



Impress Guide

Chapter 5
Working with Lines and
Shapes

OpenOffice.org

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[Optional section.]

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Introduction

This chapter describes how to create your own graphics using the drawing tools available in Impress. It focuses on the most commonly used tools and techniques.

Impress also contains a number of advanced drawing functions that are rarely used when creating a presentation and are not fully described in this book. To create more advanced graphic objects, the reader is invited to use OpenOffice.org Draw and then to import the graphic object created there into an Impress slide. See the *Draw Guide* for more details.

The Drawing toolbar

The Drawing toolbar contains the tools used to create rectangles, circles, and other lines and shapes to enhance the design of the presentation. If this toolbar is not showing, select **View > Toolbars > Drawing** from the main menu bar.

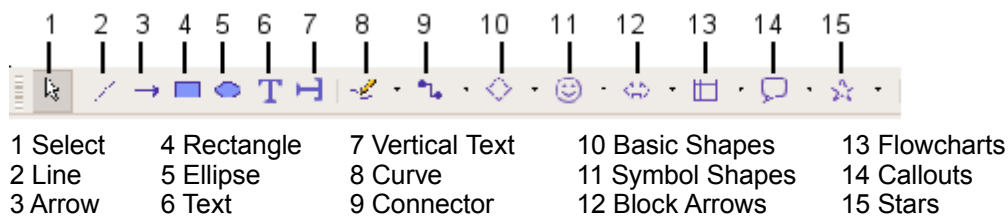


Figure 1: First section of Drawing toolbar with drawing objects tools

The toolbar can be divided into two parts. The first part contains drawing objects, as shown in Figure 1. The tools in this part of the drawing toolbar are:

- **Select**: selects objects.
- **Line**: draws a straight line.
- **Line ends with arrow**: draws a straight line ending with an arrowhead.
- **Rectangle**: draws a rectangle. Press the *Shift* button to draw a square.
- **Ellipse**: draws an ellipse. Press the *Shift* button to draw a circle.
- **Text**: creates a text box with text aligned horizontally.
- **Vertical text**: creates a text box with text aligned vertically. This tool is available only when Asian language support has been enabled in **Tools > Options > Language Settings > Languages**.
- **Curve**: draws a curve. Click the black triangle for more options, shown in Figure 2. The title of the submenu is incorrectly shown as Lines.



Figure 2: Available curve options

- **Connectors:** draws a connector line between two figures. Click the black triangle for additional connectors, shown in Figure 3.



Figure 3: Connectors options

- **Basic Shapes, Symbol Shapes, Block Arrows, Flowcharts, Callouts, Stars:** click the black triangle to open a toolbar showing the available shapes in that category. The default shapes available in Impress are shown in Figure 4. Select the desired shape, then draw the shape as normal. Keep the *Shift* key pressed to obtain a shape where the height and width are equal.

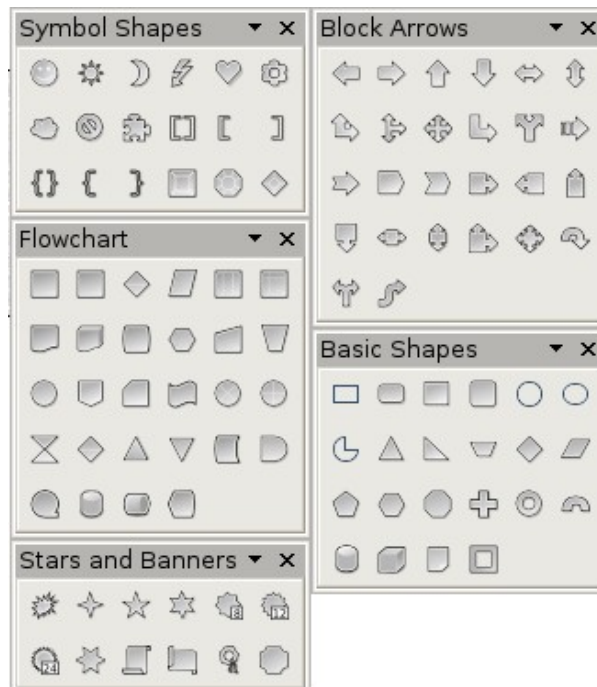


Figure 4: Available shapes for Impress

The second part of the toolbar, shown in Figure 5, contains more generic tools.

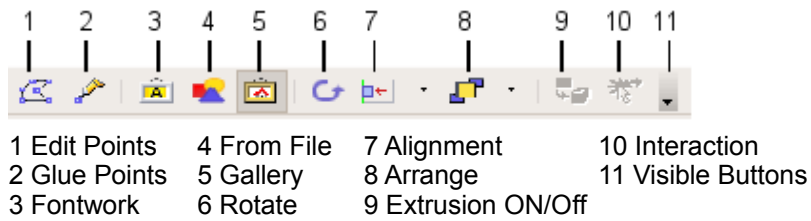


Figure 5: The second section of the drawing toolbar with utility tools

Those tools are:

- **Edit points:** select this tool, then select a shape or a line, to edit the individual points that form the shape or line.
- **Glue points:** select this tool to edit the glue points of a graphic object. Glue points are the positions where connector lines terminate or start. See “Managing glue points” on page 25 for instructions.
- **Fontwork:** opens the Fontworks gallery. See “Using Fontwork” on page 20 for further information.
- **From file:** equivalent to **Insert > Picture > From file** on the main menu. See Chapter 4 for details.
- **Gallery:** opens the gallery. Equivalent to **Tools > Gallery** on the main menu. See Chapter 4 for details.
- **Rotate:** select this tool to rotate an object. See “Rotating graphic objects” in Chapter 4 (Working with Pictures and Other Graphics) for details.
- **Align object:** see “Aligning shapes“ on page 17.
- **Arrange object:** see “Arranging shapes“ on page 16.
- **Extrusion On/Off:** switches 3D effects on or off for the selected object. Clicking this button also opens the 3D settings toolbar. See “Working with 3D shapes” on page 30 for details.
- **Interaction:** opens a dialog where you can specify the interaction between the user and the object. See “Setting up interaction with a shape or image” on page 26.

Creating lines and shapes

To create shapes and lines:

- 1) Select the desired line or shape tool.
- 2) Click and drag to create the object on the slide. See Figure 6.

When drawing a polygon, keep the *Shift* key pressed to restrict the angle between the segments to multiples of 45 degrees. To finish drawing a polygon, double-click on the last part of the segment. If a closed polygon was selected, OOo will color the inside area.

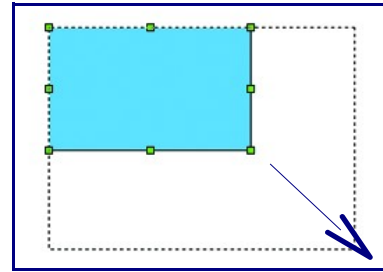


Figure 6: Creating a shape

When drawing certain shapes, one or more yellow dots are displayed along with the blue resizing handles. These dots perform a different function according to the shape they are applied to. With the basic shapes the yellow dot (or dots) are used for the following purposes:

- Rounded rectangle and Rounded square shapes: use the yellow dot to change the size of the curve replacing the corners.
- Circle Pie: use the two yellow dots to change the size of the filled sector.
- Isosceles triangle: move the yellow dot on one vertex to modify the triangle type.
- Trapezoid, Parallelogram, or Octagon: move the yellow dot to change the angle between the sides.
- Cross: use the yellow dot to change the thickness of the four sides.
- Ring: use the yellow dot to change the internal diameter.
- Block arc: use the yellow dot to change both the internal diameter and the size of the filled area.
- Cylinder and Cube: use the yellow dot to change the perspective.
- Folded corner: use the yellow dot to change the size of the corner.
- Frame: use the yellow dot to change the internal rectangle diagonal.

Formatting lines and shapes

Use the **Format** menu to modify lines and shapes.

- 1) Click on the shape or line to select it.
- 2) Click **Format** in the main menu. Some of the options may not be available (grayed out) because of the type of object selected. For example, if the object is a simple line, the **Area** choice will be unavailable because a line does not have an area to fill.
- 3) Select one of the formatting options:
 - *Line* to set the characteristics of the line, including the border of an area.

- *Area* to format the fill, or interior, of an object. This includes color, transparency, and pattern.
- *Position and Size* allows an object to be moved, rotated, and manipulated according to specified measurements.
- *Text* to format the appearance of the text that can be added to any shape or line.

The following sections provide details of the available options for each of these formatting parts.

Formatting lines

The dialog to format the line properties is shown in Figure 7. It contains three pages.

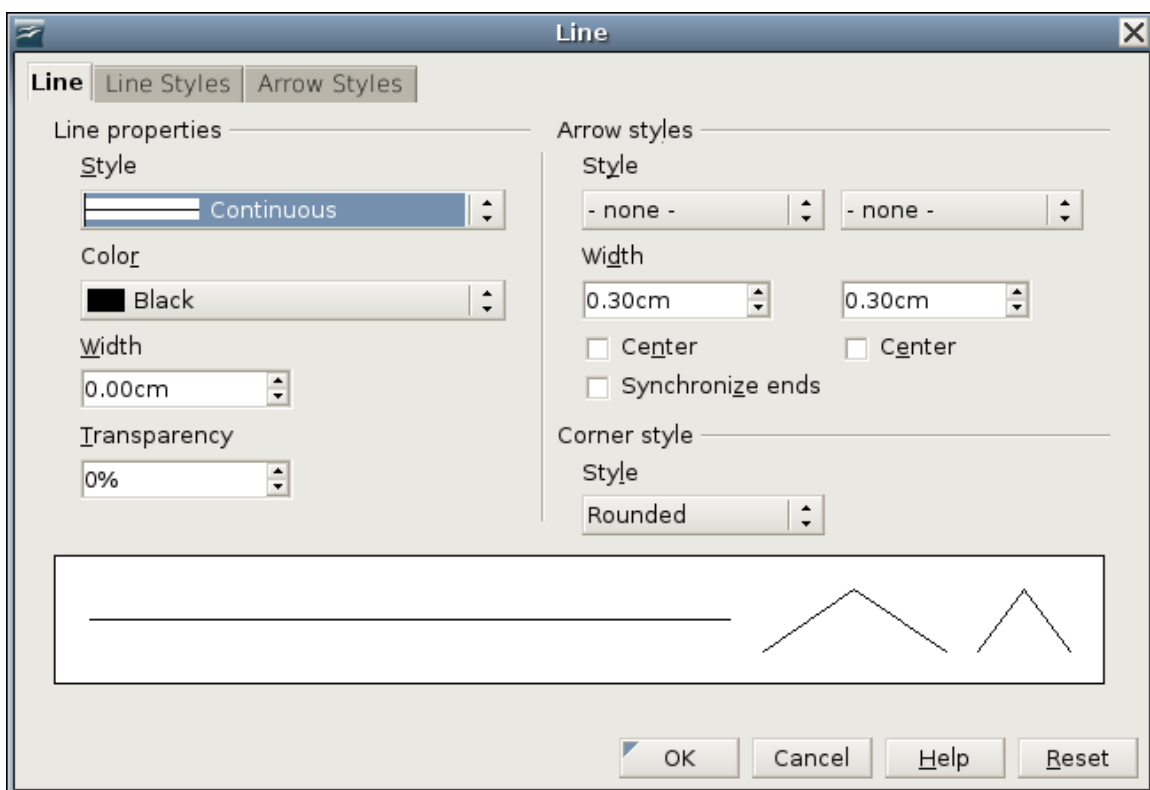


Figure 7: Main line formatting dialog

The *Line* page is further subdivided into four parts handling different aspects of the line.

The *Line Properties* section (left side) is the most important. It includes the following parameters:

- **Line style:** a variety of line styles is available in the drop-down list, but more can be defined if needed (see Appendix B for details on how to create new line styles).
- **Color:** pick among the already defined colors. If a color not in the list is needed, refer to Appendix B to create a new one.
- **Width:** specifies the thickness of the line.

- **Transparency:** sets the transparency value of the line, a useful property when you do not want to hide completely what is under the line.

The *Arrow styles* section of this page is only applicable to line segments; it has no effect on the line that forms the border of a shape or of a polygon. Use this section to set the styles of the two ends of the segment. You can configure independently the two ends, selecting for each of them the arrow shape (**Style** drop-down menu), the **Width**, and the termination style (**Center** checkbox). Selecting the **Center** checkbox moves the center of the arrowheads to the end point of the line. If the two ends should be identical, select the **Synchronize ends** checkbox. To create new arrowheads, use the *Arrow styles* page, as described in Appendix B.

Use the *Corner style* section of this page to choose how the connection between two segments should look. There are four available options in the drop-down menu.

The bottom part of the page shows a preview of the applied style and a preview of two corners so that the corner style choice can be quickly evaluated. To appreciate the difference between corner styles, choose a thick line style and observe how the preview changes.

Formatting areas

Impress offers many different options for formatting the fill of an area.

- 1) Start by selecting the object to which the formatting will be applied.
- 2) When the resizing handles appear, select **Format > Area** from the menu bar. The dialog shown in Figure 8 is displayed.

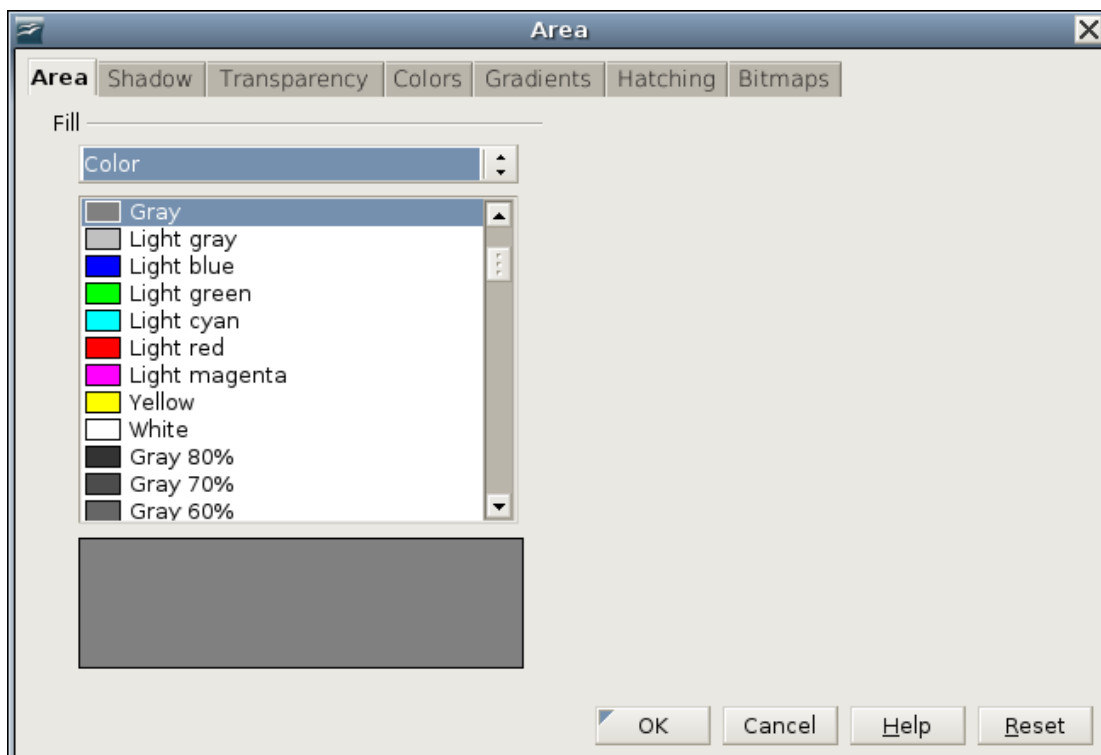


Figure 8: Area page of the area formatting dialog

- 3) Select the desired type of fill from the drop-down list. The Area page changes to display the choices available for that fill style, as described on the following pages.
- 4) Select the required fill and its parameters, and then click **OK** to close the dialog and apply your selection.

Picking the type of fill from the four choices (None, Color, Gradient, Hatching, and Bitmap) modifies the entries in the list below and makes some new options appear in the Area tab. The list is populated with the default choices for the selected fill type. If none of the choices is satisfactory, you can fully customize the fill by using the tab with the corresponding name in the same dialog. Appendix B describes how to create new fills.

Colors

For color fills, select one from the list, as shown in Figure 8.

Gradients

A gradient fill provides a smooth transition from one color to another. The transition pattern may vary from a simple linear transition to a more complex radial transition.

If the predefined gradients are not satisfactory, you can create a new gradient or modify an existing one. See Appendix B.

Select *Gradient* in the drop-down list on the *Area* page and pick the gradient from the list (see Figure 9). To manually input the number of steps (increments) that should be applied, deselect the **Automatic** checkbox and enter the number of steps required.

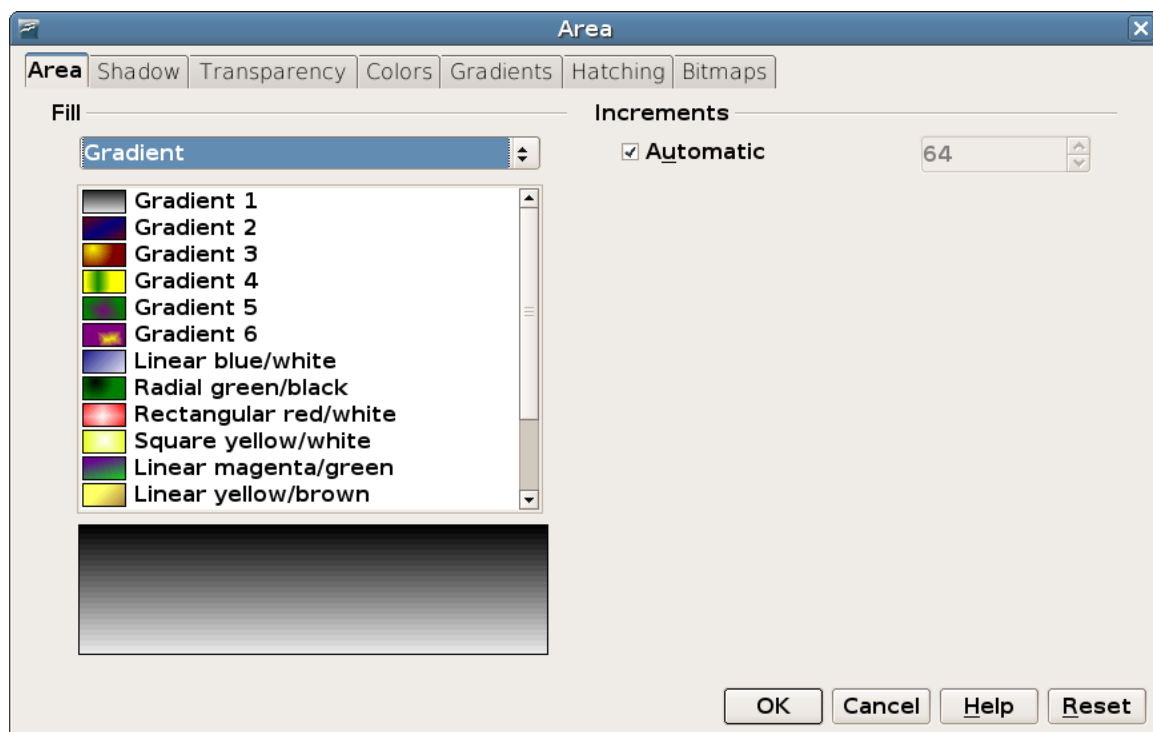


Figure 9: Selecting a gradient fill

Hatching

A hatching fill is a pattern of lines that is repeated throughout the area.

To apply a hatching pattern to an area, go to the *Area* page, select *Hatching* from the drop-down list and then select the desired hatching from the list (Figure 10). To apply a background color to the hatching pattern, selecting the **Background color** checkbox and choose a color from the drop-down list.

As for gradients and colors, if the predefined patterns are not satisfactory, you can create a new pattern or modify a predefined one. See Appendix B.

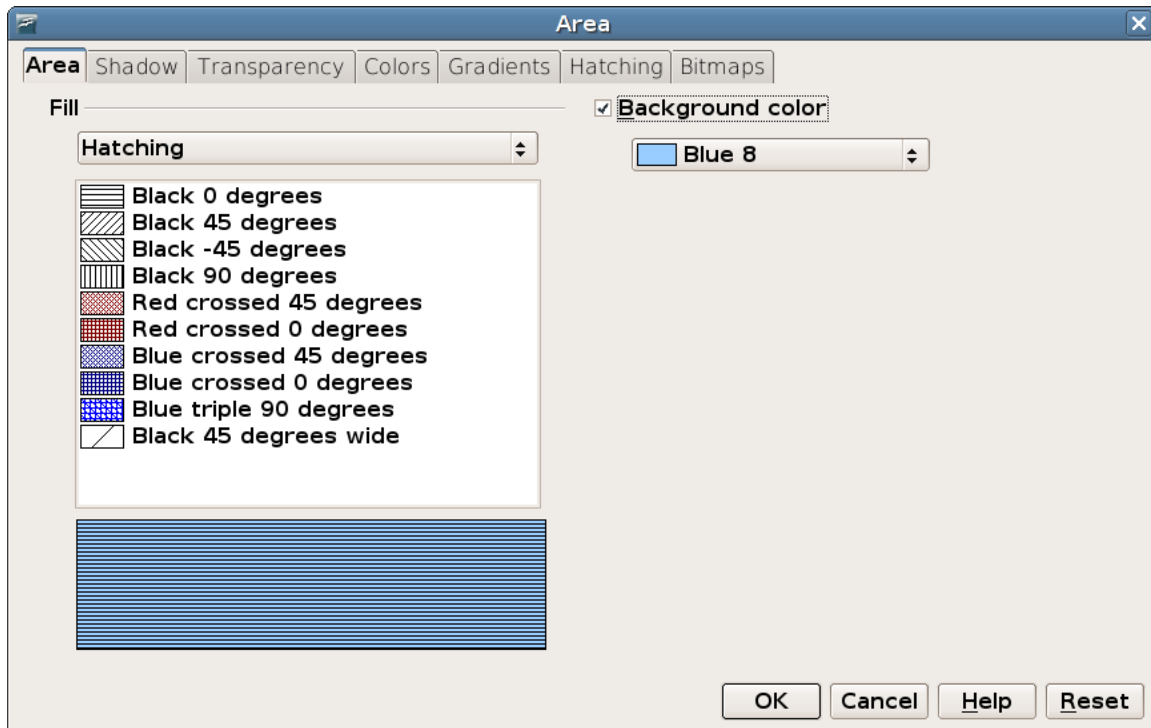


Figure 10: Selecting a hatching fill pattern

Bitmaps

The last type of fill for an area is the bitmap fill.

On the *Area* page, chose *Bitmap* from the drop-down list. Select from the list of bitmaps the one to be used to fill the area. Note that any imported bitmaps should be available in the list.

Set the size, position and offset parameters (as applicable) in the right hand side of the tab, and then click **OK** to close the dialog.

As Figure 11 shows, when using a bitmap fill there are quite a number of parameters to be configured. These are described in Table 1.

As for the other types of fill, OOo comes with a number of predefined bitmaps, but you can also add new ones or to create your own pattern. See Appendix B.

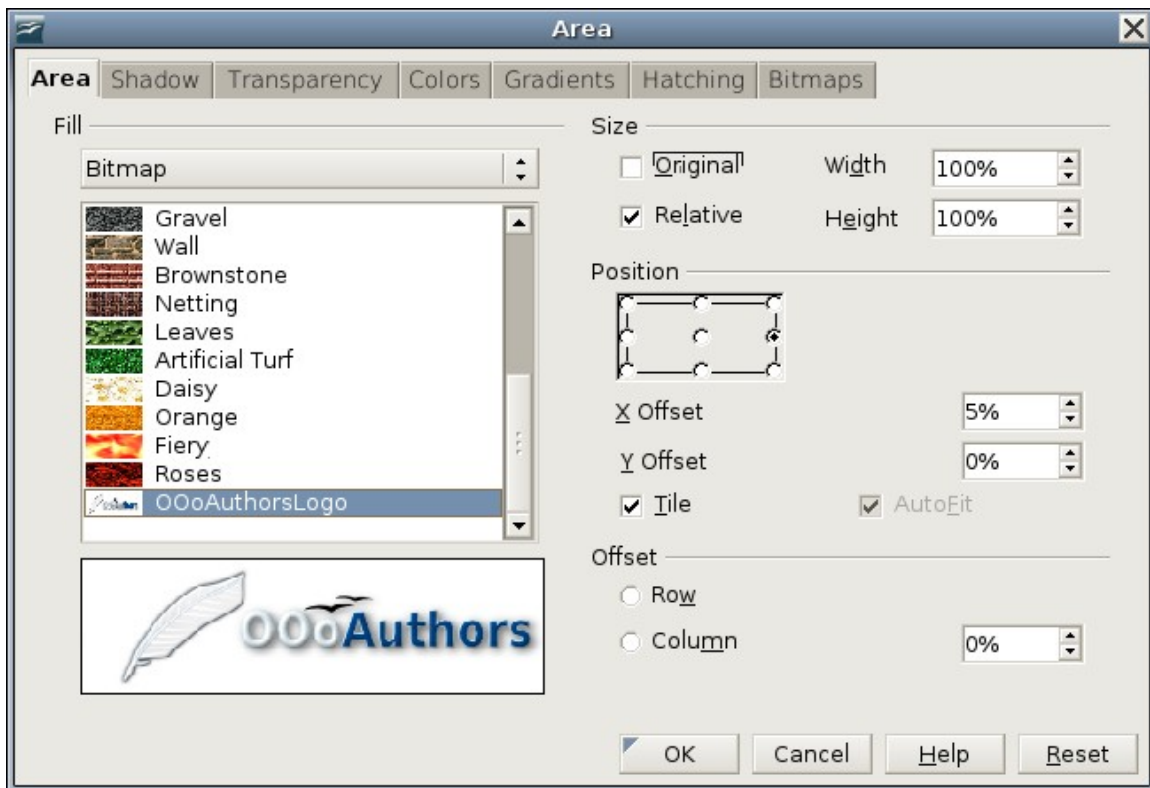


Figure 11: Advanced formatting for bitmap fill

Table 1: Bitmap fill properties

Property	Meaning
Size – Original	Select this box to retain the original size of the bitmap.
Size – Relative	To rescale the object deselect the Original checkbox and select this one. The Width and Height edit boxes are enabled.
Size – Width	When Relative is selected 100% means that the bitmap original width will be resized to occupy the whole fill area width, 50% means that the width of the bitmap will be half that of the fill area.
Size – Height	When Relative is selected 100% means that the bitmap original height will be resized to occupy the whole fill area height, 50% means that the height of the bitmap will be half that of the fill area.
Position – Anchor Map	Select from the map the place of the area where the bitmap should be anchored to.
Position – X offset	When tiling is enabled, enter in this box the offset for the width of the bitmap in percentage values. 50% offset means that at the anchor point of the bitmap OOo will place the middle part of the bitmap and start tiling from there.

Property	Meaning
Position – Y offset	This will have the same effect of the X offset, but will work on the height of the bitmap.
Position – Tile	When this checkbox is selected the bitmap will be tiled to fill the area. The size of the bitmap used for the tiling is determined by the Size settings.
Position – Autofit	Stretches the bitmap to fill the whole area. Selecting this checkbox disables all the size settings.
Offset – Row	If tiling is enabled offsets the rows of tiled bitmaps by the percentage entered in the box so that two subsequent rows are not aligned.
Offset – Column	If tiling is enabled, offsets the columns of tiled bitmaps by the percentae entered in the box so that two subsequent columns of bitmaps are not aligned.

The way some of these parameters work is difficult to describe; the best way to understand them is to use them. Some examples of bitmap fills are given in Figure 12 along with the parameters used.

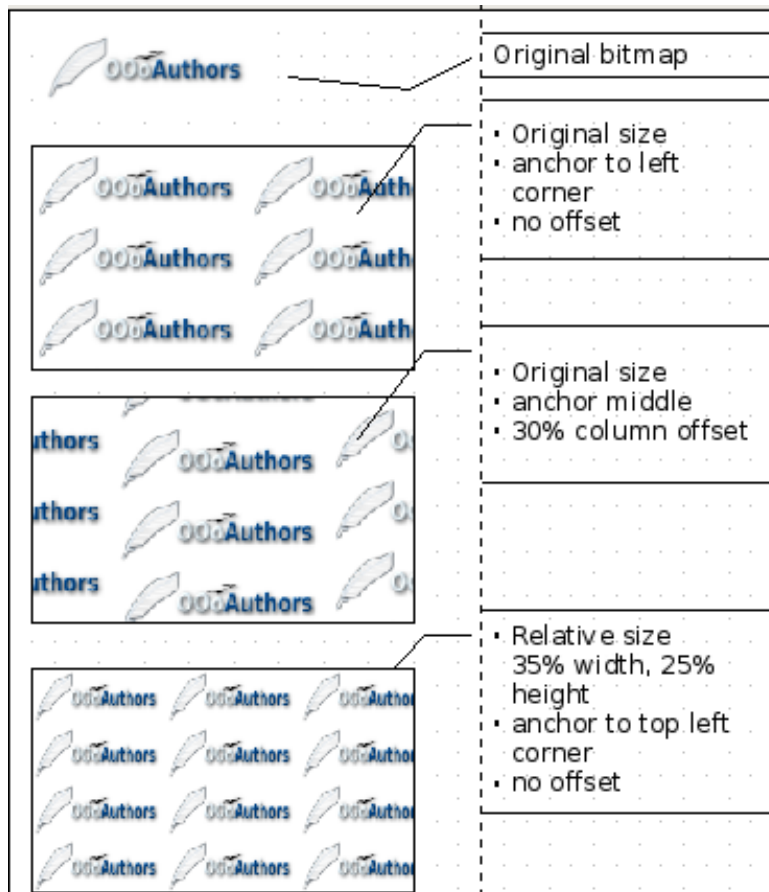


Figure 12: Some examples of bitmap fill

Formatting shadows

Shadowing can be applied to both lines and areas. To apply a shadow to an area, first select the object to which shadowing should be applied, then press **Format > Area**.

Shadows can also be applied to lines, but it is not very obvious how to do it. One way is to click the **Shadow** icon on the Line and Filling toolbar (see the last tool in Figure 13). The other way is to apply a style to the line that uses a shadow (see “Using Graphic styles to format graphics” on page 19 for additional information on using styles).

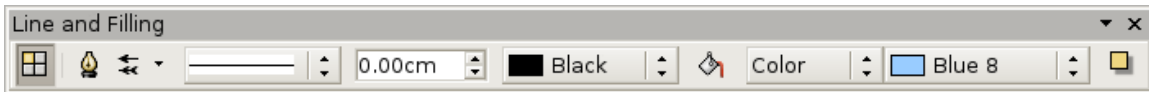


Figure 13: The Line and Filling toolbar allows quick access to many common formatting tools

Using the first method, you cannot customize the shadow; it is applied according to the default settings. The second method offers full flexibility to configure the shadow properties. If the Line and Filling toolbar is not shown when selecting an object, open it using **View > Toolbars** on the menu bar.

The dialog to customize a shadow is shown in Figure 14.

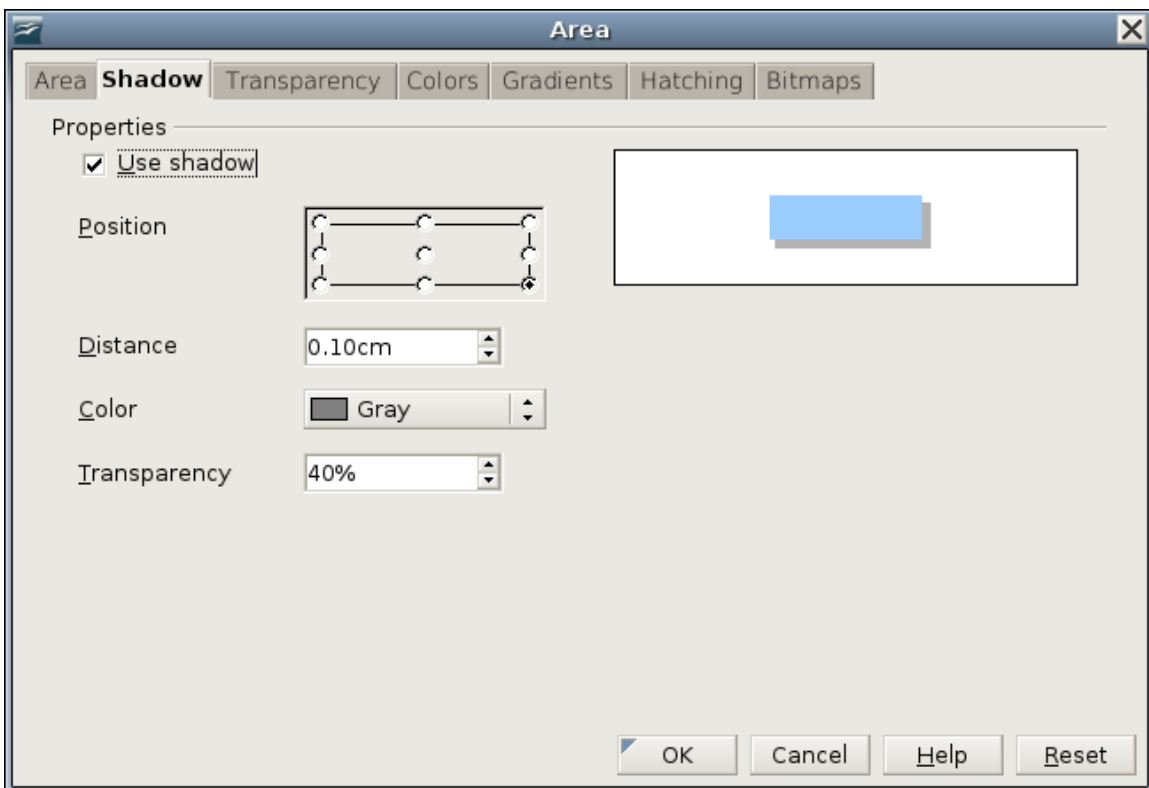


Figure 14: Dialog for customizing the shadowing of graphic objects

When the **Use shadow** checkbox is selected, the following parameters can be set:

- **Position:** the selected point in the mini map determines the direction in which the shadow is cast.

- **Distance:** determines the distance between the object and the shadow.
- **Color:** sets the color of the shadow.
- **Transparency:** determines the amount of transparency for the shadow.

Tip By setting the transparency value above 0%, the objects below the shadow are not completely hidden by the shadow. This produces a pleasant visual effect, as shown in Figure 15.

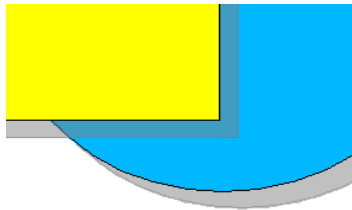


Figure 15: Shadow with 50% transparency

Transparency formatting

Transparency is applicable to lines, areas, and shadows. To apply transparency to lines, refer to “Formatting lines” on page 5; for shadows, refer to “Formatting shadows” on page 11.

To apply transparency to areas, select **Format > Area** and then go to the Transparency tab shown in Figure 16.

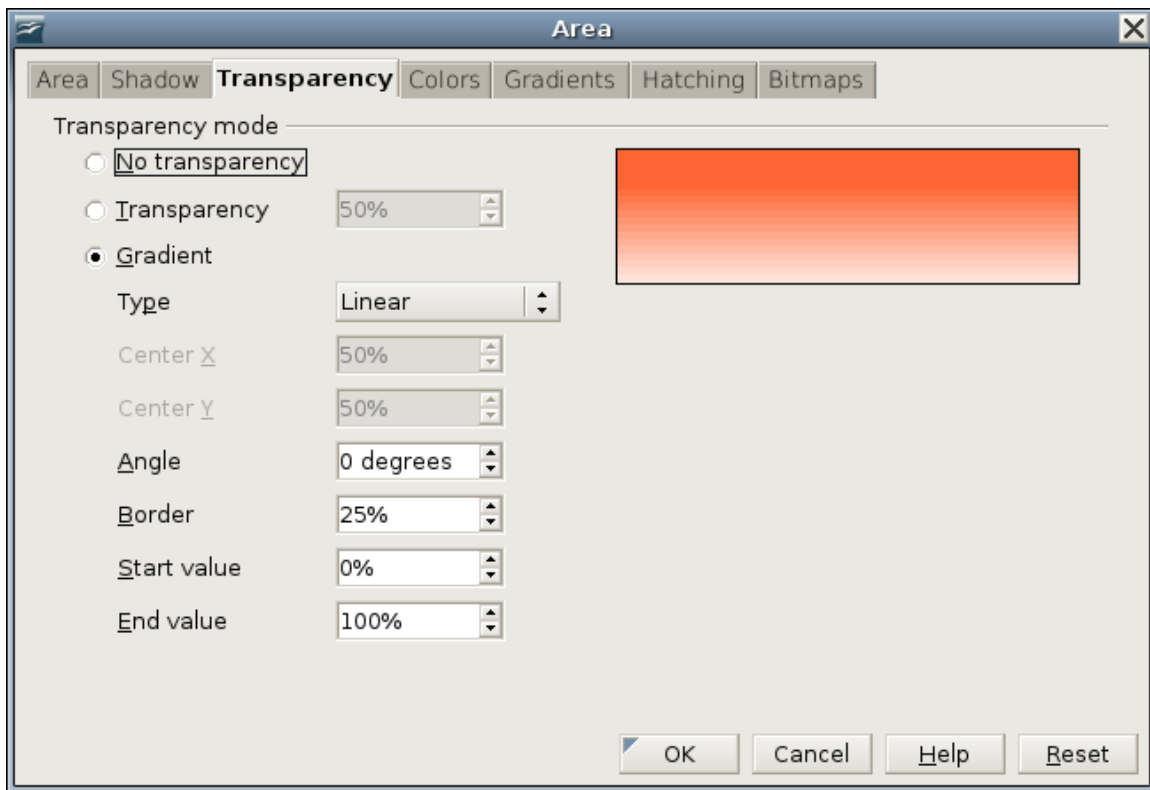


Figure 16: Setting the object transparency

There are two types of transparency: one which is uniformly applied to all the area of the object, and the gradient one. To obtain an uniform transparency select the **Transparency** radio button and then select the percentage of transparency required. For a gradient transparency so that the area becomes gradually transparent, select the **Gradient** radio button and then set the parameters of the gradient:

- **Type:** pick between Linear, Axial, Radial, Ellipsoid, Quadratic or Square.
- **Center X, Y:** for some types of gradient, you can specify the position of the center in percentage points.
- **Angle:** the angle of the gradient, applicable to all but the radial type of gradients.
- **Border:** the percentage of the shape (measured from the edge) that is not subject to the gradient settings.
- **Start value:** the transparency value of the start point of the gradient: 0% is fully opaque, 100% means fully transparent.
- **End value:** the transparency value of the end point of the gradient: 0% is fully opaque, 100% fully transparent.

Formatting text

Impress provides two separate dialogs related to text formatting.

- To modify the formatting such as font, font effects and so on, select the text in the shape and then go to **Format > Character**. This is covered in Chapter 3.
- To determine how the text which is added to a line or a shape behaves, use the settings on the Text dialog, as described in this section.

Before formatting text, add it to the object (a shape or a line):

- 1) Select the object to which text will be added.
- 2) With the green (or blue) resizing handles showing, double-click on the object and wait for the cursor to become an I-beam or just start typing.
- 3) Type the text. When finished, click somewhere outside the object or press *Esc*.

To format the text in a shape:

- 1) Select the object to which text was added.
- 2) Select **Format > Text** or right-click on the shape and select **Text** from the pop-up menu. The dialog of Figure 17 is displayed.

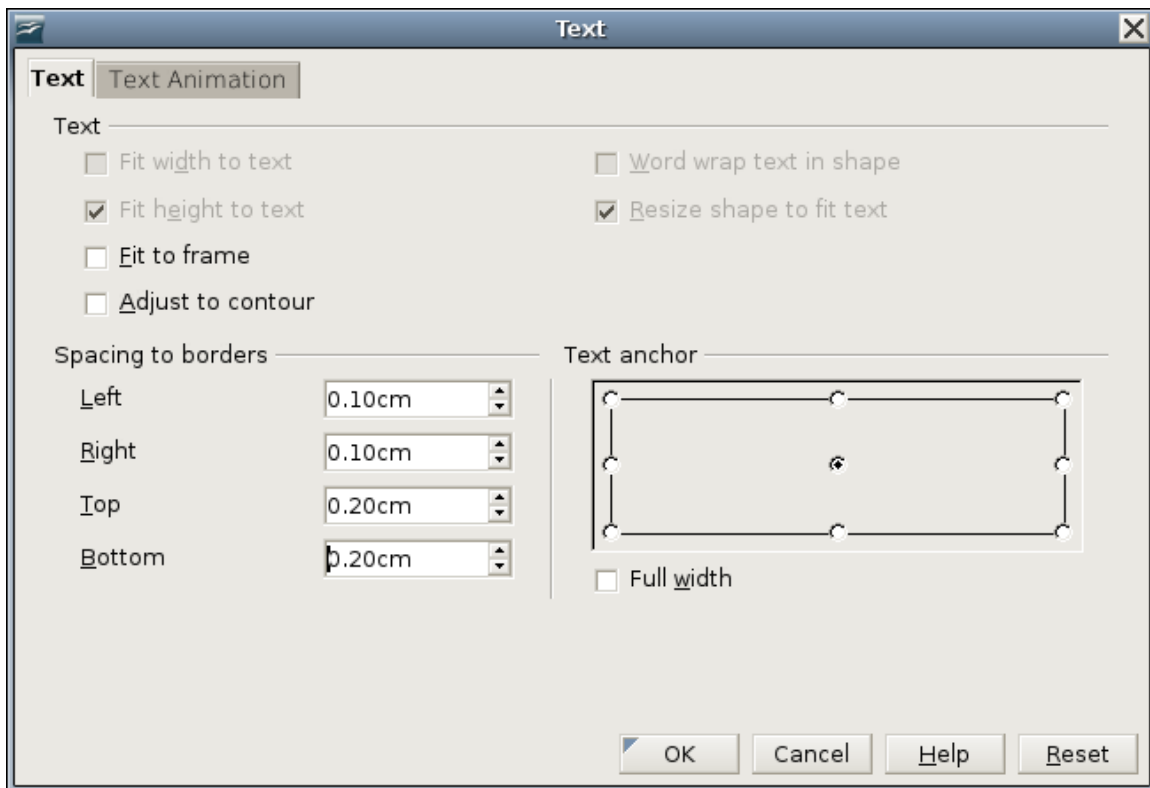


Figure 17: Main dialog to set the text properties

The top section of the dialog offers several options in the form of checkboxes. Some of the checkboxes will be grayed out, depending on the object to which the text will be attached.

- Select **Fit width to text** to expand the width of the shape or line if the text is longer than it.
- Select **Word wrap text in shape** to automatically start a new line when the edge of the shape is reached.
- Select **Fit height to text** to expand the object height whenever it is smaller than the text (set by default for lines).
- Select **Resize shape to fit text** to expand a custom shape when the text inserted in the shape is too large.
- Select **Fit to frame** to expand the text so that it fills all the available space.
- Select **Adjust to contour** to make the text follow a curved line.

In the *Spacing to borders* section, specify the amount of space to be left between the border of the shape or line and the text; this is similar to the settings for indentation and spacing for paragraphs.

The text anchor grid is used to decide where to anchor the text. The **Full width** checkbox determines if the anchoring should be performed to the full width of the shape.

Text animation

Use this tab to specify special effects applied to the text. Choose between four options in the list and where applicable the direction of the effect picking one of the four arrow buttons to the right. The available effects are:

- **Blink:** the text will blink on the screen.
- **Scroll through:** the text will move into the shape and then out following the chosen direction.
- **Scroll back and forth:** the text will not exit the shape border and move first in the chosen direction.
- **Scroll in:** the text will scroll in towards the given direction starting from the edge of the shape.

By default no animation is applied.

The other properties that can be set are:

- **Start inside** checkbox: when set the animation will start from inside the shape.
- **Text visible when editing** checkbox: set this box to see the text while editing.
- **Animation cycles:** includes three further options to set the frequency of the animation, the increments between two positions of the animation and finally the delay before the animation starts.

To see some of the animations in action, it is necessary to start the presentation. Press *F9* or select **Slide Show > Slide Show** from the main menu. To return to the edit mode press the *Esc* key.

Formatting connectors

Connectors are lines that join two shapes. Connectors stem from a **glue point** of the shape. Refer to “Managing glue points” on page 25 for instructions.

For more about connectors and glue points, see the *Draw Guide*.

Use the dialog shown in Figure 18 to set the style of the connectors.

In the Connector dialog, set the type of connectors choosing between Line connector, Straight connector and Curved connector. Whenever multiple connectors overlap, use the Line skew section of the dialog to distance the lines. It is possible to customize the distance between 4 different lines.

In the *Line spacing* section of the dialog, set the space at the beginning and at the end of the connector, both horizontally and vertically.

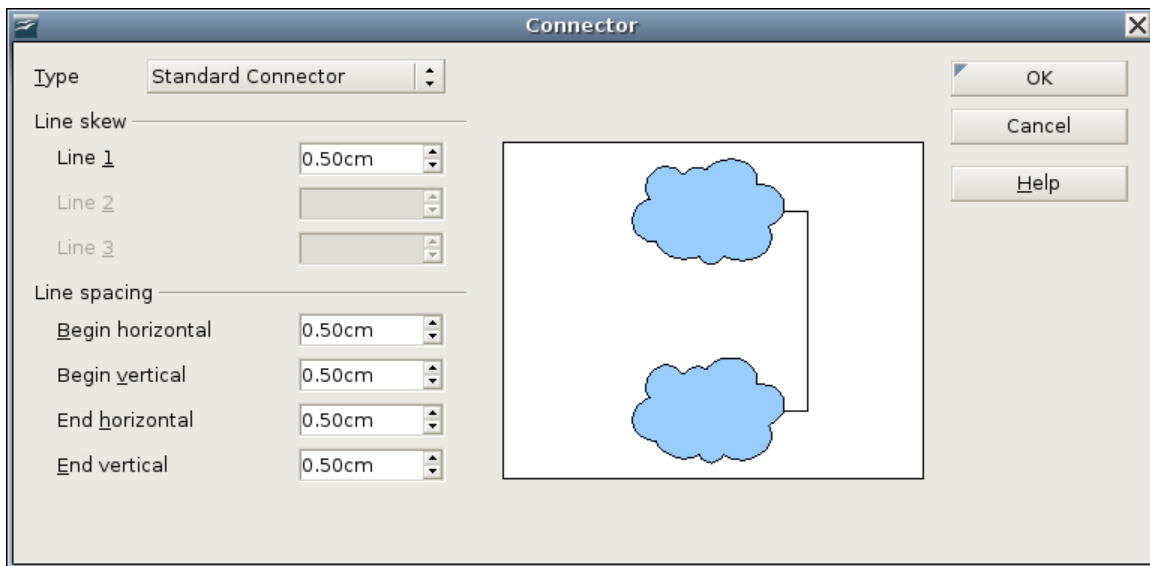


Figure 18: Setting up the connectors properties

Arranging shapes

Arrange determines the stacking order of the selected object. Impress organizes objects in a stack so that the objects on a high level of the stack cover the objects on lower levels if overlapping occurs. To modify the position of an object in the stack click the small triangle on the side of the tool to open the extended toolbar of Figure 19 where seven options are available. The same arrange options described below are available from the context menu.



Figure 19: The extended Arrange toolbar

The first four work on a single object and they are:

- **Bring to front:** the selected object is moved on top of any other object.
- **Bring forward:** the selected object is moved one level up in the stack.
- **Send backwards:** the selected object is moved one level down in the stack.
- **Send to back:** the selected object is given the lowest position in the stack.

The other three tools work on the relative positions of two objects and they are:

- **In front of object:** brings the selected object in front of the second selected object.
- **Behind object:** brings the selected object behind the second selected object.
- **Reverse:** swaps the stacking order of two selected objects.

To use the **In front of object** and **Behind object** tools:

- 1) Select the first object by clicking on it.
- 2) When the green handles show, select the desired arrange action.
- 3) The mouse pointer changes to a pointing hand. Click on the second object.

Aligning shapes

Use the Alignment tools to adjust the relative position of a graphic object compared to another object. Clicking on the Alignment icon in the Drawing toolbar opens the extended toolbar of Figure 20. The same alignment options are available from the right-click menu.



Figure 20: The align extended toolbar

The toolbar has six icons. The first three determine the horizontal alignment of the selected objects (Left, Center, Right); the other three determine the vertical alignment of the selected objects (Top, Middle, Bottom). If only one object is selected, it is aligned to the page, however when in a group, a single object is aligned to the edge of the group selection.

Flipping shapes

To flip an object or group, right-click on it and select either **Flip > Vertically** or **Flip > Horizontally**. The object will be flipped around an imaginary axis (horizontal and vertical respectively) passing through the center of the object, or group.

Converting an object to a different type

This is an advanced menu that allows to transform an object into a different type.

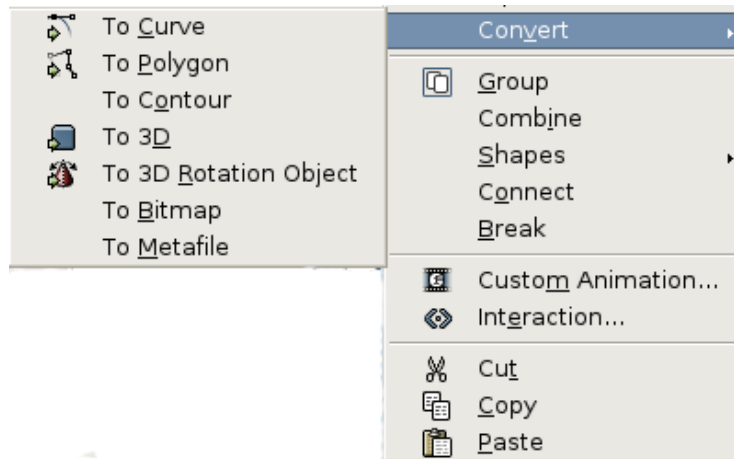


Figure 21: The convert options in the context menu- redo with submenu on right, next to little arrow by Convert

Right-click on the object and select the Convert menu. The menu of Figure 21 will open allowing you to select one of the following options:

- **To Curve:** converts the selected object to a Bézier curve.
- **To Polygon:** converts the selected object to a polygon. After the conversion choose Edit Points to edit the shape.
- **To Contour:** converts the selected object to a polygon, or a group of polygons. If the conversion creates a group of polygons (for example, when you convert a text object), then press *F3* to enter the group before you can select an individual polygon.
- **Convert to 3D:** converts the selected object to a three-dimensional (3D) object.
- **Convert to 3D Rotation Object:** creates a three-dimensional shape by rotating the selected object around its vertical axis.
- **To Bitmap:** converts the selected object to a bitmap.
- **To metafile:** converts the selected object to Windows Metafile Format (WMF), containing both bitmap and vector graphic data.

Grouping shapes together

It is often convenient to group shapes together so that they are treated as a single shape by Impress. A group of shapes can be formatted as if it was a single shape, moved, rotated, deleted and so on. To group shapes together, do as follows:

- 1) Select the shapes to be grouped. To do this, use the selection tool on the drawing toolbar and draw a rectangle around the shapes to be grouped, or click on each shape to be added to the group while pressing the *Shift* key.

- 2) When the green resizing handles show, select **Format > Group > Group** or press *Control+Shift+G* on the keyboard.

Once the group is defined, click on any of the shapes in the group to select the group. To edit only the elements of the group, press *F3* when the group is selected or select **Format > Group > Enter group** from the menu bar. Notice that the elements not part of the group are grayed out and that only the shapes belonging to the group can be edited. Use this functionality when you need to apply a particular format to a single member of the group. To exit from group mode, press *Control+F3* or select **Format > Group > Exit group** from the menu bar.

For more about working with grouped objects, see Chapter 6, “Combining Multiple Objects” in the *Draw Guide*.

To ungroup objects:

- 1) Select the group of shapes.
- 2) When the green resizing handles show, select **Edit > Format > Group > Ungroup** from the menu bar.

Tip If you use the grouping and ungrouping often, why not adding them to one of the toolbars shown by default so that the commands are readily available? To do so, you will need to customize the selected toolbar. See Chapter xx.

Using Graphic styles to format graphics

To apply the same formatting to a large number of objects, the best approach is to use styles to set the formatting attributes. If a style is modified (for example, by changing the area transparency), the changes are automatically applied to all the graphics with that style. Using the inheritance properties of styles also achieves professional results in a short time. For example, if multiple lines change in color but are otherwise identically formatted, the best way to proceed is to define a generic style for the line and a number of hierarchically dependent styles which only differ in the line color attribute. If later you need to change the arrowhead style or the thickness of the lines, it is sufficient to change the parent style and all the other styles will change accordingly.

To create a new style, select all the attributes of the graphic objects to which the style will be applied. As shown in Figure 22, the style dialog consists of 15 pages.

- The Organizer page, which contains a summary of the style and its hierarchical position, is discussed in Chapter 2.
- The Font, Font Effects, Indents & Spacing, Alignment, Tabs and Asian typography pages, which set the properties of the text, are discussed in detail in Chapter 3.
- The Dimensioning page is normally not used in presentations. For further details refer to the *Draw Guide*.

- The remaining pages (Text, Text animation, Connector, Line, Area, Shadowing, and Transparency) are the same as the corresponding pages on the Line, Area, and Text dialogs used for manual formatting, discussed earlier in this chapter.

To apply a style, select the object (or objects) and click on the style from the Styles and Formatting window. If the window is not showing, press *F11*, or click the Styles and Formatting icon at the left-hand end of the formatting bar, or select **Format > Styles and Formatting** from the menu bar. Press *F11* again when the dialog is not needed, to maximize the workspace area.

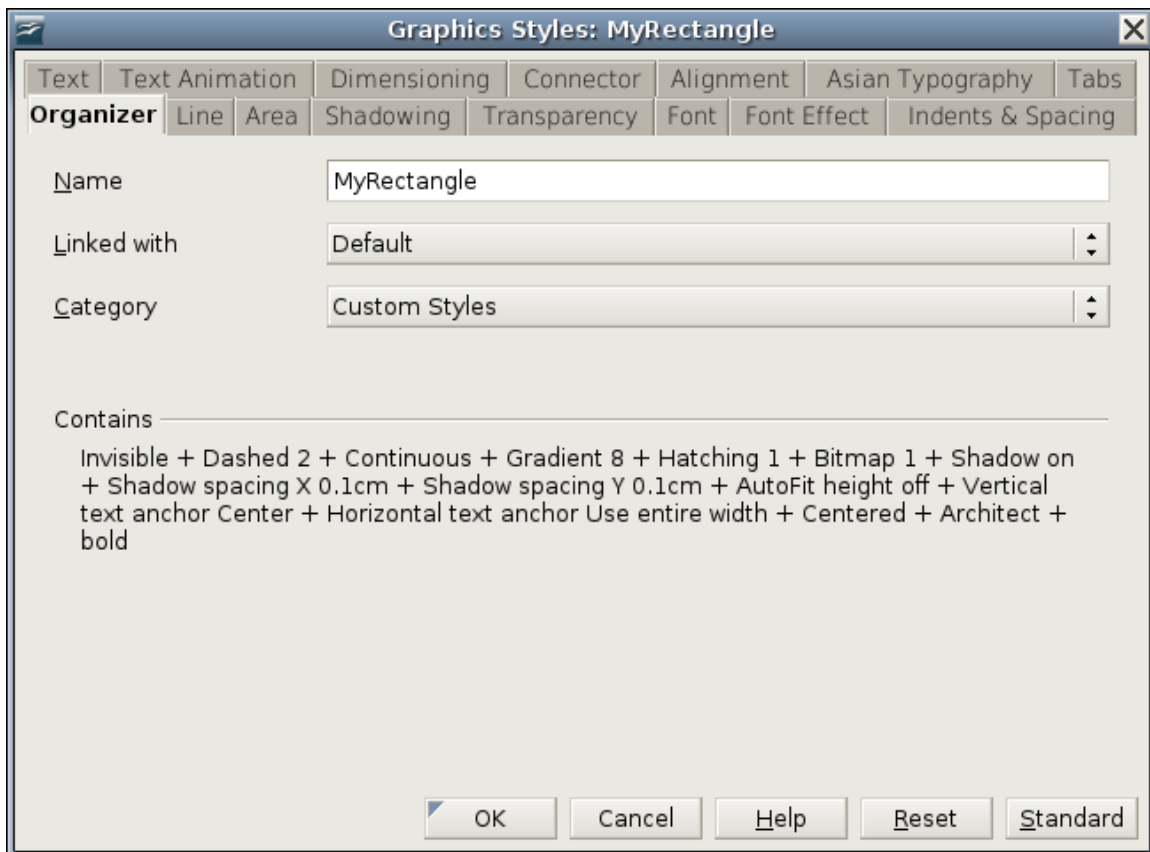



Figure 22: The dialog for defining a custom graphic style

Using Fontwork

Use Fontwork to obtain special text effects. For more about this topic, see Chapter 15, “Using Fontwork” in the *Getting Started* book.

To start using Fontwork:

- 1) Open the Fontwork Gallery by clicking the  icon on the Drawing toolbar (see Figure 5) or on the Fontwork toolbar (see Figure 25). If the Drawing toolbar is not showing, you can go directly to the Fontwork toolbar by selecting **View > Toolbars > Fontwork** from the main menu bar.

- 2) Select from the Fontwork Gallery (Figure 23) the preferred style and click **OK**. You can modify it later, so pick one providing an effect similar to the desired one. The text *Fontwork* in the selected style appears on the slide (Figure 24).

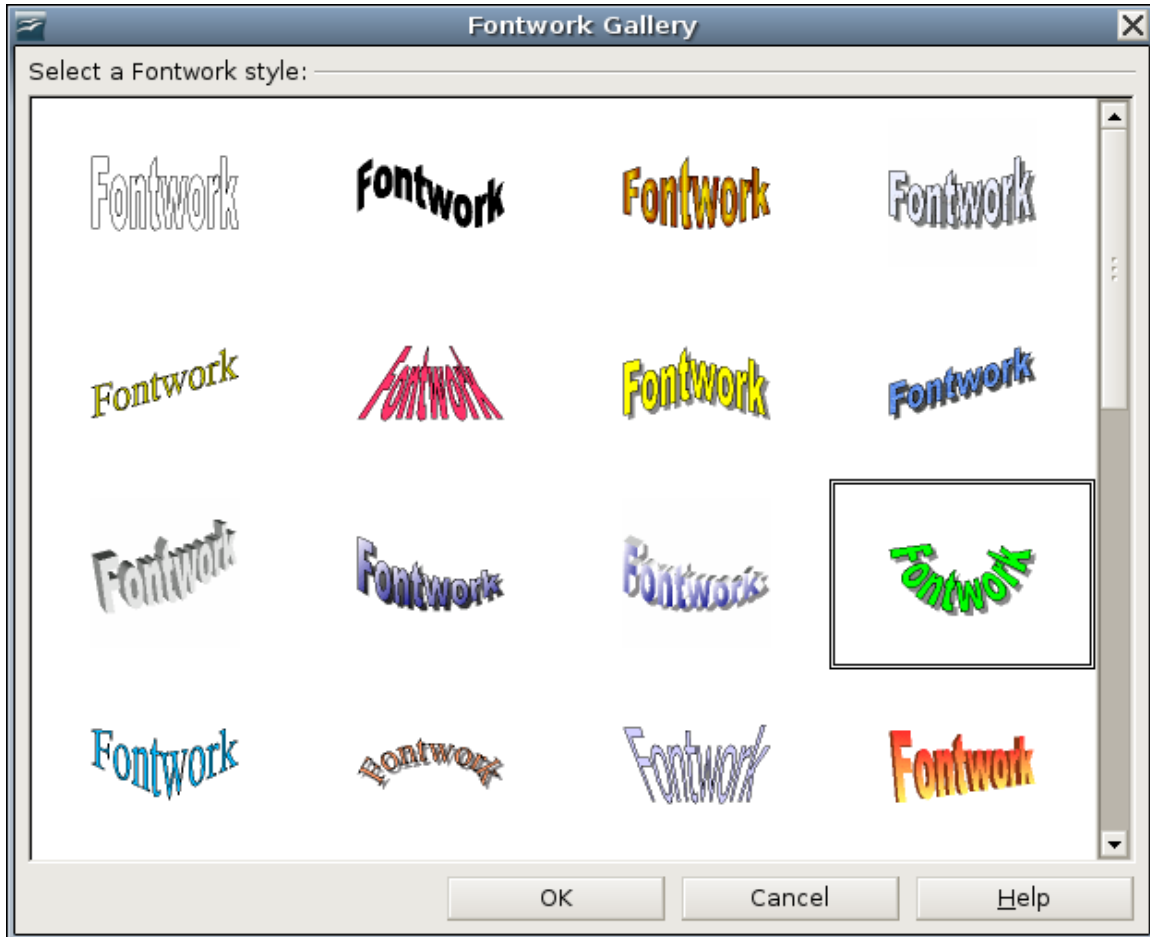


Figure 23: The Fontwork gallery

- 3) Double-click the object to edit the Fontwork text. Type your own text in place of the black *Fontwork* that appears over the object (Figure 24).



Figure 24. Editing Fontwork text

- 4) Press the *Esc* key or click outside the area with the blue resizing handles to exit.

Now that the Fontwork object is created, you can edit some of its attributes. To do this, you can use the Fontwork toolbar or other options as described in the next section.

Using the Fontwork toolbar

Make sure that the Fontwork toolbar, shown in Figure 25, is visible on the workspace. If not, select **View > Toolbars > Fontwork** from the main menu bar.

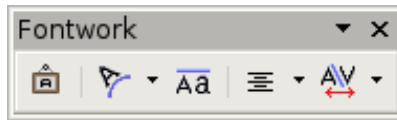


Figure 25: The Fontwork toolbar

In addition to the Fontwork Gallery icon, this toolbar contains the following icons:



Fontwork shape: to change the shape of the selected object, choose a shape from the extended toolbar (Figure 26).

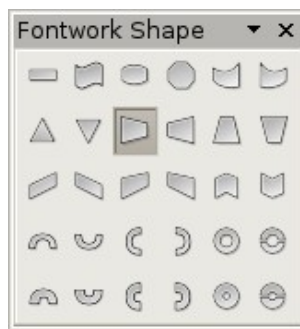


Figure 26: The extended shapes toolbar



Fontwork Same Letter Heights: Changes the height of characters in the object. Toggles between normal height (some characters taller than others, for example capital letters, d, h, l and others) and all letters the same height. See Figure 27.



Figure 27. Left: normal letters; right: same letter heights



Fontwork Alignment: specify the alignment of the text within the frame from the choices available in Figure 28. The effects of the text alignment can only be appreciated if the text spans over two or more lines. In the Stretch Justify mode all the lines are filled completely.

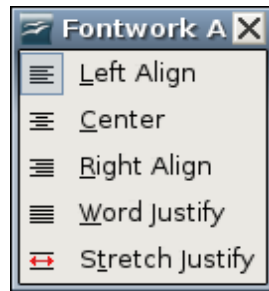


Figure 28: The extended alignment toolbar



Fontwork Character Spacing: select the desired spacing (Figure 29) and whether kerning pairs should be used. For custom spacing, input a percentage value: 100% is normal spacing; less than 100% is tight spacing; more than 100% is expanded spacing.

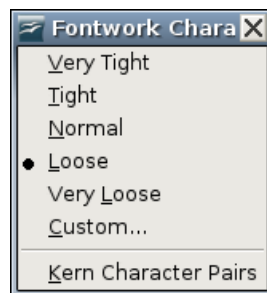


Figure 29: The extended character spacing toolbar

Modifying Fontwork text as a shape

It is possible to treat Fontwork text as a shape and therefore to apply to it all the formatting that has been described in this chapter. Assign line properties only to Fontwork which does not have a 3D effect, otherwise the changes will not be visible.

Tip Change the Fontwork color quickly using the Area fill color swatch on the Line and Filling toolbar.

In the same way as it is possible to modify the angles of Trapezoids and Parallelogram basic shape by moving the yellow dot that is displayed along with the blue resizing handles, it is possible to modify the shape of some of the Fontwork.

Alignment using the grid and snap guides

The section “Aligning shapes” on page 17 discussed the alignment of objects relative to each other or to the page border. However, sometimes it is important to align objects to specific points of the page or to make sure that objects that appear on multiple slides are placed in exactly the same position. For this purpose Impress provides two mechanisms: the **Grid** and the **Snap Guides** (also called **Snap Lines**).

Using the grid

Options for the grid are available in the menu that opens by right-clicking on an empty part of the page in Normal view and choosing **Grid** or by selecting **View > Grid** from the menu bar. In both cases a submenu with three options opens:

- **Visible Grid**: displays the grid.
- **Snap to Grid**: the anchor points of an object will always be placed on a grid when the object is moved or resized.
- **Grid to Front**: displays the grid in the foreground.

To set up the grid spacing and snapping options, choose **Tools > Options > OpenOffice.org Impress > Grid** from the menu bar.

Using snap guides

Options for the guides are available in the menu that opens by clicking on an empty part of the page in Normal view and choosing **Snap Lines** or by selecting **View > Guides** from the menu bar. A submenu with three options opens:

- **Visible Guides (Snap Lines Visible)**: the guides are shown on the slide.
- **Snap to Guides (Snap to Snap Lines)**: the anchor points of the objects snap to the guides when the object is moved or resized.
- **Guides to Front (Snap Lines to Front)**: the guides are brought to the foreground and cover the objects.

Note The main menu uses the term *Guides*, but the pop-up menu refers to *Snap Lines*.

To create a new Guide:

- 1) Right-click on an empty part of the work area and select **Insert Snap Point/Line** from the pop-up menu.
- 2) In the dialog that appears, specify the type (Point, Vertical line, or Horizontal line).
- 3) Depending on the choice made, the two edit fields *X* and *Y* become active; enter the position of the Guide.
- 4) Click **OK** to close the dialog.

Tip When positioning the Snap Guides, it is useful to display the rulers. To do so, select **View > Rulers**.

Tip Drag a Snap Guide directly onto the slide by clicking on the ruler and then dragging onto the slide.

To edit a Guide:

- 1) Right-click next to or on the guide to be edited.

- 2) Select **Edit Snap line** from the pop-up menu.
- 3) Enter the new value (or values) and click **OK**.

To delete a Guide:

- 1) Right-click next or on the guide to be deleted.
- 2) Choose **Delete Snap line** from the pop-up menu.

Figure 30 show the three types of guides, the grid on a slide, and the dialog to create a new Guide.

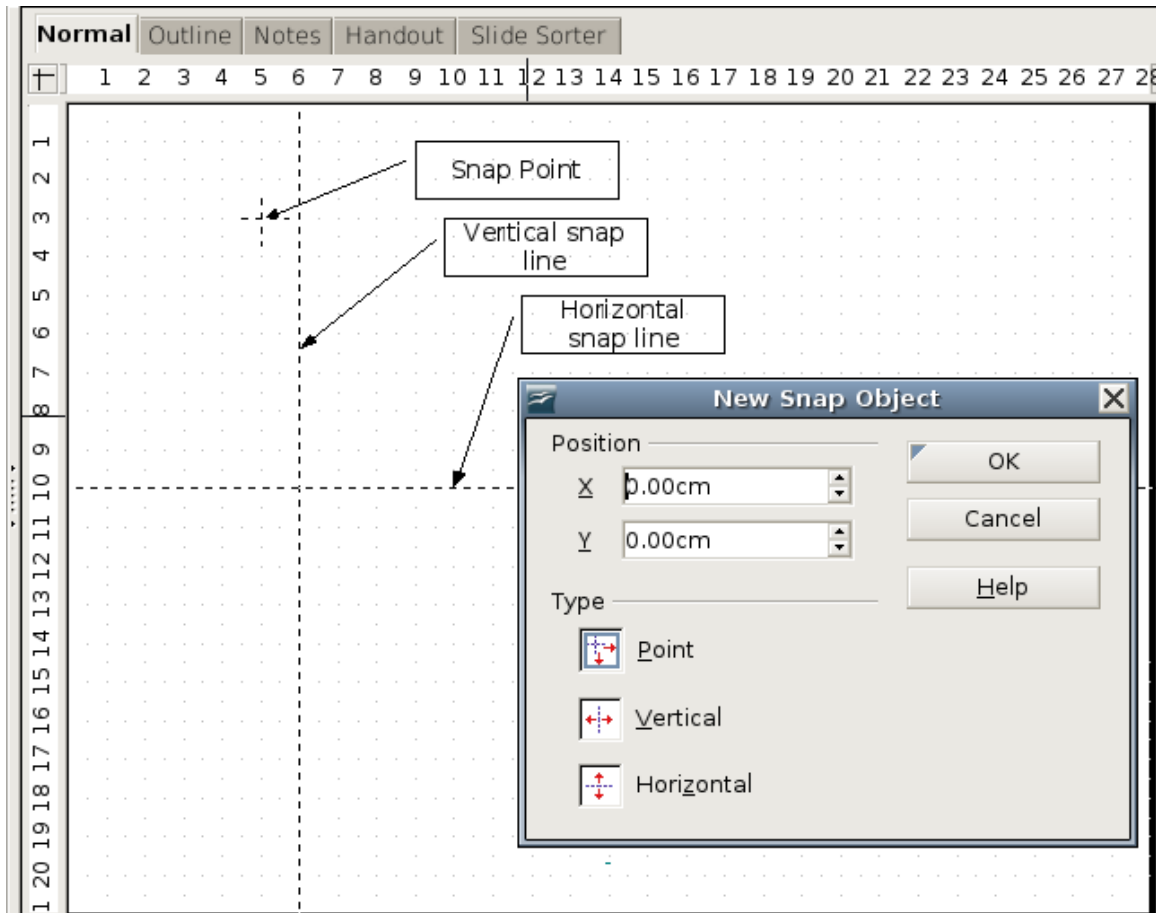


Figure 30: Gridline, snap lines and snap point on a slide

Managing glue points

As discussed in “Formatting connectors” on page 15, a glue point is the point of attachment for a connector. To define new glue points and edit them, use the **Gluepoints toolbar**, shown in Figure 31.



Figure 31: The Gluepoint toolbar


Use the first tool to insert a new glue point. The next four tools determine the exit direction of the connector terminating at the glue point. To maintain the relative position of the glue point when resizing the object, make sure that the **Glue point relative** icon is pressed. Deselecting the **Glue point relative** icon enables the next six icons of the toolbar; use these to fix the position of the gluepoint during the resizing of the object. Hover the mouse over the buttons to obtain a tooltip giving a short description of the functionality.

To delete a custom glue point, select it with the mouse and press the *Delete* key.

Setting custom glue points is particularly useful where multiple connectors terminate on the same side of a shape or where the default glue point position is not satisfactory.

Setting up interaction with a shape or image

You can associate with a shape or an image some action to be performed when the user clicks on it. To create an interaction:

- 1) Select the graphic object for which an interaction will be created.
- 2) When the green handles show, select from the Drawing toolbar (Figure 5) the **Interaction** button  or right-click on the object and select **Interaction** from the rpop-up menu.
- 3) The dialog shown in Figure 32 is displayed. Select the interaction type and the parameters (if applicable).
- 4) Click **OK** to close the dialog.

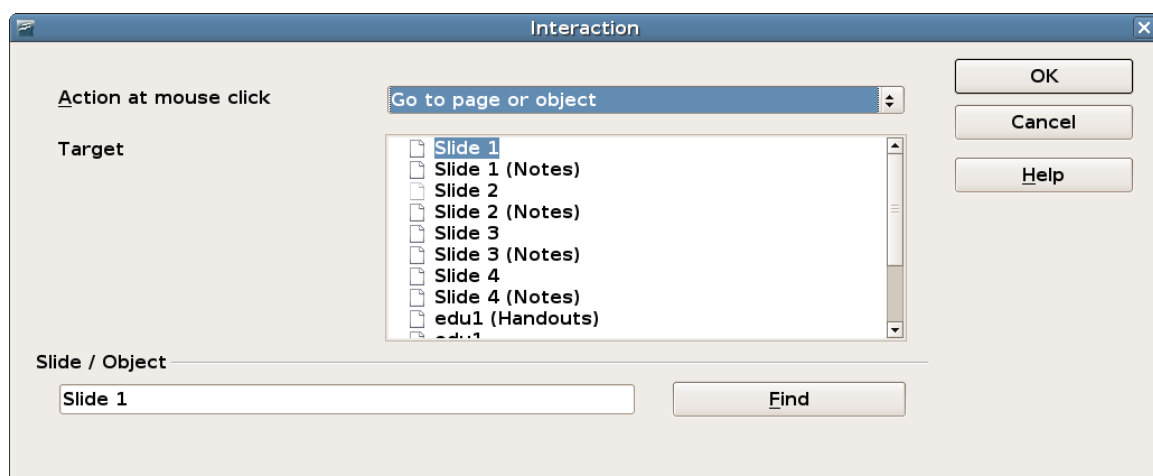


Figure 32: Dialog to set the interaction with a graphic object

To remove an interaction from a graphic object follow the steps 1–5, above taking care to select **No action** as the interaction type at step 4.

The possible actions and their parameters are described in Table 2.

Table 2: Interactions and their parameters

Interaction type	Parameters
Go to Previous slide	No parameters.
Go to Next slide	No parameters.
Go to First slide	No parameters.
Go to Last slide	No parameters.
Go to Page or Object	Specify the target from the list in the Target box. You can search for a specific target in the Document box at the bottom of the screen.
Go to Document	Select the document in the Document box. Use the Browse button to open a file picker dialog. If the document to be opened is in Open Document Presentation format, the target list will be populated allowing the selection of the specific target in the document.
Play sound	Select the file containing the sound to be played. Use the Browse button to open a file picker dialog.
Run program	Select the program to execute. Use the Browse button to locate it.
Run Macro	Select a macro that will run during the presentation. Use the Browse button to open the macro browser dialog.
Exit presentation	When the mouse is clicked over the graphic object, the presentation will terminate.

Animating images

Impress offers some animation functionalities that are typical of specialized programs. An animated image consists of a sequence of images (frames) that are displayed in succession. Each frame may contain one or multiple drawing objects. To start creating a custom animated image open the Animator dialog from **Insert > Animated Image** (see Figure 33).

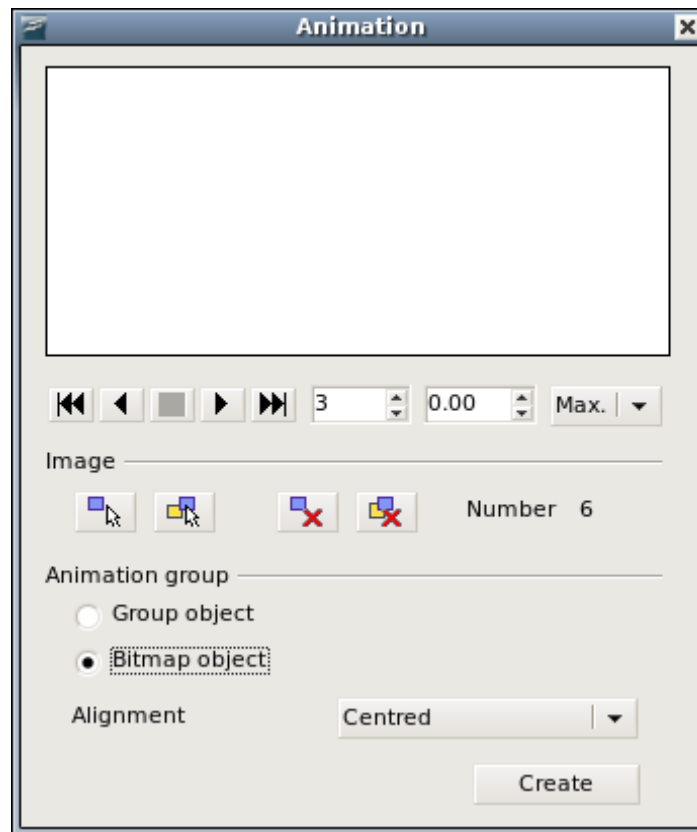



Figure 33: The Animator dialog


Creating an animation

There are several mechanisms that can be used to create an animated image, in this chapter only two of them will be described as they should be sufficient to understand the various functionalities offered.

Frame by frame animation:


- 1) Create the image you intend to animate using the drawing tools.
- 2) Select the image and press the **Apply Object** . This will copy the object (or objects) into the upper part of the animator window.
- 3) Apply some transformation to the object, for example rotate it, change the color, if you are animating a text add or subtract a letter and so on.
- 4) When you are ready, create the second frame of the animation clicking again the apply object.
- 5) Repeat steps 3 and 4 until you have created all the desired frames of the animation.
- 6) Select the radio button **Bitmap object** part of the *Animation group* section of the Animator dialog. This will allow you to customize the timing of each of the frames and the number of repetitions for the animation (set the value to *Max* to obtain an infinite loop).

7) Press the **Create** button to place the animated image on the slide.

Note If the image to be copied in the Animator consists of several objects, you can choose to treat each object as a separate frame. In this case press the **Apply objects individually** button . Remember that each object will be centered in the animation.

Animated image in one go


For some simple animations it is possible to create all the animation frames in advance, and place them on the slide. This method works well for a rotating line, a shape gradually changing color, shapes increasing or decreasing size. In most of these occasions it is convenient to use the **Edit > Duplicate** command.

When all the frames are already prepared, use the **Apply objects individually**  to create one frame for each of the objects.


It is easy to obtain for example a rotating segment:


- 1) Draw a segment, say, horizontal and make it fairly thick (use **Format > Line** or the Line and Filling toolbar to do that).
- 2) Open the Duplicate dialog by selecting **Edit > Duplicate** and set the number of copies to 5, the X and Y axis to 0.1, the angle to 30, the enlargement width and height to 0, and press the **OK** button.
- 3) Select the 6 segments created by *Impress* and open the Animator (**Insert > Animated image** from the main menu bar).
- 4) Click on the Animator dialog **Apply objects individually**.
- 5) Select **Bitmap object** in the lower part of the dialog, then click the Create button.

Other functionalities of the Animator and Tips

You can review the animation at any time by pressing the **Play** button  as well as navigate the various frames using the other controls available.

If you are not satisfied of a particular frame you can remove it, to do so:

- 1) Navigate to the frame using the edit control with the spin buttons.
- 2) Press the **Delete current image** button .

You can also delete the whole animation pressing the **Delete all images** button .

Tip In case you want to work on the animation frames a bit more, you can copy them into the Impress work area by selecting the **Group object** and then clicking the **Create** button.

Tip Since all the objects are centered in the animation window, to animate an object off the center of the image, create a blank rectangle of the same size of the final image and select it along with the object to be animated. Make sure that the **Group object** is selected before pressing the **Apply object** button.



Working with 3D shapes

3D graphic objects can be created in different ways in Impress:

- From the 3D-Objects toolbar. The 3D-Objects tool is not included in the default Drawing toolbar. To include it, click on the small triangle at the end of the toolbar, select **Visible Buttons**, and select **3D-Objects** from the list. On the Drawing toolbar, click on the triangle by the 3D-Objects icon to display the extended 3D Objects toolbar (Figure 34).



Figure 34: 3D-Objects extended toolbar

- From Convert menu as Rotation. Select an object, right-click on it, then select **Convert** and select **To 3D Rotation Object**.
- From the **Extrusion on/off** icon  on the drawing toolbar. Select the shape to which apply a 3D effect, then click the  button on the Drawing toolbar (see Figure 35).

Caution You can not apply extrusion to rectangular and oval shapes created using the rectangle and the oval tools respectively. To create a rectangle or oval with 3D effects, select the desired shape from the basic shapes menu. Alternatively, right-click on the object then select **Convert > To 3D**. Note though that in this case the **extrusion on/off** menu will not be enabled.

Although Impress offers advanced functionalities to manipulate 3D objects, this book describes only the 3D settings applicable to an object with Extrusion enabled. For additional information on how to use advanced 3D effects such as geometry, shading, and so on, refer to the *Draw Guide*.












Click on  to activate the extrusion. The shape changes and a default thickness is added to it. At the same time the 3D-Settings toolbar (Figure 35) should become visible. If the toolbar does not appear, select **View > Toolbars > 3D-Settings**.



Figure 35: The 3D-Settings toolbar

Use the tools to change the appearance of the 3D object.

-  Extrusion On/Off: adds thickness to an object and activates the 3D properties.
-  Tilt Down: tilts the object downwards around an horizontal axis.
-  Tilt Up: tilts the object up around an horizontal axis.
-  Tilt Left: tilts the object left around a vertical axis.
-  Tilt Right: tilts the object right around a vertical axis.
-  Depth: determines the thickness of the shape. An extended toolbar opens where some default values are given. If none of them is satisfactory, select Custom and then enter the desired thickness.
-  Direction: pick the direction of the perspective as well as the type among parallel and perspective from the extended toolbar that opens when clicking the button.
-  Lighting: specify the direction of the light as well as its intensity from the extended toolbar that opens when clicking this button.
-  Surface: choose between Wire frame (useful when manipulating the object), Matt, Plastic or Metal.
-  3D Color: select the color of the object thickness.

Most of the Fontwork shapes (see the corresponding section on page 20) have 3D properties and can be manipulated with the 3D-Settings toolbar.

Note that when rotating a 3D object, in addition to the corner red handles, the four handles on the sides of the frame become available.

Figure 36 is an example of customized 3D object.



Figure 36: Example of 3D object