

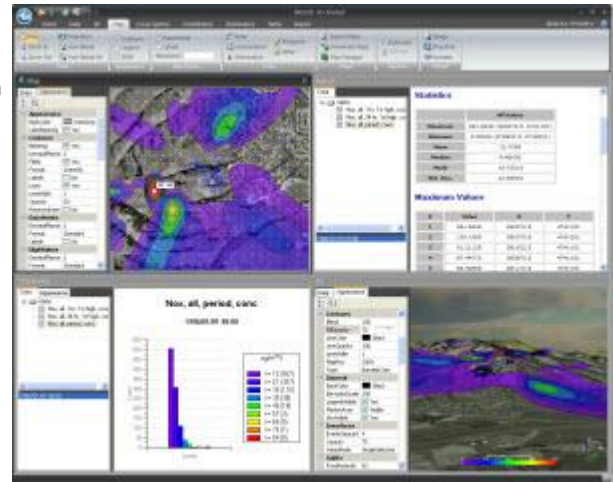
BREEZE 3DAnalyst

BREEZE 3DAnalyst is a powerful post-processor that enables you to analyze and visualize data in time series, contour plots, and 3D isosurface and plane views; and to visualize the intersection / union of multiple data sets.

It is useful for analyzing meteorological, terrain, and concentration data. Animated movies can be created for display in presentations and it is compatible with Google Earth™ and Surfer®.

BREEZE 3DAnalyst can display data from numerous sources including:

- **Continuous release models such as:**
AERMOD, CALPUFF, and ISC
- **Meteorological data from:**
CALMET, HYSPLIT, SCIPUFF, and others
- **Digital elevation model tiles**



Overview

BREEZE 3DAnalyst is a powerful and flexible application that frees up your time to interpret data instead of wasting time reformatting it. The intuitive design, developed to Microsoft® and BREEZE standards, and multitude of functions make this the best data analysis tool on the market.

Plotting

The plotting and graphing features in 3DAnalyst allow you to create great-looking plots of modeling results and raw datasets so that you can quickly analyze the data in both two and three dimensions. With 3DAnalyst, you can:

- Create custom contour levels for an entire project or individual datasets
- Customize all object properties to display only the results and objects you want to see
- View data from every angle with 2D plane views, 3D surfaces, and slices of 3D data in the XY, XZ, and YZ planes
- Plot data as a function of time and animate the time steps
- Use your mouse to see real-time data interpolation between receptors
- Plot data to Golden Software's Surfer® application
- Plot data to Google Earth™
- Create 3D templates that can be loaded with future projects to quickly recreate three dimensional display views

Data Manipulation

Not only can you display data, 3DAnalyst allows users to perform data manipulation simultaneously. Temporarily transform data with easy-to-use scaling and transformation tools to analyze how your results could change. You can also use the numerous tools to extract averages, percentiles, highs, and more all from a single dataset.

The latest version of 3DAnalyst also features powerful merging capabilities. Choose from a wide array of merging options (sum, difference, multiply, and more) and simultaneously perform scaling or translation to the merged datasets.

Data Analysis

Just as impressive as its plotting and data manipulation abilities, 3DAnalyst makes it easy to analyze data. Each of the display views brings new information to light so that users can increase understanding of complex datasets and the interrelationships of multiple parameters. With the Map and 3D views, the mouse can be used to rotate, slice, and zoom in or out to identify data trends and anomalies. The Cross Section view provides 2D views of 3D data so that users can find things that might escape them with traditional maps. The Table view has threshold and sorting functions so users don't need to switch from one program to another just to do simple data analysis.

3DAnalyst version 2 also has two new displays; the Contribution and Distribution views. Just opening your data in 3DAnalyst will bring a wealth of new information to you.

Additional Features

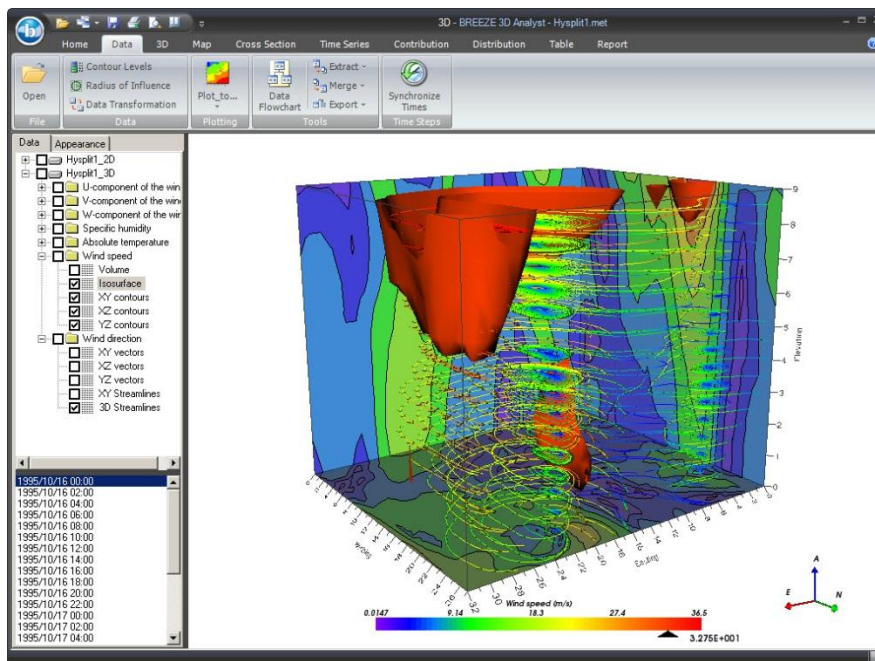
- Export data to X,Y,Z text files
- Synchronize display properties for Cross Section and 3D windows
- Add titles and axes to image displays
- Preview and print each display view
- Copy snapshots of each display window paste to other applications
- Save display images in image formats such as .bmp, .jpg, and .gif
- Save time by creating templates for 2D and 3D displays that can be loaded for new projects
- Copy and paste tabular data to spreadsheets
- BREEZE 3DAnalyst features a number of different display views to help you easily and quickly analyze, view, modify, and save your data. Utilizing the ribbon bar interface, working with your data has never been so easy.

Displays

3D Display

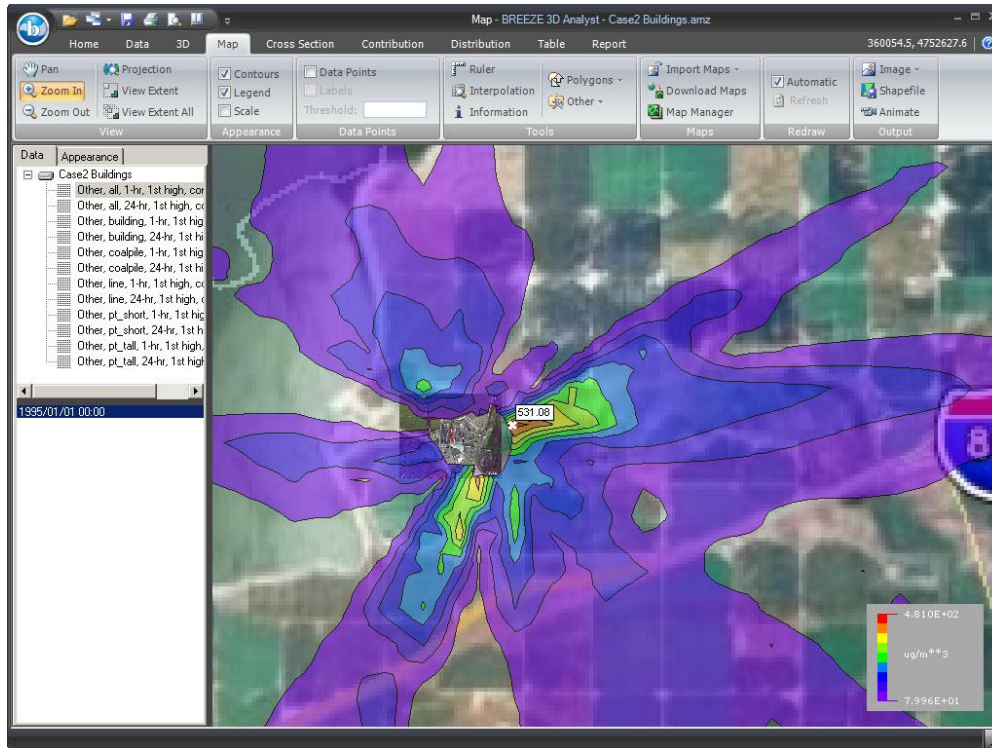
The 3D display view allows you to rapidly investigate the 3D distribution of spatial data. In the top-left panel, the user-data and associated display options are provided in an intuitive and organized tree structure. Items in the data-tree can be clicked on to display either a cross-sectional plane (color-coded, level-contoured) or a three-dimensional isosurface (color-coded, value-adjustable). In the bottom-left panel, the data time-periods can be selected randomly or in sequence.

Individual contour planes can be selected so that you can observe the spatial variations of the data as you move (i.e. slide) the planes to any location in X,Y,Z. The color scale can be adjusted to select and move the iso-plane to any desired value. This helps you observe how the data spatially transitions from minimum to maximum values. Display any number of variables with any number of contour planes and iso-surfaces. Set the transparency of both the contour planes and iso-surfaces. Observe how the planar contours intersect the iso-surfaces. Set color and level values for any number of contour and surface values. Automatic levels, user-defined min/max thresholds, and fully user-defined level tables are available. Create time series animations to visualize and analyze how data variables change and interact through time and space.



Map Display

The Map display shows a top down view of the modeling domain and any underlying basemaps. You can create contour maps within a true Geographic Information System (GIS) and overlay results on base maps which can be imported or downloaded through several easy-to-use wizards. 3DAnalyst supports AutoCAD DXF, ESRI Shapefiles, MapInfo TAB, and various raster image formats. AVI and Flash movies of time based datasets can be generated within the Map display, as well data shown in the Map display can be plotted to external programs such as Google Earth™ and Surfer®.

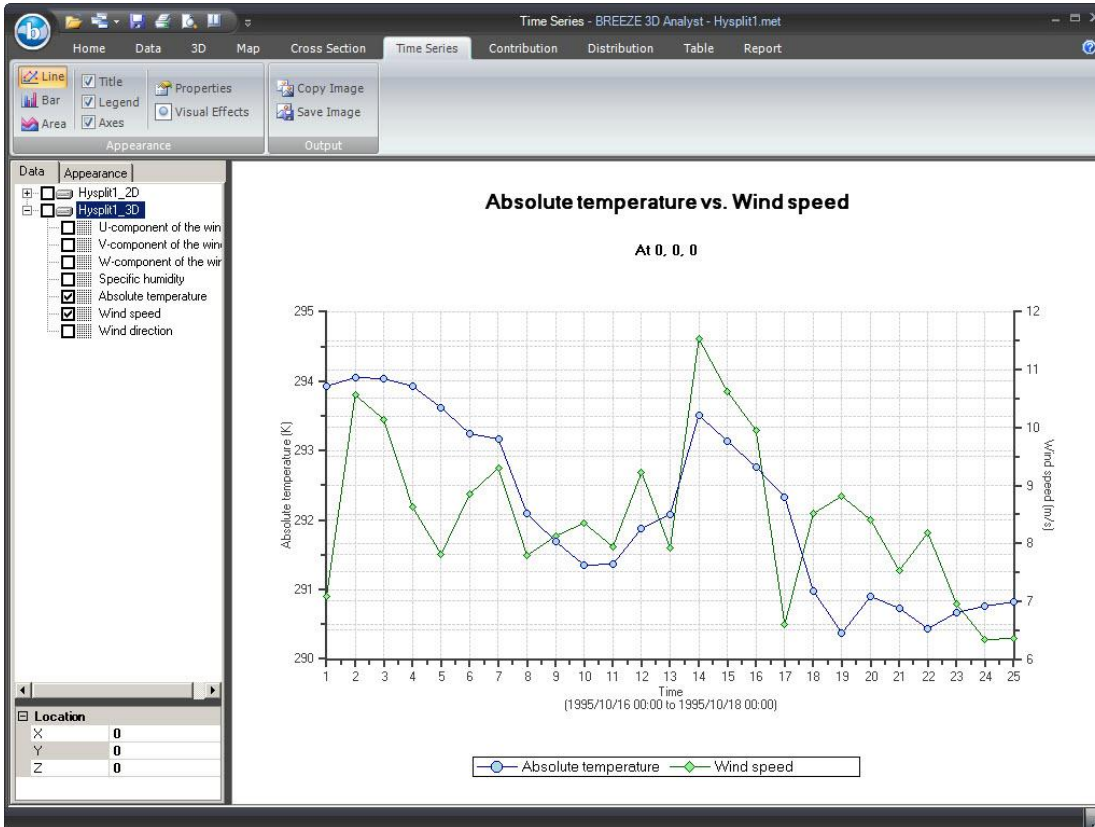


Cross Section Display

The Cross Section Display allows the user to display 2D or 3D gridded data as a 2D or 3D contoured or mesh cross sectional image. 3D data can be displayed in the XY, XZ, or YZ planes for different levels (e.g., heights above ground level or mean sea level) and different time periods. The ribbon bar interface makes it easy to choose whether data will be viewed in 2D or 3D as well as selecting contoured or mesh displays. Data types with multiple time steps can be viewed one step at a time or animated to create a time series of each cross section.

Time Series Display

The Time Series display window shows the change in a selected parameter as a function of time. Up to two parameters can be plotted in the same chart. If 3D data is available, the specific height level (z-value) can be selected. A tool button allows the user to change to a bar chart, area chart, or other chart types.



An example of meteorological data variables plotted versus time in the Time Series display.

Table Display

This display window shows the gridded data in tabular format. Simply select the parameter from the data tree to view the tabular data. If data is available for multiple time periods, select the desired time period. Data can be sorted in ascending or descending order and thresholds can be applied to highlight values above any limit you want to analyze.

The data can be cut and pasted to a spreadsheet program like Microsoft Excel.

NEW Displays - Contribution and Distribution Display

BREEZE 3DAnalyst Version 2 has two new display views: the Contribution and Distribution displays. The Contribution display automatically generates a graphical or tabular view of source contributions to receptors. The graphics can be copied and pasted into other applications while the tabular data is fully compatible with spreadsheet programs. Like the other displays in 3DAnalyst, the Contribution display contains several templates to choose from such as pie charts, bar graphs, scatterplots, and more.



The Distribution display window provides the user with a graphical or tabular view of how concentrations are distributed over time at all receptors. The graphs can be customized by the user and exported to be used in external programs.

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