

# GAEASYNERGY

## Quick Facts

GaeaSynergy is comprised of a base application and optional modules. The base application consists of the following components:

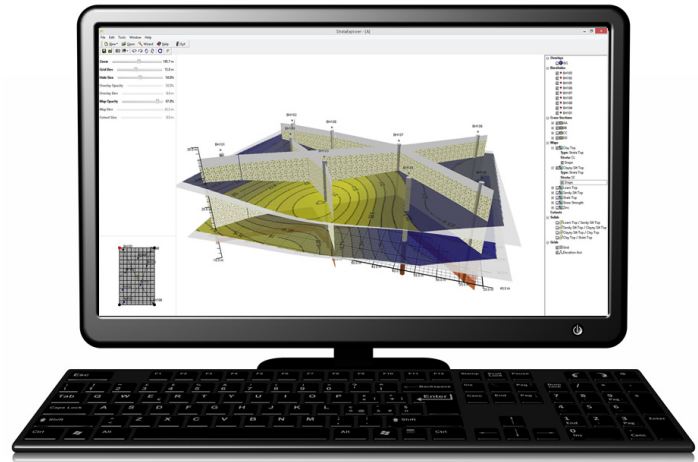
- Geographic Information System
- Database Management
- License Management
- User Management
- 3D Display
- Import/Export
- Mapping and Gridding
- Buildings and Excavations

The following optional modules are currently available:

- Environmental Data Management System
- Geotechnical Data Management System
- WinLoG Boring and Well Logs
- WinFence Cross-sections

The base application of GaeaSynergy is currently being offered for free.

Using the optional modules the program can be used to generate geotechnical test results and reports, lab analyses reports, boring and well logs, cross-sections and fence diagrams, contour maps, 3D displays, and project reports.



In version 4, StrataExplorer was renamed to GaeaSynergy to better reflect the purpose and benefits of the base application. GaeaSynergy is an application suite for geoscientific analyses, mapping, data display and data management. It uses the synergy within the geoscientific data to effectively and efficiently fulfill the needs of several industries.

The program can be used to evaluate contaminants, soil and rock properties, minerals deposits, oil and gas deposits, and oil sands. It is ideal for the environmental, geotechnical, mining, oil sands, and petroleum industries.

GaeaSynergy is comprised of a base application and several optional modules. The base application is free and is used as a platform that all of the other modules build upon.

Projects are the primary building block of GaeaSynergy and are used to encapsulate all the data in the application. The primary data sources in the application comes from samples, test results, wells and borings. After the data has been entered it can then be used to create cross-sections, and contour maps.

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

# Features

The base application of GaeaSynerg consists of several components that provide functionality to both the base application and optional modules.

## License Management

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

## Database Management

- Used to store, track, and retrieve all the data in the application
- Access rights can be restricted to specific users
- Automatic backup of databases

## User Management

- Users are assigned a username, password, and privilege level
- Users can be local or network users
- Different privilege levels can be used to control access to program functions and data

## Import/Export

- Projects can be exported and imported in XML format
- WinLoG, WinFence, and WinSieve projects can be imported
- Page layouts can be exported in a wide variety of formats
- AGS version 3 and 4 data can be imported and exported

## 3D Display

- 3D display can be used to show and manipulate samples, 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 samples, 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 can be adjusted

## Geographic Information System

- Two types of basemaps, web map services and static
- GIS layers can include satellite images, aerial photos, roads and streets, pipelines, zoning, etc.
- Web map services include Bing, Google, Open Street Maps
- Projects, well and boring locations, cross-sections, and samples can be displayed
- A wide variety of data can be imported, including Shape, AutoCad, Raster, ArcInfo, GPS, and USGS

## Buildings and Structures

- Buildings and structures that can be created include rectangular and irregular shaped buildings, storage tanks, silos, storage piles, underground shafts, and excavations
- Base elevation, slope, height, tilt angle and direction, position, and boundary points can be specified
- Multiple buildings and structures can be selected and aligned

## Mapping and Gridding

- Diverse types of data can be edited and merged
- Data can be automatically extracted from wells, borings, samples, cross-sections, lab analyses, and geotechnical test results
- Mathematical operations can be applied to a dataset
- Two datasets can be added, subtracted, multiplied or divided
- Gridding algorithms include Natural Neighbor, Inverse Distance, Modified Sheppard, Minimum Curvature, Trend Surface, and Nearest Neighbor
- Areas of grids can be blanked to represent zones of no data
- Individual grid node values can be edited
- Mathematical operations can be performed on one or more grids
- Contour maps can be drawn with contour lines, color fill, or colored contour lines
- Labels on contour lines can be easily moved and deleted
- Individual contour levels can be edited



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