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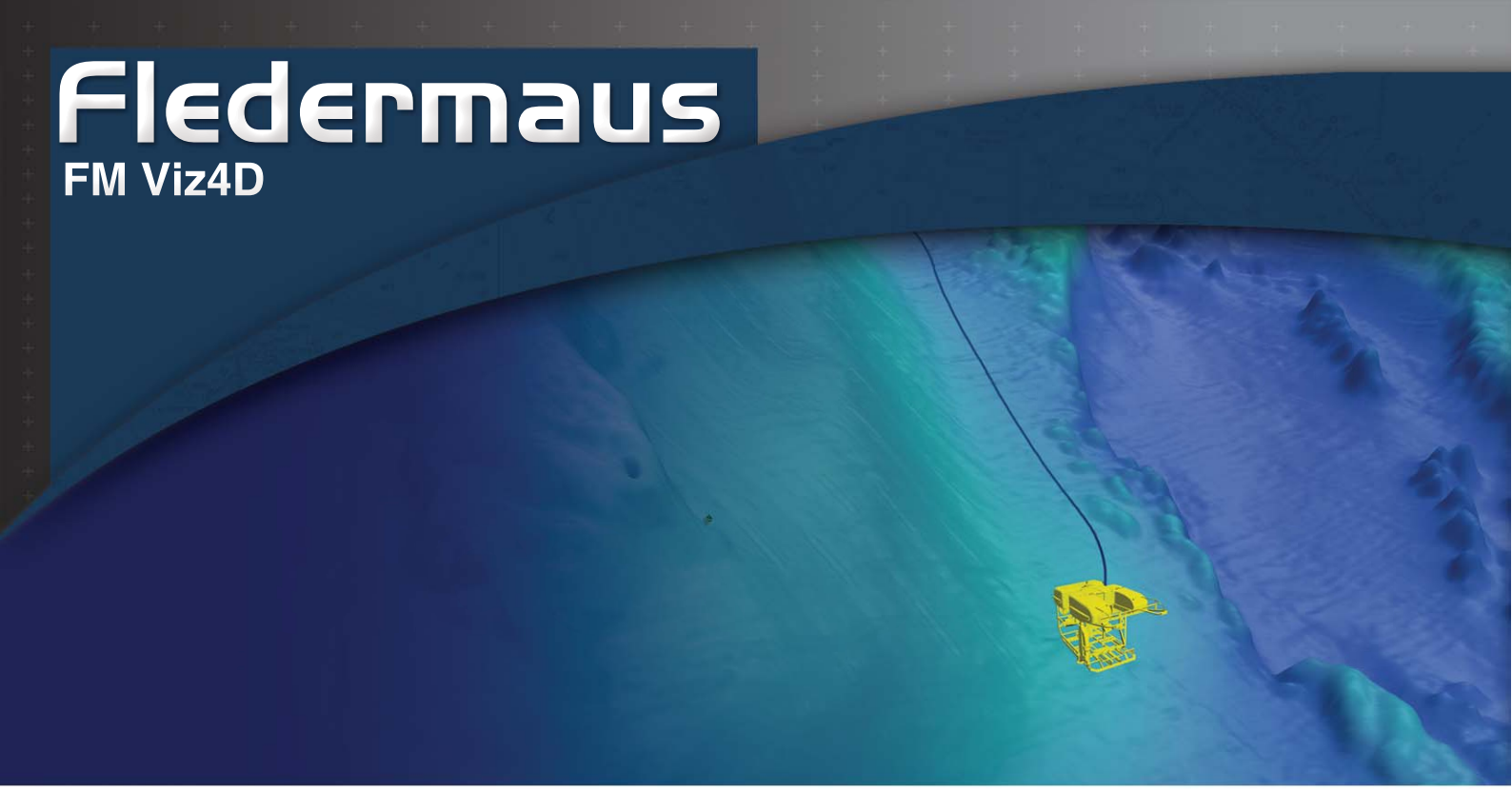
FM Viz4D



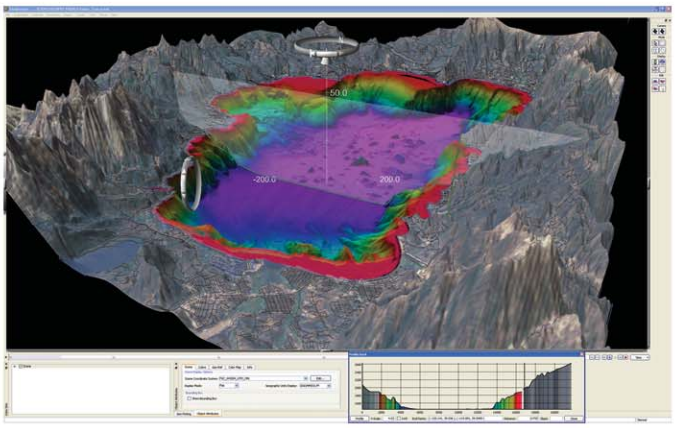
Fledermaus 4D - Working in Space and Time

Industry-leading visualization for geoscience and geospatial professionals.

Use FM Viz4D to create intuitive high-resolution visualizations of your data for analysis and interpretation, from multiple data formats and sources. FM Viz4D has a new time framework, full geo-spatial referencing, simplified surface creation, and an integrated suite of surface manipulation tools to both enrich and simplify the visualization process.

FM Viz4D is the ideal software bundle for:

- **Research scientists** in need of a way to easily and consistently display and analyze complex geospatial datasets and effectively communicate results.
- **Educators, content developers, and outreach specialists** looking for a stereo-capable visualization program built around true 4D interaction with data.
- **Cartographers, illustrators, and marketing personnel** who are creating products from already-processed and interpeted data. interpreted data.
- **Hydrographic survey and engineering teams** that don't require access to raw data, processing, or route planning tools.



Lake Tahoe scene from SIO Visualization Center, Scripps Institute of Oceanography, from mapping by USGS

FM Viz4D moves users beyond static 2D representation and analysis to an intuitive and dynamic 4D environment. It combines quantitative tools with easy import of multiple types of data, giving you the ability to build integrated scenes, create high resolution images and movies, and export to standard GIS and CAD packages. FM Viz4D is truly more than *"just a pretty picture"* – it's a comprehensive visualization and interpretation environment.

QPS

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Import and integrate data from multiple sensors, databases and third party applications.

- Create sun-illuminated 3D surfaces from gridded and ungridded data using an easy, wizard-based interface.
  - Direct support of many public domain and commonly used grids — ETOPO, GMT, ESRI, Surfer, USGS DEMs, etc.
  - Supports all major multibeam, swath sonar, and bathymetric lidar data formats, as well as common transfer formats and generic ASCII.
  - Display datasets of multiple resolutions in the same scene without resampling or degradation.
  - Create grids based on any measured or interpreted raster attribute (gravity, magnetic intensity, slope, grain size, etc.).
  - Full support of common and custom geospatial projections.
- Import a variety of supporting datasets including ASCII points and lines, images, ESRI shapefiles, AutoCAD DXF and DWGs, and 3D models to enhance your visualization and analysis.
  - Dynamically drape imagery such as aerial photos, satellite images, maps, charts, and sidescan mosaics.
  - Vertically hang photographs, interpretive cross-sections, or seismic subbottom images.
  - Add coastline shapefiles and structural outline drawings.
- Take advantage of the addition of time referencing to the geo-spatial framework — import time-stamped data to show surface change, object movement, dispersal patterns, or sea level change.
- Use pre-generated objects such as planes and grids to aid analysis and enhance your scene — add horizontal planes to simulate changing water level, check object clearance, or for use in surface difference, area, and volume calculations.
- Option to add water column data processing (FMMidwater) to create time-aware beam fans, beam curtains, volume and point objects of water column data ranging from methane plumes to fish populations.
- Option to add direct integration to ArcGIS (1) software Geodatabase, allowing easy access to and utilization of a growing set of geospatial tools and easy product creation within the ArcGIS software suite.

Efficient analysis and interpretation tools in an intuitive 3D visualization environment

- Manipulate surfaces to get the best representation of seafloor or land using interpolation, masking, cropping and resampling tools.
- Create and edit color maps and shading parameters to suit data and type of analysis.
- Use interactive digitizing, interpretation (attributing), and labeling tools to geo-pick points and define areas for interpretation or use in an area-based analysis; exporting locations to file or database.
- Analyze your integrated data with our growing suite of tools: slope analysis, instant interactive profiling, contouring, and surface difference.
- Monitor the location of objects — vessels, AUVs, ROVs, gliders, or tagged animals — in real-time via serial cable or UDP packet; save paths for later playback and analysis.

Products, data export, and database integration

- Create and edit powerful interactive visualizations and movies for presentation and distribution using time-supported objects, a new scalable time interface, and brand-new key-framing tools.
  - Show surface change over a variety of data and time scales—from wave propagation to plate motion—using a true time-integrated surface series.
  - Add the next dimension to earthquake or water column visualizations by taking advantage of point-data time stamps.
  - Integrate time-varying visibility, transparency, and location of objects into a playable flight path that can be dynamically created and interactively edited.
  - Use multiple camera locations to show different perspectives at the same time.
- Produce high-resolution graphics for reports, posters and publications.
- Generate and export point files, polygons, contours, grids, and high-resolution geo-referenced imagery of surfaces in a variety of common industry formats.
- Export Google Earth KML and KMZ files for upload and distribution.
- Foster collaboration and education with highly immersive, interactive visualization.
  - Interactive temporal-spatial scenes can be shared using the free viewer, iView4D.
  - Full stereo support, both active and passive, for presentation in visualization centers and on GeoWall systems.
- Seamless workflow from processing to database with the optional interface to ArcGIS (1) software.

Notes:
(1)Integration with ArcGIS software requires an ArcGIS license, and is only available for Windows 32-bit systems. Trademark provided under license from ESRI.