

Vectorian Inc.

Vectorian Giotto

User's Manual

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<http://www.vectorian.com>

Part I: How to make an animation in Giotto

Table of Contents

PART I: HOW TO MAKE AN ANIMATION IN GIOTTO.....	5
1.1 ANIMATION.....	5
1.2 KEY FRAME.....	5
1.3 TWEEN FRAME.....	5
1.4 HOW TO MAKE AN ANIMATION IN GIOTTO?.....	5
PART II: COMMAND AND MENU REFERENCE.....	9
2.1 MENUS.....	9
2.1.1 File.....	9
2.1.2 Edit.....	10
2.1.3 View.....	11
2.1.4 Insert.....	12
2.1.5 Modify.....	12
2.1.6 Control.....	13
2.1.7 Window.....	14
2.1.8 Help.....	15
2.2 MAIN TOOLBAR.....	16
New.....	16
Open.....	16
Save.....	16
Undo.....	17
Redo.....	17
Cut.....	17
Copy.....	17
Paste.....	17
Paste in Place.....	17
Clear.....	17
Zoom In.....	17
Zoom Out.....	17
Stop.....	17
Play.....	18
Rewind.....	19
Go To End.....	19
PART III: HOW TO USE DRAWING TOOLS.....	20
INTRODUCTION.....	20
3.1 LINE TOOL.....	20
3.2 INSERT BITMAP TOOL.....	21
3.3 TEXT TOOL.....	21
3.5 RECTANGLE TOOL.....	22
3.6 PENCIL TOOL.....	23
3.7 BRUSH TOOL.....	23
3.8 INK BOTTLE TOOL.....	24
3.9 PAINT BUCKET TOOL.....	24
3.10 EYEDROPPER TOOL.....	24
3.11 ERASER TOOL.....	24
3.12 SELECTION TOOL.....	25
3.13 SUBSELECTION TOOL.....	25
3.14 FREE TRANSFORM TOOL.....	26
3.15 FILL TRANSFORM TOOL.....	26
3.16 LASSO TOOL.....	27
3.17 MOVING SHAPE.....	27
3.18 DELETING SHAPE.....	27
3.19 CHANGING PEN AND BRUSH PARAMETERS.....	27
3.20 CHANGING WIDTH AND HEIGHT OF A SHAPE.....	27
3.21 ROTATING A SHAPE.....	28
PART IV: LAYERS.....	29

4.1	WHAT ARE LAYERS?	29
4.2	OPERATIONS ON LAYERS	29
4.2.1	<i>Insert</i>	29
4.2.2	<i>Remove</i>	29
4.2.3	<i>Make layer visible/invisible</i>	29
4.2.4	<i>Lock/unlock layer</i>	30
4.2.5	<i>Rename</i>	30
4.2.6	<i>Send to back</i>	30
4.2.7	<i>Move to front</i>	30
PART V: MORPHING		31
5.1	MORPHING BASICS	31
5.2	CREATING MORPH IN GIOTTO	31
5.3	MODIFYING AND REMOVING MORPH	32
5.4	CONSECUTIVE MORPHS	32
PART VI: TRANSPARENCY (ALPHA BLENDING)		33
6.1	TRANSPARENCY BASICS	33
6.2	APPLYING AND MODIFYING THE TRANSPARENCY	33
PART VII: FILTERS		34
7.1	FILTER BASICS	34
7.2	APPLYING FILTERS	34
7.3	FILTER TYPES	34
7.3.1	<i>Drop Shadow</i>	34
7.3.2	<i>Blur</i>	35
7.3.3	<i>Glow</i>	35
7.3.4	<i>Bevel</i>	36
7.3.5	<i>Gradient Glow</i>	36
7.3.6	<i>Gradient Bevel</i>	37
7.3.7	<i>Adjust Color</i>	38
7.4	REMOVING FILTERS	38
PART VIII: EFFECTS		39
8.1	EFFECTS - BASICS	39
8.2	ASSIGNING, EDITING AND REMOVING EFFECTS	39
8.3	EFFECTS – COMMON OPTIONS	39
8.4	EFFECTS - TYPES	40
	<i>Flash</i>	40
	<i>Merge</i>	40
	<i>Rainbow</i>	40
	<i>Shreds</i>	40
	<i>Blinds</i>	40
	<i>Disco</i>	40
	<i>Wave</i>	40
	<i>Wiggle</i>	40
	<i>Rocking chair</i>	40
	<i>Quiver</i>	40
	<i>Pulse</i>	40
	<i>Circle</i>	41
	<i>Beads on a wire</i>	41
	<i>Rubber band</i>	41
	<i>Falling leaf</i>	41
	<i>Whirlpool</i>	41
	<i>Aircraft landing</i>	41
	<i>Boomerang</i>	41
	<i>Snail's shell</i>	41
	<i>Loop in</i>	41
	<i>Helicopter landing</i>	41
	<i>Elastic impact</i>	41

3D rotate	41
Appear/disappear.....	41
Explode.....	41
Drop shadow.....	41
Blur	42
Simple effects.....	42
Transform.....	42
8.5 EFFECTS - OPTIONS	42
Move:	42
PART IX: SOUND.....	43
9.1 SUPPORTED SOUND FILE FORMATS	43
9.2 INCORPORATING SOUND IN ANIMATION	43
9.3 WHAT YOU SHOULD KNOW	43
<i>Length of animation vs. length of sound file</i>	43
<i>Sounds and layers</i>	43
9.4 SOUND EXPORT SETTINGS	44
<i>Compression</i>	44
<i>Preprocessing</i>	44
<i>Quality</i>	44
<i>Bit rate</i>	44
<i>Sample rate</i>	44
9.5 REMOVING SOUND FROM ANIMATION	45

Part I: How to make an animation in Giotto

In this section you will see how to make a simple animation in Vectorian Giotto. It also describes some basic but essential terms you have to know if you want to use Giotto effectively.

1.1 Animation

Animation is the optical illusion of motion. Animation consists of still images called frames which are displayed sequentially, one after another, in order to create illusion of continuous movement. This is possible due to the way our sense of sight “operates” or, more precisely, persistence of vision phenomenon. There are two types of frames: key frames and tween frames.

1.2 Key frame

A key frame is a single still image (frame) in an animated sequence that occurs at an important point in that sequence. Key frame is always drawn or constructed by the user. Key frames are defined throughout an animation and they define crucial points of motion, for example start of a motion and end of a motion. In hand-drawn animation, an experienced animator would draw key frames and beginner animators would draw tween frames (also known as in-between frames). In computer animation, user of an animation program would draw key frames and computer would insert tween frames.

1.3 Tween frame

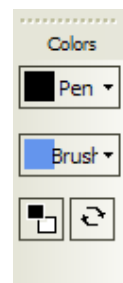
Tween frames actually create illusion of motion. Tween frames are intermediate frames with the purpose of creating smooth transition between two key frames. For smooth appearance, animation requires at least 24 frames per second (fps). For example, you can create only two key frames, one to begin and one to end a movement. Computer program will then create remaining 22 tween frames. The final result would be one second of smooth animation with a little effort from user.

1.4 How to make an animation in Giotto?

This section provides step-by-step instructions on how to make a simple animation in Vectorian Giotto. It illustrates creating of key frames, creating of tween frames and determining how many frames per second (fps) animation will have.

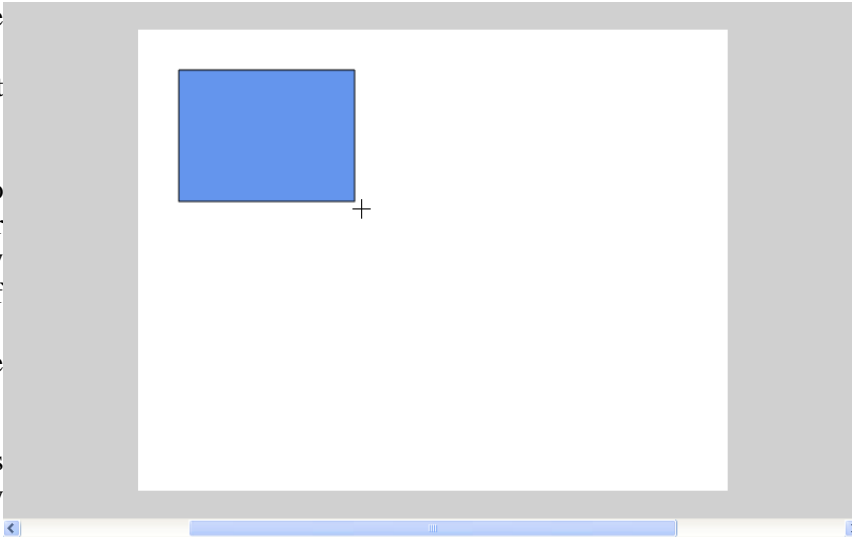


You will draw one rectangle and one oval (ellipse) on the first key frame. From the Drawing Toolbar, which is initially placed in the left hand side of the Giotto’s window, choose Rectangle tool. Now choose color of rectangle’s outline and fill (interior). This is done from Colors Toolbar, which is initially located just below the Drawing Toolbar. By left-clicking the small black triangle just right of Pen label we can choose the color of rectangle’s outline. Similar to that, by clicking the small black triangle just right of Brush label you can choose the color of rectangle’s interior.



In this example you will draw rectangle with black outline and blue interior. All graphic media content (vector images, bitmap images and text objects) are drawn on Stage, the central part of Giotto’s window. You will see crosshair cursor. Press left button of your mouse where you want top left hand corner of your rectangle to be and drag (with left mouse button still pressed). When you release left mouse button a rectangle will be shown on the screen, as seen in the picture.

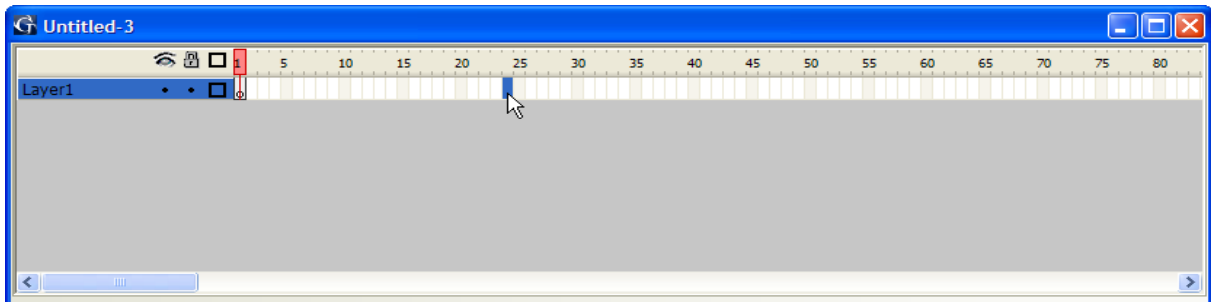
In a similar fashion, add an oval in the top right hand corner. located just to the left of the Rectangle tool. For example, change the Pen color to green and the Brush color to red. You have now finished the drawing of the first key frame, which is at the same time of



Next step is adding the second key frame. For example, choose the 24th

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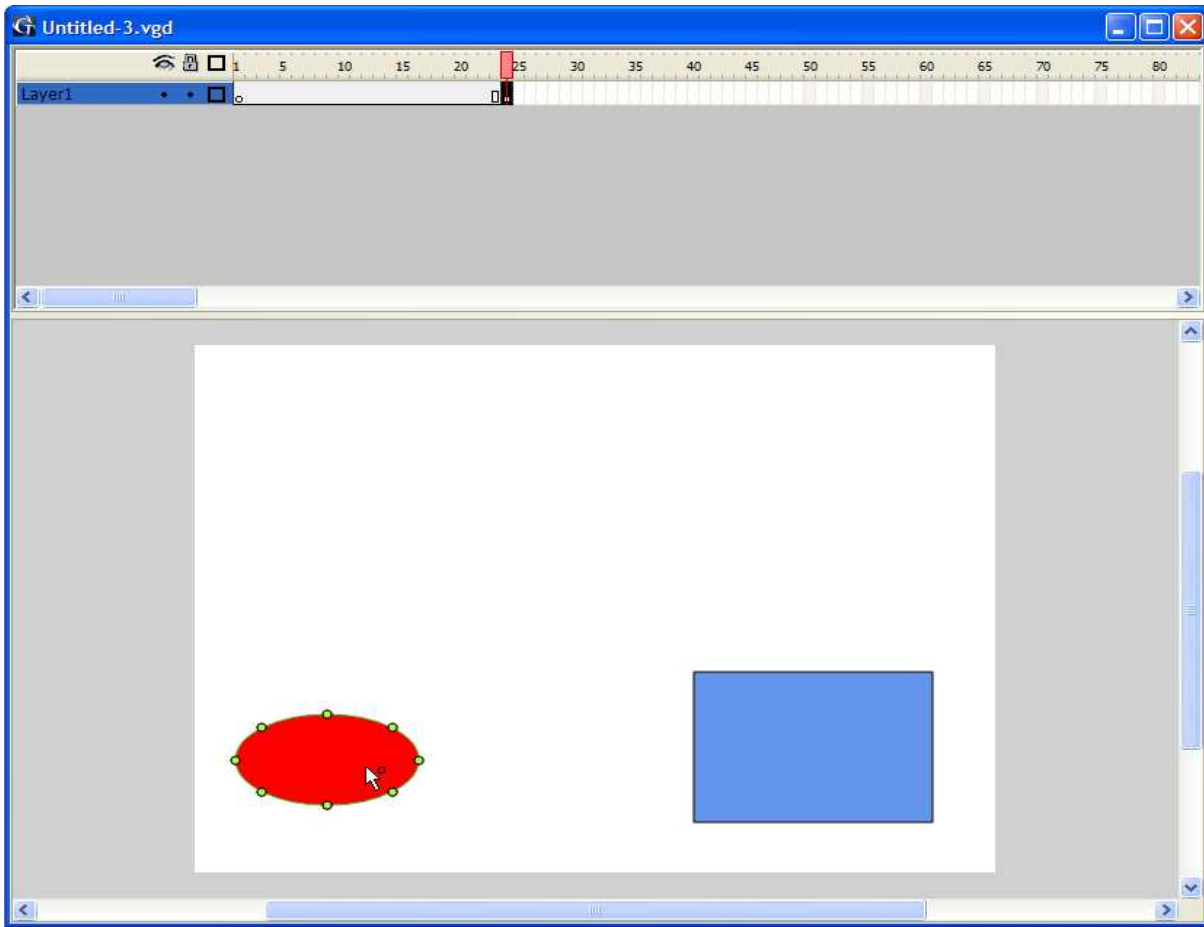


frame on the timeline by left-clicking it.

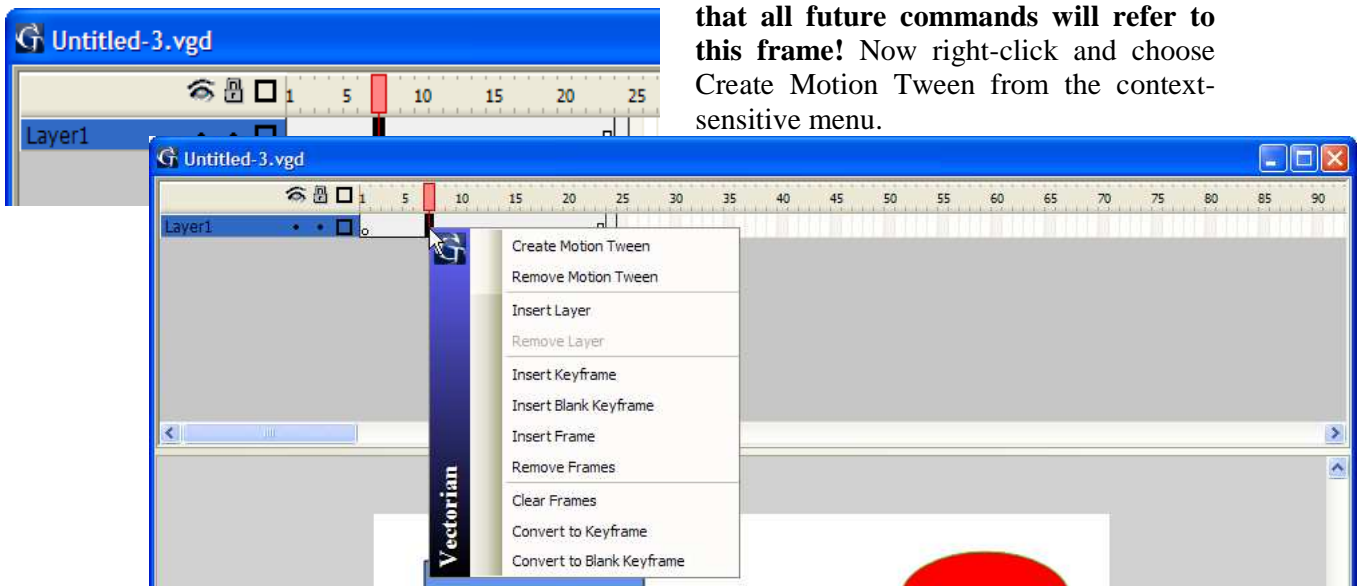
Notice the blue marker on the timeline which shows that all future commands will refer to this frame!

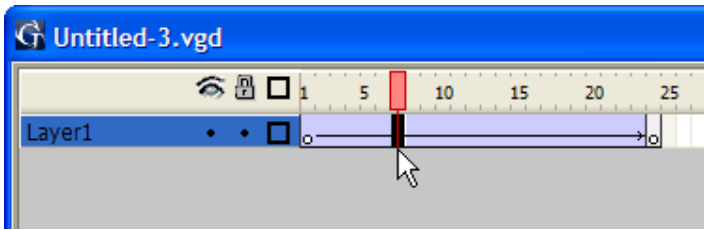


Make this (24th) frame key frame by right-clicking it and choosing Insert Keyframe option from context-sensitive menu. Notice the difference in timeline - frames from 1st to 24th are now marked grey. If the 24th frame is not already selected, select it by left-clicking it on the timeline. Now choose Selection tool from the Drawing Toolbar. Both rectangle and oval have green dot shaped markers around them, which means they are already selected. But you need to select only rectangle in order to move it. Left-click white space on the Stage and notice that green markers have vanished. Select blue rectangle by left-clicking it. Now drag the rectangle (without releasing left mouse button) to the bottom right corner of the Stage. This is the final rectangle's position in animation. In a similar fashion drag red oval to the bottom left corner. You have now finished the drawing of the second key frame, which is at the same time 24th frame of the animation. Your screen should look like this:



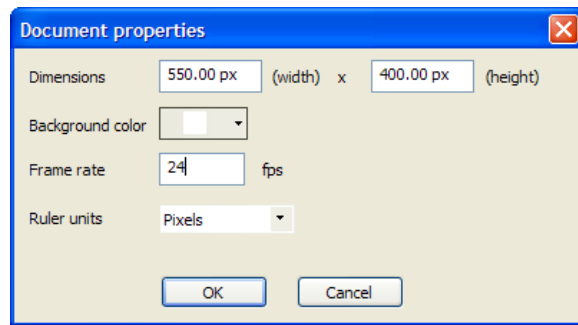
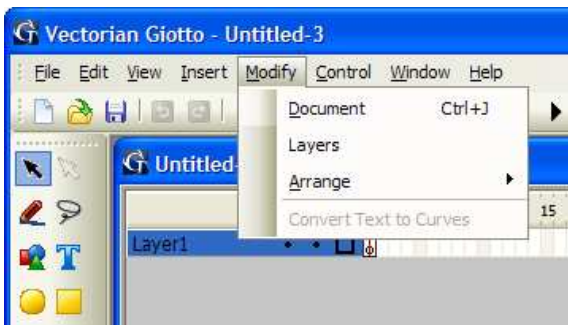
Next step is adding tween frames between first and second key frame. Left-click any of frames between 2nd and 23rd frame on the timeline. **Notice the black marker on the timeline which shows that all future commands will refer to this frame!** Now right-click and choose Create Motion Tween from the context-sensitive menu.





After this, all frames from 2nd to 23rd became tween frames. Notice that frames from 2nd to 23rd on the timeline are now marked blue and there is a line with an arrow pointing to 24th frame. This is a visual indicator that those frames are tweened.

Finally, we will set fps. This is done by invoking Modify/Document command from menu or by pressing Ctrl + J keyboard shortcut. Giotto will open a Document properties dialog where fps can be set. In this dialog we will enter desired fps in the Frame rate field. It is possible to set fps in any moment during the animation process and to change that value any time later.



Now you can see how your animation looks like in a built-in player. Left-click the 1st frame on the timeline, thus making it starting frame for animation playing, and click Play button on the Main Toolbar. Your animation is displayed in the Stage. Notice that Giotto has created all the necessary movements for you. All you had to do is to decide beginning and ending position of rectangle and oval and how many fps you want in your animation.

Part II: Command and menu reference

2.1 Menus

In this section you will find reference to all commands available from Vectorian Giotto's menus. Menus are context sensitive. This means that only menu items relevant to the current work are available to select and execute. Other, inactive menu items are grayed and they can not be selected. However, in an appropriate context previously grayed menu items will become available.

2.1.1 File

File menu contains options that apply to the whole document or Vectorian Giotto.

New

This command creates a new empty file called Untitled-X, where X is next natural number in a sequence. Upon starting, Giotto creates file named Untitled-1 and successive calls to *New* command will create files Untitled-2, Untitled-3 and so on.

New Action Script

This command opens a new Action Script editor. Here you can type Action Script code and save it to file with .as extension.

Open

This command let you open a file previously saved in Giotto. File is opened from a dialog standard for all Windows applications. Just select one of .vgd files and click Open. File is opened for editing.

Close

This command closes the current file without exiting the program. The Close command closes all of the open windows for the current file. If you have made changes to the current file, you are prompted to save those changes.

Save

This command saves the current file. If the file is not previously saved then Save As command is executed and dialog is opened. Enter file name and choose file type (Vectorian Giotto Document .vgd) and click Save. If the file is previously saved the dialog will not open. Old version of a file is overwritten by new version.

Save As

This command saves the current file with a new filename or to a different location. It will automatically be called when you save file for the first time.

Export Flash movie

This command saves the current file in Flash format with .swf extension. You can change filename and location where you want file to be saved to.

Export animation

This command saves the current file in Gif or Avi formats with .gif or .avi extensions, respectively. You can change filename and location where you want file to be saved to.

Recent

Here, you have four recently opened documents available for quick access.

Exit

This command closes all open Giotto files, prompts you to save them and then exits Vectorian Giotto.

2.1.2 Edit

Undo

This command is used to undo (recall) last command. For example, if you have moved an object on the Stage, undo will move it back to previous position. Be careful: not all commands can be recalled! For example, save command can not be recalled.

Redo

This command is the opposite of Undo – while Undo is moving backwards through issued commands, Redo is moving forward.

Cut

This command deletes selected objects (see 3.12 Selection Tool) from the Stage and puts them to the internal clipboard. Objects from internal clipboard can later be pasted on any Giotto's document.

Copy

This command puts selected objects to the internal clipboard but does not delete them from the Stage.

Paste in Center

This command literally pastes contents of internal clipboard or Windows clipboard to the center of the Stage.

Paste in Place

This command is similar to Paste, but it remembers original clipboard contents' coordinates. After pasting, clipboard contents retain their coordinates.

Clear

This command deletes selected objects from the Stage. Objects are not copied into internal clipboard so they can not be pasted later.

Customize

This command enables you to customize Vectorian Giotto's toolbars, shortcut keys and menu appearance.

Sound Export Settings

This command enables you to choose how Giotto will export sounds in your animation.

Preferences

This command enables you to customize Vectorian Giotto's Action Script editor.

2.1.3 View

Go To

Moves through sequence of Movies. There are 4 subcommands you can use to go to the First, Previous, Next, or Last Movie.

Rulers

Shows or hides horizontal and vertical ruler from the Stage. Rulers help you to determine size of objects and to position objects on the Stage more precisely.

Grid

Grid is a pattern of straight lines crossing each other. Use Grid to position objects on the Stage more precisely. This command contains 2 subcommands. If Show Grid is ticked then grid is shown on the Stage, otherwise it is hidden. Edit Grid enables you to customize the Grid.

Zoom In

This command shows objects on the Stage closer, as if the Stage is looked through zoom lens. Therefore objects appear larger and you can change them more precisely.

Zoom Out

This command is the opposite of Zoom In. It shows objects on the Stage further away. Therefore

objects appear smaller.

Magnification

Magnification is just shortcut to several predefined values of zoom, from 25% to 800%.

2.1.4 Insert

Timeline

This command has 4 subcommands, which allow you to insert new Layer, Frame, Keyframe, or Blank keyframe.

Bitmap

This command allows you to insert existing bitmap into current frame. Bitmap may be in Windows Bitmap (.bmp), JPEG (.jpg), TIFF (.tif), PNG (.png), GIF (.gif), or ICO (.ico) format. Respective file extensions are inside parenthesis.

Sound

This command allows you to insert existing sound file into current animation. Sound may in MP3 (.mp3), or Wave Audio (.wav) format. Respective file extensions are inside parenthesis.

Scene

This command allows you to insert new scene (Movie) into current animation.

Intersection

With this command you can insert intersection of multiple shapes on the Stage.

Union

With this command you can insert union of multiple shapes on the Stage.

Difference

With this command you can insert difference of two shapes on the Stage.

2.1.5 Modify

Document

This command opens Document properties window, from which you can set Stage dimensions (in pixels) and background color, frame rate for movie (scene) and units for ruler.

Layers

This command opens Layers window, from which you can set various properties of layers. For details, see Part IV: Layers section in this document.

Arrange

This command contains two subcommands: *Bring to front*, and *Send to back*. *Bring to front* will position selected shape above all other shapes on the Stage. *Send to back* will position selected shape below all other shapes on the Stage.

Convert Text to Curves

This command will convert selected text to curves so you can freely edit its shape, size etc.

2.1.6 Control

Play

This command starts playback of an animation in the built-in player. For details about animation see

Part I: How to make an animation in Giotto section.

Stop

This command stops playback of an animation which is currently played in the built-in player. Playback can be continued with Play command.

Rewind

This command rewinds playback of an animation or, if an animation is not played back, jumps to the first frame causing subsequent changes to be performed on that frame. It should be applied after Stop command. After sequence of Stop-Rewind-Play commands, animation is restarted.

Go to End

This command causes playback of an animation to finish. It jumps to the last frame causing subsequent changes to be performed on that frame.

Step Forward One Frame

With this command you can move one frame forward in animation.

Step Backward One Frame

With this command you can move one frame forward in animation.

2.1.7 Window

New Window

This opens new window, i.e. another view of the current animation. You can have multiple views of the same animation so, for example, you can see multiple frames at the same time.

Cascade

This command shows all opened windows one on the top of another, so you can easily access all of them.

Tile

This command shows all opened windows tiled, i.e. stacked evenly spaced on your screen. This way you can see all views of an animation at the same time.

Arrange Icons

??
??

Toolbars

This command has 3 subcommands which allow you to show or hide Main Toolbar, Drawing Toolbar, or Status Bar.

Morph Shapes

When ticked, Morph Shapes window is shown, otherwise it is hidden.

Object Properties

When ticked, Object Properties window is shown, otherwise it is hidden.

Filters

When ticked, Filters window is shown, otherwise it is hidden.

Scenes

When ticked, Scene window is shown, otherwise it is hidden.

Compiler Errors

When ticked, Compiler Errors window is shown, otherwise it is hidden.

Shape

When ticked, Shape window is shown, otherwise it is hidden.

Movie Browser

When ticked, Movie Browser window is shown, otherwise it is hidden.

Library

When ticked, Library window is shown, otherwise it is hidden.

Action Script Editor

When ticked, Action Script Code window is shown, otherwise it is hidden.

2.1.8 Help

Help Topics

Displays online help from Giotto's web site.

Buy Now

This option allows you to purchase Vectorian Giotto online from Giotto's web site.

About Vectorian Giotto

Displays information about Vectorian Giotto program.

2.2 Main Toolbar

In this section you will see what options Vectorian Giotto's main toolbar contains. Main toolbar consists of five sections, each section containing two to five buttons. All toolbar commands are activated by a single click.



New



This command creates a new empty file called Untitled-X, where X is next natural number in a sequence. Upon starting, Giotto creates file named Untitled-1 and successive calls to *New* command will create files Untitled-2, Untitled-3 and so on.

Open



This command let you open a file previously saved in Giotto. File is opened from a dialog standard for all Windows applications. Just select one of .vgd files and click Open. File is opened for editing.

Save



This command saves the current file. If the file is not previously saved then Save As command is executed and dialog is opened. Enter file name and choose file type (Vectorian Giotto Document .vgd) and click Save. If the file is previously saved the dialog will not open. Old

version of a file is overwritten by new version.

Undo



This command is used to undo (recall) last command. For example, if you have moved an object on the Stage, undo will move it back to previous position. Be careful: not all commands can be recalled! For example, save command can not be recalled.

Redo



This command is the opposite of Undo – while Undo is moving backwards through issued commands, Redo is moving forward.

Cut



This command deletes selected objects (see 3.12 Selection Tool) from the Stage and puts them to the internal clipboard. Objects from internal clipboard can later be pasted on any Giotto's document.

Copy



This command puts selected objects to the internal clipboard but does not delete them from the Stage.

Paste



This command literally pastes contents of internal clipboard or Windows clipboard to the center of the Stage.

Paste in Place



This command is similar to Paste, but it remembers original clipboard contents' coordinates. After pasting, clipboard contents retain their coordinates.

Clear



This command deletes selected objects from the Stage. Objects are not copied into internal clipboard so they can not be pasted later.

Zoom In



This command shows objects on the Stage closer, as if the Stage is looked through zoom lens. Therefore objects appear larger and you can change them more precisely.

Zoom Out



This command is the opposite of Zoom In. It shows objects on the Stage further away. Therefore objects appear smaller.

Stop



This command stops playback of an animation which is currently played in the built-in player. Playback can be continued by pressing Play button.


Play




This command starts playback of an animation in the built-in player. For details about animation see

Part I: How to make an animation in Giotto section.

Rewind

 This command rewinds playback of an animation or, if an animation is not played back, jumps to the first frame causing subsequent changes to be performed on that frame. It should be applied after Stop command. After sequence of Stop-Rewind-Play commands, animation is restarted.

Go To End

 This command causes playback of an animation to finish. It jumps to the last frame causing subsequent changes to be performed on that frame.

Part III: How to use drawing tools

Introduction

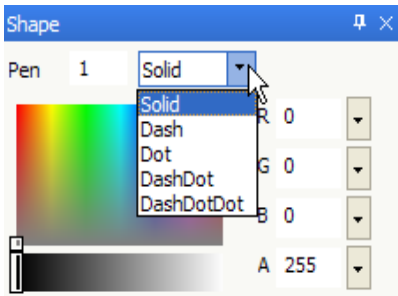
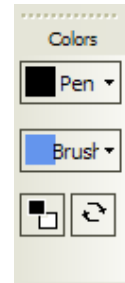


In this section you will see how to use various drawing tools present in Vectorian Giotto. All drawing tools are selected from the Drawing Toolbar, which is initially visible and placed in the left hand side of Giotto's window. If you do not see it, tick the View/Drawing Toolbar option. All drawing tools are used in pretty much the same way: select the drawing tool you want by left-clicking it and then do some action on the Stage (e.g. draw an object or select an object). Giotto has sixteen drawing tools: Selection, Sub-selection, Line, Lasso, Insert Bitmap, Text, Oval, Rectangle, Pencil, Brush, Free Transform, Fill Transform, Ink Bottle, Paint Bucket, Eyedropper and Eraser. Each drawing tool is described in detail in the following subsections. Pen and Brush tools, which are located in the Colors Toolbar, are closely related to drawing tools. This toolbar is initially located just below the Drawing Toolbar. Some Pen and Brush options are located in the Shape window which is initially placed in the right hand side of Giotto's window. Usage of Pen and Brush is also described in detail.

3.1 Line Tool

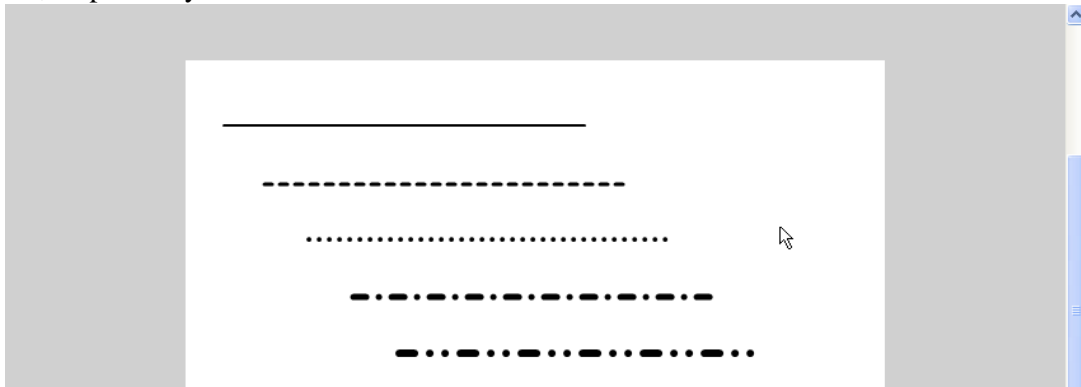


This tool is used to draw a line on the Stage. Select Line Tool icon from the Drawing Toolbar and left-click on the Stage where you want the starting point of a line to be. Then drag the mouse and release left button where you want the ending point of a line to be. The color of the line you have just drawn is a color that is selected as Pen color in the Colors



Toolbar. By left-clicking the small black triangle just right of Pen label you can change the color of the line. Now take a look at the Shape window.

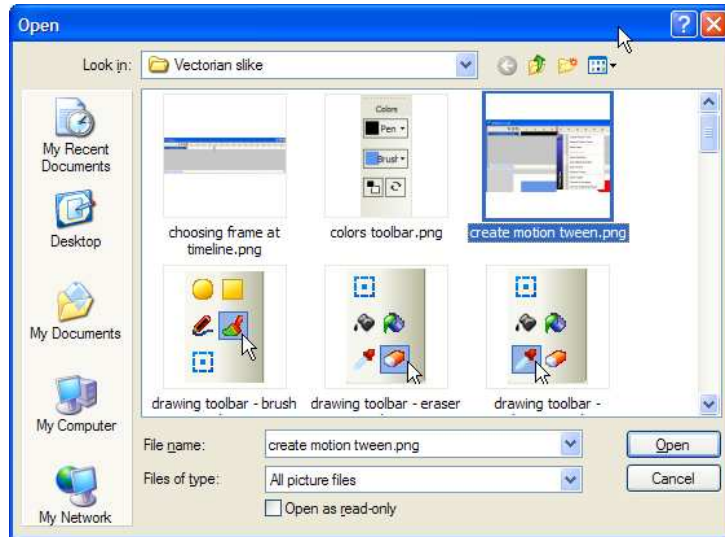
There you can change width, type, color, and transparency of the Pen. Note that those settings should be set before you draw the line. Width is a whole number between 0 and 10, inclusive. Pen type can be: Solid, Dash, Dot, Dash-Dot, and Dash-Dot-Dot. Color can be changed by dragging the white square on the color palette or by typing values for Red, Green, and Blue components or by choosing those values from slider which opens after clicking small black triangle next to R, G, or B labels. Transparency is set in a similar fashion (A label). You can see effects of different Pen widths and types in the picture. There are 5 lines with widths of 2, 3, 4, 5, and 6, respectively and types Solid, Dash, Dot, Dash-Dot, and Dash-Dot-Dot, respectively.



3.2 Insert Bitmap Tool



This tool is used to insert a bitmap picture on the Stage. Select it and Windows will open standard dialog where you can choose which picture you want to insert. Left-click the picture you want to insert and click Open. Giotto will insert the selected picture on the Stage. There is a chance that picture is too small or too large and you want to change its dimensions. This is done using the Free Transform tool so you can look for that section in this manual. Giotto can insert following types of pictures: bitmap (bmp), JPEG (jpg), TIFF (tif), PNG (png), GIF (gif), and ICO (ico).



3.3 Text Tool

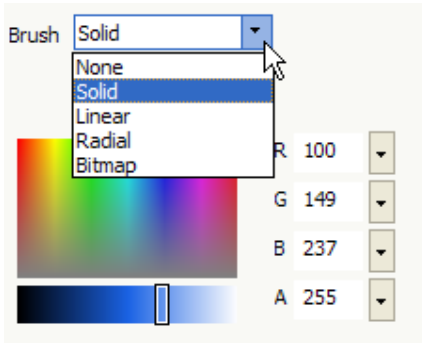


This tool is used to insert text on the Stage. Text toolbar is closely related to this tool. At this toolbar you can change font and size of the text, select if text should be typed **bold** or *italic*, and choose alignment (left, centered, right or justified). Typically, you will first choose desired font, size, and alignment from the Text Toolbar, Brush color from the Colors Toolbar and then select Text Tool. Text toolbar is quite similar to text or formatting toolbars in text processors and you should have no difficulties using it. Select Text Tool from the Drawing Toolbar and move mouse pointer over Stage. Mouse pointer becomes crosshair. Click and drag and you will see dashed rectangle being drawn. This is a visual aid to help you determine the width of the text. When you release left mouse button, you can start typing the text. When you finish typing the text, you can choose 3.12 Selection Tool and, if needed, change text parameters. Another possibility to change color of typed text is using 3.9 Paint Bucket Tool. You can use 3.14 Free Transform Tool to change width and height of typed text, to rotate it or “mirror” it.

3.4 Oval Tool

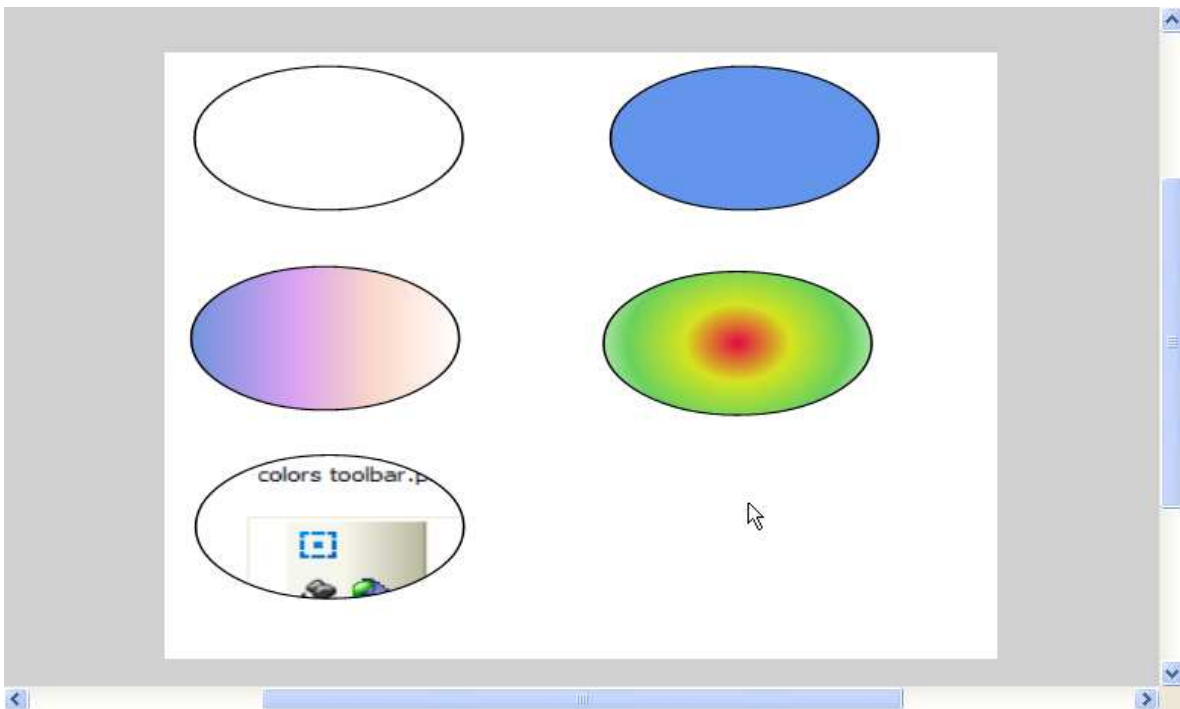


This tool is used to draw an oval shape on the Stage. Select Oval Tool icon from the Drawing Toolbar and click and drag the mouse on the Stage. As soon as you release the button an oval is drawn. Outline color of an oval is a color that is selected as Pen color. Fill color of an oval is a color that is selected as Brush color. For description of Pen tool see description of 3.1 Line Tool. By left-clicking the small black triangle



right of *Brush* label you can change fill color for the shapes that will be drawn afterwards. Now take a look at the Shape window. There you can change type and color of the Brush. There are five types: *None*, *Solid*, *Linear*, *Radial*, and *Bitmap*. If Brush type is *None* than a shape drawn afterwards will have no fill. If Brush type is *Solid* than the fill will be single colored. Brush type *Linear* means that shape will be filled from left to right with several colors that transition smoothly from one another. Brush type *Radial* means that shape will be filled from center to edge with several colors that transition smoothly from one another. Finally, *Bitmap* type means that

shape will be filled with bitmap picture you select. Colors are changed just like Pen colors.



3.5 Rectangle Tool

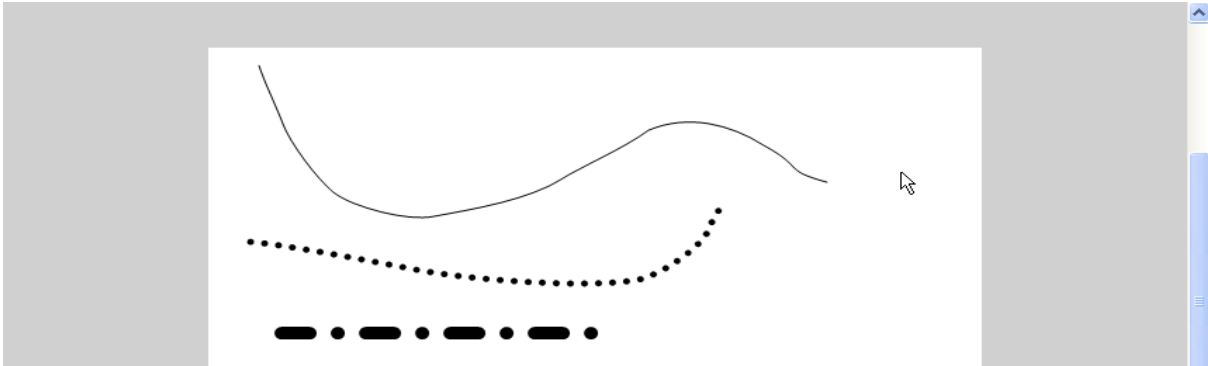


This tool is used to draw a rectangle shape on the Stage. Select Rectangle Tool icon from the Drawing Toolbar and click and drag the mouse on the Stage. The point where you have clicked will be one rectangle corner and the point where you have released mouse button will be diagonal corner. As soon as you release the button a rectangle is drawn. Outline color of an oval is a color that is selected as Pen color. Fill color of an oval is a color that is selected as Brush color.

3.6 Pencil Tool



This tool is used to draw free formed lines on the Stage. Select Pencil Tool from the Drawing Toolbar and click and drag the mouse on the Stage. As you drag the mouse you will see a line being drawn. The color of the line you have just drawn is a color that is selected as Pen color in the Colors Toolbar. In the Shape window you can set width, type and color of the line. A few examples of solid, dotted and dash dotted lines with different widths are given below.

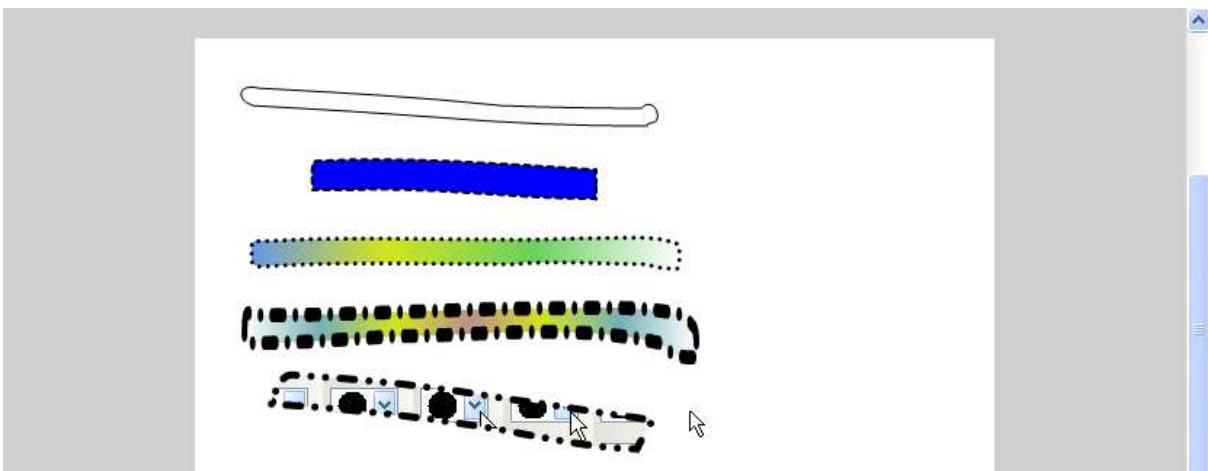
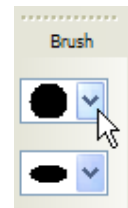


3.7 Brush Tool



This tool is used to draw free formed wide and filled shapes on the Stage. Select Brush Tool from the Drawing Toolbar and click and drag the mouse on the Stage. Brush Tool is very powerful and you can adjust many of its parameters to accomplish various effects. You should now be familiar with most of these parameters located in the Colors toolbar and Shape window.

Two additional parameters are Brush's size and shape. Giotto offers you 10 sizes and 9 shapes of Brush. Size and shape are adjusted through two drop down lists located at Brush toolbar. Choose size from upper list and shape from the list below that one. Some of possible shapes are: circle, ellipse, square, rectangle etc.



This picture shows just a little fraction of many different effects you can accomplish with Brush Tool. Shown are variations in size, shape and type of Brush.

3.8 Ink Bottle Tool



This tool is used to change the Pen (outline) of a drawn shape. If you have drawn some shape (e.g. rectangle), first choose desired Pen parameters (width, type, color, transparency) from the Shape window. Then select Ink Bottle Tool from the Drawing Toolbar and click at the shape you have drawn earlier. Its Pen parameters are now changed.

3.9 Paint Bucket Tool



This tool is used to change the fill of a drawn shape. If you have drawn some shape (e.g. rectangle), first choose desired Brush parameters (type, color) from the Shape window. Then select Paint Bucket Tool from the Drawing Toolbar and click at the shape you have drawn earlier. Its fill parameters are changed.

3.10 Eyedropper Tool

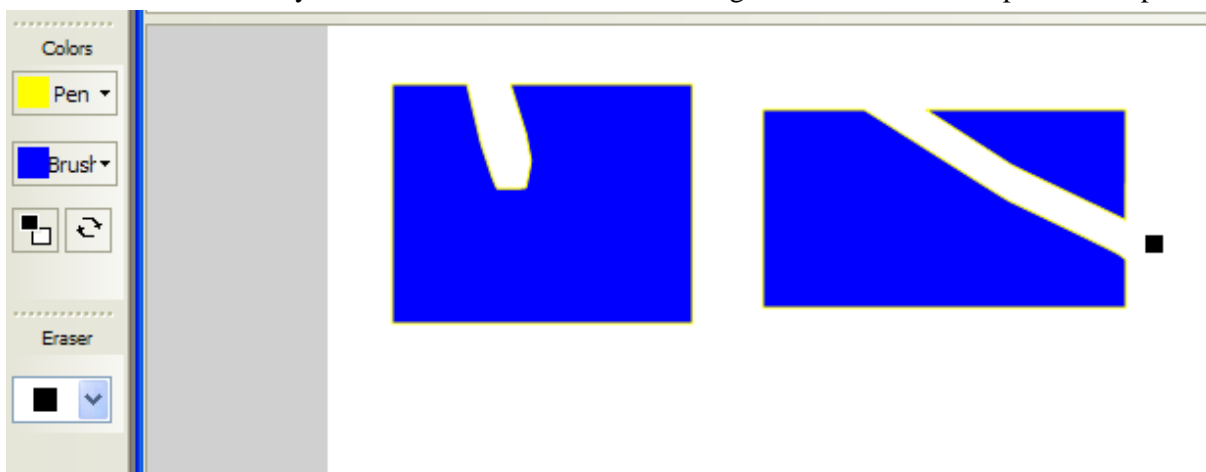


This tool is used to select new Brush color that can be applied afterwards as a fill color of some existing or new shape on the Stage. For example, there are a blue rectangle and a red oval on the Stage and you want fill color of an oval to be the same as rectangle's. First, select Eyedropper Tool from the Drawing Toolbar. Then click at blue rectangle. Two things happened: Brush color in the Colors Toolbar is now blue and Paint Bucket Tool is selected. Finally, click at red oval which instantly became blue.

3.11 Eraser Tool



This tool is used to erase parts of drawn shapes. It should not be used to delete whole shapes. Select Eraser Tool from the Drawing Toolbar and choose size and shape of eraser from the Eraser Toolbar which is opened just below the Colors Toolbar. Notice that mouse pointer is now shaped and sized just like eraser you have chosen. Click at the Stage and drag (without releasing left mouse button). Notice that parts of shapes below eraser are literally erased. But there is one interesting side effect - one shape can be split to

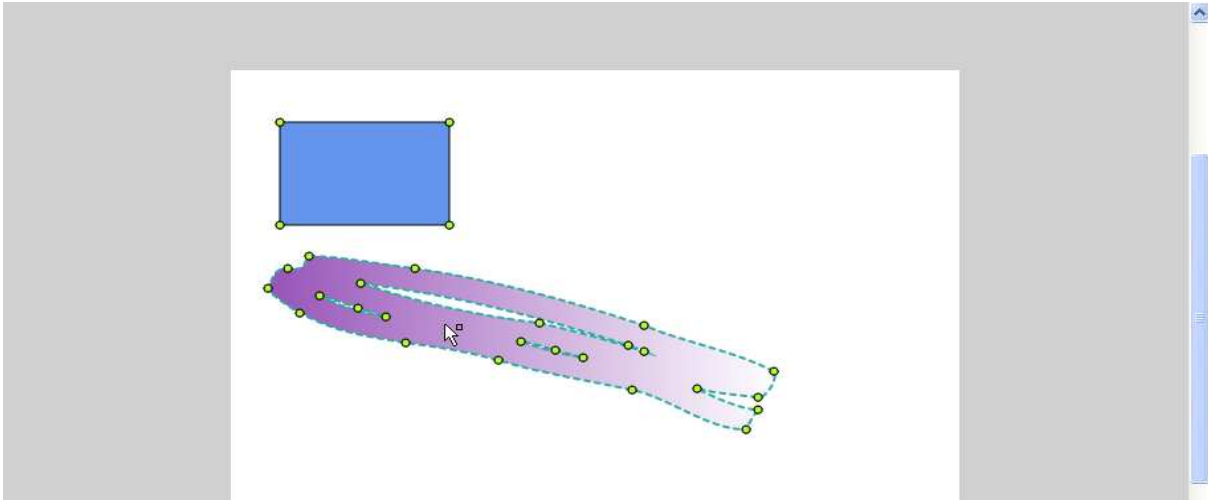


two (or even more) shapes. This is done by erasing interior from one edge to another. In the left hand side of this picture is one shape that remained one shape after erasing and in the right hand side other that is split into two shapes after erasing.

3.12 Selection Tool



This tool is used to select shapes on the Stage. Select Selection Tool from the Drawing Toolbar and move your mouse pointer over any shape on the Stage. Notice the small black outlined square just to the right of mouse pointer - this means that Selection Tool can now be applied by simply clicking the shape. A number of markers (green filled dots) have appeared around the shape. If you want to select more than one shape, after selecting the first one press and hold Ctrl key and click the other shape(s). Notice that multiple shapes now have markers around them. An alternative way of selecting shapes is to select Selection Tool, click anywhere on the Stage and drag. As you drag, notice a rectangle on the Stage. As soon as you release left mouse button, rectangle disappears and all the shapes that are “touched” by rectangle are selected.



While a shape is selected you can: move, delete, change shape's Pen parameters (width, type, color, transparency), and change shape's Brush parameters (type, color).

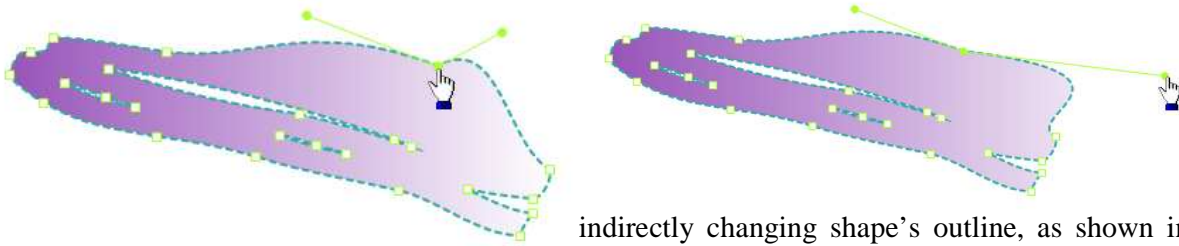
3.13 Subselection Tool



This tool is used to transform shapes by moving their markers. It also can be used to do everything that Selection Tool can do. Select Subselection Tool from the Drawing Toolbar and move your mouse pointer over any shape on the Stage. Notice the small black outlined square just to the right of mouse pointer - this means that Subselection Tool can now be applied by simply clicking the shape. A number of markers (green squares) has appeared around the shape. Notice that markers are now not filled - that is visual difference between Selection and Subselection Tool. If you want to move markers, first place mouse pointer over one of the markers. Notice that pointer now looks like a hand with index finger pointing the marker. Click and drag the marker to desired position. When you release left mouse button the shape will be redrawn to reflect change.



Shapes drawn using Brush or Pencil tools have even more possibilities of transforming. Besides moving markers, you can also move control points in a similar fashion. Each marker has 2 control points which are visible only when you click on marker. Each control point and its corresponding marker form a tangent to shape's outline. By moving control point you move that tangent, thus

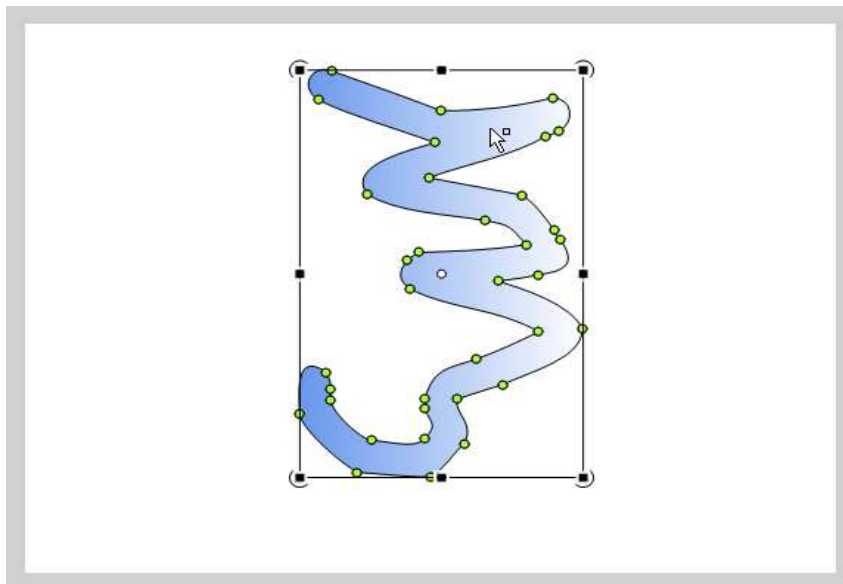


indirectly changing shape's outline, as shown in the picture.

3.14 Free Transform Tool



This tool is used to change shape's dimensions (height and width), to "mirror" shape or to rotate shape clockwise or counter clockwise. It also can be used to do everything that Selection Tool can do. Select Free Transform Tool from the Drawing Toolbar and move your mouse pointer over any shape on the Stage. Notice the small black outlined square just to the right of mouse pointer - this means that Free Transform Tool can now be applied by simply clicking the shape. Bounding rectangle and eight black square handles has appeared around the shape as well as four arcs on the corners and one white dot in the center.



3.15 Fill Transform Tool



This tool is used to change shape's fill properties. Select Fill Transform Tool from the Drawing Toolbar and move your mouse pointer over any shape on the Stage. Notice the black and white rectangle just to the right of mouse pointer - this means that Fill Transform Tool can now be applied by simply clicking the shape. Bounding rectangle and eight

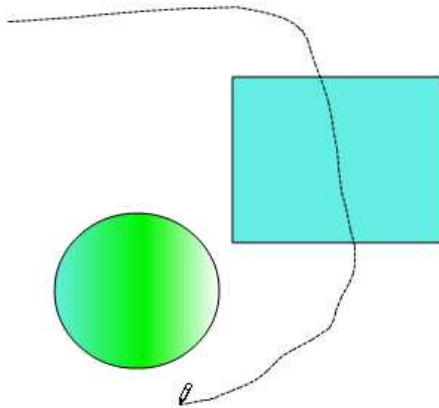


blue square handles has appeared around the shape as well as four arcs on the corners and one white dot in the center. Fill Transform Tool works in a similar fashion as Free Transform Tool.

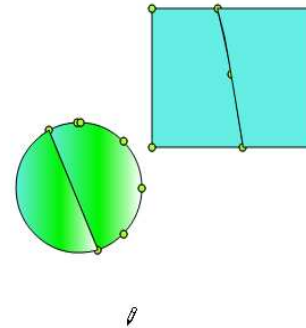
3.16 Lasso Tool



This tool is used to cut shapes on the Stage. Select Lasso Tool and move mouse pointer, which now looks like pencil, to the Stage. Choose where you want the starting point for the Lasso to be and then click and drag. As you drag you will see a line being drawn. When you release left mouse button the *lasso* will automatically close itself by connecting starting and ending point. All shapes that lasso touched are cut, effectively splitting them to two (or even more) shapes.



In these pictures you can see how Lasso Tool works and how it affects the object. Rectangle and oval are split to two shapes each. Use Selection Tool to move split shapes.



3.17 Moving shape

To move a shape, follow these steps: select a shape, left-click and drag mouse pointer to desired location, release mouse button.

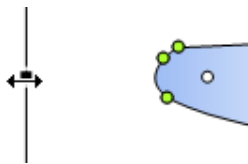
3.18 Deleting shape

To delete a shape follow these steps: select a shape, press Delete key.

3.19 Changing Pen and Brush parameters

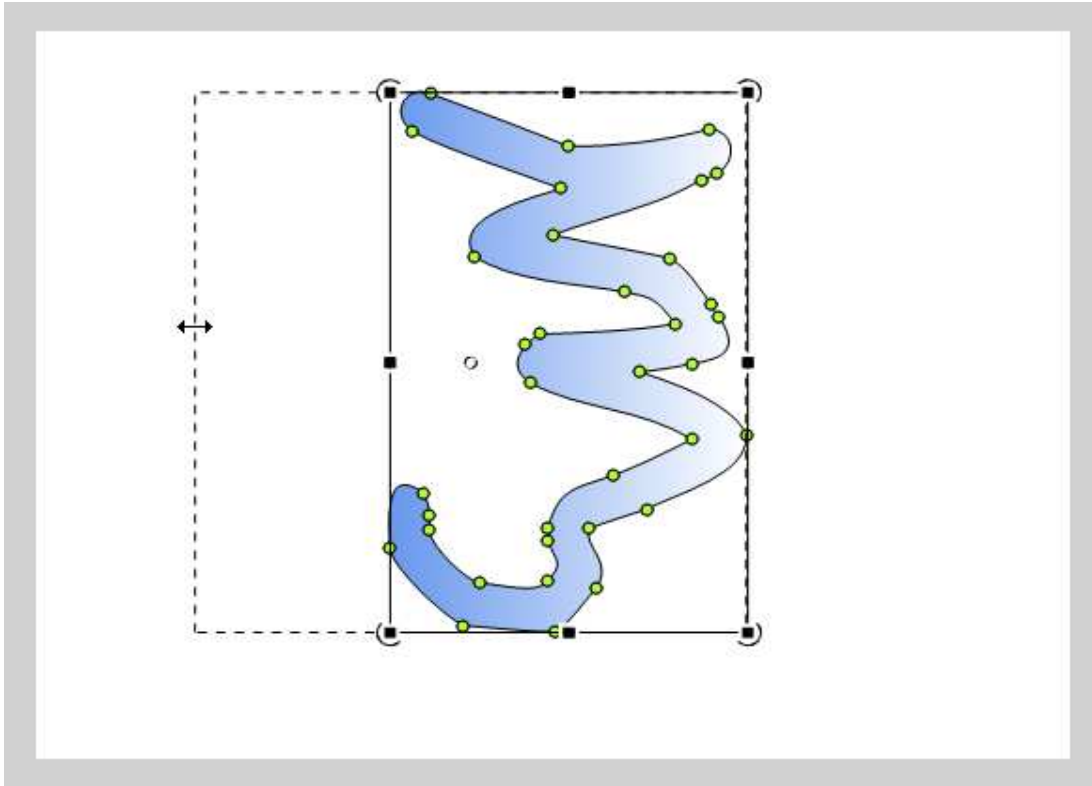
To change shape's Pen parameters follow these steps: select a shape, choose desired parameters from the Shape window. Changes are instantaneously visible.

3.20 Changing width and height of a shape



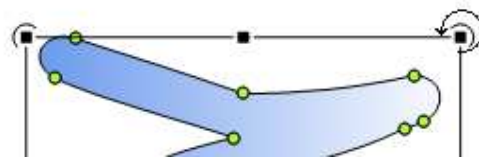
If you want to change width and/or height of a shape, move mouse pointer over one of eight black-square handles. Notice that pointer is now double-angled. Horizontal pointer means that you can change width, vertical mean that you can change height, and diagonal that you can change both width and height at the same time. For example, to change width click one of the handles on vertical rectangle sides and drag it to the left or right. Notice the dashed rectangle that shows you the final dimensions of a shape. When you release left mouse

button shape will receive its new dimensions (new width in this example).

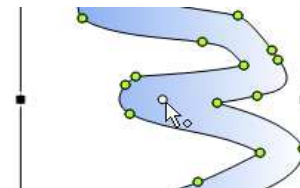


3.21 Rotating a shape

To rotate a shape you need to use one of four corner arcs and, if needed, white dot. Move mouse pointer over one of four corner arcs. Notice that pointer is now shaped like arc with arrow. Click and drag and you will see that bounding rectangle is rotating. When you release left mouse button the shape will be rotated to its new position. The effect is the same no matter what corner arc you use for rotating.



Center of rotation is represented by white dot. Simply, white dot does not change its position when you rotate a shape. You can change center of rotation by moving the white dot. To move the white dot, move mouse pointer over it. Notice the small circle just to the right of mouse pointer. This means that you can click and drag in order to move white dot. When you release mouse button, the center of rotation takes its new place. Center of rotation can be moved anywhere, even outside the Stage. To return center of rotation to its original position, just select Free Transform Tool again.



You can simply control speed of rotation by moving arc-shaped mouse pointer closer to or further from the center of rotation. To rotate shape at higher speed, move pointer further from the center of rotation. To rotate shape at lower speed, move pointer closer to the center of rotation.

Part IV: Layers

In this section you will see what layers are and how to use this simple yet effective animation technique. Using layers is essential in any complex animation but they can be useful in some simple animations too.

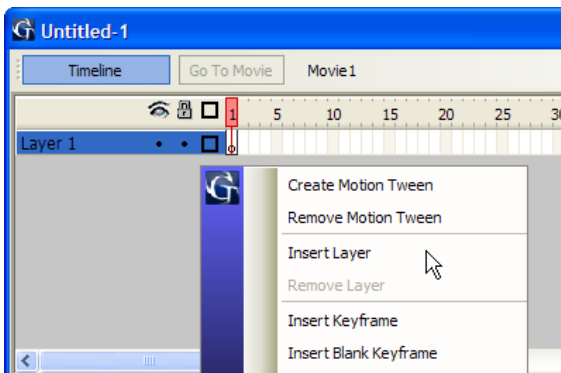
4.1 What are layers?

The simplest way to understand layers is to imagine them as a stack of transparencies. Each layer (transparency) represents an animation for itself but all the layers together make one “big” animation. Main point to remember here is that layers on the top of the stack cover layers at the bottom. This means that some of the bottom layers’ contents may not be visible if covered by top layers’ contents.

4.2 Operations on layers

Upon creation, there is one layer in Vectorian Giotto’s document. Default name for this layer is Layer 1. There are several possible operations on layers: insert, remove, make layer visible/invisible, lock/unlock, rename, send to back, move to front. All those operations can be undo-ed (recalled).

4.2.1 Insert

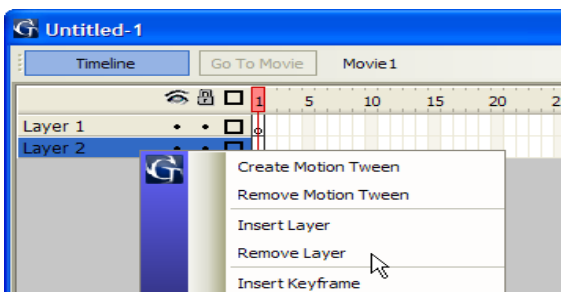


The easiest way to insert new layer is from context-sensitive menu. Right-click on the timeline and select Insert Layer option from menu. A new layer is inserted with its default name. In this example, its name will be Layer 2. This new layer is located on top of stack, i.e. everything located in it will appear on top of everything else drawn in bottom layers.

Insert New from Layers dialog.

Another way to insert layer is by invoking Modify/Layers command from menu bar. Choose

4.2.2 Remove



You can remove layer from context-sensitive menu. First select layer you want to remove by left-clicking layer name below timeline. **Notice that selected layer is now marked blue which shows that all future commands will refer to this layer!** Right-click and select Remove Layer option from menu. Selected layer and all objects it contains are removed from document.

4.2.3 Make layer visible/invisible

If layer is visible, all objects it contains are visible. Invisible layer means that objects it contains are

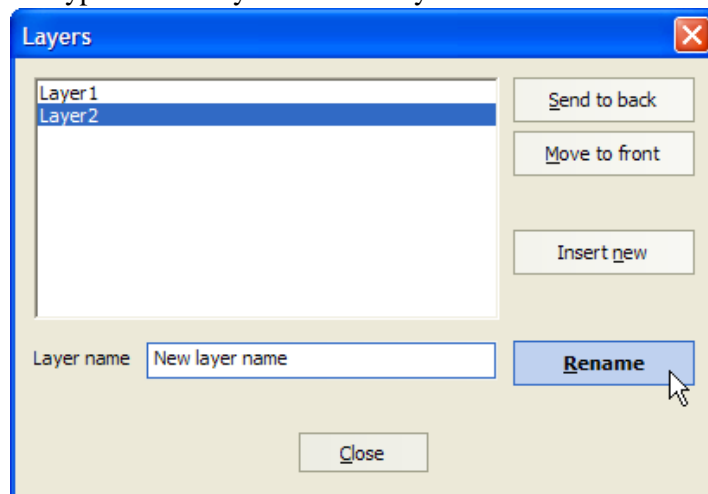
invisible. Changing visibility is very easy – just left-click small black dot next to layer name (an eye symbol is shown as “column header”). Dot changes to red X sign. This means that from now on layer is invisible. If you want to make layer visible again, left-click red X. It reverts to black dot and layer is visible again. By default, all inserted layers are visible.

4.2.4 Lock/unlock layer

If layer is locked, none of objects it contains can be changed in any way (deleted, moved...). Locking layer is very easy – just left-click second black dot right of layer name (a lock is shown as “column header”). Dot changes to lock symbol. This means that from now on layer is locked. If you want to unlock layer, left-click lock. It reverts to black dot and layer is unlocked again. By default, all inserted layers are unlocked.

4.2.5 Rename

You can change layer’s name by invoking Modify/Layers command from menu bar. Select layer you want to rename and type the name you want in Layer name edit field. After that click Rename.



4.2.6 Send to back

You can move layer down the stack, effectively making contents of that layer appear below contents of other layers on top of it. You can send layer back by invoking Modify/Layers command from menu bar. Select layer you want to send back and click Send to back.

4.2.7 Move to front

This command is the opposite of 4.2.6 Send to back – it moves layer up the stack. You can move layer to front by invoking Modify/Layers command from menu bar. Select layer you want to move and click Move to front.

Part V: Morphing

In this section you will see what morphing is and how to morph objects in Vectorian Giotto.

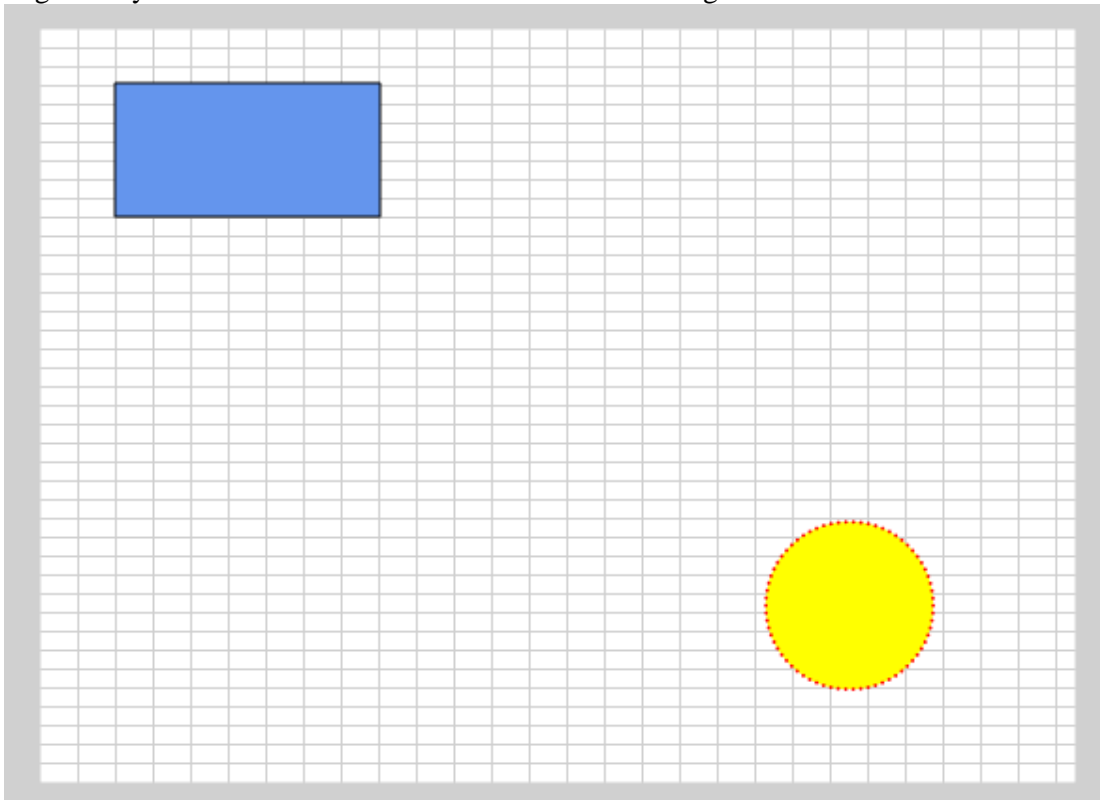
5.1 Morphing basics

Morphing is a special effect in animation that transforms one image into another. This transformation is done gradually (in a series of steps) and seamlessly. Certain chosen points of the first image are moved to the position of corresponding points in the second image.

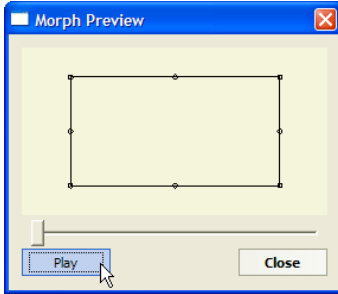
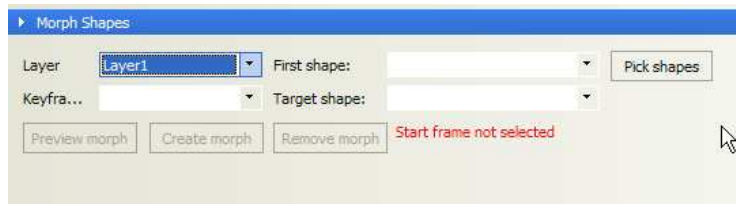
5.2 Creating morph in Giotto

Morphing in Giotto is possible only between shapes in the same layer. In order to morph successfully you need at least two key frames. One key frame will be starting point for morphing and other key frame will be ending point for morph. We will demonstrate morphing between a rectangle and an oval.

On the first key frame (by default it is frame number 1): Draw a rectangle in the top left corner of the Stage with blue interior and black solid outline. Also draw an oval in the bottom right corner of the Stage with yellow interior and red dotted outline. Your Stage should look like this:



Now insert second key frame (for example make 24th frame a key frame). Choose Window/Morph Shapes from menu bar. This command will open Morph Shapes window inside main Giotto window. Now let's look at the Morph Shapes window for a moment.



Notice 4 combo boxes from which you can choose important parameters for morphing. First choose on which layer morphing should be performed. This choice will affect next choice – which key frames (in our example Keyframes #1 to 24), choose First shape and Target shape. Having all parameters set you can now preview morph (by clicking Preview morph button) and see how First shape will morph into Target shape. On Preview Morph window you can click Play button to see complete morphing process or move slider with left mouse button pressed to see morphing frame-by-frame. When you are satisfied with results, click Create morph button on Morph Shapes window.

5.3 Modifying and removing morph

After creating the morph, you can modify it by clicking Modify morph button and then modifying any shape that is included in the morph by changing its appearance or position. Also, you can remove morph by clicking Remove morph button.

If you have done something else after creating the morph, you can still modify it or remove it. Just left-click on the timeline starting frame for the morph and select first shape from combo box or by clicking Pick shapes and selecting first and second shape for morph. Options for modifying and removing morph are available again.

5.4 Consecutive morphs

It is possible to create consecutive morphs in Giotto. In such morphs one shape can be target for first morph and source for second morph which produces interesting effects.

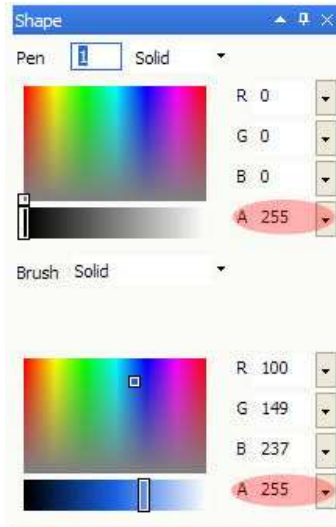
To create consecutive morphs, create one rectangle on first key frame (for example, 1st frame of animation), one oval on second key frame (for example, 20th frame) and one brush on third key frame (for example, 40th frame). Left-click 1st frame on the timeline. Open Morph Shapes window if it is not already open. Choose Keyframes #1 to 20 from Keyframes combo box and click Pick shapes button. Select rectangle from first keyframe by left-clicking it. Notice that mouse cursor has number 1, a square and a star next to it. Giotto will now automatically show second key frame (20th frame in this example), the one with oval in it. Select oval (mouse cursor will show number 2) and click Create morph button in Morph Shapes window. You have successfully created first of two consecutive morphs. Now choose Keyframes #20 to 40 from Keyframes combo box. Click Pick shapes button and choose oval as the first shape. Giotto will show second key frame (40th frame in this example). Choose brush shape and click Create morph.

That is everything! If you want to see the final result, left-click 1st frame on the timeline and click Play button on the Main toolbar. You now have two consecutive morphs and if you need more it is easy to repeat this procedure to create more.

Part VI: Transparency (Alpha blending)

Alpha blending is the process of combining a translucent foreground color with a background color, thereby producing a new blended color.

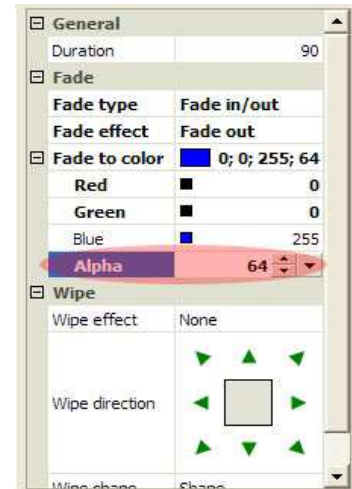
6.1 Transparency basics



Using this option will enable you to combine an image with a background to create the appearance of partial transparency, and/or to create composite images by blending two or more objects with various brush colors. The value of alpha in the color code ranges from 0 to 255, where value 0 represents a fully transparent color, and 255 represents a fully opaque color.

6.2 Applying and modifying the transparency

Alpha settings can be used on *Shape* window in *Pen* and *Brush* tools, for blending lines and brushes respectively. Make sure that your *Shape* window is open. Then find Alpha blending edit boxes on *Pen* and *Brush* panels (see the above-left picture). You can change values by dragging the slider up or down, or simply by typing the wanted value in edit boxes.

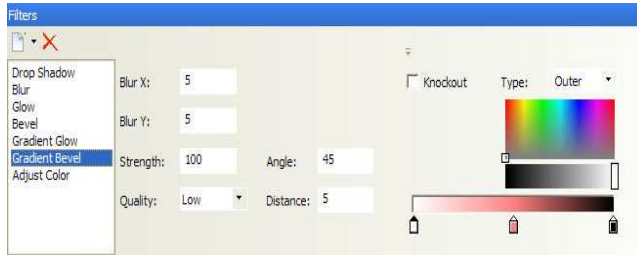


This option is also enabled in various *effects* that support color manipulation (see picture above). In these cases instead of the slider you have a dozen typical values for use. For more information on using Alpha blending in effects see Chapter VIII: Effects.


Part VII: Filters

7.1 Filter basics

Filters let you apply interesting visual effects to graphic elements. They can be animated in motion tween for performing dynamic effects on animated objects. You can experiment with applying as many effects you want for achieving combined effect. Filters can be applied to text, buttons, and movie clips.



7.2 Applying filters

To apply a filter you need to open the *filters* window (see beside), select applicable object and then, by clicking on *add filter*  icon, select the appropriate filter. You can customize each filter effect by changing specific options for each.

7.3 Filter types

7.3.1 Drop_Shadow

The Drop Shadow filter simulates the look of an object casting a shadow onto a surface, shadowy object (*Inner shadow* effect), cutting out a hole in the background in the shape of the object (*knockout* effect) or just shadow of an object (*Hide object* effect).



Drop shadow options

Blur X/Y: This option enables you to modify how much the shadow is blurred on X or Y axis. Higher the value, shadow is more blurred.

Strength: This value affects the solidity of the shadow. Higher the value, shadow is thicker.

Quality: Use this option to change the resolution of the shadow. There are three levels: *Low*, *Medium* and *High*. This option can influence the performance of the animation.

Color: Here you can choose the color of the shadow. Choose from the basic 40 colors, or try the custom colors.

Angle: Use this option to change the angle by which the shadow falls from the object. Shadow changes its position clockwise (90° – directly below an object, 270° – directly above an object).

Distance: With this option you can increase or decrease the distance of the shadow from object.

Knockout: Checking this option will make the effect of cutting out a hole in the background in the shape of the object. The shadow of the object will remain.

Inner shadow: Checking this option will make the effect of a shadowy object on which its original brush and shadow mingle.

Hide object: Checking this option will hide the appropriate object and only leave its shadow.

7.3.2 Blur

This filter is used to reduce image noise and reduce detail levels. The Blur filter softens the edges and details of objects. Applying a blur to an object can make it appear as if it is behind other objects, or make an object appear to be in motion.



Blur options

Blur X/Y: This option enables you to change the level of blurriness of an object on X or Y axis respectively. Higher the value, object is more blurred on appropriate axis.

Quality: Use this option to change the resolution of the blur. There are three levels: *Low*, *Medium* and *High*. This option can influence the performance of the animation.

7.3.3 Glow

The Glow filter lets you apply a shining color all around the edges of an object.

Glow options



Blur X/Y: This option enables you to change the blurriness of glow on an object on X or Y axis respectively. Higher the value, the glow is more blurred on appropriate axis.

Strength: This value affects the solidity of the glow. Higher the value, glow is thicker.

Quality: Use this option to change the resolution of the glow effect. There are three levels: *Low*, *Medium* and *High*. This option can influence the performance of the animation.

Color: With this option you can change the color of glow. Choose from the basic 40 colors, or try the custom colors.

Knockout: Checking this option will make the effect of cutting out a hole in the background in the shape of the object. The hole will be surrounded by remaining glow.

Inner glow: Checking this option will make the effect of an object which glows from inside its boundaries. The brush color and glow will mingle.

7.3.4 Bevel

Applying a bevel highlights the object in a way it makes it appear to be curved up above the background surface. You can create an inner bevel, an outer bevel, or a full bevel.



Bevel options

Blur X/Y: This option enables you to change the blurriness of bevel effect on an object on X or Y axis respectively. Higher the value, the bevel effect is more blurred on appropriate axis.

Strength: This value affects the solidity of the bevel effect. Higher the value, bevel is thicker.

Quality: Use this option to change the resolution of the bevel effect. There are three levels: *Low*, *Medium* and *High*. This option can influence the performance of the animation.

Shadow: Here you can set the color of the bevel shadow. Choose from the basic 40 colors, or try the custom colors.

Highlight: Here you can set the color of the bevel highlight. Choose from the basic 40 colors, or try the custom colors.

Angle: Use this option to change the angle by which the bevel shadow and highlight falls from the object. Both effects change their position clockwise (90° – directly below (S) / above (H) an object, 270° – directly above (S) / below (H) an object).

Distance: With this option you can increase or decrease the distance of the shadow from object.

Knockout: Checking this option will make the effect of cutting out a hole in the background in the shape of the object. The hole will be surrounded by remaining bevel effect.

Type: Here you can choose between three types of bevel: *inner*, *outer* and *full*. Inner bevel makes bevel effect to stay inside the boundaries of an object. Outer bevel makes bevel effect around an object. Full bevel makes bevel effect inside and outside an object.

7.3.5 Gradient_Glow

Applying a gradient glow produces a glow look with a gradient color across the surface of the glow.

Gradient Glow options

Blur X/Y: This option enables you to change the blurriness of gradient glow effect on an object on X or Y axis respectively. Higher the value, the glow effect is more blurred on appropriate axis.



Strength: This value affects the solidity of the gradient glow effect. Higher the value, glow is thicker.

Quality: Use this option to change the resolution of the gradient glow effect. There are three levels: *Low*, *Medium* and *High*. This option can influence the performance of the animation.

Angle: Use this option to change the angle by which the gradient glow falls from the object (for outer type) or by which gradient glow shifts inside the object (for inner type). Both types of effect change their position clockwise (90° – directly below an object, 270° – directly above an object).

Distance: With this option you can increase or decrease the distance of the gradient glow from an object (for outer type) or how close the secondary color is to the center of the object (for inner type).

Knockout: Checking this option will make the effect of cutting out a hole in the background in the shape of the object. The remaining gradient glow effect will remain.

Type: Here you can choose between three types of gradient glow: *inner*, *outer* and *full*. Inner makes gradient glow effect to stay inside the boundaries of an object. Outer makes gradient glow effect around an object. Full removes an object and leaves the gradient glow of it.

Color selection: Here you can choose the colors included in gradient glow. Minimum number of colors is two and maximum is 8. To choose the colors first click on pencil icon on gradient strip then choose the color from the specter above, and then determine the presence or absence of light in the color by moving the slider on black – white bar. If you want to add new gradient color just click anywhere on the gradient strip, new pencil icon will appear. Distance between pencil icons determines the distance between the gradient colors.

7.3.6 Gradient_Bevel

Applying a gradient bevel produces a raised look that makes an object appear to be raised above the background, with a gradient color across the surface of the bevel.



Gradient Bevel options

Blur X/Y: This option enables you to change the blurriness of gradient bevel effect on an object on X or Y axis respectively. Higher the value, the bevel effect is more blurred on appropriate axis.

Strength: This value affects the solidity of the gradient bevel effect. Higher the value, bevel is thicker.

Quality: Use this option to change the resolution of the gradient bevel effect. There are three levels: *Low*, *Medium* and *High*. This option can influence the performance of the animation.

Angle: Use this option to change the angle by which the gradient bevel falls from the object (for outer type) or by which gradient bevel shifts inside the object (for inner type). Both types of effect change their position clockwise (90° – directly below an object, 270° – directly above an object).

Distance: With this option you can increase or decrease the distance of the gradient bevel from an object (for outer type) or how close the secondary and third color is to the center of the object (for inner type).

Knockout: Checking this option will make the effect of cutting out a hole in the background in the shape of the object. The remaining gradient bevel effect will remain.

Type: Here you can choose between three types of gradient bevel: *inner*, *outer* and *full*. Inner makes gradient bevel effect to stay inside the boundaries of an object. Outer makes gradient bevel effect

around an object. Full makes gradient bevel effect inside and outside an object.

Color selection: Here you can choose the colors included in gradient glow. Minimum number of colors is three and maximum is 8. First pencil icons are fixed on their positions; you can change only their colors not position. To choose the colors first click on pencil icon on gradient strip then choose the color from the specter above, and then determine the presence or absence of light in the color by moving the slider on black – white bar. If you want to add new gradient color just click anywhere on the gradient strip, new pencil icon will appear. Distance between pencil icons determines the distance between the gradient colors.

7.3.7 Adjust_Color

Applying an adjust color filter enables you to control the color parameters within the object.

Adjust Color options

Brightness: Here you can change brightness value of appropriate color by dragging the slider left or right. Values range from -100 to +100.

Contrast: Here you can change contrast value of appropriate color by dragging the slider left or right. Values range from -100 to +100.

Saturation: Here you can change saturation value of appropriate color by dragging the slider left or right. Values range from -100 to +100.

Hue: Here you can change hue value of appropriate color by dragging the slider left or right. Values range from -180 to +180.

Reset: By clicking on this button you can reset all modifications and place all values on 0.

7.4 Removing filters

To remove a filter just select the object on which the filter is applied, in *filters* window select the unwanted filter, and then click *remove* icon, or press *delete* key on your keyboard.

Part VIII: Effects

8.1 Effects - basics

In Vectorian Giotto you have, at your disposal, around 30 highly customizable effects that can be applied to any shape, text, imported object (bmp, jpg, tif, png, gif, ico...), SWF movie, or movie clip. You can, also, assign two or more effects to the same object.

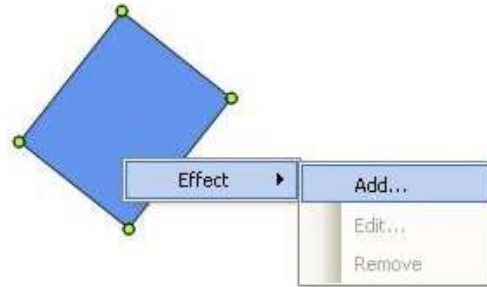
8.2 Assigning, editing and removing effects

To assign the effect to an object, click right mouse button on the object for side menu, select *Effects*, click *Add* (to add an effect), edit (to edit the present effect) or remove (to remove the present effect).

8.3 Effects – common options

Duration

This is the most common option that all the effects have. It represents for how many frames should last one effect cycle. As the effect comes to the end of its cycle it will begin anew (for text options see Effect cycling). Note that many effects have their low point (minimum number of frames) under which they won't work. You can change the numerical value of the duration by pressing an arrow keys on your keyboard (up or down), clicking the arrowheads right of the numerical value (up or down), or just assign the value by manually typing the appropriate number in the value box.



Color

Color (Main): This option is used for assigning the color important for the selected effect. How to change the color? Find the main edit box in which you can see (from left to right) Selected color, Numerical RGB values (0-255), Value for alpha (0-255), and down arrow for color selection. You can directly apply numerical values for the color (if you know the desired color's value) and alpha, or open the selection.

Selection: You can see a dropdown menu with 40 standard colors and an option for assigning custom color.

Color (Additional menu): You can also customize the color with simplified custom menu under the main options. Open the menu by double-clicking on it or on the + sign beside it. There are four edit boxes for each color and alpha respectively. You can change the values by using the up/down arrows, keyboard, or a dropdown menu with 9 typical values. Note that after you change the color, the values become bolded, if you change back the original values the font will return to normal.

8.4 Effects - types

Flash

This effect uses sudden transitions from one color to another and back, to give an impression of flashing object. Use additional options to set the secondary color and duration of the transition.

Merge

is made of setting apart an object into four equal pieces and combining it into primary form. Use the duration option to adjust the time of change.

Rainbow

use this effect to add a multicolored array on the object. Use the duration option to change the speed of color transition.

Shreds

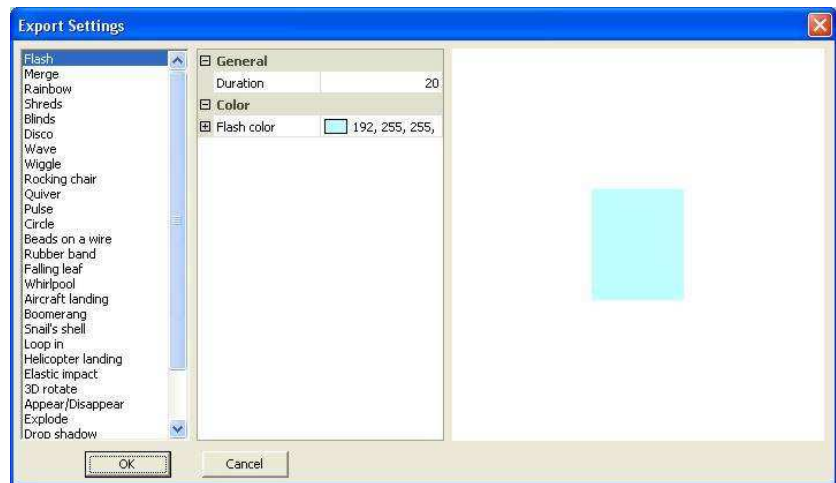
to give you impression of object shredding, this effect transforms the object into long narrow strips and then merge it into one again without change. Use additional options to adjust the speed and direction of the effect animation.

Blinds

if you want to produce the effect of window blinds on an object use this option. Duration option regulates speed of transition and blinds effect option regulates direction of change (open blinds and closed blinds effect).

Disco

rappid change of vivid colors on the object is what this effect produces. If you want the change of colors to be more slow or fast simply use duration option.



Wave

if you use this option you will add a wavelike motion to the object. The speed of the motion can be adjusted using the duration option.

Wiggle

this effect puts shaking motions on an object. Again, the speed of the movements can be adjusted through duration option.

Rocking chair

use this option if you want to cause an object to sway from one side to another as if in a rocking chair. The duration option regulates the speed of the effect animation.

Quiver

If you want an object to shake with slight trembling motion use this effect. The duration option regulates the speed of the moves.

Pulse

Rhythmical pulsing of the object is what this effect produces. The duration option regulates the speed of the pulse.

Circle

if you use this effect you will make an object to move in a circle. You can adjust the speed of circulation if you change the duration number.

Beads on a wire

this effect makes an object to turn around its axe, like it is thread on a string. Again, the duration option regulates the speed of effect animation.

Rubber band

his effect makes selected object to stretch like a rubber band. Use the duration option to adjust the speed of stretching.

Falling leaf

use this effect if you want to give impression of an object falling down freely, light as a leaf. The duration of the fall can be adjusted.

Whirlpool

this effect causes the selected object to move rapidly in a circle as if it is a floating object drown by the force in the center. Use the duration option to change the speed of the movement.

Aircraft landing

Bringing down an object to an imaginary surface is what this effect produces. The duration option can be used to change the speed of landing.

Boomerang

this effect gives the impression of, as the name suggests, thrown object that returns to its point of origin. Using the duration option you can change the speed of the effect animation.

Snail's shell

setting this effect you will get an object

moving on a imaginary logarithmic spiral. Duration of one sequence can be adjusted as well as number of iterations and radius of the spiral through additional options.

Loop in

you can use this effect if you want to give impression of an object making a loop. Use duration option to adjust the speed of animation.

Helicopter landing

this effect makes an object rotate like a helicopter rotor while landing. You can set the duration and direction of rotation.

Elastic impact

makes an effect of a elastic object in free fall. Additional options can be used to set duration of one sequence, zoom in/out, bounce high and drop axes.

3D rotate

this effect will make an object rotate around one or both axis while moving on scale of depth.

Appear/disappear

if you want to make impression of an object slowly coming in/out of sight use this effect. Duration and direction of effect animation can be adjusted.

Explode

this effect gives you the impression of explosion of the selected object. Additional option regulates the duration of the explosion sequence.

Drop shadow

use this effect to put shadow on the object. Additional options can be used to choose the color of the shadow and distance of the shadow from the object.

Blur

to give impression of fading out of the object image choose this effect. To adjust the speed of the effect animation use duration option. To manage the blur quality use resolution and scale options.

Simple effects

Transform

this effect gives you rotation of the object. The rotation can appear in two direction (clockwise, counter clockwise). The speed of the animation effect can be set through duration option.

8.5 Effects - options

The effects are highly customizable. Here are the descriptions of the effects options:

Move:

Move direction: Click on the appropriate arrow to control the direction of the effect animation. Note that some effects have animation than can animate by depth, if this is the case use the middle square.

X/Y Offset: You can change the distance and direction of an object under the effect from its center by changing these values (in pixels).

Move type: You can assign the object under the effect to *move in*, *move out* or not to move at all.

Move effect: The object can be assigned to slide with this option. Works only if the move type is *move in* or *move out*.

Bounce height:

Drop axis z/y

Rotation axis

Zoom:

Move:

Rotation:

Effect specific options

Blinds

Effect (open, close)

Simple effects

Fade:

Fade type

Fade effect

Fade to color

Snail's shell

Effect:

Iterations

Radius

Elastic impact

-

Zoom

Zoom direction

Scale

Text:

Frame delay 0-10

Effect cycling: cycle/one time effect

Letter order: first to last, last to first, random

Part IX: Sound

In Vectorian Giotto you can easily make animations with audio effects or accompanying music.

9.1 Supported sound file formats

Vectorian Giotto supports importing of WAV and MP3 file formats. You can further manipulate these sounds and arrange them by your preference in export. For animation exporting quality of the incorporated sounds see 9.4 Sound export settings.

9.2 Incorporating sound in animation

In this version of Vectorian Giotto you can only add sounds that will play in the background of your animation. To do this open an animation sequence, left-click on an existent frame¹ on appropriate layer you wish to apply your sound, then open *Insert* menu, then left-click *Sound*. The browser window will popup in the previously used location. Then find the appropriate sound file, select it and click *Open*.

You can now see that the selected layer has in its frames oscilloscopic line of a sound file. This means that the sound has been applied to the animation. You can also see that the name of selected sound file has appeared in your Library. For hearing the final result you must see the animation in exported form it cannot be done using *play preview* option.



9.3 What you should know

Length of animation vs. length of sound file

If the sound you incorporate is longer than animation itself, then in export, after one pass of animation, the audio file will continue to play until its end. If the animation loops is set to loop then the sounds will overlap. Therefore, you should make sure that you have synchronized the length of audio file and animation.

Sounds and layers

For incorporating sound in animation it would be best if you would use separate layers for sound. This will enable you to manipulate the animation layers without interference, independently of the sound itself.

¹ Note that if you try to apply the sound on nonexistent frame Giotto will warn you with warning message: "*There is no current frame to draw into.*"

9.4 Sound export settings

After incorporating sound file in animation you can further manipulate the sound output by tweaking the preferences in *Sound export settings*. Open *Edit* menu, then left-click *Sound export settings*; settings window will popup (see picture).



Compression

Here you can choose what kind of compression Giotto should apply for incorporated sound in export. There are two types of compression: *MP3* and *Raw*. Selecting the *MP3* will compress your sound in MP3 format (if not already; if yes than you can further tweak other parameters; see below) to have your export file smaller in size, but to the price

of some sound quality. Selecting the *Raw* will leave incorporated file as it is with an additional tweaking available (see below).

Preprocessing

Here you can check *Convert to mono* check box if you want to force incorporated file to play in mono channel. Leave this unchecked if you want to leave it as it is.

Quality

Here you can choose among three degrees of overall quality of incorporated sound file. Options are Low, Medium and High. Lower the quality, smaller export file and vice versa. This option is only available if you chose MP3 compression.

Bit rate

Bit rate represents the amount of information, or detail, which is stored per unit of time of a recording. You can choose the appropriate bit rate for incorporated sound. Predefined numerical values are: 8, 16, 20, 24, 32, 48, 56, 64, 80, 96, 112, 128 and 160. You can lower the real bit rate to reduce your exported file size, but to the price of some sound quality. Lower the bit rate, lower the quality. This option is only available if you chose MP3 compression. See *Bit rate legend* for value reference.

Sample rate

Sample rate is the frequency at which bits of data are recorded in digitizing a sound. You can choose between several values: 5.512, 11.025, 22.050 and 44.100 Hz. If you convert the sound that is encoded at a given rate to a higher or a lower rate, some noise could be introduced. See *Sample rate legend* for value reference.

Bit rate legend

- ✗ 32 kbit/s – MW (AM) quality
- ✗ 96 kbit/s – FM quality
- ✗ 128 – 160 kbit/s – Decent/Good quality

Sample rate legend

- ✗ 8,000 Hz – telephone quality
- ✗ 11,025 Hz and 22,050 Hz – used for lower-quality PCM and MPEG audio
- ✗ 44,100 Hz - audio CD quality

9.5 Removing sound from animation

To remove the sound from the animation, simply find/open your Library, your unwanted sound file should be there (see picture). Select sound file you want to remove and press delete on your keyboard or delete button in Library.

