Rapid Three-Dimensional Geotechnical Prototyping
SVDESIGNER™ is a user-friendly 3D conceptual model mesh builder used to visualize and manipulate your geotechnical / hydrogeological data. Volumes can be calculated or high-quality representations of staged geotechnical projects can be produced. Deep integration with our other modules means that the geometry output is easily used to produce models within your SVOFFICE™5 projects.

POWERFUL NEW GEOMETRY CREATION AND VISUALIZATION TOOL

The SVOFFICE™5 release of SVDESIGNER™ software represents a fundamental shift...

- **New Paradigm**: Build 3D site geometry and then export to 2D or 3D numerical models
- **New Workflow**: Conceptual model builder improves and simplifies input of 3D data and numerical conceptual models
- **Visualization**: Create stunning visualizations of construction phases with rapid prototypes of geotechnical designs
- **Construction / Excavation**: Manage, edit and visualize geotechnical construction and excavation activities

Geo-strata can be imported based on boreholes or based on a number of different formats. Once in the software, the surfaces can be represented as grids or as triangulated surfaces (TINs). There are also advanced features in the software to handle intersections of various surfaces so the 3D geometry can be represented accurately.

SVDESIGNER™ also has tools to easily describe geotechnical designs into the 3D world. Standard cut and fill operations for roads, embankments, earth dams, and tailings dams are provided and allow easy entry of complex structures. Volume calculation functions then allow subsequent calculations of material requirements for construction purposes.

The software is designed to allow geotechnical engineers to quickly prototype designs in 3D. Once a site or design is prototyped the volumes of materials can be calculated and subsequently used in construction processes. SVDESIGNER™ also acts as a manager of three-dimensional data for subsequent numerical modeling. Once three-dimensional geometry is created it can be subsequently output to numerical models in the form of 2D slices or as full three-dimensional models comprised of either grids or meshed surfaces.

SVDESIGNER™ represents a new paradigm for geotechnical design in that the full three-dimensional site geometry is represented. Subsequent 2D or 3D numerical modeling activities can be initiated based on professional judgment of the project engineer. Overall design and prototyping time is reduced in this system. The complexity of 3D numerical models that can be created in a short time frame is also improved.
Key features and capabilities of SVDESIGNER™

- **Easy to Use:** Featuring a familiar user interface with easy to understand icons and functions. The software tools behave exactly how you would expect with a short learning curve. You will be able to start modeling right away.

- **Representation of Complex 3D Surfaces:** 3D surfaces can be imported from a variety of formats and represented as grids or triangulated surfaces consisting of hundreds of thousands of individual elements.

- **Surface Intersections:** Intersections of complex surfaces represented as grids or as TINs can be accomplished.

- **Geometry Editing:** A rich variety of functionality is implemented in the software to allow editing of existing geometry to represent the integration of new geotechnical designs with existing topology. Editing features integrate with both surface grids and meshes.

- **Surface Cuts / Excavations:** Cuts into topography can be easily performed as per the design of a road cut into the side of a hill. Mining cuts such as with open pits can also be represented.

- **Construction Sequences:** Sequences of layers or lifts of material as placed in earth dams or in mining operations can be easily represented in the 3D conceptual model.

- **Volume Calculations:** Volumes of material can be calculated to aid in construction activities.

- **Export to Modeling Packages:** 2D or 3D representations of particular geometry scenarios can be exported to any of the SVOFFICE™ numerical modeling packages for analysis. Exported models can utilize grids or triangulated meshes.

- **Stunning Client Visuals:** 3D conceptual designs can be captured for display to clients and review of potential designs. Image draping of aerial site photos is supported. Flybys of sites can be created and exported as animations.
THE MOST VERSATILE SUITE OF MULTI-DIMENSIONAL GEOTECHNICAL AND HYDROGEOLOGICAL ANALYSIS TOOLS WE HAVE EVER DEVELOPED.

WE HAVE REDEFINED THE “NEW” STANDARD... AGAIN.

EXCITING NEW FEATURES!
SVOFFICE™ 5 introduces new features, speed, precision and functionality that have not been available in any other geotechnical analysis software until now.

SVOFFICE™ 5 boasts a completely new Manager with “Learning” and “Expert” user modes to get you up and running even faster; a completely reimagined and modern Soil Properties database application; a new user friendly 3D model geometry builder and visualizer... SVDESIGNER™; improved user interface for a more intuitive streamlined workflow; an entirely new graphics subsystem to handle more complex geometry, speed up workflows and allow for high resolution output of visuals.

What we haven’t changed is our commitment to keep developing leading-edge software at a breakneck pace, exceptional technical support and user training.