



Significant Wave

Version 1.0.0

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USER GUIDE

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 **TECHNO logismiki**

Advanced Technical Software

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Significant Wave

Technologismiki

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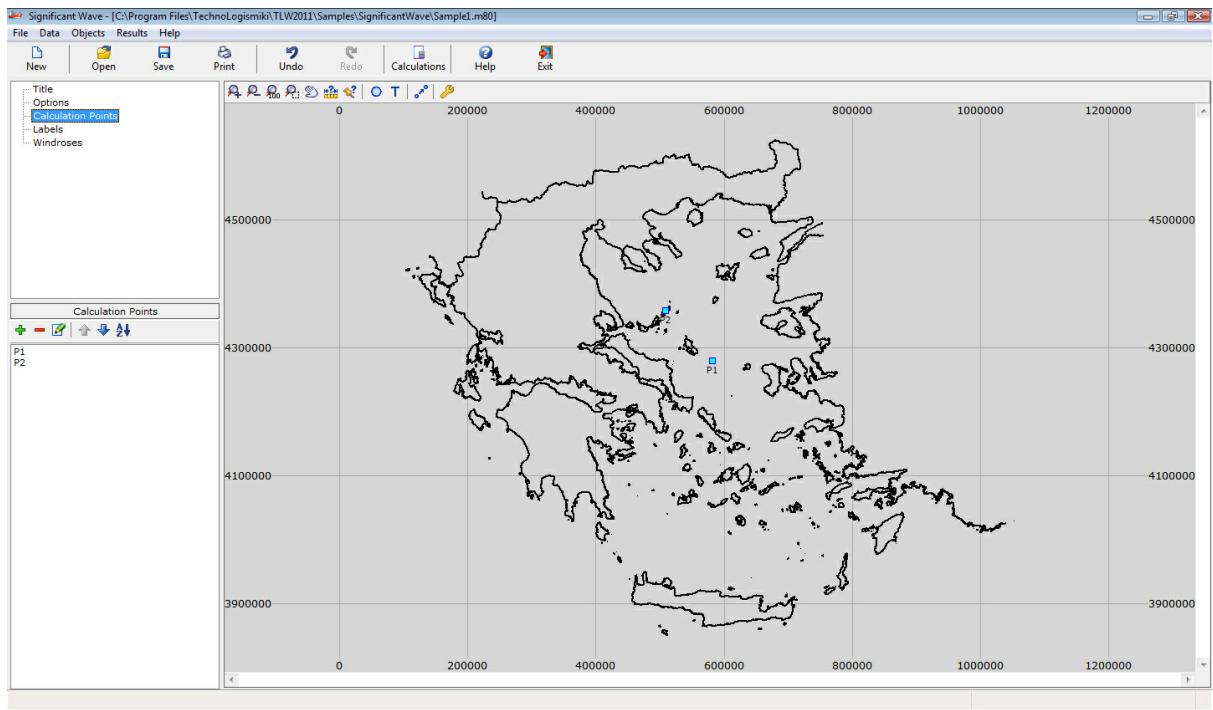
Chapter

I

1 About the program

1.1 What does the program do?

This program evaluates the characteristics of the significant wave by using the SMB (Sverdrup - Munk - Bretschneider) method.



By using the SMB method, the height H_s and period T_s of the significant wave are derived as functions of the wind speed U , the fetch F and the duration of the wind D . The following dimensionless equations are employed:

$$\frac{gH_s}{U^2} = 0.283 \tanh(0.0125\Phi^{0.42})$$

$$\frac{gT_s}{U} = 7.540 \tanh(0.077\Phi^{0.25})$$

$$\frac{gD}{U} = 6.588 \exp \left(\left(0.0161(\ln(\Phi))^2 - 0.369 \ln(\Phi) + 2.2024 \right)^{0.5} + 0.8798 \ln(\Phi) \right)$$

Where $\Phi = gF/U^2$ is the fetch coefficient.

1.2 What's new in this version

This is the first version of the program.

1.3 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
- 1280x768 with 16-bit 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

1.4 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, Imitou street, Cholargos, 15561, Athens, Greece.

Chapter



II

2 File

2.1 File menu

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

- New project
- Open project
- Save project
- Save project as
- Print Setup
- Print
- Print to
 - Print to File
 - Print to Word (Formatted)
 - Print to Excel
- Exit

2.2 New project

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

To create a new project:

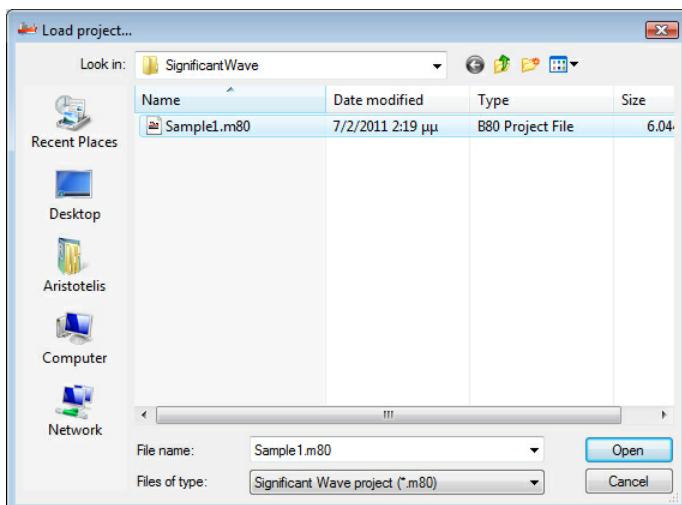
1. Select **New project** from the **File** menu.
2. If a project is already loaded and changes have been made, a warning message will appear that asks the user whether to save the changes or not.
3. The current project is erased and a new project is started.

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 "Significant wave project" with the extension .m45.
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\TLW2011\Samples\SignificantWave

Supported file types

- **M45** (Significant Wave project): Files created by version 2011.
- **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.

Backwards compatibility

This version implements backward compatibility (up to version 5); however, note that when a project is saved with the latest format, it cannot be used by previous versions.

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

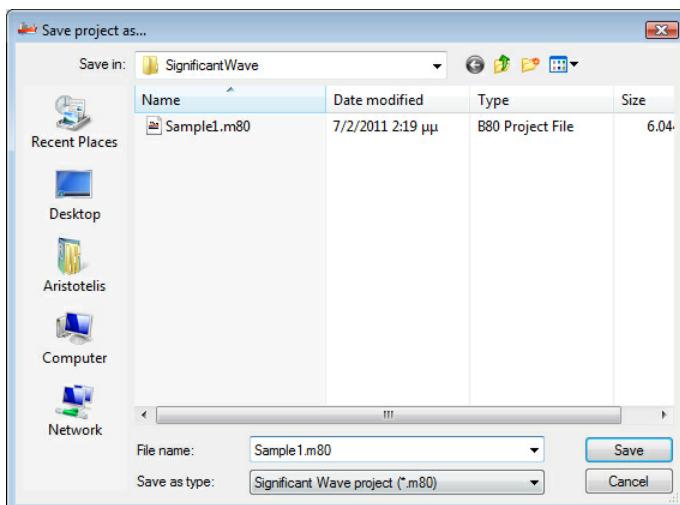
messages. If the filename is not set, a dialog box will appear that allows the selection of the filename and path.

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.



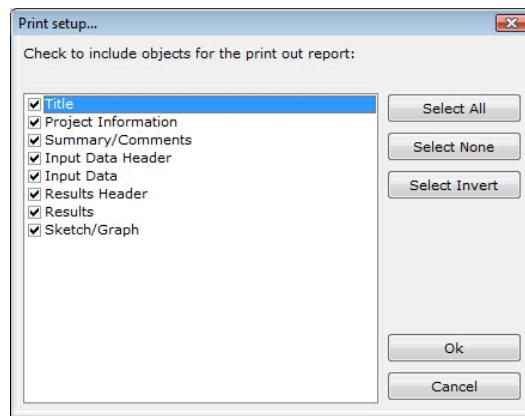
NOTE: If a file with the same name and in the same path already exists, a warning message will appear that asks whether to overwrite the file or not. If you answer Yes, then the existing file is erased and the new file takes its place. If you answer No, the existing file remains intact but NO changes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

2.6 Print Setup

With this option, you can select which parts of the project will be included in the printouts. When a new project is created, a full report is selected by default.

To modify the print setup:

1. Select **Print setup** from the **File** menu.
2. Select the sections (Title, Project information etc) that will be included in the reports.
3. Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.



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 of a list.

NOTE: The changes are saved with the project. The above preferences are used to all printouts, either to the printer or to other formats such as Word file, Excel file etc.

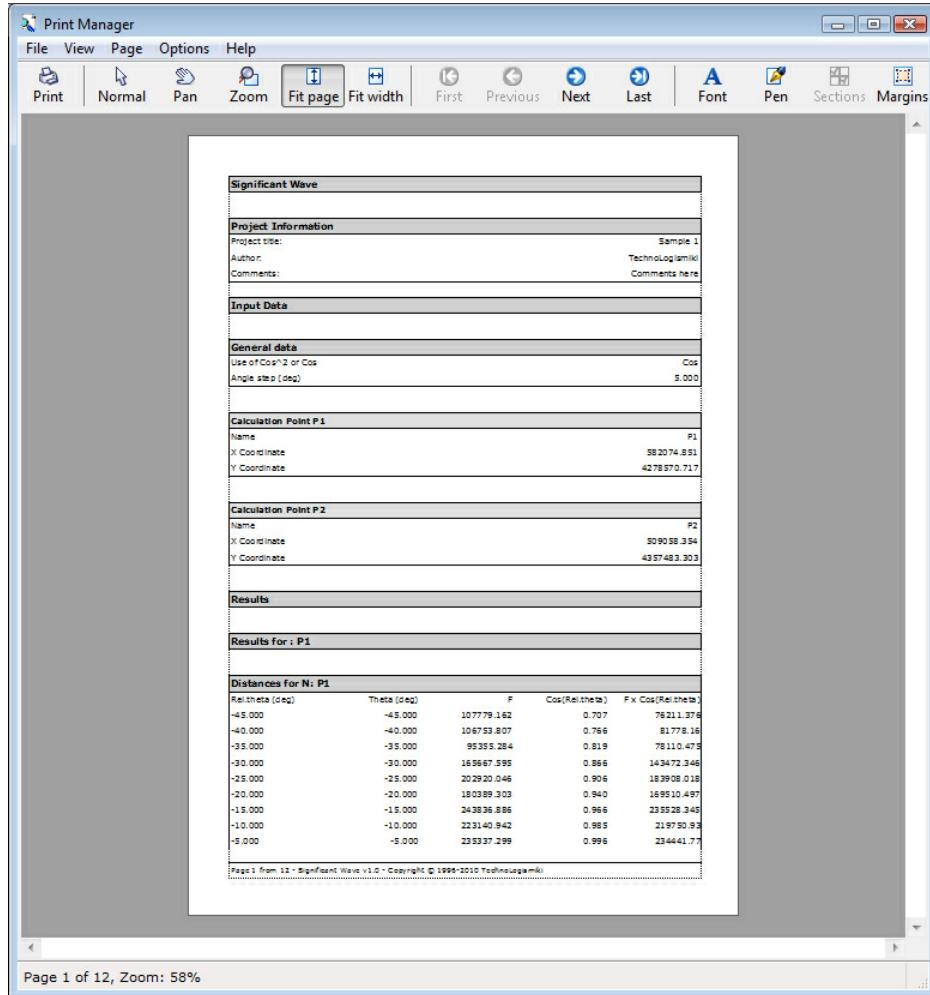
2.7 Print

With this option, you can prepare a report to be printed to a local, network or virtual printer such as Adobe PDF Writer. The parts of the project that will be included in the report are determined from print setup.

By selecting **Print**, the report is not printed directly; instead, a document is prepared and a preview of the printout is created by the **Print manager**. You can print the report by clicking the **Print** button of the toolbar of **Print manager**.

To create a report:

1. Select **Print** from the **File** menu.
2. A report is prepared and sent to **Print manager**. A preview of the document appears.
3. You can print the report by clicking the **Print** button of the toolbar.



NOTE: A complete user manual on the capabilities of **Print manager** can be found in the corresponding help file.

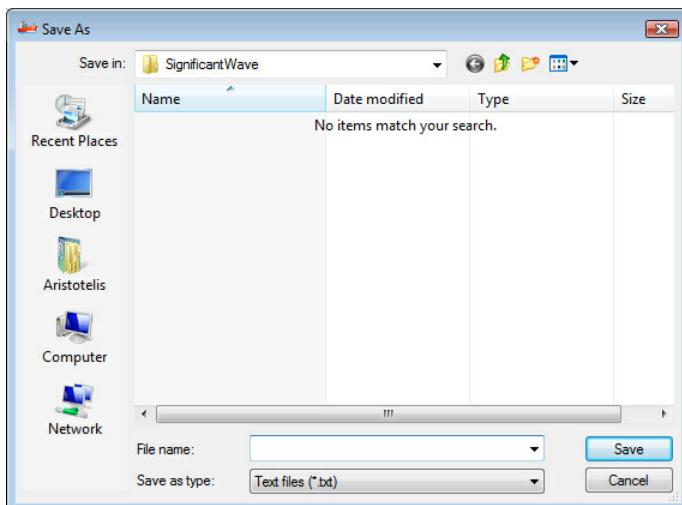
2.8 Print to

2.8.1 Print to File

With this option, you can create a simple text file containing a report of the project. This file is recognized and can be further modified by word processors such as Microsoft Word, OpenOffice Writer etc.

To print to a text file:

1. Select **Print to** from the **File** menu.
2. Select **Print to file** from the **Print to** menu.
3. Select the path of the file.
4. Type the filename in the **File name** text box.
5. Select **Save** to create the file.



The parts of the project that will be included in the report are determined from print setup

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 the report is NOT printed.

2.8.2 Print to Word (Formatted)

If Microsoft Word (version 2003 or later) has been installed in the system, then a Microsoft Word file containing the report can be created. Note that Microsoft Word is a separate program and it is not included in TechnoLogismiki's products. Moreover, no technical support is offered regarding the usage of Microsoft Word.

To print the report to a formatted Microsoft Word file:

1. Select **Print to** from the **File** menu.
2. Select **Print to Word (Formatted)** from the **Print to** menu.

The parts of the project that will be included in the report are determined from print setup . This operation is much slower than the regular print to word function. However, the final output requires minimal user intervention as it comes fully formatted with tables, alignment, font styles, etc.

NOTE: Do not use Copy (CTRL+C) on any of the programs running during this operation. If you do so, it will most likely affect the communication between Microsoft Word and the clipboard and as a result the final document will be corrupt.

2.8.3 Print to Excel

If Microsoft Excel (version 2003 or later) has been installed in the system, then a Microsoft Excel file containing the report can be created. Note that Microsoft Excel is a separate program and it is not included in TechnoLogismiki's products. Moreover, no technical support is offered regarding the usage of Microsoft Excel.

To print the report to a Microsoft Excel file:

1. Select **Print to** from the **File** menu.
2. Select **Print to Excel** from the **Print to** menu.

The parts of the project that will be included in the report are determined from print setup

.

2.9 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:

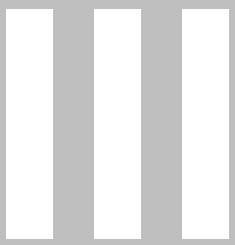
- either ask the user to save the changes
- or save the changes
- or ignore the changes

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 Data

3.1 Data menu

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

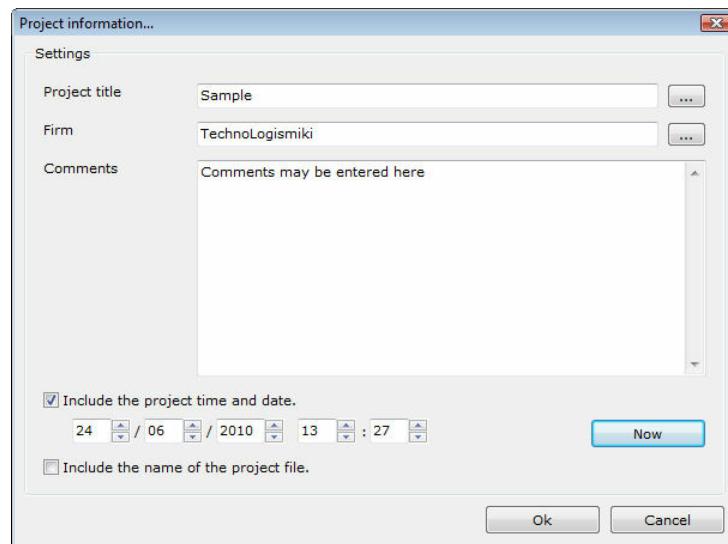
- Project info
- Undo
- Redo
- Select All
- Delete Selected Objects
- Analysis options
- Windroses
- Options
 - Import from DXF
 - Clear
 - Show
- Options
 - General preferences
 - Sketch
 - Grid editing
 - Customize toolbar

3.2 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.



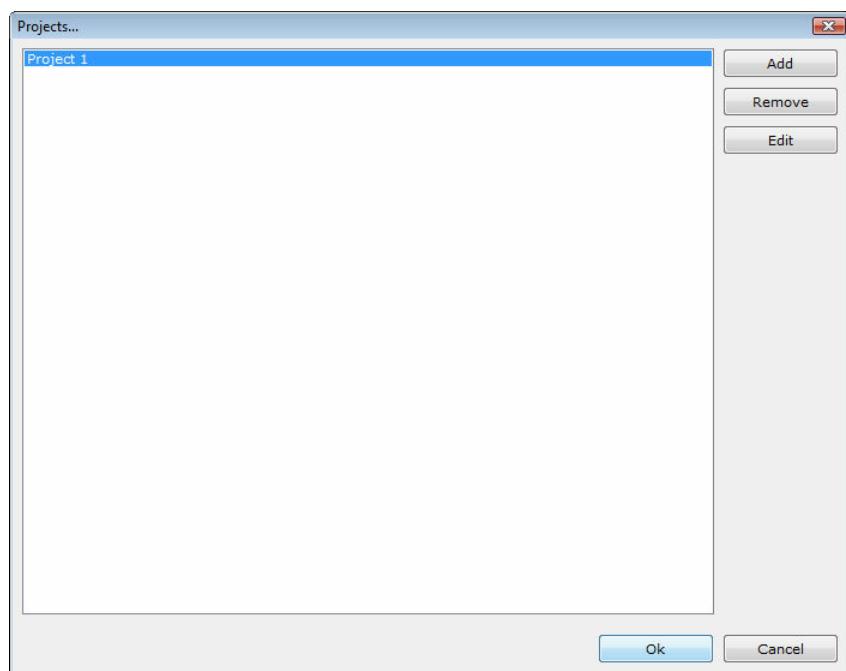
By selecting the buttons with the ellipses (...) next to the **project title** and **firm**, you can access the corresponding databases.

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.

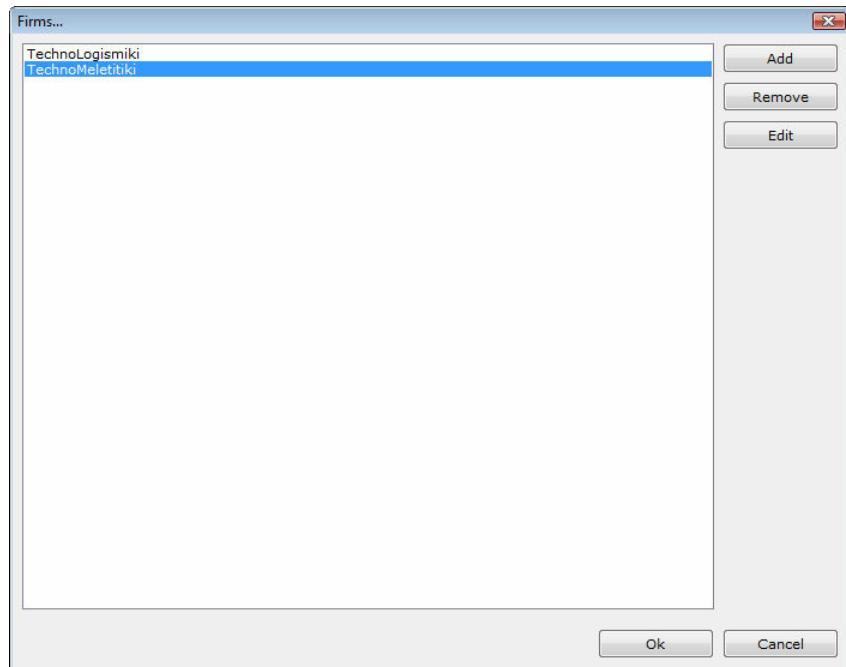


Firm database

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.



3.3 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.

3.4 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.

3.5 Select all

With this option, all objects in the plan view are selected.

To select all:

1. Select **Select All** from the **Data** menu.

3.6 Delete selected objects

With this option, you can delete the selected objects.

To delete the selected objects:

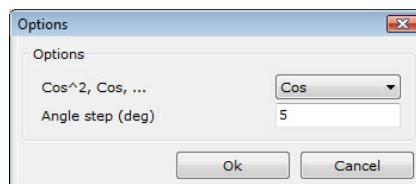
1. Select **Delete Selected Objects** from the **Data** menu.

3.7 Analysis options

With this option, you can set options for the analysis.

To set options for the analysis:

1. Select **Analysis Options** from the **Data** menu. The following form 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.

Options

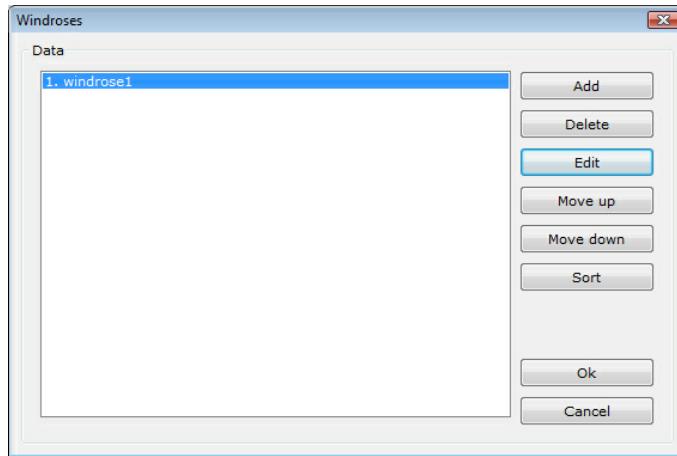
Cos², Cos: select the use of cosinus or its square when evaluating the effective fetch.
Angle step (deg): select the angle step which will be used when scanning the fetch in a sector +/- 45 degrees from one of the eight main directions (N, NE, E, SE, S, SW, W, NW).

3.8 Windroses

With this option, you can add windroses.

To add windroses:

- 1.** Select Windroses from the Data menu. The following form appears:



- 2.** Make the necessary changes.

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

In particular, the following options are available:

Add:

To add a windrose, press the **Add** button. The following form appears:

The screenshot shows a dialog box titled "Wind Rose Data". At the top, it says "Wind Rose Data" and has a "Name:" text box containing "W1". Below this is a table grid with columns labeled "Beauf." and "N", "NE", "E", "SE", "S", "SW", "W", "NW", "Stillness", and "Sum". The rows are labeled from "Annual" down to "Sum". The "Annual" row contains values for each month from January to December. The "Sum" row at the bottom contains the total values for each column. On the right side of the dialog box are "Import" and "Export" buttons. At the bottom are "Ok" and "Cancel" buttons.

Beauf.	N	NE	E	SE	S	SW	W	NW	Stillness	Sum
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
>=12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00

Enter a suitable **Name** in the corresponding text box.

Enter the wind data by typing directly into the grid. You must enter the wind data for all months, or, alternatively, only for the "Annual" case. The sums and stillness values are evaluated automatically.

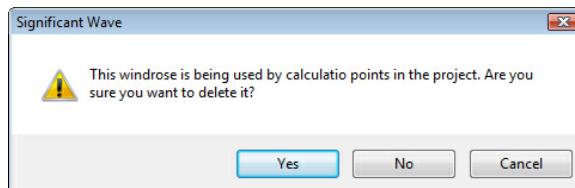
Alternatively, you can import data from an external file with the extension .ane, by

pressing the **Import** button.

Finally, you can export the data of the grid to an external .ane file by pressing the **Export** button.

Delete

To delete an entry, select it from the list and press Delete. A warning message may appear, depending on the general preferences of the program. If the data you are trying to delete are used in a calculation point, the following message appears:



Edit

To edit a windrose, select the corresponding entry from the list and press the **Edit** button. The following form will appear:

Beauf.	N	NE	E	SE	S	SW	W	NW	Stillness	Sum
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.41	35.41
1	0.79	0.33	1.37	0.60	0.44	0.24	1.11	2.06	0.00	6.94
2	2.77	0.88	6.89	2.32	0.96	0.32	3.27	7.60	0.00	25.01
3	1.68	0.55	7.88	2.35	0.43	0.19	2.38	5.13	0.00	20.59
4	0.65	0.28	3.90	1.34	0.14	0.10	1.11	2.01	0.00	9.53
5	0.13	0.04	0.55	0.24	0.06	0.04	0.32	0.50	0.00	1.88
6	0.02	0.03	0.14	0.07	0.01	0.02	0.10	0.13	0.00	0.52
7	0.00	0.00	0.04	0.00	0.01	0.01	0.01	0.02	0.00	0.09
8	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.03
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
>=12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	6.04	2.11	20.79	6.92	2.05	0.92	8.30	17.46	35.41	100.00

Make the necessary changes. Press **Ok** to save the changes and close the form. Press **Cancel** to close the form without saving any changes.

Move up

With this option, the selected entry is moved by one place to the top of the list, if possible.

Move down

With this option, the selected entry is moved by one place to the end of the list, if possible.

Sort

With this option, the entries in the list are sorted alphabetically.

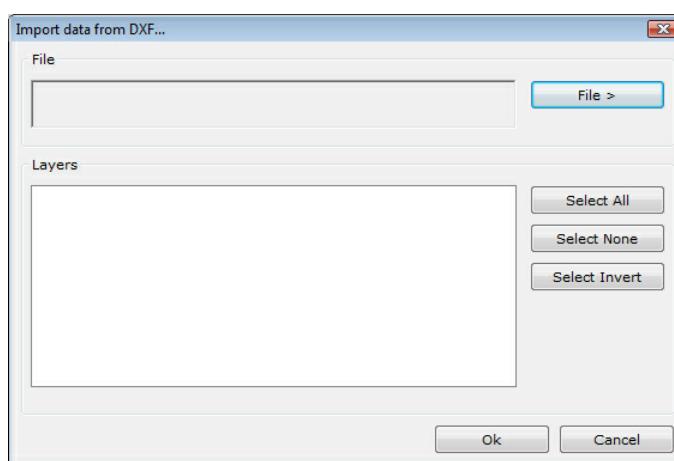
3.9 Shorelines

3.9.1 Import from DXF

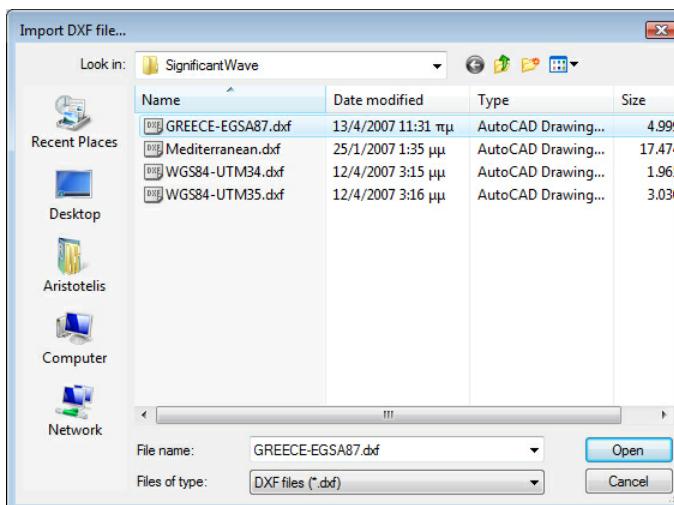
With this option, you can import shoreline data from DXF files.

To import shoreline data from DXF:

- 1.** Select **Shorelines** from the Data menu.
- 2.** Select **Import from DXF** from the **Shorelines** menu. The following form appears:

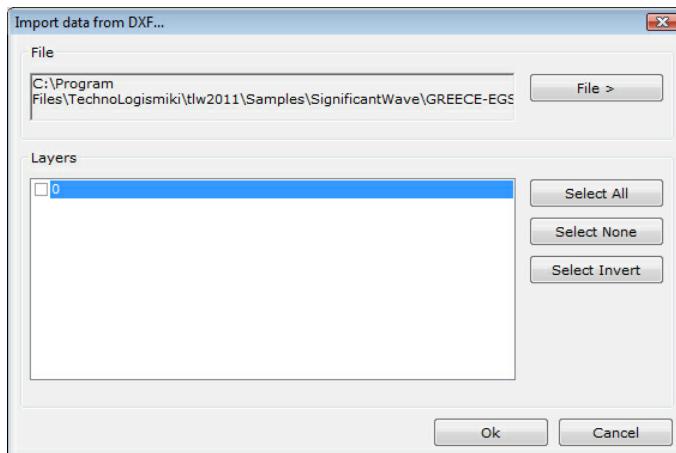


- 3.** Click **File >** to select the DXF file. The file selection dialog box appears.



- 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.



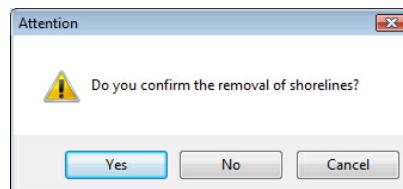
- 8.** Select one or more layers containing the data. The quick keys (**Select all**, **Select None**, **Select Invert**) can be used to quickly select all objects, deselect all objects and invert the current selection.
9. Select **Ok** to import the data and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

3.9.2 Clear

With this option, you can clear the shorelines of the project.

To clear the shorelines of the project:

- 1.** Select **Shorelines > Clear** from the **Data** menu. The following warning message appears:



- 2.** Select **Yes** to clear the shorelines. Press any other key to cancel the procedure.

3.9.3 Show

With this option, you can toggle the visibility of the shorelines.

To toggle the visibility of the shorelines:

- 1.** Select **Shorelines > Show** from the **Data** menu. The shorelines are shown if they were hidden, and vice versa.

3.10 Options

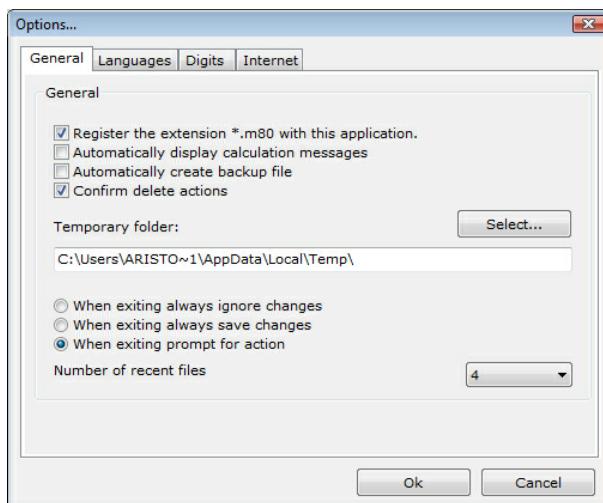
3.10.1 General preferences

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 *.m80 with this application** to associate the extension .m80 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.

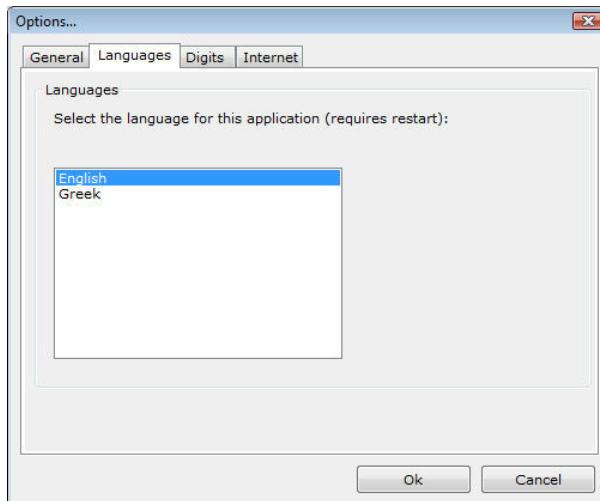
Check **Confirm delete actions** if you want to be asked for confirmation each time an object is about to be deleted. This setting affects the behaviour of all delete actions, for example the deletion of an object.

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.

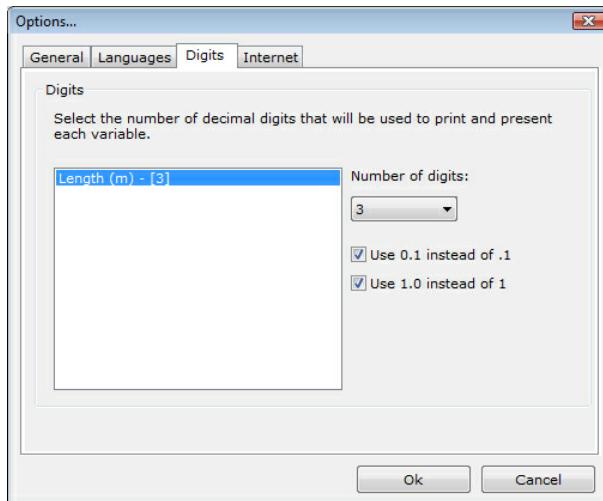
Languages Tab



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.

Digits Tab



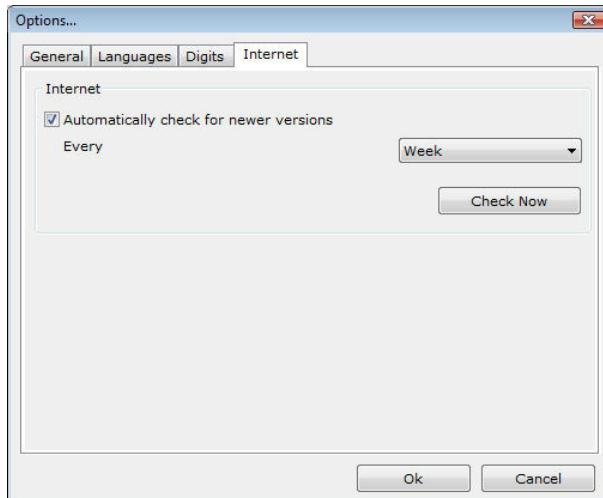
With this tab, you can modify the way the results are presented. All values used in the program are displayed in the list on the left.

For each value, you can select the number of decimal digits using the **Number of digits** drop-down list.

Check **Use 0.1 instead of .1** to use a preceding zero when displaying numbers between -1 and 1, for example -0.08 instead of -.08 and 0.98 instead of .98.

Check **Use 1.0 instead of 1** to use trailing zeros (when necessary) in order to display a number with the decimal digits selected in the **Number of digits** drop-down list, for example 1.1600 instead of 1.16 (when the number of digits is set to 4).

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.

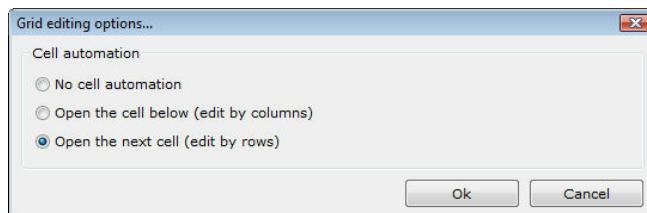
When a newer version is found, you will be prompted to download and install the latest version.

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.

3.10.2 Grid editing

With this option, you can modify the behavior of grids.



The behaviour of all editable grids is controlled by the preferences in this dialog box.

Select **No cell automation** if you want the active cell to remain the same when hitting ENTER.

Select **Open the cell below (edit by columns)** if you want to activate the cell below when hitting ENTER. This is particularly useful when editing tables by columns.

Select **Open the next cell (edit by rows)** if you want to activate the next cell on the right when hitting ENTER. This is particularly useful when editing tables by rows.

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

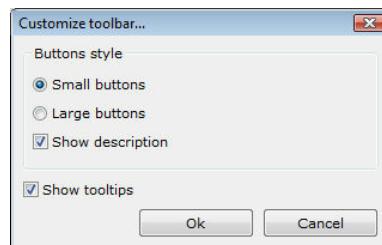
Select **Ok** to apply the changes and close the dialog box. Select **Cancel** to close the dialog box without applying any changes.

3.10.3 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.

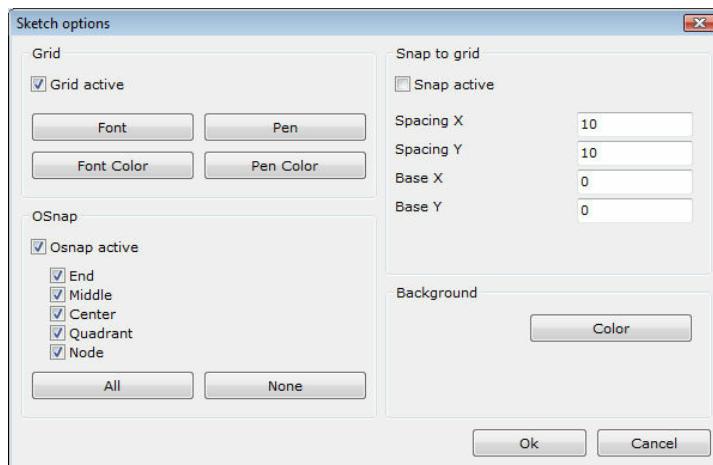
NOTE: These preferences affect all projects, both old and new.

3.10.4 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

Chapter



IV

4 Objects

4.1 Objects menu

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

- Add
 - Calculation Point
 - Label
- Properties
 - Calculation Point
 - Label

4.2 Add

4.2.1 Calculation Point

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

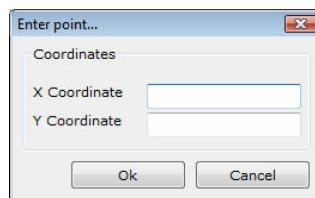
To add a calculation point:

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

To add more than one points:

1. Select **Add** from the **Objects** menu.
2. Select **Calculation point** from the **Add** menu while holding down CTRL key.
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**.

4.2.2 Label

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

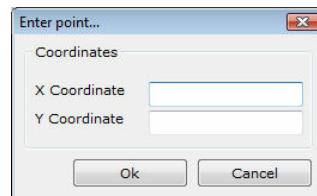
To add a label:

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

To add more than one labels:

1. Select **Add** from the **Data** menu.
2. Select **Label** from the **Add** menu while holding down CTRL key.
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**.

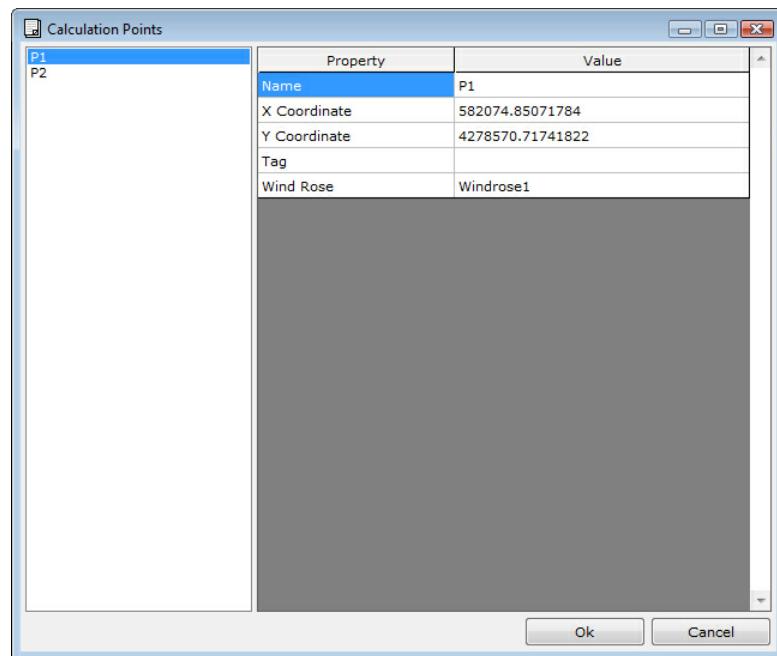
4.3 Properties

4.3.1 Calculation Point

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

To view and modify the properties of calculation points:

1. Select **Properties** from the **Objects** menu.
2. Select **Calculation Points** from the **Properties** 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.

Properties

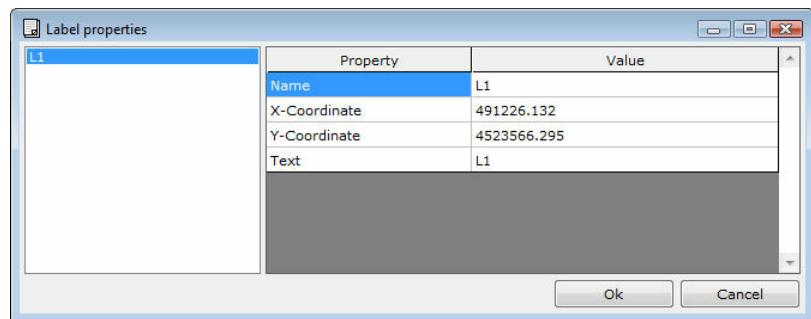
- **Name:** enter the name of the object. Two or more objects may share the same name, but this is not recommended since there will be confusion in the results.
- **X coordinate:** enter the X coordinate of the subcatchment centroid.
- **Y coordinate:** enter the Y coordinate of the subcatchment centroid.
- **Tag:** enter a tag for the calculation point. This appears neither in the input data nor the results.
- **Wind Rose:** select the appropriate windrose from the drop-down list.

4.3.2 Label

Labels are optional text objects that can be used to enrich the plan view with important data.

To view and modify the properties of labels:

1. Select **Properties** from the **Objects** menu.
2. Select **Label** from the **Properties** 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.

Properties

- **Name:** enter the name of the label (not the text).
- **X-coordinate:** enter the X-coordinate of the label.
- **Y-coordinate:** enter the Y-coordinate of the label.
- **Tag:** enter the text that will be displayed.

Chapter



V

5 Results

5.1 Results menu

With this menu, you can perform calculations and view the results. In the **Results** menu you can select one of the following options:

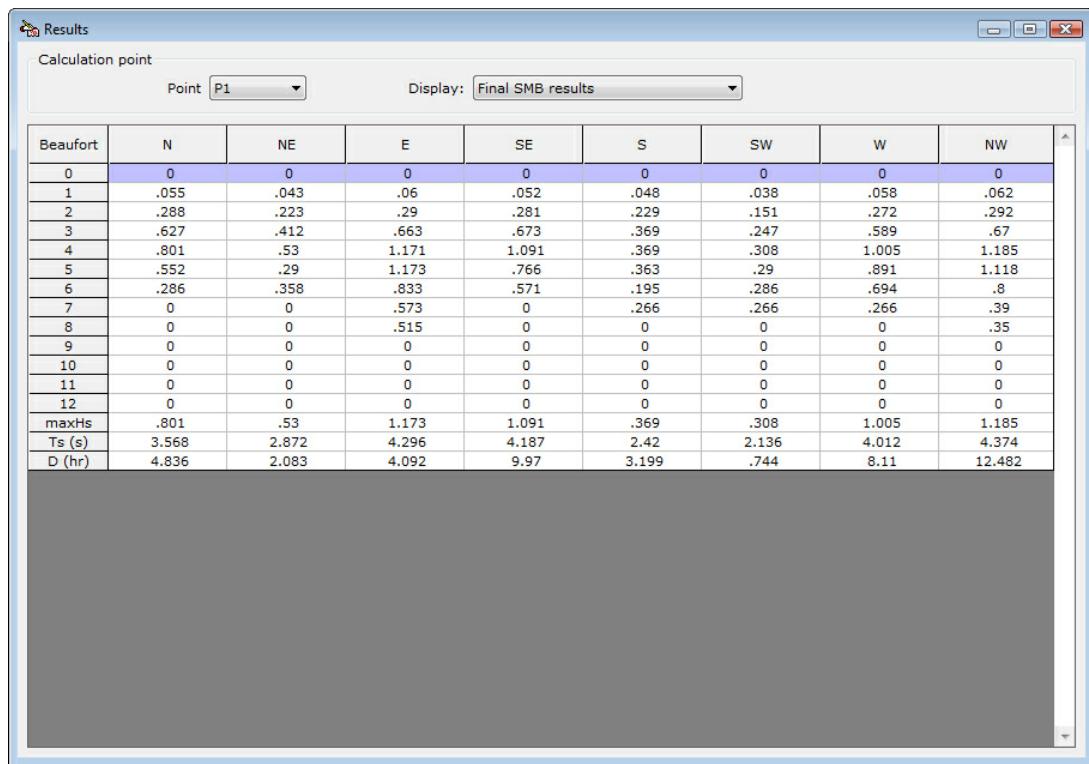
- Perform calculations

5.2 Perform calculations

With this option, you can perform calculations.

To perform calculations:

1. Select **Perform calculations** from the **Results** menu.
2. The calculations are performed. The results form appears:



The screenshot shows a software window titled "Results". At the top, there are two dropdown menus: "Point" set to "P1" and "Display" set to "Final SMB results". Below these are two tables. The first table has columns for Beaufort scale (0 to 12) and directions (N, NE, E, SE, S, SW, W, NW), with values ranging from 0 to 1.185. The second table includes rows for "maxHs", "Ts (s)", and "D (hr)" with corresponding numerical values.

Beaufort	N	NE	E	SE	S	SW	W	NW
0	0	0	0	0	0	0	0	0
1	.055	.043	.06	.052	.048	.038	.058	.062
2	.288	.223	.29	.281	.229	.151	.272	.292
3	.627	.412	.663	.673	.369	.247	.589	.67
4	.801	.53	1.171	1.091	.369	.308	1.005	1.185
5	.552	.29	1.173	.766	.363	.29	.891	1.118
6	.286	.358	.833	.571	.195	.286	.694	.8
7	0	0	.573	0	.266	.266	.266	.39
8	0	0	.515	0	0	0	0	.35
9	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0
maxHs	.801	.53	1.173	1.091	.369	.308	1.005	1.185
Ts (s)	3.568	2.872	4.296	4.187	2.42	2.136	4.012	4.374
D (hr)	4.836	2.083	4.092	9.97	3.199	.744	8.11	12.482

Beaufort	N	NE	E	SE	S	SW	W	NW
0	0	0	0	0	0	0	0	0
1	.055	.043	.06	.052	.048	.038	.058	.062
2	.288	.223	.29	.281	.229	.151	.272	.292
3	.627	.412	.663	.673	.369	.247	.589	.67
4	.801	.53	1.171	1.091	.369	.308	1.005	1.185
5	.552	.29	1.173	.766	.363	.29	.891	1.118
6	.286	.358	.833	.571	.195	.286	.694	.8
7	0	0	.573	0	.266	.266	.266	.39
8	0	0	.515	0	0	0	0	.35
9	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0
maxHs	.801	.53	1.173	1.091	.369	.308	1.005	1.185
Ts (s)	3.568	2.872	4.296	4.187	2.42	2.136	4.012	4.374
D (hr)	4.836	2.083	4.092	9.97	3.199	.744	8.11	12.482

Select the active calculation **point** from the drop-down list on the left. Select the result that will be displayed by using the **Display** drop-down list on the right.

Chapter



VI

6 Help

6.1 Help menu

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

- Contents
- Tutorials
- Tip of the day
- Unit conversion
- TechnoLogismiki on the Web
- About the program

6.2 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.

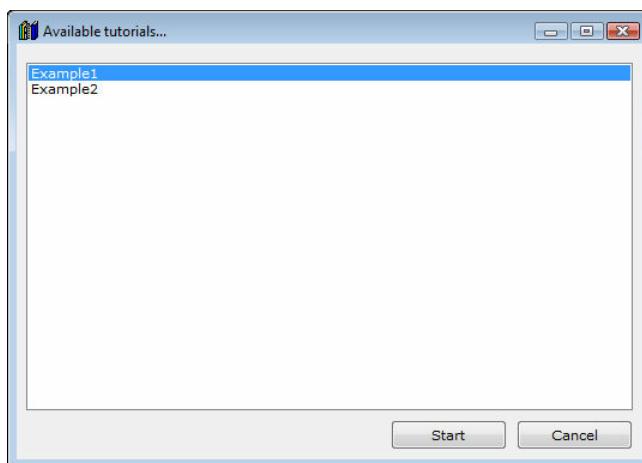
NOTE: If an error message appears then the online help has not been installed. You can install the online help from the installation CD or the Internet.

6.3 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.



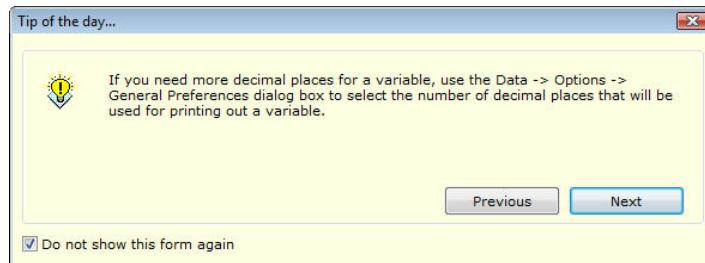
NOTE: The number and content of the tutorials is changed frequently. Use the live update system of TechnoLogismiki's products to download the latest tutorials.

6.4 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.



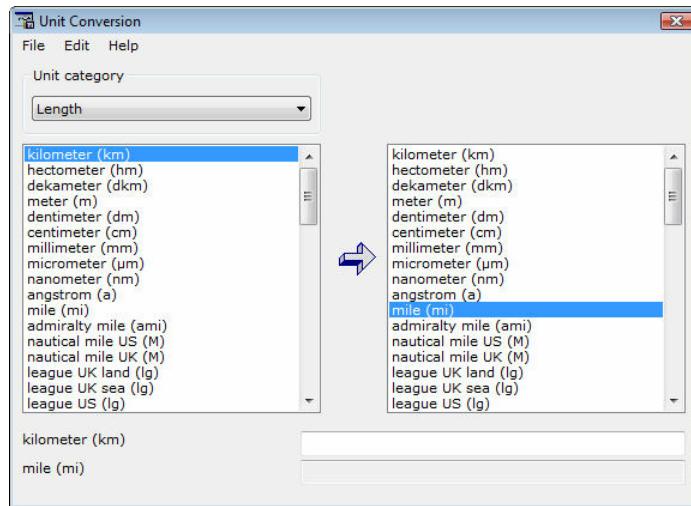
NOTE: The number and content of the tips is changed frequently. Use the live update system of TechnoLogismiki's products to download the latest tips.

6.5 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.

6.6 TechnoLogismiki on the Web

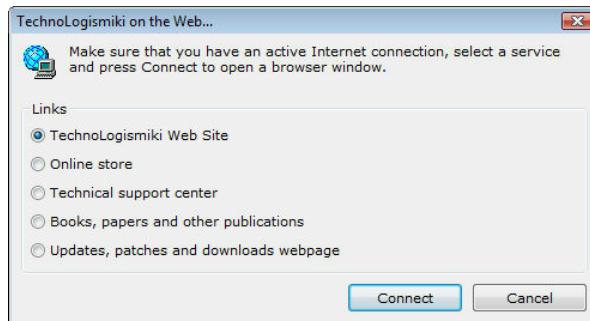
With this option, you can load on your Internet browser one of the available web pages of TechnoLogismiki, namely:

- The main Web Site
- The Store, which can be accessed 24 hours per day
- The Technical Support page,
- Other interesting pages

Of course, this option requires an active Internet connection and an Internet browser, such as Mozilla, Netscape Communicator, Internet Explorer, Opera etc.

In order to connect to TechnoLogismiki, follow the steps described below:

1. Select **TechnoLogismiki on the Web** from the **Help** menu.
2. Select the page from the available list.
3. Click the **Connect** button to connect, or click **Cancel** to close the dialog box without connecting.

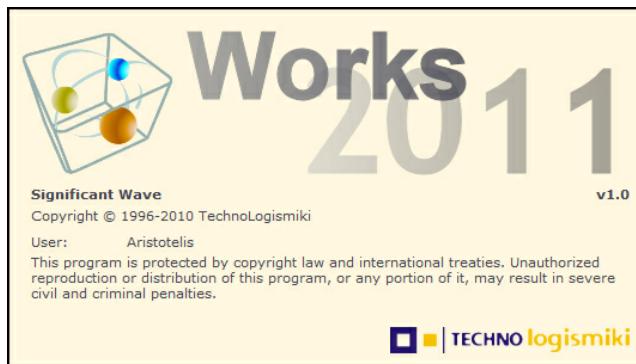


6.7 About the program

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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