

Analysis of Time Management Statistics
Statistische Erfassung der Arbeitszeit
Indagine statistica dei tempi di lavoro
Étude statistique des temps de travail
Cálculo estadístico de los tiempos de trabajo

ArchiTime™

vers. 1.0



PLUG-IN FOR ARCHICAD®



ArchiTime

Plug-in for statistical annalysis of time designing in ArchiCAD

A Plug-in is a software component that allows ArchiCAD to provide new functions in addition to the standard characteristics.

ArchiCAD allows you to manage the plug-ins automatically, starting them up and closing them through the menu bar. Indeed, once the Plug-in has been installed, a new menu will appear in the menu bar. This menu will behave like any other ArchiCAD menu. It will allow you to access the Plug-in palette and therefore to access all of its tools.

In fact, you will not even realize that you are using a Plug-in: it will still be similar to using your ArchiCAD, but with more functions.

System Requirements

The configuration is established by the configuration requested for ArchiCAD. However if you do not have enough storage space for the libraries, a warning message will be displayed.

In this case, more storage space in the Disk Operating System can be made available by closing other applications or decreasing the storage space assigned to ArchiCAD.

ArchiCAD Version

The Plug-in is compatible with ArchiCAD 7.0 (we suggest you use the 7.0 V3-R3 release) and does not work with older versions of ArchiCAD.

Where should the Plug-in be placed?

The plug-ins cannot be opened directly through the Finder (Macintosh platform) or through Windows Explorer (Windows platform) and therefore, to be able to start them up, you must copy them into the ArchiCAD Add-Ons folder.

- **Mac OS:** the Add-Ons folder can be found in the same folder as the ArchiCAD application, or within the Graphisoft folder present in the System folder.

- **Windows:** the Add-Ons folder must be in the same folder as the ArchiCAD application. If positioned elsewhere, ArchiCAD will not be able to access it.

ArchiCAD verifies the presence of Plug-ins when booting up. If the Plug-ins are not found in the correct place, you must quit the program and place them in the correct location and then restart ArchiCAD.

For temporary use, you may run the Plug-in requested via the Load **Add-On...** command present in the *Tools menu*.

Installing the package

The ArchiTime folder contains the ArchiTime plug-in and the "ArchiTime.Lib" folder. To install ArchiTime, please carry out the following procedure:

- Copy the ArchiTime folder into the Add-On folder, found in the ArchiCAD folder.

If the installation has been performed correctly, a new menu will have been added to the Menu Bar.



The library needed for running the "ArchiTime.Lib" is automatically added to the list of active libraries by the Plug-in.

If, for whatever reason, the additional library is not loaded, when you use one of the Plug-in commands for the first time, the program will notify you and suggest that you load it.

Select the **Load library...** command from the ArchiCAD *Archive menu*.

In this window, select the ArchiTime.Lib folder and add it to the list of active libraries.

Welcome to ArchiTime

Welcome!

Allow me to introduce myself, I am ArchiTime, one of Cigraph's plug-in's. If you want I can discretely accompany you throughout all your ArchiCAD designed projects, supplying you with useful statistics and information on how you have used the program and on the time spent creating your project.

How often have you asked yourself how much time both you and your colleagues spend in front of the computer creating your project? As you can undoubtedly see, this type of information is of great value when calculating the time and costs of creating a project, the use of the program and how this can influence the total costs of the work.

All this can serve as pure statistical and informative data and as well as for evaluating the economic costs of adding data into your project which at present, is one of the main factors that influence your prices if the work is intended for third parties.

ArchiTime will help you in this.

ArchiTime is activated each time you work on a project, it will keep track of all the operations carried out (based on the type of item on operation) and the time spent in each work session (divided by the worksheet window used and by daily work). It will supply a detailed account on all information gathered (in combination with explanatory graphs) that can be printed or saved in text format for post-elaborations on calculation sheets or specially dedicated applications.

No effort is required on your part: ArchiTime will directly work for you in the background, you can forget about it until you need to access the information required.

How to use ArchiTime

Working with ArchiTime is very easy: you only have to remember to activate it when starting a new project...then it will do all the rest by itself!

It seems amazing, but this is all the effort required from you: *just remember to activate ArchiTime each time you start a project you want to monitor.*

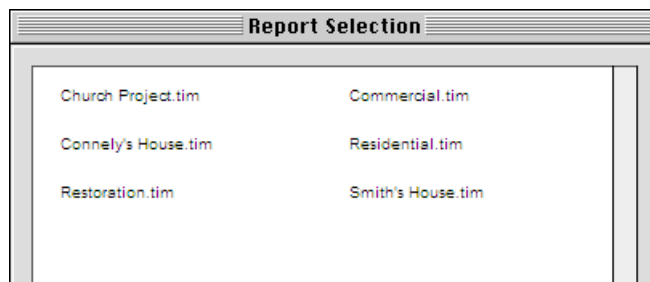
Lets have a detailed look at how to begin the project monitoring procedure and where and how to save the information gathered by ArchiTime.

Starting ArchiTime

Don't be shocked by the term "start", it simply means opening the document to be monitored (usually a new project as there is little sense in monitoring a project that is partially completed) and start ArchiTime by using the **Start ArchiTime** command. This is the only window present in the menu of this plug-in.



The first time you start ArchiTime, you will see a simple dialogue box visualizing the contents of the *ArchiTime folder* (the one where the plug-in is located). The folder lists all the reports created (ArchiTime reports end with a .tim extension).



You can name the report linked to the project being worked (ArchiTime will suggest naming the open project “untitled” if the project does not yet have a name). Confirming the name with **OK**, will create the new report in the *ArchiTime folder*. The selection/creation window will be closed and the *ArchiTime Palette* toolbox will appear.

From this moment there is virtually no need to do anything else, easy isn't it?

Note:

The ArchiTime reports (.tim) are always saved in the folder where the plug-in is located: do not move the reports into other positions as ArchiTime automatically organizes the reports located inside the folder.*

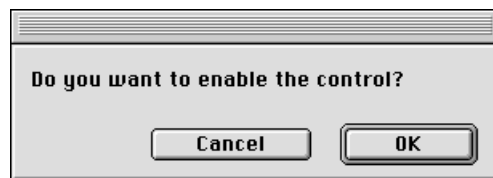
If you have to elaborate the project on another computer, remember to copy the report that relates to the project (along with the ArchiTime plug-in obviously) into the ArchiTime folder on the new computer: ArchiTime will automatically find the report that relates to the project, nothing will be lost.

For mnemonic reasons, we suggest you name the report with the same project name to which it refers: this avoids confusion and facilitates the report search.

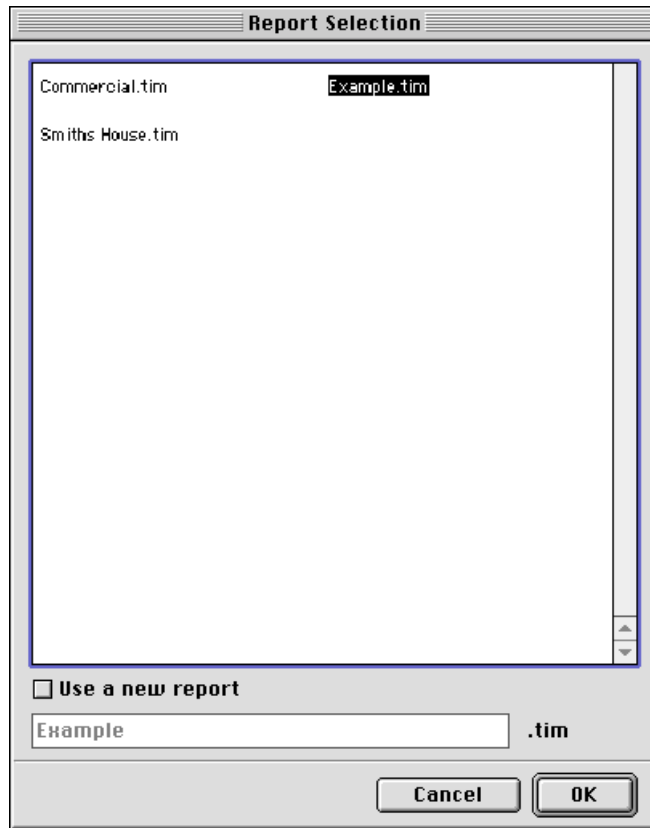
Organizing the reports

Once you have started ArchiTime, the organization of the report files is virtually automatic, it is unnecessary to save the reports when you close the project: ArchiTime does it for you.

When you reopen a project you have begun monitoring, ArchiTime will signal the presence of a report, asking (by means of a warning window) if you wish to restart monitoring:



Confirm the control restart, with **OK**, ArchiTime will again visualize the report selection window, automatically highlighting the report name that relates to the opened project (unless the project has been cancelled or renamed):



Confirm your selection with **OK** and continue with your work.

Note:

*Alternatively, you can also create a new report by selecting the option **Use a new report**: ArchiTime will restart the underlying field of text where you can type the new report name.*

If you have renamed the report (and ArchiTime cannot find it under the same name, select the renamed report from the proposed list.

When creating a new report or selecting another one, ArchiTime will automatically memorize the information so that the next time it will be automatically selected.

The ArchiTime Palette Toolbox

The ArchiTime palette is comprised of seven icons that access the seven plug-in functions:



From left to right, the icons visualized on the palette are:

- Pause
- Play
- Report in Text Format
- Formatted Report
- Formatted Report Settings
- Compare Reports
- On-line Help

Note:

The ArchiTime palette is visualized as soon as ArchTime is started and cannot be closed in any way (this is a design feature of the plug-in). The palette will close automatically as soon as the project is closed.

Pause and Play

These two buttons are so simple that their function is almost banal!



As soon as ArchiTime is started, the *palette Toolbox* is visualized and **Play** is activated and remains pressed to indicate that ArchiTime is monitoring the opened project.



You can interrupt the monitoring at anytime by pressing **Pause**:

The **Pause** icon will be pressed and **Play** will automatically rise to indicate that ArchiTime has been paused.



Why should ArchiTime be paused and its monitoring suspended?

There are two main reasons and these depend on the way ArchiTime works.

Remember that ArchiTime continues keeping track of the time spent in front of the project worksheet windows (Floor plan, Section/Elevation 3D window etc) both when you are working and when you are not or, when you are temporarily using another program.

If you have to leave your workstation for any reason (everyone needs a coffee break every now and then!) or, if you leave ArchiCAD in the background to use your e-mail to check your post, you will not want this time added to the open project, so ArchiTime can be paused.

Do not worry, you will not run the risk of resuming work on the project and forget to restart the monitoring: ArchiTime will visualize a warning message that you have paused it as soon as you beginning working on the project.



Close the warning message by clicking **OK** and... remember to press **Play** to restart ArchiTime!

Report in Text Format



Clicking the **Report in Text Format** icon of the *ArchiTime palette* opens a text window where ArchiTime will visualize the report of the current monitor.:

ArchiTime Report 7/15/02					
TYPE	ELAPSED TIME	ACTION	STORY	WINDOW	ITEMS
Plan	1m 25s	New	0	Plan	28
Wall		Deleted	0	Plan	4
Wall		New	0	Plan	3
Column		Deleted	0	Plan	4
Column		Deleted	0	Plan	1
Beam		New	0	Plan	3
Window		New	0	Plan	4
Door		New	0	Plan	10
Object		Changed	0	Plan	1
Object		Edited	0	Plan	1
Object		Undone	0	Plan	6
Slab		New	0	Plan	1
Slab		Deleted	0	Plan	1
Zone		New	0	Plan	2
Zone		Deleted	0	Plan	1

The contents of this text window, just as all the ArchiCAD text windows (e.g. the project list window) can be printed or saved in text format to be opened in other programs (e.g. on a spreadsheet) for any eventual elaborations.

Do not worry about closing the window as it is automatically controlled by ArchiTime: each time you click on **Report in Text Format** of the *ArchiTime palette*, the contents of the window will be visualized again, showing the latest up-dated figures.

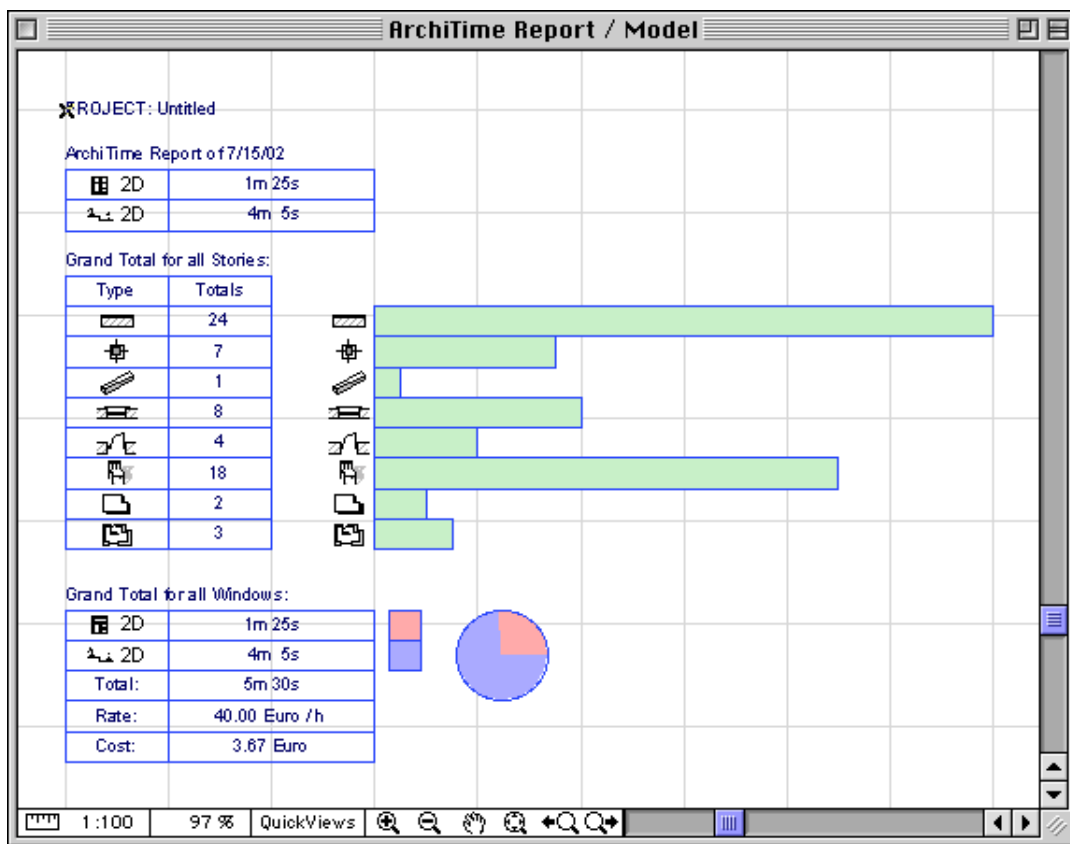
Note:

For a detailed explanation of the information visualized in the report, refer to the chapter "Information on ArchiTime reports".



Formatted Report

Clicking on the **Formatted Report** icon of the *ArchiTime* palette, opens a "special" Section/Elevation window in which ArchiTime will visualize the current monitor report using a parametrical library item, that lists the collected data in a graphic format that can be personalized:



The contents of this *Section/Elevation* window can be printed or saved to be reopened for any eventual elaborations just as any other ArchiCAD Section/Elevation window.

Do not worry about closing the window as it is automatically controlled by ArchiTime: each time you click on **Formatted Report** of the ArchiTime palette, the contents of the window will be visualized again, showing the latest updated figures.

Let us look at some details that relate to this window.

The first time you recall this window using the icon on the *palette Toolbox*, ArchiTime will insert a very small Section/Elevation in the plan naming it "**ArchiTime Report**", this permits the use of a window to automatically insert "**ArchiTime.gsm**" - the special item of the parametrical library permitting the visualization of the report list.

Do not worry if you accidentally cancel the Section/Elevation positioned in the plan: ArchiTime will notice and insert it once again the first time you recall the **Formatted Report**.

Do not edit the ArchiTime.gsm object inserted into the section: any change has to be made by selecting the object and using ArchiTime, otherwise the data visualized could be wrong!

Even in this case you do not have to worry: ArchiTime will automatically update/resolve the "error" the first time you reopen the **Formatted Report** by using the related key on the palette Toolbox (the regeneration can occur with the *ArchiTime Report* in the foreground).

Note:

For a detailed explanation of the information visualized in the report, refer to the chapter "Information on ArchiTime reports".



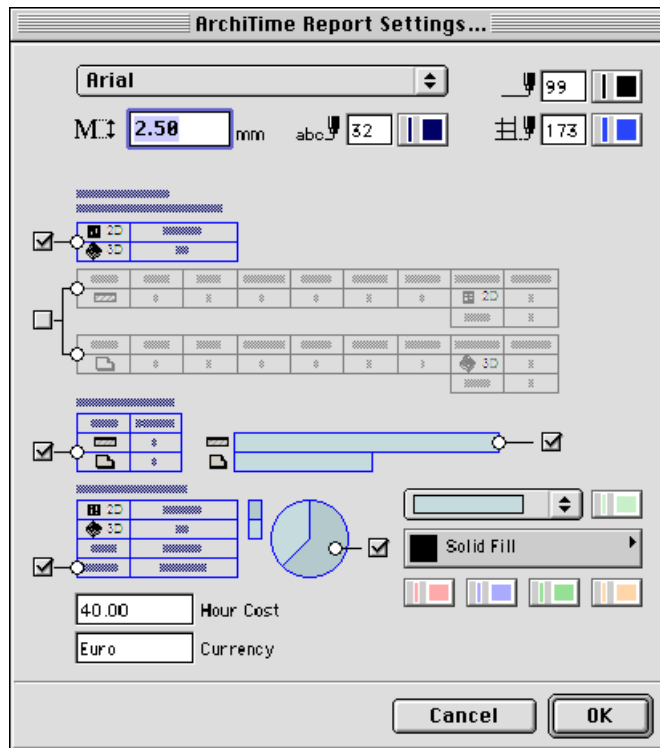
Formatted Report Settings

You can configure the graphical aspect and the contents of the formatted report by clicking on the **Formatted Report Settings** icon of the *ArchiTime* palette.

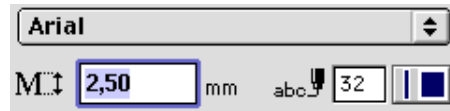
This settings key works in the following way:

1. If you use it after having selected the **ArchiTime.gsm** object inserted into the **ArchiTime Report** window, you will only personalize the instance of the selected object (i.e. you will modify the aspect and the contents of the selected report).
2. If you use it without selecting an **ArchiTime.gsm** object, you will personalize the *ArchiTime* settings: *ArchiTime* will save the configuration and use it for all formatted reports created on future projects.

ArchiTime will visualize the following dialogue window as soon as you click on the **Formatted Report Settings**:



On the top left, you can configure the font used in the report by choosing the type of text from the pop-up list, typing its size and selecting the pen to be used:

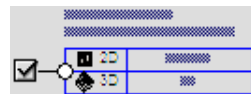


On the right of the font options you can choose both the pen to draw the items (the icons that identify the data) and for drawing the grid:

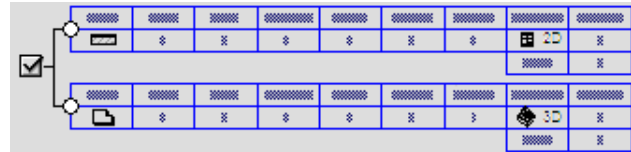


The following six options activate/deactivate the visualization of part of the information visualized in the report:

Show/Hide elapsed time by day in the worksheet windows.



Show/Hide list of operations performed on ArchiCAD items.



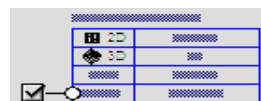
Show/Hide total items elaborated.



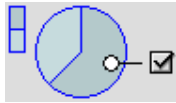
Show/Hide total graphic items elaborated.



Show/Hide hourly rate and total calculated cost of project elaboration.

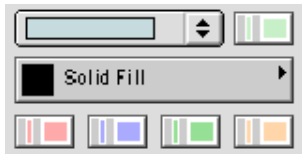


Show/Hide total elapsed time in worksheet window graphics.



On the lower left of the window, the following series of options permit you to personalize the aspect of the two graphic options:

- Choice of graphics for the histogram columns.
- Pen color for the histogram columns.
- Histogram and pie chart fill.
- Pen color for the pie chart sections.



The last two fields on the bottom left permit you to set your hourly rate and the currency used for the report:

40.00	Hour Cost
Euro	Currency

ArchiTime elaborates the data as soon as you confirm the settings using **OK**.

Note:

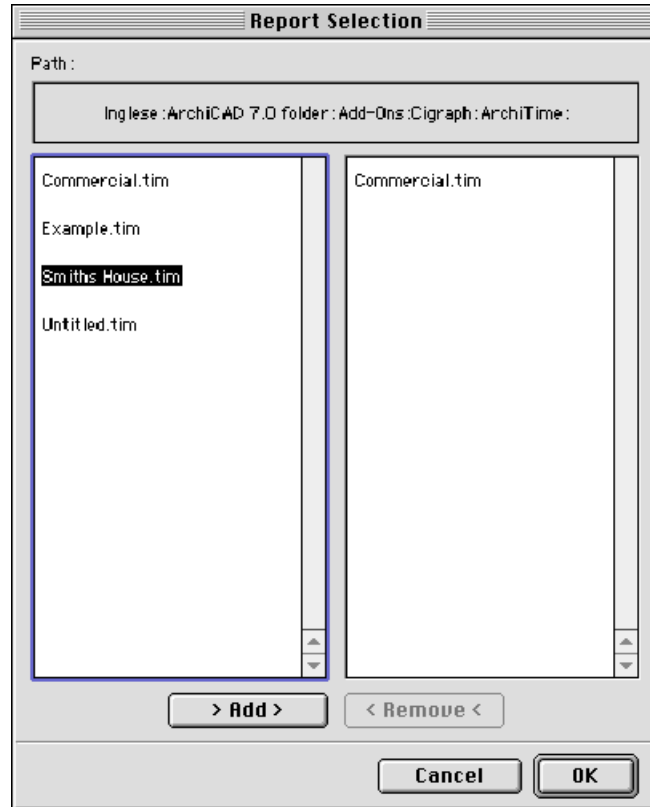
For a detailed explanation of the information visualized in the report, refer to the chapter "Information on ArchiTime reports".



Comparing Reports

It could be useful to compare the reports of various projects to gain statistics from the various works. ArchiTime **Compare Reports** allows you to do this.

As soon as you click on the **Compare reports** icon, ArchiTime will visualize a dialogue window where you will be able to select and compare up to ten reports:



ArchiTime will visualize on top, the complete route of the folder containing the reports (as we have mentioned this is the folder containing the plug-in).

All the reports contained in the folder (*.tim documents) are listed on the left.

The reports correctly selected for comparing are listed on the right.

To add/select a report for comparing:

1. click on the report name to be added highlighting it from the list on the left;
2. click on the **> Add >** key located under the report selection list.

ArchiTime adds the report selected to the list on the right and deactivates its name from the list on the left.

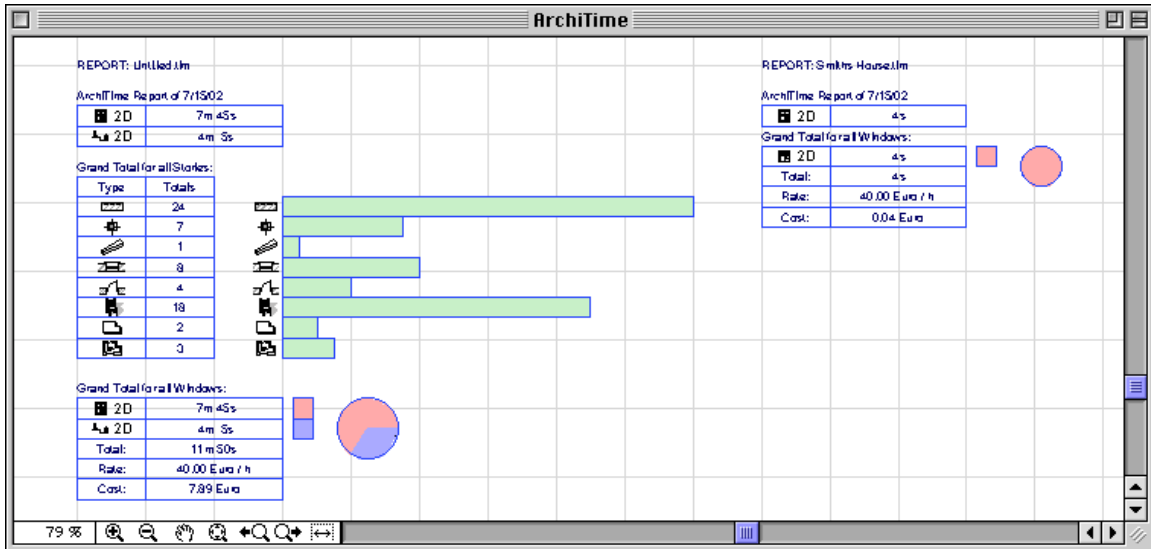
To remove/de-select a report for comparing:

3. click on the name of the report to be removed, highlighting it from the list on the right;
4. click on the **> Remove >** key under the list of reports already selected.

ArchiTime removes the selected report from the list on the right and reactivates its name in the list on the left.

Once the selection is concluded (maximum 10 reports), confirm the settings with **OK**.

ArchiTime will visualize the comparison of the selected reports by opening a new drawing window (named *ArchiTime_Drawing*):



The contents of this drawing window, just as all ArchiCAD drawing windows (e.g. formatted project list windows), can be printed or saved in various formats (RTF, PLN, PMK) for any eventual re-elaborations.

Closing the drawing window will cause its data to be lost but it will again be available using the **Compare Reports** function.

Suggestion: You can only access the compare report window if ArchiTime is activated. To create a comparison you can do the following:

1. Open a new empty document.
2. Activate ArchiTime using a temporary report (which can then always be used for this).
3. As soon as the Architime palette appears, click **Pause** (we are not interested in monitoring the empty document: it is only needed for activating ArchiTime and accessing the comparison).
4. Click on "**Compare Reports**" and continue with the procedure described above.

Note: The graphical aspect of the listed reports reflects the current ArchiTime settings: click on the **Formatted Report Settings** icon to modify it (see related paragraph) without selecting anything, and continue with the procedure for the creation of the comparison as described above.

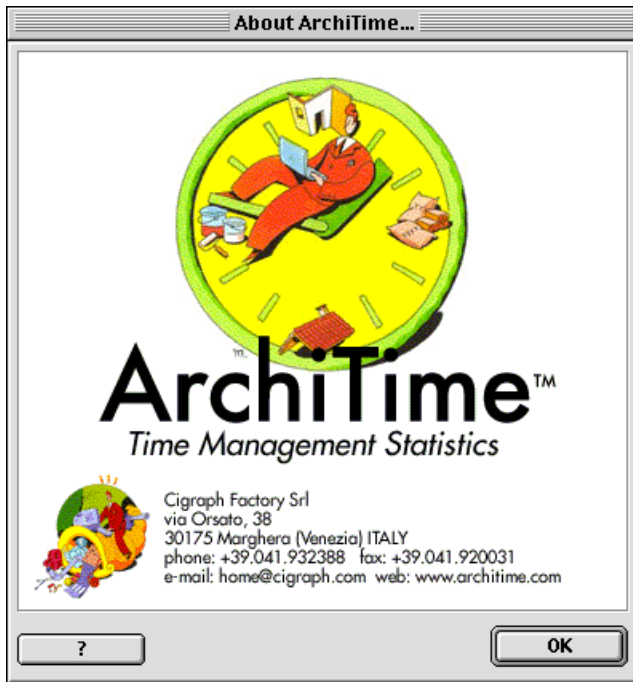
For a detailed explanation of the information visualized in the report, refer to the chapter "Information on ArchiTime reports".



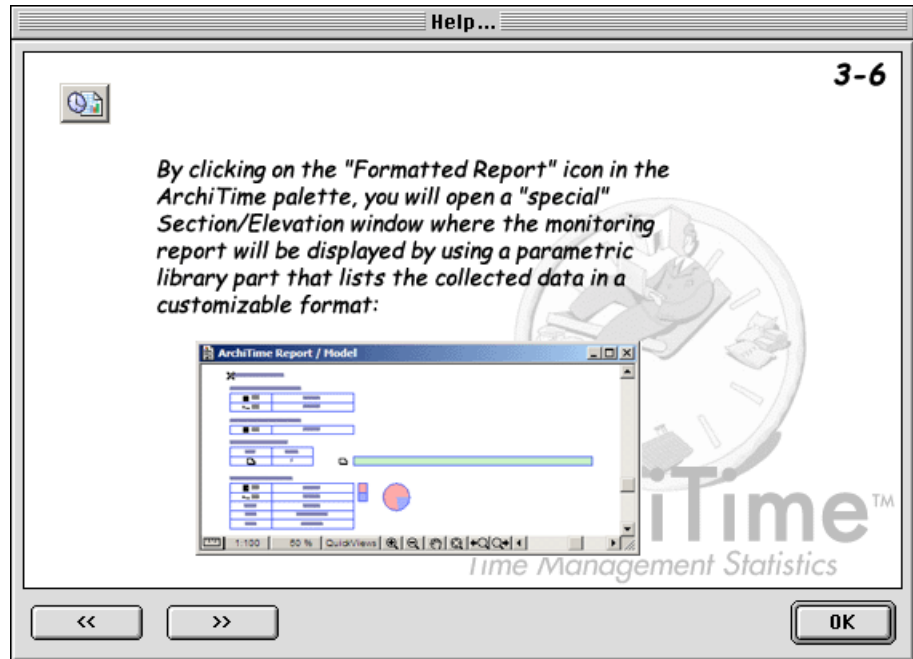
On-line Help

However easy it is to use, you may need to refresh your memory on how ArchiTime works: use the last icon of the ArchiTime *toolbox palette* **On-line Help** to visualize the plug-in help pages that briefly illustrate ArchiTime's functions.

As soon as you click on the **On-line Help**, an image of ArchiTime will be visualized, clicking ? will access the on-line help pages:



Use << and >> to scroll through the pages and click **OK** to close the help window.



Information on ArchiTime reports

In this chapter, we will illustrate which information gathered by ArchiTime is visualized in the report windows and saved in *.tim type documents.

Item Operations

Each time you modify an ArchiCAD project, ArchiTime will memorize the operation in its report.

The memorized information refers to:

- the TYPE of item;
- the ACTION on the item;
- the STORY to which the item belongs;
- the worksheet WINDOW where the action took place;
- the NUMBER of elaborated items.

This information is divided into working days and summarized as a final total in the visualized reports and *.tim memorized documents.

The TYPE of items

ArchiTime will monitor your activity on any type of useable ArchiCAD item:



- Walls
- Columns
- Beams
- Windows
- Doors
- Objects/Lamps
- Slabs
- Roof
- Meshes
- Zones
- Fills
- Lines
- Circles/Arches/Ellipses
- Splines
- Figure
- HotSpots
- Sections/Elevations
- Camera
- Text/Labels

The only items not monitored (caused by API development limitations) are the quotas. In any case, the time taken to insert these quotas is monitored in the

section relating to elapsed time (see following paragraph) and is therefore no great loss to the final analysis of the project.

The ACTIONS on the item

The actions monitored by ArchiTime are basically all those performed in your project:

- Creation of a NEW item.
- Item EDITING in graphic mode using the cursor and *Edit menu* commands.
- Item MODIFICATION using the settings dialogue window.
- UNDO the operations performed on the items.
- CANCELLATION of the item.

The worksheet WINDOWS

ArchiTime will monitor almost all project worksheet windows. Let us summarize the various types of windows used in ArchiCAD:

- FLOOR PLAN window (one for each project story).
- SECTIONS/ELEVATIONS windows (one for each section/elevation positioned in the floor plan).
- 3D window.
- TEXT type window (opened by the ArchiCAD plug-in).
- DRAWING type window (opened by the ArchiCAD plug-in).
- GENERAL type window (other non-identifiable windows).

The NUMBER of elaborated items

It is very important not to confuse the information supplied by ArchiTime: the number of elaborated items DOES NOT coincide with the number of items inserted into the project!

In this case it is intended to mean the number of operations performed on a certain type of item.

Let us look at an easy example to understand this concept.

If we draw a new wall on the floor plan, then extend it using the cursor, then select it and modify its materials using the Wall settings dialogue window,

ArchiTime will keep track of the three operations (NEW, EDITED, MODIFIED) and will indicate in the report that three items have been elaborated.

Elapsed time

As we have already mentioned, ArchiTime will keep track of the elapsed time in each window of the project.

Remember that whether or not you are working, ArchiTime continues to count the time spent in front of the project worksheet windows (Floor plan, Sections/Elevations, 3D window etc) even if you are temporarily using another program. It is therefore important to remember to pause ArchiTime when you stop working on the open project (see paragraph **Pause and Play**).

***.tim type documents**

These documents are connected to the ArchiCAD project and are where ArchiTime memorizes all the gathered information.

They are simple table-text documents that **MUST NOT** be modified or tampered with: the modification or cancellation of these documents can cause ArchiTime to not function or can result in the loss of all report data.

As they are simple table-text documents, they are important for any eventual elaborations compatible with this format application (e.g. databases or spreadsheet).

*.tim type documents have to be in the same folder as the ArchiTime plug-in so that ArchiTime can automatically control them.

We remind you once again, if you have to elaborate the project on another computer, remember to copy the report relating to the project (along with the ArchiTime plug-in) into the ArchiTime folder on the new computer. ArchiTime will automatically find the report that relates to the project; nothing will be lost.

For mnemonic reasons, we suggest that you name the report with the same project name to which it refers: this avoids confusion and facilitates the report search.