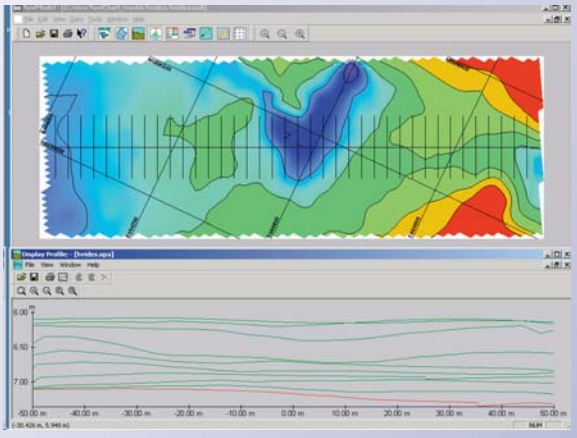
NaviModel

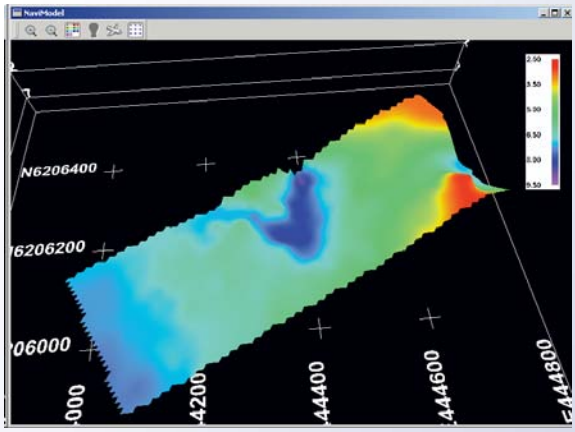
Survey Modelling Software

APPLICATIONS – The NaviModel software provides advanced tools for generation of Digital Terrain Models (DTM) based on either Triangular Regular Network (TRN) or Triangular Irregular Network (TIN) models. In the TRN models the survey area is divided into equally spaced triangular cells like in the EIVA Contour software, whereas in the TIN models triangles are created based on the raw data.



DATA INPUT – Data for modelling is imported as cleaned survey data from NaviEdit (NED), ASCII XYZ data, run-line and profiles or raw NaviScan and NaviPac survey files.

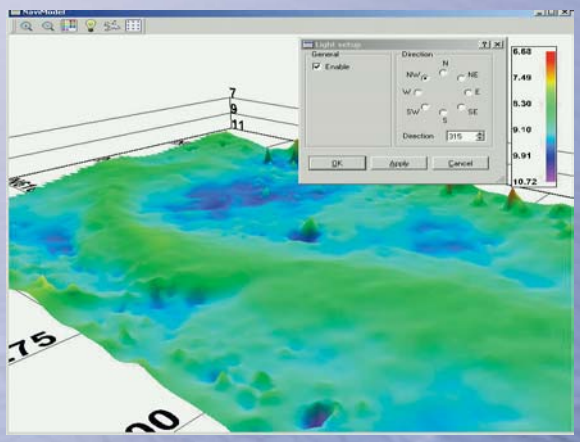
MODEL GENERATION – Models are created for a survey area by definition of model parameters, desired cell type and depth data type (minimum, maximum, average, last value, standard deviation and density).



DATA REDUCTION – During the model definition phase NaviChart provides facilities for data reduction by setting of tolerances for depth variations and allowable shrinkage of model boarders.

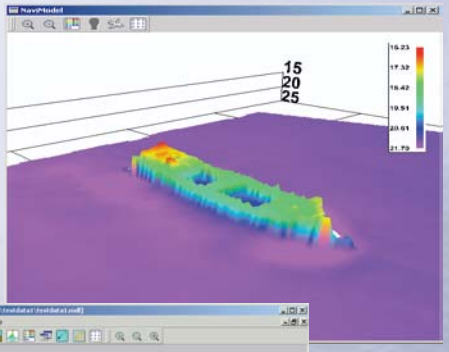
CLEANING – NaviModel features additional cleaning of models, either manually profile by profile in a pseudo 3D view or automatically through a spatial plane over the model allowing handling of data overlap.

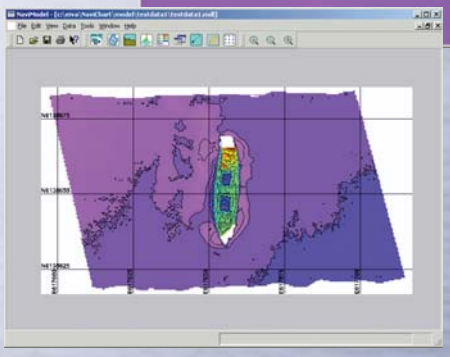
FLEXIBILITY – Optional addition of survey data after creation of a model provides the possibility of dividing large data sets into more files for easier data handling.



DERIVED MODELS – NaviModel provides for the generation of derived models, substitution of one model into another model (e.g. insertion of theoretical model into data model), merging of models, etc.

MODEL ANALYSIS – NaviModel features a/o analysis of actual versus theoretical models, model manipulations, and volume/area computations.





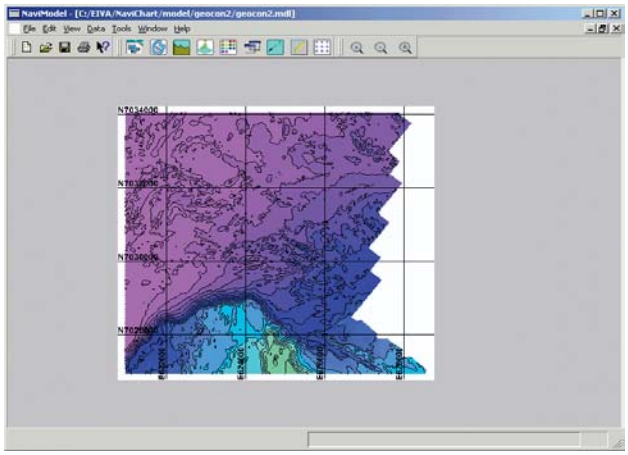
DATA VIEWS – Data displays comprise a/o 2D colour-coded views, ability to rotate sun illuminated 3D views with free-flight feature and presentation of data relative to different sea levels. Longitudinal and cross profiles are defined or loaded by use of a profile definition curve.

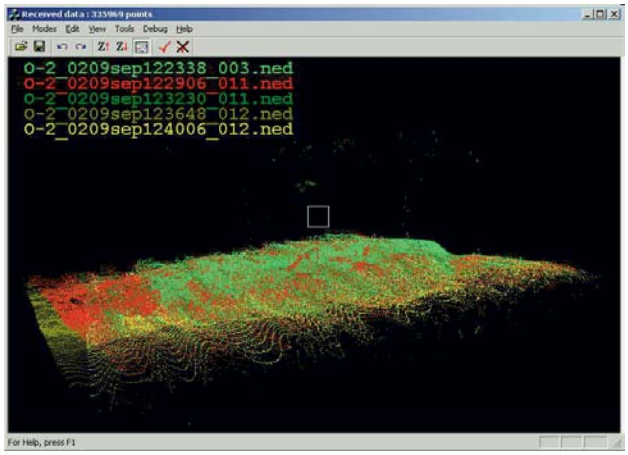
REPORTING – At any time during the generation of models access to progress information and reporting is available.

OUTPUT – NaviModel provides data output as DTM, Contour curves, longitudinal and cross profiles, cleaned or rejected data and screen prints. Formats comprise raw ASCII XYZ, DXF and NaviChart format.

WINDOWS DISPLAYS – Full system flexibility allows personnel design and configuration of windows for preferred display settings and layout.

PRODUCT SUITE – The EIVA software product suite comprises software for all aspects of marine surveying, from integrated navigation and data acquisition to post-processing and final charting. Full continuity is provided between the individual software packages. Through a flexible interface the individual software packages also allow for use with 3rd party software. The EIVA software product suite is written for Microsoft Windows NT, Windows 2000 and Windows XP, and the user interface adheres to The Microsoft Interface Guidelines. All EIVA software products are made according to ISO9001 principles for system design.





Technical Specifications

Hardware (recommended)
- Pentium processor

Operating System
- Windows NT, Windows 2000 or Windows XP

Displays
- Screen text, font size, graphics, colours and windows layout fully configurable
- Fully user designable screen layout
- Storage of operator preferred screen layout and settings

Digital Terrain Model
- TRN (Triangular Regular Network)
- TIN (Triangular Irregular Network)

Data input
- Cleaned survey data from NaviEdit (*.ned)
- ASCII XYZ data
- Run-line and profiles
- Raw NaviScan filesRaw NaviPac files

Model generation
- Definition of name
- Definition of area
- Definition of cell type
  - TRI (regular grid)
  - TIN (irregular grid)
- Definition of data type
  - Minimum
  - Maximum
  - Average
  - Last value
  - Standard deviation
  - Density
- Model parameters
  - Cell size
  - Collar width

Data reduction
- Tolerances for increasing/decreasing depths
- Allowance for boarder shrinkage

Cleaning
- Manually profile by profile in pseudo 3D view
- Automatically in spatial plane
- 3D data cleaning

Derived models
- Substitution of model areas
- Merging of models
- Water levels

Model Analysis
- Actual versus theoretical models
- Model manipulations
- Volume computations
- Area computations
- Data vs. model statistics

Output
- DTM
- Contour curves
- Longitudinal profiles
- Cross profiles
- Cleaned or rejected data
- Screen prints

Output formats
- ASCII XYZ
- DXF
- NaviChart

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