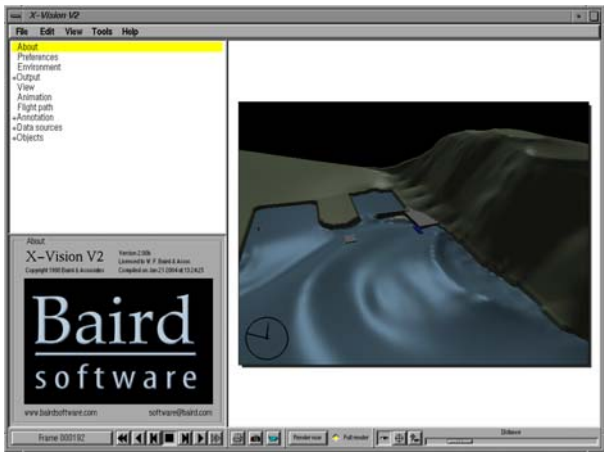
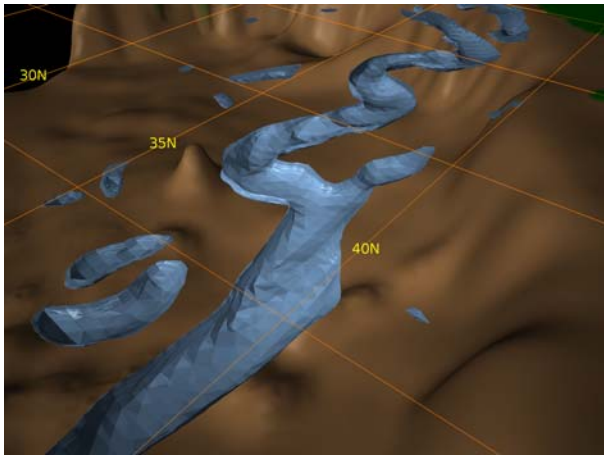
Baird
software

X-Vision

Visual Analysis Software





X-Vision is a 3D visualization and animation environment supporting many kinds of spatial and temporal data. In addition to visualization, it provides tools for editing and analysis of recorded and modeled data.

The software was initially developed in order to significantly decrease the turnaround time required to prepare, run, and analyze results from hydrodynamic simulations, although because of its generic interface, it is suitable for other spatial data whether simulated or collected.

Key benefits to modelers and designers

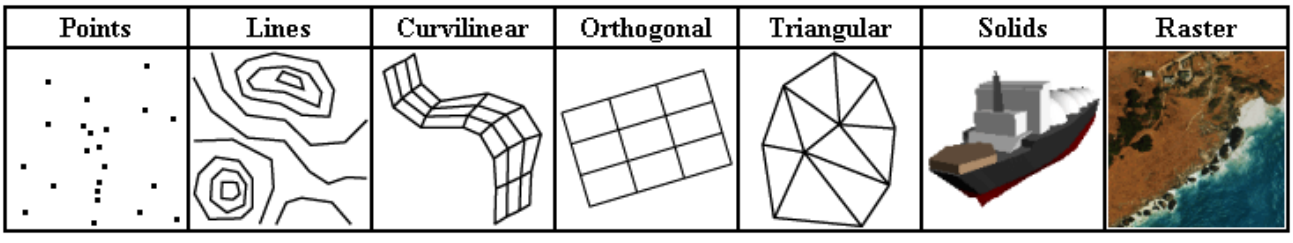
- Visual inspection, generation, and editing of spatial data
- Visualization and analysis of results
- Synchronous display of different data sets for comparison and validation
- Production of 3D images and animations of the virtual environment for presentation
- Batch-mode capabilities for unattended repeated operations using various scenarios

These features allow the user to quickly detect invalid data, errors, or numerical instabilities in a simulation, as well as observe complex interactions of various phenomena in an intuitive manner. Presentation of simulation results to laypeople is also greatly enhanced since the animations look similar to the real physical processes.

X-Vision runs on X-Windows under Irix, Solaris, and Linux-IA32 operating systems. 64-bit versions are available on Irix and Solaris for handling very large data sets.

Fast 3D on-screen and off-screen rendering is achieved using OpenGL. Extremely high-resolution image output is possible due to tiled rendering capabilities.

Geometric configurations supported include points, lines, triangular meshes, orthogonal grids, curvilinear grids, rasters, and solids models. Volumetric configurations supported include fixed, sigma, and hybrid spacing. Typical data sources could include any of survey, sensor, GIS, satellite, hydronumeric or atmospheric models.



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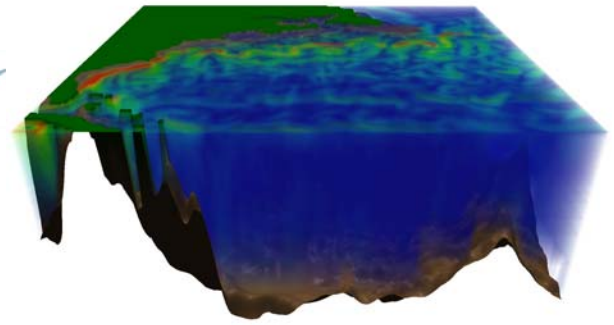
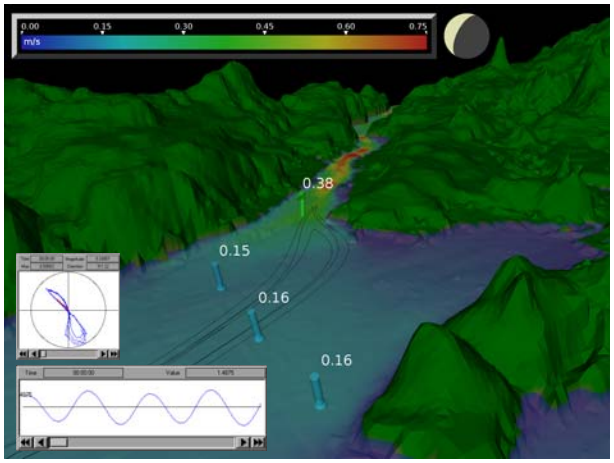
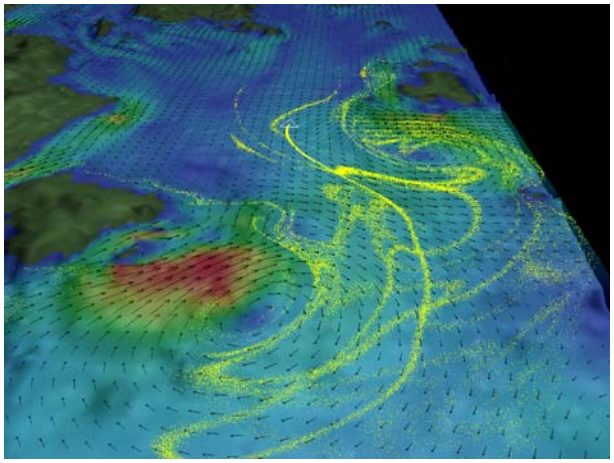


Supported Numerical Solvers
- MIKE 21, MIKE 3
- Telemac 2D/3D
- Adcirc 2D/3D
- RMA 2
- User-specified models via NetCDF generic format
- Expandable database for client-specific files

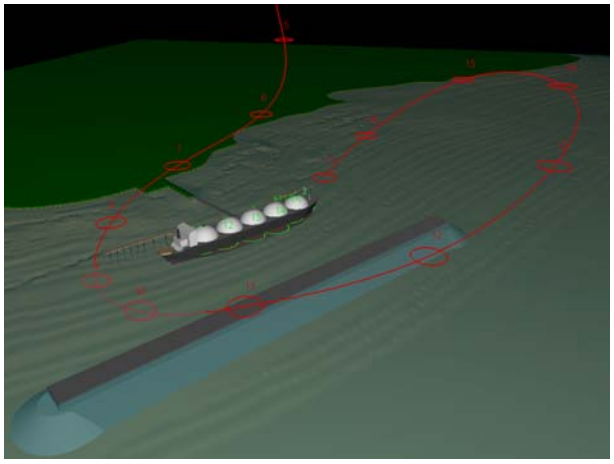


Data Analysis Tools
- Data probe for node specific information
- Visual markers for probe (buoy, windsock, etc.) with value labels
- Static and dynamic scalar and vector charts for timeseries at individual nodes
- Printed postscript plots of timeseries
- Current tracer lines

Particle Tracking
- Operates on TIN, orthogonal, curvilinear model results
- Surface or volumetric current fields
- Steady-state or dynamic currents
- Particle settling, and decay
- Hot start, splatter functions, multiple flux injection points



Flight Path
- Created by specifying a number of control points by graphical insertion
- Viewpoint and focalpoint curves are interpolated using a variety of methods
- Graphical or manual editing of control points
- Path import/export
- Automatic path generation tools
- Global path modification functions



Other Features
- Simultaneous animation of multiple data sets, labels, clocks, charts, probe markers, flythrough
- Orthogonal grid generation
- Dynamic solids models
- Image Draping
- Annotation
- Movie recording
- Time synchronization
- Stereoscopic rendering
- Tiled rendering
- On or off-screen rendering
- Batch mode