



# HYPACK Survey Remote Viewer

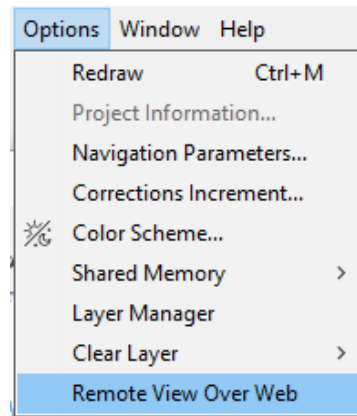
By Trevor Burns

In previous HYPACK installations, HYPACK Survey Viewer has been an integral part of HYPACK Survey. This program allows for users to view the hosted HYPACK Survey screen on remote desktop computers containing the SurveyViewer.exe program. This program allowed users to view the Left/Right Indicator, Map, Data Display, Survey Screen, and Status Bar.

**As of the Q2 release, due to an issue of permissions in modern versions of Windows (8, 8.1, 10, 11+), HYPACK Survey Viewer will officially be decommissioned.**

HYPACK Survey Viewer will officially be replaced by **HYPACK Survey Remote Viewer**, which can be found in HYPACK Survey by going to Options->Remote View Over Web.

*Figure 1: How to Access HYPACK Survey Remote Viewer Contained Within the Survey Options Menu*



Although we recognize the importance of HYPACK Survey Viewer, we feel as though this switch to HYPACK Survey Remote Viewer will increase the longevity of remotely viewing the host survey screen. HYPACK Survey Remote Viewer utilizes an http server, which not only allows for access on desktop computers, but also phones and tablets.

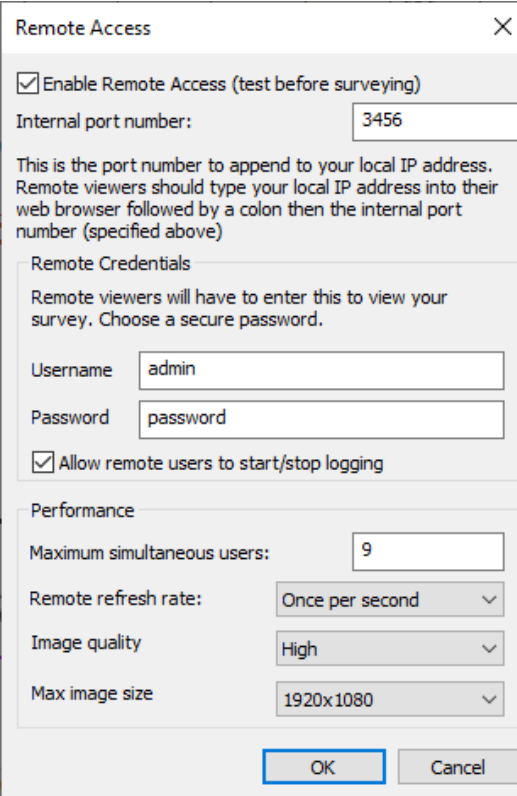
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## INITIAL SETUP

To begin using HYPACK Survey Remote Viewer, select the **Options** drop-down menu, and select the **Remote View Over Web** option. Upon entering the Remote View window, there are many different options to select and choose from.

*Figure 2: Remote Access Window Containing Several Configuration Options for HYPACK Survey Remote Viewer*

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Remote Access

Enable Remote Access (test before surveying)

Internal port number:

This is the port number to append to your local IP address. Remote viewers should type your local IP address into their web browser followed by a colon then the internal port number (specified above)

Remote Credentials

Remote viewers will have to enter this to view your survey. Choose a secure password.

Username

Password

Allow remote users to start/stop logging

Performance

Maximum simultaneous users:

Remote refresh rate:

Image quality

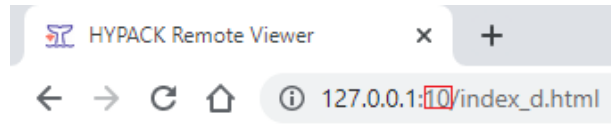
Max image size

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**Enable Remote Access:** This enables for the HYPACK Survey Remote Viewer client to be enabled/disabled.

**Internal Port Number:** The number chosen here, between 0 and 65535, is the port that is going to be opened for HYPACK Survey Remote Viewer to be accessed from the desktop computer/mobile device.

*Figure 3: HYPACK Survey Remote Viewer IP Address with Port Number Boxed in Red*



**Remote Credentials (Username/Password):** Upon typing in the IP address and port number for HYPACK Survey Remote Viewer, these credentials are what will be used to authenticate the user to connect.

*Figure 4: HYPACK Survey Remote Viewer Authenticator, as Presented in Google Chrome*

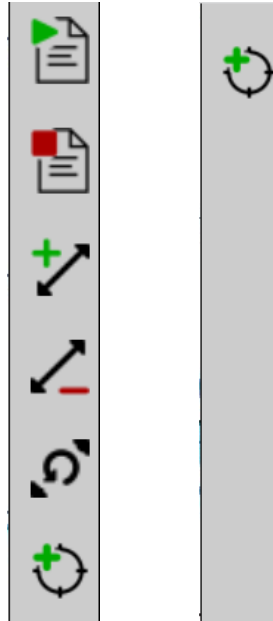
A screenshot of a web-based authentication form. At the top, it says "Sign in" followed by the URL "http://127.0.0.1:10". Below this are two input fields: "Username" and "Password". The "Username" field has a blue border and a vertical cursor. Below the input fields are two buttons: a blue "Sign in" button and a white "Cancel" button with a grey border.

**Allow Remote Users to Start/Stop Logging:** Enabling logging allows for HYPACK Survey Remote Viewer to: Start Logging, End Logging, Increment Line, Decrement Line, and Swap Line. Disabling this checkbox will only allow for the user to drop a target on the map.

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Figure 5: HYPACK Survey Remote Viewer When Logging is Allowed (Left) and When Logging is Not Allowed (Right)

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**Maximum Simultaneous Viewers:** The number of HYPACK Survey Remote Viewer windows that can be opened.

**Remote Refresh Rate:** The number of times the map image will be updated in a specific timeframe. This includes twice per second, once per second, once per two seconds, once per five seconds, and once per ten seconds. The faster the refresh rate, the more updated the map will appear.

**Image Quality:** Increases or decreases the amount of compression to the image (Low = high compression, High = low compression).

**Max Image Size:** Sets the maximum resolution for the image contained within the Remote View window. **Note:** if the max image size is 1920x1080, but the Remote View map window resolution (between the data on the left and the icon box on the right) is 1280x720, then the map resolution will automatically be set to 1280x720.



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## INITIALIZING HYPACK SURVEY REMOTE VIEWER

After HYPACK Survey Remote Viewer has been configured to the desired settings, it is time to load it. To check if HYPACK Survey Remote Viewer has initiated correctly, we recommend you first load it on the computer hosting Survey. To do this:

1. Launch a web browser (Google Chrome, Microsoft Edge, Mozilla Firefox). In the search bar, you are going to want to type **127.0.0.1 followed by a colon (:)** and then the **port number you selected**. For example, 127.0.0.1:3456 (if the port number is 3456). The convention is:

**127.(0-255).(0-255).(0-255):(Port Number)**

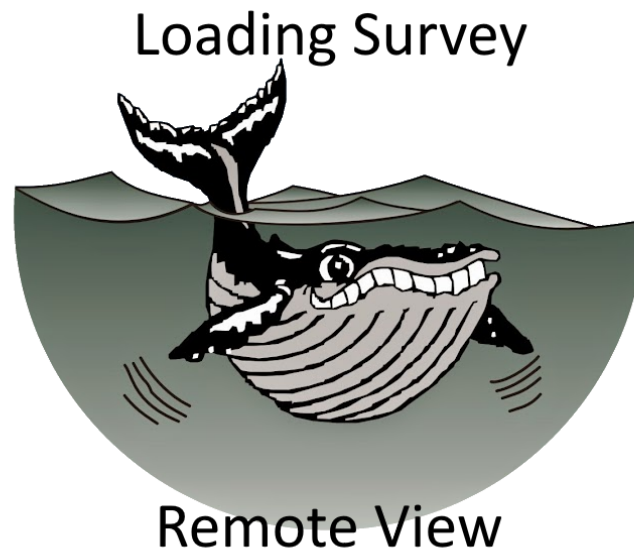
**OR**

**Localhost:(Port Number)**

**You will know when the page is loaded correctly when you see the admin and password prompt (as seen in Figure 4).** If it does not display, or there is an error on the webpage, check to make sure that your port number is valid (and it lines up with the one in HYPACK Survey).

2. Upon entering the designated username and password, HYPACK Survey Remote Viewer should pop up, with the map displaying the image below.

*Figure 7: HYPACK Survey Remote Viewer Loading Screen, Displayed Before the Map is Loaded*



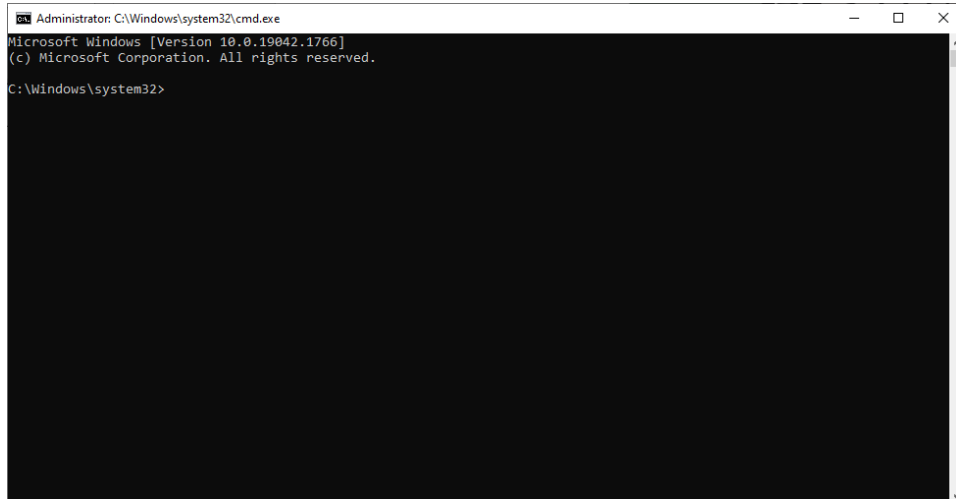
**If the window proceeds to be stuck on the “Loading Survey Remote View” screen for more than 10 seconds or so, refresh the page. If you see “Connection error, refresh page”, please also refresh the page.** When the map image displays, HYPACK Survey Remote Viewer is functioning as expected.

Now that HYPACK Survey Remote Viewer is confirmed to be operational, we may now switch to a different desktop computer/mobile device to view the survey screen. **In order for HYPACK Survey Remote Viewer to function, the host computer must be connected to the same network.**

The process for connecting to the host computer is the same operationally, but the IP address will be different this time.

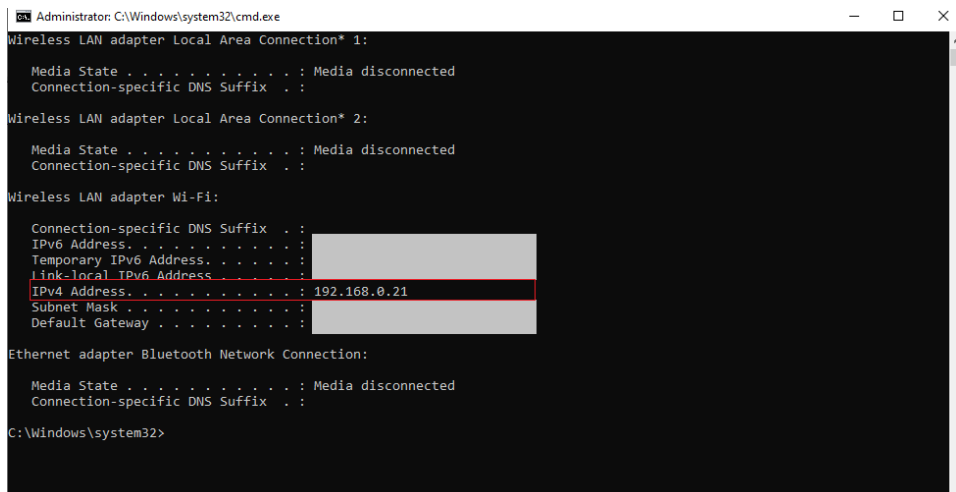
1. To find the IP address of the host computer, on the host, go to the Windows Search bar and type “cmd” and press enter. You should see the window pictured below. **This also works in Windows PowerShell in case Command Prompt loses support in the future.**

*Figure 8: Microsoft Windows Command Prompt*



2. In the Command Prompt window, you are going to want to type “**ipconfig**”, which is a tool to view the IP configurations on that local machine. After you enter this command, you should see a screen as in Figure 9.

*Figure 9: Example Microsoft Windows Command Prompt After "ipconfig" Execution. IPv4 Address is Highlighted, and is of Interest*



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3. What we are going to want to search for is the IPv4 address of the adapter you are using to directly source the network. **If you are using Ethernet as a means of connection, it would be under the Ethernet connection. However, in most cases you are going to want to go under the “Wireless LAN Adapter Wi-Fi” section.**
  4. Copy and paste the IPv4 address as shown in your Microsoft Windows Command Prompt in the address space of your web browser.

Now, the convention is the same. However, it will change to:

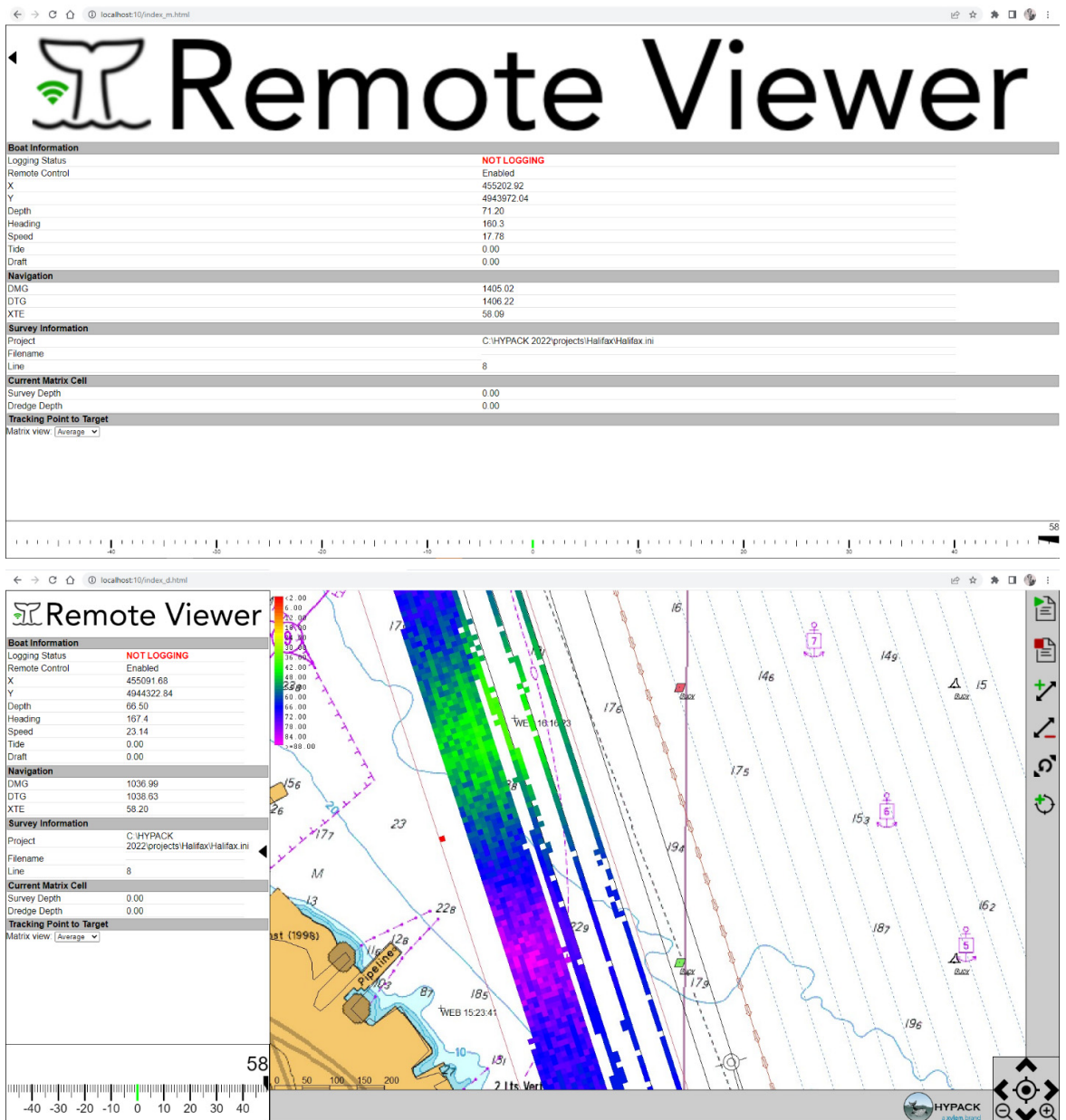
**(IPv4 Address):(Port Number)**

In the example of Figure 9, it would be 192.168.0.21:(Port Number) (i.e., 192.168.0.21:3456).

Please refer back to steps 1 and 2 if there are issues with the HYPACK Survey Remote Viewer window appearing correctly.

In the address bar, you may see either /index\_d.html or /index\_m.html after the IP address and port number. **/index\_d.html indicates that HYPACK Survey Remote Viewer was launched in Desktop mode, denoted by the “d” of the URL. /index\_m.html indicates that HYPACK Survey Remote Viewer was launched in Mobile mode, denoted by the “m” of the URL.** Both Mobile and Desktop versions work on all platforms, so if you prefer the look and feel of a specific version on a device, you may switch to the mobile or desktop versions by simply changing the “d” or “m” after “index\_” to the other in the URL. Pictured below are both the mobile and desktop versions of the interface.

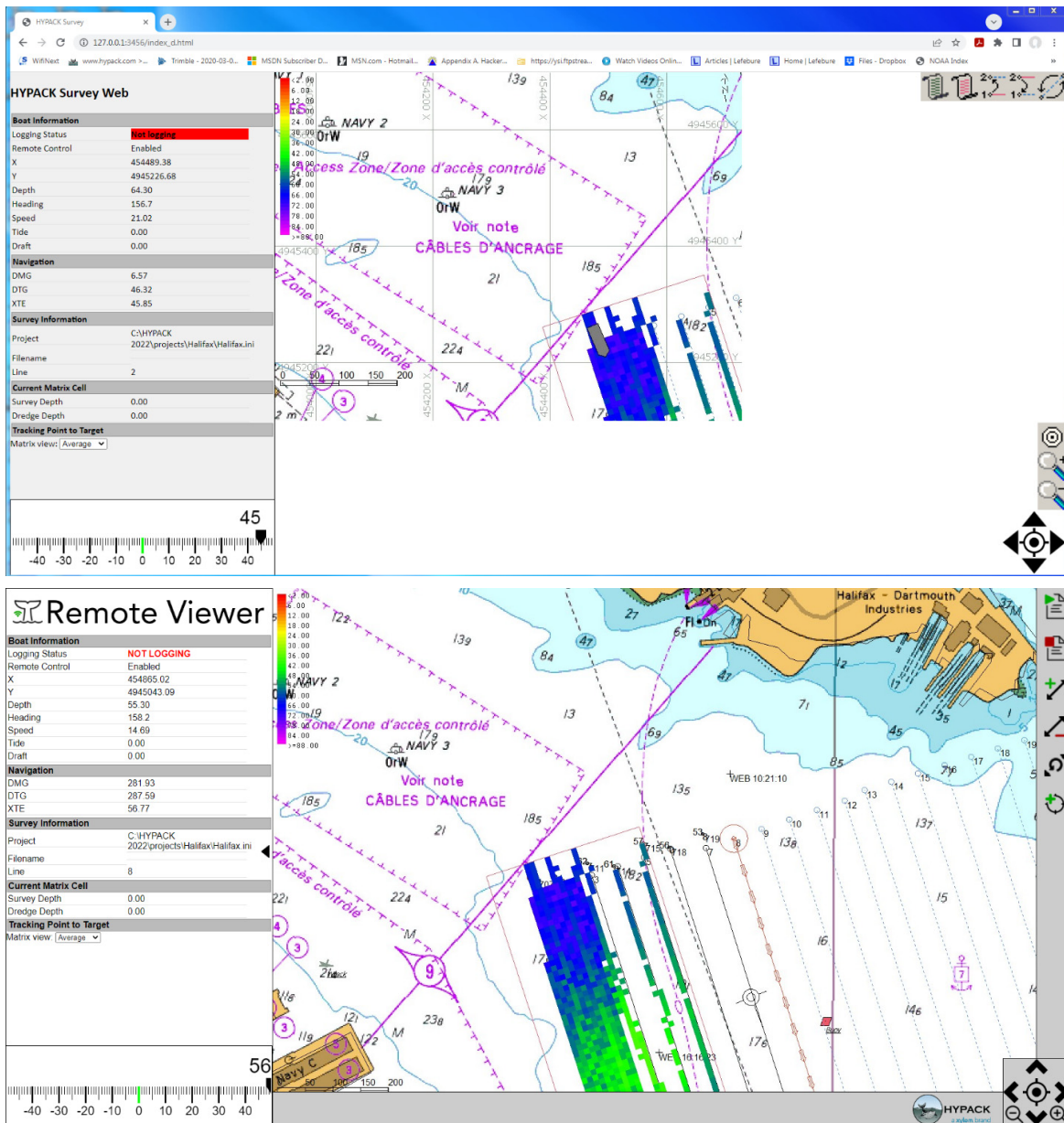
Figure 10: HYPACK Survey Remote Viewer Mobile Interface (Top) and Desktop Interface (Bottom)









## FEATURE SET

With the decommissioning of HYPACK Survey Viewer, HYPACK Survey Remote Viewer has received an entirely new user interface. All the controls from old HYPACK Survey Remote Viewer have remained the same, with one new additional feature.

Figure 11: Previous HYPACK Survey Remote Viewer User Interface (Top) Compared with New User Interface (Bottom)











*HYPACK Survey Remote Viewer Map Commands*

	<b>Start Logging*</b> : Commands HYPACK Survey to begin logging.
	<b>End Logging*</b> : Commands HYPACK Survey to end logging.
	<b>Increment Line*</b> : Commands HYPACK Survey to increment the line position on the map.
	<b>Decrement Line*</b> : Commands HYPACK Survey to increment the line position on the map.
	<b>Swap Line*</b> : Commands HYPACK Survey to swap the direction of the line on the map.
	<b>Drop Target</b> : Commands HYPACK Survey to drop a target on the map in the location clicked in HYPACK Survey Remote Viewer

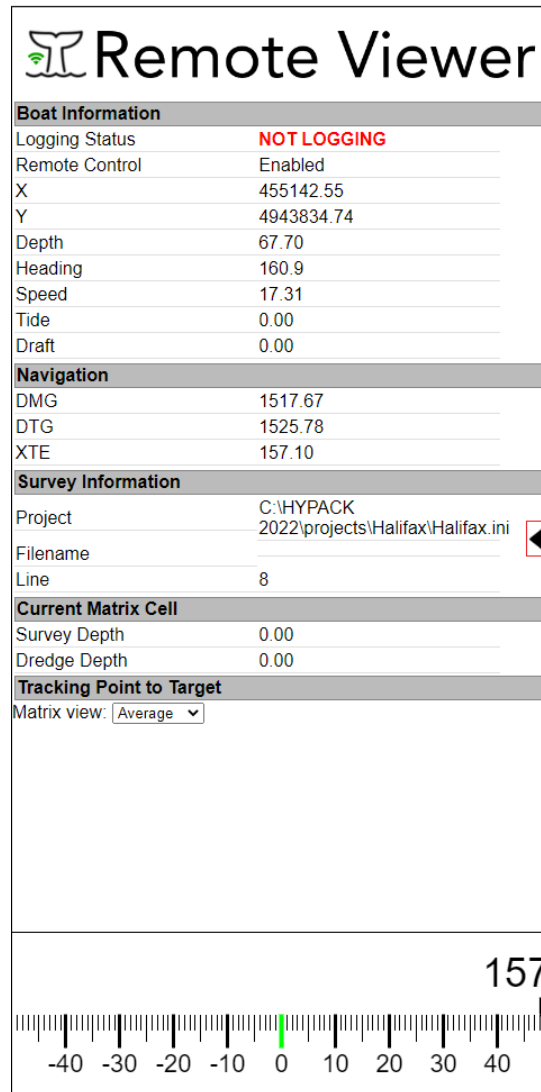
Items with an \* indicates only available when "Allow Remote Users to Start/Stop Logging" is enabled

*HYPACK Survey HYPACK Survey Remote Viewer Map Navigation Controls*

	<b>Move Up</b> : Commands HYPACK Survey map to shift upwards.
	<b>Move Left</b> : Commands HYPACK Survey map to shift to the left.
	<b>Boat Tracking Off</b> : Commands HYPACK Survey map to not track the vessel.
	<b>Boat Tracking On</b> : Commands HYPACK Survey map to track the vessel.
	<b>Move Right</b> : Commands HYPACK Survey map to shift to the right.
	<b>Move Down</b> : Commands HYPACK Survey map to shift downwards.
	<b>Zoom Out</b> : Commands HYPACK Survey map to zoom out.
	<b>Zoom In</b> : Commands HYPACK Survey map to zoom out.

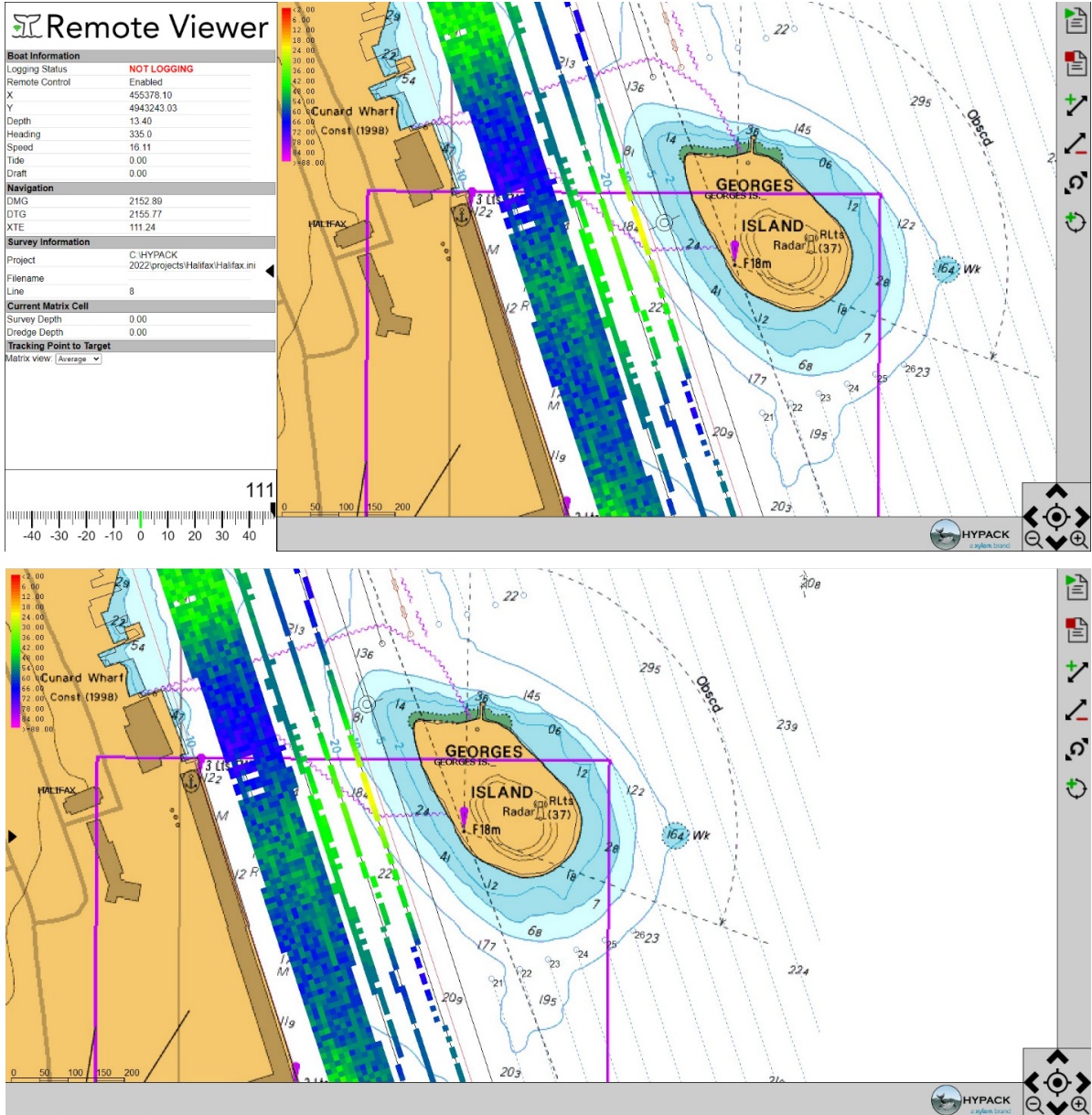
## DATA DISPLAY

Figure 12: New HYPACK Survey Remote Viewer Data Display, with Data Toggle Arrow Boxed in Red



The data display from the old HYPACK Survey Remote Viewer client is the same, only with one new feature: **the data toggle**. The data toggle button allows for the user to slide away both the data display and the left/right indicator in order to have a greater view on the map display. After the button has been toggled, the arrow switches direction and moves to the left side of the display. After this button is pressed again, the data display and left/right indicator will return.

Figure 13: Before Data Toggle Button in the HYPACK Survey Remote Viewer Display is Pressed (Top) and After (Bottom)



## MOBILE INTERFACE

The feature that the HYPACK team is most excited about in the switch from HYPACK Survey Viewer to HYPACK Survey Remote Viewer is the all-new designed mobile interface.

Figure 14: HYPACK Survey Remote Viewer Displayed on an Apple iPhone 12 Pro Max in Safari

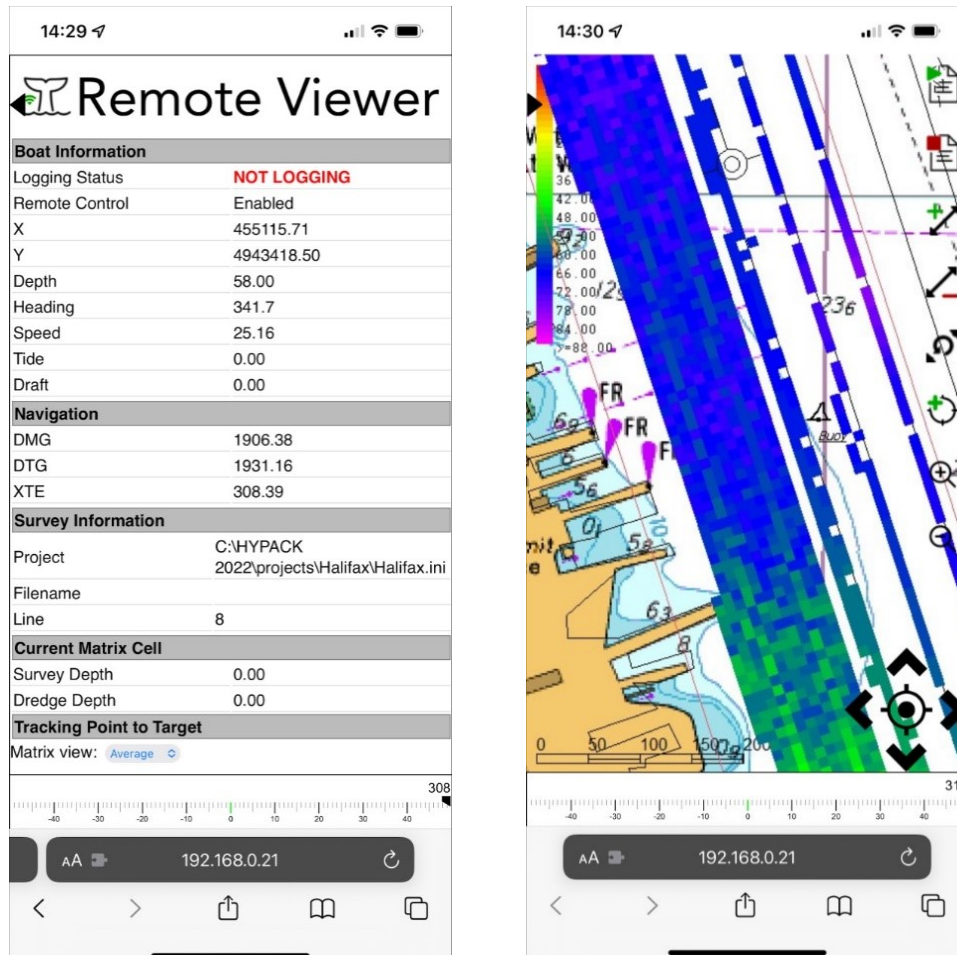
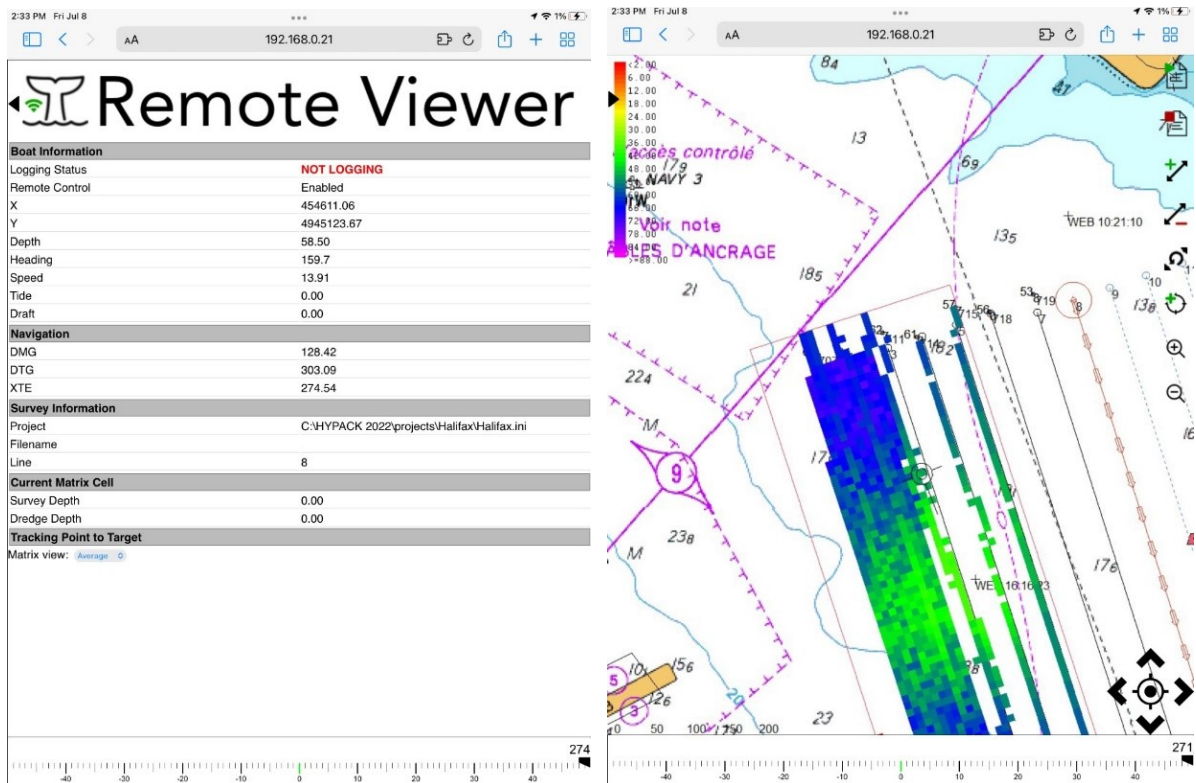


Figure 15: HYPACK Survey Remote Viewer Displayed on an Apple iPad 7th Generation in Safari



One thing that HYPACK Survey Viewer was not able to provide originally was a mobile interface due to the secondary display needing to have the HYPACK Survey Viewer program installed. However, since HYPACK Survey Remote Viewer only requires for an http server to be created through HYPACK Survey, **any mobile device that can connect to the internet and has the browser support/capabilities may now control the HYPACK Survey client directly from that device.**

The mobile interface is very similar to that of the desktop display, in that there are still navigation tools and icons contained within the right side of the display. However, the placement of the toggle data switch has now been moved near the top of the display. The data display spans the entirety of the window when it is visible.

In order to connect to the host computer, please follow the steps contained within the “Initializing HYPACK Survey Remote Viewer” section.

We thank you for choosing HYPACK and look forward to your feedback regarding the all-new HYPACK Survey Remote Viewer!