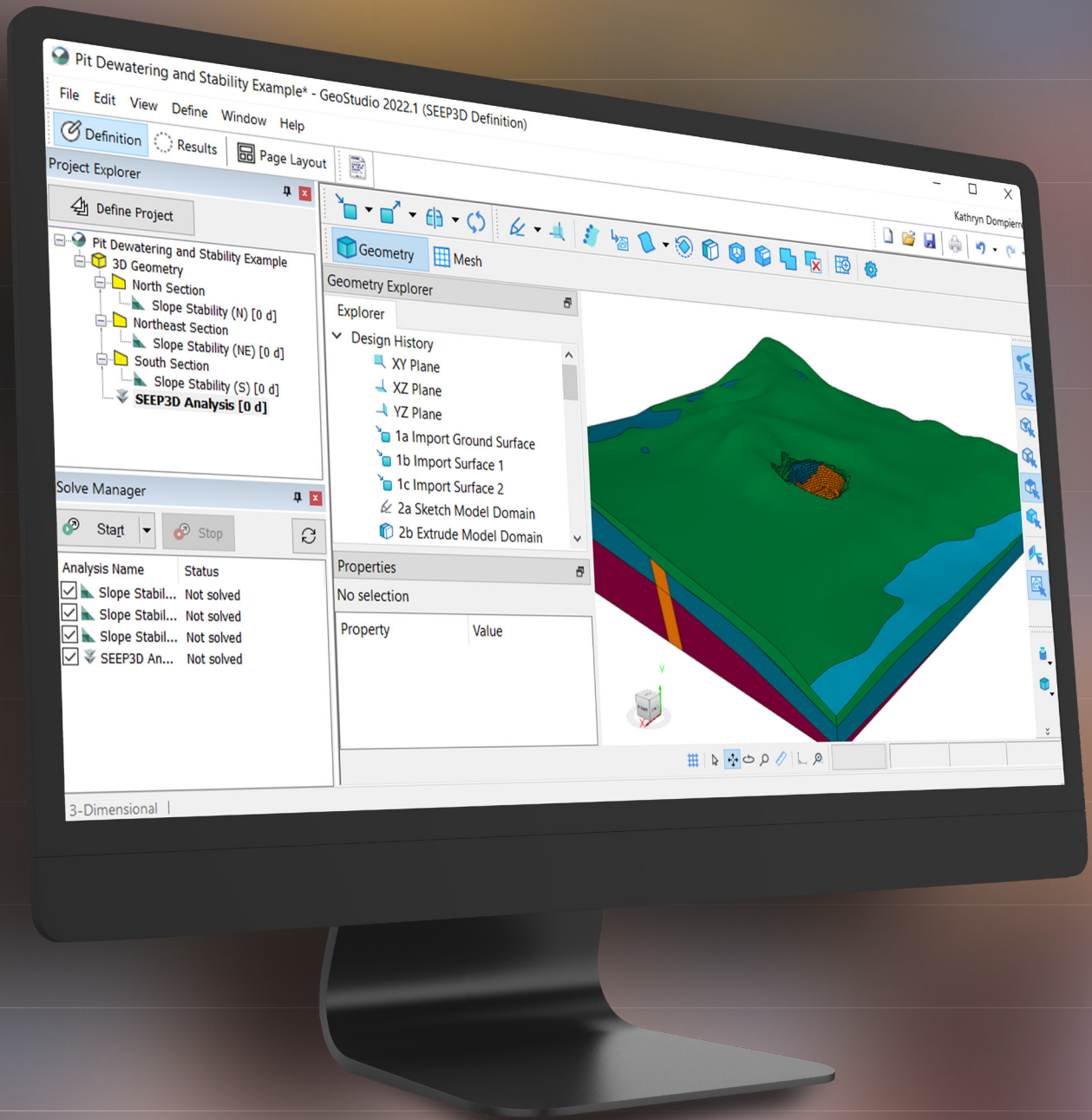


GeoStudio 2022.1

new release



GeoStudio 2022.1 Feature List

Geotechnical workflows are smoother than ever with the newly released GeoStudio 2022.1!

This release includes key features and functionality to improve the 3D modelling experience and enhance slope stability analysis through SLOPE/W.

Licensing is more flexible than ever. With this release, GeoStudio supports three licensing types, enables easy transitions between Licensing Systems, and is now available to Bentley enterprise accounts via E365.

Enhanced 3D Workflow

BUILD3D Embedded in GeoStudio Window

The 3D geometry creation application is now present in the main GeoStudio window, simplifying the 3D workflow. This improvement brings 3D modelling in GeoStudio closer to the 2D experience.

Quick Material Assignment with Geological Model Volumes

GeoStudio provides the ability to import Leapfrog Geological Model Volumes from Seequent Central into a 3D geometry. These Geological Model Volumes can be used to assign materials to existing 3D parametric geometry objects. This workflow makes it easy to map complex geologies to analysis geometry, removing the need to create complex parametric surfaces to capture stratigraphic boundaries.

Common Commands Added to BUILD3D

The undo and redo commands are now available for creating and modifying 3D geometries.

Import 3D Piezometric Surfaces

Piezometric surfaces can be imported using the Import Background Mesh command in BUILD3D. An imported piezometric surface can be used to define initial pore water pressure conditions in a SEEP3D analysis.

SLOPE/W Improvements

Cuckoo Search Technique Now Available

The Cuckoo Search method can be used to search for circular slip surfaces in SLOPE/W. This search method is an unbiased attempt at locating the critical slip surface. It is beneficial for identifying the critical mode of failure in complex geology and/or large domains. This search method can also identify portions of the domain where additional analysis is required.

Improved Compound Strength Material Model

Planar geological features are defined by dip and dip direction. The Compound Strength material model originally required the user to enter a start and end angle which bound the dip of the plane. The improved Compound Strength model now allows for the direct entry of the dip angle and two ranges around the dip, in which the strength is linearly interpolated between the joint and intact material. The other key change is that the intact material is selected from the existing materials list and only the discontinuities must be defined in the joint parameters table.

New License Selection Workflow

GeoStudio now supports three licensing types: (1) legacy FlexNet licenses; (2) Seequent ID licenses; and (3) Bentley Connect licenses for E365 customers. A License System selection tool allows GeoStudio users to select the desired License System or to easily move from one License System to another.

Additional Online Resources

Free Online BUILD3D Course

A new BUILD3D course is available in the Seequent Learning Portal for those looking to set up 3D geometries and analyses in GeoStudio. The course covers the methods for importing various geometry file types, creating and modifying 3D geometry items, defining the 3D mesh, and interpreting 3D results.

Slope Stability Verification Manual

The Slope Stability Verification Manual comprises dozens of analyses testing various features of stability analysis and compares the simulated results with published studies and analytical solutions.

Additional GeoStudio Example Files

The Compound Strength demonstration project and accompanying document have been updated to reflect changes to the Compound Strength material model. A new 3D FLOW example simulates chemical volatilization of trichloroethylene from a shallow contaminated groundwater table into cracks in the basement of an overlying 3D building.