

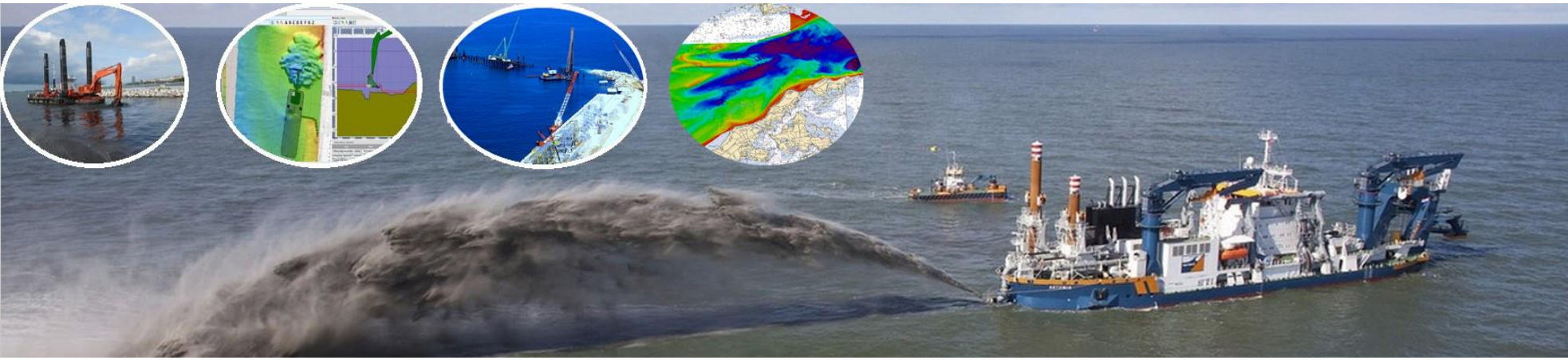
BeamworX



Survey

Hydrographic and Geophysical software & Consultancy





Firmamız **MARİNMET ŞTİ**, Dünyaca ünlü Hollanda firması **BEAMWORX BV** 'nin Türkiye temsilcisi olarak hizmet vermektedir. BeamworX yazılım ürünleri, Ulusal ve uluslararası hidrografik / batimetrik etütler, deniz tarama, deniz inşaatları gibi birçok şirketler, kamu kurumları ve de üniversiteler tarafından kullanılmaktadır.

NavAQ Singlebeam / Multibeam Echosounder ve Laser Scanner veri toplama programı; NavAQ, Singlebeam / Multibeam / deniz tarama ekipmanları ve lazer tarayıcılar için kullanıcı dostu, çok yönlü bir çevrimiçi gezinme ve veri toplama programıdır. Esnek kurulumu sayesinde, aşağıdakiler dahil, çok çeşitli görevler için kullanılabilir. Tek kurulum da **NavAQ- AutoClean- AutoPatch- SbEdit- Raw Processing** programları birlikte yer alır.

- ✓ Singlebeam, Multibeam, Lazer Tarayıcılar ve Hidrografik Araştırma.
- ✓ Kesici- Emici Tarama Gemileri, Ekskavatörler, Yüzer Vinçler ve benzeri vasıtaların anlık izleme
- ✓ Hava Dronları ve Gezici araçlar ile lidar tarama.
- ✓ Hem karada hem de denizde genel konumlandırma hesaplama / görselleştirme

BeamworX

2024.1

Proj	Proj. Config	File Size	Start Time	Len	Width	Acc	
109_211	TK Vehicle	6.51 MB	09-01-2019 22:23:10	450.9	138.4	285	
109_222	TK Vehicle	9.67 MB	09-01-2019 22:23:10	191.9	58.2	285	
109_223	TK Vehicle	1.41 MB	09-01-2019 22:26:05	54	207.1	58.3	278
109_224	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_225	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_226	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_227	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_228	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_229	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_230	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_231	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_232	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_233	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_234	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_235	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_236	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_237	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_238	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_239	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_240	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_241	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_242	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_243	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_244	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_245	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_246	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_247	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_248	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_249	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374
109_250	TK Vehicle	1.41 MB	09-01-2019 22:27:05	54	152.4	55.4	374



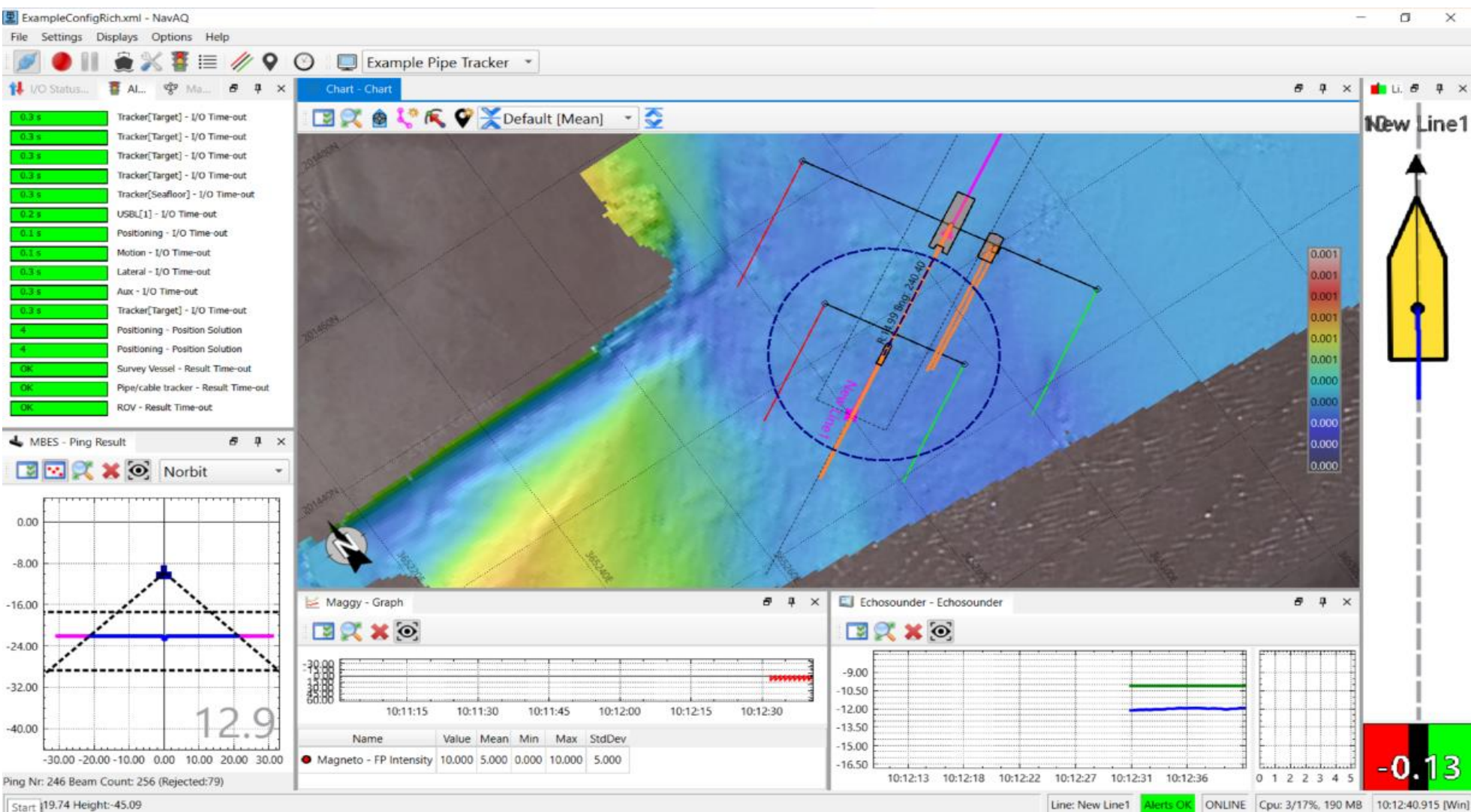
NavAQ

Easy Online!

NavAQ is a user-friendly and versatile online navigation and data acquisition program for single/multibeam echosounders, laser scanners, sidescan sonar, dredging guidance and general positioning calculation and visualisation.

NavAQ includes interfacing drivers to all the well-known sensor/system brands including Kongberg, Teledyne Reson/Odom, R2Sonic, Norbit, WASSP, Picotech, Z+F, Riegl, Velodyne, SBG, Applanix, iXBlue, Trimble, Septentrio.

- All interfaced sensor messages are logged in its original raw format into the NavAQ raw log file for further processing.
- Positioning and bathymetry results are computed and visualized in real-time and directly stored in the NavAQ result log file.
- Very easy and flexible setup including unlimited sensors and vessels.
- Exports of Raw and Result Data to ASCII/XTF/S7K/Raw Dump/GSF.



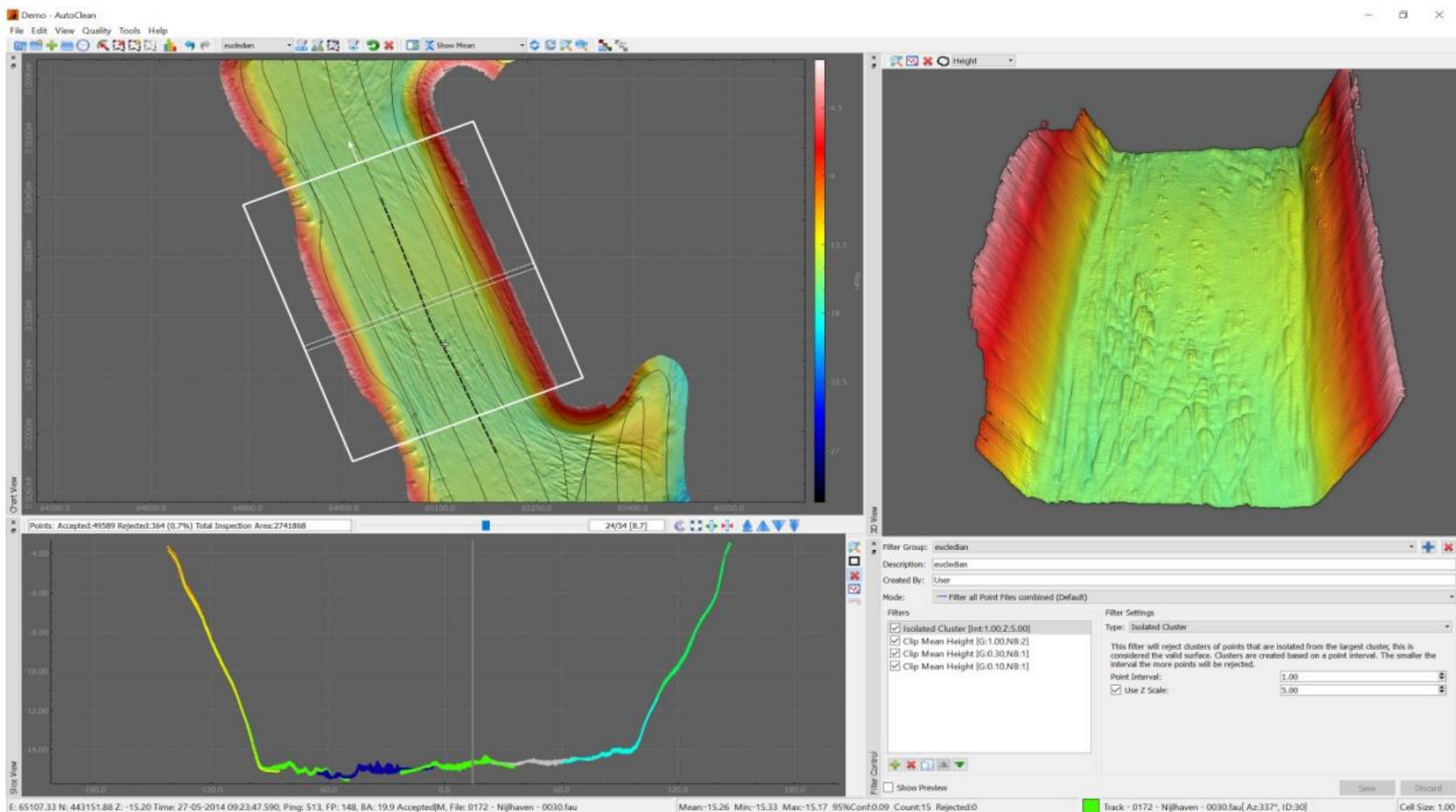


AutoClean

Cleaning tool for bathymetric and Lidar point data

Cleaning program for Bathymetric and Lidar point data. Focused on day to day cleaning on board of survey vessels or near site.

- Automatic cleaning and validation for bathymetric and Lidar point clouds
- Manual flagging of points in 2D Slice and 3D View
- Stand-alone application, easy to learn and use
- Optimum use of modern computer hardware(multi-core, 64-bit, GB's mem)
- Supports many cleaning algorithms: statistical, spline filter, spatial
- Full undo on all modification actions
- Import/export to various file formats, e.g. FAU/GSF/ALL/LAS/LAZ/Hypack HS2(X)/ASCII/Grids/PDS
- Respects the point status as flagged by the acquisition software
- Optionally exports only the changes back to the original source files
- Automatic Least Square Adjustment Height Fitting for Tide errors
- Reference layer for design or previous survey
- Multiple rejection flags and classification
- Automatic import of files through folder monitoring during the survey
- Corrected 95% confidence grid attribute



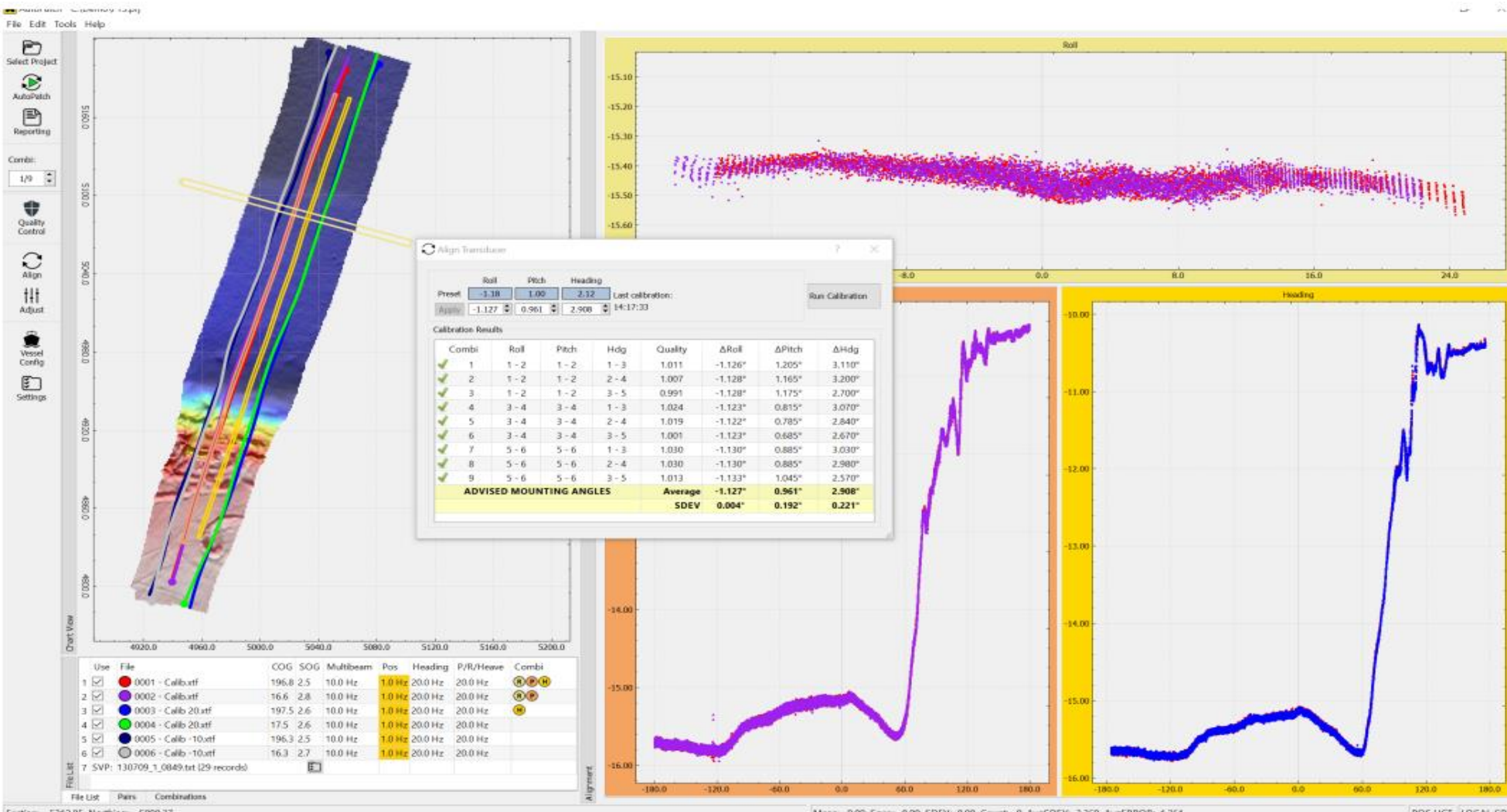


AutoPatch

Fully Automated Multibeam Patch Test Calculation

Fully automated Multibeam Echosounder patch test calculator.
Your calibration report is just a click away!

- Very easy to operate
- One button click to complete the full calculation
- Calculates Roll/Pitch/Heading mounting angles, various latencies, Transducer offset shifts
- Refraction, analyse sound velocity and SVP optimization
- Height fitting for none-RTK data
- Automatic line and area selection
- Extensive calibration report
- Includes despiking/outlier removal for sounder data
- Exact calculation algorithms, using full raytracing
- Consistent and reproducible calibration results
- Supports XTF, Hypack HSX, kongsberg ALL, Teledyne PDS Format
- Calibrates Single/Dual head systems including separate TX and RX
- Calculates the best-fit result from multiple survey lines





SBEdit

User-friendly Single Beam Editor

SBEdit makes it very easy to edit Single Beam Echosounder Data (SBE) in Chart Datum with the raw acoustics as background.

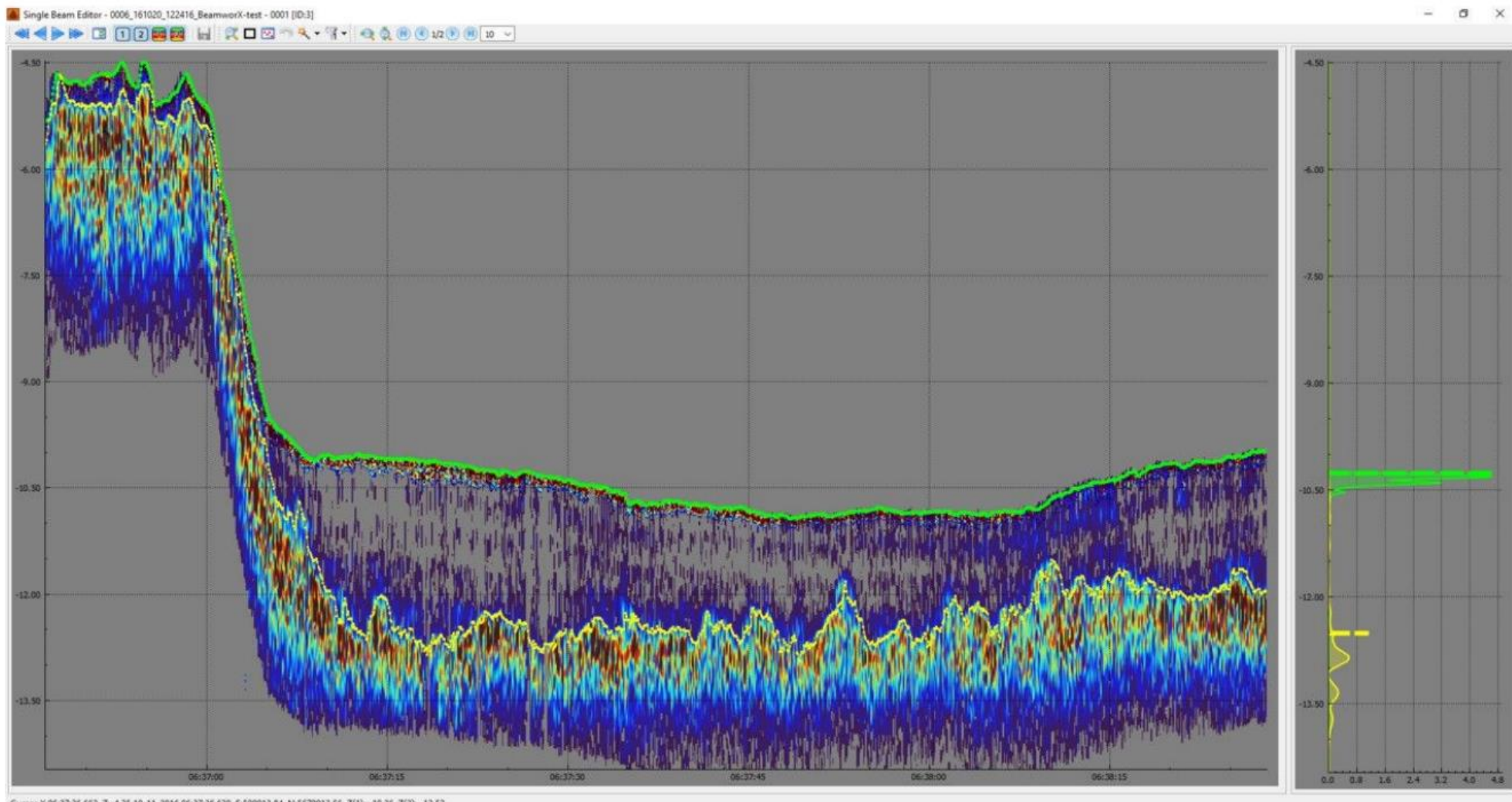
SBEdit is an **AutoClean** Add-on, it is fully integrated into **AutoClean**.

The presentation of the acoustics is configurable with different color palettes and drawing order.

A full range of edit tools are available:

- Manual clipping with the mouse cursor
- Assign new height by “free-drawing” with the mouse cursor
- Automatic “boxcar” Despiking
- Height Averaging

A dedicated BeamworX utility is used to log the “echogram” data directly from the sounder and the results from the Acquisition Software. These files are then commonly presented in AutoClean and SBEdit.



NavAQ Laser Scan

The screenshot displays the NavAQ software interface, which is used for processing and visualizing laser scan data. The interface is divided into several panels:

- I/O Status - I/O Status:** Shows system status and file information.

Status: Logging [Free Space:72.05 GB]			
Raw File: 0028_20201122_150843_CL.0001.bvwxr...			
Res File: 0028_20201122_150843_CL.0001.bvwxr...			
System	#	F [Hz]	Age [s]
1	Position[1]	11752	26.5
2	Position[102]	11749	26.4
3	Position[103]	11749	26.4
- Alert - Alert:** Lists various system alerts, all marked as 'I/O Time-out' for different components like Position and Motion.
- Numerical - Numerical:** Provides a detailed list of system parameters and their values.

Item	Value	Arr
Position[1] - X	4.9013152184°	14:
Position[1] - Y	52.3918661166°	14:
Position[1] - Z	42.41 m	14:
Position[1] - QI	7	14:
Position[102] - X	4.9013152184°	14:
Position[102] - Y	52.3918661166°	14:
Position[102] - Z	42.41 m	14:
Position[102] - QI	7	14:
Position[103] - X	4.9013152184°	14:
Position[103] - Y	52.3918661166°	14:
Position[103] - Z	42.41 m	14:
Position[103] - QI	7	14:
Motion[1] - Pitch	0.34°	14:
Motion[1] - Roll	0.71°	14:
- Chart - Chart:** Displays a 2D map of the scan area with a color-coded depth scale ranging from 0.00 to -5.00. A boat icon is visible on the map.
- 3D - 3D:** Shows a 3D visualization of the laser scan data, with a boat model and its corresponding scan volume.
- Z+F Scanner.xml - NavAQ:** Contains scan parameters and a detailed log of events.

Scan Parameters:

 - Rate/Resolution: 08.50Hz 1016KHz
 - Power: Default

Events:

```

15:05:25.790 Status= check sensor
15:05:26.004 Status= check sensor
15:05:26.023 Status= check
15:05:26.049 Status= pre scanning

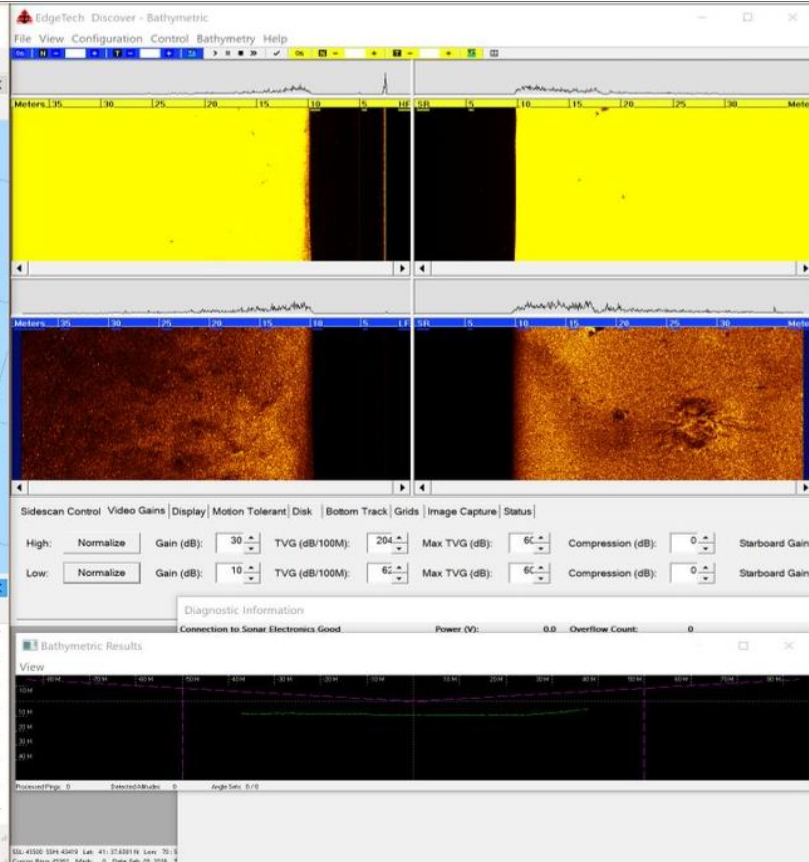
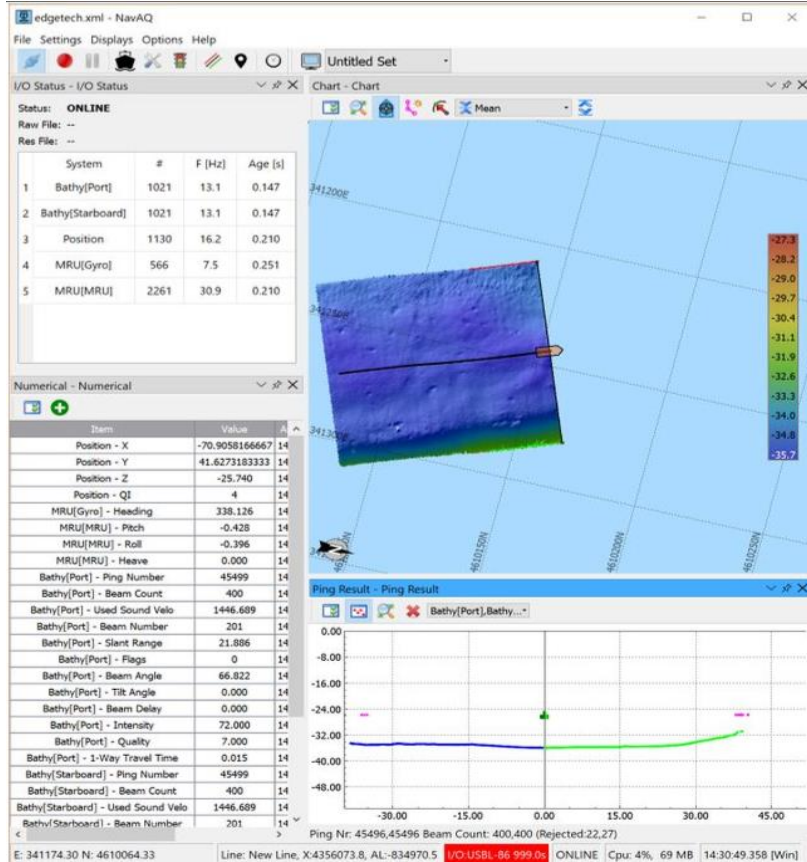
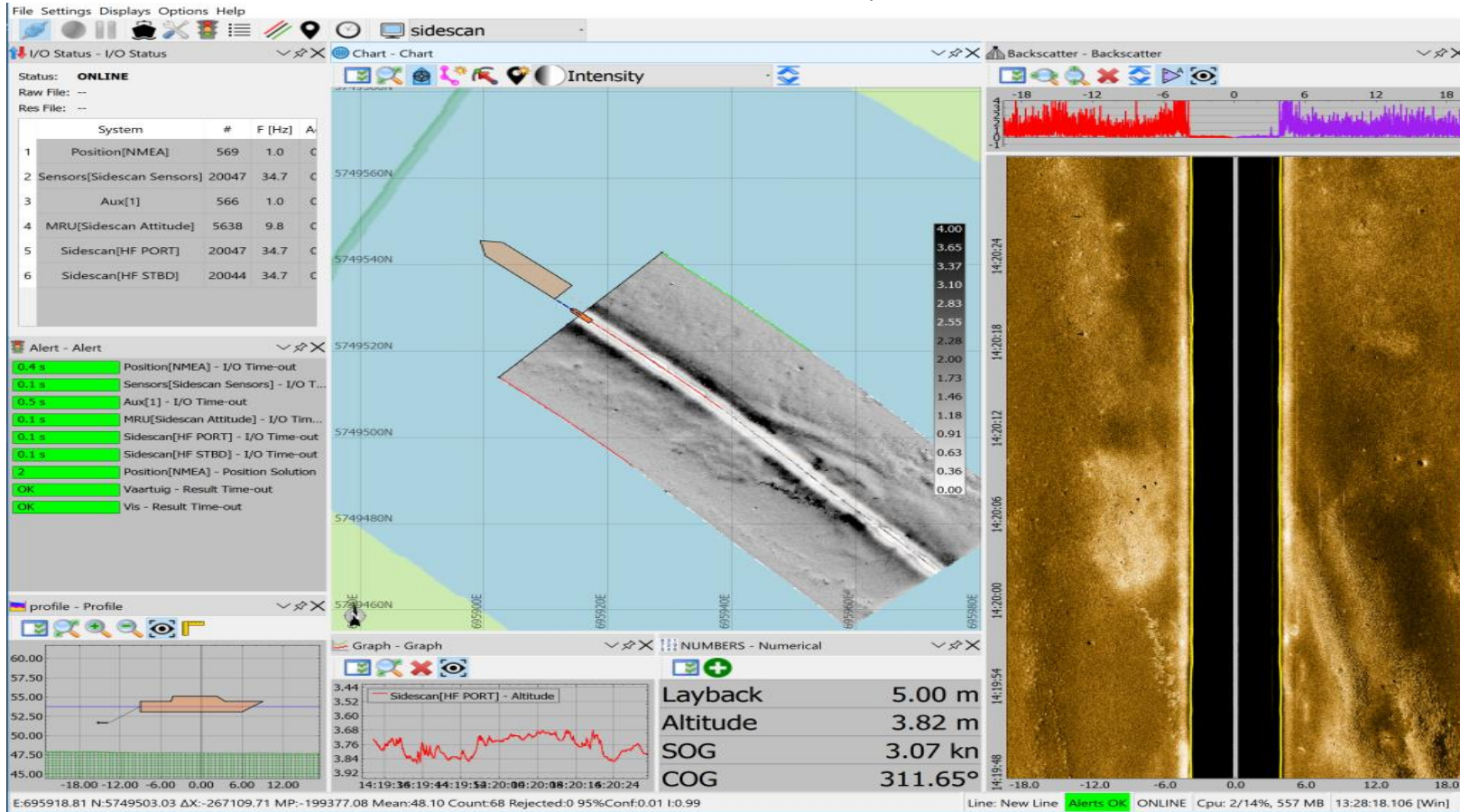
15:05:46.215 Stop Scanning...
15:05:46.219 Disconnecting from Scanner...
15:05:46.221 Disconnecting complete
15:05:56.262 Try connect to Scanner...
15:05:56.390 Connected OK, Model: 5010X, S/N:3743
15:05:56.472 Status= navigation
15:05:56.475 Status= white-balance wait 2
15:05:56.476 Status= Camera
15:05:56.477 Status= Camera setup
15:05:56.478 Status= Camera
15:05:56.480 Status= Camera fin
15:05:56.481 Status= Project sync
15:05:56.482 Status= Infrared camera
15:05:56.485 Status= goto home pos
15:05:56.485 Status= get position 2
15:05:57.103 Status= get position 2
15:05:57.127 Status= signal lrc
15:05:57.128 Status= motor off
15:05:57.137 Status= power down
15:05:57.420 Request Start Scanning...
15:05:57.452 scan - profiler - resolution sh - quality l - sal
full - endless - linestream all - statusstream - ip 172.20.4.1 -
pps
15:05:57.452 Commanding to Start Scanning...
15:06:11.910 Status= check sensor
15:06:11.949 Status= wait trigger
15:06:12.067 Status= check sensor
15:06:12.113 PPS WARNING(3.1858,12.0.1) =
1666043271.7923, Prev = 1582293971.9982
15:06:12.286 Status= check sensor
15:06:12.500 Status= check sensor
15:06:12.719 Status= check sensor
15:06:12.735 Status= check
15:06:12.754 Status= pre scanning
      
```
- Chart - Chart (Zoller + Froehlich Z+F) Laser Scanner - Device:** Shows a 2D map of the scan area with a color-coded depth scale ranging from -5.33 to -7.04. A car icon is visible on the map.
- Untitled - Ping Result:** Displays a graph of the ping result, showing a sharp peak at approximately 1.2 seconds.
- I/O Status - I/O Status:** Shows system status and file information.

Status: Logging [Free Space:19.88 GB]			
Raw File: 0052_20200221_150632_New Line.0003.bvwxr - 86.55 MB @29.74 MB/s			
Res File: 0052_20200221_150632_New Line.0003.bvwxr - 78.81 MB @28.28 MB/s			
System	#	F [Hz]	Age [s]
1	Z+F Laser Scanner	13748	52.0
2	Positioning	34150	50.0
3	Motion	34150	50.0
- Numerical - Numerical:** Provides a detailed list of system parameters and their values.

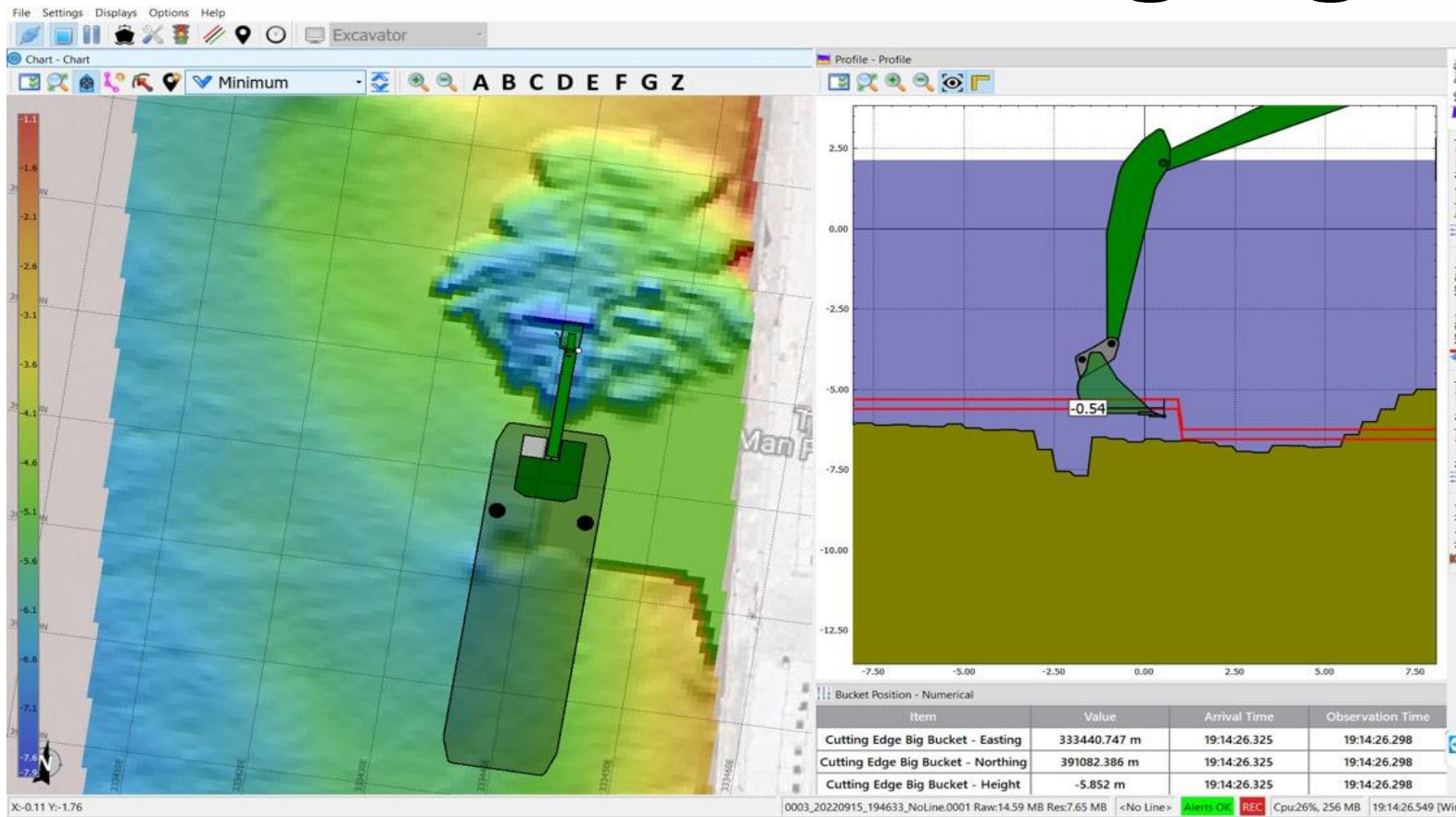
Item	Value	Arrival Time	Observation Time
Z+F Laser Scanner - Ping Number	4352	14:07:37.684	21-02-2020 14:07:37.612
Z+F Laser Scanner - Beam Count	20000	14:07:37.684	21-02-2020 14:07:37.612
Z+F Laser Scanner - Ping Flags	1	14:07:37.684	21-02-2020 14:07:37.612
Z+F Laser Scanner - Beam Number	10001	14:07:37.684	21-02-2020 14:07:37.612
Z+F Laser Scanner - Intensity	904192.000	14:07:37.684	21-02-2020 14:07:37.612
Z+F Laser Scanner - Quality	46.114	14:07:37.684	21-02-2020 14:07:37.612

At the bottom of the interface, there is a status bar showing system information: E: 983109.79 N: 5787761.85, 0052_20200221_150632_New Line.0003 Raw.86.55 MB Res:78.81 MB, Line: New Line, X:3180488.5, AL:4392410.6, Alerts On, REC, Cpu:21%, 503 MB, 14:07:37.609 [Win].

NavAQ Sonar



NavAQ Dredging



Driver Settings

Setup: Flow Meter Calibration

Cylinder Flow - Bucket

Observation: FLOW

Profile: Kraan

Stick/Bucket Dimensions

Bucket/Cyl. Dimensions

A-B:	0,7046
A-E:	0,6563
A-F:	5,7130
B-D:	0,9440
D-E:	0,3500
E-G:	1,0000
E-F:	5,0570
F-G:	1,8890
D-G Min:	0,6510
D-G Max:	1,1054
A to Arm:	1,4400

Paste

OK Cancel

Driver Settings

Setup: Flow Meter Calibration

Cylinder Flow - Grab

Observation: FLOW

Profile: Kraan

Shapes: 2

Shape Selection

Shape 2

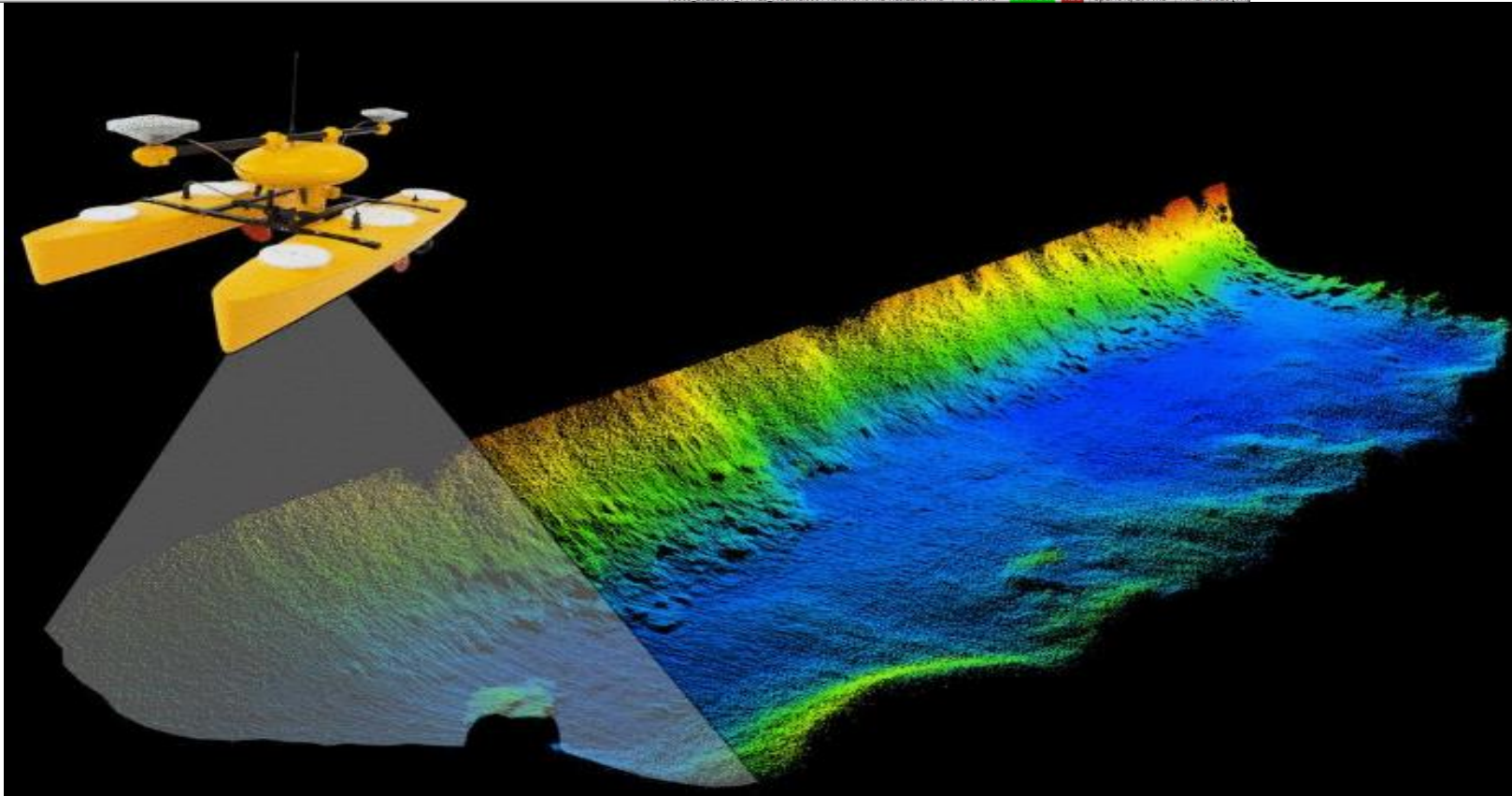
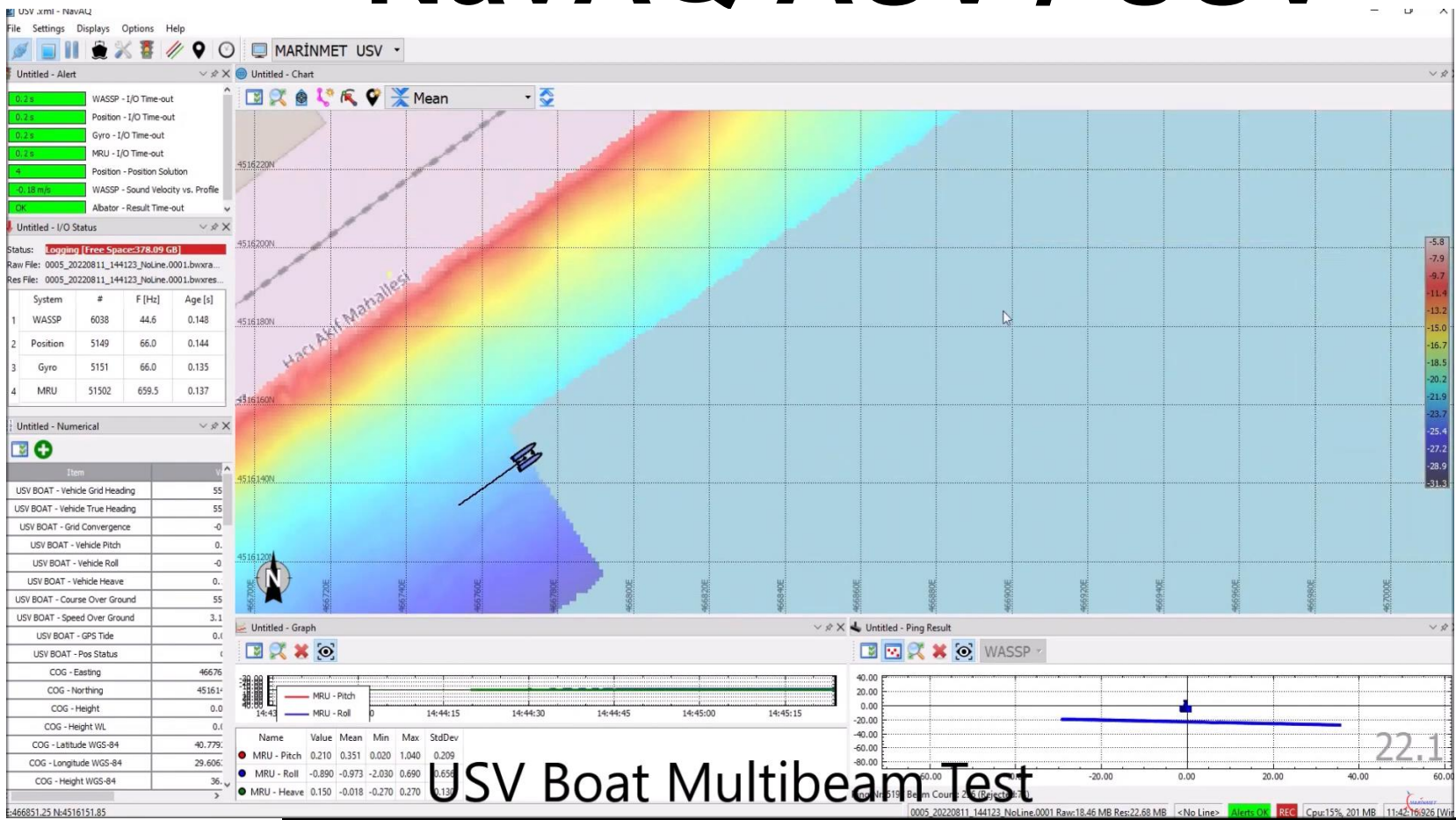
Cyl. Dimensions

	0,3500
	1,0000
Min:	0,6510
Max:	1,1054
	0,3000
	0,2500
	0,3000
	1,2500

Paste

OK Cancel

NavAQ ASV / USV



MARİNMET

Hidrografik Yazılım ve Danışmanlık

Destek

Eğitim;

Ürünlerimiz için yerinde eğitim sağlıyoruz, aynı zamanda daha genel olarak çok ışınli verilerin nasıl elde edileceği, kalibre edileceği ve işleneceği konusunda da eğitim sağlıyoruz.

Yerinde destek

Dünyanın her yerinde, yerinde destek sağlıyoruz. Anket yazılımı kurulumunuzda (MBES Beamworx) donanım / yazılım kurulumunuzda (Çok Işınli, Tek ışın, GPS, Hareket sensörleri) gibi konularda size yardımcı olabiliriz !

Danışmanlık

Hidrografik Araştırma ve Gemi mobilizasyonlarında 25 yılı aşkın deneyime sahibiz. Sistem kurulumunuzu ayarlamanıza, kalibre etmenize ve sorun gidermenize yardımcı olabiliriz. Ayrıca AutoPatch programı ile multibeam kalibrasyonunun tam olarak nasıl yapılacağına dair eğitim de verebiliyoruz.

Özel yazılım

Kimsenin sunamayacağı özel programı mı arıyorsunuz? Bu programı yapmanıza yardımcı olabiliriz! Hidrografik veri toplama, işleme ve çok ışınli sistem arayüzü oluşturma konularında deneyimimiz var. Özel bir yazılım çözümüne mi ihtiyacınız var?



İLETİŞİM * ULAŞIM



MARİNMET DENİZ İNŞAAT & GENEL SUALTI HİZMETLERİ SANAYİ TİCARET LİMİTED **ŞİRKETİ**



Adres: İstasyon Mahallesi. Vatan Caddesi. Ceyhun Sokak. Ahmet Algan Apt. No: 10/2 34940 Tuzla, İSTANBUL - TÜRKİYE



Tel: +90 216 447 38 65
Tel: +90 532 525 87 53
Tel: +90 532 305 11 13



E-posta: info@marinmet.com.tr
E-posta: marinmetsualti@gmail.com
Web: www.marinmet.com.tr
Web: www.marinmet.net