



HYPACK
a xylem brand

Sounding Better!

Shared Memory Output of Dredge Data

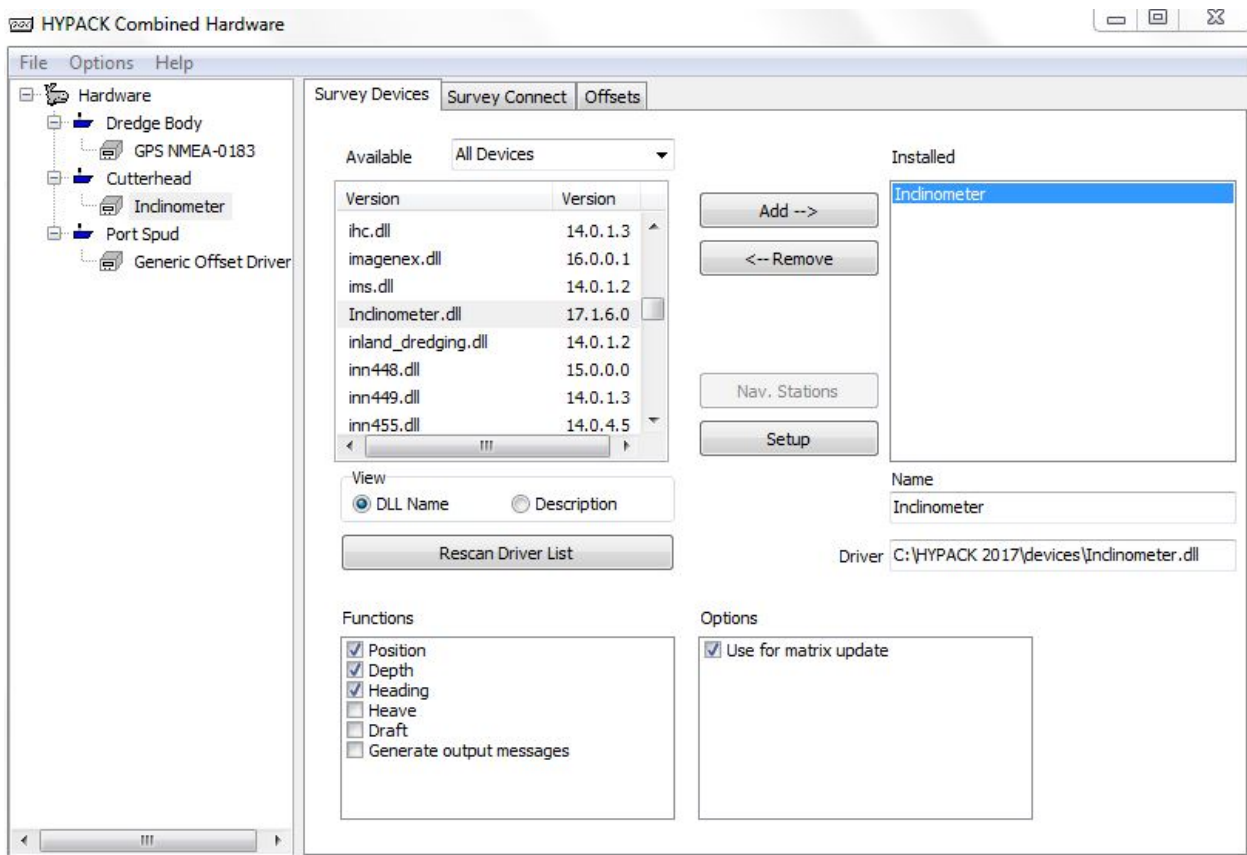
by Rob Baird

A HYPACK® user's recent call into Technical Support brought me back to a trusted old utility, Shared Memory Output from SURVEY or DREDGEPAK®. The request was made by a dredging company project manager for a way to output the X,Y and Z coordinates of the cutterhead, with other information, to a COM port.

The Shared Memory Output program is found in DREDGEPAK-OPTIONS-SHARED MEMORY- OUTPUT, and is easily configured to output whatever data is desired from any of the available mobiles in the HYPACK® HARDWARE configuration. I set up an example to show how this utility works.

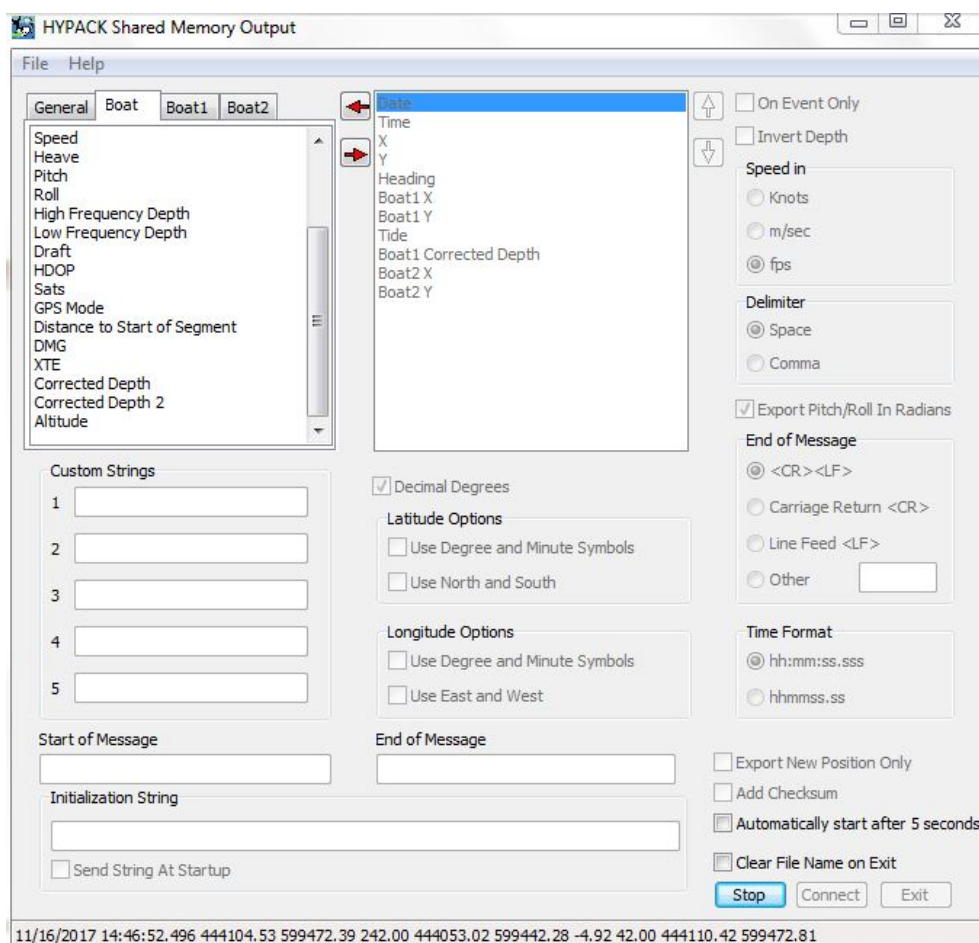
The following HYPACK® HARDWARE configuration is for a hydraulic, cutter suction dredge, with a dual-head GPS on the dredge body for position and heading. There is an inclinometer (angle sensor) on the ladder to calculate the depth and position of the cutterhead, and a generic offset driver on the third mobile to account for the position of the port spud.

FIGURE 1. Sample Dredge Configuration



After the hardware is set up, you can into DREDGEPACK® to set up the Shared Memory Output program. You will notice that the names of the mobiles from HYPACK® HARDWARE are not inherited, but rather simplified to Boat, Boat 1 and Boat 2.

FIGURE 2. Shared Memory Output



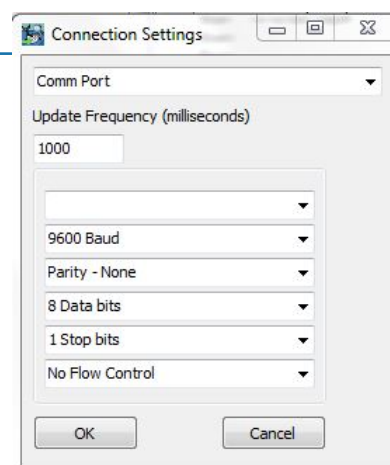
Once the desired fields of data are configured for output, click [Connect] to specify the destination: serial, network, or parallel port, or a text file.

FIGURE 3. Connection Settings

When the connection parameters are set, simply click [Start] to begin using Shared Memory Output.

If configured to output to a port, you may need to configure the receive side for use in a third-party utility. If the data is output to a text file, you can find the file in the project folder. The file is saved when you click [Stop] in Shared Memory Output window.

Below is a text file that was created using Shared Memory Output, with user-defined fields... Date, Time, Dredge GPS



X, Dredge GPS Y, Heading, Tide, Cutterhead X, Cutterhead Y, Cutterhead Z, Port Spud X, Port Spud Y.

FIGURE 4. Sample Output File

11/16/2017	16:38:55.983	444286.64	599590.66	242.00	-4.92	444235.13	599560.55	43.13	444292.52	599591.06
11/16/2017	16:38:56.997	444285.77	599590.09	242.00	-4.92	444234.25	599559.98	42.72	444291.64	599590.50
11/16/2017	16:40:05.994	444290.23	599592.99	242.00	-4.92	444238.73	599562.89	43.16	444296.12	599593.40
11/16/2017	16:40:07.009	444289.35	599592.42	242.00	-4.92	444237.85	599562.32	42.86	444295.24	599592.83
11/16/2017	16:40:08.022	444288.48	599591.85	242.00	-4.92	444236.97	599561.75	41.88	444294.37	599592.26
11/16/2017	16:40:09.036	444287.60	599591.28	242.00	-4.92	444236.10	599561.18	42.13	444293.49	599591.69
11/16/2017	16:40:10.050	444286.72	599590.71	242.00	-4.92	444235.21	599560.60	43.08	444292.61	599591.13
11/16/2017	16:40:11.064	444285.85	599590.14	242.00	-4.92	444234.33	599560.03	42.82	444291.74	599590.56
11/16/2017	16:40:12.079	444284.96	599589.56	242.00	-4.92	444233.46	599559.46	41.86	444290.85	599589.98
11/16/2017	16:40:13.092	444284.10	599589.00	242.00	-4.92	444232.58	599558.90	42.16	444289.97	599589.41
11/16/2017	16:40:14.106	444283.21	599588.43	242.00	-4.92	444231.71	599558.33	43.11	444289.10	599588.84
11/16/2017	16:40:15.121	444282.34	599587.87	242.00	-4.92	444230.83	599557.76	42.77	444288.22	599588.27
11/16/2017	16:40:16.134	444281.47	599587.30	242.00	-4.92	444229.95	599557.19	41.95	444287.35	599587.70
11/16/2017	16:40:17.149	444280.59	599586.73	242.00	-4.92	444229.08	599556.62	42.03	444286.47	599587.14
11/16/2017	16:40:18.164	444279.72	599586.16	242.00	-4.92	444228.20	599556.05	43.01	444285.59	599586.57
11/16/2017	16:40:19.177	444278.84	599585.59	242.00	-4.92	444227.33	599555.48	42.92	444284.72	599586.00
11/16/2017	16:40:20.191	444277.96	599585.02	242.00	-4.92	444226.45	599554.91	41.92	444283.84	599585.43
11/16/2017	16:40:21.205	444277.09	599584.45	242.00	-4.92	444225.57	599554.34	42.08	444282.97	599584.86
11/16/2017	16:40:22.219	444276.21	599583.89	242.00	-4.92	444224.70	599553.78	43.05	444282.09	599584.29
11/16/2017	16:40:23.233	444275.34	599583.32	242.00	-4.92	444223.82	599553.21	42.86	444281.21	599583.72
11/16/2017	16:40:24.247	444274.46	599582.75	242.00	-4.92	444222.95	599552.64	41.88	444280.34	599583.15
11/16/2017	16:40:25.261	444273.59	599582.18	242.00	-4.92	444222.07	599552.07	41.96	444279.46	599582.59
11/16/2017	16:40:26.276	444272.70	599581.60	242.00	-4.92	444221.19	599551.50	42.95	444278.59	599582.02
11/16/2017	16:40:27.290	444271.83	599581.04	242.00	-4.92	444220.32	599550.93	42.98	444277.71	599581.45