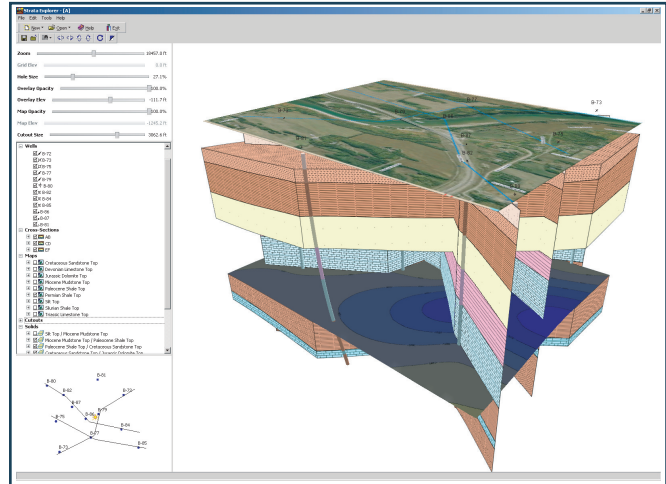


Subsurface Mapping and Data Management

- SE-GIS Module
- Database Management
- License Management
- 3D Display
- Import/Export
- Buildings and Excavations Module (SE-Structures)

- Environmental Data Management (EDMS)
- Well and Boring Log Module (WinLog)
- Cross-section Module (WinFence)
- Gridding and Contour Module (SE-Map)



The program is composed of a base application and several extension modules. The base application of StrataExplorer is used as a platform that all of the other modules build upon.

In addition to subsurface data, the application can also be used to create and display 3 dimensional buildings, structures, and excavations. All of the samples, wells and borings, cross-sections, contour maps, layers, GIS data, buildings, structures, and excavations entered in a project can be displayed in 3D.

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Features

The base application of StrataExplorer consists of several components that provide functionality to both the base application and extension modules. These components are the database management, license management, 3D display, and import/export.

License Management

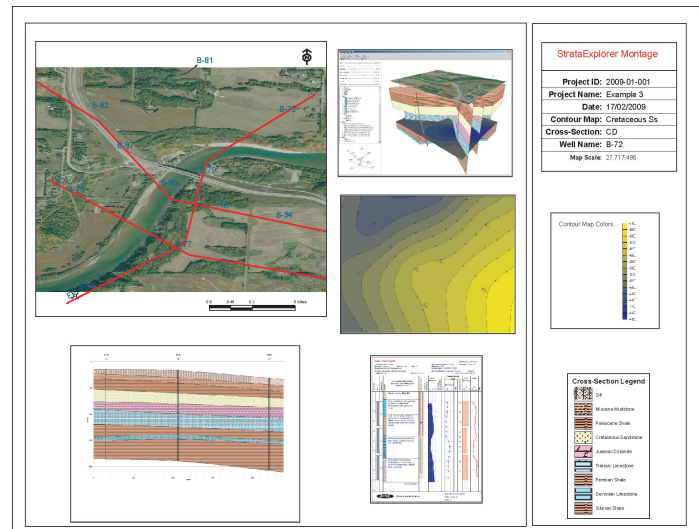
- Controls base application and extension module licenses
- Support for either stand-alone or network licensing

3D Display

- 3D display can be used to show and manipulate wells, borings, cross-sections, contour maps, solids, GIS data, buildings and structures in 3 dimensions.
- Industry standard OpenGL is used to generate the display.
- Displays can be panned and zoomed and contain a light source that can be moved.
- The display of wells, borings, cross-sections, contour maps, and solids can be turned off and on.
- GIS data from the project map can be overlain.
- Contour maps can be displayed as a flat surface or draped at the elevation of the grid nodes.
- Solids are automatically generated from strata that have their top and bottoms defined by contour maps.
- Cutouts can be used to selectively remove portions of solids.
- The transparency of contour maps and project GIS overlays

Import/Export

- Projects can be exported and imported in XML format.
- WinLoG and WinFence projects can be exported.
- Page layouts can be exported in a wide variety of formats.
- LogSleuth and CanStrat data can be imported.



Database Management

- Used to store, track, and retrieve all the data in the application.
- Can use either Microsoft Access or Oracle databases.
- Automatic backup of databases.



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Geographic Information System

The GIS module provides the geographic information system (GIS) for the StrataExplorer base application. It is used as the primary display and selection interface for the base application. Without the GIS the application will display of list of projects only and not display basemaps.

The GIS stores all of the basemap, project, station, sample, well, boring, cross-section, and other spatial data for the application.

In StrataExplorer, basemaps represent the geographic information as a collection of layers. These layers contain different datasets that are overlaid on the basemap.

GIS layers can include satellite images, aerial photos, roads and streets, pipelines, railway lines, flood zones, municipal zoning, terrain, topography, and demographic data.

There are a wide variety of sources of the layer data, some data is provided with the program and other data can be obtained from our various partners and government sources.

There are now two types of basemaps, web map services or static.

Web Map Services

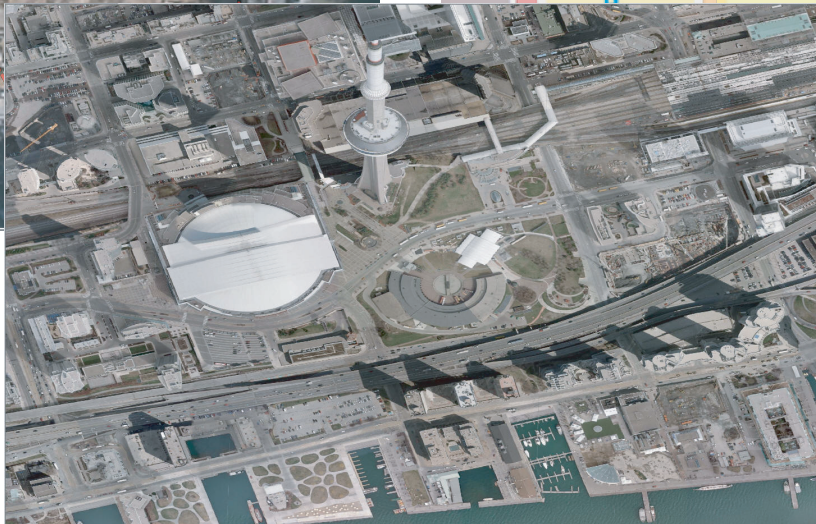
Web map services use a standard protocol to serve georeferenced map images over the Internet. This protocol was developed and published by the Open Geospatial Consortium.

Several web map services are available within the application and more are being added with each update.

Static Basemaps

These basemaps consist of a set of georeferenced layers (shape files) for different parts of the world.

Once a predefined static basemap has been created, additional GIS layers can be added.



Structures

This module of StrataExplorer is used to create simplified buildings, structures, and excavations for display in 3D. After they have been created these buildings and excavations can be used to show the positions of these structures in 3D relative to borings, wells, cross-sections, contour maps, and solids.

A variety of simplified buildings, structures, and excavations can be created including rectangular shaped buildings, irregular buildings, storage tanks, silos, storage piles, underground shafts, and excavations.

The buildings and excavations are created by placing them on an overlay of the project map. After they have been placed on the project map, their properties can be edited. Properties that can be edited include boundary points, base elevation, height, slope, tilt angle, tilt direction and position.

Buildings and excavations can be selected and scaled or rotated. Multiple buildings and excavations can also be selected and aligned. Once the position and size of the building or excavation is correct, the size and position can be locked on to the project map.

This module can be used to create buildings, structures, and excavations for display in 3D. The following buildings, structures, and excavations can be created:

- rectangular shaped buildings
- irregular shaped buildings
- storage tanks
- silos
- storage piles
- underground shafts
- excavations

After the building, structure, or excavation has been placed on the map, the following properties can be edited:

- base elevation
- height
- slope
- tilt angle
- tilt direction
- position
- boundary points

After the buildings, structures, and excavations have been created they can be displayed in 3D to show their position relative to borings/wells, cross-sections, solids, and contour maps.

