OpenOffice.org 3

Draw Guide

Chapter 1
Introducing Draw

Drawing Vector Graphics in OpenOffice.org

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Acknowledgments

This chapter is based on an original French document written for OpenOffice.org 1.x by Michel Pinquier (translated to English by Alex Thurgood) and previous content revised by Jim Taylor. The chapter was revised for OpenOffice 2.0 by the authors listed above, and later translated into German by Wolfgang Uhlig; the German revisions were then translated into English by Martin Fox and updated for OpenOffice 3.2.

Publication date and software version

Published 12 March 2010. Based on OpenOffice.org 3.2.

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Introduction

Draw is a vector graphics drawing tool, although it can also perform some operations on raster graphics (pixels). It offers a series of powerful tools that enable you to quickly create a wide variety of graphical images.

Vector graphics store and display a picture as simple geometric elements (lines, circles, polygons, among others) rather than as a collection of pixels (points on the screen). This permits simpler storage and supports precise scaling of the picture elements.

Draw is fully integrated into the OpenOffice.org (OOo) suite, and this simplifies exchanging graphics with all components of the suite. For example, if you create an image in Draw, reusing it in a Writer document is as simple as doing a copy-and-paste. You can also work with drawings directly from within Writer or Impress, using a subset of the functions and tools from Draw.

Draw's functionality is extensive, and even though it was not designed to rival high-end graphics applications, it possesses significantly more functionality than the drawing tools that are generally integrated with most office productivity suites.

A few examples of the drawing functions are: layer management, magnetic grid-point system, dimensions and measurement display, connectors for making organization charts, 3D functions that enable small three-dimensional drawings to be created (with texture and lighting effects), drawing and page-style integration, and Bézier curves.

The *Draw Guide* is not a course book that must be worked through from beginning to end. Rather, it is a reference work in which you can browse for guidance on particular topics.

This document describes only the functions associated with Draw. Some notions, such as file management or the way the OOo environment works, are mentioned only briefly, as they are covered in the *Getting Started* guide.

The Draw workplace

The main components of the **Draw** interface are shown in Figure 1.

The large area in the center of the window is where you make the drawings. You can surround the drawing area with toolbars and information areas. The number and position of the visible tools vary as

a function of the task at hand or user preferences. Therefore, your setup may appear a little different. For example, many users put the main Drawing toolbar on the left-hand side of the workspace—not at the bottom, as shown here. The setup procedure is described in detail in Chapter 4 (Menus and Toolbars) in the *Getting Started* guide.

You can split drawings in Draw over several pages. Multipage drawings are used mainly for presentations. The *Pages* pane, on the left side of the Draw window in Figure 1 gives an overview of the pages that you create. If the Pages pane is not visible on your setup,you can enable it from the View menu (**View > Page Pane**). To easily make changes to the page order, drag and drop one or more pages.

In Version 3 of OpenOffice.org the maximum size of a drawing page is 300 cm by 300 cm.
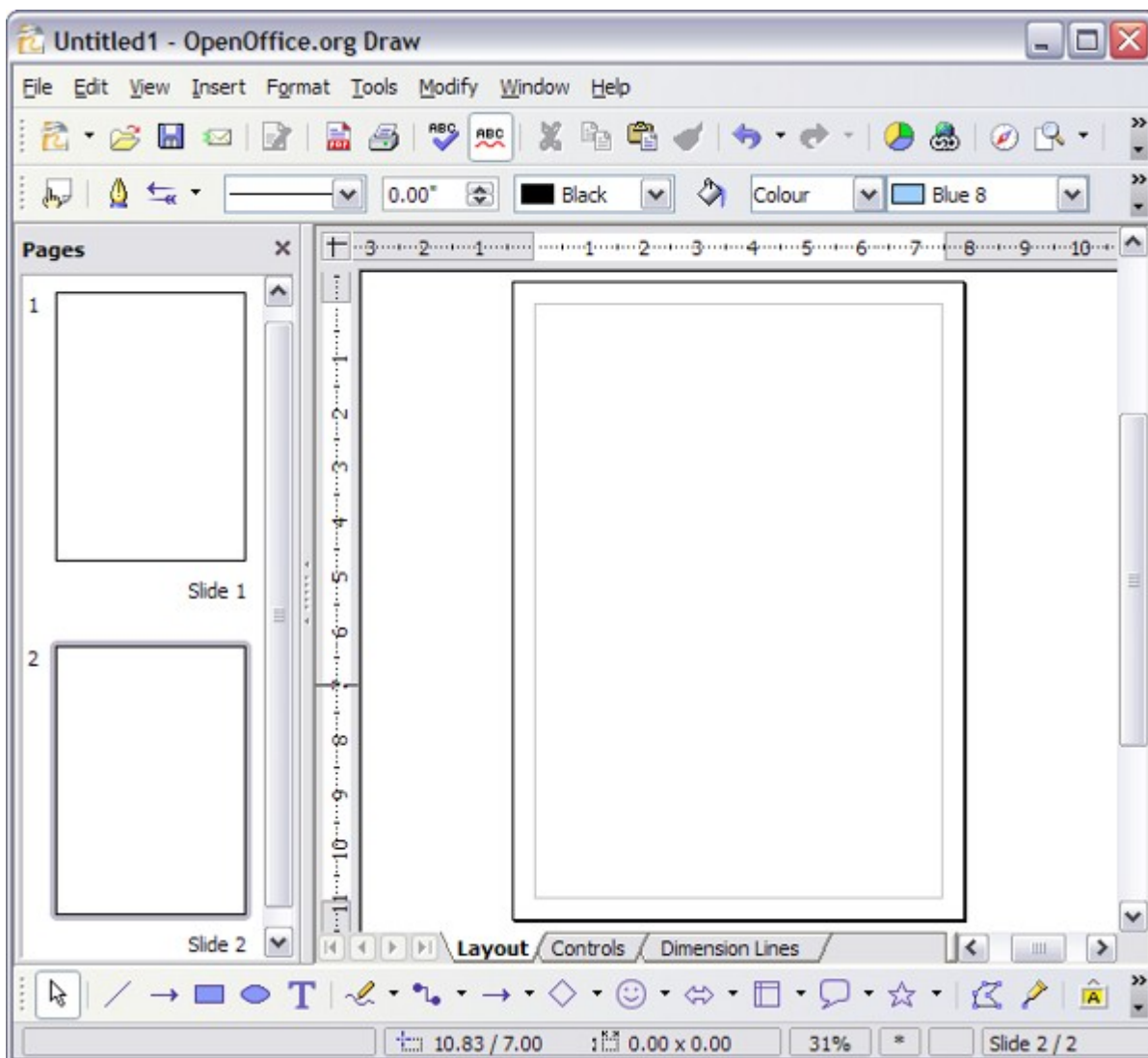

Figure 1: Initial Draw window

Rulers

You should see rulers (bars with numbers) on the upper and left-hand sides of the workspace. If they are not visible, you can enable them by selecting them from the View menu (**View > Ruler**).

The rulers show the size of a selected object on the page (see the gray double lines, highlighted in Figure 2). When no object is selected, they show the location of the mouse pointer, which helps to accurately position drawing objects.

You can also use the rulers to manage object handles and guide lines, making it easier to position objects.

The page margins in the drawing area are also represented on the rulers. You can change the margins directly on the rulers by dragging them with the mouse.
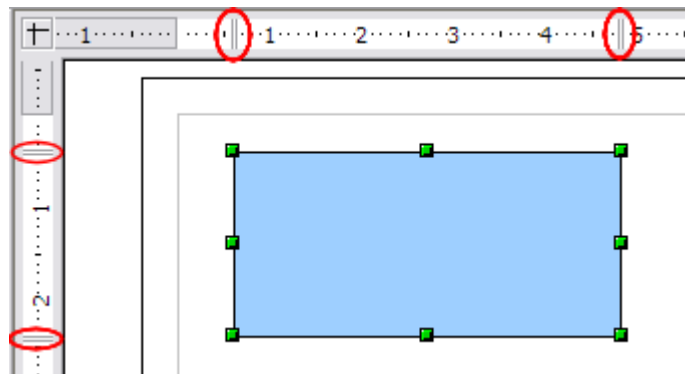

Figure 2: Rulers show the size of the selected object

To modify the units of measurement of the rulers (which you can define independently), right-click on the desired ruler, as illustrated for the horizontal ruler in Figure 3.
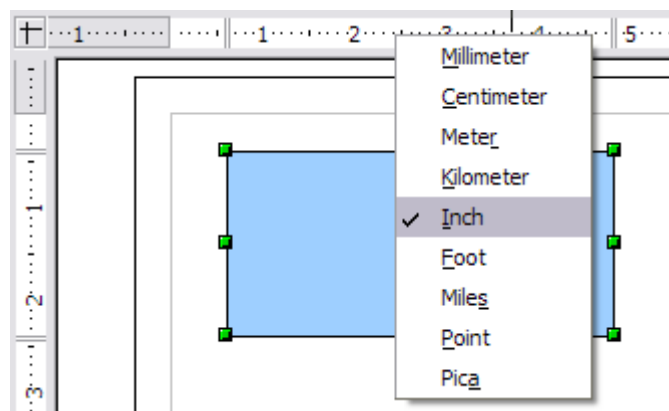

Figure 3: Rulers in a drawing

Status bar

The Status bar is located at the bottom of the screen (in all OOo components) and includes several Draw-specific fields, as identified in Figure 4.
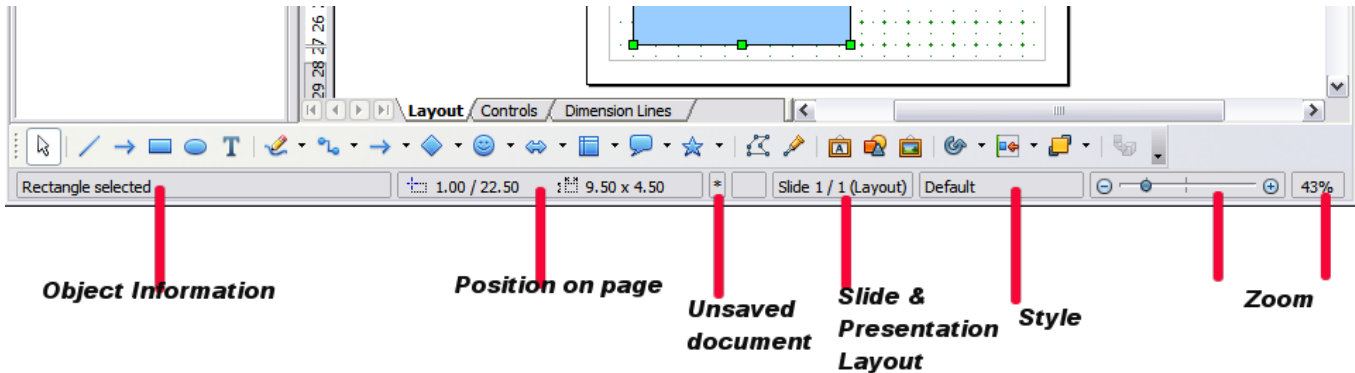

Figure 4: Items on the Draw status bar

The *Information* field shows which action is being carried out, or which object type is selected.

The *Position* field shows different information, depending on whether objects are currently selected or not:

- When no object is selected, the left number pair shows the current position (in X,Y Cartesian coordinates) of the mouse cursor.

- While an object is being resized with the mouse, the right number pair shows the size of the object (width and height).

Note	The sizes are given in the current measurement unit (not to be confused with the ruler units). This unit is defined in **Tools > Options > OpenOffice.org Draw > General**, where you can also change the scale of the page. Another way to change the scale is to double-click on the number shown in the status bar.

- If an object is selected, the left number pair shows the X,Y coordinates of the upper-left corner, and the right number pair displays the size of the object, as seen in Figure 4. These numbers do not relate to the solid object, but to the rectangle forming the selection outline. This outline is the smallest possible rectangle that can contain the visible part or parts of the object; see also Chapter 3 (Working with Objects and Object Points).

- When an object is selected, a double-click on this field opens the Position and Size dialog, which is described in detail in Chapter 4 (Changing Object Attributes).

The percentage shown in the *Zoom* field gives information about the current zoom factor. A double-click or right-click on this field opens the Zoom dialog, where you can quickly change the zoom factor. Click and drag the round indicator in the Zoom slider area to the right to zoom in (increase size) or to the left to zoom out (decrease size). The vertical bar in the middle represents a zoom factor of 100%.

In the *Indicator* field, an asterisk (*) is shown whenever any change is made to the document but not yet saved to disk.

If you wish to digitally sign the document, a double-click or right-click in the *Signature* field brings up the signature box. Note that a document must be saved at least once before it can be signed. After it is signed, an indicator is present in this field.

The *Slide* field shows the page-sequence number for the current drawing page, in addition to the total number of pages that you created so far. This is useful when your drawing has a number of pages. If you select an object, the field enclosed by parentheses shows the layer in which the object resides within the drawing. In the example of Figure 4, the object is on the Layout layer of Slide 1, and there is a total number of one slide, so far.

The *Template* field shows which page template is being used for the current page. If you saved several slide designs, you can select one for the current page by double-clicking in this field (see Figure 5) and selecting **Load** after choosing a slide design.
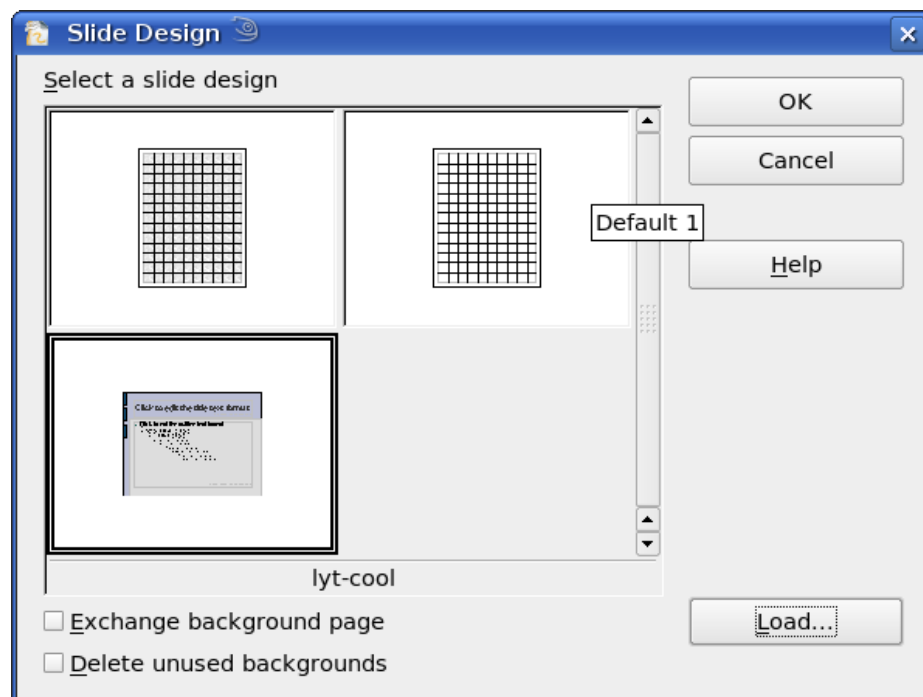

Figure 5: Selecting a slide (page) design

Toolbars

You can display or hide the various Draw toolbars, according to your needs. To display or hide a toolbar, click **View > Toolbars**. On the menu that appears, choose which toolbars you want to display.

You can also select the icons that you wish to appear on the toolbars. Some toolbars have icons that are not displayed by default, but you can choose to display them. You can also hide any icons that do appear on the toolbars, by default. To change the visible icons on any toolbar, click the arrow at the right-hand end of the toolbar and select **Visible Buttons**. On the list of the available icons that appears, select or deselect the icons you want to be visible. A checkmark next to an icon indicates that it is visible.

The tools available in the various toolbars are explained in the following sections.

Standard toolbar

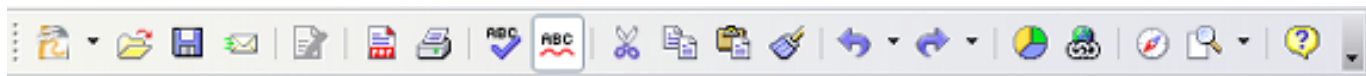The Standard toolbar is the same for all OOo components and is not described in detail here.

Figure 6: Standard toolbar

Line and Filling toolbar

The Line and Filling toolbar lets you modify the main properties of a drawing object: the icons and pulldown lists vary, according to the type of object selected. For example, to change the thickness of a line with the spinner, hover the mouse over the spinner and click the up or down arrow to achieve the desired thickness.
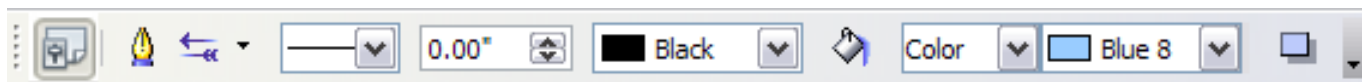
Figure 7: Line and Filling toolbar

In the example above, the available functions enable you to change the color, style, and width of the line drawn or the fill color, style, and other properties of an object. The object must first be selected with a mouse click. If the selected object is a text frame, the buttons for line style and fill color are changed to *Invisible*.

When text is selected, the Line and Filling toolbar changes to the Text Formatting toolbar, which is very similar to the Formatting toolbar in

Writer. A more detailed explanation of the buttons on this toolbar can be found in Chapter 4 (Changing Object Attributes).
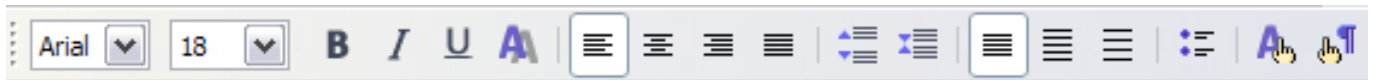

Figure 8: Text Formatting toolbar

Drawing toolbar

The Drawing toolbar is the most important toolbar in Draw. It contains all the necessary functions for drawing various geometric and freehand shapes and for organizing them on the page. It is described in detail in Chapter 2 (Drawing Basic Shapes).

Figure 9: Drawing toolbar

Color bar

To display the Color bar, use **View > Toolbars > Color Bar**. The toolbar then appears at the bottom of the workspace and displays the current color palette.

Figure 10: Color bar

This toolbar lets you rapidly choose the color of the various objects (lines, areas, and 3D effects) in your drawing. The first box in the panel corresponds to transparency (no color).

Choosing a color palette

You can access several specialized color palettes in Draw, as well as change individual colors to your own taste. This is done using the Area dialog, reached by choosing **Format > Area**, as shown in Figure 11, or the *pouring can* icon on the Line and Filling toolbar (Figure 7).

On the Area dialog, choose the **Colors** tab (Figure 12).

To load another palette, click on the **Load Color List** button (circled). The file selector dialog asks you to choose one of the standard OOo palettes (files bearing the file extension `*.soc`). For example, `web.soc` is a color palette that is particularly adapted to creating drawings that are going to appear in Web pages. The colors will correctly display on workstations with screens displaying at least 256 colors.
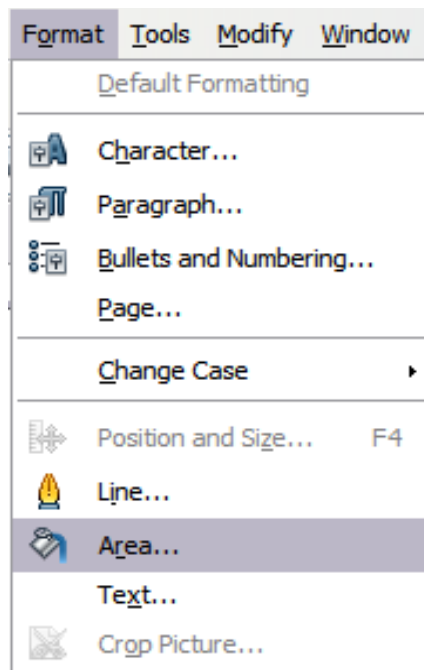
Figure 11: Displaying the Area
dialog from the menu bar

A more detailed description of color palettes and their options can be found in Chapter 8 (Tips and Tricks).
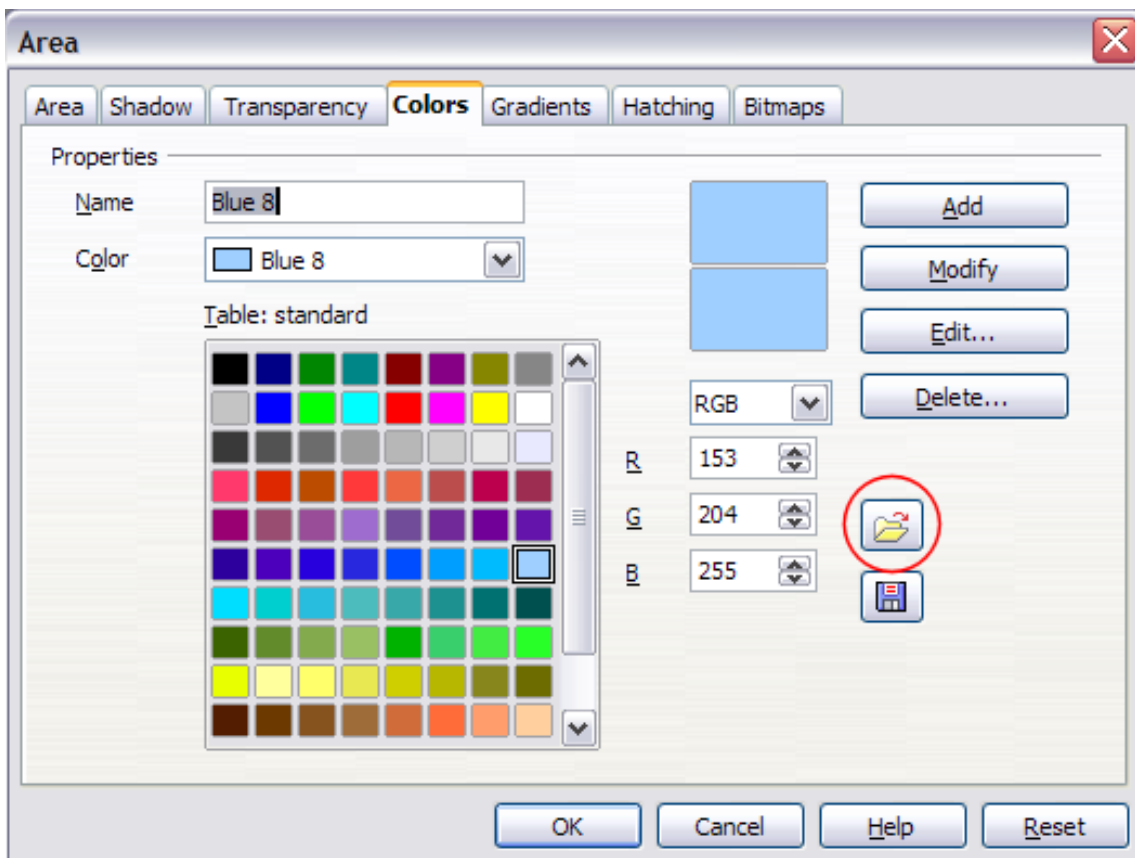

Figure 12. Changing the color palette
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Options toolbar

The Options toolbar lets you activate or deactivate various drawing aids. The Options Bar is not one of the toolbars displayed by default. To display it, select **View > Toolbars > Options**.

Figure 13: Options toolbar

The options are described in the table below and in greater detail in other chapters of the *Draw Guide*.

Table 1: Functions on the Options toolbar

Icon	Function
	Rotation Mode after Clicking Object
	Display (or hide the) Grid
	Display (or hide the) Guides
	Display (or hide Guides) When Moving
	Snap to Grid
	Snap to Guides
	Snap to Page Margins
	Snap to Object Borders
	Snap to Object Points
	Allow Quick Editing
	Select Text Area Only
	Double-click to edit Text
	Simple Handles
	Large Handles
	Create Object with Attributes
	Exit All Groups

Drawing grid and guides

Draw offers a grid as a drawing aid. The grid can be turned on or off by clicking on the **Grid** icon on the Options toolbar. The points of the grid displayed on the screen are not shown on the printed drawing. The color, spacing, and resolution of the grid points can be individually chosen for each axis. This is described in more detail in Chapter 8 (in the section titled "Configuring the grid").

Guides are special "helper lines" that can be turned on or off by clicking on the **Guides** icon on the Options toolbar. Draw offers a "Snap" function, with which you can place drawings exactly on these guides or on a grid point, a page margin, or a border or point of another object. All snap functions are described in detail in Chapter 8 (Tips and Tricks).

Showing the position of the object while moving it makes positioning the object much easier. If the Guides function is activated, pairs of vertical and horizontal lines enclosing the object are shown while moving the object. These lines extend to the edges of the drawing area. This function is also described in detail in Chapter 8.

Floating and moving toolbars

Many toolbar icons are marked with a small arrow. The arrow indicates that this icon has additional functions. Click the arrow, and a submenu appears, showing its additional functions (see Figure 14). Such an icon, and its associated submenu, can often become a floating toolbar. The floating-toolbar capability is common to all components of OOo.

To keep this submenu displayed on your screen, but in a different position as a *floating toolbar*, click the area at the top of the submenu, drag it across the screen to a location you want, and then release the mouse button. Floating toolbars can be redocked on an edge of the screen or within one of the existing toolbar areas at the top of the screen, as described in Chapter 4 (Changing Object Attributes).

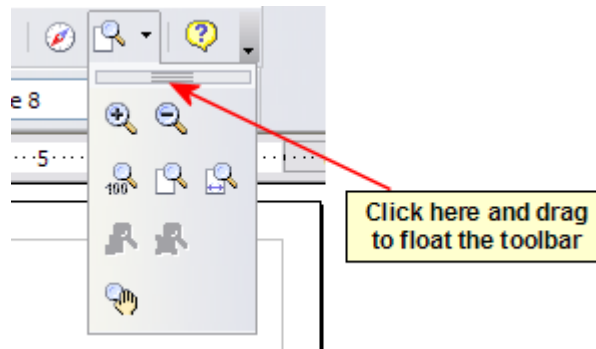| **Note**	When a submenu is made into a floating toolbar, the icon on the existing toolbar remains in the toolbar and always shows the last command you used. This means that the icon you see on your screen may differ from any icon shown in this Guide.

*Figure 14: An arrow next to an icon
indicates additional functions.*

Tip	When you double-click on an icon on a floating toolbar, the command corresponding to that icon will run. You can then repeat this action as often as you like. To exit from this mode, press the *Esc* key or click on another icon (for example ☑). This may not work for every icon on every toolbar.

Similarly, click on the arrow on the title bar of a floating toolbar to display additional functions (see Figure 15).
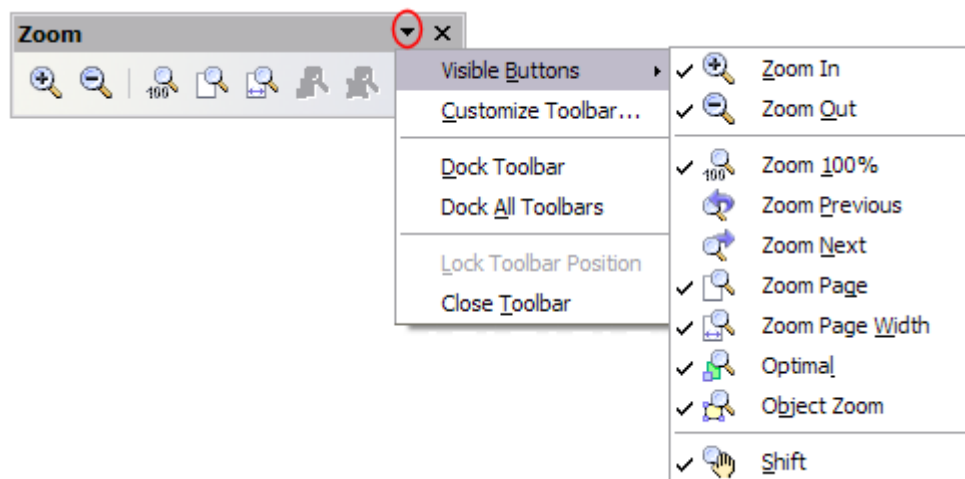

*Figure 15: An arrow on a floating toolbar indicates
that there are additional functions available.*

To show or hide icons defined for the selected toolbar, choose **Visible Buttons** from the drop-down menu. Visible icons have a checkmark next to them. Click on icons to select or deselect them.

In Draw, as in all OOo components, you can move a toolbar to a new position by using the mouse. Hover the mouse pointer over the end of the toolbar (look for two vertical columns of dots) until the pointer changes shape, and then drag-and-drop as desired.

Customizing toolbars

You can customize toolbars in several ways, in addition to those described in the previous section. For example, you can add functions to a toolbar, move tools between toolbars, and create new toolbars. To do this, choose **View > Toolbars > Customize**, select the **Toolbars** tab (Figure 16), select the toolbar you want to change, and then select the desired buttons for that toolbar. Each toolbar has a different list of buttons. For details, see Chapter 14 (Customizing OpenOffice.org) in the *Getting Started* guide. That chapter also describes how to customize menus.
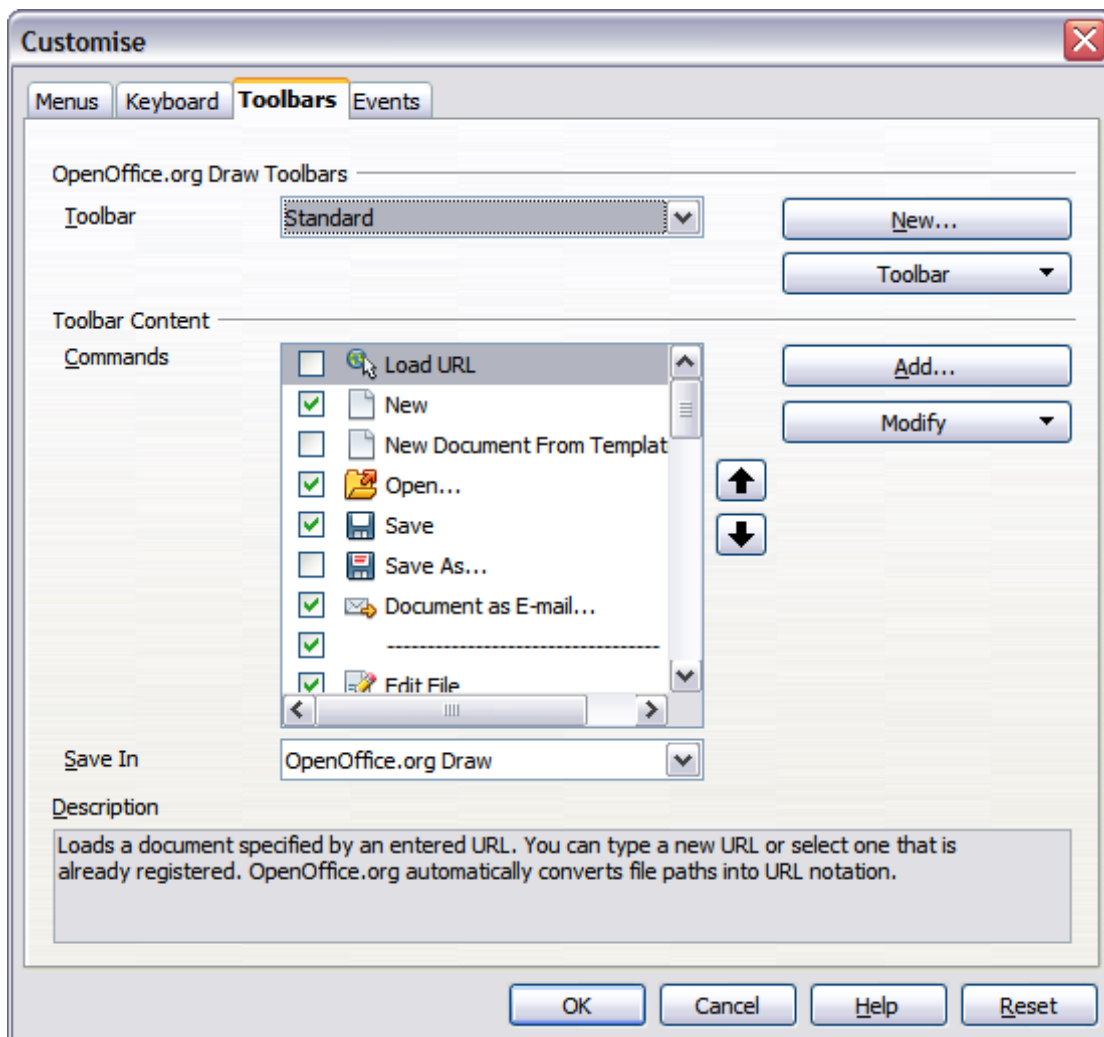
Figure 16: Customizing a toolbar