

The first fully integrated 3D GIS solution

Encom Discover 3D for MapInfo Professional is the first fully integrated 3D GIS solution for the resource sector. Built on top of the functionality and power of the award-winning Encom Discover, Discover 3D turns a 2D GIS environment into a full 3D GIS system. By switching from the traditional 2D GIS mode to full 3D, you can view and interact in real time with a range of GIS datasets.

Seamless link with Encom Discover

Drillhole project data, drillhole sections, drillhole logs, geochemical or geophysical survey data, grid surfaces, raster images, 3D DXF objects or any other mapped data from MapInfo/Discover can be transferred to the environment. Discover 3D is fully integrated with Encom Discover and Encom Discover Mobile technologies.

Enhance 3D data visualisation

Discover 3D contains a number of utilities designed to enhance the appearance of your data. Display drillholes or surface grids using a range of available colour look-up tables or legend patterns or create your own. Modulate data by colour, size or rotation, add labels, modify image and DXF object transparency or add a 3D axis to create an impressive presentation to showcase your data.

Advanced features

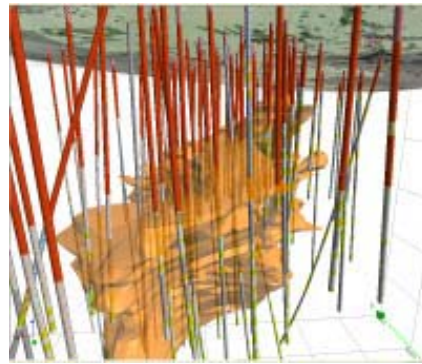
Create 3D solid objects from existing orebody, fault, aquifer or lithological outlines currently displayed as section boundaries.

Display and modify the appearance of voxel models created in third-party mine simulation or geophysical inversion software.

MapInfo/Discover - Discover 3D

Discover 3D is a completely new add-on module for Encom Discover and is available for purchase separately. Data can be easily transferred from the MapInfo environment to Discover 3D with some data formats able to be opened directly via Discover 3D menu options.

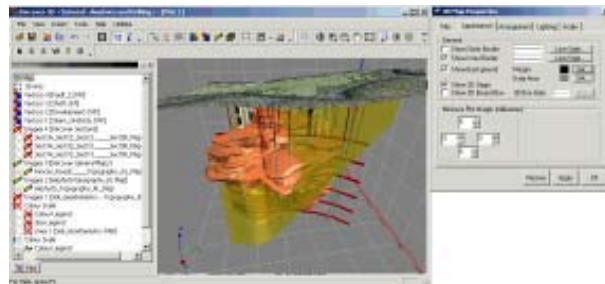
- View Encom Discover Drillhole project data
- Open Discover drillhole dataset tab files or Geosoft WholePlot databases directly into Discover 3D
- Send data to Discover 3D via menu options or from “within” a map window
- Transfer Discover 3D views back to MapInfo to use in presentation and hard-copy output
- Continuous interactive help



Discover 3D User Interface

The Discover 3D User Interface is comprised of pull-down menus, button toolbars, the Workspace Tree window, main display window and interactive help window. The User Interface controls:

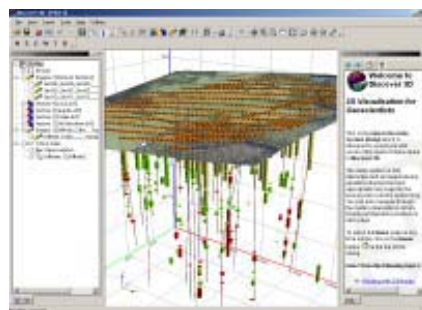
- the addition, removal and visibility of data in the 3D window via the Workspace Tree
- navigation within the 3D environment via zooming, panning, rotation, fly-through and pre-set views
- 3D Axis display
- property dialogs to modify the appearance of data in the 3D map window.



Display Map Window Views

Any map window view created in Discover can be viewed in Discover 3D as a Georeferenced Bitmap Image. The georeferenced image may be displayed in Discover 3D at a constant Z-level or draped over an elevation surface grid. A georeferenced image may be comprised of any of the following data types:

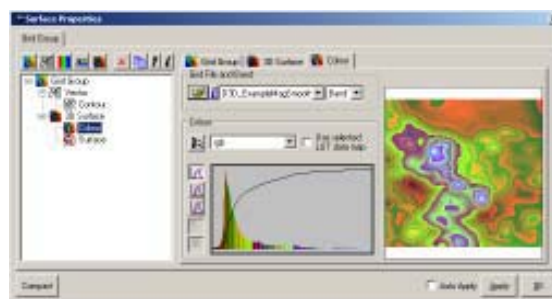
- surface layers such as elevation grids
- raster files such as aerial photography or satellite imagery
- vector data such as contours, roads, infrastructure
- annotation layers.



Gridded Surfaces

Gridded surfaces can be displayed directly from Discover 3D or as part of a georeferenced image from MapInfo Professional. The Discover 3D Grid Surface utility provides the following functionality:

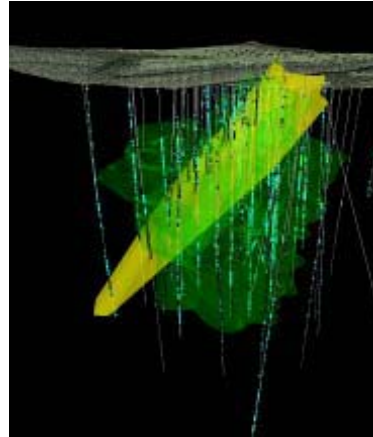
- support for a wide range of surface file formats such as ERMapper, Geosoft, Surfer, Vertical Mapper and GeoTIFF files
- various surface grid display settings including pseudocolour, RGB, ER Mapper Algorithm
- sun-shading, stretch and colour histogram modification and colouring by existing or user-created look-up tables
- contour or offset surface grids vertically to align with data.



Display 3D Vector Objects

Discover 3D has the ability to open and display 3D DXF files created from external software packages or MapInfo Professional vector objects.

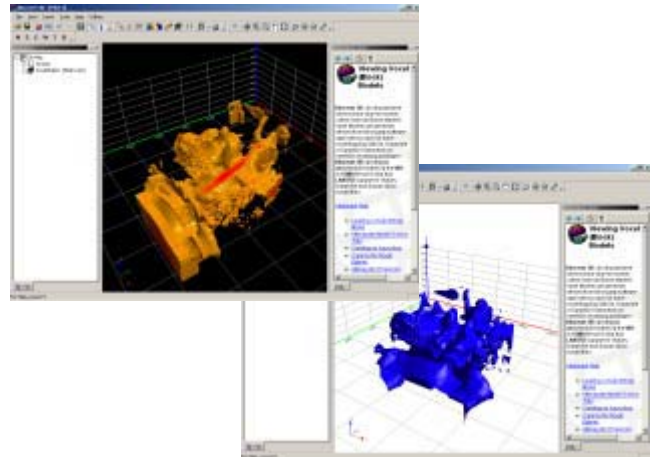
- Display 3D Vectors such as orebody extents or pit/ underground mine design directly into Discover 3D
- Options to Smooth 3D object surface, reverse facing or cull back
- Override existing fill colour
- Apply transparency factor
- Display 3D object as wireframe
- Z-values for MapInfo vector object selections can be constant, read from attribute column or interpolated using a surface grid.



Display Voxel Models

Discover 3D has the capacity to display and manipulate a type of 3D volume model known as a Voxel. The Discover 3D Voxel Model utility includes the following functionality:

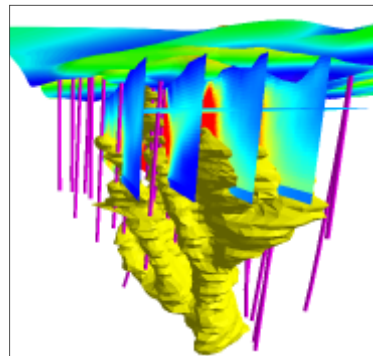
- support for UBC and CEMI geophysical inversion models
- limited support for Surpac, Vulcan and Datamine geological models
- Threshold (a display of the actual voxels), Isosurface (3D contour surfaces) and Slice (flat surfaces) rendering options
- interactively "slice" model to remove data in any north-south, east-west or top-bottom direction
- control model appearance and colour via special lithology table
- chair clipping in east, north and vertical directions
- colour voxel model using existing or user-defined look-up table.



Display Geochemical and Geophysical Survey Data

Any sample data collected systematically along traverses either as individual points or continuous line readings can be displayed in Discover 3D.

- Modulate sample points using colour, size or rotation using values from any field in the data
- Create line profiles and fill with colour to show data above or below a nominated threshold value
- Annotate sample points



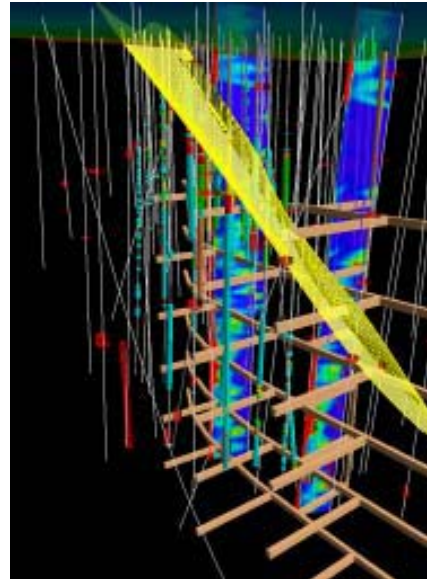
View Drillhole Sections and Logs

Existing Discover drillhole sections or drill logs can be displayed in Discover 3D as georeferenced images along the plane in which the image was created. Any annotations, downhole drill displays or section boundaries are also visible. Individual drillhole logs can also be rendered as image curtains to corresponding 3D drillholes.

Display Drillhole Data

Drillhole data can be displayed in a variety of ways in Discover 3D as long as the drillhole table is already part of a Discover drillhole project or in MapInfo tab or Geosoft Wholeplot database format.

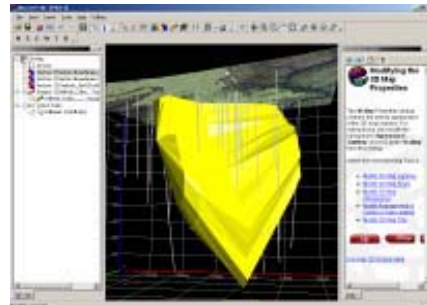
- Select drillholes to display from map or list
- Modulate downhole data such as lithology or assays using existing or user-created Colour Look-up table or Legend Editor patterns
- Annotate drillholes with HoleID, EOH, depth intervals, etc
- Display a number of downhole variables simultaneously



Generate 3D Solids

Create simple interpreted polyhedral objects or open surface 3D objects such as an orebody, fault, aquifer or placer deposit etc from existing polyline boundaries.

- Save individual cross-sections of an orebody or a lithological boundary displayed in a section view in Discover as a 3D DXF vector file.
- The 3D Solid Generator automatically interpolates between the vertices of each section boundary to create an enclosed volume.



Requirements

Encom Discover 3D is an optional advanced module for Encom Discover. Minimum system requirements are Windows 2000/XP, Pentium III 800+ processor, 256Mb RAM, 32Mb video card with hardware acceleration and 100Mb free hard disk space.

Recommended system requirements to run Discover 3D are: Windows XP, Pentium 4 2000Ghz+ processor, 512-1024Mb RAM, 62-128Mb video card with hardware acceleration and 200Mb free hard disk space.

For more information

For more information about Encom Discover 3D, visit our website at www.encom.com.au, or talk to Encom to arrange a demonstration or request an evaluation copy of the software. To contact an authorised reseller in your region, visit www.encom.com.au/resellers.

Encom Discover is one of a suite of specialist geophysical and GIS software tools from Encom Technology. For more information about Encom Profile Analyst, Encom ModelVision, EM Flow, EM Vision and other products, contact Encom.

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