Chapter 6 Next Draw

Draw is a vector drawing application that works on object basis. Graphics objects are composed of line, rectangles, 3D shapes or other objects or regions. Each of these objects has a set of properties, such as size, surface color, border color, etc. When you are editing your drawing, you are actually modifying these object properties. Because Draw works on vectors, you can freely scale your graphics, rotate your graphics without fear of losing any details.

You can use Draw to create 3D objects, character cliparts. You can export your drawings into various graphics formats or icons or buttons for web usage.
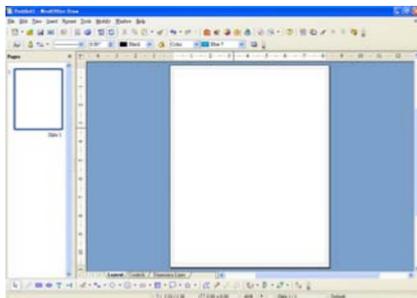

Fig. 6-1

Draw Basics

Vector Graphics and Bitmaps

Drawing objects in Draw can be classified basically into: vector graphics and bitmaps.

Fig. 6-2

Fig. 6-3

Vector graphics are mode up of straight lines and curves. Lines and curves are drawn through control points based on formulas. For example, a rectangle is drawn with 4 straight lines and a semi-circle is drawn with a curve and a straight line.

Bitmaps are made up of red, green and blue color pixels. You can change a bitmap image through editing its pixels. Bitmap size is related to output devices. In a higher resolution device, same bitmap will appear smaller. In a low resolution devices, same bitmap will appear bigger and blur.

Sometime you need to edit your images in Draw. For example, when images imported from scanners and digital cameras, the looks of the images might be deviated from their originals.

Master View and Slide View

Each canvas is made up of two parts: background and slide content.

In "Slide View" mode, you can edit the contents of the current slide/canvas. For example, add text, graphics, etc. The Object Bar on top will switch to provide a list of functions relevant to the current selected object.

In "Master View" mode, you can edit the content of the slide background. For example, add text, graphics, etc. In general, there is one background per drawing. Background may contain company logo, company name, page number, date, etc.

Editing Drawing

Drawing Shape

1. After Draw starts, you will find a list of icons on the bottom Tool Bar. (Fig. 6-4)

Fig. 6-4

2. Click on the "Rectangle" icon, a screen pops up with choices of rectangle, square, circle, ellipse, etc.

3. Select your desired object and drag it to your Draw document.

4. You will find 8 control points on the boundary of the object. You can drag and drop the control points to manipulate the object, such as changing its size.

5. Similarly, there are other options on the bottom Tool bar of your document window, such as "Ellipse". You can choose "Ellipse", "Circle", "Ellipse Pie", "Circle Pie", etc. Inside the "3D Objects" icon group, you have "Cube", "Sphere", "Cone", "Cylinder", etc. You can select one and then drag-and-drop it into your document.

Vector Graphics Object Properties

Vector graphics objects have a set of attributes including: border line style, line width, area style/filling, etc. After you have selected the object, the Object Bar will change to provide a list of relevant functions for you to edit the selected object. (Fig. 6-5)

Fig. 6-5

● Select "Line Style" icon to change the line style of the object.
● Select "Line Width" icon to change the line width of the object.
● Select "Line Color" icon to change the line color of the object.
● Select "Area Style/Filling" icon and then the "color" icon to change the filled color of the ob ject.

Using Connector

Connectors can connect the glue points of different objects. The basic shapes included in Draw are all created with default glue points. For example, a rectangle has 4 glue points, one in the middle of each side.

Click on the arrow besides the "Connector" icon in the bottom Tool Bar, a small "Connectors" window appears. You can move this window around and choose from it different types of connectors. For example, "curve connector", "straight connector with arrows", etc. (Fig. 6-6)

First insert a cone and a half sphere.

Then click on the "Connector" icon. Use your mouse to click on a glue point of the cone and insert the connector to join another glue point of the half sphere. Now, even when you move the cone and/or the half sphere, they will stay connected through the connector. (Fig. 6-7)

Fig. 6-6

Fig. 6-7

Rotating Objects

1. Click on the "Effects" icon on the bottom Tool Bar and select "Rotate" in the pop-up window. (Fig. 6-8)
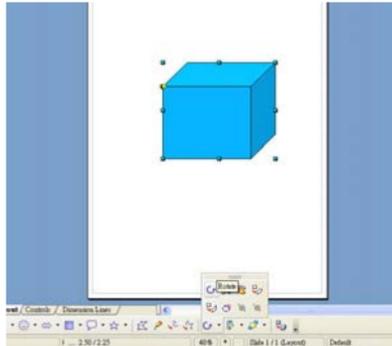

Fig. 6-8

2. Select an object with your mouse, you will see eight red control points appearing in the border of the object. You can now use the mouse to rotate the object. (Fig. 6-9)

3. There is a black dot in the center of the object which represents the center for rotating the object. You can use the mouse to move the center to achieve different effects. (Fig. 6-10)
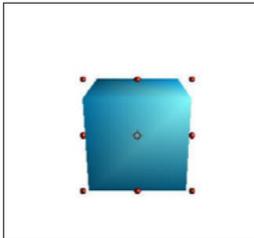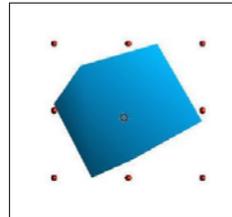

Fig. 6-9

Fig. 6-10

Editing Text Objects

Inputting Text

When you have to insert text in your Draw document, you should consider whether the text is plain text or text object which you can scale, rotate...

1. Press the "Text" icon on the bottom Tool Bar and select the "Text" option. (Fig. 6-11)

Fig. 6-11

2. Then drag-and-drop your mouse to create an input text box. You can then enter text in the newly created text box. (Fig. 6-12)

3. After you have entered some text, you can use the mouse to select the text and apply different effects such as typefaces, font size, bold, italic, etc. to the text as if you were working with Writer document. (Fig. 6-13)
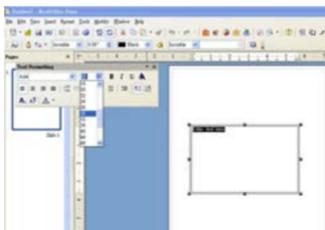
Fig. 6-12
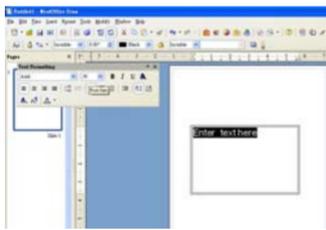
Fig. 6-13

4. Just click in any area outside the text box and you will exit from the text box "Edit" mode. Double click in the text box will allow you to edit the text in the text box again. Single click in the text box to select the text box (you will see 4 control green points in the border), you can then use the mouse to move the text box or re-size it.

5. Press the "Effects" icon on the bottom Tool Bar to select the "Rotate" effect. You can then use the mouse to rotate the text.

Using Callouts

1. Press the "Text" icon on the bottom Tool Bar and select an "Callouts" option. (Fig. 6-14) Then drag-and-drop your mouse to create a "Callouts" text box.

2. When light blue control points appear, you can move the "Callout" text box with your mouse or re-size it. You can adjust the border lines of the "Callout" text box using the function icons in the Object Bar, such as making the border thicker, etc.

If you double click the border lines of the "Callouts" text box, its border color will change to gray, you can then enter text in the "Callouts" text box. (Fig. 6-15)

Fig. 6-14

Fig. 6-15

3D Text

After you have input some text, you can use the 3D option to convert your text to 3D.

1. First, select the text and then menu "Modify" → "Convert" → "To 3D". (Fig. 6-16)

2. After converting the text to 3D, you can apply the previous described method to rotate it or change its size. (Fig. 6-17)

Fig. 6-16

Fig. 6-17

Setting 3D Effect

No matter the object is a 3D text or a 3D object, you can apply various effects on it.

1. First select the text, right click on it to bring up a menu and select "3D Effects". (Fig. 6-18)

2. In the pop-up dialog box, you can setup various special effects, such as lighting effect, color effect, etc. (Fig. 6-19)
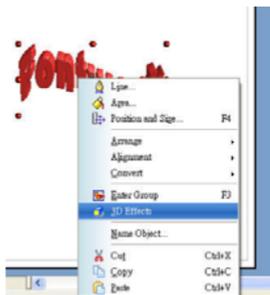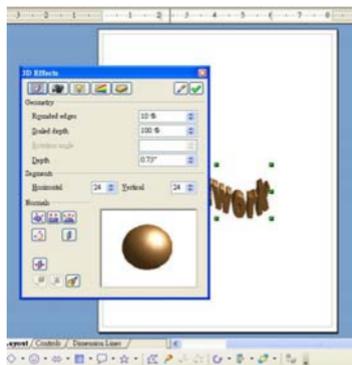

Fig. 6-18

Fig. 6-19

Twist and Distort Objects

You can freely twist and distort objects by using the "Effects" icon in the bottom Tool Bar. A small "Effect" window will appear. You can move this window freely. (Fig. 6-20)
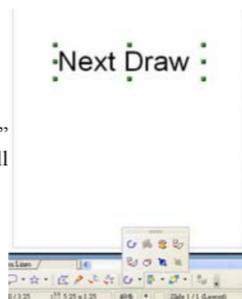
Fig. 6-20

Text object is different from vector graphics object. In Draw, text is usually not saved in vector graphics format, but as text object format. Text objects saved as "text" format cannot accept the general vector graphics functions such as flip, edit curves, etc. To apply general vector graphics functions to text, first convert your text object into a vector graphics object by selecting menu "Modify" → "Convert" → "To Curve".

Now you can apply special effects. For example, flip:

1. Select the object, click on the "Effects" icons on the bottom Tool Bar and select "Flip" option. (Fig. 6-21)

2. A "Flip axis line" will appear on the text object.

3. Move the "Flip axis line" to the bottom of the text object.

4. Keep the object as selected and press <Crtl-C> to copy the object into clipboard and <Crtl-V> to insert a copy of it.

5. Move the copied object to the bottom of the "Flip axis line" to complete the flipping process. (Fig. 6-22)
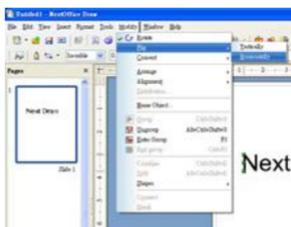
Fig. 6-21

Fig. 6-22

Or you can apply the "Distort" function to the selected text.

1. Select the object, click on the "Effects" icons on the bottom Tool Bar and select "Distort" option .(Fig. 6-23)

2. Move the cursor to one of the 8 control points on the object. Left click on the mouse to move the sides of the object.

3. When you have achieved your desired effect, release the mouse button and the object will fit into the boundary. (Fig. 6-24)
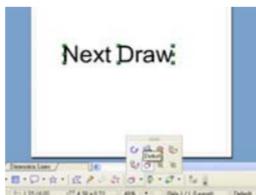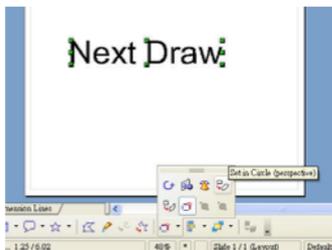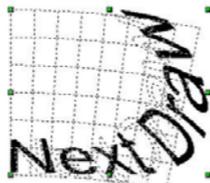

Fig. 6-23

Fig. 6-24

Or you can apply the "Set in circle (perspective)" function to the selected text.

1. Select the object, click on the "Effects" icons on the bottom Tool Bar and select "Set in circle (perspective)" option .(Fig. 6-25)

2. Move the cursor to one of the 8 control points on the object. Left click on the mouse to move the sides of the object.

3. When you have achieved your desired effect, release the mouse button and the object will fit into the boundary. (Fig. 6-26)
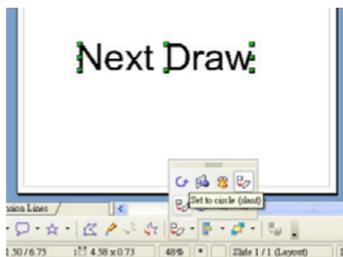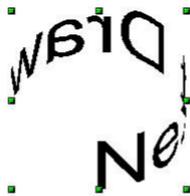

Fig. 6-25

Fig. 6-26

Or you can apply the "Set in circle (slant)" function to the selected text.

1. Select the object, click on the "Effects" icons on the bottom Tool Bar and select "Set in circle (slant)" option . (Fig. 6-27)

2. Move the cursor to one of the 8 control points on the object. Left click on the mouse to move the sides of the object.

3. When you have achieved your desired effect, release the mouse button and the object will fit into the boundary. (Fig. 6-28)

Fig. 6-27

Fig. 6-28

Aligning Objects

Sometimes you may like to align objects. For example, in preparation of your company organization chart, you will need to align several rectangular objects horizontally.

1. First select the objects to be align horizontally or vertically.

2. Press the mouse right button to to bring up a menu, select "Top" (Fig. 6-29)

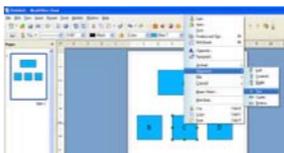3. Press the mouse right button to to bring up a menu, select "Distribute" (Fig. 6-30)

Fig. 6-30

Fig. 6-29

4. In the "Distribution" dialog, select horizontal "Spacing".

Special Effects

Duplicating Objects to Creating Special Effect

You can achieve special effect by object duplication. For example, you can control the number of copies, positions, rotating angles, color etc. Steps are:

1. First select the object.

2. Press menu "Edit" → "Duplicate" to pop up the "Duplicate" dialog box. (Fig. 6-31)

3. Select the number of copies, such as '5', rotating angle to 15 degree, and press <OK> to confirm. (Fig. 6-32)
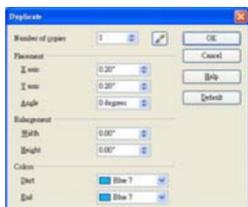

Fig. 6-31

Fig. 6-32

Cross-fading Objects

Cross-fading objects allows you to record the whole morphoring procedure from one object to another. You can create special effect with cross-fading.

1. First prepare two different objects and use your mouse to select the two objects. (Fig. 6-33)
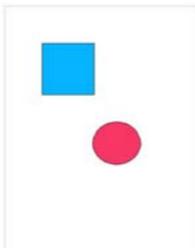
2. Select menu "Edit" → "Cross-fading". (Fig. 6-34)
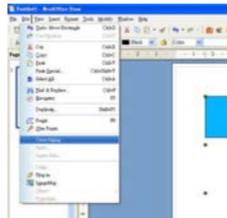

Fig. 6-33

Fig. 6-34

3. In the "Cross-fading" dialog, select the number of increment and check "Cross-fading" and "Same orientation" attributes if necessary. (Fig. 6-35)

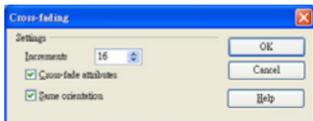4. You will get the effects similar to that shown in Fig. 6-36.
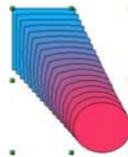

Fig. 6-35

Fig. 6-36

Combining 3D Objects

Draw has very powerful 3D capability, such as combining two different 3D objects to form a new object.

1. Click on the "3D Controller" icon on the bottom Tool Bar". In the "3D Effects" dialog box, select a sphere and drag out a sphere on your slide. Click on "Color" icon in the Object Bar on top and change the color of the sphere to orange.

2. Click again on "3D Controller" icon on the bottom Tool Bar. In the "3D Effects" dialog box, select a cube and drag out a cube on your slide. Click on "Color" icon in the Object Bar on top and change the color of the sphere to magenta. (Fig. 6-37)
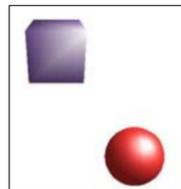

Fig. 6-37

3. Now, combine the cube with the sphere.

4. First select the sphere. Right click on the mouse and in the pop-up menu, select "Cut" or <Crtl-X> to cut the sphere into clipboard.

5. Then select the cube. Right click on the mouse and in the pop-up menu, select "Enter group". Select menu "Edit" → "Paste" or press <Crtl-V> to insert the sphere from clipboard. (Fig 6-38)

6. Now, drag the sphere into the cube. Right click on the mouse and in the pop-up menu, select "Exit Group" or press <Crtl-F3> to exit group function. (Fig. 6-39)
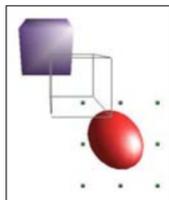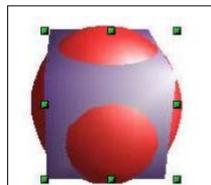

Fig. 6-38

Fig. 6-39

You can use 3D effect to create very attractive visual effects for your drawings or presentation.