

# Plaxis 3D crossplatform port

## Background

Plaxis 3D is an application for creating, calculating and evaluating 3D models of soil and structures, such as tunnels, dikes and skyscraper foundations. The model creation is essentially command-driven, but there is also a rich, interactive GUI that generates and executes commands based on the user's manipulation of the model.

## Problem definition

Plaxis uses Delphi for Win32 to build its applications, which means that it is impossible to create native builds for non-Windows operating systems like Linux or Mac OS X. Some users would like to use Plaxis 3D under such environments, preferably without resorting to emulation or virtualization. Fortunately there are other Object Pascal compilers, most notably FreePascal, that are partially or fully compatible with the Delphi source code.

## Project goals

This project entails the evaluation of the compatibility of the FreePascal compiler with the existing Plaxis 3D codebase, identification and solving of problem areas, followed by the porting of as much as technically feasible of the 3D environment to a 64-bit non-Windows operating system. The goal is to have at least a CLI interface that can utilize the 3D command interpreter to load, modify and save 3D models that are fully compatible with the Windows version.

## How to apply

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