

Geotechnical Software

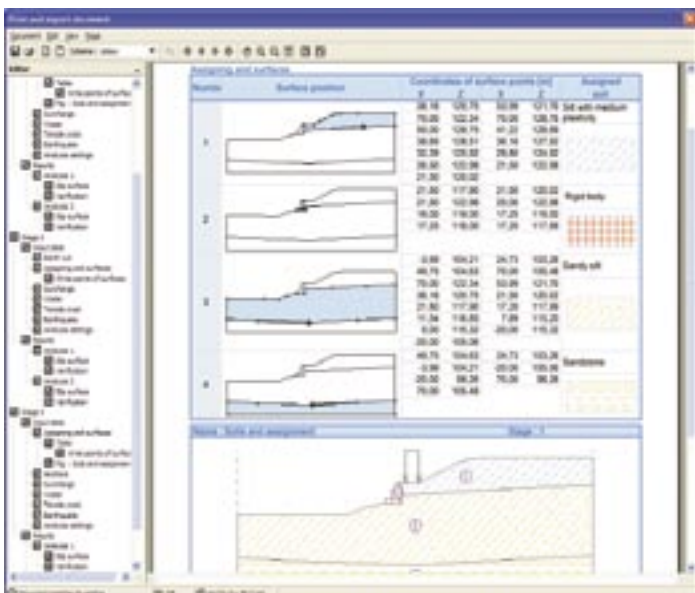
- More than 30 geotechnical programs
- Finite Element & Analytical solutions
- Continuous development from 1989
- Over 1300 users in 50 countries
- Growing number of supported languages

Introduction

This paper introduces the GEO5 suite of programs which are designed to solve a wide range of geotechnical problems. The suite consists of individual programs for the analysis of common geotechnical problems (slope stability, abutment, gabions, sheeting, footings, piles, settlement etc.). In addition, it includes highly sophisticated applications for the analysis of tunnels, building damage due to tunnelling, stability of rock slopes etc.

History and present

The first programs of the GEO family entered the Czech market in 1990. These applications ran in the MS-DOS environment with basic graphics but with simple and clear input. Soon they became very popular and in ten years the GEO programs dominated the Czech and Slovak geotechnical software markets. In 2000, GEO4, a new Windows version, was released. This allowed the development of foreign language versions and distribution of the programs worldwide. Today, FINE Ltd offers products through its sales representatives in 20 countries. There are 10 language versions of GEO software and it has been sold in 50 countries. Presently there are about 1300 companies worldwide using software developed by FINE Ltd.



Integrated suite of programs

One of the main advantages of GEO5 is its level of integration. It is a compact system based on both analytical and finite element methods. Interlinked analytical methods of computation (e.g. sheeting design, slope stability analysis) allow users to design and check structures quickly and efficiently. If necessary, the designed structure can be transferred into the FEM program where general finite element analysis of the structure is performed. This not only saves designer's time but also compares two independent solutions, thereby increasing design safety.

User-friendly application environment

Fine Ltd. emphasizes simple input and a user-friendly environment in all GEO programs. In most of the applications it is possible to design and check a structure within one hour and without any special training. When a user returns to work with a GEO program after a break he/she instinctively knows how to input data and to use the program. The fundamental idea of the software is that all input data is immediately displayed. When the user needs to edit dimensions of structure, he/she does not need to open a dialog box but just clicks on the dimensions to change the values. These simple principles are also integrated into more complicated applications such as the FEM programs where intersections of soil layers and structure lines are automatically found and an appropriate mesh type is generated.

geotechnical software suite

GEO5



Clear graphical output

One of the most important objectives of any program is to create good output. GEO programs allow the user to easily generate clear graphical and text output. The structural analysis report is the basic output document. This is generated according to a tree menu, which allows the insertion of graphical output (figures). In each input or analysis mode, it is possible to add one or more figures into a list of pictures. Any picture can be edited, enlarged or coloured. Figures are automatically inserted into the structural analysis report and are updated if any change of input data occurs. The result is an easy-to-understand and always up-to-date output document.

Integrated help

All GEO programs contain context-sensitive Help which is available anywhere in the program by pressing the F1 key. Any topic can be reached in a maximum of four mouse clicks. Help contains a description of all input and control elements together with instructions for generating output documents etc. It also includes the theoretical background and tables with recommended values of variables used in the current program. The user can move between Help topics using context links and a tree menu or search for the wanted topic directly. The complete GEO Help text exceeds one thousand pages in length. The main advantage of GEO Help, in comparison with tutorial books, is its immediate availability. Help or individual topics may be also printed out. Each new software version includes an updated version of Help.

GEO5 Key features :

- User-friendly environment
- Integrated contextual help
- Comprehensive graphical output
- Integrated suite of programs
- National and EC standards
- Permanent customer support

Compatibility with standards

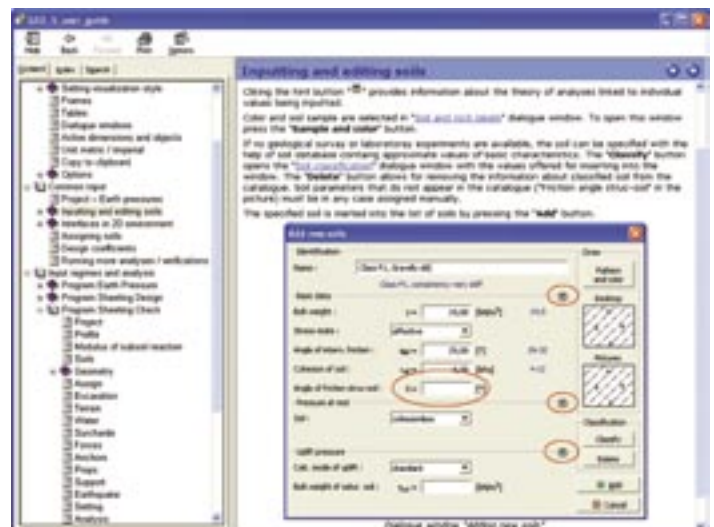
An important feature of the GEO5 programs is that they are capable of conforming to standards and practices in many countries. They are based on general and well known theories; only the form of the final check depends on individual standard and country. All GEO applications allow users to check structures according to the theory of limit states and also the factor of safety method. Any reduction factors, analysis coefficients etc. may be set by the user. That way he/she is able to design a structure according to Eurocodes or British, American, Australian, Indian and other national standards within one module. Design of concrete structures is performed according to standards EC2, PN, BS, IS, ACI and so on.

Affordable software package

The GEO5 programs are very affordable as it is not necessary to buy the complete suite. Many users begin with a single program that is needed at the time and progressively purchase more modules according to their budget. Customers may take advantage of quantity discounts. Educational versions for schools and universities (full program versions) are offered under special conditions.

Permanent customer support

For a low annual rate, FINE Ltd. and its local dealers offer permanent customer support. The Fine Maintenance program includes technical support, professional assistance and unlimited access to program updates. Any member of the program may also attend technical meetings and training sessions at reduced prices.



Your local dealer:



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