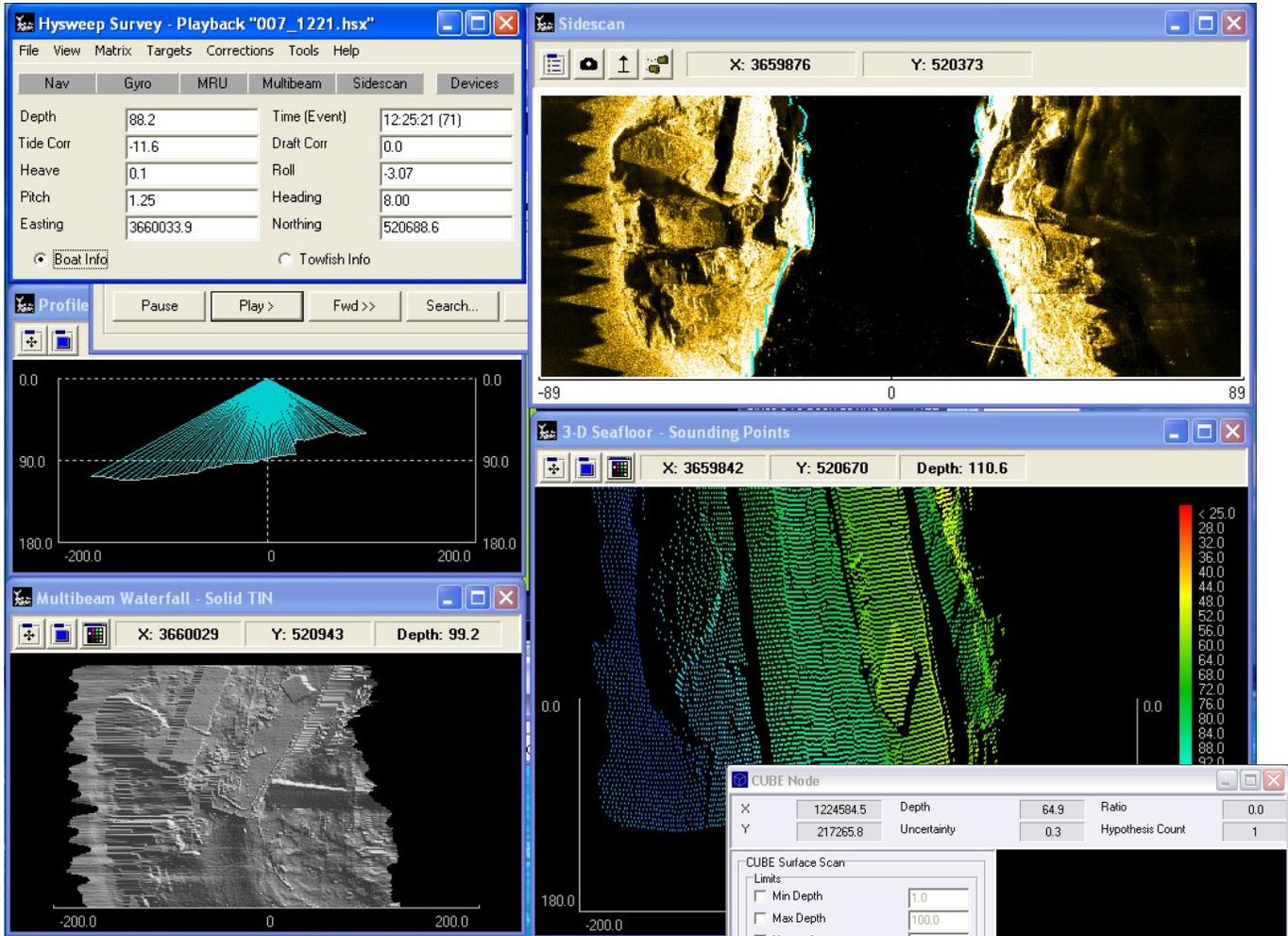


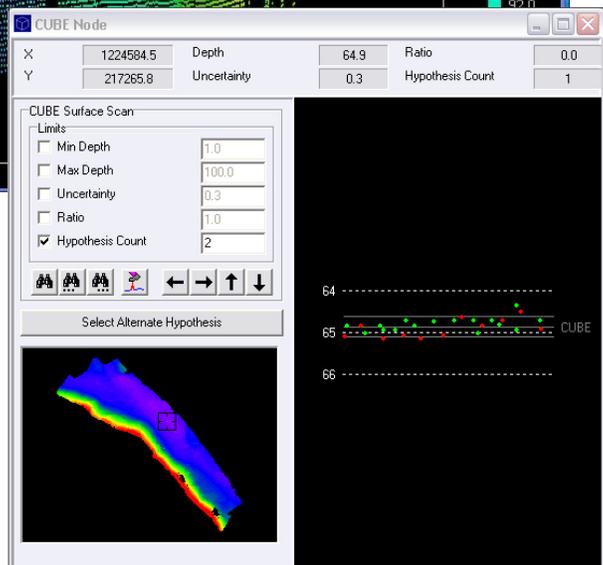
HYSWEEP®

Calibration, Collection, Editing
and Performance Testing of
Multibeam Systems in HYPACK®



Supports:

- Atlas Fansweep
- Atlas Hydrosweep MD2
- Benthos C3D
- Geoacoustics Geoswath+
- Imagenex DeltaT
- Odom Echoscan II
- Odom Miniscan
- Reson 7125
- Reson 8124
- Reson 8124/8125
- Reson 9001
- Reson 9003
- Ross Smart Sweep
- Seabeam 1000 Series
- Seabeam 2100
- Simrad EM1002
- Simrad EM2000
- Simrad EM3000/3002
- Simrad SM2000
- Tritech SeaKing



HYSWEEP now contains the CUBE data cleaning algorithm, licensed from UNH-CCOM as a standard feature.

HYSWEEP® is an optional module of HYPACK® that integrates multibeam and multiple transducer sonar systems. It provides programs for:

- System alignment and calibration
- Multibeam data collection and review
- Multibeam data editing
- QC and performance testing

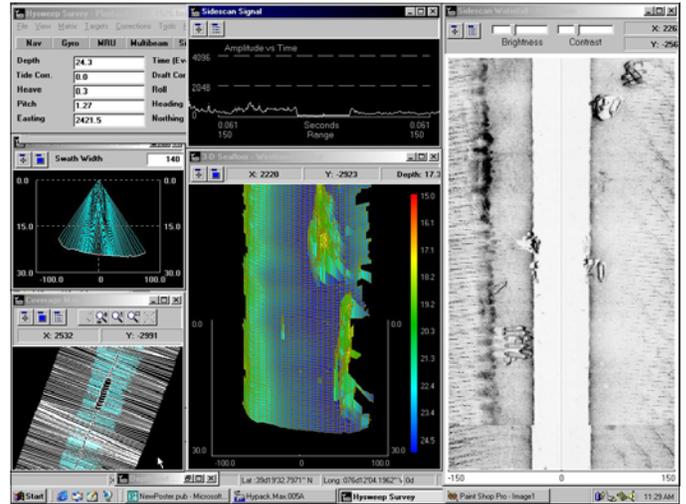
System Alignment: Using the integrated 'Patch Test' in HYSWEEP®'s MULTIBEAM EDITOR, you can quickly determine the exact mounting angles and time delays for both single and dual-head multibeam sonar systems. Your system calibration takes hours, not days.

Data Collection and Review: HYSWEEP® SURVEY runs simultaneous with the HYPACK® SURVEY program. It performs all data collection, logging and time tagging while providing graphics for data visualization, bottom coverage and quality control.

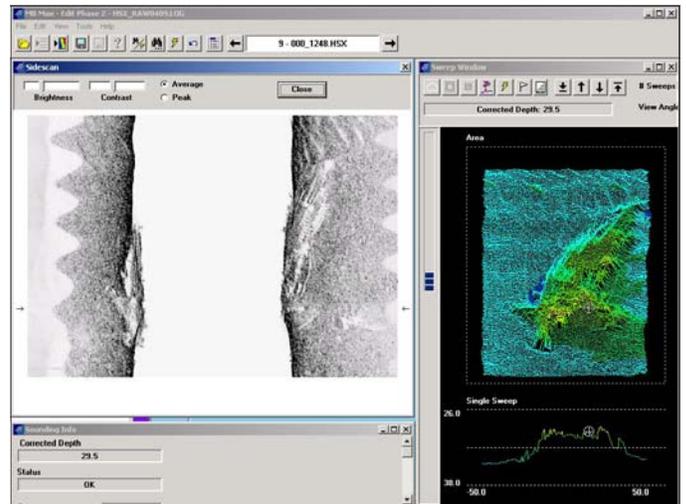
Multibeam Data Editing: HYSWEEP® provides powerful tools to review your data, apply geometric and statistical filtering methods to remove outliers and saves your editing session at any time. The MULTIBEAM EDITOR applies tidal corrections (both conventional and RTK tides) and sound velocity corrections to your data.

QC and Performance Testing: HYSWEEP® contains the Performance Test, as required by the U.S. Army Corps of Engineers. It provides a statistical summary of the repeatability of your system and justifies the use of wider beam angles for different surveys and bottom conditions. HYSWEEP® generates statistical comparisons between multibeam and single beam surveys, allowing you to determine the differences between the two data sets.

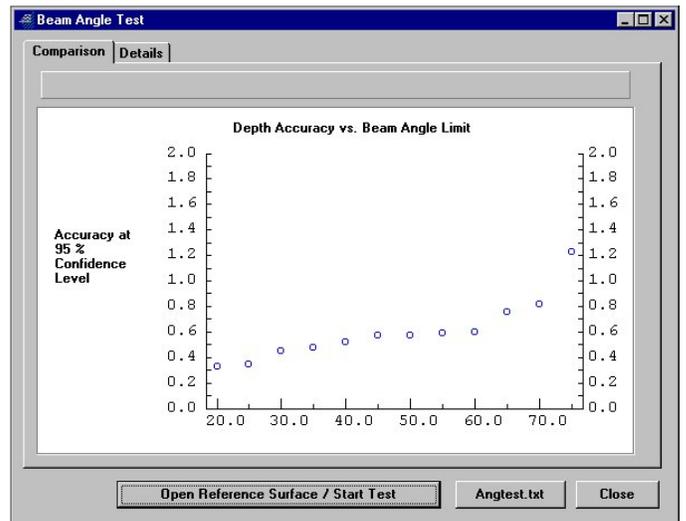
CUBE Integration: A new feature in HYSWEEP® is the integration of the 'CUBE' multibeam data cleaning algorithm licensed from the University of New Hampshire's Center for Coastal and Ocean Mapping. HYCUBE generates error models of your multibeam data set and outputs cleaned statistical and actual data sets.



Real time collection display from HYSWEEP® SURVEY.



Editing swath data with backscatter imagery displayed in the MULTIBEAM EDITOR of HYSWEEP®.



The Performance Test results from HYSWEEP® show the repeatability of your system versus beam angle.



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