GeoEasy^{OS} 3.1

The development of the GeoEasy program started in 1997. Twenty years later in 2017 it has became free software under GPL license, freely available for everybody. The ComEasy module of the project was released under open source license from the beginnings (seehttps://github.com/zsiki/ComEasy). The core development of GeoEasy is made on Linux operating system, using Tcl/Tk script language, thanks to the Tcl/Tk ports to several operating system the program can be used on Linux, on Windows (32 and 64 bit version), on Android tablets and on OSX machines. Intensive tests of the code were made on Linux and Windows only

New features:

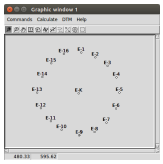
- German, Czeh, Russian GUI
- Tcl console for your scripts
- Portable windows release
- Variable column widths in field-books
- Parallel line regression
- Vertical transformation
- KML export of coordinate list
- Many bugfixes
- More than 180 commits and 43 issues solved after 3.0

Objectives

- User friendly graphical user interface
- Modular, extendable structure
- Direct process of data from total stations
- Flexibility and openness connecting to other programs
- Educational and professional usage

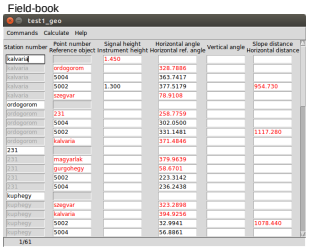
open source

Graphic window

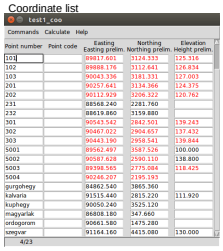


Download the binary release for Windows and Linux:
http://digikom.hu/english/geo_easy_e.html

Field-book



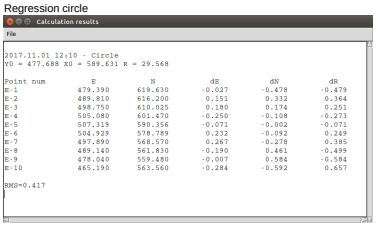
Coordinate list



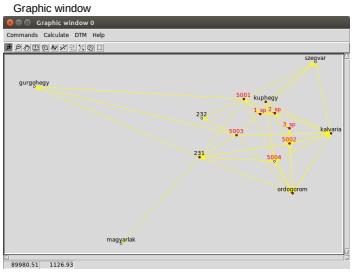
Development tool

- Console window to run ad-hoc Tcl commands
- Extend the functionality of GeoEasy with user defined scripts loaded from file
- Write your own app using GeoEasy as a library

Regression circle



Graphic window



Surveying calculations

- Edit field-books
- Intersection, resection, orientation, ...
- Traversing, trigonometric line
- Coordinate transformations
- Coordinate list and field-book import (several formats)
- DXF export

Regression calculation

- Solving engineering surveying tasks
- Regression lines, plan, circle, sphere, 3D line, parallel lines

GeoEasy

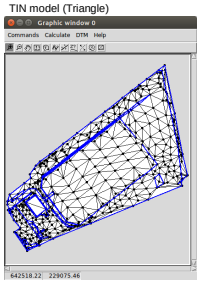
Network adjustment

- 1D/2D/3D geodetic network
- Normality check
- Data snooping
- Network sketch with error ellipses

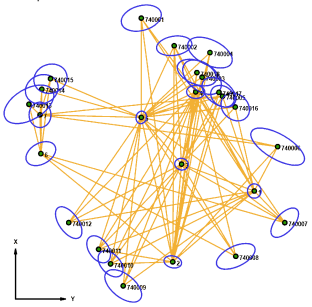
Digital Terrain Models

- DXF import
- TIN models
- Break lines
- Contour lines
- Volume calculation
- Cross sections
- VRML, KML, DXF, ASCII GRID export
- Update, regenerate

TIN model (Triangle)



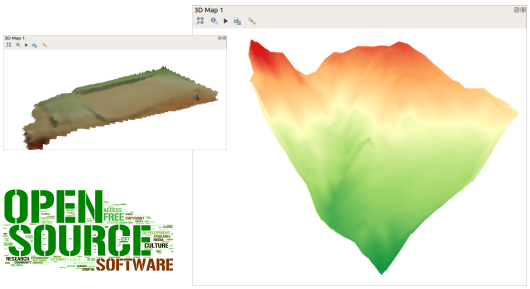
Error ellipses in horizontal network



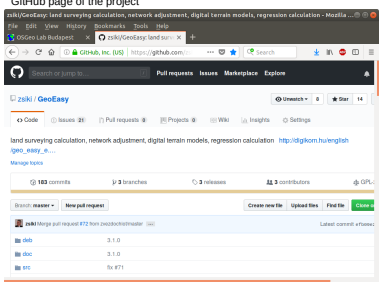
Adjustment results (GNU Gama)

```
Adjusted coordinates
********************
  i        point    approximate  correction  adjusted    std.dev conf.i.
=====================  value ====== [m] ====== value ========== [mm] ===
                 1
 17              X *    735.53500  -0.00002    735.53498      0.4     0.7
 18              Y *    598.88300   0.00013    598.88313      0.3     0.7
                 2
 23              X *    673.49900  -0.00001    673.49899      0.3     0.6
 24              Y *    527.57600  -0.00087    527.57513      0.4     0.8
                 3
  1              X *    759.06300  -0.00002    759.06298      0.3     0.6
  2              Y *    535.25100  -0.00007    535.25093      0.3     0.6
                 4
 36              X *    822.31000   0.00005    822.31005      0.3     0.7
 37              Y *    547.62300  -0.00015    547.62285      0.4     0.9
```

Exported GRID model in QGIS 3

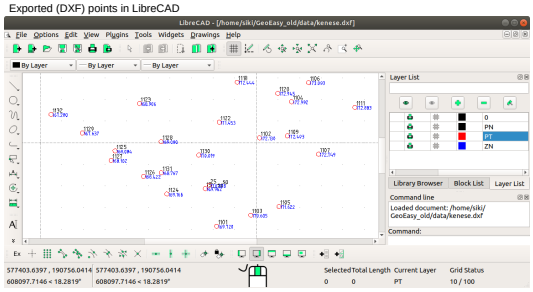


GitHub page of the project

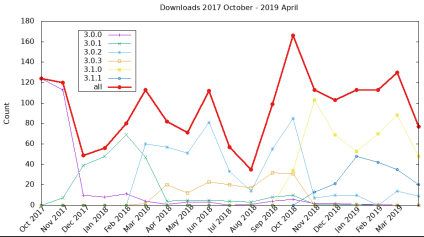


Exported (GPX) points in GoogleEarth

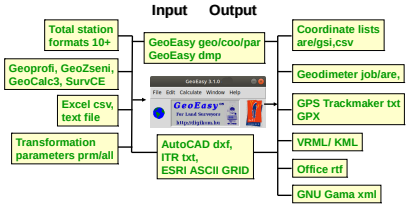
Exported (DXF) points in LibreCAD



Downloads 2017 October - 2019 April

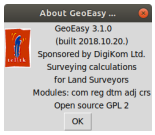


Connections to other programs through data sets



OS software used

- Tcl/Tk (https://www.tcl.tk/)
- GNU Gama (https://www.gnu.org/software/gama/)
- Triangle (https://github.com/MrPhil/Triangle)
- Proj (https://proj4.org/)
- NSIS (http://nsis.sourceforge.net/Main_Page)
- Freewrap (http://freewrap.sourceforge.net/)

Let us develope GeoEasy together!

Source code available on GitHub (https://github.com/zsiki/GeoEasy)
Report the errors you found in issue tracker (https://github.com/zsiki/GeoEasy/issues)
Extend and correct the documentation (https://github.com/zsiki/GeoEasy/doc)
Help other users (https://github.com/zsiki/GeoEasy/wiki)