

Automatically create comparison overlays

# ArchiGiallieRossi

vers. 1



PLUG-IN FOR ARCHICAD®



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# User Guide

## What is an ArchiCAD plug-in?

A plug-in is a software component enabling you to add functions to ArchiCAD. ArchiCAD allows you to manage plug-ins automatically by launching and closing them through the menu bar where a new item appears once the plug-in has been installed. This menu acts like any other ArchiCAD menu.

You won't even realise you're using a plug-in, it's like using your ArchiCAD, but with more functions.

## System requirements

The plug-in configuration is established by the configuration requested for ArchiCAD.

## ArchiCAD version

This plug-in is compatible with ArchiCAD 12 and does not work with older versions of ArchiCAD.

## Where should the plug-in be placed?

Plug-ins cannot be directly activated from the Finder (Macintosh) or Windows Explorer (Windows). In order to run them, you must therefore copy the plug-ins to the ArchiCAD add-ons folder.

- Mac OS: the add-ons folder can be found in the same folder as the ArchiCAD application, or in the Graphisoft folder in the system folder.
- Windows: the add-ons folder must be in the same folder as the ArchiCAD application. If located elsewhere, ArchiCAD will not be able to access it.

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

For temporary use, you may run the required plug-in via the Load Add-On... command in the Options menu.

## Installing the package

Select the folder of the plug-in purchased and copy it to the add-ons folder in the ArchiCAD folder on your computer.

If the installation is correct, when you restart ArchiCAD there will be a new submenu in the Extras menu enabling you to show or hide the application's palette.

## Managing the object library

We recommend you do not move the library used by the plug-in from its original location (in the same folder as the plug-in). This will ensure it is automatically managed by the plug-in and you will not have any difficulty loading it.

## Choosing the language

To select the language of the plug-in, choose Language from the submenu in the Extras menu, then click on the corresponding button.

## Custom work environment

If you use custom work environments, the plug-in menu might not appear automatically in the ArchiCAD Design Extras menu.

To show the Work Environments Manager dialog, click on Options/Work Environment.

Use this dialog to configure your custom work environments to include the menu for the new plug-in.

## User manual

The user manual in PDF format (available for download from the Cigrph site in five languages) is contained in the plug-in folder and can be consulted at any moment using the Help button.

## Available versions

All Cigraph plug-ins are available in three different versions:

- Commercial version
- Demo version

To use the commercial version you must first purchase and correctly “load” a Cigraph dongle.

If the dongle is not connected to your computer or is not available on the network (in the case of network dongles), the plug-in will not work.

As it is designed for evaluation purposes, the demo version does not require a dongle, but has limited commands and functions.

If you are using a demo version of our products, the folder containing the plug-in also includes an html document (“Product\_Name\_DEMO.htm”) you can open in your browser listing the limitations of the various demo versions.

***N.B.:*** *ArchiGiallieRossi is NOT available in the Educational version!*

# The ArchiGiallieRossi Plug-In

## Plug-In to automatically create comparison overlays

With the ArchiGiallieRossi plug-in for ArchiCAD, you can compare two views of a project and highlight the differences.

Its main use is to automatically (or semi-automatically) generate comparison overlays in which two situations of the same project (current and proposed situation) are superimposed and then compared. The structures to be demolished are shown in yellow (and possibly with dotted lines) and the “new” structures are shown in red.

As described below, the comparison procedure is very simple. The starting conditions may, however, vary as ArchiCAD allows you to manage the current and proposed situations in various ways as required or as set in the custom preferences.

### ***Current and proposed situations in ArchiCAD***

In the ArchiCAD virtual building, these two situations can be handled in various ways. There are basically two possibilities:

- a. the two situations can be managed in two separate files
- b. the two situations can be managed in the same file, in this case:
  - the two situations are perfectly superimposable
  - there is a deliberate offset between the two situations to avoid problems associated with layer intersection cleanup.

### **Separate files**

In this case, the current and proposed situations are handled in two separate project files and therefore ArchiGiallieRossi has to compare views not found in the same file.

In this situation, we suggest managing the comparison overlay directly in the file containing the proposed situation. Updating the variations will be simpler as by definition the current situation never changes, while the proposed situation often changes during the life of the project.

A special procedure is used to export the views to be compared from the file representing the current situation.

The comparison overlay can then be generated in the project file by selecting the external files for the current situation (those previously exported using ArchiGiallieRossi) and the corresponding internal views for the proposed situation.

### **Superimposable views in a single file**

In this case, the user decides to have both the current and proposed situation in one ArchiCAD project file.

The two situations can be viewed by using suitably configured layers and project views.

The walls in the current situation must be on layers with a different intersection number from the layers containing the walls in the proposed situation to avoid incorrect “clean-up”.

Perfect “clean-up” of the plan is essential for ArchiGiallieRossi to generate a correct comparison overlay. If the initial views are incorrect, ArchiGiallieRossi could return incorrect results (correctable with the special tools).

### **Offset views in a single file**

In this case, the user decides to have both the current and proposed situation in one ArchiCAD project file.

The two situations can be viewed by using suitably configured layers and project views.

The user shifts one of the two virtual buildings to avoid intersection clean-up problems resulting from the use of layers with the same intersection number.

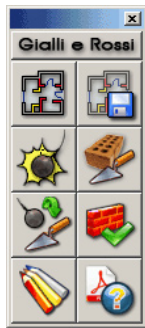
ArchiGiallieRossi will be able to generate the comparison overlay without difficulty, but the offset between the two views (in graphic mode) must obviously be communicated.

Once the offset value has been configured, it will not need redefining when the comparison overlay is updated (unless, obviously, the value has been modified by the user).

## The ArchiGiallieRossi tool palette

This plug-in to generate comparison overlays is accessed by means of the ArchiGiallieRossi tool palette.

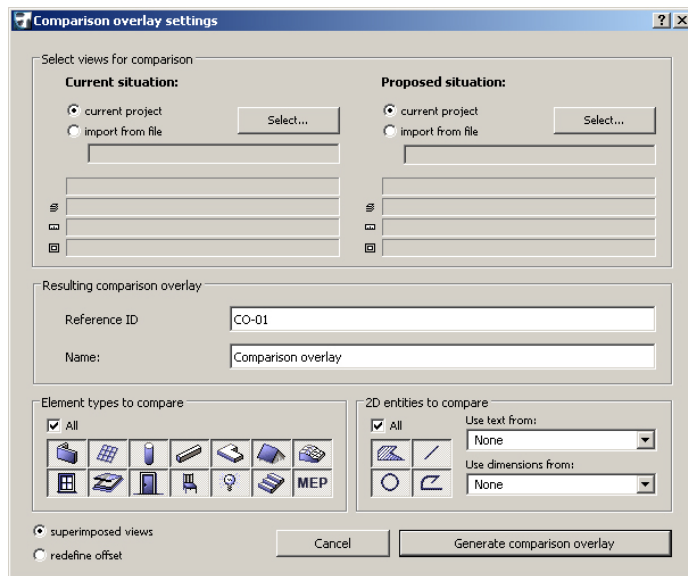
From left to right and from top to bottom:



1. Create/update comparison overlay
2. Export project views in ArchiGiallieRossi format
3. Configure manually as demolition
4. Configure manually as new structure
5. Configure manually as demolished/reconstructed
6. Configure manually as existing/unchanged
7. Configure colours/fills/line types for comparison
8. Help.

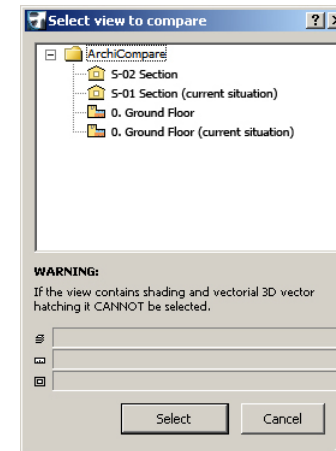
### Create/update comparison overlay

Clicking on the first icon in the ArchiGiallieRossi palette opens the following dialog box where you can configure the comparison overlay to be created:



In the first section at the top, you can define the view to be used as the current situation and the view to be used as the proposed situation.

If the active option is **current project**, then clicking on the **Select...** button opens a “mini-navigator” listing all the views defined for the current project:



This mini-navigator does not list all the views defined in ArchiCAD, but only those which can be used for the ArchiGiallieRossi comparison. Empty folders or folders containing inappropriate views are also excluded.

The views “compatible” with the comparison procedure are as follows:

- Plans
- Sections
- Elevations
- Independent worksheets

In order to be utilizable, section and elevation views must also have certain settings (model view panel):

- views in which 3D vector hatching is active cannot be used
- views in which vector shading is active cannot be used.

Obviously (but worth specifying), only views of the same type can be compared:

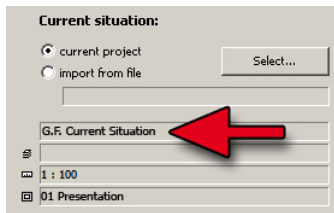
- plans with plans
- sections with sections
- elevations with elevations
- worksheets with worksheets.

**Notes:** *If two views of different types are selected for the comparison procedure, when you try and launch the procedure itself, you will be warned that the selection is not congruent and invited to correct it.*

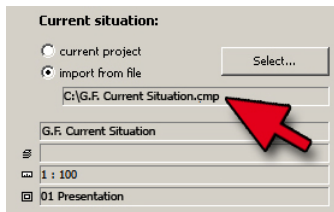
Click on the view to be used for the comparison to highlight it, then click on the **Select** button to confirm the choice.

If on the other hand the **Import from file** option is active, then a dialog will open enabling you to select a file on your disk previously exported using ArchiGiallieRossi.

When the view (internal or external) to be used has been selected, the characteristics of the selected view will be listed below:

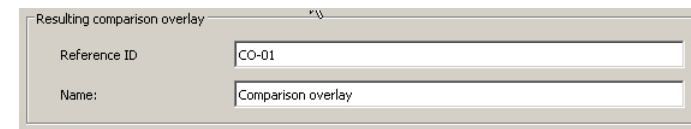


#### Internal view



#### External file

In the centre of the dialog, you can define the ID and name of the independent worksheet to be used by ArchiGiallieRossi for the final comparison overlay:

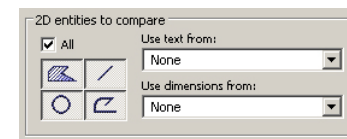


At the bottom left, you can define which types of elements will be considered in the comparison procedure:



The example shows the filters for the 3D construction elements in the project.

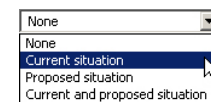
In the next section on the right, you can decide how to treat the 2D elements in the two views used for the comparison:



On the left are the filters for the 2D graphic primitives to be considered in the comparison.

On the right, there are two pop-up menus to define how the text blocks and dimensions in the two views to be compared are to be considered. These entities are not in any case compared as the comparison would have no sense and will therefore retain their original settings.

In both cases, the following options are available:





## None

If this option is chosen, no text block and no dimension will be present in the final comparison overlay.

## Current situation

If this option is chosen, the final comparison overlay will include the blocks of text and dimensions present in the view selected as the current situation.

## Proposed situation

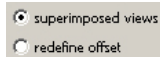
If this option is chosen, the final comparison overlay will include the blocks of text and dimensions present in the view selected as the proposed situation.

## Current and proposed situation

If this option is chosen, the final comparison overlay will include the blocks of text and dimensions present in both the views selected for the comparison.

## Redefine offset

At the bottom left, there are two radio buttons to define if the two views to be compared are superimposable or if an offset must be defined to superimpose them:



As described previously, the offset definition option is used only if the two views selected for the comparison are not perfectly superimposable.

In this case, activate the option to define the shift between the two views and the **redefine offset** radio button is also activated.

If the option is active, when you confirm the settings and launch the comparison procedure with the **Generate comparison overlay** button, you will have to click twice to define two corresponding points in the two views to be compared.

ArchiGiallieRossi will display the first view, the cursor will become a pencil icon and you must click on a point in the first view.

When this reference point has been defined with a click, ArchiGiallieRossi will display the second view. The cursor will become a pencil icon and you must click on the point in the second view corresponding to the one indicated previously.

After the two clicks, ArchiGiallieRossi will have all the information necessary to shift the two views in order to superimpose them perfectly and generate the comparison overlay.

**Notes:** *the offset must be defined the first time the comparison overlay is generated. Subsequently, the offset value will be stored with the comparison overlay generated and will not need to be redefined. The offset may need to be redefined in the event of error (the two clicks are incorrect) or if the two views have been shifted by the user to a new position.*

## Generate comparison overlay

At the bottom right, the **Generate comparison overlay** button launches the comparison procedure.

If the dialog has been opened with an independent worksheet type window created by ArchiGiallieRossi (you are viewing a comparison overlay generated by ArchiGiallieRossi), then the text of the button changes to Update comparison overlay, enabling you to update the information contained in the comparison overlay displayed.



## Modifying comparison overlays

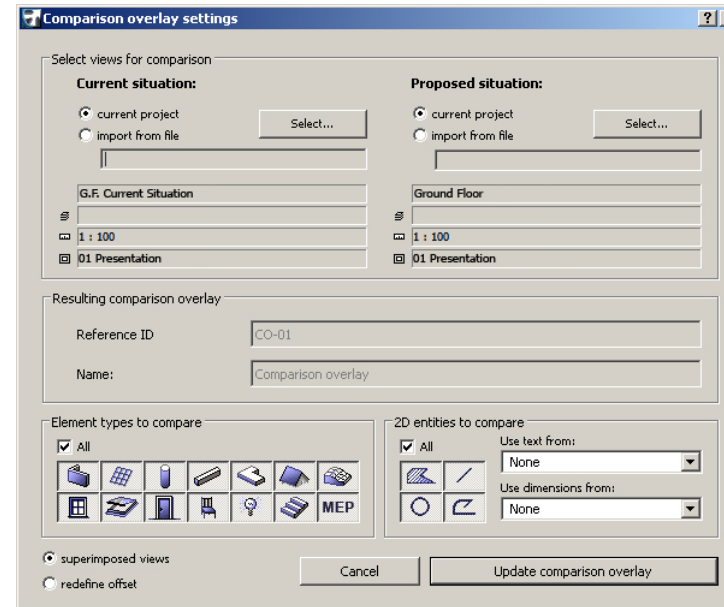
As seen, comparison overlays generated by ArchiGiallieRossi are merely independent worksheets.

Each comparison overlay corresponds to a new independent worksheet.

Each of these incorporates all the settings used when it was generated:

- the view chosen as the current situation
- the view chosen as the proposed situation
- the state of the filters used for the entities to be compared
- definition of the offset (if relevant)
- the graphic settings (pens, fills, line types) to represent the three types deriving from the comparison:
  - demolitions
  - new structures
  - unchanged elements.

If you are viewing one of these independent worksheets generated by ArchiGiallieRossi (and in this case only, because only those produced by ArchiGiallieRossi are recognised) and you click on the **Create/update comparison overlay tool**, the dialog box will change slightly and the dialog no longer serves to create a new comparison overlay, but to verify the settings in the overlay currently displayed and modify and update them if necessary



The settings displayed are obviously those set when the previous comparison overlay was generated and the button at the bottom right has changed to **Update comparison overlay**.

## Export Project Views in ArchiGiallieRossi format

As seen previously, some users prefer to manage the two project situations (current and proposed) with two separate files.

The procedure usually involves creating a project with the current situation from which all the necessary views are obtained (plans, sections, elevations, etc.).

After the virtual building has been created, the file is duplicated and the building is modified in the project file.

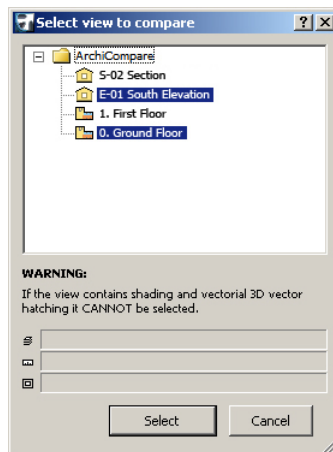
If this is how you like to work, we suggest generating the comparison overlays in the project file, then exporting the views to be used as the current situation in the comparison from the first project file representing the current situation.

Open the ArchiCAD project representing the current situation.



Access the ArchiGiallieRossi tool palette and click on the **Export project views in ArchiGiallieRossi format**.

Clicking on the tool icon opens a mini-navigator enabling you to select which views to export in ArchiGiallieRossi format:

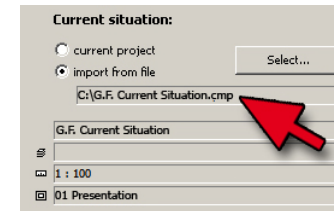


The mini-navigator obviously lists all the views defined in the current project compatible with the comparison procedure.

Select those you want to export, then click on the **Export** button and define the destination of the files to be exported. In the case of multiple selections, the name of the exported file is the same as the original view.

The selected views will be displayed, processed and then exported one by one in a special ArchiGiallieRossi format.

These views can be utilised during the comparison phase using the import from file option (see previous chapter):



## Comparison procedure: what does ArchiGiallieRossi do?

Before describing the next tools in the ArchiGiallieRossi palette, let's take a look at how the programme generates comparison overlays automatically.

As described above, basically ArchiGiallieRossi just takes two views, superimposes them and verifies/highlights the differences, in practical terms, the changes from before (the situation represented by the first view) and after (the situation represented by the second view).

There are not many possibilities:

1. an element present before may not be present afterwards (demolition)
2. an element not present before may be present afterwards (new structure)
3. an element is present both before and afterwards (unchanged).

The comparison procedure does not compare any primitive, but performs the comparisons on the basis of element type, with a logic obviously linked to the virtual building.

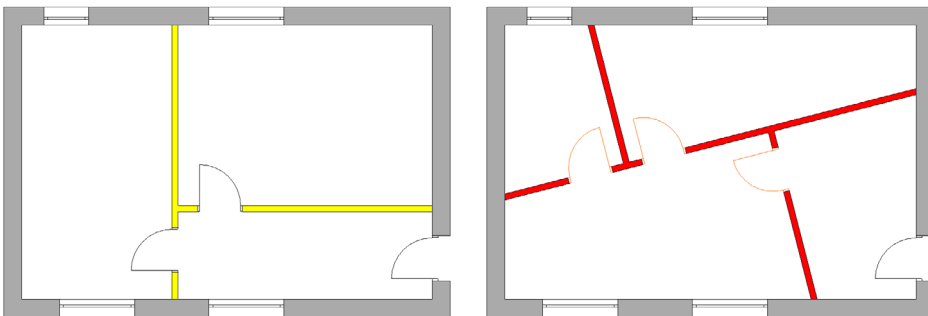
The walls present before are therefore compared with the walls present afterwards (and just wall with wall), the slabs with the slabs, the beams with the beams, the objects with the objects and so on.

Each type of element is compared with its respective type only.

The result of this comparison is shown with the three colours, fills and line types set by the user.

The default configuration represents the demolitions in yellow, the new structures in red and the unchanged elements in grey.

Let's take a look at the following example:



On the left, a plan with the current situation, on the right a plan with the proposed situation.

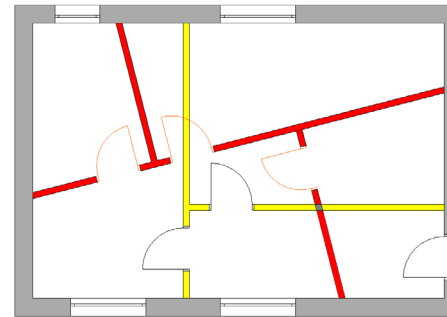
ArchiGiallieRossi superimposes the two views and, using the logic described above, compares the differences.

The elements, or parts of them, present in both the proposed situation and current situation are considered as "unchanged".

The elements, or parts of them, present in the current situation but not in the proposed situation are considered as "demolitions".

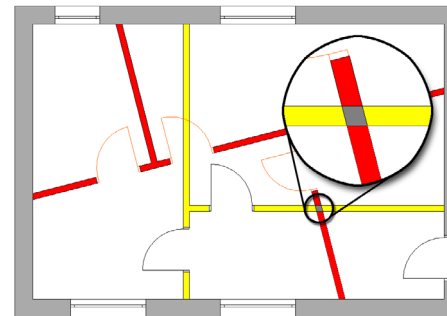
The elements, or parts of them, present in the proposed situation but not in the current situation are considered as "new structures".

Following this simple logic, the following result is obtained:



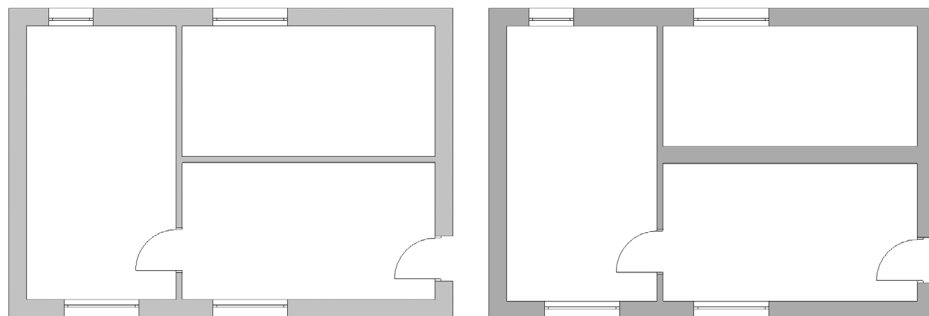
ArchiGiallieRossi obviously follows a purely "geometric" logic and cannot make designer-type evaluations.

In the right part of the plan, you can see how one of the walls to be demolished intersects with a new part to be constructed during the design phase:



The small rhombus identifying the intersection is actually present both before (in the current situation) and afterwards (in the proposed situation) and ArchiGiallieRossi thus considers it as an “unchanged” element.

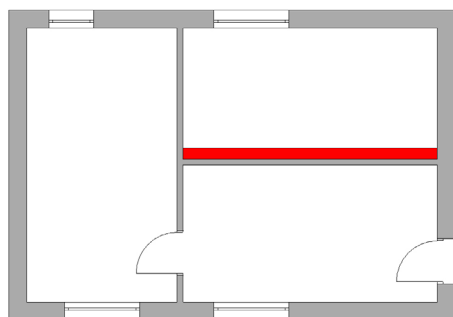
Let’s look at another simple example:



On the left, a plan with the current situation, on the right a plan with the proposed situation.

The difference between the two situations, obvious to a designer, consists in the fact that the horizontal partition wall has been demolished to build a load-bearing spine wall.

As said before, the comparison performed by ArchiGiallieRossi can make only geometric comparisons and the result obtained automatically will be as follows:



Here the additional thickness of the wall is considered as a “new structure” while the thickness “in common” with the current situation is considered as “unchanged”.

If in the same example, the vertical partition wall has also been completely demolished, then reconstructed with different construction characteristics, but in the same position and with the same dimensions, ArchiGiallieRossi will obviously not be able to recognise it as demolished and reconstructed as it will find no difference between the two situations.

In these particular cases, a result cannot be obtained automatically. However, you can intervene to modify ArchiGiallieRossi’s automatic representation and manually assign the most appropriate graphic representation.

### ***The result generated by ArchiGiallieRossi***

Above we saw how the comparison overlay automatically generated by ArchiGiallieRossi is actually an independent worksheet.

Precisely because of the nature of this type of ArchiCAD window, the elements used to represent the comparison overlay will simply be 2D graphic primitives: fills, lines, etc.

Each of these primitives can obviously be edited and modified as you wish (including by using standard ArchiCAD methods).

The tools described below help edit these elements by providing fast procedures to modify the state (demolished, reconstructed, demolished and reconstructed, unchanged) of the graphic primitives present in the comparison overlay.

To further simplify these modifications, the 2D graphic primitives into which the original construction elements compared are “exploded” are grouped together according to the original element from which they were created.

Let’s take a simple example... a wall is exploded into four lines (the perimeter) and a fill (the internal hatching). These five elements are grouped together in such a way that modifying one will automatically modify the others, saving you time.

## Comparison procedure for sections, elevations and worksheets

The comparison procedure for processing these types of view (sections, elevations and worksheets) is different from the procedure for plans:

1. the comparison is still based on element types
2. the walls are compared in exactly the same way as the other elements (in other words, unlike in plans, a specific procedure is not used)
3. all graphic primitives such as lines, circles, etc. are compared (in the plan, in the case of walls, they are not processed and retain their original characteristics)
4. the shaded parts (in other words, the sectioned parts) are represented with 45° hatching where the fill and background pens are defined in the **Configure colours/fills/line types** dialog settings (in other words, the colour of the fill will be determined by its state: demolition, new structure, etc.).

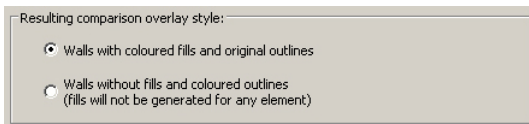
The final result will therefore normally be a comparison overlay in which the state of the elements is shown by the colour of the lines and the fills (also coloured according to their state) are present only in the sectioned parts.

## Configuring the style of the comparison overlay (plans only)

In the default procedure for comparing views, wall type elements are processed with a particular procedure and therefore their "state" is shown by a solid fill (default settings) in the relative colour (demolition, new structure, etc.), while the outline of the elements uses the original pen.

However, certain local authorities require that the comparison overlay does not include any hatching colour and that the state of the elements (the walls in particular) is indicated by the pen defining the outline.

ArchiGiallieRossi enables you to obtain both these results by configuring the style of the resulting comparison overlay. In the **Configure colours/fills/line types** dialog, you can use the two radio buttons to choose the required style of representation.



## Configure manually as demolition



This tool manually assigns the graphic characteristics of "demolished element" to the element indicated by the user.

It can be used extremely simply in two ways:

- assignment by selection
- assignment by click.

### Assignment by selection

In this case, first select the elements to be assigned the new graphic characteristics of "demolished element" and then click on the **"Configure manually as demolition"** tool.

ArchiGiallieRossi will immediately change the graphic characteristics of the selected elements.

### Assignment by click

In this case, click on the **Configure manually as demolition tool** to activate the procedure to assign/modify the graphic characteristics.

ArchiGiallieRossi changes the appearance of the ArchiCAD cursor (pencil cursor) and waits for you to click a graphic element in the comparison overlay.

ArchiGiallieRossi will immediately modify the graphic characteristics of the element indicated by the click.

In this case, the procedure is cyclical. In other words, after the first click (and first modification), ArchiGiallieRossi waits for you to click again to modify another element.

**Notes:** to interrupt the cyclical procedure:

- click with the right button of the mouse to display the context sensitive menu, then choose the "Cancel" command
- press the Esc button on the keyboard
- press the icon of any other ArchiCAD tool.

## Configure manually as new structure



This tool manually assigns the graphic characteristics of “new structure” to the element indicated by the user.

It can be used extremely simply in two ways:

- assignment by selection
- assignment by click.

### Assignment by selection

In this case, first select the elements to be assigned the new graphic characteristics of “new structure” and then click on the **“Configure manually as new structure”** tool.

ArchiGiallieRossi will immediately change the graphic characteristics of the selected elements.

### Assignment by click

In this case, click on the **Configure manually as new structure** tool to activate the procedure to assign/modify the graphic characteristics.

ArchiGiallieRossi changes the appearance of the ArchiCAD cursor (pencil cursor) and waits for you to click a graphic element in the comparison overlay.

ArchiGiallieRossi will immediately modify the graphic characteristics of the element indicated by the click.

In this case, the procedure is cyclical. In other words, after the first click (and first modification), ArchiGiallieRossi waits for you to click again to modify another element.

**Notes:** to interrupt the cyclical procedure:

- click with the right button of the mouse to display the context sensitive menu, then choose the “Cancel” command
- press the Esc button on the keyboard
- press the icon of any other ArchiCAD tool.

## Configure manually as demolished/reconstructed



This tool manually assigns the graphic characteristics of “element first demolished then reconstructed” to the element indicated by the user.

It can be used extremely simply in two ways:

- assignment by selection
- assignment by click.

### Assignment by selection

In this case, first select the elements to be assigned the new graphic characteristics of “demolished and reconstructed element” and then click on the **“Configure manually as demolished/reconstructed”** tool.

ArchiGiallieRossi will immediately change the graphic characteristics of the selected elements.

### Assignment by click

In this case, click on the **Configure manually as demolished/reconstructed** tool to activate the procedure to assign/modify the graphic characteristics.

ArchiGiallieRossi changes the appearance of the ArchiCAD cursor (pencil cursor) and waits for you to click a graphic element in the comparison overlay.

ArchiGiallieRossi will immediately modify the graphic characteristics of the element indicated by the click.

In this case, the procedure is cyclical. In other words, after the first click (and first modification), ArchiGiallieRossi waits for you to click again to modify another element.

**Notes:** to interrupt the cyclical procedure:

- click with the right button of the mouse to display the context sensitive menu, then choose the “Cancel” command
- press the Esc button on the keyboard
- press the icon of any other ArchiCAD tool.



## Configure manually as existing/unchanged



This tool manually assigns the graphic characteristics of “unchanged element” to the element indicated by the user.

It can be used extremely simply in two ways:

- assignment by selection
- assignment by click.

### Assignment by selection

In this case, first select the elements to be assigned the new graphic characteristics of “unchanged element” and then click on the **“Configure manually as existing/unchanged”** tool.

ArchiGiallieRossi will immediately change the graphic characteristics of the selected elements.

### Assignment by click

In this case, click on the **Configure manually as existing/unchanged** tool to activate the procedure to assign/modify the graphic characteristics.

ArchiGiallieRossi changes the appearance of the ArchiCAD cursor (pencil cursor) and waits for you to click a graphic element in the comparison overlay.

ArchiGiallieRossi will immediately modify the graphic characteristics of the element indicated by the click.

In this case, the procedure is cyclical. In other words, after the first click (and first modification), ArchiGiallieRossi waits for you to click again to modify another element.

**Notes:** to interrupt the cyclical procedure:

- click with the right button of the mouse to display the context sensitive menu, then choose the “Cancel” command
- press the Esc button on the keyboard
- press the icon of any other ArchiCAD tool.

## Configure colours/fills/line types for comparison



This tool to configure the graphic characteristics to be assigned to the elements present in the comparison overlay according to their state (demolished, new structure, unchanged) again works in two different ways, depending on the window currently active.

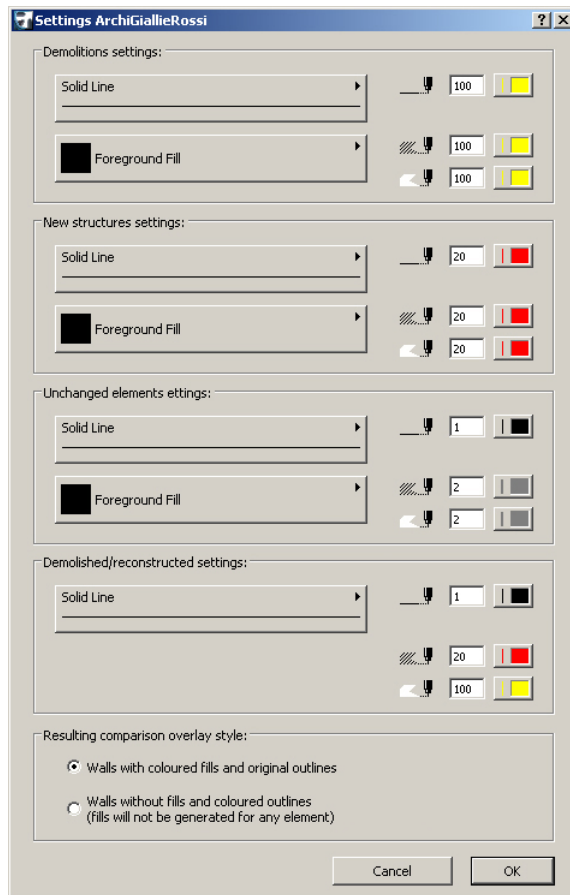
If the tool is used in any ArchiCAD window other than an independent worksheet generated by ArchiGiallieRossi to view the comparison overlay, then it sets the “general” configuration of the programme.

In this case, the settings will be those active each time you launch ArchiGiallieRossi.

On the other hand, if it is opened with an independent worksheet window created by ArchiGiallieRossi (you are viewing a comparison overlay generated by ArchiGiallieRossi), then the configuration to be modified (and viewed in the dialog box) relates to the active comparison overlay. In this case, it is a “local” configuration, linked exclusively to the overlay displayed (if you modify the settings for colours, fills and line types, the next time you update the comparison overlay the same modified settings will be used).

In both cases, clicking on the tool icon displays the relative dialog box.





As you can see, the dialog box is divided into three sections, each dedicated to one of the possible states of the element: demolition, new structure, unchanged.

For each of these “categories”, you can define:

- line type (in some cases, the control authorities require demolished elements to be represented with a different line type)
- pen
- fill type (normally the solid fill type assigned by the programme should be correct)

- pen for the fill hatching (if using a solid fill, this will be the colour of the element)
- pen for the fill background.

The default settings correspond to a “standard” ArchiCAD configuration (in other words, when the fill, line, pen and colour properties have not been changed/customised by the user).

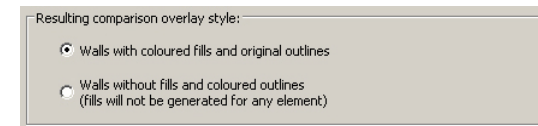
In this case, assignment involves:

- line type: solid line
- fill type: foreground (solid fill)
- colour/pen for the demolition category: yellow (pen 100)
- colour/pen for the new structures category: red (pen 20)
- colour/pen for the unchanged category: black for the outline (pen 1), grey for the hatching (pen 2)

If you are using a custom set of pens, modify the general configuration of ArchiGiallieRossi by assigning the most appropriate properties.

**Note:** as can be seen from the dialog, no custom configuration is provided for the fill used for the demolished/reconstructed category. The fill with diagonal bands generated by ArchiGiallieRossi and added to the range of ArchiCAD fills will always be used.

The last section of the dialog enables the style of the resulting comparison overlay to be customised:



In the default procedure for comparing views, wall type elements are processed with a particular procedure and therefore their “state” is shown by a solid fill (default settings) in the relative colour (demolition, new structure, etc.), while the outline of the elements uses the original pen.

However, certain local authorities require that the comparison overlay does not include any hatching colour and that the state of the elements (the walls in particular) is therefore indicated with the pen defining the outline.

ArchiGiallieRossi enables you to obtain both these results by configuring the style of the resulting comparison overlay. In the **Configure colours/fills/line types** dialog, you can use the two radio buttons to choose the required style of representation.

The first radio button sets walls with coloured hatching to show their “state”, but with outlines still using the original pens.

The second radio button on the other hand sets walls without hatching in which the colour of the outline changes to reflect the state of the element. With this style, no fill will be generated for any of the other elements.

## Help



As for all Cigraph plug-ins, pressing this tool icon displays the ArchiGiallieRossi manual in pdf format.

**Note:** *for this tool to function correctly, Acrobat Reader must be installed on your computer and the relative help document in pdf format must be in the same folder as the plug-in.*

## Appendix

### How can you compare a 2D relief with a 3D ArchiCAD plan?

ArchiGiallieRossi is designed to compare ArchiCAD views based on the virtual model of the building consisting of construction elements (walls, slabs, roofs, etc.).

The comparison is based on element type, in other words walls are compared with walls, slabs with slabs, and so on.

However, you may want to compare two views in which the element types do not correspond, for example, comparing a relief made up of lines and fills (perhaps imported from a dxf) with the design for a building which obviously consists of construction elements (walls, pillars, slabs, etc.).

How can you do this, given that only elements of the same type are compared?

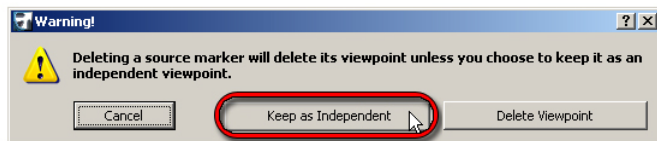
Here is a simple procedure enabling you to compare a plan with 3D elements with a 2D plan:

First step:

The 2D relief must be positioned in an independent worksheet.

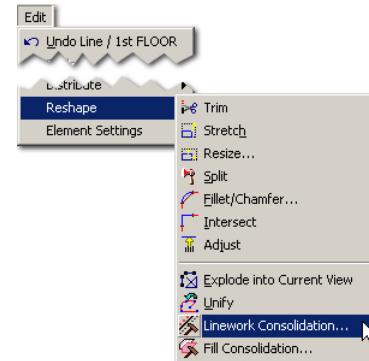
For the ArchiCAD plan, proceed as follows:

1. create a worksheet of the plan
2. view this worksheet (still associated with the relative marker in the plan)
3. go back to the plan, select the worksheet marker and delete it
4. ArchiCAD displays a warning message, asking how you want to proceed with the deletion. Choose to delete the marker and retain the independent viewpoint.



5. now the second worksheet is also independent (in other words, made up of 2D elements only)

6. before proceeding with the comparison, you must consolidate the lines and fills in the two worksheets (not obligatory, but recommended!):



7. finally, generate the two views for the two independent worksheets (making them usable with ArchiGiallieRossi)
8. now compare the two views.