CD-ROM Installation

GeoTutor IV - Integrated Version

Installation Instructions for GeoTutor IV

(Windows 2000 or XP only!)

Please find enclosed a GeoTutor IV installation. Our CD-ROM Installation offers fast installation. Included with GeoTutor itself are updated examples, tutorials, ,instructional movies technical abstracts, presentations and manuals.

A Serial Number is on the CD. You will be requested for this during the installation process. You must be online to complete the registration. Please insure that you do not have any firewalls set up in such a way to interfere with this process.

Do not lose this serial number and do not abuse it. You have a limited number of registrations

Insert CD into your CD-ROM drive.
If AutoRun is configured on your computer, the installation will begin automatically
If not, Run CD_Drive:\ GeoTutor_IV_Setup.exe

Special Instructions for Windows NT, Windows 2000 and Windows XP Users:
--- the installer must have administrative privileges.
After installation is recommended to check the following environment variables:
Access environmental variables through Control Panel / System / Advanced
1)SET environmental variable TGS_LICENSE_FILE to
"c:\Program Files\GeoTutor_IV\bin\password.dat"
2) Add "c:\Program Files\GeoTutor_IV\bin" to your Path

***Note**: If you have installed GeoTutor into a directory other than "c:\Program Files" ensure that you use that path in the above 2 steps.*

Please contact us if you have any questions on the installation process or on modelling with GeoTutor.
Support Department, PetRos EiKon **Tel: 1 (905)-796-0324**
Email: support@petroseikon.com

***Note**: If you have an environmental variable set for a previous version, you will want to delete this earlier variable.*

You must now re-boot your computer if you have edited any environment variables.

***Note**: During the installation, setup will automatically create a directory "C:\Preikon" if this directory can't be found. This directory will be used to store intermediate files. After installation please make sure the attribute of "C:\Preikon" is not "Read Only". If setup failed to create "C:\Preikon", please create it manually.*

Before running GeoTutor IV, you must register. You can use GeoTutor without registering but only for 30 days. If you did not enter your serial number and register while installing GeoTutor, select Register GeoTutor IV from the GeoTutor IV group in the Start menu. Enter the serial number that has been provided for you and click OK.

If you have trouble connecting to our server and cannot register, try registering again with the "Use Proxy" option selected. After clicking OK, a window will appear displaying the status of your connection. The last message in this window should say "Tor has successfully opened a circuit". It might take a few minutes. If you do not receive this message and the process times out with an unsuccessful registration, close the registration window and try again.

If you still cannot register, select the offline option and send your serial number along with the displayed hex code to support@petroseikon.com for an activation code.

Getting Started

Getting Started

Start/Programs/GeoTutor IV/ -> GeoTutor IV

You will encounter a message upon first starting GeoTutor IV: 'TGS License Check Warning'. This is just a warning message. Please click OK to this message and continue normal use. Please contact PetRos EiKon at support@petroseikon.com to request a password file if this becomes a problem.

A video tutorial has been developed and is the best place to learn how to model with GeoTutor. This tutorial walks the user through starting the program, building models in GeoTutor, simulation models, and imaging the data in our 3D Visualizer, XY Plotter and Contour tools. The user can move through the tutorial at their own pace and can refer to the tutorial at any time for a refresher or information on a specific function. The video is in avi format so a compatible viewer such as Windows Media Player is needed. Also the TechSmith Screen Capture Codec needs to be installed on your computer. Run tscc.exe found in the same folder where the tutorial is located if you need to install this codec.

Path to tutorial: GeoTutor_IV\Demonstrations\Tutorial
There is also an Interactive Demo found in the directory: GeoTutor_IV\InteractiveDemo

New Features of this Installation

Integrated GeoTutor:
By opening **GeoTutor** (GeoTutor.exe) you can now run all the tools using the Visualizer as the front end.

You can open files and modify the models in the Visualizer (or build models from scratch). Then:

Simulations *Run your models directly from the Visualizer by selecting the "start simulations" icon (red check mark). Run strategies are integrated into the run operation. Upon successful completion, your model will be displayed in the Visualizer. You can plot the data here, then adjust the model and re-run.*

EMContour *You can also select "start* **EM Contour***" (Cardinal) to contour your data. Your data will be brought up automatically and will be ready for contouring and pseudo-section/depth displays.*

PEImport *(Loon) has also been integrated. First open VisRD and import data with the "start* PEImport*" icon. Upon completion, the survey will automatically be displayed in the Visualizer, ready to view the data, and add a model.*

EiKPlot ***(squiggly line)*** *is now fully integrated. You may to go to* EiKPlot *for XY plotting of your profiles and decays from the Visualizer*

IDInverse *for FEM, MT and CSAMT is also available from the 1D icon.*

Batch Modelling: *icon access to Batch Modelling – Easy to Use – Try it!*

Transform (*Blue Jay*): *icon access to the frequency to time transform, but most transformations are automatic*

Advantages: Reduced memory allocation and significant reductions in the need to open and save files.

Tutor: (The Graduation Cap Icon)
We have developed an express model set-up option for building models. This tool is a user-friendly and efficient way to set up models in EMIGMA from scratch.

Model FEM, TEM, Magnetics, VLF, CSAMT, MT and IP.

To use: Select the graduation cap icon. Walk through the pages to set up your model. Upon completion, you can run the model using the start (simulations) icon (red check mark). Note that in order to simplify the model building process, a number of limitations were implemented, i.e. only 3 profiles are allowed, you are limited to 3 layers, only 2 bodies are allowed and they can be either a plate or LN Prism (ILN Prism is not offered). If you would like to surpass any of these limitations, save the model once it has been built and modify your model, as you would normally do in VisRD. For example, you could switch a LN prism to an ILN prism. Then run the modified model. Let me know your impression of this tool. It is being offered to educational institutions (bundled with VisRD, EMContour and EiKPlot) as a training tool. We hope that it can help in the training of up and coming geophysicists and geo-technicians.

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Interpolation of the Green's function routines:

To use: *When you "Start Simulations" the Run/Strategies window will be displayed automatically*

1. *Select Dump Green's functions and run. This saves a database of Green's functions to your PREIKON working directory (automatic).*
2. *Select Interpolate Green's function and run again.*

You will then be able to modify the properties of your prisms, i.e. strike, dip, conductivity etc…and run only the second stage. Ensure that the grid of Greens' functions that you build is large enough to encompass all your models. If not, you will need to re-run the first stage. These procedures significantly reduce run times for multiple models and enhanced borehole IP modelling.

Increased Plotting Functionality:

- *Rapid plotting and toggling between channels (time or frequency), profiles and transmitters in EiKPlot, VisRD and EMContour*
- *Plot both measured and simulated data simultaneously in VisRD for ease of comparison as a profile, surface, contour or combination of the above*
- *Display 2 time channels or 2 time windows or 2 components simultaneously in VisRD. The 2 data channels can be controlled independently both in selection and display style.*
- *Save or capture images from any program for inclusion in reports. Output to PostScript.*

Enhancements in Depth Section Techniques:

Try EMContour to plot multiple time slices, IP pseudosections, magnetic surveys or MT/CSAMT depth sections. EMContour allows a variety of data displays at effective depths including the Suite of Depths option, by time, frequency, or separation, or Pseudo-section option by time/freq., separation or Bostick transformations

3D Magnetic Inversion:

Full 3D Forward Modelling and Inversion of your magnetic data. You can now import your surface and airborne magnetic data (up to 4000 data stations – EMIGMA V8.1 allows larger data sets) View and slice your inversion results directly in VisRD. Plot your data over top as profiles or a surface and import models. Starting models are flexible including the ability to utilize forward models.

New MT Tools:

Import your MT EDI data files then simulate directly from your MT survey. Invert (1D) on your MT and CSAMT data. View Bostick transformations displayed in 3D space

Enhanced Computation Speeds:

- *Number of harmonics to skip over in the waveform increased to 15*
- *Improved Interpolation when N skips of 5 or higher are used*
- *60% reduction in simulation times on average*
- *Greater Accuracy*

Automated Transformations to time domain:

For imported field data and previously modelled data, the frequency to time domain transform is run automatically for you.

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