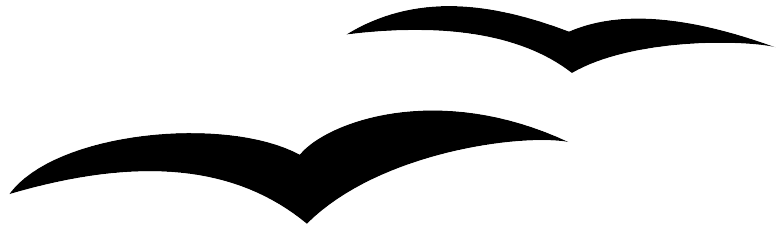


Editing Objects Part II:



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Version: 1.0
First edition: November 2004

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Overview

This document describes how to change object attributes, use the Stylist to apply attributes to objects, and apply special transformations to objects.

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Feedback

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Modifications and updates

<i>Version</i>	<i>Date</i>	<i>Description of Change</i>
1.0	18 November 2004	First published edition

Changing Object Attributes

Each object comes with a set of associated attributes that characterize the appearance of the object. These attributes, such as color, the contour type, line thickness, etc., can be modified whenever you want.

A toolbar and a dialog box are dedicated to the modification of these attributes. The main attributes can be directly modified from the object toolbar (located by default above the workspace). Depending on the currently selected object, the Object Bar changes appearance.

The default Object toolbar is applicable to all objects:



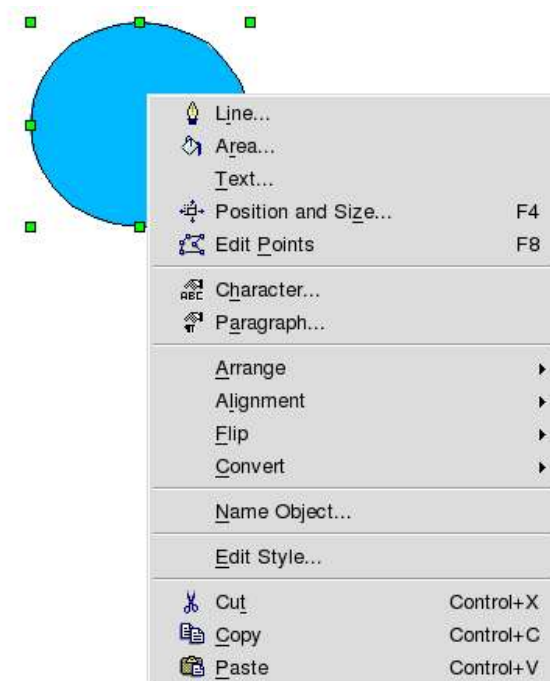
When editing texts, a new toolbar appears:



This toolbar is split into two parts. To go from one to the other, use the arrow button located at the right end of the Object toolbar. The second part of the toolbar will then appear; it is the default Object toolbar shown above.

Changing Attributes using the Context Menu

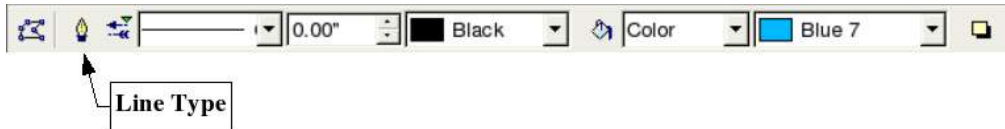
When an object is selected, a right mouse button click on the object brings up a context menu that provides yet another way to access the functions for changing object attributes.



The Object Toolbar

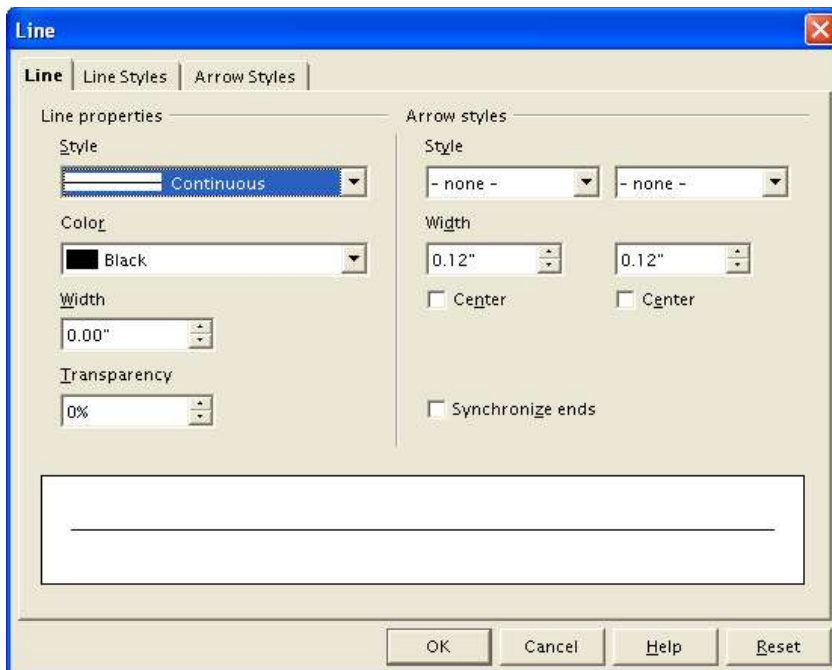
The buttons in the Object toolbar let you change the following properties.

Line type

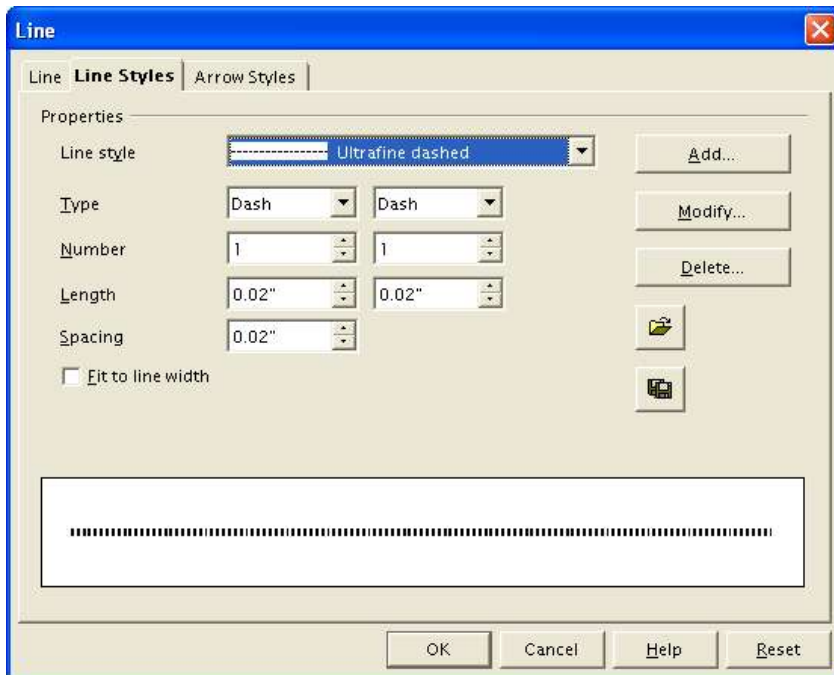


Clicking this button opens a dialog box in which you can choose the properties of the currently selected line. If you want to change the properties of arrows, the line, its thickness or color, you can also directly use the four areas provided in the toolbar, as described later in this section.

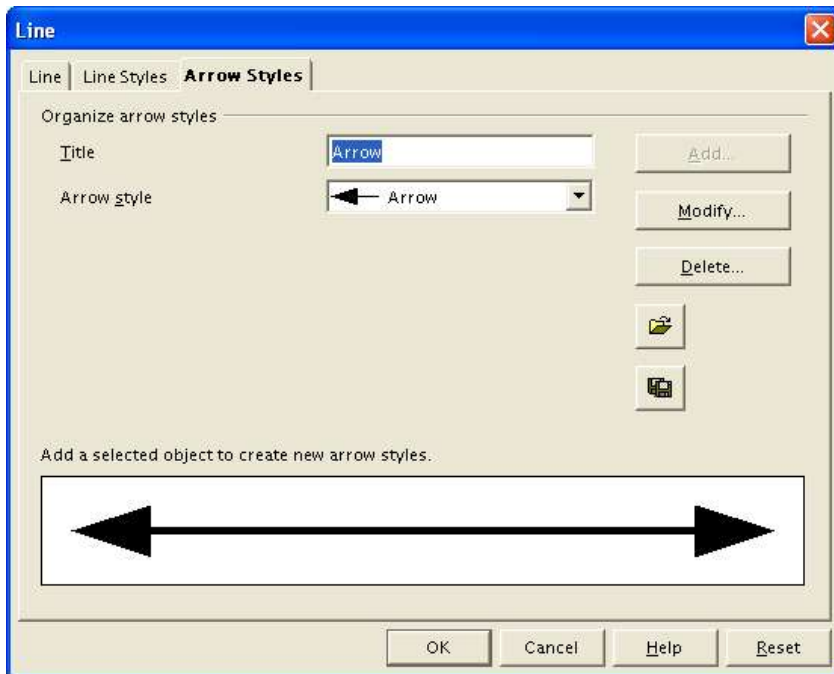
The Line dialog box has three tabs. The first tab lets you edit the most common properties of the line. Notice that transparency and the pointedness of the ends of the line are only editable from within this dialog. Select the Synchronize ends checkbox to force the arrow ends of a line to be the same.



The second tab lets you finely tune the type of line you want to have. Using this dialog, you can define the appearance, number, size, width and spacing of the dashes or dots making up the line. With the Add button, you can create a new type of line and insert it into the Type list. You can also modify or delete existing line styles. The Load Line Style and Save Line Style icon buttons are there to help you save a new definition or read one from disk (file extension .sod).



The third tab lets you add new end types (styles) to the line. As you can see, there is no way to draw the end types using the dialog box.

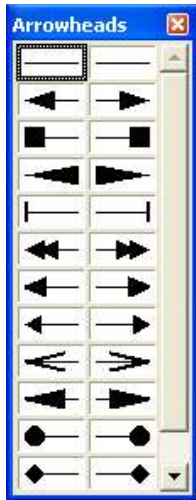


Choosing line attributes from the object toolbar

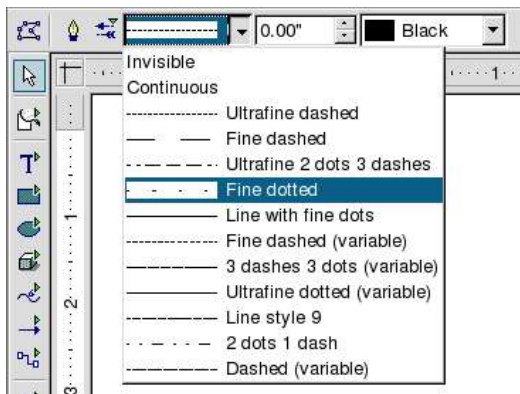
The Arrow Style (line ends) button located to the right of Line button on the Object toolbar lets you directly choose the line ends in a small window. You can choose each end independently of the other.



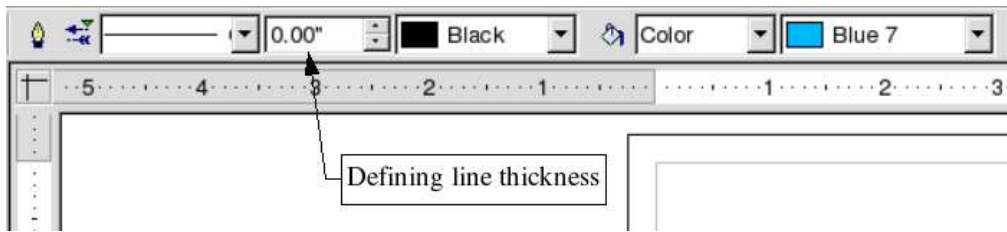
Note: If you frequently need to use this function, don't forget that you can detach the window by clicking on it with the mouse button and dragging it (by its title bar) to a new spot. That way it will stay visible on the workspace.



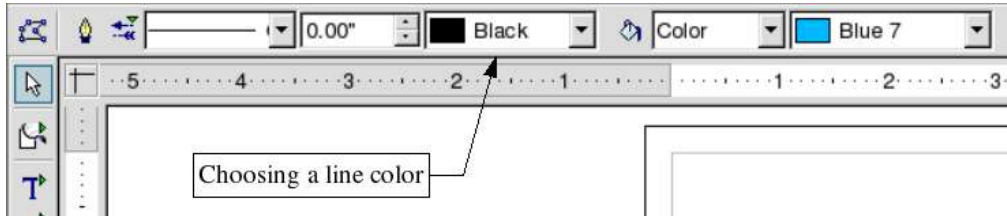
The drop-down menu located to the right of the Arrow Style button lets you directly choose the line type without going through the corresponding dialog box.



The next area concerns the width (thickness) of the line expressed in the current unit of measurement. You can enter this value manually in the area provided or use the spinbox to change the value.

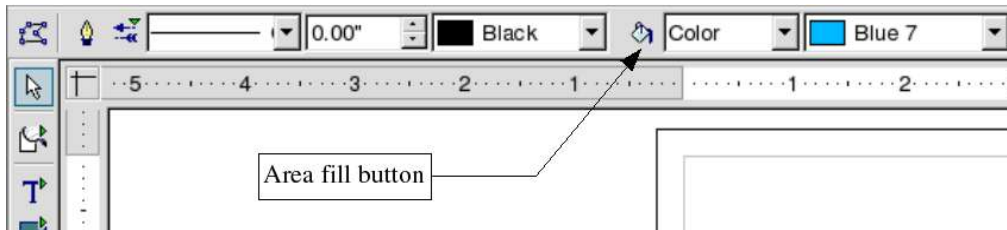


The drop-down box to the right of the line width box lets you choose the line color. The various colors available in the color palette are displayed.



Area Fill

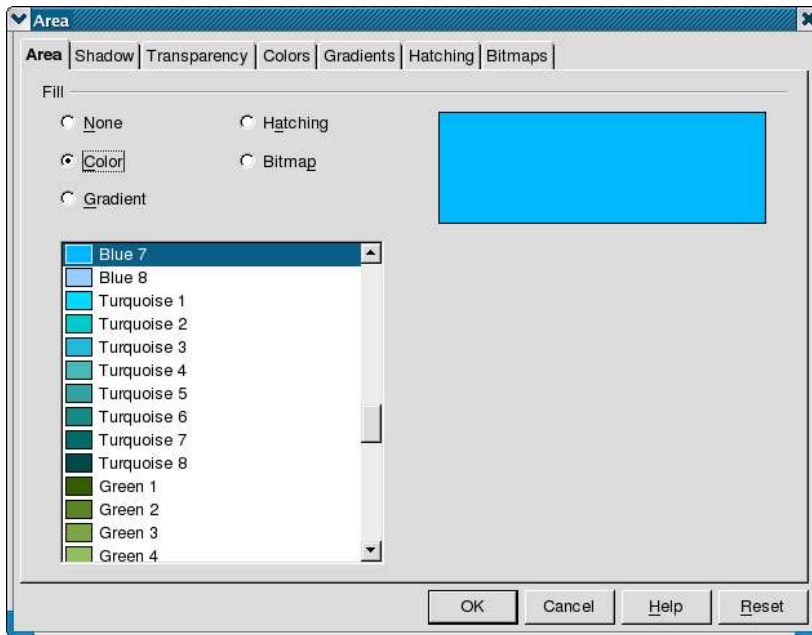
The Area fill button and dialog box let you chose the fill mode for the selected object.



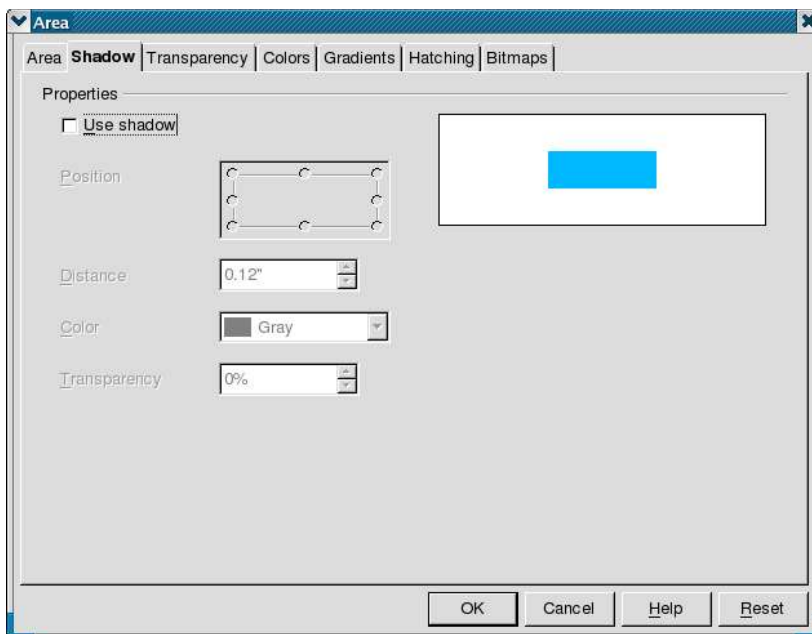
The Area dialog box has several tabs, which are described on the following pages.

The first tab, Area, lets you make a quick selection of the type of fill that you want, whereas the other tabs let you change, delete or add a given fill type. The four possible fill types are:

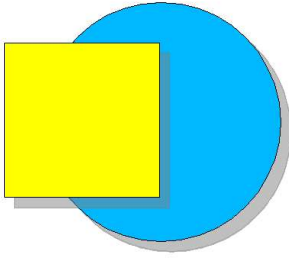
- simple color
- gradient
- hatching
- bitmap



The Shadow tab lets you choose whether to apply a shadow to your object. The shadow lets you simulate the floating of an object above the drawing area.

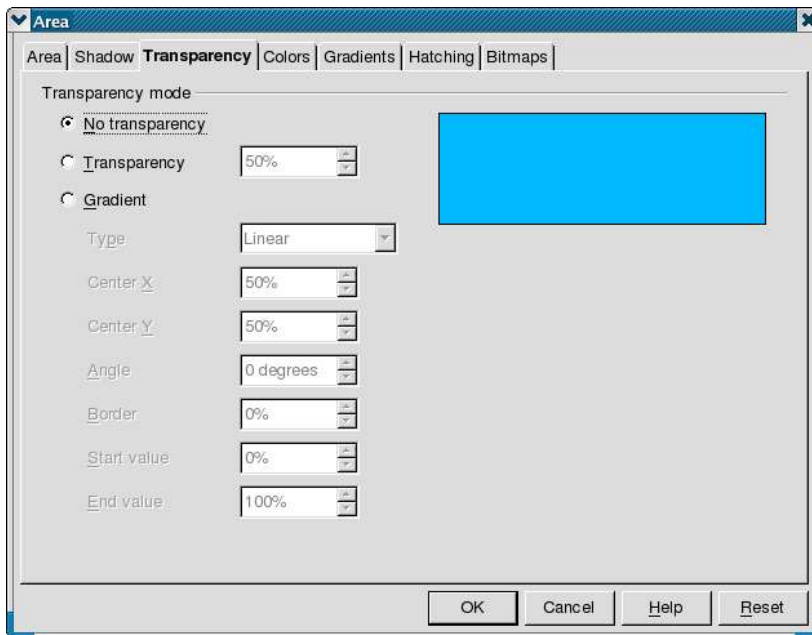


The shadow will match the contour of the object that has been selected. This tab also lets you set the color and distance with respect to the object, position, and transparency of the shadow.



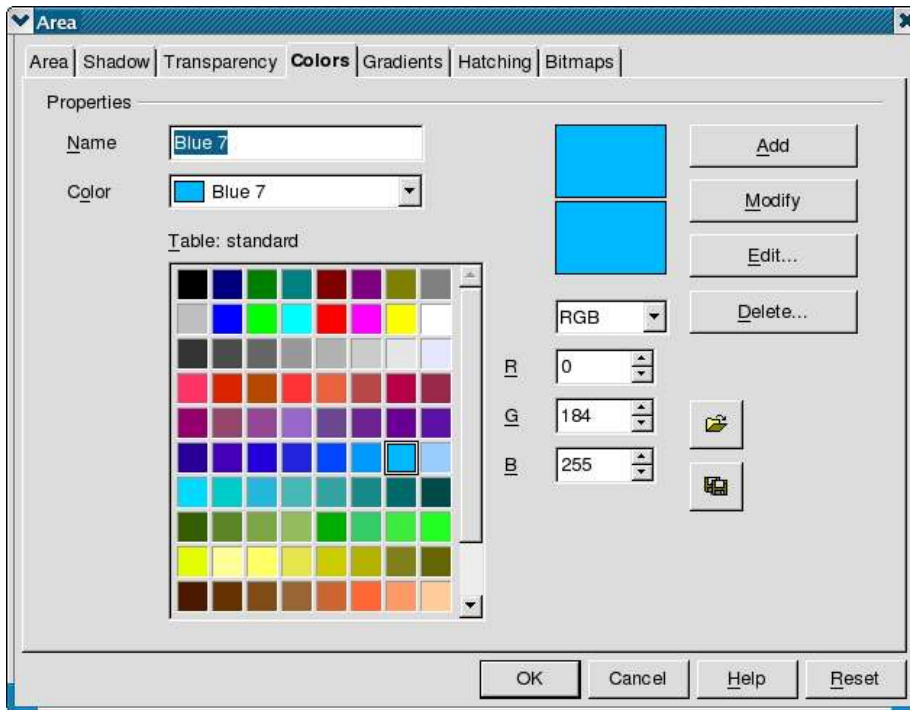
The figures shown above have a gray shadow with 50% transparency.

The Transparency tab lets you set the fill transparency of the selected object. For example, you can set the transparency to be non-uniform.

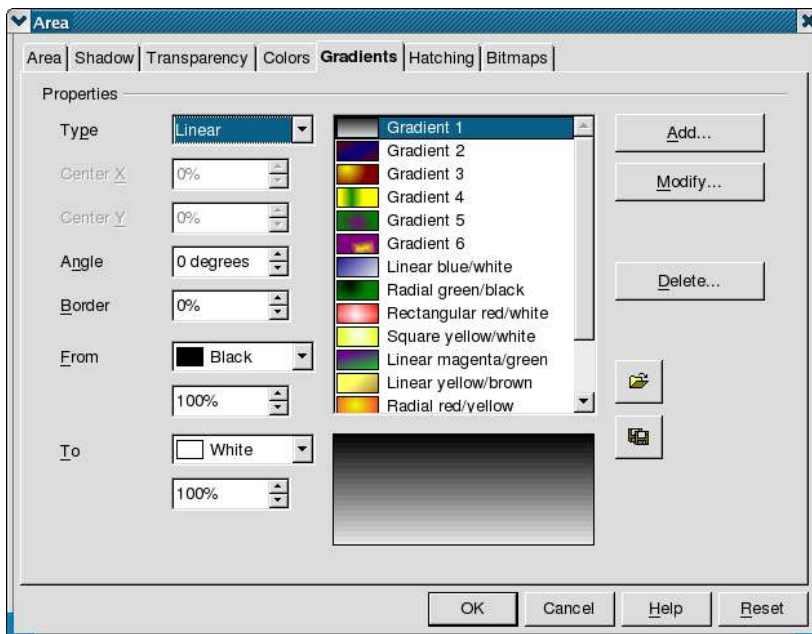


You can preview the current gradient (the result of your selections) in the area on the right-hand side of the dialog box.

The Colors tab lets you edit the palette of available colors. You can choose the fill color of an object by clicking on one of the colored squares and then clicking OK.

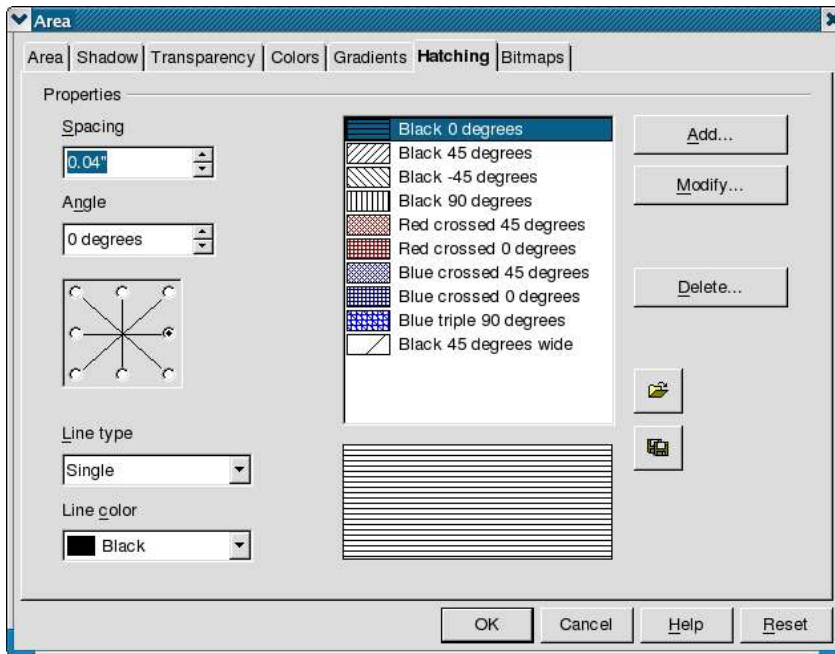


The Gradients tab lets you define or choose a type of gradient. You can choose a gradient to apply to an object by selecting it in the list and clicking on OK.

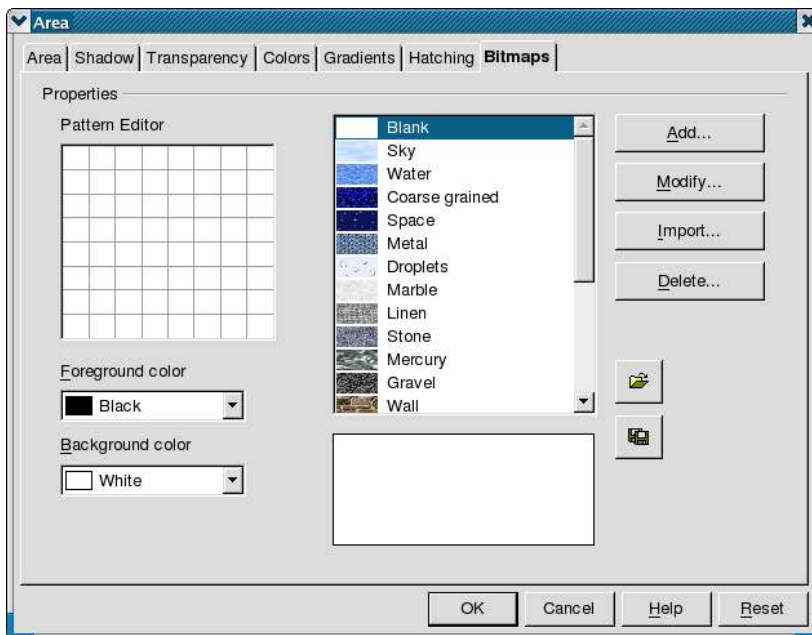


Several gradients are predefined. The parameters used to define the gradients are similar to those that are available for transparency.

The Hatching tab lets you define a hatch motif. Indicate the spacing between the lines (in the current unit of measurement), hatching angle, line type (simple, double, triple), and color.



The seventh and final tab, Bitmaps, lets you cover selected objects with a pattern obtained from a bitmap image. Any of the bitmap formats recognized by OpenOffice.org can be used.

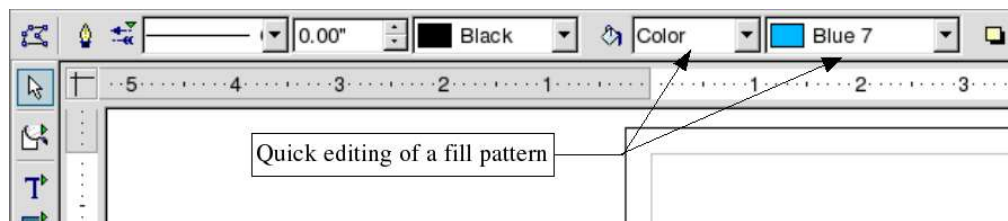


In order for the mapping of the image onto the selected object to be of sufficient quality, it is necessary to use bitmap images that contain repeating patterns. Use the Import button to create a new pattern from an existing file.

The Pattern Editor on the left lets you draw a simple pattern from two colors. To draw a pattern, click on the various boxes in the grid, using either mouse button. The mouse button toggles between the foreground and background color. Your bitmap pattern will display in the preview pane in the lower part of the window.

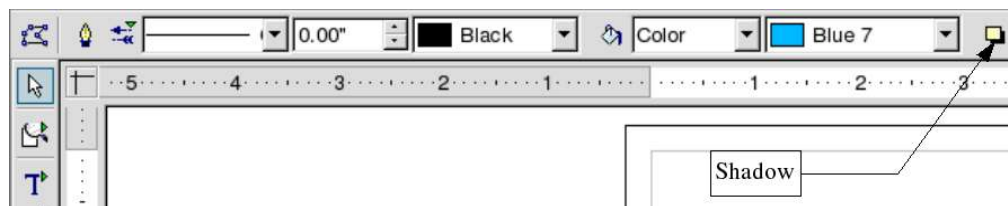
Choosing area fill patterns from the object toolbar

The two drop-down lists located on the right of the object toolbar enable quick selection of a fill pattern without having to go through the dialog boxes that have just been described. The first list lets you choose the fill type (Color, Gradient, Hatching and Bitmap), and the second list is used to select the specific fill. The content of the second list depends on the choice (Color, Gradient, Hatching and Bitmap) made in the first one.



If you choose Invisible in the first list, the selected objects will become transparent - that is, no fill at all.

The last button on the object toolbar enables and disables the placing of a shadow on the selected objects. It functions as a toggle switch.



The Text Object Edit Toolbar

When the selected object is a text frame, the toolbar doubles up to add extra buttons dedicated to formatting text. Click the blue triangle at the right hand end of the toolbar to display the Text Object Edit Toolbar.



This toolbar comprises the usual text functions (similar to those that can be found in the Writer module) that let you set the font, paragraph alignment, etc. These are fairly standard and will not be discussed in more detail here.

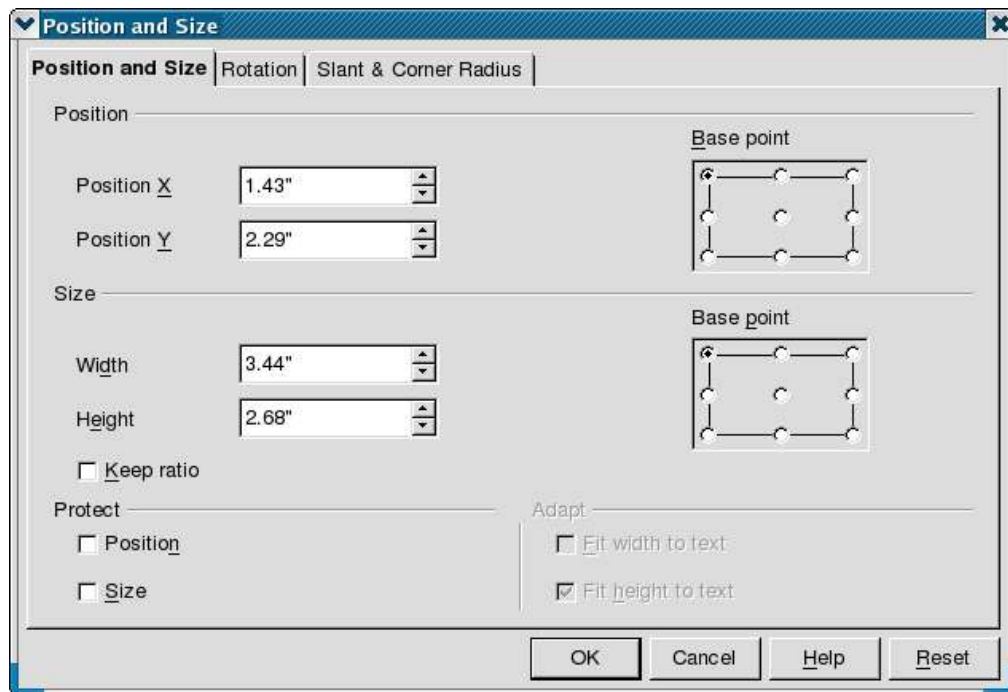
Manual Editing of Object Size and Position

The preceding sections were devoted to dynamic modification of the attributes of one or more objects, with dynamic meaning that all changes were carried out with the mouse. This technique has the advantage that you can continuously see the changes being made, but with the disadvantage that it is not very precise.

When an object is selected, pressing the *F4* key (Position and Size) or using the right-click menu and choosing Position and Size displays a dialog box with four tabs, where you can enter precise values concerning size and position.

Entering Position and Size data

Use the Position and Size tab on this dialog to enter the position data for the X and Y axes in the current unit of measurement, and the size data described in the next paragraph. You can also indicate the base point for the object. Click a base point in the grid, and then enter the destination coordinates to where you want to shift the object relative to the base point that you selected in the **Position Y** and **Position X** boxes. The base points correspond to the selection handles on an object.



If you select either of the **Protect** checkboxes, the object can no longer be moved. You'll have to deselect the box to move the object again.

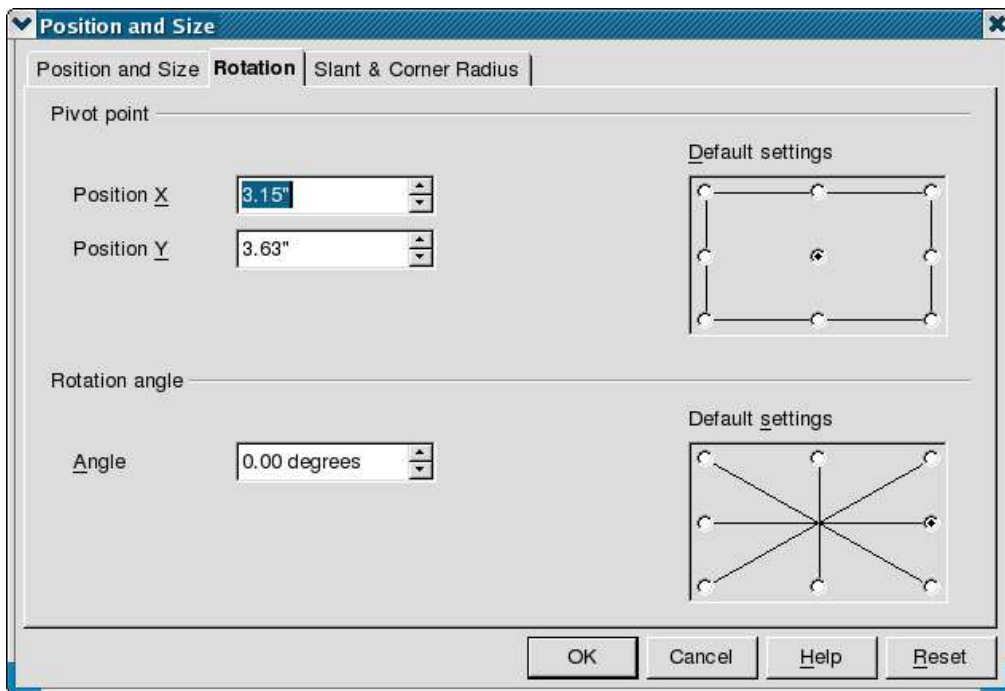
Size Data Entry

The Position and Size tab is also used to specify the size of objects. If the **Keep ratio** checkbox is selected, any changes made to one of the dimensions will automatically be applied to the other dimension, which enables the length/width ratio of the object to be maintained. If the object is a text frame containing text, two further tickboxes are available, to let you automatically adapt the width and height of the frame around the text.

As with the preceding dialog, you have to indicate the Base Point with respect to which the change will take place. For example, if you click on the center Base point, any size change will be made symmetrically with respect to the center of the object.

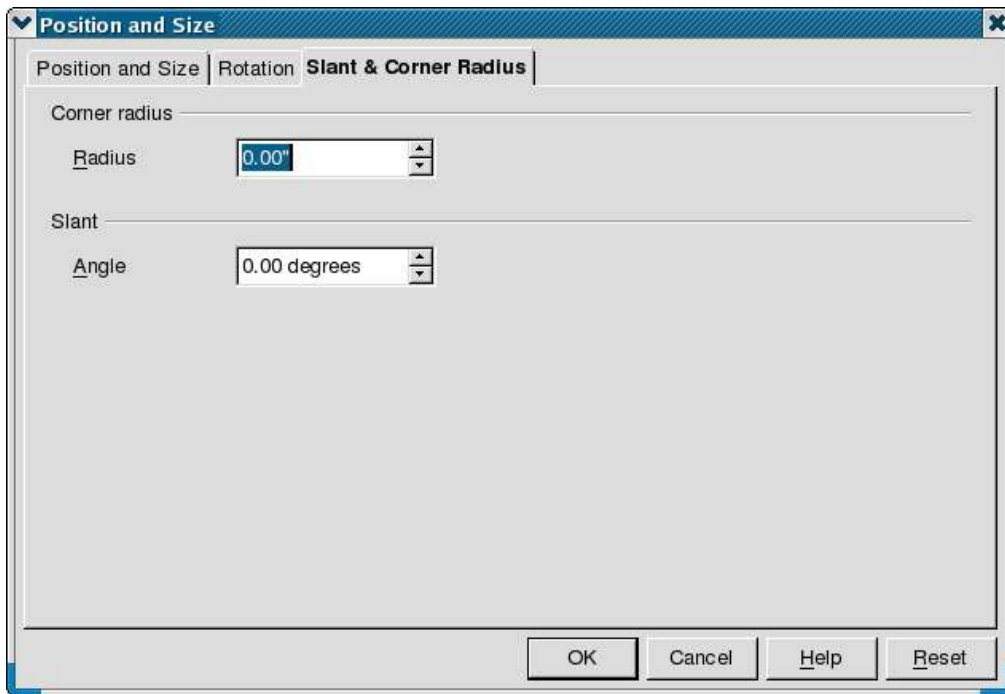
Angle of Rotation Data Entry

The Rotation tab lets you specify the position of the axis and angle of rotation of the object. You also have to define the base point from which the axis of rotation is measured, as described in the preceding topic. The zone marked Default Settings lets you quickly choose the angle of rotation in 45° steps.




Inclination Data Entry

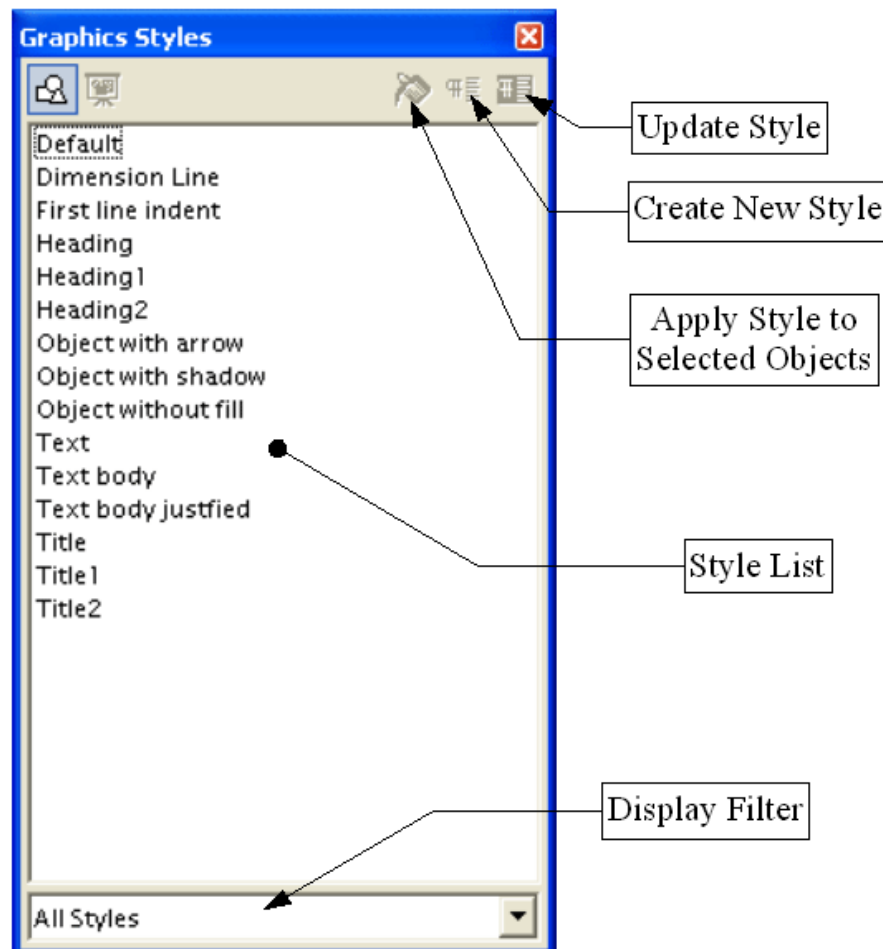
The last tab of this dialog is used to enter the rounded corners (corner radius) and the angle of inclination of the object. Illustration 90 shows a rectangle that has been slanted by 15 degrees and had its corners rounded by a 0.5 cm radius.



Using the Stylist

The application of the same style to several different objects can soon turn out to be a tedious job with the drawing tools. Fortunately, OpenOffice.org comes to the rescue with the Stylist. This window, as in the Writer module, lets you define particular styles and apply them in a single operation to several objects simultaneously. Some of the Stylist functions that relate to the use of the OpenOffice.org Impress module will not be described here.

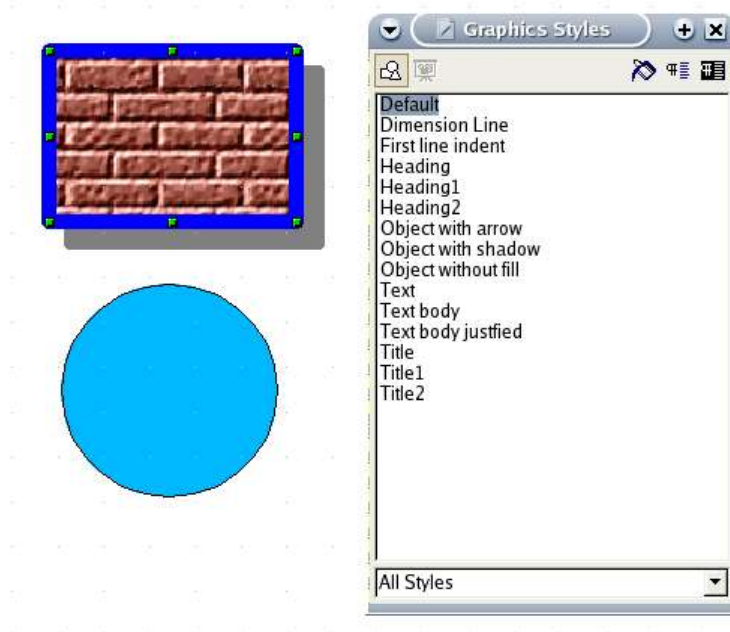
You can show and hide the Stylist with the  button on the Function Bar or by pressing the *F11* key. The Stylist appears as a floating toolbar window. You can click in the title bar of the Stylist and drag it to a convenient location on your display.



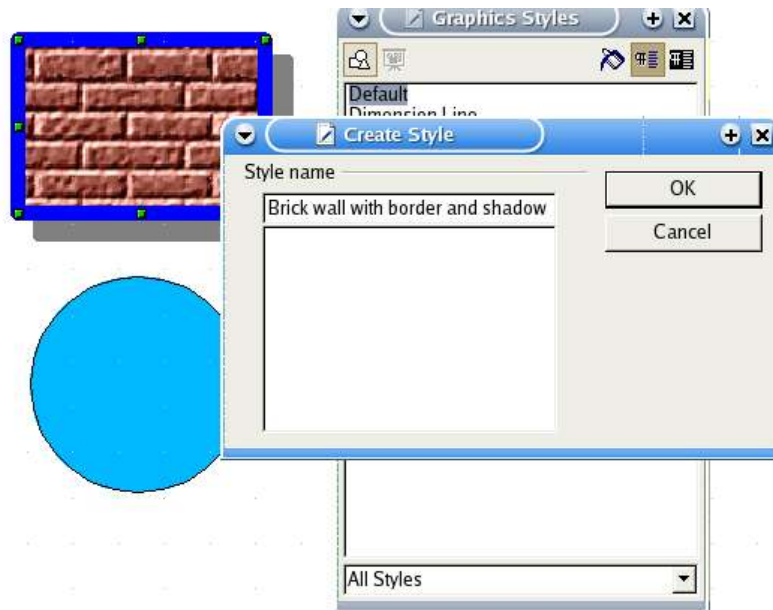
Applying a Style

To apply an existing style to one or more objects, all you have to do is select them and double-click on the required style. You can also use the **Fill All** mode. When this button is pressed, the mouse cursor changes into a paint can; then just select all of the objects to which you want to apply the current style.

In the following example, we will create a particular style comprising a shadow, a thick blue border, and brick motif bitmap fill.



The first step is to create the style. To do this, select the object whose style you wish to add to the list of styles, then click the Create Style button in the Stylist window. Type the name of your new style in the Create Style dialog box.



The next step is to apply your new style to other objects. Select your new style, Brick wall with border and shadow, then click the Apply Style button (the paint can button), then click the objects to which you wish to apply this new style. The new style will be applied to the objects as you click on them.

If you first press the paint can button, click on the graphic object to see your new style attributes applied immediately:

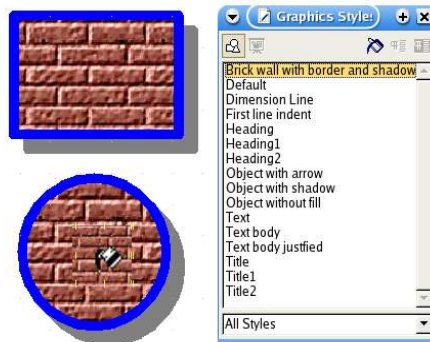



Illustration 1 - Applying a style


Changing a Style

All of the objects memorize the style that has been applied to them. If you modify the basic style, all of the objects that are associated with this style will be modified as well. To change a style, use one of these methods:

- You can directly change the style of an object by applying the various techniques that have been described earlier in this document, then simply click on the Update Style  button.
- You can also change a style directly in the Stylist. Just right-click on the name of the style and choose Modify.

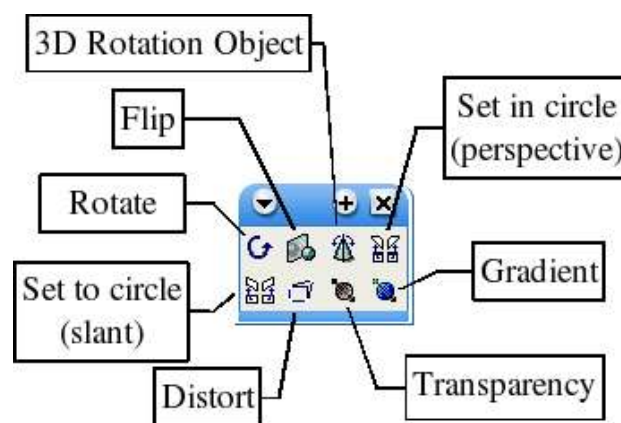
Creating a New Style

There are two ways of creating a new style:

- Right-click in the Stylist and choose **New** from the pop-up menu. Enter all of the style options in the dialog box, name the style, and click OK. The new style will appear in the list.
- You can also use the method known as *copying by example*, by creating a new style from the properties of an object. Choose an object from which you want to create a style, and then click on the **New style from selection**  in the Stylist. A dialog will ask you to enter the new style name; this name will appear in the list afterwards.

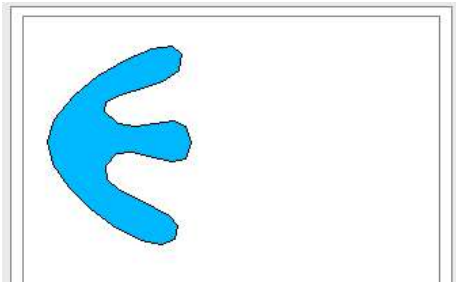
Special Transformations

In the toolbar, the rotation button gives you access to a sub-menu of functions grouped under the heading **Effects**. Each button is associated with a set of special transformation functions. The submenu window looks like this:

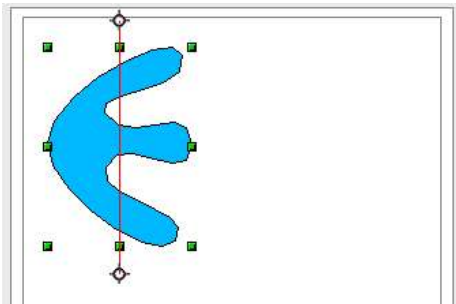



Flip

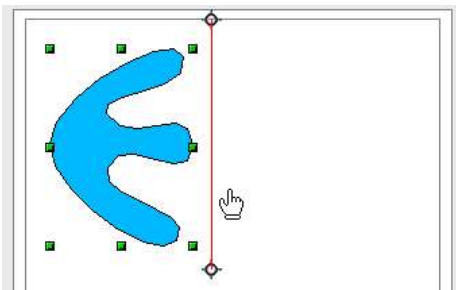
This function lets you flip an object with respect to a given axis that you can define precisely. Here's an example explaining how this tool works:



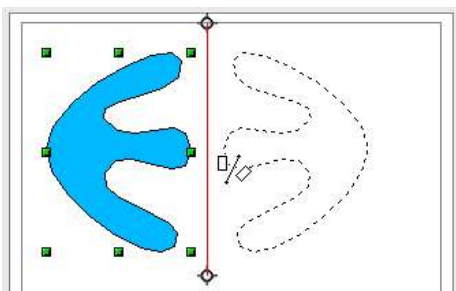
Here's the object you want to modify.



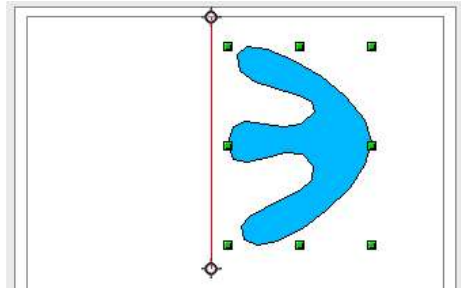
Once you've clicked on the Flip  button, a red axis of symmetry with two handles appears in the center of the object. The flip will occur with respect to this axis.



The axis of symmetry can be moved by dragging it with the mouse. You can also change its angle by pulling on one of the handles.



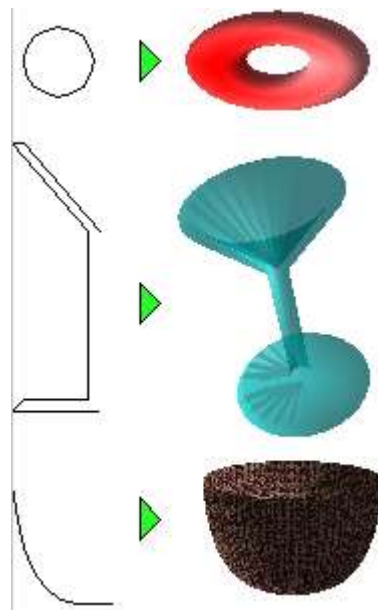
When the axis of symmetry is where you want it, you can proceed to next step. Click on one of the handles of the object, and keeping the mouse button pressed, drag it onto the red axis. A mirror image is projected onto the other side of the axis as a dotted outline.



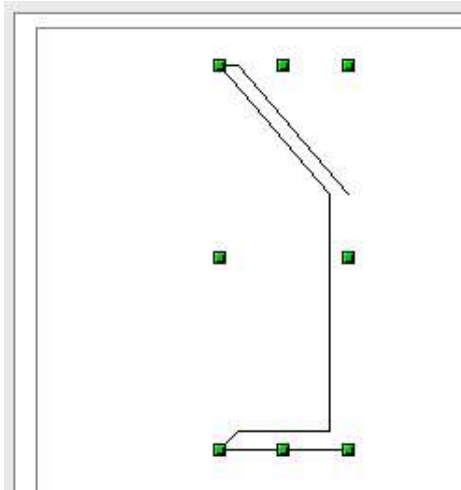
Release the mouse button and the flip transformation is complete.

3D Rotation Objects

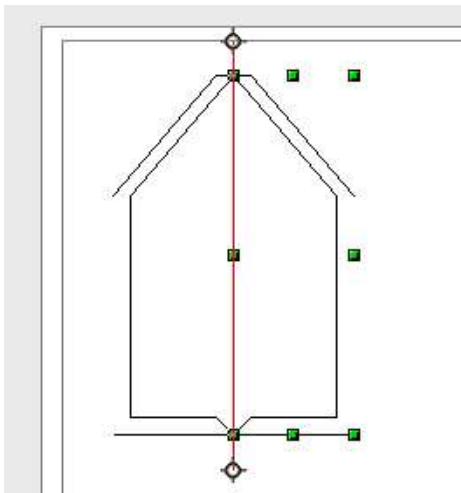
This function lets us enter the world of three-dimensional objects. With this tool you can get a 3D object by rotating a profile that you've drawn about an axis of rotation. It's useful for drawing common objects found in daily life, such as vases, glasses or bottles. Here are some examples of 3D drawings obtained from simple profiles:




The profile can be open or closed. The way this tool works is similar to that used for reflection. An axis is positioned around which the rotation occurs. Here's an illustration of the way it works:

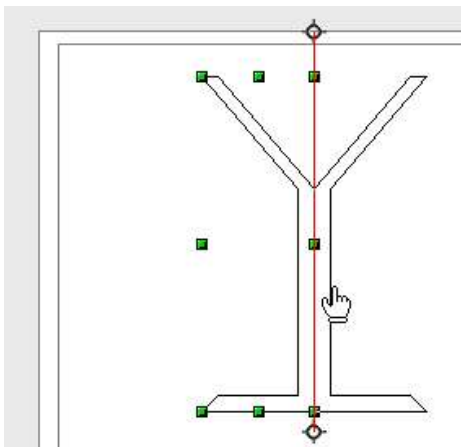


Here's the start profile. It was made with the polygon drawing tool.



When you click on the button , a red axis with a handle at each end shows up at the edge of the profile.

The resulting profile is displayed on the other side of the axis to give you an idea of the result.



So that the resulting drawing looks like a glass, you need to move the *axis of rotation* itself by dragging it to the other side of the profile. The resulting form is drawn around the axis of symmetry¹.

You can incline the axis by moving the handles located at the ends.

¹ Another way to do this is to use the Flip effect on the 2D polygon drawing, then use the 3D rotation effect.



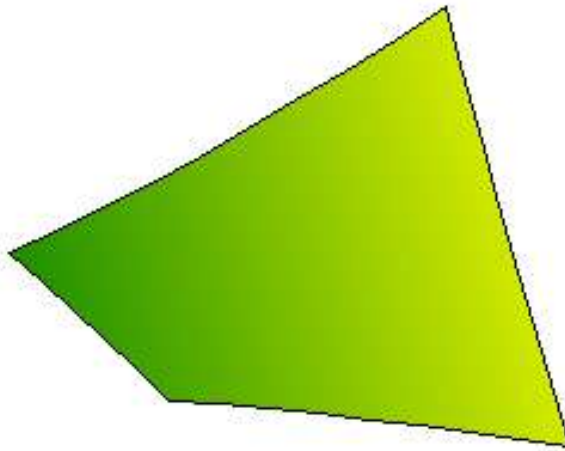
To see the end result, click on the 2D object that you've created.



To make the object more visible, we changed the color to blue and applied a 50% transparency.

Distort

This tool lets you distort an object by freely moving the handles located at the edges of its selection rectangle. A rectangle can for example be easily transformed into the following shape:




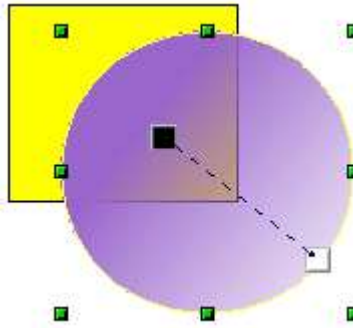
The principle behind distortion is very simple: by moving the selection handles located at the corners of the rectangle, you can stretch the object as you wish. If you move the handles located on the edges, you can slant or incline the object.

Note: When you choose to distort an object with this function, OpenOffice.org will ask you first of all to transform the object into a curve (as for the point edit mode). This transformation is irreversible.

Dynamic Transparency Gradient Definition

The transparency dialog box lets you adjust all of the parameters linked to this, but it's not always easy to see what your changes will look like before you've saved them.


The dynamic transparency gradient definition function lets you adjust the transparency attribute of an object. It is very easy to use. When you click on the  button, an arrow appears on the selected object.

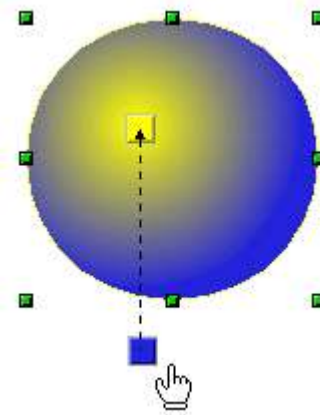


By moving the two squares at each end, you dynamically change the transparency of the object. The black square lets you choose the opaque side and the white square the transparent side. You can click on one of the boxes in the color palette to change the color of the object (and thereby the color of the opaque side). Click outside the object to apply the transparency changes.

Note: The changes that you can do using the arrow will depend on the type of transparency that you've chosen. For example, with axial transparency, the square located at the center of the object can not be moved, and you'll only be able to carry out operations on the other square. In a transparent square, the arrow can be moved as you wish.

Dynamic Gradient Definition

This tool works just like the tool for managing transparency. It is only activated if the selected object is filled with a gradient. Clicking on the gradient button  will display an arrow on the selected object.



The two ends of the arrow correspond to the start and end colors of the gradient. You can change the colors of the two squares by clicking on a box in the color palette and dragging it on the required square. The squares and the arrow can be moved freely. The movements of the squares show up immediately on the gradient of the selected object. Click outside the object to apply the changes to the gradient.

Note: The changes that you can carry out on the arrow will depend on the type of gradient that you've chosen. For example, for a linear gradient, the start and end squares of the gradient will always be situated to either side of the center point of the object.