

Hand Drawn Effects for drawings

Umwandlung von Zeichnungen in Skizzen

Modifica del tratto nei disegni

Personnaliser le trait des dessins ArchiCAD

Modificación del trazado de los dibujos

# ArchiSketchy™

vers. 1.0



PLUG-IN FOR ARCHICAD®



# ArchiSketchy™

## *User Guide*

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ArchiSketchy "User Guide"  
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# ArchiSketchy

## Plug-in for line conversion in ArchiCAD drawings

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

- Copy the ArchiSketchy 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.



Thanks to this added menu, you will be able to display/hide the Plug-in Toolbox.

The library needed for running the "ArchiSketchy.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 ArchiSketchy.Lib folder and add it to the list of active libraries.

# Introduction

After years of supplying you with products that improve your designs, Cigraph proudly presents the best tool for....making them worse!

This add-on will allow you to work on a 2D or 3D image and modify its appearance giving it the sensation of a hand drawn design.

## Working Method

It is very simple to use: select the areas you want to work on, re-call the **Transform Selection** command from the *ArchiSketchy menu* and configure the parameters of the dialogue box. After having closed the window, double click on the work sheet to choose the position of the copy in relation to the original chosen areas.

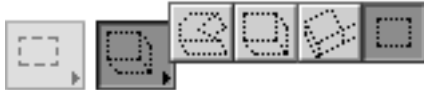
Let us now look in greater detail at the characteristics of this tool.

### Transform Selection

We will start by explaining where it can be used: we can re-call the ArchiSketchy command from the plan windows and from Section/Elevation. It is also possible to elaborate prospective or asymmetric view points, but to do so you must firstly copy the contents of the 3D window.

#### How to do this

From the 3D window, activate the Marquee, choosing the Rectangular geometrical method (fourth icon, on the information panel).



Highlight the area and click **Copy** from the *edit menu* or from the keyboard. In the dialogue you will be asked to, choose **Drawing** (actual size) or **Drawing to scale**. Move to the plan window, or Selection /Elevation and paste the result that can now be selected and elaborated whit ArchiSketchy.

The elements of the project will be elaborated and transformed according to the values chosen in the dialogue box. There are few exemptions: the elements that are just symbols and are not part of the drawing (they always have the same size even with the zoom) such as Television cameras and Hotspots. Bitmap images are also ignored.

It is important to remember that the final ArchiSketchy results are vectorial and can be modified or re-elaborated with all the available ArchiCAD tools including ArchiSketchy.

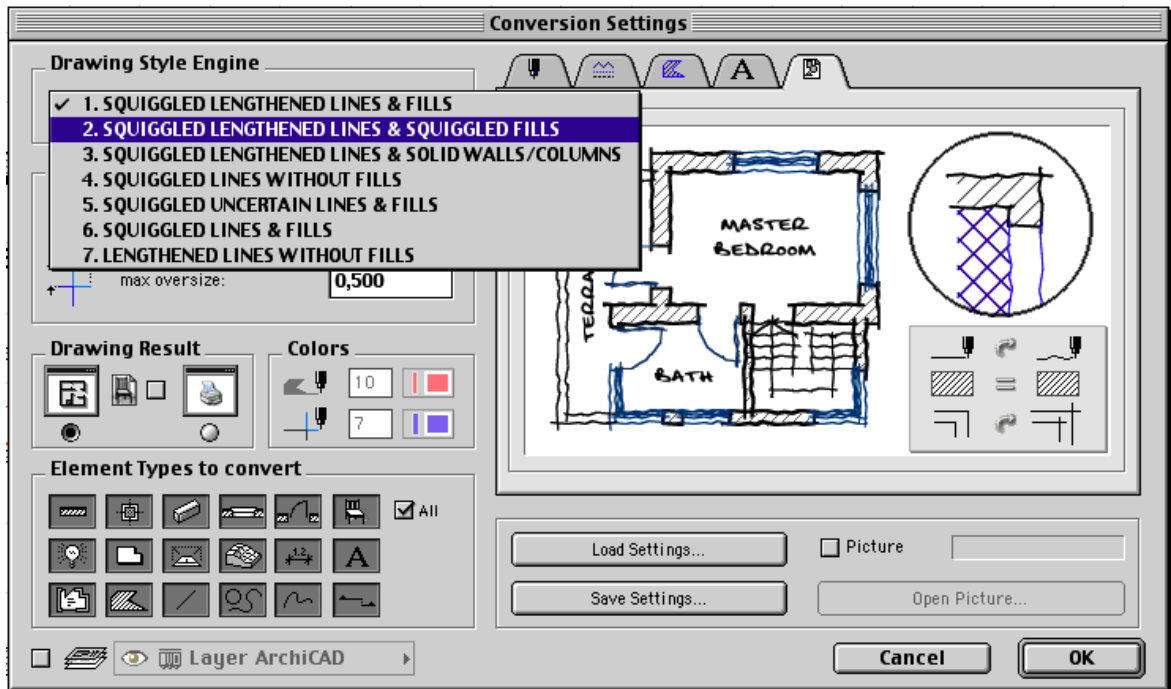
The command is activated only if the elements are individually selected (the marquee area is not sufficient).

# The primary window of ArchiSketchy

If we look at the main ArchiSketchy window, we can see that it is divided into two parts: on the left there are the main settings, while on the right there are various overlapping dividers that are activated by clicking on the icons just above them.

## Design Style Engine

The first command on the left is the pop-up menu for choosing the elaboration method (**Design Style Engine**).



There are 7 available methods:

### 1. Free hand extended lines and Fills

The lines are squiggled in appearance and stretch over the original borders, the fills are reproduced without any modifications.

### 2. Free hand extended lines and free hand fills

The lines are squiggled in appearance and stretch over the original borders and the fields that represent the fills are also squiggled in appearance.



### 3. Free hand extended lines and Walls/Filled columns

The lines are squiggled in appearance and stretch over the original boarders, the field that shows the elements in construction (in the Plan: Walls and Columns; in the not disconnected sections: all the elements in 3D) is substituted by a constant color while the Fills are reproduced without any modifications.

### 4. Free hand lines without Fills

The lines are squiggled in appearance but do not overstretch the boarders, the Fills are eliminated.

### 5. Uneven free hand lines and Fills

The lines have an intermittent appearance and are usually shorter in length than the original. The Fills are reproduced without modifications (in this case the figures for the **Maximum Extension** field are used for the reduction of the lines and not for the stretch).

### 6. Free hand lines and Fills

The lines are squiggled in appearance but maintain their original lengths, the Fills are reproduced without modifications.

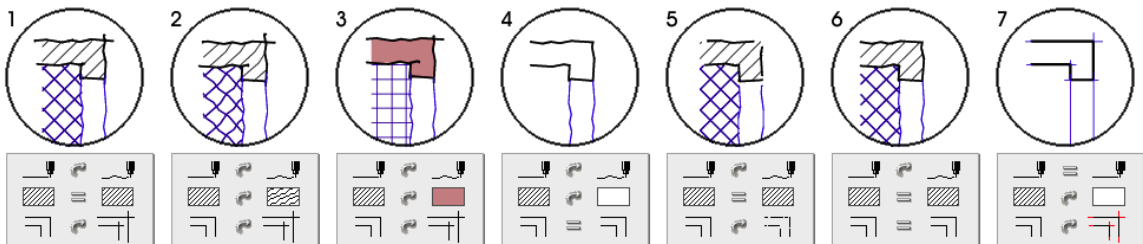
### 7. Extended lines without Fills

The type of line is not modified, but from each side there is an extension that looks hand drawn with a pencil or a pen of minimal line weight, typical of drawings created over a previous draft.

Please note that these are just some of the predefined settings. The remaining settings allow you to personalize each of these in a way that the end result may differ from the printed description.

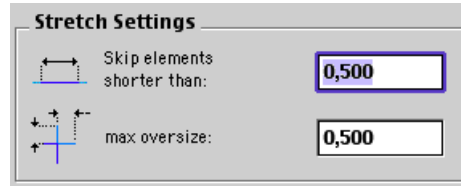
### Preview

Selecting one of these options , on the right hand side of the dialogue you will see the **Preview** divider. This shows an example of a typical result obtained with the chosen **Engine**.



## Stretch Settings

The following controls are in relation to the **Stretch Settings**.



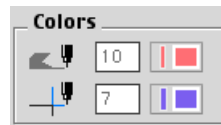
The first figures indicate the minimum size of the segments to be considered. The shorter lines are not extended but they are elaborated according to line type and color.

The second figure indicates the maximum oversize allowed for each line. The actual oversize will be purely casual but will not go beyond the set limit.

## Color

The **Color** fields are only activated if the chosen method includes their use.

The first establishes the pen to be used for the Walls and Columns field (only method 3), the second allows you to choose the color of the added line extensions (only method 7).



## Drawing Result

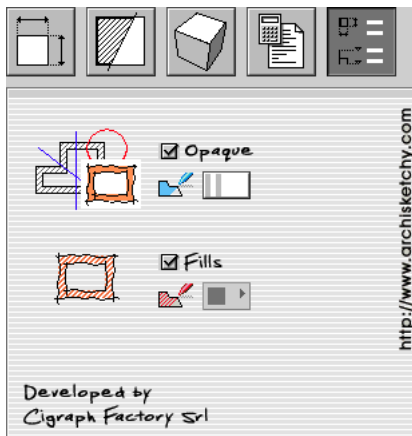
In the **Drawing Result** section there is a choice of ArchiSketchy output options. The elaborated drawing can be positioned in the window of origin (Plan, Section/Elevation), or in a special independent window usually used only for printing (the drawing can also be saved in .pln and .pmk format). This window can be considered similar to that of a Rendering in ArchiCAD. The contents cannot be elaborated and will be lost without warning when the window is closed. The window is listed in the *Windows menu* under *Other Lists* and is unique in that: a new elaboration will take the place of the previous one.



When the **Window of Origin** option is chosen, it is possible to activate the **Object** window. This means that along with the usual result, there will also be a Library element allowing you to position the elaborated ArchiSketchy drawing in projects different from the one it was created for, or change the size and the proportions. Further controls are included in the **Object Settings** dialogue.



Click on the **Tool** icon (located on the *User Interface*) to choose if the object has to have a background color and if the original Fills or Fills available from the list have to be used.

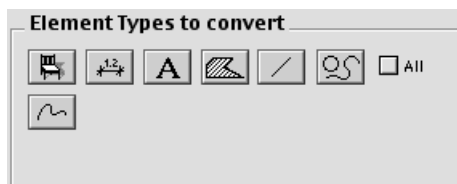


## Element Types to convert

The lower part of the **Element Types to convert** window, is the Element Filter. From here it is possible to deactivate the ArchiCAD elements that do not have to be elaborated. In this way, it is much easier to select an entire area and avoid the conversion of the Zones or the Section Lines without having to de-select each one individually.



It is necessary to note that in the *Section/Elevation* window, the list of elements that can be filtered present fewer icons in comparison to those available for the Plan. Some just do not exist in these windows, such as the Section Lines and Zones, while other or rather all the 3D elements or better still, their representation, cannot be excluded from the selection as they belong to a special type, coordinated by the program (this is why it is possible to eliminate 3D elements but not add new ones when working in sections).



Finally, the icon for the exclusion of Objects is present for the Sections/Elevated but only for 2D symbols added by the user.

## Layer

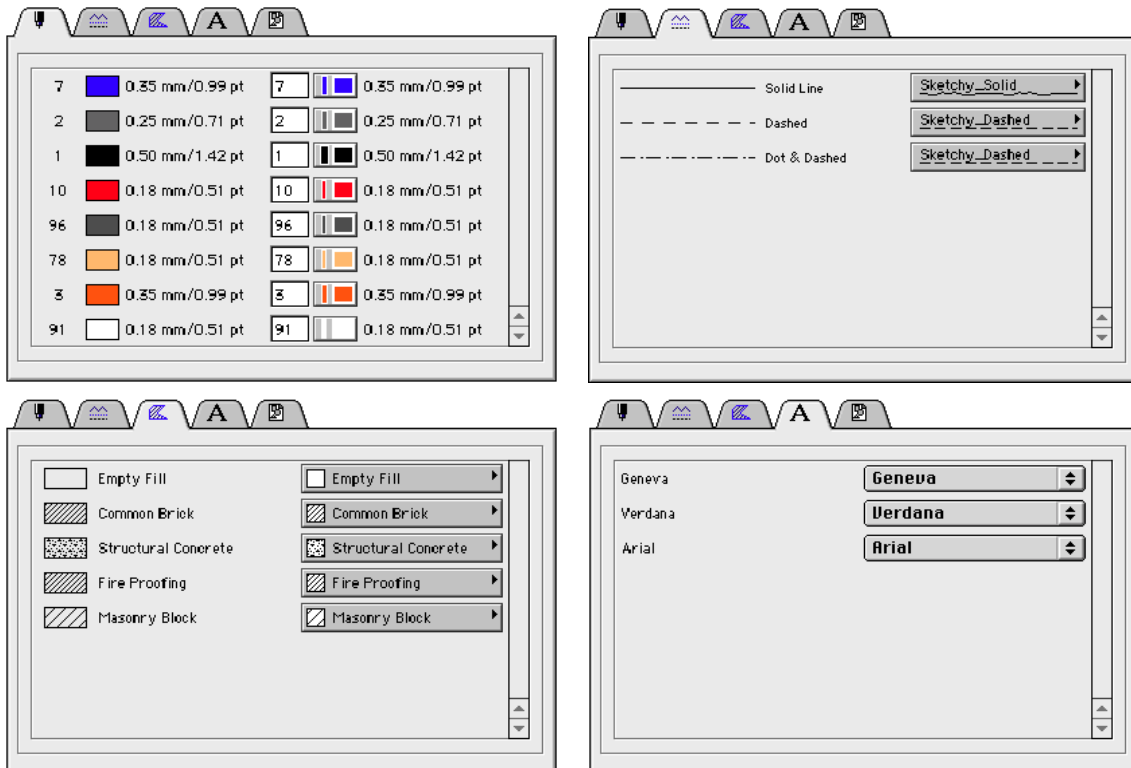


The last control on the left is related to the **Layer**. Normally the elements produced by ArchiSketchy are placed on the same layers as the original ones. By activating this window it is possible to move the entire result on to a single layer, choosing it from the usual disappearing list.

We will now move on to describe the contents and functions located on the right of the dialogue box.

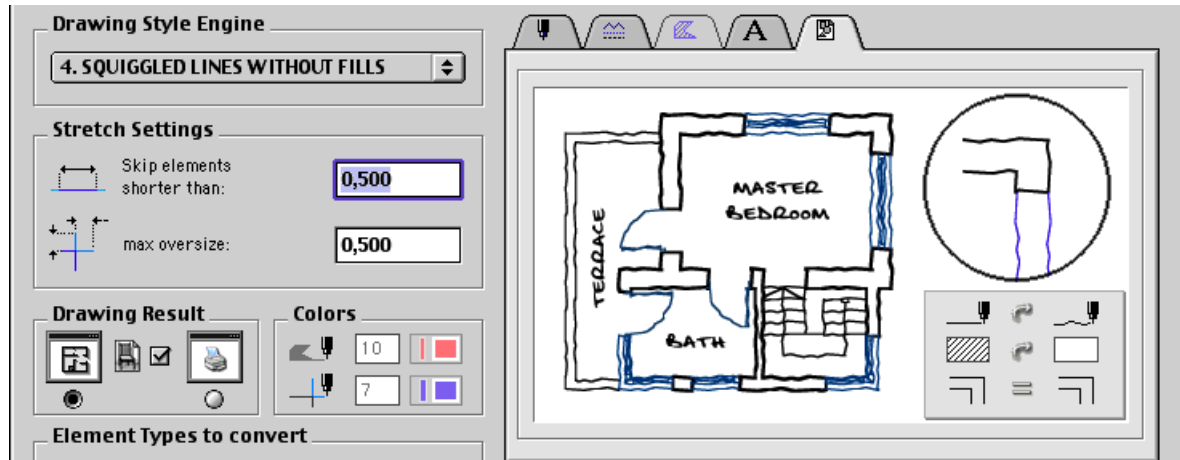
### The Pens, the Types of Lines, and the Characters

First of all we see the five dividers, each containing a different icon. The first four represent in order, the **Pens**, the **Types of Lines**, and the **Characters**. In each of these dividers there is a list of features that correspond to all the elements selected. For each element the user can suggest a change that ArchiSketchy will apply to the result of the elaboration. For example, the user can choose to change font with corrosive or handwritten ones, or apply personalized types of lines that differ from those created by ArchiSketchy. The dividers can only be accessed if their use is contained in the elaboration method (Design Style Engine). For example, with engine 2 (Free hand lines without Fills), the Fills divider is not available.



This substitutive function allows the add-on to be used in an alternative way – to simplify modifications to 2D drawings in relation to ArchiCAD procedures.

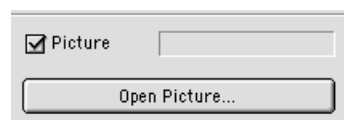
The fifth divider with the **Picture** icon shows a preview, or an example to be precise, of the type of elaboration set-up in the *Design Style Engine* field.



The circled area (above right) gives an immediate visual of the main characteristics, while the box on the bottom is a summary of the operation in which three series of icons indicate if and where ArchiSketchy intervenes on the type of lines, fills and on the end of the lines.

## Picture

Under the dividers, the **Open Picture** window activates when selecting the **Picture** box. From here it is possible to choose a picture for the background for the drawing. It is only possible to choose from the files stored inside ArchiSketchy.Lib. All image files handled by ArchiCAD can be used with the exception of Tiff formatted files.



Adjustments to the size of the image and the horizontal and vertical minimum margins is done by accessing the lower fields located in the background selection window. If necessary, the image will be repeated until the entire elaborated area is covered. The angles of each picture (if allowed by the current *Video Options*) will be highlighted with handles.

The library supplied with the add-on contains a range of ready-to-use backgrounds, some of these represent types of paper or other supports that complement the final drawing.



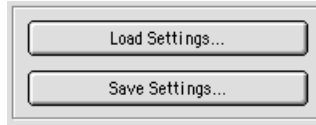
You will find ArchiSketchy rather easy to use, with a wide range of results, thanks to the combination of predefined and personal settings.

In addition you will see that during the same work session the options on the bottom left will remain unchanged where as those on the right are reset during each use.

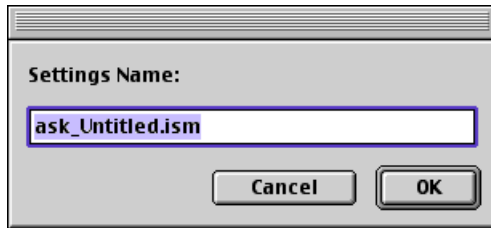
It is possible to save the current settings so that they can be used in the future for similar drawings without the necessity of repeating the set-up procedure.

## Load/...Save Settings

In any case, it was decided to introduce the possibility of saving the current settings, with the option of recalling and using them and avoiding having to repeat the set up procedure in order to have the possibility of reproducing similar results and a series of graphically homogeneous drawings even after a period of time.

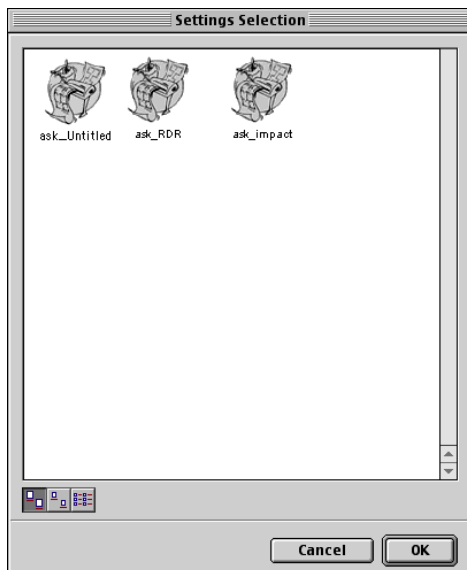


To give a name to the current configuration, click on the **Save Settings...** window.



The name has to begin with "ask\_" and the configuration will be saved in the **ArchiSketchy.lib** library.

By clicking on the **Load Settings...** window you are shown only the configuration files inside ArchiSketchy.lib.





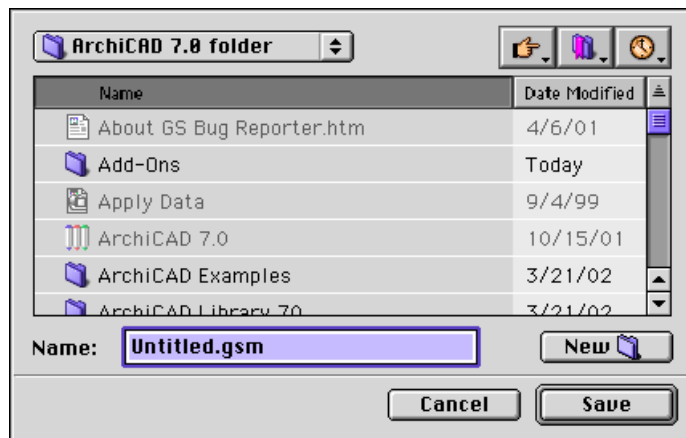
Selecting one of the ArchiSketchy settings windows will immediately update it with the previously saved parameters.

The settings will be stored with an ".ism" file extension, this is typical of ArchiCAD Macro Objects as it allows them to be accessed rapidly and efficiently. The "ask\_" prefix prevents any problems due to duplicate file names.

We have reached the last command on the ArchiSketchy window... **OK!**

There can be three possible situations after having closed the add-on dialogue box:

1. The **Independent Window** will be displayed immediately if it has been chosen as the *Drawing Result*.
2. If you have chosen **Window of Origin** as the *Drawing Result*, then the positioning cursor will appear. This waits for the introduction of a drag vector, in the same way as the *Move a Copy* command from the *Edit menu*. Click once to choose the initial point of reference and a second time to define the final point of the vector. As with all other editing, it is possible to use drawing aids such as constraints, constructions, snap, alignments, numerical input etc supplied by ArchiCAD. The drawing is positioned and The Auto-scale adjusts the result.
3. If you have decided to create an object in addition to the Window of Origin, you will be asked to name it as a new library element before positioning it on the plan.



By clicking **Cancel** this window only cancels the creation of an object not the entire elaboration. The operation continues with the definition of a drag vector as in the first case. Before the actual positioning, you are asked to confirm the creation of the object.



## Line Types

The add-on supplies some new features to ArchiCAD, you will find 4 new lines:

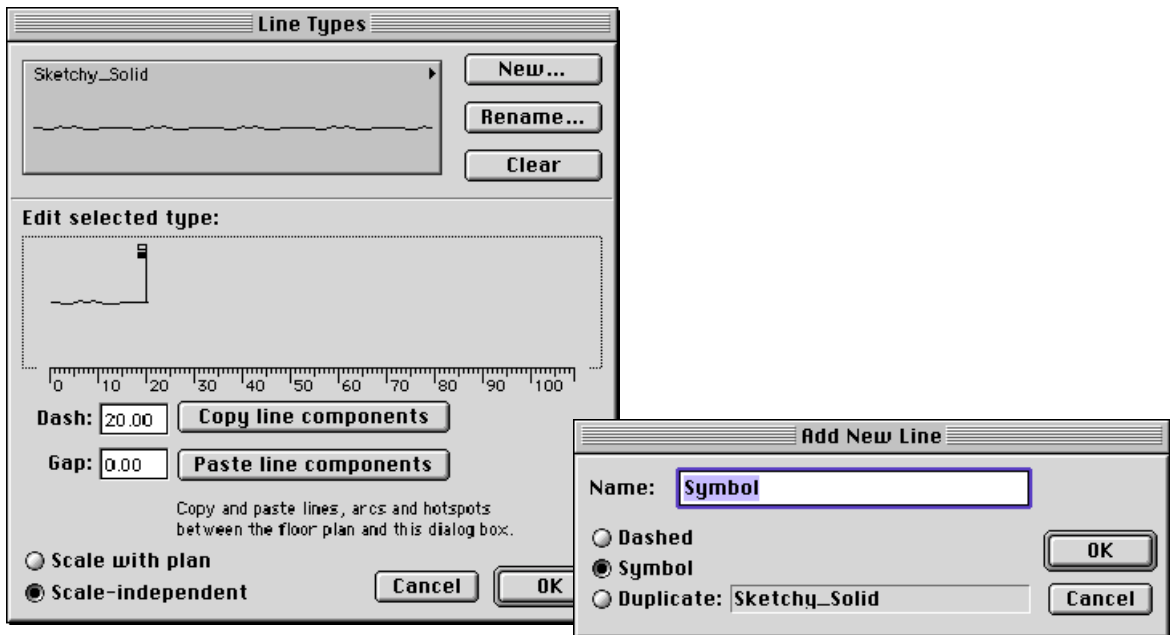
- Sketchy\_Solid;
- Sketchy\_Solid2;
- Sketchy\_Dashed;
- Sketchy\_Long\_Dashed.

These Lines can be modified to change the results by the user or it is possible to create new Lines using the substitution option.

### How to do this

By using the **Line Types** command from the *Options menu*.

- You can change the thickness of an existing line by modifying the flags or the numerical values after having selected it from the pop-up menu.



- To change its structure choose **Copy Line components**, then close the dialogue box and paste them on to the plan. Copy the modified segments after having made the changes and re-open the *Line Types* dialogue box. Choose the type to edit and click on **Paste line components**.

You can create personalised lines in the same way using the **New** key and choosing the **Symbol** option.

Two types of fills are also created (Sketchy\_Solid and Sketchy\_Empty, These are only Fills not constructing elements). They cannot be modified or eliminated but new ones can be created for use with the ArchiSketchy substitution option.

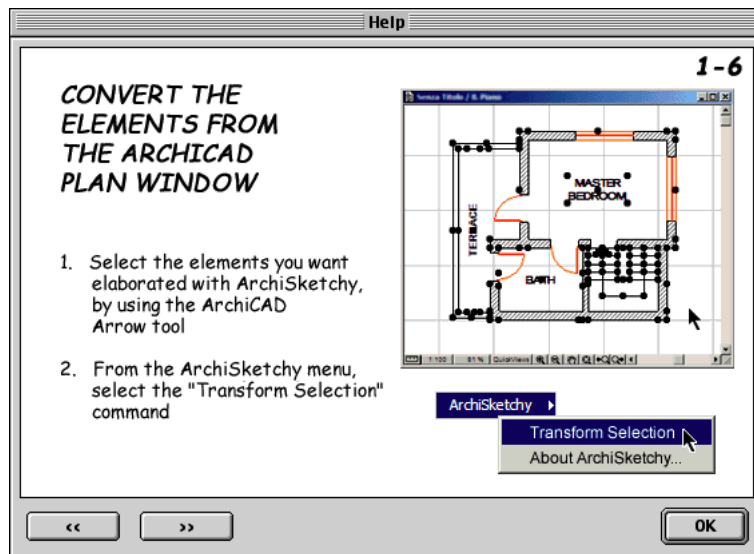
For further information, consult the Archicad User Manual.

## Help

ArchiSketchy contains a practical on-line help even though it is very easy to use. When clicking on the **About ArchiSketchy** menu, you will find an explanation about the add-on.



Clicking on the question mark allows you to access a series of quick reference guides that describe the main ArchiSketchy features.

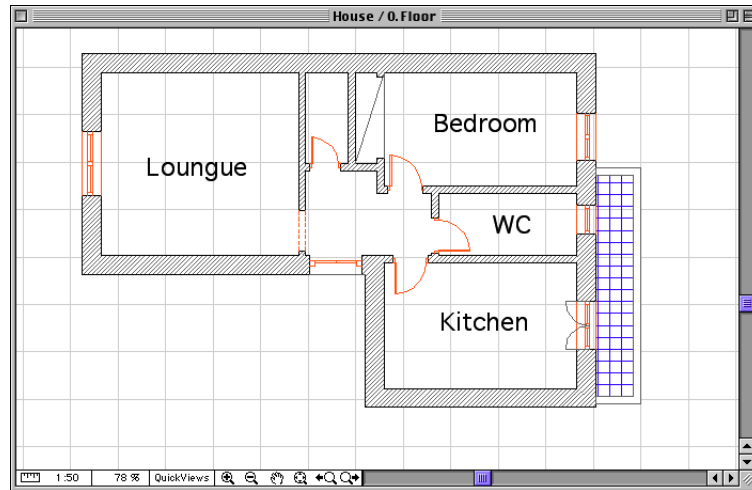


You can move from one illustration to the other by using << and >>.

## An example

Lets try a very easy, though detailed example of how to use this add-on.

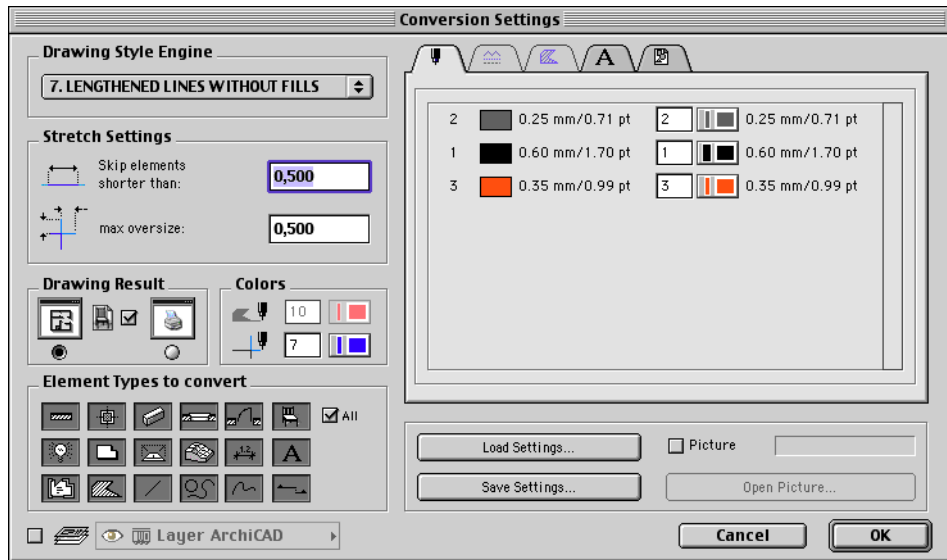
I want to show you a very simple plan of a small apartment. Its simplicity almost makes it drab in appearance. I decide I want to change it slightly and give it a touch of personality.



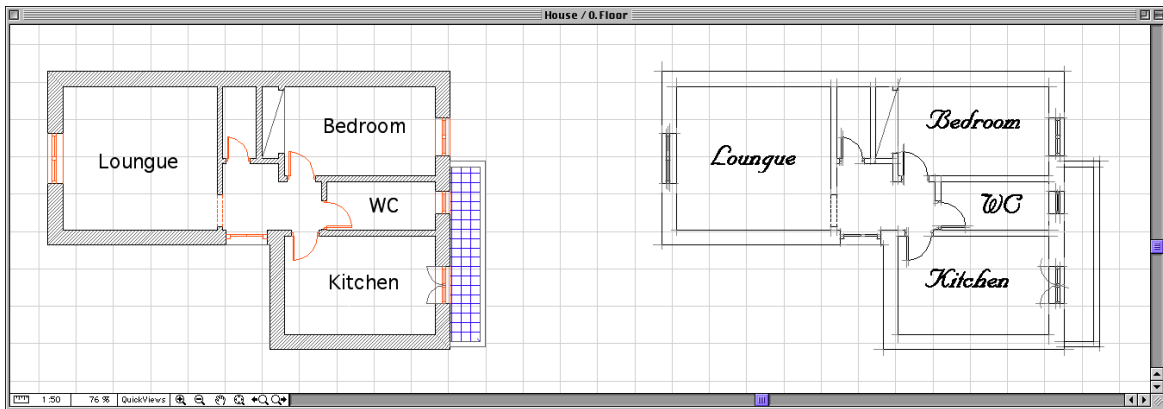
I select all and recall ArchiSketchy.

I want to use Engine 7 to give the drawing a “layered” effect on a pencil drawn base. For the extension lines I choose a light gray color to reflect the pencil markings.

For the fixtures I choose a thin black pen from the **Pens** divider. I decide to change font from the **Text** divider selecting one with a nice handwritten appearance.



I click **OK** and position the drawing on the plan. I already have in mind another change and decide to save the drawing so that it can be recalled later. I click on an angle between two walls and type on the keyboard "**x20+**" and then press **Return**. The end result is that the ArchiSketchy drawing has moved exactly 20 metres on the right of the original.



I now want to add the squared fill for the balcony. This too has to look hand drawn. I select only the fill and recall ArchiSketchy.

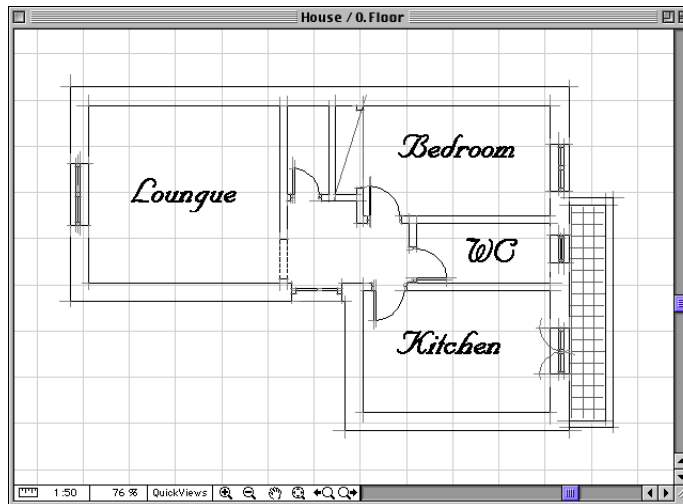
This time I choose engine 2 as it is the only one that can explode any vectorial Hatching. I can create a fill identical to the original but composed by "exploded" lines that are individually elaborated by setting both fields in the **Stretch Settings** window to zero. I am only half way there as I am trying to

create something unique....I click **OK** and position the drawing. I don't want to place the drawing in its definite location at the moment, so I write "**x22+**" and place it only two metres further from its final position.

I select the field lines created by ArchiSketchy and recall the add-on for the last time.

In order to have shorter lines than the original, I choose engine 5 as I don't want the fill to be clearly seen and prefer it not to extend beyond the balcony perimeter. I enter a value of 15 cm in the **Maximum extension** field to define the maximum shortening of the lines. I choose the same color pen as before from the **Pen** divider for the hand drawn effect and use the **Continuous Line** from the **Line** divider to maintain the style of the drawing.

To place the drawing I click on the plan and write "**x2-**" with the keyboard. This moves the result two metres to the left.



Here is the final result ready for printing.

### **Note**

*In order to obtain a good result, it is very important to use a correct font, especially when there is a lot of writing. In addition to the fonts installed in your computer, you can easily access others that may be more suitable many of which are free. We have listed some internet sites that may help you.*

*<http://saru.milkcafe.to/font/pencil.html> ("Pencil")*

*<http://www.astigmatic.com/alphamack.html> ("AlphaMack")*

*<http://www.larabiefonts.com/fonts/p2.html> ("Prime minister of Canada")*

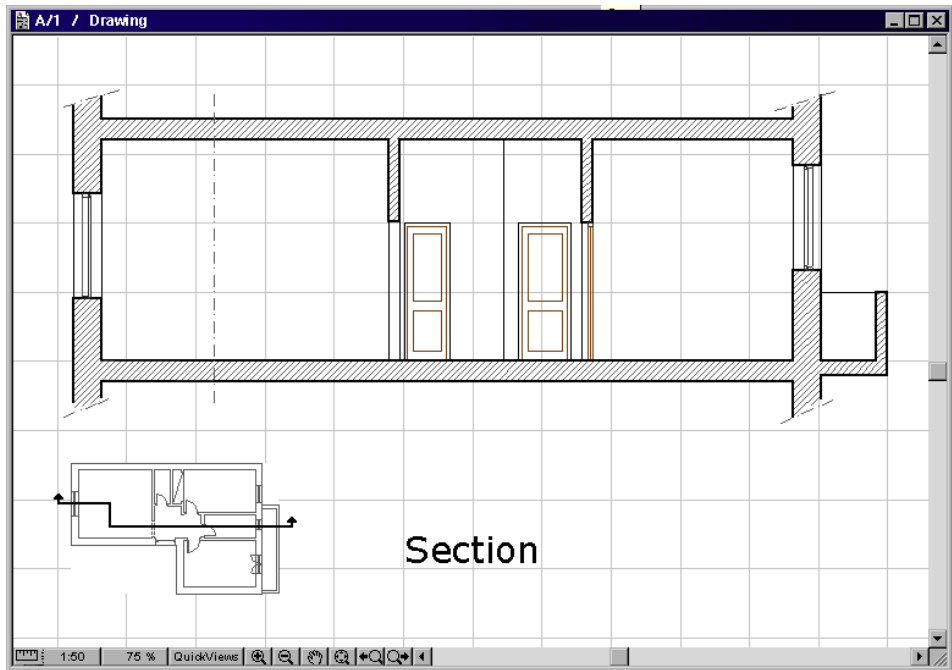
*<http://www.webfontlist.com/pages/station.asp?ID=8112> ("Augie")*



<http://pro.wanadoo.fr/dephitro/telechf1.htm> (Various corrosives, but only for Windows)

<http://www.fonthead.com/freeware.html> ("Good dog plain")

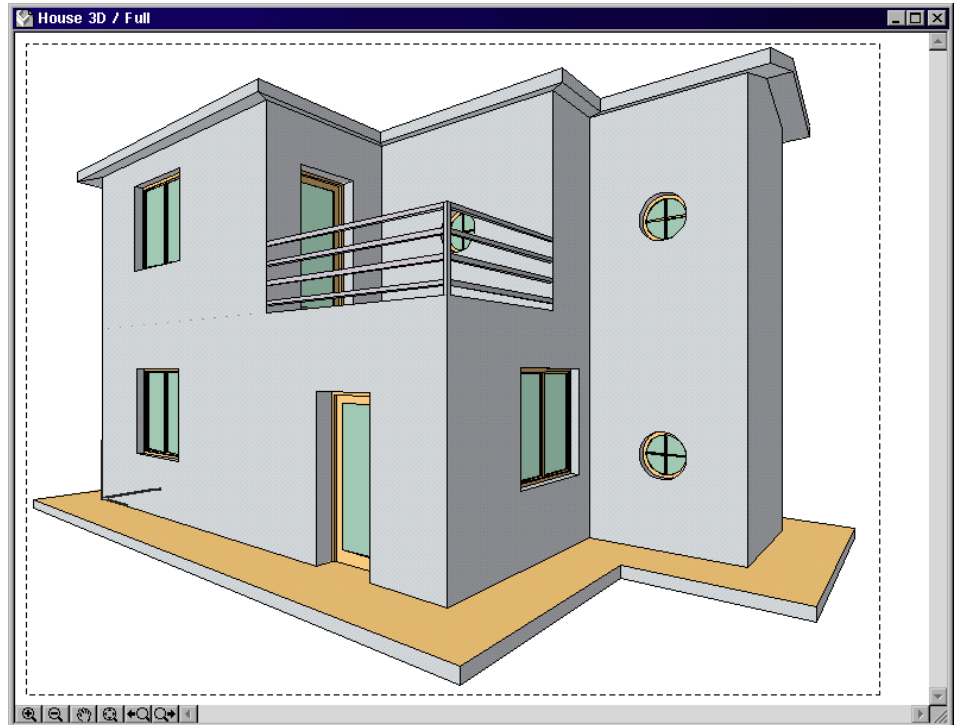
If I'd activated the create an object option, my small apartment would have become a library element. The drawing can be positioned in a reduced size next to the sections and perspectives for an immediate use and to see its position inside the building.



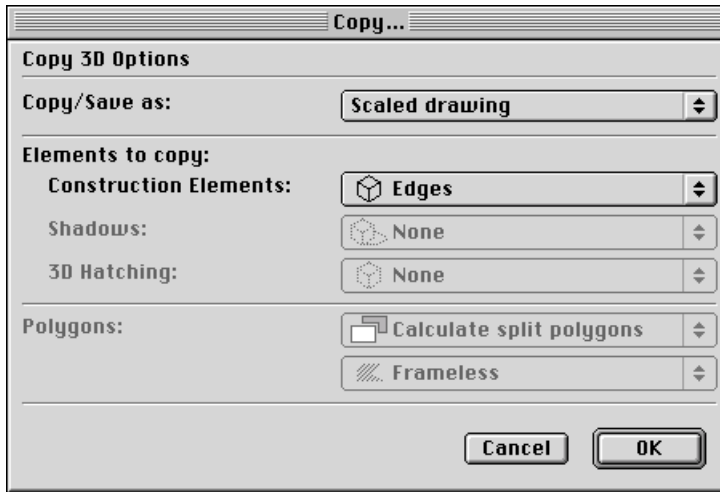
Here are another two even simpler examples designed using the predefined settings available in ArchiSketchy.

This time I want a 3D model of a small apartment to reproduce it using hand drawn lines. Obviously they will be “hand drawn” by computer, but that will be our little secret!

I have used very simple fixtures because library elements create many lines that can appear excessive when substituted with squiggled lines.

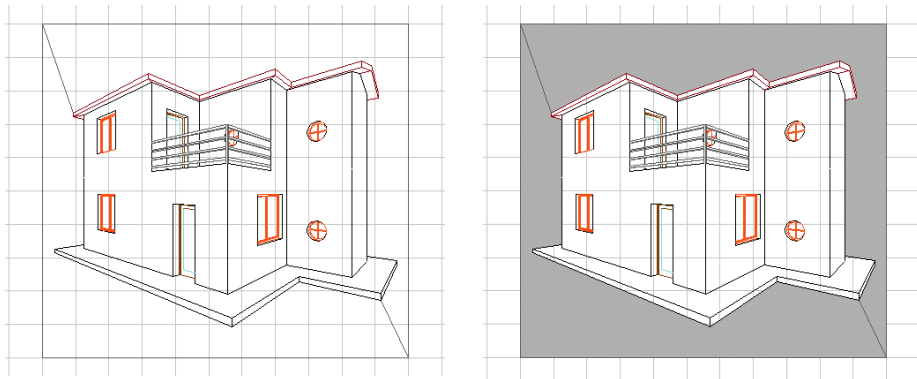


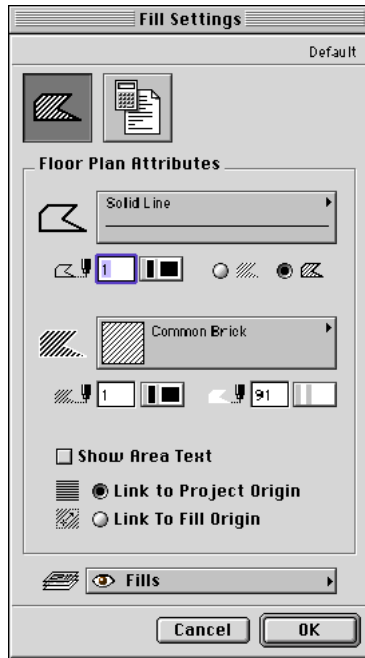
Once I have chosen a position I am happy with, I frame the drawing using the rectangular **Selection Area** to frame it and click **Copy**. As I only want a simple lined drawing, from the ArchiCAD window, I choose the **Edges** option as the element to copy. After this, I paste the copied drawing on to the plan.



An idea springs to mind, I can use a technique adopted by many designers to highlight my drawing even more; the use of a marker that stands out for a greater emphasis of the contours. I could go over the entire perimeter with a polyline, or maybe there is a quicker method. The idea is to use a fill to temporarily color the background, so I draw a rectangular area with four lines that surrounds the drawing. In this cases the Magic Wand does not work straight away because the field that has to be created is ring-shaped.

A simple solution to this problem is to add two lines that join the frame to the drawing. In this way I successfully fill the background with two taps of the Magic Wand.



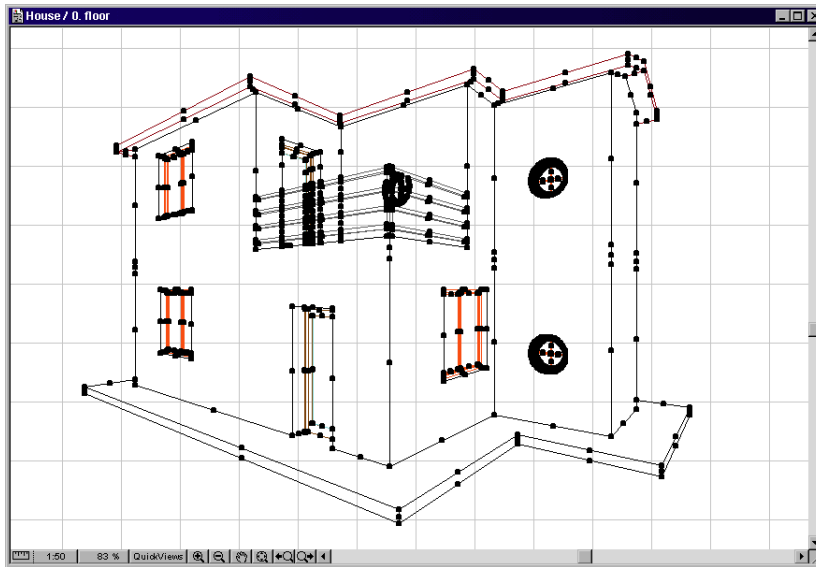


As you can see, in order to not have fills with superfluous nodes, I have drawn the lines so that their ends touch existing vertices. I select the two fills and choose a color not used in the drawing (in this case pen 140) and click on the **Explode** command from the *Edit menu*. Now I cancel the fills, the frame and the other temporary lines. The drawing is identical to the first but in addition it has a perimeter drawn with pen 140 around it.

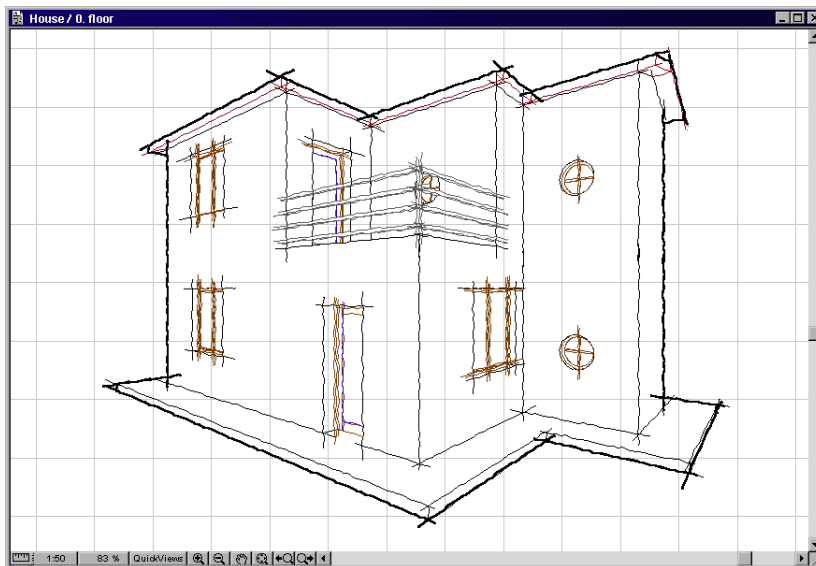
Its time to put into action ArchiSketchy... but first I must do something else...

We must consider that ArchiSketchy intentionally makes the drawing irregular. Lines positioned one above the other may not be seen in the original drawing but will be very noticeable after the elaboration. What can we do? In the **Goodies** folder located on the ArchiCAD CD as you might be aware, there are some additional add-ons that are not automatically installed. **Control Duplicates** selects and cancels the duplicate lines. This "cleaning" process has to be done for drawings elaborated on the 3D window, but drawings from the Section/Extension window often contain double lines.

I now select all the lines that make up the drawing and finally call ArchiSketchy.



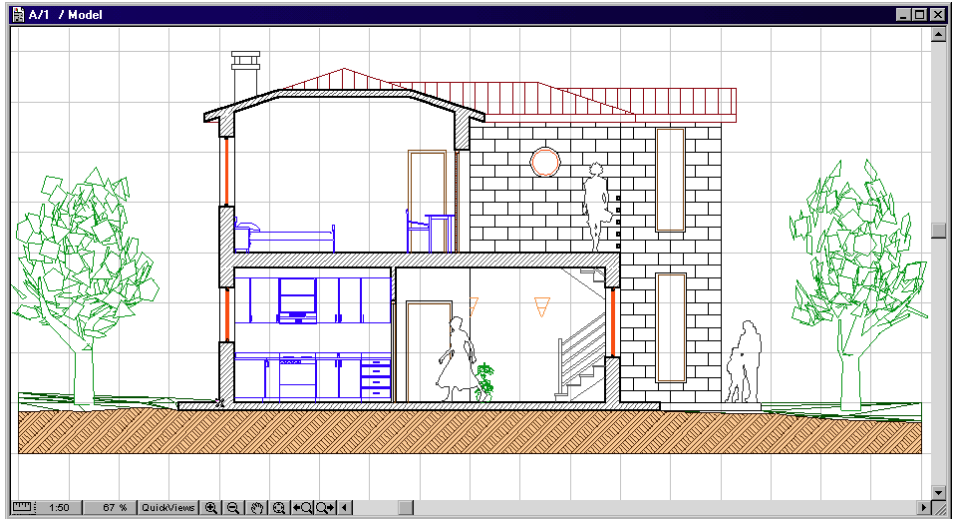
Using engine 1, I choose the **Pen** divider and make some changes and select a darker shade for the pens that are too light, but above all I choose a thick black pen for the lines drawn with pen 140.



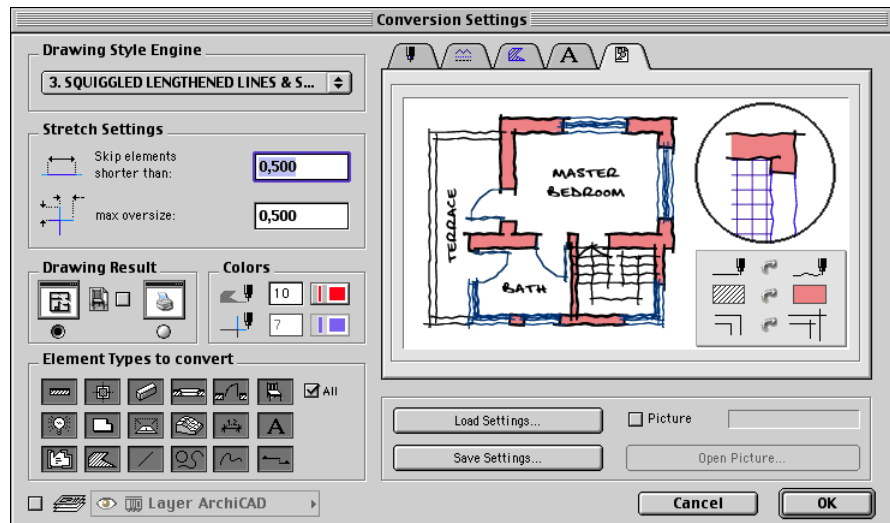
The result is instant, I have the effect I wanted!

Lets just try one test, this time with a section.

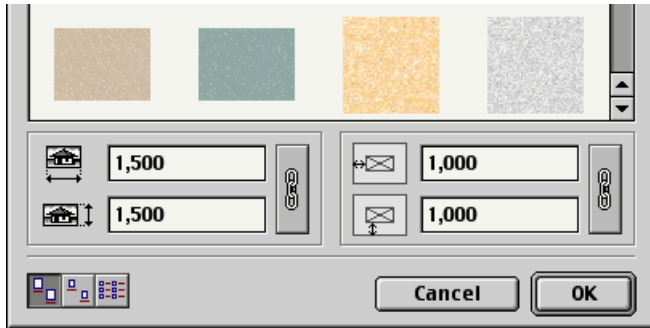
I want to create a more stimulating drawing and decide to add a background, In the settings dialogue box I create a normal section and activate the vectorial Hatching to give surfaces more features.



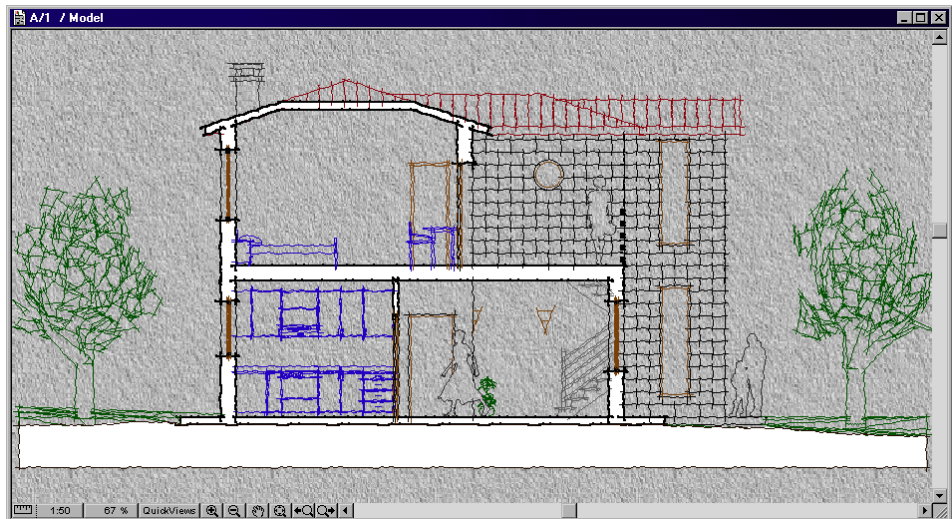
I select all and call ArchiSketchy. For a full field on the walls and all the sectioned structures, I choose engine 3, but I choose a white pen instead if selecting a "light" color for these fields.



The effect is still highlighted thanks to the background. I didn't want to risk losing the grainy effect due to an excessive reduction so I used a grainy grey color and chose large size settings.



I close the dialogue box by clicking **OK**, click twice on the section window and there you have it, another extraordinary masterpiece...!



All the results are fantastic, but let's not forget that they are simply 2D ArchiCAD drawings that can be modified using the usual methods. Whoever wishes can modify fills, cancel lines, add pictures, symbols, text... and enjoy producing not only projects but actual drawings.