



Ground model

Version 2.0.0

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USER GUIDE

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 **TECHNO logismiki**

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Ground model

TechnoLogismiki

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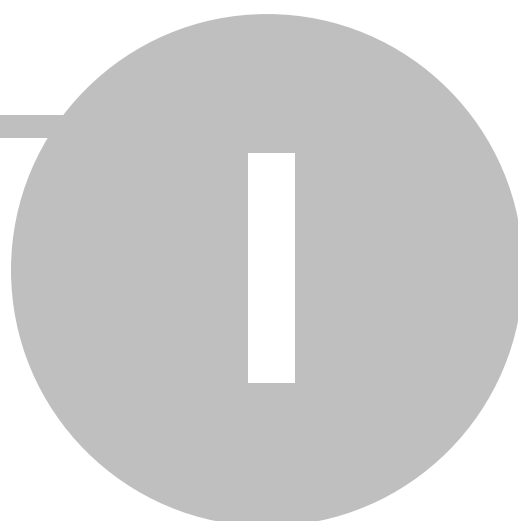
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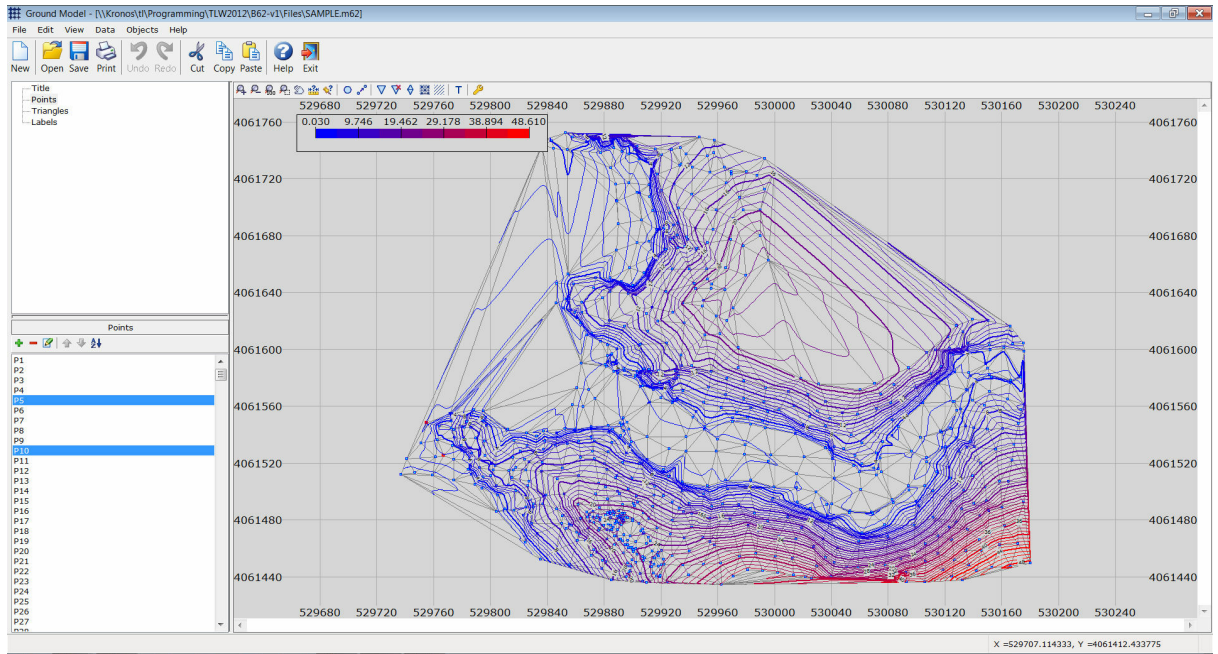
Chapter



1 About the program

1.1 What does the program do?

This program creates a ground model based on elevation data.



The program is able to create a triangular network, as well as produce the relevant contours. The results may be exported in a DXF file.

1.2 Minimum requirements

The minimum requirements for the usage of the programs are the following:

- Windows 2000/ XP/ 2003/ Vista/ 7 (for each case, the latest service packs, updates & patches must be installed)
- Pentium III 800 MHz
- 800x600 with 256 color palette
- 700 MB free disk space
- CD-Rom

If your system does not meet one or more of the above requirements, it is highly recommended that you upgrade it before installing the programs. The recommended system configuration is the following:

- Windows 2000/ XP/ 2003/ Vista/ 7 (for each case, the latest service packs, updates & patches must be installed)
- Pentium IV 2.0 GHz
- 1280x768 with 16-bit color palette
- 1.2 GB free disk space
- CD-Rom

- Internet connection

1.3 Technical support

Support through the Internet

TechnoLogismiki offers technical support 24 hours per day, 365 days per year, through the web site where you can get information on the latest programs and services.

Support by e-mail

Please use the dedicated e-mail addresses for better customer service:

- for questions regarding sales: sales@technologismiki.com
- for questions regarding the usage of programs: support@technologismiki.com
- for any other question or comment: info@technologismiki.com

The normal response time is within two business days. If your inquiry cannot be answered by e-mail, a customer service representative will contact you by telephone.

Interactive Support

Business days, 09:00 - 17:00 Eastern European Time:

- Telephone [3 lines]: ++30-210-656-4147
- Fax: ++30-210-654-8461
- Address: 5, Imittou street, Cholargos, 15561, Athens, Greece.

Chapter



2 File

2.1 File menu

With this menu, you can perform file operations. In the **File** menu you can select one of the following options:

- New project
- Open project
- Save project
- Save project as
- Import
 - Points from DXF
 - Background from DXF
- Export
 - Ground to DXF
- Exit

2.2 New project

With this option, a new project is started. All data of the previous project are erased.

To create a new project:

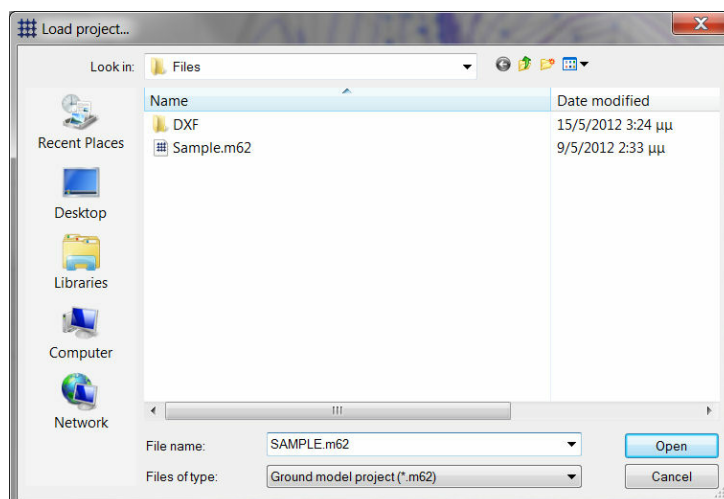
1. Select **New project** from the **File** menu.
2. If a project is already loaded and changes have been made, a warning message will appear that asks the user whether to save the changes or not.
3. The current project is erased and a new project is started.

2.3 Open project

With this option, an existing project is loaded. The project may be located locally, in a network or in an external media device such as a CD-Rom. If a project is already loaded and changes have been made, a warning message will appear that asks whether to save the changes or not. When a project is loaded, all data of the previous project are lost.

To open an existing project:

1. Select **Open project** from the **File** menu.
2. Select the path of the file.
3. Select the file type from the **Files of type** drop-down list. The default option is "Ground model project" with the extension .m62.
4. Select the file by clicking on it.
5. Select **Open** to open the selected file. Select **Cancel** to cancel the operation.



NOTE: You can find sample projects in the installation folder of the program:
C:\Program Files\TechnoLogismiki\TLW2013\Samples\GroundModel

Supported file types

- **m62** (Ground model project): Files created by versions 2012 and 2013 of Ground model.
- **BCK** (Backup files): If you have selected from program options the creation of backup copy when a file is loaded, then the file can be loaded by selecting Backup files (*.bck) from the Files of type drop-down list.
- ***.*** (All files): Displays all files in the current folder.

NOTE: If a message "Could not load project. File may be corrupt or saved by an unknown or incompatible version of the program" then either you are trying to load a project that does not belong to this program or the file is used (and locked) by another process in your computer.

2.4 Save project

With this option, you can save all data of a project into a file. The file may be saved locally, in a network location or in an external media device such as a disk.

The filename and path will be asked only the first time you are saving a project. When the filename and path are set, all subsequent saves will be made to the same file.

When you want to rename a file or save it in a new location, use Save project as... from the **File** menu.

To save the current project:

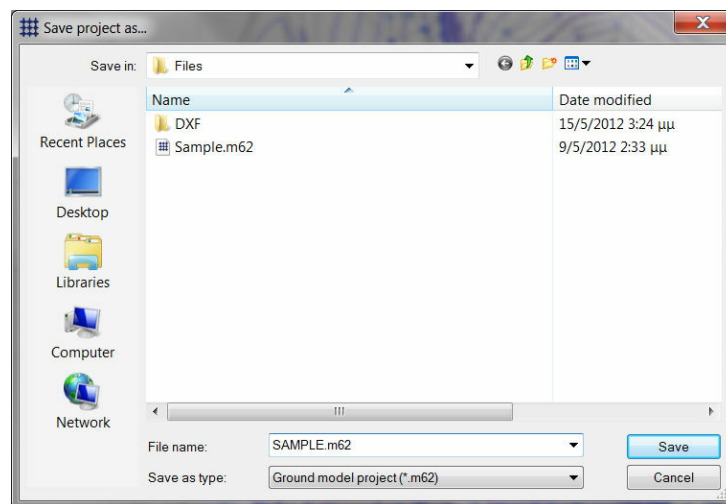
1. Select **Save project** from the **File** menu.
2. If the location of the file is already set, the project is saved to this file without any messages. If the filename is not set, a dialog box will appear that allows the selection of the filename and path.

2.5 Save project as

With this option, the current project is saved just as in the case of Save project, but with the difference that the name and/or location of the file can be changed. In this way, you can create backup files or move a project to another media device.

To save a project with another name and/or to another location:

1. Select **Save project as** from the **File** menu.
2. Select the path of the file.
3. Type the filename in the **File name** text box.
4. Select **Save** to save the project with the selected filename and path. Select **Cancel** to cancel the operation.



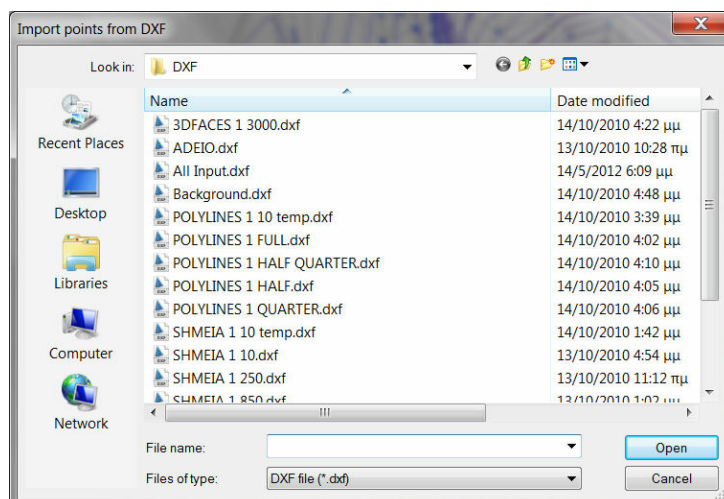
NOTE: If a file with the same name and in the same path already exists, a warning message will appear that asks whether to overwrite the file or not. If you answer Yes, then the existing file is erased and the new file takes its place. If you answer No, the existing file remains intact but NO changes of the current project are saved.

2.6 Import

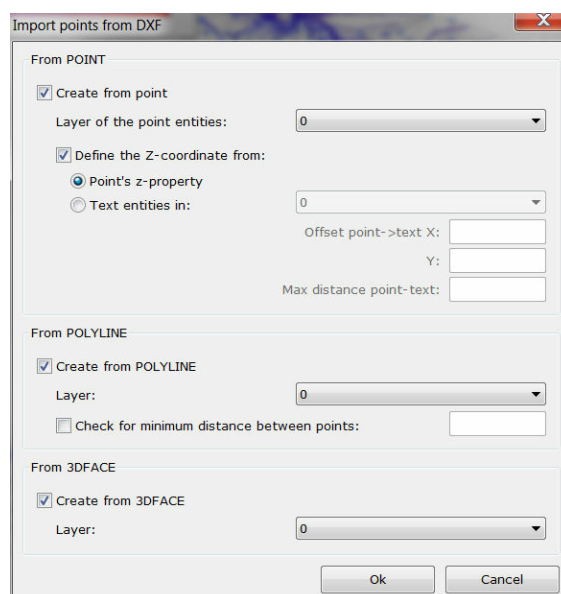
2.6.1 Points from DXF

To import point data from a DXF file:

1. Select **Import > Points from DXF** from the **File** menu. The following form appears:



2. Select the path of the file.
3. Select the file type from the **Files of type** drop-down list. The default option is "DXF file" with the extension .dxf.
4. Select the file by clicking on it.
5. Select **Open** to open and analyze the file.



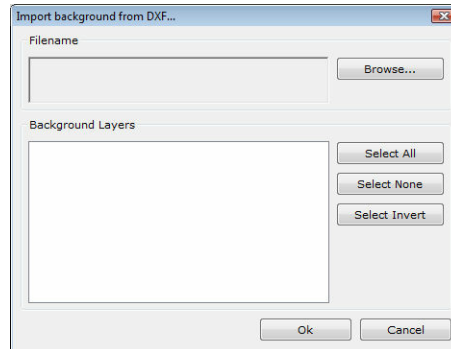
5. Select whether the import will be performed based on **POINTS**, **POLYLINES** and/or **3DFACES**. For each entity, a specific layer containing the data may be selected. The elevation (z) property may be imported based on the relevant point property or a text entity at a specified relative position. When importing from POLYLINES you can control the minimum distance between the points, so that the number of imported points is not excessive.
6. Select **Ok** to import the data and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

2.6.2 Background from DXF

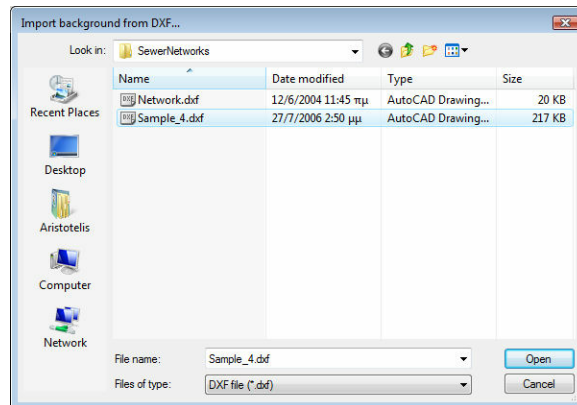
With this option, you can import background data from DXF files. The background is not active, but it is most helpful when designing a network. For performance reasons, only the most common entities of DXF files are imported, such as lines, points, polylines, arcs, circles, text etc.

To import background data from DXF:

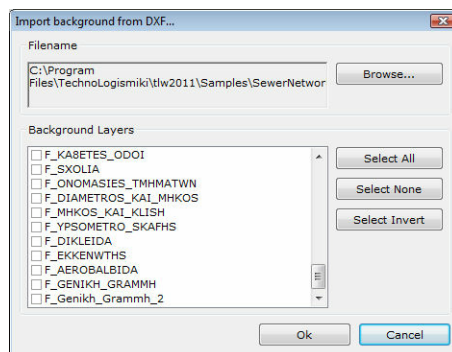
1. Select **Import** from the **File** menu.
2. Select **Background from DXF** from the **Import** menu. The following form appears:



3. Click **Browse** to select the DXF file. The file selection dialog box appears.



4. Select the path of the file.
5. Select the file type from the **Files of type** drop-down list. The default option is "DXF file" with the extension .dxf.
6. Select the file by clicking on it.
7. Select **Open** to open and analyze the file. The list is loaded with the layers contained in the DXF file.



8. Select one or more layers containing the data. The quick keys (**Select all**, **Select None**, **Select Invert**) can be used to quickly select all objects, deselect all objects and invert the current selection.

9. Select **Ok** to import the data and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

NOTE: To modify the background drawing, from the menu select **View > Plan View > Background**

2.7 Export

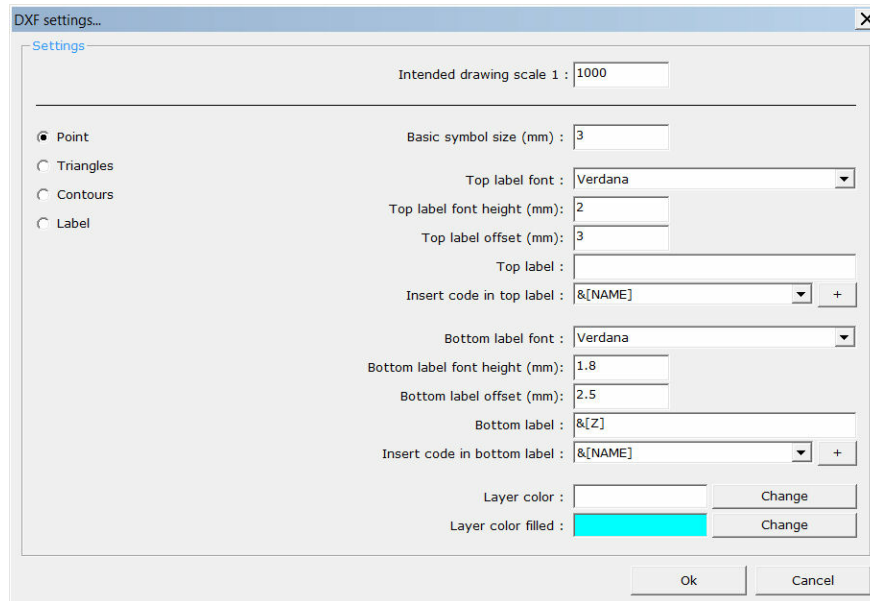
2.7.1 Ground to DXF

With this option, a DXF file containing the plan view is created. The following data are included in the file:

- Points
- Triangles
- Contours

To export the plan view to DXF file:

1. Select **Export** from the **File** menu.
2. Select **Plan view to DXF file** from the **Export** menu. The following dialog box appears:



3. Select the appropriate settings:

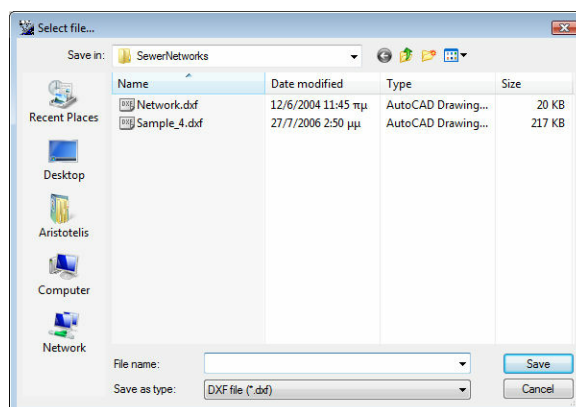
- **Intended drawing scale:** Select the intended drawing scale. The rest of the settings are measured in mm (millimeters) in the printed drawings. Based on the intended drawing scale, the sizes of all drawing elements are automatically derived.
- Select the object you wish to configure from the list on the left. Depending on the object, the following options may become available:
 - **Basic symbol size (mm):** Enter the basic symbol size in mm (millimeters) in the printed drawing. For example, the basic symbol size for a junction refers to the diameter of the circle that represents it.
 - **Top label font:** select the font for the top label. All drawing elements are grouped into layers and font styles, so that they can be easily modified using CAD software.
 - **Top label font height (mm):** Enter the top label font height in mm (millimeters) in the printed drawings. If the font height is selected to be 2mm and the scale is 1:1000, then the text height that will be used is equal to $2\text{mm} * 1000 = 2\text{m}$. When printed, the desired font height will be obtained.
 - **Top label offset (mm) :** Enter the top label offset from the center of the object, in mm in the printed drawing.
 - **Top label :** Enter the text that will appear in the top label of the selected object. The text may contain **codes**. The codes have the prefix "&" and contain a special keyword within brackets. For example, if the top label is selected to be "&[NAME]", then the name of the object will be displayed. **Any combination of text and/or codes is allowed.**
 - **Insert code in top label:** Depending on the selected object, select the code from the list and click on the " + " button to enter it in the top label. The insertion point is the current cursor point in the previous field entitled "Top label".
 - **Similar options may refer to the bottom label.**
 - **Layer color:** Select the layer color of the selected object.
 - **Layer color filled:** Select the layer color for the filled elements of the selected object.

The available codes, depending on the type of the object, are (the names are self-explanatory):

- "&[X]"
- "&[Y]"
- "&[Z]"
- "&[DESCRIPTION]"
- "&[TAG]"

4. Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

5. The file selection dialog box appears:



6. Select the path of the file.

7. Type the filename in the **File name** text box.

8. Select **Save** to save the file with the selected filename and path. Select **Cancel** to cancel the operation.

NOTE: If nothing is visible when viewing the newly created DXF file, select **Zoom Extents** to view the whole drawing.

2.8 Exit

With this option, you can exit the program. If there are changes in the current project that have not been saved then the program will:

- either ask the user to save the changes
- or save the changes
- or ignore the changes

depending on what you have selected in General preferences.

To exit the program:

1. Select **Exit** from **File** menu.

2. If you are asked whether to save the changes or not, you can save changes or ignore them.

3. The program is terminated.

Chapter



3 Edit

3.1 Edit menu

With this menu, you can perform basic operations regarding data. In the **Edit** menu you can select one of the following options:

- Undo
- Redo

3.2 Undo

Undo cancels the last committed change in the project.

To cancel the last committed change:

1. Select **Undo** from the **Data** menu.
2. The last committed change is canceled.

To cancel an undo command, you may use the redo function which is described below. Redo becomes available once undo is used.

It is possible to undo more than one recent changes and to redo them, by following the step described above. The number of actions that are kept in memory and may be undone or redone is 20 by default. This means that the program is able to keep track of up to 20 successive changes and undo them. This number may change for all programs, using the option in the main menu. For more information, please consult main menu user guide.

NOTE: Some changes cannot be undone like the new project or the save project functions.

3.3 Redo

Redo cancels the latest undo command.

To redo the latest change that was undone:

1. Select **Redo** from the **Data** menu.
2. The latest undone change is redone.

To undo a redo, you may use the undo command.

It is possible to redo more than one changes that were previously undone by following the steps described above. The number of actions that are kept in memory and may be undone or redone is 20 by default. This means that the program is able to keep track of up to 20 successive changes that are undone and redo them. This number may change for all programs, using the option in the main menu. For more information, please consult main menu user guide.

Chapter



IV

4 View

4.1 View menu

With this menu, you can modify the appearance of the plan view and the profiles. In the **View** menu you can select one of the following options:

- Plan view
 - Visible objects
 - Background
- Background pictures
 - Add
 - Edit
 - Delete
 - Show

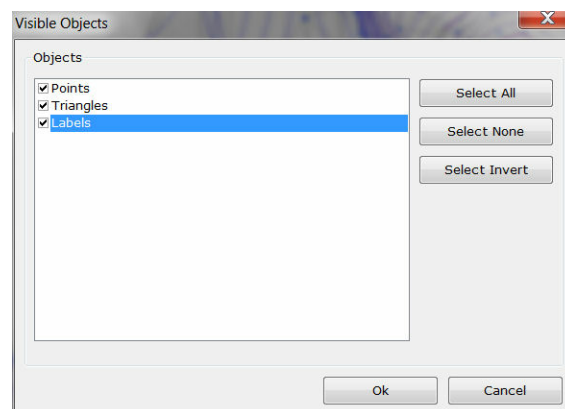
4.2 Plan view

4.2.1 Visible objects

With this option, you can select the object type(s) that will be visible in plan view. This option refers to the active objects of the plan view and not the background objects.

To select the object type(s) that will be visible in plan view:

1. Select **Plan view** from the **View** menu.
2. Select **Visible objects** from the **Plan view** menu. The following form appears:



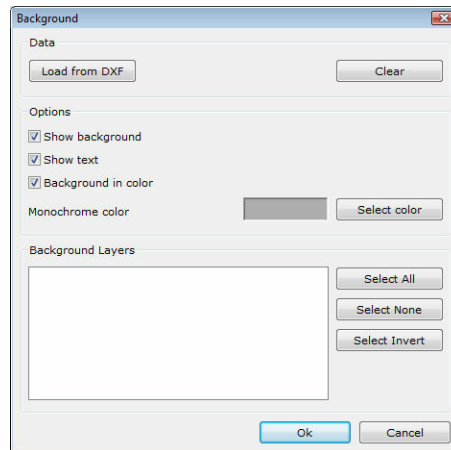
3. Select the object type(s) that you wish to be visible. The quick keys (**Select all**, **Select None**, **Select Invert**) can be used to quickly select all objects, deselect all objects and invert the current selection.
4. Select **Ok** to accept changes and close the form. Select **Cancel** to close the form without any changes.

4.2.2 Background

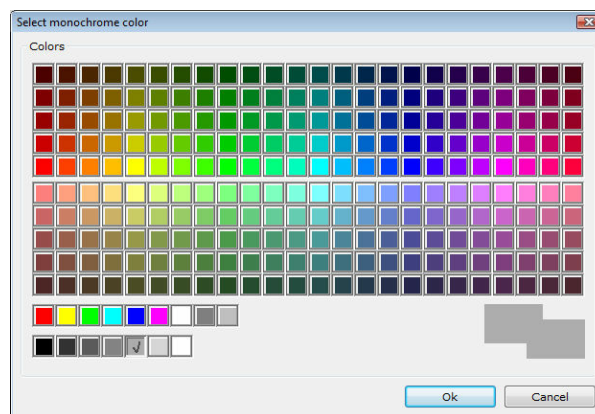
With this option, you have full access to the background data from DXF files. This includes the option to import data from a DXF file, under the **File > Import** menu.

To modify the background:

1. Select **Plan view** from the **View** menu.
2. Select **Background** from the **Plan view** menu. The following form appears:



3. To load data from a DXF file, select **Load from DXF**. This process is described in the **File > Import > Background from DXF** section.
4. Select **Clear** to clear the existing background. A confirmation message will be displayed.
5. Select **Show background** to toggle the visibility of the background.
6. Select **Show text** to toggle the visibility of TEXT objects of the background.
7. Select **Background in color** if you wish to view the background in color.
8. If the option of step 7 is deselected, a single color is used for all background objects. This color can be modified by selecting **Select color**.
- 8.1. The color selection dialog box appears.



- 8.2. Select the **color** from the 256 available colors. The currently selected color is marked with a tick. On top of the **Cancel** button, the old and the new color are displayed.
- 8.3. Click **Ok** to save the changes and close the dialog box. Click **Cancel** to close the

dialog box without saving the changes.

NOTE: The color palette follows standard CAD color palettes.

9. Select the **Background layers** that you wish to be active (visible). The quick keys (**Select all**, **Select None**, **Select Invert**) can be used to quickly select all objects, deselect all objects and invert the current selection.

10. Select **Ok** to accept changes and close the form. Select **Cancel** to close the form without any changes.

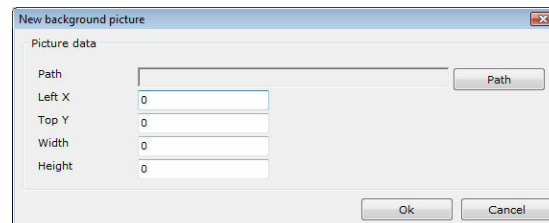
4.3 Background pictures

4.3.1 Add

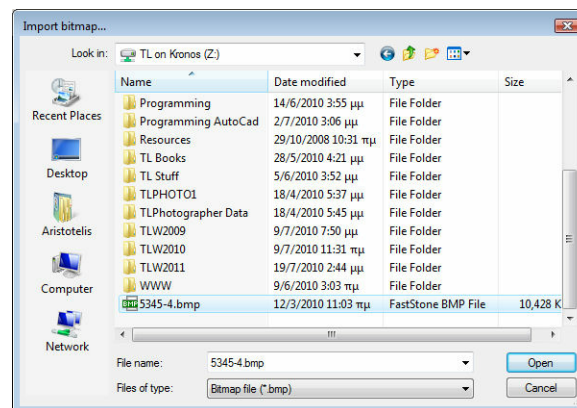
With this option, you can add a picture to the background.

To add a picture to the background:

1. Select **Background Pictures** from the **View** menu.
2. Select **Add** from the **Background Pictures** menu. The following form will appear:



3. Select **Path**. The file selection dialog box will appear:



4. Select the path of the file.
5. Select the file type from the **Files of type** drop-down list. The default option is "Bitmap file" with the extension .bmp.
6. Select the file by clicking on it.
7. Select **Open** to open the selected file. Select **Cancel** to cancel the operation.
8. Enter the **Left X**, **Top Y**, **Width** and **Height** of the picture in drawing units. If you provide only the height or the width, the ratio of the source picture will be used to calculate the missing data.

9. Select **Ok** to save the changes and close the dialog box. Select **Cancel** to close the dialog box without saving any changes.

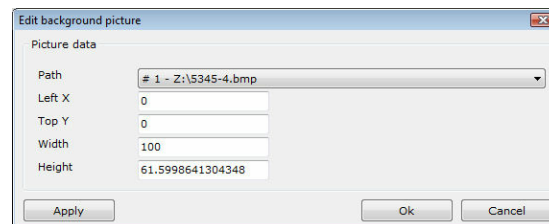
NOTE: The following image file types are supported: bitmaps (.bmp) and JPEG (.jpg).

4.3.2 Edit

With this option, you can modify the position and dimensions of an existing background picture.

To modify the position and dimensions of an existing background picture:

1. Select **Background Pictures** from the **View** menu.
2. Select **Edit** from the **Background Pictures** menu. The following form will appear:



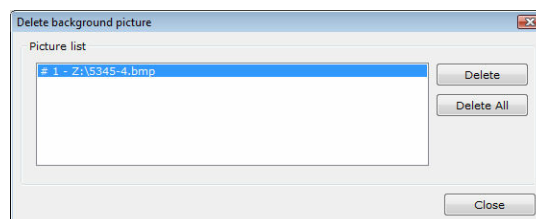
3. Select the picture from the drop-down list.
4. Make the appropriate changes. If you provide only the height or the width, the ratio of the source picture will be used to calculate the missing data.
5. Select **Apply** to apply the changes without closing the form. Select **Ok** to save the changes and close the dialog box. Select **Cancel** to close the dialog box without saving any changes.

4.3.3 Delete

With this option, you can delete one or more existing background pictures.

To delete one or more existing background pictures:

1. Select **Background Pictures** from the **Map** menu.
2. Select **Delete** from the **Background Pictures** menu. The following form will appear:



3. Select the picture from the list.
4. Select **Delete** to delete the selected picture.
5. Select **Delete all** to delete all pictures.
6. Select **Close** to close the dialog box.

4.3.4 Show

With this option, you can show or hide all pictures in the background.

To show or hide all pictures in the background:

1. Select **Background pictures** from the **View** menu.
2. Select **Show** from the **Background pictures** menu.
3. If the background pictures were visible, they become invisible and vice-versa. A checkbox in the menu indicates if this option is enabled.

Chapter



5 Data

5.1 Data menu

With this menu, you can add and modify data. In the **Data** menu you can select one of the following options:

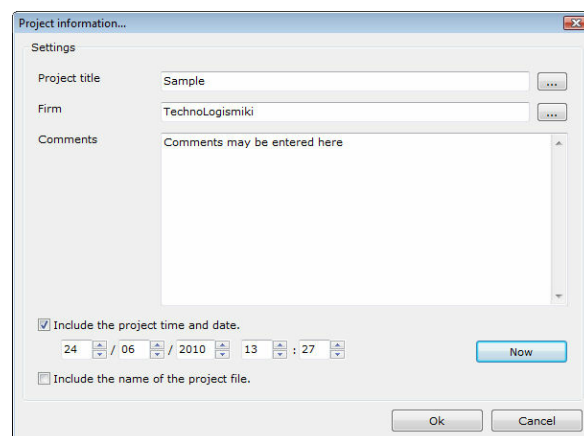
- Project info
- Project summary
- Model check
- Options
 - General preferences
 - Sketch
 - Customize toolbar

5.2 Project info

With this option, you can add project information that include title, firm title and comments. If you want, this information can be included in the reports. The empty fields are ignored.

To add or modify the project information:

1. Select **Project info** from the **Data** menu.
2. Type the **project title**, **firm** title and comments.
3. Check **Include project time and date** if you want to include the time and date in the project. In this case, type the day, month, year, hours and seconds in the corresponding text boxes. Alternatively, press **Today** to insert the current values automatically.
4. Check **Include the name of the project file** if you want the full path and filename of the project to be included in the report.
5. Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.



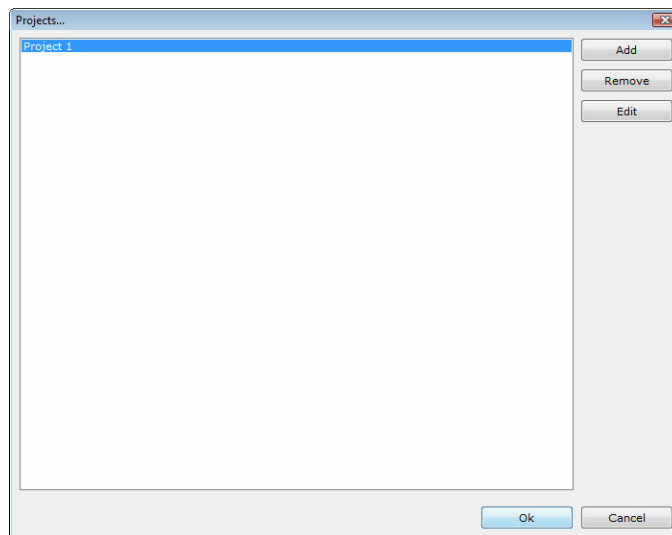
By selecting the buttons with the ellipses (...) next to the **project title** and **firm**, you can access the corresponding databases.

Project title database

For the completion of a project, more than one programs may be needed. For convenience, you can add the project title to the database and retrieve it from all programs.

To use the project title database:

1. Select the button with the ellipses (...) next to the project title text box. The project title database appears.
2. Select **Add** to add a new title to the database.
3. Select **Remove** to remove the selected entry from the database. You will be asked for confirmation only if you have selected to confirm deletions in the General preferences tab.
4. Select **Edit** to modify the selected entry.
5. Select **Ok** to use the currently selected project title and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

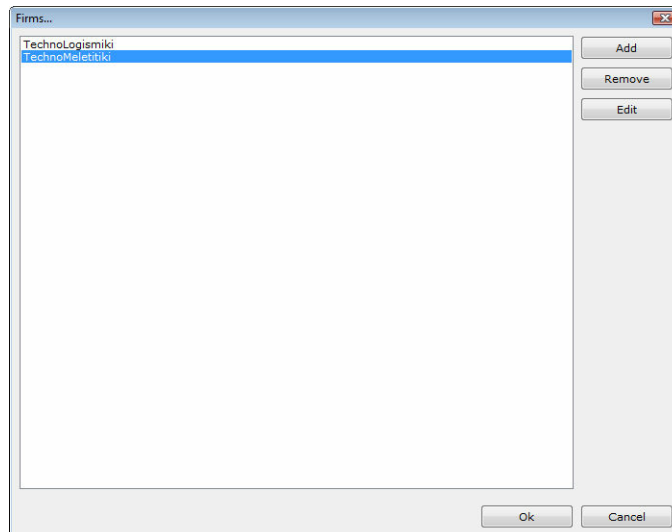


Firm database

An engineer or firm may be involved in multiple projects. For convenience, you can add the title to the database and retrieve it from all programs.

To use the firm database:

1. Select the button with the ellipses (...) next to the firm text box. The firm database appears.
2. Select **Add** to add a new firm/author to the database.
3. Select **Remove** to remove the selected entry from the database. You will be asked for confirmation only if you have selected to confirm deletions in the General preferences tab.
4. Select **Edit** to modify the selected entry.
5. Select **Ok** to use the currently selected firm and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

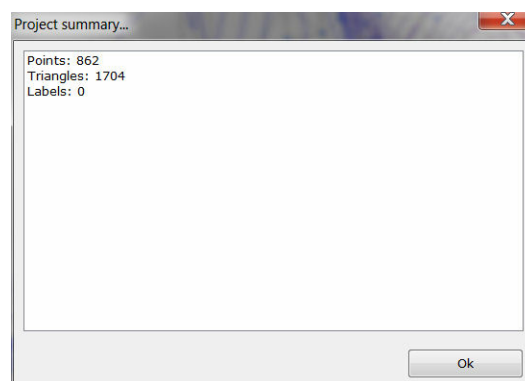


5.3 Project summary

With this option, a summary of the project is displayed. This includes the number of objects and the most important simulation and calculation options.

To display the project summary:

1. Select **Project summary** from the **Data** menu.
2. The project summary is displayed:



3. Press **Ok** to close the form.

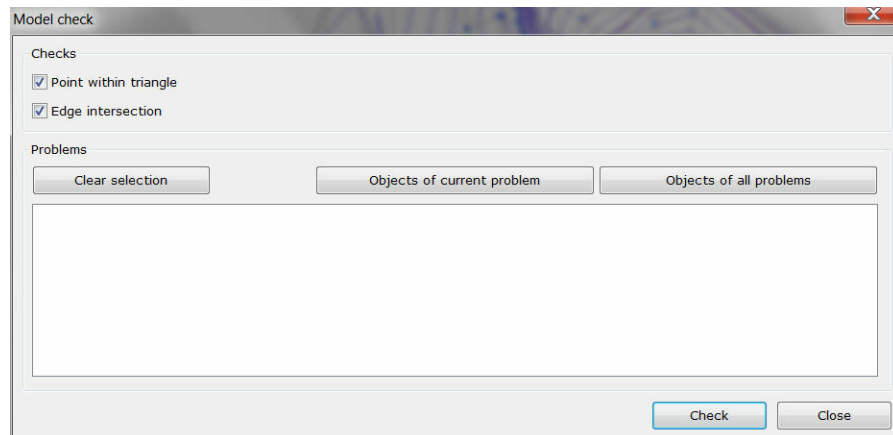
5.4 Model check

When importing point data from an external source such as a DXF file, there can be a number of hard-to-locate inconsistencies. This form facilitates the location and correction of several types of problems.

To use the model check tool:

1. Select **Model Check** from the **Data** menu.

2. Select the type of problems you wish to look for and optionally correct.
3. Click on **Check** to look for specific problems.
4. Highlight one problem in the list and click **Objects of current problem** to highlight the location of the erroneous input on the map.
5. Optionally you may want to click on **Objects of all problems** to highlight the location of all erroneous input on the map.
6. Click on **Clear selection** to hide all highlighted objects on the map.
7. Click **Close** to close the form.



5.5 Options

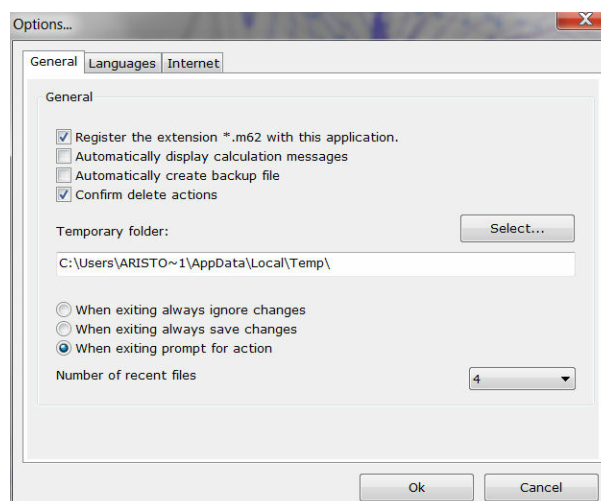
5.5.1 General preferences

With this option, you can modify the general preferences of the program.

To modify the general preferences:

1. Select **Options** from the **Data** menu.
2. Select **General preferences** from the **Options** menu.
3. The general preferences dialog box appears. The preferences are grouped into four tabs. You can select a tab by clicking on its name.

General Tab



This tab contains general preferences regarding the usage of the program.

Check **Register the extension *.m62 with this application** to associate the extension .m62 with this program. This extension is used by the program when saving a project. In this way, you will be able to run the program and load a project by double-clicking on the project filename in Windows Explorer.

Check **Automatically display calculation messages** if you want the report details to be automatically displayed when you calculate the results.

Check **Automatically create backup file** if you want a backup file (with the extension .bck) to be created every time a project is loaded. By default, this file is created in the temporary folder of Windows.

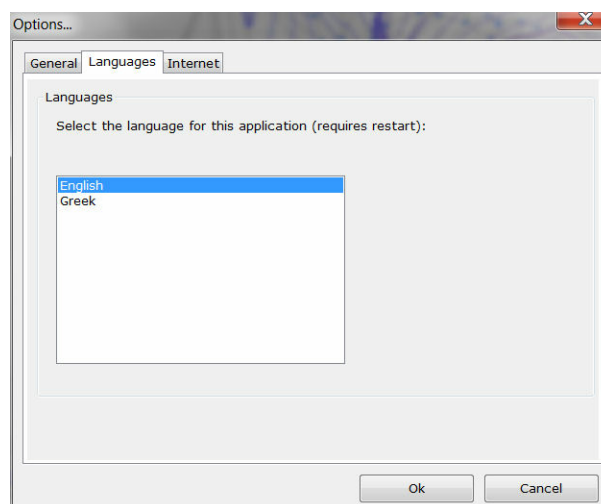
Check **Confirm delete actions** if you want to be asked for confirmation each time an object is about to be deleted. This setting affects the behaviour of all delete actions, for example the deletion of an object.

You can also modify the temporary folder that will be used for the creation of backup files. By default, this folder is the temporary folder of Windows.

Finally, there are three options regarding the termination of the program:

- **When exiting always ignore changes** - All changes since the last save of the project are ignored.
- **When exiting always save changes** - All changes in the current project are automatically saved. If the filename of the project is not set, a dialog box will appear that allows the selection of the filename, as when selecting Save project as from the **File** menu.
- **When exiting prompt for action** - If there are changes in the current project, then a dialog box will appear. You can choose to save or ignore the changes. If the filename of the project is not set, a dialog box will appear that allows the selection of the filename, as when selecting Save project as from the **File** menu.

Languages Tab

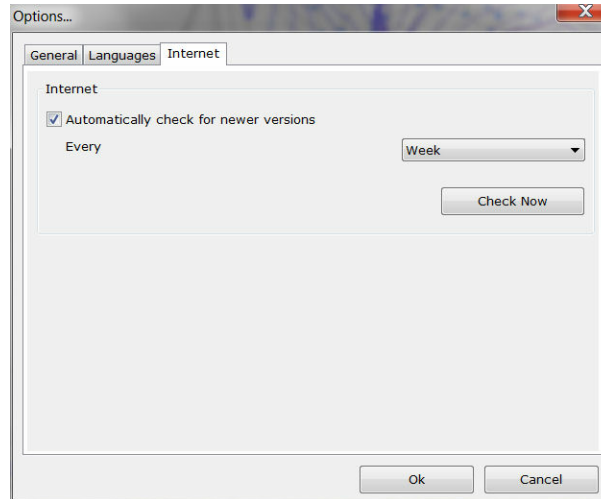


If more than one language packs have been installed, then you can choose the language of the program. In the above case, there are two language packs; English

(that are already selected) and Greek. If you change the language, all forms, menus, messages, help files will reflect the chosen language.

In order for the changes to take effect, you must restart the program.

Internet Tab



The program can automatically check for newer versions over the Internet. Check **Automatically check for newer versions** to enable this feature. The check is automatically performed at an interval specified in the **Every** drop-down list. Select **Check now** to manually check for newer versions.

When a newer version is found, you will be prompted to download and install the latest version.

NOTE: TechnoLogismiki protects your privacy. During the check for newer versions, no data is transferred from your computer to the Internet.

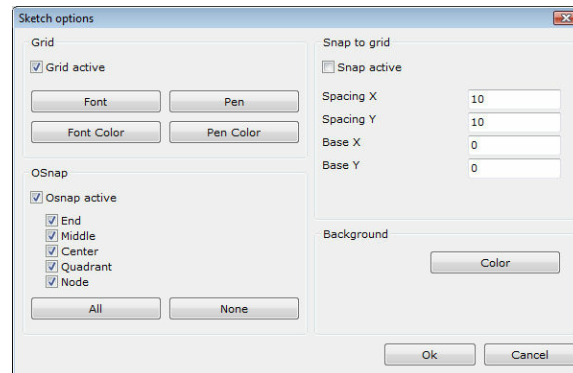
Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

5.5.2 Sketch

With this option, you can modify the profile sketch.

To modify the profile sketch:

1. Select **Options** from the **Data** menu.
2. Select **Sketch** from the **Options** menu. The profile sketch options dialog box appears:



2. Make the appropriate selections as described below.

3. Select **Ok** to save the changes and close the dialog box. Select **Cancel** to close the dialog box without saving any changes.

Grid

- Select **Grid active** if you want the dynamic grid to be displayed.
- Press the **Font** button to select the font that will be used by the grid.
- Press the **Font color** button to select the color of the font that will be used by the grid.
- Press the **Pen** button to select the style and width of the grid line.
- Press the **Pen color** button to select the color of the grid line.

OSnap

- Select **OSnap active** if you want the snap to objects to be active.
- Select one or more OSnaps to be active: **End**, **Middle**, **Center**, **Quadrant**, **Node**. Press **All** to select all OSnaps. Press **None** to select none.

Snap to grid

- Select **Snap active** if you want the snap to grid to be active.
- Select the appropriate **Spacing X** and **Spacing Y** values.
- Select the appropriate **Base X** and **Base Y** values.

Background

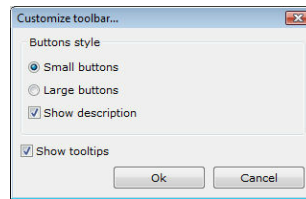
- Press the **Color** button to select the background color of the sketch

5.5.3 Customize toolbar

With this option, you can customize the toolbar of the main form.

To customize the toolbar of the main form:

1. Select **Options** from the **Data** menu.
2. Select **Customize toolbar** from the **Options** menu.
3. Make the appropriate changes.
4. Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.



The toolbar may contain small or large buttons.

Check **Show description** if you want a small description to be displayed under the buttons.

Check **Show tooltips** if you want tooltips to be displayed when the mouse pointer hovers over a button for 2-3 seconds.

NOTE: These preferences affect all projects, both old and new.

Chapter



VI

6 Objects

6.1 Objects menu

With this option, you can add and modify objects. In the **Objects** menu you can select one of the following options:

- Points
 - Add
 - Delete
 - Properties
- Triangles
 - Add
 - Delete
 - Properties
 - Correction
 - New triangulation
 - Options
- Contours
 - Create
 - Delete
 - Options
- Labels
 - Add
 - Delete
 - Options

6.2 Points

6.2.1 Add

With this option, you can add one or more points.

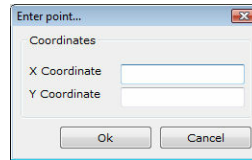
To add a point:

1. Select **Points** from the **Objects** menu.
2. Select **Add** from the **Points** menu.
3. Click onto the drawing to define the position of the point.

To add more than one points:

1. Select **Points** from the **Objects** menu.
2. Select **Add** from the **Points** menu.
3. Click onto the drawing to define the position of the point while holding down CTRL key.
4. Repeat step 3 as many times as required.
5. Hit ESC when you have finished.

When the program expects a point, you can provide the coordinates analytically by hitting CTRL+2. The following form appears:



1. Enter the coordinates by typing into the corresponding text box.
2. Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes. The program resumes the previous action.

NOTE: When selecting points graphically, you can use Snap and / or OSnap. These options can be configured using the menu **Data > Options > Sketch** or by hitting **CTRL + 1**.

6.2.2 Delete

With this option, you can delete one or more existing points.

To delete one or more existing points:

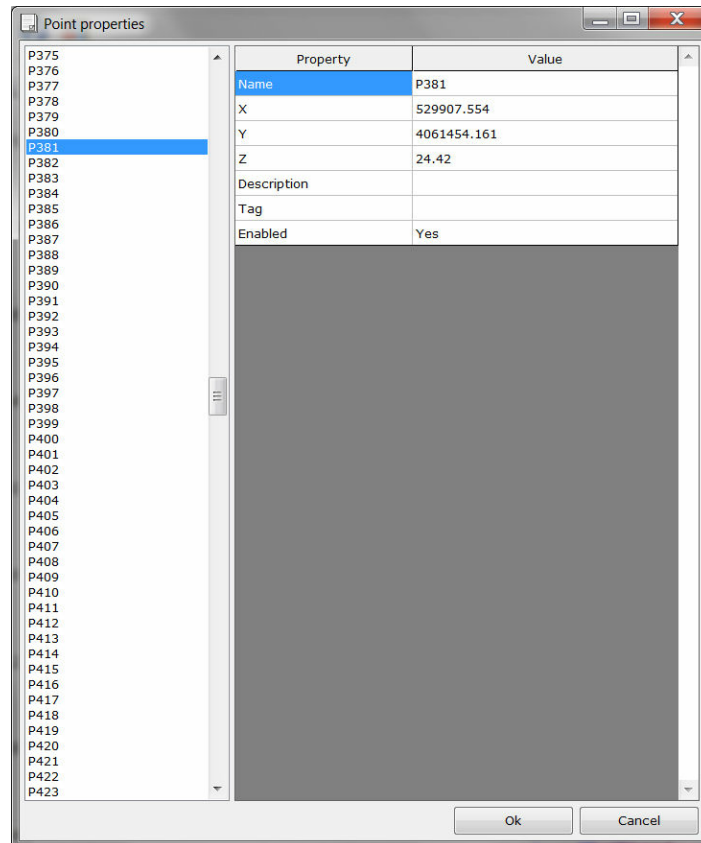
1. Select the points you wish to delete.
2. Select **Points > Delete** under the **Objects** menu.

6.2.3 Properties

With this option, you can view and modify the properties of points.

To view and modify the properties of points:

1. Select **Points** from the **Objects** menu.
2. Select **Properties** from the **Points** menu. The following form appears:



3. Select one or more objects from the list on the left. To select more than one objects, hold down **CTRL** while selecting. The objects that are selected in the plan view are preselected in the list.
4. If more than one objects are selected in the list, only the common properties are displayed.
5. Make the appropriate changes, as described below. The new property values are assigned to all selected objects in the list.
6. Select **Ok** to save the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

6.3 Triangles

6.3.1 Add

With this option, you can add a new triangle. To achieve this, you need to click onto three suitable (existing) points.

To add a new triangle:

1. Select **Triangle > Add** under the **Objects** menu.
2. Click onto three consecutive points to define the corners of the triangle. If the click is not accepted, then the resulting triangle is invalid (e.g. the resulting triangle contains points, or the edges intersect existing edges, etc).

To add more than one triangles:

1. Select **Triangle > Add** under the **Objects** menu.
2. Click onto three consecutive points to define the corners of the triangle, holding down the [CTRL] key.
3. Repeat step 2 as necessary.

6.3.2 Delete

With this option, you can selectively delete one or more existing triangles.

To selectively delete one or more existing triangles:

1. Select **Triangles > Delete** under the **Objects** menu.
2. Click onto the triangle you wish to delete. Hold down the CTRL key if you wish to delete more than one triangles.

6.3.3 Properties

With this option, you can view and modify the properties of triangles.

To view and modify the properties of triangles:

1. Select **Triangles** from the **Objects** menu.
2. Select **Properties** from the **Triangles** menu. The following form appears:

Property	Value
Name	T15
X1	529861.099
Y1	4061471.158
Z1	14.5
X2	529861.254
Y2	4061465.294
Z2	14.37
X3	529862.716
Y3	4061469.953
Z3	15.48
Description	
Tag	

3. Select one or more objects from the list on the left. To select more than one objects, hold down **CTRL** while selecting. The objects that are selected in the plan

view are preselected in the list.

4. If more than one objects are selected in the list, only the common properties are displayed.

5. Make the appropriate changes, as described below. The new property values are assigned to all selected objects in the list.

6. Select **Ok** to save the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

6.3.4 Correction

With this option, you can selectively correct two adjacent triangles, by alternating their common edge.

To selectively correct two adjacent triangles:

1. Select **Triangles > Correction** under the **Objects** menu.

2. Click onto the triangle edge you wish to correct. Hold down the CTRL key if you wish to correct more than one edges.

6.3.5 New triangulation

With this option, you can create a new network of triangles. All existing triangles are erased.

To create a new network of triangles:

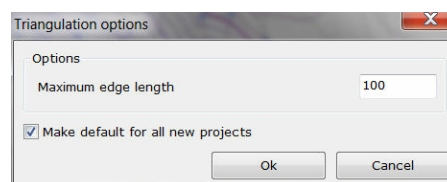
1. Select **Triangles > New triangulation** under the **Objects** menu.

6.3.6 Options

With this option, you can modify the options regarding the triangulation.

To modify the options regarding the triangulation:

1. Select **Triangles > Options** from the **Objects** menu. The following form appears:



2. Select the maximum allowable length of the edges of the triangles.

3. Select **Ok** to save the changes and close the dialog box. Select **Cancel** to close the dialog box without saving any changes.

6.4 Contours

6.4.1 Create

With this option, you can create the contours based on the existing triangles.

To create the contours:

1. Select **Contours > Create** under the **Objects** menu. The contours are created based on the existing triangles and the options specified.

6.4.2 Delete

With this option, you can delete the existing contours.

To delete the existing contours:

1. Select **Contours > Delete** under the **Objects** menu.

6.4.3 Options

With this option, you can modify the options regarding the contours.

To modify the options regarding the contours:

1. Select **Contours > Options** from the **Objects** menu. The following form appears:

The screenshot shows the 'Contours' dialog box with the following settings:

- Enabled:** ☒
- Settings:**
 - Contour step: 1
 - Major step: 4
 - Contour segments: 5
 - Show labels: ☒
- Colors:**
 - Min value color: Blue
 - Max value color: Red
 - Classes: 10
- User defined low/high values:** ☐
 - Low value: 20
 - High value: 30
 - Color < low value: (empty)
 - Color > high value: (empty)
- Make default for all new projects:** ☐

2. Check **Enabled** to enable the coloring of objects.

3. Select the colors that correspond to the minimum and maximum values by clicking on the corresponding **Change** button. If you want to use custom (user defined) high and low values, check the corresponding field. In this case you need to provide the colors for the values that are higher than the high value or lower than the low value.

4. Select the number of classes for the classification of objects.

5. Select **Ok** to close the dialog box and save changes. Select **Cancel** to close the dialog box and ignore changes.

6.5 Labels

6.5.1 Add

With this option, you can add one or more labels.

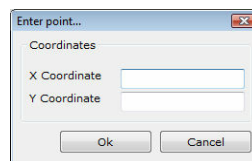
To add a label:

1. Select **Labels** from the **Objects** menu.
2. Select **Add** from the **Labels** menu.
3. Click onto the drawing to define the position of the label.

To add more than one labels:

1. Select **Labels** from the **Objects** menu.
2. Select **Add** from the **Labels** menu.
3. Click onto the drawing to define the position of the label while holding down CTRL key.
4. Repeat step 3 as many times as required.
5. Hit ESC when you have finished.

When the program expects a point, you can provide the coordinates analytically by hitting CTRL+2. The following form appears:



1. Enter the coordinates by typing into the corresponding text box.
2. Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes. The program resumes the previous action.

NOTE: When selecting points graphically, you can use Snap and / or OSnap. These options can be configured using the menu **Data > Options > Sketch** or by hitting **CTRL + 1**.

6.5.2 Delete

With this option, you can delete one or more existing labels.

To delete one or more existing labels:

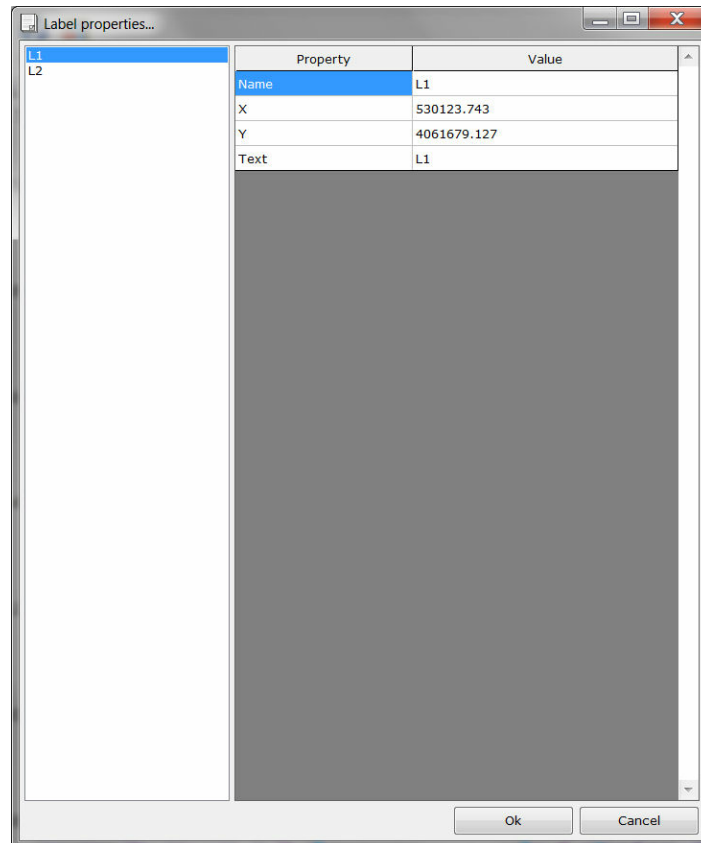
1. Select the labels you wish to delete.
2. Select **Labels > Delete** under the **Objects** menu.

6.5.3 Properties

With this option, you can view and modify the properties of labels.

To view and modify the properties of labels:

1. Select **Labels** from the **Objects** menu.
2. Select **Properties** from the **Labels** menu. The following form appears:



- 3.** Select one or more objects from the list on the left. To select more than one objects, hold down **CTRL** while selecting. The objects that are selected in the plan view are preselected in the list.
- 4.** If more than one objects are selected in the list, only the common properties are displayed.
- 5.** Make the appropriate changes, as described below. The new property values are assigned to all selected objects in the list.
- 6.** Select **Ok** to save the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

Chapter

VII

7 Help

7.1 Help menu

In the **Help** menu you can select one of the following options:

- Contents
- User guide
- Tutorials
- Tip of the day
- Unit conversion
- TechnoLogismiki website
- Buy products
- TechnoLogismiki NOMOS
- TechnoLogismiki Live!
- About the program

7.2 Contents

With this option, you can access the online help which contains detailed information regarding the usage of the program.

To view the online help:

1. Click **Contents** from the **Help** menu.
2. The online help appears.

NOTE: If an error message appears then the online help has not been installed. You can install the online help from the installation CD or the Internet.

7.3 User guide

With this option, you can access the user guide which contains detailed information regarding the usage of the program.

To view the user guide:

1. Click **User Guide** from the **Help** menu.
2. The user guide appears.

NOTE: If an error message appears then the online help has not been installed. You can install the online help from the installation CD or the Internet.

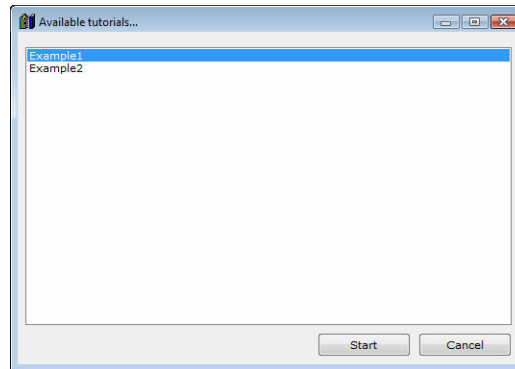
NOTE: Adobe Acrobat Reader or a similar program that can display pdf files is required in order to view or print the user guide.

7.4 Tutorials

With this option, you can access the tutorials of the program. The tutorials are step-by-step examples that allow you to decrease the learning cycle of the programs dramatically.

To access the tutorials:

1. Click **Tutorials** from the **Help** menu.
2. The tutorial selection dialog box appears.
2. Select the appropriate tutorial and click **Start** to proceed. Click **Cancel** to close the dialog box.



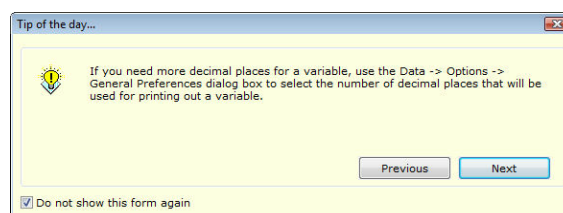
NOTE: The number and content of the tutorials is changed frequently. Use the live update system of TechnoLogismiki's products to download the latest tutorials.

7.5 Tip of the day

With this option, you can access the tip database of the program. The tips are short guidelines regarding the usage of the programs which may be of great help to the user.

To access the tips:

1. Click **Tip of the day** from the **Help** menu.
2. The tip of the day form appears.
3. Check **Do not show this form again** to prevent the program from showing the tip of the day when starting. Press the **Previous/Next** buttons to browse all available tips.
4. Press **Esc** to close the form.



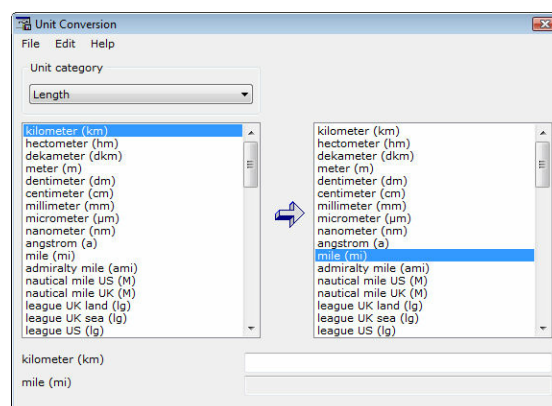
NOTE: The number and content of the tips is changed frequently. Use the live update system of TechnoLogismiki's products to download the latest tips.

7.6 Unit conversion

With this option, you can access the unit conversion tool. You can find more information about its usage in its help system.

To launch the unit conversion tool:

1. Click **Unit conversion** from the **Help** menu.
2. The unit conversion tool is launched.



NOTE: If an error message appears then the unit conversion tool has not been installed. You can install the unit conversion tool from the installation CD or the Internet.

7.7 TechnoLogismiki website

With this option, you can load on your Internet browser the website of TechnoLogismiki's.

7.8 Buy products

With this option, you can load on your Internet browser the main product page of TechnoLogismiki's website.

7.9 TechnoLogismiki NOMOS

With this option, you can load on your Internet browser the **NOMOS** service of TechnoLogismiki.

7.10 TechnoLogismiki Live!

With this option, you can load on your Internet browser the **Live!** service of TechnoLogismiki.

7.11 About the program

With this option, a form containing the name, version and licence information of the program appears.

To show this form:

1. From the **Help** menu, select **About the program**.
2. The form appears.
3. Click anywhere on the form or hit ESC to close the form.

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