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# **Part III Animation Basics**

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# I Introduction

# 1.1 Welcome



UltraSnap was originally written for our internal purpose, to speed up process of creating multimedia presentations, training, manuals and web pages and to simplify resizing digital photos to be sent by e-mail. Because it performed beyond any expectations we decided to make it available for public. That was more than 10 years ago...

Since then UltraSNAP grew into an always ready quick graphics productivity tool with many tools and features that cannot be easily found in other packages.

Note: Through the text you may see used UltraSNAP and UltraSNAP **PRO** interchangeably - there is in fact only a **single** version of the software. The PRO suffix was added when a full editing capabilities were added in version 2 to differentiate it from much simpler first version.

# 1.2 What is new in version 5

There are many additions in the version 5

- a new code base using 64 bit code and UNICODE
- GIF animations
- Signature Object and line graphics vectorization
- Shape Reactor create vector shapes using Photo-Reactor Plug-ins
- new bitmap effects using Photo-Reactor plug-ins
- much more robust SVG import
- object properties

# 1.3 What's new in version 4

The version 3.x was probably the oldest and longest running workhorse in our office. But it was time for a large scale update!

- · Works in Windows 10 and its new way of display scaling and monitor DPI
- Saves all data in User space
- Adds multipage PDF export a quick way to capture screenshots one after another and then save the result as a PDF document.
- Numerous enhancements in the Editor Mode:
  - $\circ\,$  Color Wheel
  - o Transparency editing, pick transparency etc...
  - o Vector Tracing
  - o Many other enhancements
- Improved capture from multiple monitors (ver.3 didn't like when the monitors had different resolutions)
- The trial version doesn't expire instead it show small overlay on bottom of capture.
- Many other fixes and smaller additions.
- · Export to illustrator

# II Ultra-Snap PRO

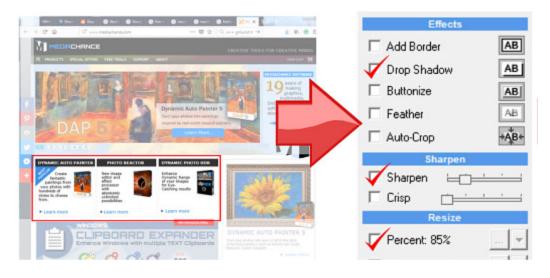
# 2.1 Basics

### UltraSnap PRO has two modes:

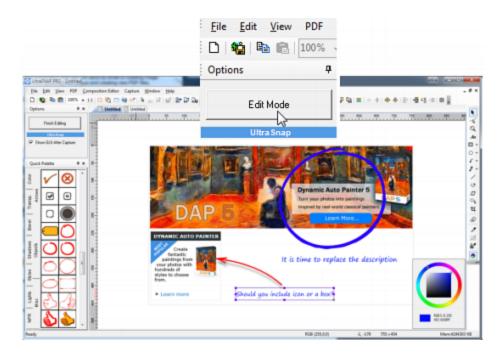
Two Mode	es in one application
Quick Mode: Grab, Adjust and Paste (or Export)	Full Editing Mode: Capture, Change, re-Arrange, Add

- Capture mode (aka Quick Mode)
- Edit mode

The capture mode works like a clipboard pipe. Whatever you grab from the screen will automatically appear in the clipboard. The same apply if you change any settings in this mode; including size, drop shadow, sharpening etc... The idea is that a next capture will automatically use these settings as well thus speeding up a process of capturing images. (for example making all your grabs 70% smaller and sharpened)



The Edit mode is for adding multiple captures into single image, adding arrows, cursors, resizing objects and creating small graphics like buttons, banners, photos with caption, visual tutorials etc.



You can grab screen in both modes! In Editing mode the screen grabs will pile up allowing you to combine them into one image.

### Minimize, Close, Exit

When you Minimize the UltraSnap it minimize to the task bar as any other Windows program. When you click close button the UltraSnap hides to the tray.

It is visible just by a small icon in the tray. It is still active and it waits for your <u>Hot-Key</u> to start the capturing process.



To Exit the UltraSnap you have to select Exit from the File menu.

### Invisible - in Tray (default YES)

The best is to load UltraSnap on the Start Up (default). Then you of course you want to load it invisible - in the tray. Just open the menu Capture and select Settings. Check *Start Invisible in Tray* (default)

### Restore After Capture (default YES)

This options brings up the UltraSnap window after the capture. This assumes you want to make some corrections (change size, sharpness, or enter to <u>editing mode</u>. You can switch off this check box if you for example planning to make a series of automatic captures.

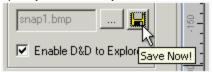
### Auto Send Clipboard (default YES)

UltraSnap can sends all the captured images to the clipboard when you check on this option. The image is sent to the clipboard every time you make a change. Simple rule: what you see in UltraSnap is also in clipboard.

Note: You can also Paste an image to the UltraSnap..

#### Auto Save to disk (default NO)

UltraSnap can save automatically each capture to the new file if you use this option. You need to first specify the directory, file name and format. The name will increment automatically.



There is also a button called Save Now that is enabled when the Auto Save to disk is set to NO. This can be used to quickly save current screen capture without any other input. It will automatically increment the name and save the capture in the previously selected format and folder.

#### Drag and Drop: Enable D&D to Explorer

You can use the Drag and Drop feature to simply drag an image from UltraSnap to any other windows program which supports Drag and Drop. For example you can drag it to Windows Explorer and it will create the file right where you drag it. Or you can drag an image to the e-mail client to send it to your friends.

#### Capture Cursor (Capture - Cursor - Include Cursor)

You can set the UltraSnap to include the cursor (1) on the captured image. This is usable only in region capture mode if you invoke it with Hot-Keys. You can also capture the cursor with a drop shadow (2) or a healthy red glow (3).



**Note**: Adding normal cursor is easier in the <u>Edit mode</u>. However including cursor during capture is good if we would like to capture a different type of cursor, that is not available in the objects.



# 2.2 Types of capture

#### **Region Capture**

The most frequently used Capturing is the Region Capture. This will let you draw a rectangle on the screen - the exact rectangle you need in your capture.

#### Keyboard

During the capture you can use also the Arrow Keys on your keyboard for exact pixel-by-pixel steps. If you need to click you can use Enter as well.

#### Zoom

You can make even more precise capturing by turning Zoom on. Just simply click Right Mouse Button during Region Capture or with key Z on your keyboard. This will come very handy if you require exact edge to edge capture.

#### Window Capture

Window capture will let you capture the exact size of the window under mouse cursor by drawing a red frame around it. But not only that, as you move the mouse cursor over windows items like list boxes, combo boxes, edit boxes, buttons, text, menus or other items you will see they can be selected as well! To capture just a combo box for example was never been easier. This is very useful for writing manuals for your software!

### Full Screen

This will capture the full screen. If you have multiple monitors, the screen where is the cursor will be captured.No other input is needed.

#### **Repeat Last**

This will capture the last region.

# 2.3 Hot-Keys

There are predefined system-wide Hot-Keys for each capture operation (note this may not be true in the version you downloaded as things were changing often):

Capture Region	Ctrl+1
Capture Window	Ctrl+2
Capture Full Screen	Ctrl+3
Repeat Last Capture	Ctrl+4

Any time you need to make a capture, just press the hot key combination.

Of course you can define your own Hot-Keys. In Menu Capture - open Hot-Keys item... The rest is simple, but make sure you don't put already used system-wide hot key by some other programs (like ICQ) or a Hot-Key which conflicts with shortcut in a program you planning to capture from (like MS Word)

Therefore it is wise to use Hot-Keys that are combination of two or three keys, like Ctrl+Shift+R

# 2.4 Advanced Export

Beside the clipboard and Auto-save to disk mode, you have an advanced export for both Capture and Edit mode.



There are few formats you can export to:

 JPG format where you can set the Quality, Subsampling and DPI. The Subsampling will enhance the red color and it is recommended to set it ON. The DPI is just a flag that is saved in JPG file. It doesn't change anything in the file itself, you can set it 1 or 1000 and the file will be exactly the same.

7

However some software like to read this info.

Progressive format will allow to display the whole JPG on web pages right away with a low quality and as it loads the quality clears up. (As opposite of loading the image from top line by line) This was useful when the internet used to be slow so you actually could see the image loading. While browsers support progressive JPG many graphics software do not!

- BMP format: 24 bit (True color), 8 bit (255 colors) and customized colors. The only reason to have less than True color is a size of the output file.
- PNG same as BMP above, however PNG uses highly compressed data so its file size is always much smaller than BMP.
- Transparent PNG. This is 32 bit PNG file with alpha transparency (see note below)
- GIF file. GIFs are always 256 colors or less and produces small file size. Only one of the color can be transparent (unlike the Transparent PNG that have alpha channel) so a transparent GIF cannot have smooth transparent edges.

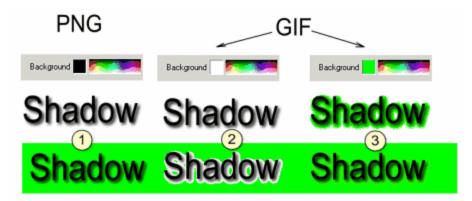
### Transparency

GIF and PNG files can be saved with a transparency. However, here it depends from which mode we are Exporting the image:

- Capture mode has always solid background. That means if we are exporting from Capture mode, the background color well in the Advanced Export dialog must be set to the color we want to appear as a transparent (white for example). This apply for both PNG and GIF. This obviously doesn't produce the best transparent output for PNG since it always use only one color substitute.
- In Editing mode it is different. The Transparent PNG will simply understand the canvas as a transparent regardless of what color it is or what is set in color well. PNG uses alpha channel, so the transparency is continuous.

The GIF in Editing mode will also take the canvas as transparent. Here however GIF can substitute only one color as transparent. If background is white, then white will be transparent.

Here is difference between the alpha transparency on PNG and the inferior GIF one color transparency:



We have simple text with a shadow and in (1) we export it as Transparent PNG (in Editing mode). The saved PNG will look good on any background since the transparency is done by alpha channel. It doesn't really matter what background color we use in the Export dialog well.

We do the same but export it to GIF (2) and set the transparent color to be white. The GIF will look fine on white background, but on a green background we will see the white ringing around the shadow. Of course, only one color in GIF can be set as transparent and the shadow has a number of different shades from white to dark.

If we would like to use such GIF on a mainly green background, then we also need to design it on a green background and let the green canvas be transparent (3). This will produce gif that looks funny on white background, but on a green background it looks rather fine.

# 2.5 Multiple Documents

	Untitled	Untitled	🛃 Unti	tled 🔝	Untitled
-350	-300	-250	-200	-150	-100

One important feature of the UltraSnap PRO is the ability to have multiple documents. When you want for example to keep recently captured image for a while while you work on another ones, Instead of saving your capture to disk and then later loading it again you simply open a new document and continue your work. When you want to return to the old capture, just switch to the previous document back. It is the same like working in a Word on a multiple different documents.

This gives you a many ways how to setup your work flow.

To create new empty document just press the New button.



Each of the documents can be switched freely into Capture or Editing mode so you can create rather interesting setup to suit any requirements.

As soon as you switch to a document that is in **Capture** mode, its image will be send to a clipboard (if Auto-send to clipboard is YES).

For example you need to often paste one of a five images to the pages you are working on: Just create five documents in UltraSnap, each in Capture mode and each having different image. To send the image to clipboard, all you need to do is to select the particular document using the tab control. That's it. And you can still make changes to any of the five images.

You can also create many documents in editing mode and then copy and paste objects from one to another one. This way you can work on few images at the same time and reuse various captured components between them.

Also you can paste an image from one Capture mode document into another Editing mode document or copy and paste objects from one document in editing mode into another empty Capture mode document.

Each document also keeps the effects and resizing as local which gives you the opportunity to create few documents where each use different settings.

# 2.6 Multiple Monitors

UltraSnap is great for multiple monitors settings. It will capture from the monitor where is initially the cursor.

For example in two monitor settings you want to capture screen from left monitor. Move the cursor to the left monitor and press the Hot-Key for Region capture.

When you have only one monitor and UltraSnap is open, as soon as you press capture Hot-Key, the UltraSnap will hide itself in order to capture the screen behind it, then it will restore. However if you are using multiple monitors and the UltraSnap is open in different window than the one you capture from, it does not need to hide and restore itself.

# 2.7 Capture mode

The Capture mode is the default mode.

It is also called single capture mode since you have only one, (the last) capture visible in the window and each next capture will simply replace the previous. (However you can create many of these single capture windows and switch between them - see more in <u>Multiple Documents</u>)

When Auto-send to clipboard is selected, the Capture mode works like a clipboard pipe. Whatever changes you make to the capture it will be reflected also in the clipboard.

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Options # 1		
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-Select Prevel: * + ×	8-	
1.000.000. 21.00	***	
Ready	71,49	400 x 300 Nem 420620 HB

### Effects

Effects can be applied to any capture. Just set the combination of effects you like and watch the UltraSnap screen. Each new capture will also automatically have these effects applied. For example you want to add to each capture border, drop shadow or sharpen it. This will be done automatically.

- Border a thin black border around the image
- Drop Shadow a drop shadow behind the whole image (the image will be resized in order to accommodate the new shadow)
- Buttonize a bevel will be applied to the whole image
- Feather it will make the edges of the image transparent
- Auto Crop this will crop the image to the its closest borders (for example removing a white border)

### Sharpen

Sharpening is important when you resize the image. Make sure you don't over-sharpen the image as it doesn't look professional.

### Crisp

Similar to sharpness but it doesn't overpower the image (like creating halo around text). It increase sharpness of only very fine details and it is great to add crispness to resized photos or make small text more readable..



Resize image (see next chapter)

### **Photo Filters**

A set of filters for changes in color, Gamma or contrast. Great for pictures but also very useful for making clear and more contrast look to Windows captures.

- Auto Level Histogram will stretch the histogram to the full scale. This works best for pictures it will
  improve the whole contrast of the digital image by making sure that the colors are stretched to full
  scale.
- Adjust Gamma. Gamma works for midtones. Moving gamma to higher numbers will push midtones towards the lighter color and vice-versa. Excellent for digital images. Bad image is usually because of the wrong gamma.
- Desaturate will simply make the image black and white.
- Color Boost will make the colors more vibrant by enhancing the in between color contrast.
- Contrast and Brightness- the overall contrast and brightness of image
- Tip: You can save your favorite settings to the library of presets.

#### Presets

You can save your favorite presets to the Presets List. Set your effects and then use the Add preset button (+)

You can also delete unwanted preset. Just select it and then press Delete presset button (X).

#### Quick Note (Capture - Quick Note...)

The quick note is used to add a text under the image without actually going to edit mode. The font is also similar to a normal screen font.



This is quick note

To remove Quick note simply click on its button again and remove any the text from the text box.

#### Quick Crop (Capture - Quick Crop)

The quick crop will allow you to crop a large previously captured image right in the capture mode. Unlike other effects, this is non reversible. The cropped image edges are gone. This is good option if we didn't capture a region exactly as we liked.

### Keyboard

During the Quick Crop you can use also the Arrow Keys on your keyboard for exact pixel-by-pixel steps. If you need to click you can use Enter as well. *Zoom* 

You can make even more precise crop by turning Zoom on. Just simply click Right Mouse Button during Quick Crop or with key Z on your keyboard. This will come very handy if you require exact - edge to edge crop.

# 2.8 Set of Resize Tools

To have easy way to switch between different sizes we included 3 sets of resize settings, each can have different options. It is very easy to switch between them, for example when creating thumbnails of fixed width etc.

Resize	
▼ Percent: 53%	💌
Percent: 50%	💌
🔲 Max Width: 175	

### Resize (3 sets)

You can let UltraSnap dynamically change the size of the image. Just click the Set (...) button near the Resize checkbox to open the Resize properties. There are 3 sets of resize, each can have different specifications and you can simply switch between them.

Resize Settings			x
Keep aspect ratio	Resize to     Maximum Width     Maximum Height     Must fit into box     Force resize to	65 <b>▼</b> % of original Width Height 320 x 200	OK Cancel
Tip: If you resizi	Filter 2 pass Bilinear ng down, use also Sharpen f	C Bicubic rom Auto Effects for best Image	quality.

You can chose the way you want to resize the image:

- Resize to % of original. If you set 75% for example all your captures will be resized to 75% of the original.
- Maximum Width. If the image width is bigger than the maximum width the image will be resized to it. The proportion of the image will of course stay the same. This way all your images will have maximum specified width. If the captured image has smaller width, it will stay unchanged.
- Maximum Height. The same as for width but this time the Height is watched.
- Must fit into box. If the captured image is bigger in any direction than the specified Width and Height the image will be resized so it always fit in that rectangle. (Proportions will stay the same of course). In other way it will never be bigger than the specified rectangle.
- Force resize to (Width and Height) -this will also change the proportions (aspect). The image will always be resized to that size.

Tip: It is always a good idea to use Sharpening if you resize image.

Filter: 2 pass Bilinear or Bicubic.

2 pass Bilinear is a special developed process for resizing images and it clearly outperforms any other resizing methods. A further sharpening option must be applied on the resized image. Bicubic resizing doesn't need any further sharpening. However resized text would not be readable very well. For photography both the 2 pass Billinear and Bicubic produce very similar results, but some people may prefer not to apply any sharpening.

We suggest to use the 2 pass Billinear for all resizing of most graphics.

2 pass Billinear + sharpen	Bicubic
set 75% for example all <u>1</u> ith is bigger than the ma es will have maximum s or width but this time the mage is bigger in any di he same of course). In o t) this will also share t	set 75% for exemple all y ith is bigger than the ma- es will have maximum s prividth but this time the mage is bigger in any dir he same of course). In o this circuit along observed
	A REAL PROPERTY



# 2.9 History

You can show the list of Auto-Saved or Dragged out images in a History browser.



This is a good option to check if you already done some particular image. You can also load the image back to Capture mode by simply double-clicking on its thumbnail in History. **Delete** 

Pressing Delete key on selected thumbnail will permanently remove that image from your drive.

# 2.10 Editing

### 2.10.1 Edit Mode

Edit mode is where the real fun starts. After you capture the image in Capture mode you can switch to Edit mode to continue working on it.

Options	Ψ×
Edit Mod	
- This Window-	

The editing mode can be used to:

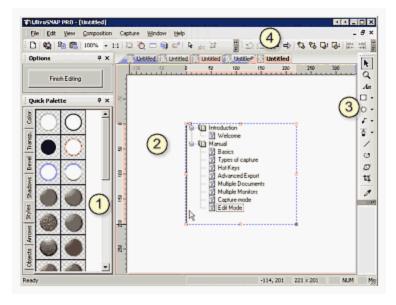
- add object to the captured image, for example add cursors, arrows or description text.
- capture multiple images into one document and then manipulate them to create one composite image
- resize and sharpen each component image separately
- add effects (drop shadow, bevel, transparency) to each component separately
- and much more

Whenever you are done with editing just click *Finish Editing* and the image will be all transferred into the Capture mode and to the Clipboard. (And as we showed previously, when you are back in the capture mode you can still apply the standard global effect on the top of the whole image.)

Options	Ψ×
Finish Editing	0
This Window	~

A great thing about UltraSnap PRO is that you can always go back to Editing mode and continue modifying the image!

### 2.10.2 Main Screen



# 1 Palette

The formatting settings are all in the Palette. From here you can change color, transparency, bevel or shadows. Palette is also used to add arrows or cursors.

# 2 Canvas

The canvas is without predefined size. When you jump to Editing mode, there will be a gray dashed rectangle showing you the original size of the image that has been transferred from the Capture mode. But in Editing mode you don't have to stay within its rectangle. You can place objects anywhere and when you Finish Editing the canvas will be cropped to the smallest rectangle to accommodate all the objects. See <u>more</u>.

# Orawing Tools

These tools are used for drawing rectangles, circles, lines and for other basic editing.

# **G** Formatting & Layer Tools

Tools for bringing objects back or up and alignment tools

### 2.10.3 Basics

### Select an Object

If you want to select, move or resize an object you use the Object Selector tool.

With the Object Selector tool, you can select an object by clicking on the visible part of the object. You can resize the object by pulling on one of the 8 handles. The bottom right handle (in gray color) is for resizing in all directions, the other 7 handles always resize in their direction. (For example: the middle left and right handle will resize only in the horizontal direction.)

### Select more objects at the same time

Often, you would like to select more objects at the same time and then move, resize, or apply a command.

To select two or more objects use one of these:

- Click on the empty part of the canvas where there is no object hold down the mouse button and drag a rectangle around the objects. Then release the button. You have to drag around the objects you want to select. Only the objects, which are inside the rectangle, will be selected.
- Click on the object you want to select first: then hold down the SHIFT key and click on the second object. Repeat until all objects are selected.
- Click on first object name in Layer Bar, then hold SHIFT and continue selecting the objects.

To deselect all objects, click outside the selected area. To deselect only one object from the group of selected objects, hold down the SHIFT key and click on a previously selected object.

**Tip**: During multiple selections, look at the bottom of the screen (the status bar). The text will identify the number of objects you have selected.

The Objects on screen will have a small number in the top left corner - this is the order on which you selected the objects.

### Move Objects with Arrows

You can move objects when you have the Object Selector tool selected, but when you have the Shape Tool Selected by default, you can't move the objects.

If you want to move the object in Shape mode, hold the ALT key.

You can move the object in pixel precision in almost any mode by pressing the Arrow keys on your keyboard. If you hold CTRL while you press the arrow key, you will move in increments defined by a grid.

### Groups

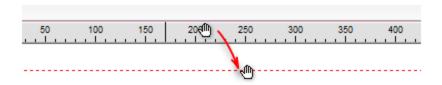
Groups are logical selections in the main document. You don't get fewer objects, you just move all objects with the group. Select two or more objects and press CTRL-G (or from the Menu: Object- Group). The group has a red border. You can move or resize grouped objects, and you can also change the parameters of whole group. To un-group a group, press CTRL-U (or from the menu: Object - Ungroup) Objects dragged from Arrows or Objects palette will be grouped if they have more than one object inside. (numbered bullet for example)

### **Change Color**

The color of the vector objects can be changed with the color palette or right click on the object and from the pop-up menu select Change Color or Color Pick.

### Guidelines

To place guidelines on the canvas, simply drag and drop them from the rulers. Guidelines are used to snap objects to them.



Guidelines can be locked: menu Edit - Lock Guidelines

To remove guideline you can just drag them back to the ruler - either vertical or horizontal. You can place the guidelines by specifying the exact pixel size in the menu Edit - Edit Guidelines and Grid. This is mostly useful if you use <u>Static Canvas Size</u> (one that doesn't resize with the objects). This way you can create a template that can be saved as a Project file (Save Project As) and then reused any time later.

### 2.10.4 Canvas Size and Color

### **Dynamic Canvas**

A canvas in editing mode is generally without a particular size because as soon as you go back to Capture mode the background will be resized to accommodate all the objects on canvas.

The canvas size is by default set to the size of the captured image when we entered the Edit mode. This is indicated by the gray dashed rectangle on canvas. Again, it doesn't limit you, you can place objects anywhere inside or outside this rectangle.

However there are cases when we may think about the size of canvas.

- · zooming out will reveal objects only inside the canvas
- · the scroll bars are calculated from the size of the canvas
- the magnifier effect works only inside the canvas

Composition Editor-Trim Canvas will resize the canvas directly in editing mode to accompany all the objects.

### Canvas Color.

You can change the canvas color in menu Composition Editor - Canvas Color.

### **Static Canvas**

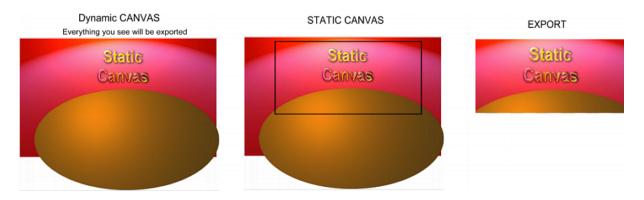
Composition Editor - Static Canvas Size

In version 4.6 the canvas can be a static - that is set to certain size. Everything outside it will be cropped during export.

This is a great way to produce banners or images if we need a certain size.

Set Static Ca	invas Size				
Width	527	Set Static			
Height	330	Reset to Dynamic			
Normally canvas size is dynamic and it resizes to accomodate all the objects. If you set the Static size the export will be always only from the area specified by the canvas.					
		Cancel			

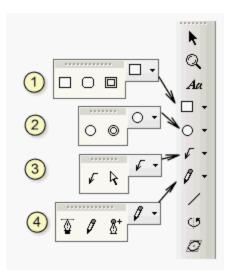
Static canvas will behave similarly to an <u>object crop</u> where everything outside the canvas will be cropped during export or going back to Basic Mode



You can switch back to dynamic canvas using the same tool and choose Reset to Dynamic.

# 2.10.5 Standard Tools

You create a basic shape by using one of the few predefined shapes: Rectangle, Rounded-Rectangle, Circle, Toroid, Frame.Few of the tools have sub-selections that can be revealed by clicking on the arrow near the tool.



# 1 Rectangles

Draw Rectangle, Rounded-rectangle or frame

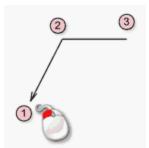
2 Circle

Draw Circle or a toroid .

# 3 Arrows

Draw simple arrow and cursor

The arrow is a special shape tool that draws simple arrows. This is great if you make a tutorial, using arrows, to describe elements on the picture.



You start drawing it from the head. Click where you want to have the head of the arrow 0. Release and move the mouse. The next click is the knee of the arrow 0, and then the horizontal line is dragged until you click again 0.

**Tip**: If you double click when you are about to draw a knee, the leader of the arrow will stop at that point, making it a simple arrow.

### Mouse Cursor

The second choice is a Mouse Cursor. If you are working on manual with screen captures you will know the importance of this tool.

Simply select the tool and click anywhere on the document. A standard Mouse Cursor object will be added.

You can hold CTRL to draw Mouse Cursor with shadow (great to enhance the appearance of it) You can always remove or adjust the shadow with the Shadow Palette.

### Shape tools

With these tools you can create new shapes - paths. You have few optional methods for drawing a Path from scratch.



The Line Tool for (drawing paths with non-curved sides) Pencil (for drawing free paths) and the Curve Tool (Bezier Curve)

• Curve Tool.

With this tool you can create lines and Path paths by drawing Path points. Select the Curve tool and click where you want to have the start point. If you release the mouse button right after the click, you will draw straight lines. If you hold the button and move the mouse, you will draw symmetrical Path points. To stop drawing the Path, use one of the following: a) Double click on the point where you want to finish. b)Click with the Right mouse button on the point where you want to finish. c) Move the mouse over the start point and click - this will create the object as a closed path.

Pencil Tool

With the Pencil you can draw a free path. Select the Pencil tool and click where you want the start point. Do not release the mouse button, just drag the mouse and release the mouse button at the end of your desired path.

You can create open or closed Paths. While you are drawing, move the mouse back to the Start point and you will see the mouse cursor change to the black arrow with a square. If you release the mouse cursor at that point, the Path will be closed - creating a filled shape.

• Add point to existing path

With the Add Point to Path you can add a point in an existing path. With this tool you have to click on the edge of the object, on the exact spot where you would like to have a new point. By holding the button and dragging the mouse, you will expand the Path handles from that point.

### • Smooth Curve Pencil Like Pencil, but the result will be naturally smoothed out. Good for curves, spirals etc...

New Tools These tools were added in v.3 and v.4



Liquify - allows you to "liquify" vector or bitmap project, stretch it etc...

Export Crop - crop that will be effective during export

Place inside - place one image inside another shape

Color transparency - pick color that will become transparent in the bitmap

Color Swatch - adds a text color object to the documentthat spells the RGB of the color. Good for keeping track of colors.

Color Wheel - opens a color wheel to adjust colors

### 2.10.6 Text Object

This tool allows you to add text

To add text, click the Artistic Text tool and click anywhere on the canvas. A dialog box, to enter the text in, will appear. You can edit the text anytime by double-clicking on the text object or using the shortcut Ctrl-T.

Some Text	
Text Object	1
The Arial	¥ 20 ¥
Some Text	

Here you can input the text, select the font, its initial size, choose if it is italic, bold, and also select alignment. Type some text and press OK.

You can resize the text freely after you enter it, so you don't have to set the size if you are not sure what size text you require.

### 2.10.7 Shapes

Each Path lying on the path point has two detached control handles. You can shape the curve between two points by moving these handles. If you don't see the handles, (for example on a square), this means that the handles are aligned with the main Path point. To drag the handles out of the point, hold **CTRL** and then drag the point. To drag symmetrical handles, hold down the **SHIFT** when dragging the handles.



Hold Ctrl and drag a point to reveal the handles. Hold down Shift and drag the handle to make the point symmetrical. To delete a point, press Del.

**Note**: You can only delete "points". If you delete the handle, the handle will be aligned with the non-deleted point.

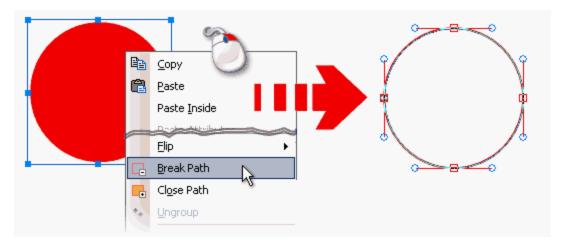
<u>P</u> oly	Polynome Editor Canvas		Capt	
Ŀ	<u>B</u> reak I	Path	Alt+	B
	<u>C</u> lose l	Path	Shift+Alt+	·В
	Brea <u>k</u> /	Apart	Ctrl+	·В
+ <b>0</b> +	S <u>h</u> rink	Poly		
← <mark>D</mark> →	Inflate	Poly		
¥ +	Increase Poly Count			
<b></b>	<u>S</u> impli	fy Pol	у	
0	C <u>u</u> t wi	th To	p Object	

### Open and Closed path (Break Path)

The Path can be open or closed. When you draw any of the basic shapes, the path is closed. Closed path means the object is filled, whereas, open path shows only an outline.

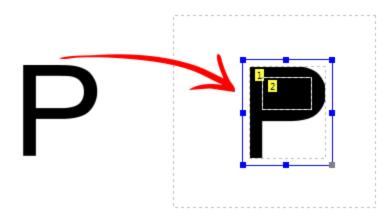
You can apply any effects, colors, or textures on an open path, as well as on a closed one.

To create Open Path from Closed shape, right click on the object and select Break Path



### **Break Apart**

If an object consist of multiple closed paths, this will break them apart.

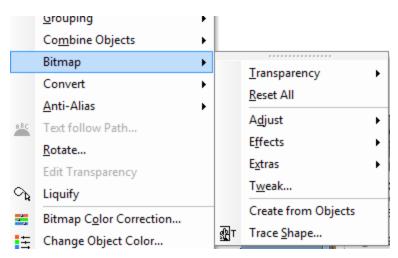


For example letter P has two separate closed paths, the outside of the letter and the inside (transparent) loop. After breaking the P apart we can then assign for example a different color to the loop.



# 2.10.8 Bitmaps

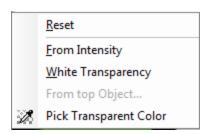
Any screen capture will be considered a bitmap. There is a huge amount of tools dedicated to the bitmap adjustments.



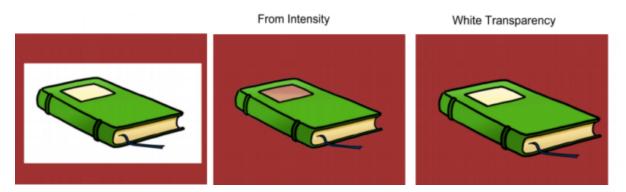
You have multiple bitmap editing tools such as Hue/Saturation, Brightness/Contrast, Levels and also many effects such as blur or art filters in the Tweak option.

### Transparency menu

A normal screen capture is solid - has no transparent, but we can adjust the transparency multiple ways.



We can automatically make the transparency from intensity or from white background. Obviously not all images will be suitable, but it can work well on images on white background.



Pick Transparent Color (also in tools as a button)

This will pick a color range from where you click. You can apply the tool multiple times as its effect is cumulative, to pick more similar colors.

Reset - will reset the transparency

### From Top Object

Place any vector object on top of the bitmap, select both and use From top object. The top object will became a mask for the transparency of the bitmap.



### 2.10.9 Bitmap Tracing

Various Bitmap tracing is a cornerstone of UltraSnap 4 vector editing to the point of some users using the software just for that function alone.

### Tracing and converting to Polynome

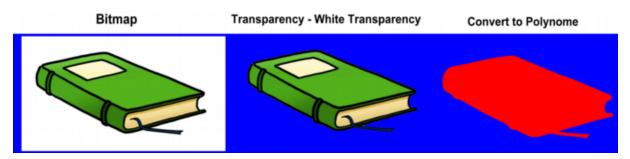
Those two functions will produce a vector object from bitmap, but each has different purpose.

T + S



Convert to Polynome - menu Object - Convert - To Polynome

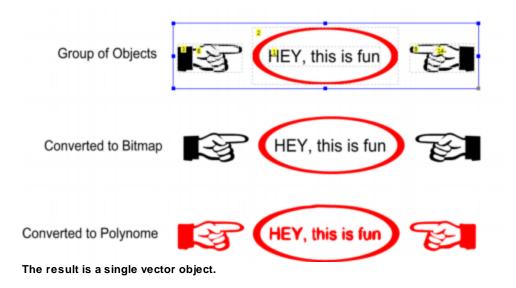
This will convert the image to polynome based on the bitmap transparency. If bitmap has **no transparency** (like a regular image) the result object will simply become just a rectangle. A transparent bitmap can be imported (example PNG) or created using few transparency tools such as White transparency.



In this example we used White transparency to create bitmap with transparency and then use *Convert to Polynome* - we obtained silhouette of the object.

If we didn't use White Transparency function on the bitmap, the result will be just a rectangle.

An interesting purpose for this tool is that it can be combined with Convert to Bitmap. For example, we can convert many complex vector objects to a single bitmap: Composition Editor - *Convert - To Bitmap* which creates single bitmap with transparency and then convert it back to a single vector object with Convert to Polynome.



See next chapter about Unify, Simplify and Polynomize

### Trace Bitmap.

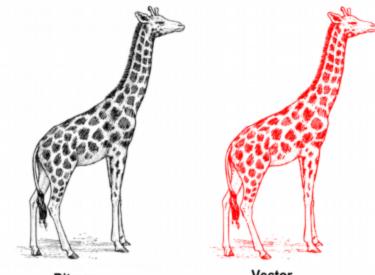
Bitmap- Trace Shape

The bitmap will be traced to vector based on its intensity of the image. See the image below..

**Trace Bitmap** 

Bitmap

Tracing works really great for line art!.



Bitmap

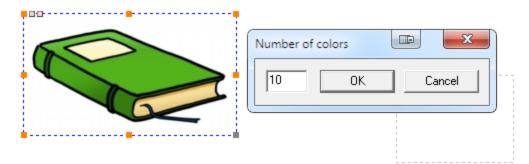
Vector

On the left we have original bitmap, on the right we have traced fully editable Polynome with hundreds of vector lines.

The bigger the input image is, the more precise the tracing will be.

### New in 4.8 - Color Tracing

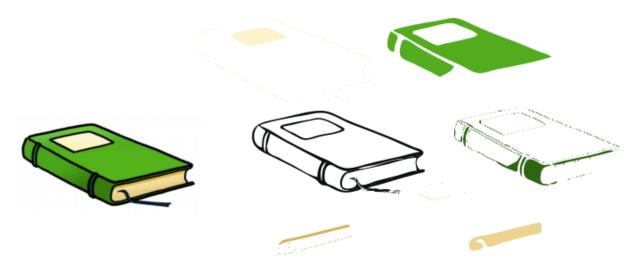
*Bitmap- Color Trace* Trace color bitmap into number of separate objects



This function is for color images (but not necessary for color photos, although it can create interesting results)

You need to specify number of colors you want the image to be separated into.

Here is traced image and then the objects were moved out for illustration.



After tracing, you may want to remove or merge objects that do not add more information. See <u>Set Anchor</u> for a tip on a good workflow.

### 2.10.10 Unify, Simplify Polynomize



There are many ways how to turn a bitmap into a vector object and back to bitmap. In previous chapter we talked about simple Tracing and Polynome and the difference. One will create vector from the image intensity the other from image opacity. We can also combine multiple vector objects by converting them to a bitmap first then polynomize them.

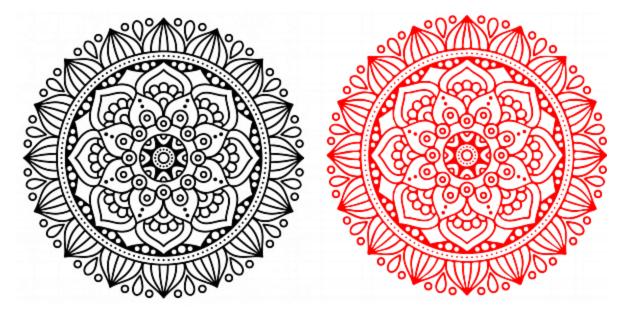
With so many choices it may not be always obvious what to use on certain objects.

However there is one tool that smartly combine all of them: Unify, Simplify, Polynomize. (USP)

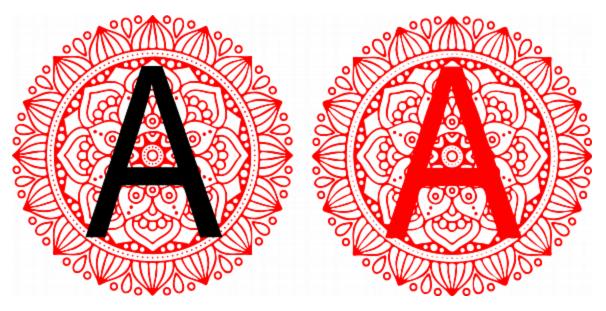
### 蘂

This tool is a one-click combination tool that will decide what to do from the object you applying it to. It can be a bitmap or vector. For example if your object is a bitmap without transparency the tool will perform Bitmap trace. If this is a bitmap with transparency it will perform Convert to Poynome. But that is not all - the tool will equally work on combining multiple vector objects by smartly re-vectorizing them using various hidden inside. Any other adjustment to shape done in UltraSnap will be realized as full vectors. This can be used to simplify very complex vector objects or to create new vector objects from shapes.

In this example the object on left is a simple screen grab from a resource web page. By clicking on the USP button it will turn it into a vector (right)



Once it is a vector we can edit it with the vector tools. However we can also unify it with any other objects and using the USP button again.



On the Left we added a Letter A, then selected both objects and pressed the USP button again. The result will be a single unified vector object that is a full non-separable combination of the two. (Unify)

Pressing the button on any vector object multiple times will start **simplifying** the vectors. Here we used it about 10 times to get the vector object on the right side.

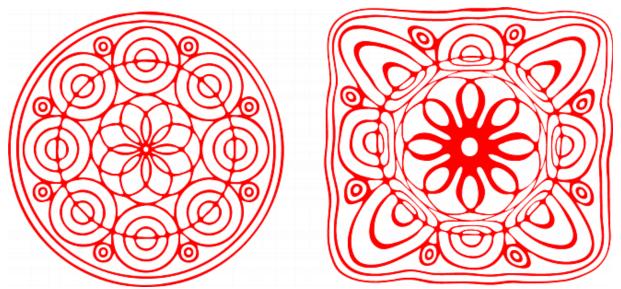


The simplify function can be used to make complex vectors smoother and simpler. Just a single use will not change the object visually too much but still it will remove redundant points.

Note: The size of objects do matter! Vectorizing small image will result in a vector with little details. It is often beneficial simply resizing the bitmap image up before vectorizing. Similarly using the USP tool to simplify vectors depends how large the image is. Resizing the complex vector down and then applying USP will simplify it much stronger than if used on a large object.

### Tip:

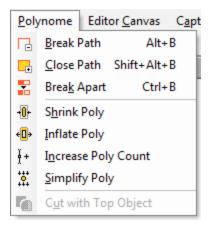
One interesting tip on using USP is to use <u>Liquify</u> on a vector object then use USP to turn it back into a full vector. This way you can easily tweak and create shapes that would be normally very hard to edit in a vector form in any meaningful way.



We used Liquify on the vector on the left followed by USP to turn it back to full vector.

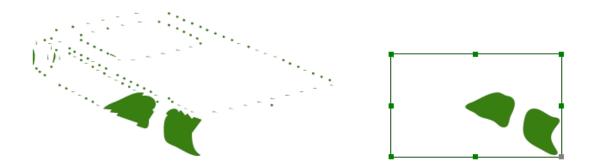
### 2.10.11 Shrink, Inflate, Increase or Simplify Poly Count

There are few special tools to work with Polynome shapes and those are especially useful for traced objects.



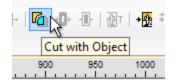
These tools can be used in sequence (for example we may shrink the polynome few times)

Shrink Poly will shrink the polynome a small step. This will also remove any thin lines. Inflate Poly will inflate the polynome (make it slightly expand) Increase poly count will add more points to the polynome - make it more dense. Simplify will remove dense points from polynome.



In this example we use Shrink Poly on the traced object, followed by Inflate Poly to get it back to the same size, then Simplify Poly. This essentially removed all the unnecessary thin lines and make the polynome rounder.

### 2.10.12 Cut with Object

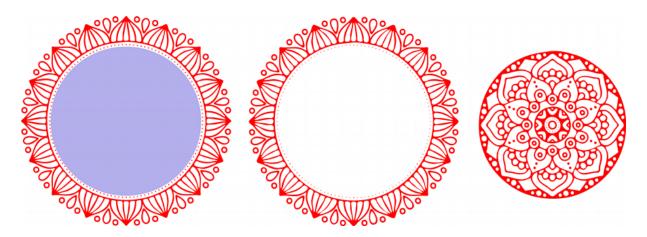


This tool with cut the bottom object with the top object as a cookie cutter - creating two separate vector objects from the bottom one.

As we saw in previous chapter we can really start working with the vectors in an unusual way. One tool that finally combine all these various ideas into one very useful tool is Cut with Object.

In this example we will separate the vector object in two parts.

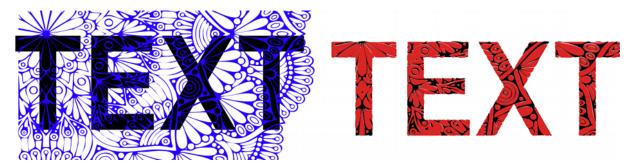
On the left part we added a simple circle on top of our vectorized image. This circle will be our cutting tool. Now select both and use Cut with the objects. The circle will disappear. Instead we have our bottom object that can be now separated into two complete vector objects where the circle was used as the cutting tool.



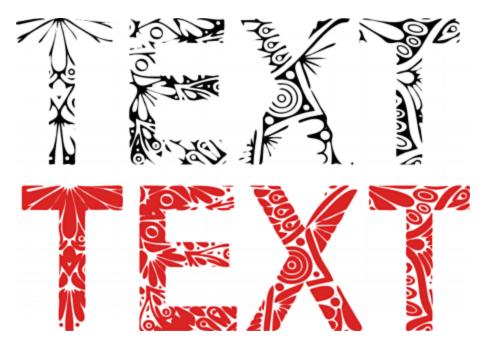
Unlike any other vector booleans that you had seen that would often struggle with very complex combinations, this tool can cut through even most complex vectors or the cutting tool itself can be complex.

Imagine if we did it the other way - we can use the vector pattern as our cutting tool and then cut through other objects!

Here is some example, we will cut with a vector pattern on top through the Text object on the bottom which will result in the Text object being split into two interlocking vectors that can then be each used for special effects.



The previous example cut through the text separating it into two interlocking vectors:



It is important to note that all the results are full vectors that can be then exported to lluustrator for example.

## 2.10.13 Set Anchor

Menu Object - Anchor

<b>ئ</b> *	Set Anchor
ΰ <sup>2</sup>	Move to Anchor
÷×	Clear Anchor

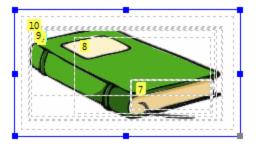
Setting anchor will set an "anchor" to the current position of one or multiple objects. That means when we later move the object, we can return them back to the anchor position with Move to Anchor.

This is especially useful for editing complex object that consist of multiple color layers, for example objects that were created with color tracing.

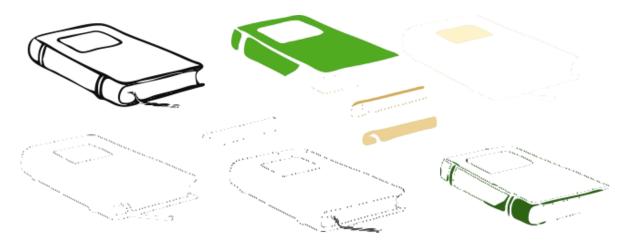
Example:

- 1. Color Trace image. A vector group will be created on top of the original image.
- 2. Move the result group out to the side and select it
- 3. Ungroup
- 4. Set Anchor
- 5. Now you can break apart all the objects (explode) to see the individual components.
- 6. You can delete redundant parts, or merge them.
- 7. When you are done, select all the objects and use Move to Anchor to get everything back to position.





Select the object and Set Anchor. Now we can move the objects apart to see them.



Some of the color traced objects are redundant (like the different outlines) and we can delete them. We can use Simplify Poly on some of the others to simplify them into more basic shapes without unnecessary thin lines.



Select all the Objects and Move them back - move To Anchor



We get a nice simplified vector object.

### 2.10.14 Export to Illustrator

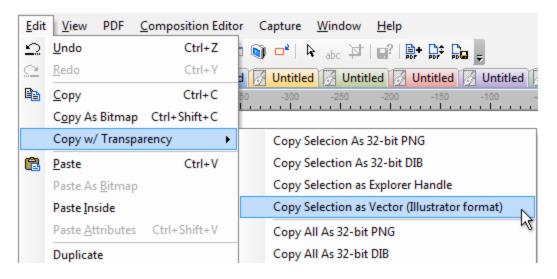
At this point we can use the simple illustrator export to save our complex vectors and use them in other software.

File: Export to Illustrator.

It is important to note that only the pure vector part of the object will be saved (the paths), not any special effect that you can apply in UltraSnap (it would be impossible, because Illustrator simply doesn't have such effects). Bitmaps will also not be exported. This is purely to get vectors out of UltraSnap.

### **Clipboard function:**

Adobe Illustrator can also use clipboard to import the vectors. Simply select any vector object(s) and use: Edit-Copy w/ Transparency - Copy Selection as Vector



The objects will be copied to clipboard as vectors in Adobe Illustrator Format and can be pasted back in Illustrator.

### 2.10.15 Interractive Sharpen

Bitmaps and screen captures have a special property - Interactive Sharpen, and you can access it from the top left corner of a bounding box.



Interactive Sharpen is a great way to individually sharpen a Bitmap (capture) especially after downsizing it. It is a non-destructive effect and you can increase or decrease the sharpness, any time you want, and as many times you want.

It is easy to use, just click on the second top handle of any bitmap or package, and move the slider up or down.

# **Interactive Crispness**

Crispness **---**

We added secondary, crispness setting. Crispness will enhance the high frequency but will not over sharpen the image. Especially good for small objects.

## 2.10.16 Export Crop Tool

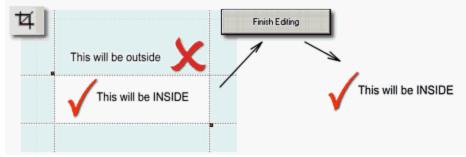
Often, you might like to export or push to clipboard only a part of the editing screen. We have a Nondestructive Crop tool in UltraSnap just for this case.



Click on the Crop Tool icon and click on the canvas, holding the mouse button down while moving. The same way you would draw a rectangle.

The Crop tool will create a border and everything inside it will export, and you can always move the crop borders using the two red squares.

If you would like to remove the crop, just drag one side of the crop rectangle, over to the opposite side creating a zero crop space and this will remove the crop.



You can also leave the Crop rectangle in place and switch it off with the Crop Tool button. The advantage of this is that the position of the crop rectangle will be saved with the document and you can recall the crop rectangle at anytime by clicking on the Crop Tool.

Note: in version 4.6 a <u>Static Canvas</u> was added that works similarly to a Crop Tool turning the canvas into a certain size and cropping everything that is outside.

## 2.10.17 Place Inside

Place inside could be one of the really nifty tools to combine two or multiple objects.

Place inside tool will place one object inside another. A typical example would be to place a bitmap inside a vector object to change its frame.



To use Place inside, click on its icon, then click on the first object (1) and without releasing the mouse drag the arrow into another vector object (2). The result (3) will be an editable vector object with Paint layer. The original object (1) will be still retained (it is not deleted).

### Advanced Placements

It is not limited to place bitmap into a vector (but it is probably most useful application), in fact you can place any object or group of objects into any other object.

To place a multiple selection of object, first select the desired objects then click the Place inside icon. You will be immediately drawing the arrow from the center of the multiple selection (no need to click) into another object.



The new object will still retain its color background settings (and all other settings) that can be changed.



Objects inside another objects are now just a bitmap representation and they can't be changed.

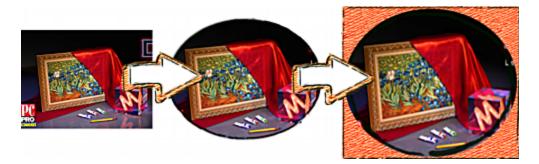
### Place Inside and NPR.

If we change NPR it will affect only the result object, not the image that was placed inside the object.



If you need objects inside to have NPR, apply it before Place Inside, then apply another NPR to result object.

You can also Place Inside one previous result into another object and to another....

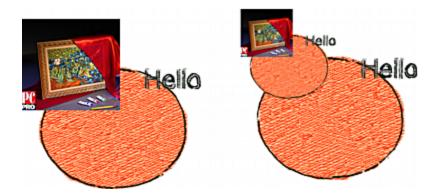


#### Place Inside into bitmap object.

if you place Inside vector objects into bitmap object you will obtain a transparent bitmap object

You can also place a text inside a bitmap or bitmap inside a text.

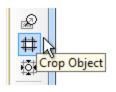
You can place a group of objects into object that is inside its own group, Simply when you have selected group, point with the arrow inside an object of that group. (We are not sure how useful that is, but it works)



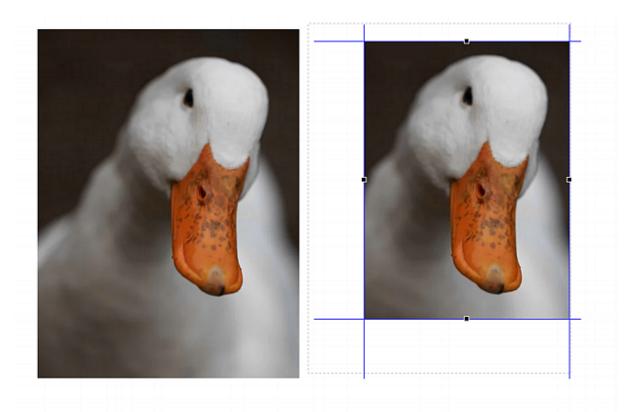
To remove the paint layer, select object, right click on it and select Remove Paint layer, you will just get the plain vector/bitmap object.

# 2.10.18 Crop Object

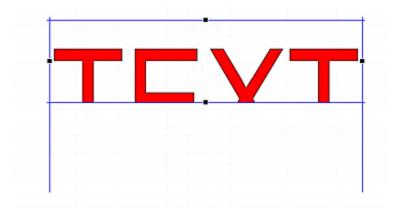
Previously crop tool was used to crop the whole artwork. With Crop object we can crop any objects individually.



With the Crop object tool simply drag the edges to create the crop you need.



It doesn't need to be only a bitmap. Any object on canvas in UltraSnap PRO can be cropped. (note a drop shadow applied to object will not be cropped)



Note: the crop tool is dynamic - it can be changed any time later. If you want to make crop permanent for bitmaps by discarding the invisible parts use: Composition Editor - Bitmap - Make Crop Permanent.

## 2.10.19 Squeeze

Squeeze tool is one of the later additions that was created to allow nonlinear photo resizing. The idea is that you can squeeze an essential part of the photo from different sides thus pushing it around the image and creating dead space where needed. This is useful for quickly creating unusual sized banners and backgrounds from photos that may be otherwise too complicated to create.



It may not be immediately obvious how the tool is used by just experimenting.

Let's see the main application on an example:

We have image of this swan that we want to turn into a long header banner but we don't have enough image to crop from. We need to add more water on one side.



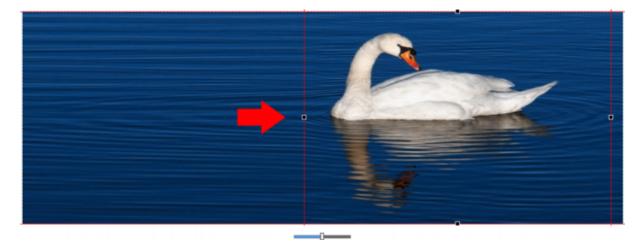
If you use photoshop you may be already thinking how you can add or clone more water on one side. Because of the way the water texture is shaped in a circle, it isn't that trivial and you may spend considerable time doing it.

The squeeze is here to solve such issues very easy. First we need to resize the image to the desired banner size:



As expected, while the size is now what we want, we definitely need to somehow push the ultrawide swan to one side.

This is where the squeeze tool comes to full play.



By moving the side handle towards the center, the center gets squeezed and pushed away creating a dead space on the left side. Similarly we can move the right handle to create a bit of empty space on the right side as well.

You can also use top and bottom handles if you need to push the image vertically.

### Stretching ratio

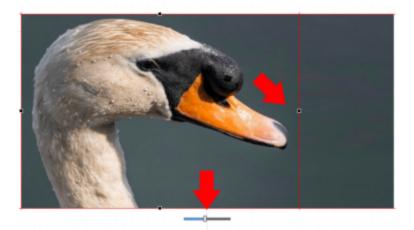


You may notice a small slider on the bottom of your selected object. This is for setting the edge stretching ratio. Here an example will tells more:

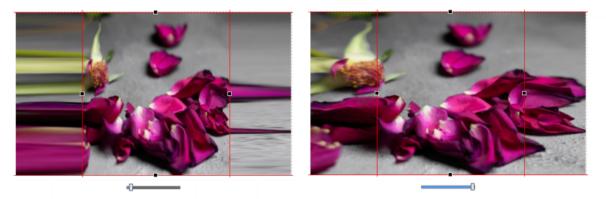
In this case we want to stretch the right side but there isn't much free edges this time. As previously we will resize the image and then push the right edge back to correct the swan. In order to get the swan back to its former aspect we will have to move the right edge way back and it will cross the swans beak - which will comically stretch it.



This is where the Stretching ratio slider is used. By moving the slider back the stretching ratio will change while stretching a smaller edge and thus allowing us to find the correct aspect without crossing the beak.

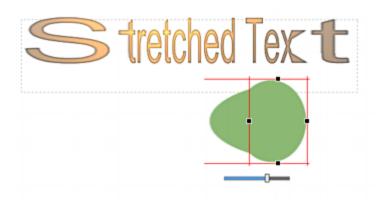


In the very left slider position the edge that is going to be stretched to fill the dead space would be very thin and so it would become far more obvious. Higher values - towards right side will use wider edge to fill the dead space, but then also the ability to stretch the image will be less.



#### Stretching other objects.

While the primary use is for bitmaps the Stretch tool can be applied to vector objects as well to get some special effects.

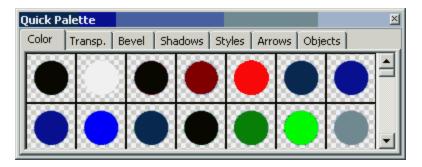


### Center handle

Additionally a center handle had been added in version 4.6 to move the window around

## 2.10.20 Style Palettes

Palettes are the place from where to change the attributes of the objects or add new predefined objects. The Palette bar is normally docked vertically, but you can also use it horizontally.



Basic Styles will change only one particular property of an object

- Color\*
- Transparency
- Bevel
- Shadow

\*note: You can also change color to exact numbers when you right click on the object and select Change Color. (or in menu Composition Editor)

There are is also special palette that changes combination of attributes at once

Styles

The last palettes are the ones with placable objects:

- Arrows
- Objects

### Working with Style type of palette

Select an object, and then click on the Style you want to apply.

If you apply a Style from the Tab called Color, then only texture and color related attributes will be applied. If the object has other attributes, such as bevel, then these will not be changed. Similarly, if you apply a Style from the Tab called Bevel, the object will change only the bevel attributes.

The next type is the Styles palette.

If you apply Styles, all the attributes will be changed, and the object will keep only its shape.

#### Add Style to Library

To add an object to the Styles list, you first have to have the Styles list visible, and then select the Tab that you want to store the style under.

Then select the object whose style you want to save, and click on the Styles list with the RIGHT mouse button, and select Add to Styles, and the style will be added to the end of the list.

or

Drag the object from the canvas to the Style list.

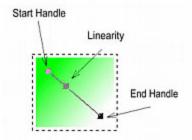
You can also use Replace, or Remove a particular Style.

#### How to copy Style from one object to another

If you don't want to create a permanent Style, then use the simple Paste Attribute command. Copy an object with the Style that you like, to the clipboard and select Edit-Copy (Ctrl+C), and then select another object, and use Edit-Paste Attributes (Ctrl+Shift+V).

#### Interactive transparency

When you add linear or circular transparency from the palette the object will switch to transparency editing mode. You can drag the transparency handles to adjust the angle and linearity of the transparency effect.



By moving the start and end handles you not only change the angle (linear and bilinear) but you also determine where the transparency starts and where it ends. You can even move the handle outside the object.

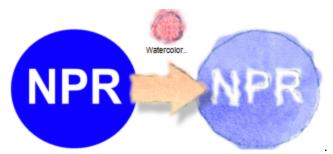
The middle handle is for linearity - by moving it close to the start or end handle will change the linearity of the transparency.

You can also edit the transparency directly in menu - Composition Editor - Adjust transparency

# 2.10.21 Global Paint styles

### Former NPR

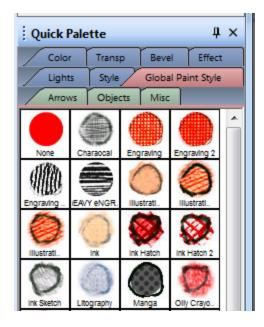
It stands for non photo realistic styles. Those styles will emulate various drawing techniques and it is a simple way to add some interesting look to your graphics.



NPR are applied globally to all objects in the image. They affect **vector** objects such as text or shapes but **not bitmaps**.

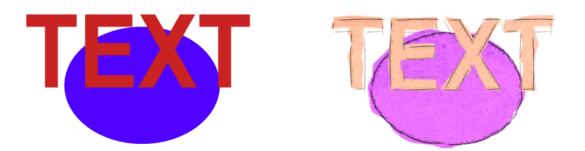


To choose NPR style, select one from the Global paint Style quick palette.



To remove NPR style, select the first one called None.

Global Paint Style is a Scene global setting. Applying it to Scene from Quick Palette will change all object using that selected style. However, objects can be locked or the effect can be removed from certain objects using Properties.



Tip: Try to apply different Styles to NPR objects such as Lights or fill styles:



#### Preventing object from changing style

While NPR applies to all objects you can actually freeze objects in their current style (so you can have on one page objects without any NPR or objects with different styles) It can be done by using "packages"

Menu Composition Editor - Grouping - Create Package (Ctrl+E)

A package will freeze the object (or objects) in their current state and create a bitmap representation instead (to which NPR styles do not apply). Packages can be edited inside or Upacked.

In this example te first text was turn into a package then NPR style was applied. Only the non-packaged text changed.



While the Paint Style is Global, each individual object can be then changed separately from the two Properties panels:

▶ <mark> </mark> ▶⋳ ⊧≡	<mark>▶_</mark> <b>▶</b> , ▶Q	• <mark>* 1</mark> * 1/
OFF	ON ON	Lock
	Paint Style P	en
Pen Hardne	ess	0.620
Pen Thickne	ess	1.000
Pen Color	•	
Set	F Color	Darken F

This adjusts the Pen - outline of the painted object. Pen can have its own color that is independent of the object fill color (Set) or it can be Fill color (F Color) that is set in the Color properties. Darken F will draw pen with fill color but darkened.

Properties	4×
È∎ È⊟ È⊒ È⊥ È⊪ ÈQ ÈØ	1
OFF ON	Lock 🔲
Paint Style Fill	
Fill Color Thinning	1.00
Random Uneven Edges	80
No Edge Shimmer Animation	•
Fill Smear	0.00

This adjusts the fill. The fill color is determined by various parameters such as the F color in Color palette, texture, even animated texture.

The object can be drawn with uneven edges that spills beyond the outline. Those edges can be also animated!. When you set the edge animation you need to choose the rate of animation:

#### Locking object Paint Style.

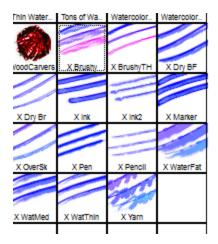
On both properties there are options to set or remove the part of Global Paint effect on that object and then Lock that settings. Locking will prevent that properties from changing when you apply different global properties. You can Lock the properties in OFF state as well.

This works separately for Pen properties and Fill properties allowing you to quickly mix and match styles.

OFF ON Lock	OFF	ON	Lock
-------------	-----	----	------

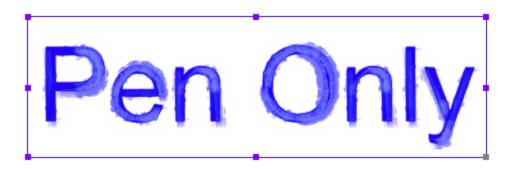
### Hand Drawn Pen-only Styles

A special part of the Global styles are Pen only styles that can create Hand Drawn look on a single line graphics as well as object such as text.



Those presets will not change the fill, only change the outline to be hand drawn, yet with the same color as fill (due to its F Color properties), creating a hand painted natural look.





You can use Color Gradient applied on objects with such Global Style for some interesting watercolor effects:



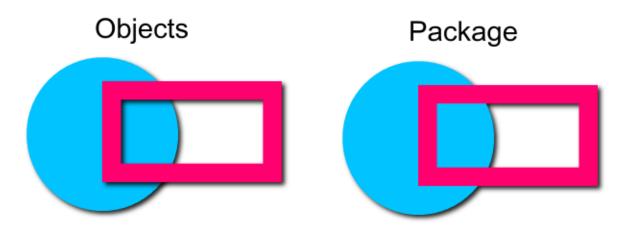
Color/Gradient	•
Burst Gradient	-
F Color	
B Color	
Color Fill	157

# 2.10.22 Packages

Object - Grouping - Create Package

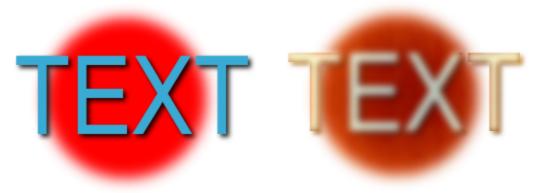
Con	nposition Editor Capture	<u>W</u> ind			
	<u>C</u> anvas Color				
	Static Canvas Size				
	Grouping	•			
		-	*.	<u>G</u> roup	Ctrl+G
	Combine Objects		+.	Ungroup	Ctrl+U
	Bitmap	►	+	- 2 1	
	Convert	•		Override Change	S
	<u>A</u> nti-Alias	•		Create Package	Ctrl+E
ABC	Text follow Path		<b>•</b> ₫	Unpack	~
	<u>R</u> otate		●5	Reload Package	
	Edit Transparency			Edit Inside	

Packages a special groups that will freeze objects. A package turns selected objects into a single bitmap representation. However it can be unpacked or edited inside. Packages are used for effect layering.



On the left side we have two objects to which both we applied shadow.

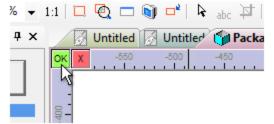
On the right side we have two objects inside package and we applied shadow on the package. See the difference. The objects in the package behaves to the outer world as a single object. Using Packages allow us to layer different effects on group of objects as a whole which would be otherwise impossible. Because the package behaves to the outside world as a bitmap we can apply any bitmap editing functions such as Levels, Hue, Saturation, Blur, Sharpening, Liquify or many of the Tweaks effects.



#### Edit Inside

We can edit the package without unpacking it - just use Edit Inside function (from right click menu or form the Grouping menu).

To apply the changes back to the main canvas press the OK button int the left top corner.



### **Reload Package**

This will rebuild the bitmap representation from the object inside.

## 2.10.23 Liquify

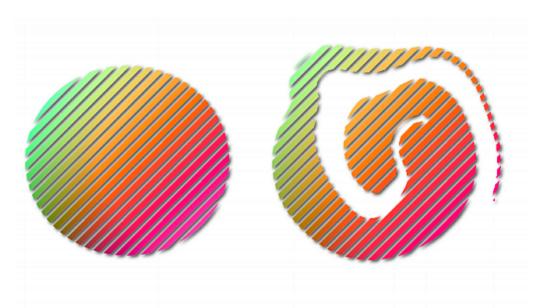
We are not sure if it was KAI Power Goo or what was the first software to create this effect but it has been here since then in various forms. Stretching, expanding, shrinking and rotating image under the brush.....



In UltraSnap you can apply the liquify to any other objects, not only bitmaps.

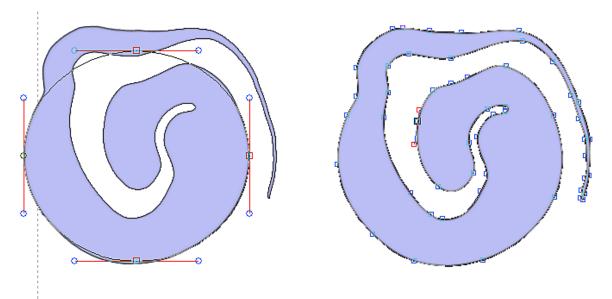


Using it on objects makes it a great tool to organically stretch solid vector objects rather than just making big puppy eyes on all your pictures. The result object still behaves like a vector objects and you can apply more effect and styles on such adjusted object.



The Liquified object still keeps its path of the original objects. On the image above the right object is still a **circle** and if we double click we will see its vector nodes that are unchanged from the original.

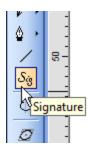
We can turn the liquified object into full vector by simply pressing Unify, Simplify and Polynomize Button.



On the left is a liquified object made from a circle that still has the nodes of the original until we press USP button. At this moment the liquified object will turn into a full vector object

# 2.10.24 Signature Tool

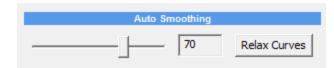
Signature Object is an object that can be (among other things) animated used Completion.



Signature Object is an Open polynome. The object is created to be used with mouse, yet it can produce smooth - stylus like drawings or written text (signatures)

Hand Draw Signature or Shapes
Signature
Auto Smoothing         Strokes         Line Tracer         Ansmalion

The smoothing is controlled with Auto Smoothing. Higher the number the more smooth the text/drawing will be. After the text is written it can also be relaxed with Relax Curves (the auto-smoothing slider has also effect on the Relax Curves)



### Line Art Import, Line Tracer

Drawing is not its only purpose. Signature can also vectorize line drawing - such as pencil sketch imported as image. Such image should be of good contrast - black pen on white paper.

	Line Tracer	
Import	Remove Orphans	< 40

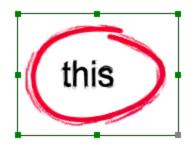
Remove Orphans will remove small lines or artefacts from the tracing, with the threshold set by the number next to it.

#### **Completion Animation**

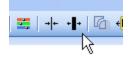
As described in previous chapter, the Signature object can be animated using Completion that will draw it on the screen in the order it was created.

Anima	ation	
Add Writing Anin	mation (Completion	)
OK	Cancel	
Add Lane: 🔂 🛱		Playback: 🕒 🖂 🕅 🏚
15	20	25 30
¢		•

Of course Signature doesn't need to be used to create hand drawn text - you can use it to make anything you need, such as arrows, circle highlighters, underlines etc...



After the object is placed on the canvas you can increase/decrease its thickness with the tools on main toolbar:

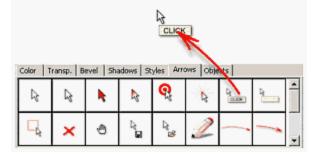


Or with the mouse wheel - while the object is selected.

## 2.10.25 Object Palettes

#### **Arrows and Objects**

While Styles stores only the attributes of one object, the Object Library can store the whole object or selection of objects. Think of the object library as your Clip Art. You can have any type of object in the library, text, path, bitmap, or any selection of objects.



#### Get Object(s) from Library

To get an object from the library, just drag and drop a desired clip from the Object Library to the Canvas. You can also get the object by double-clicking on it.

#### Add Object(s) to Library

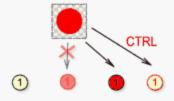
To store an object or selection of objects from canvas to the Object Library, first select the object(s), and then click on the Object library with the right mouse button, and select Add to Library. Similarly, you can replace an existing object in the library with the one on canvas

or

Drag Object or selection from your canvas to the Object Library - the new item will be added at the end.

#### **Color Changes (Override Changes)**

If the Object from Palette is created using multiple objects then it will be grouped. A typical example is the numbered bullet. It has circle, a black open circle as a outline and a text object.



Normally if you apply s style to a normally grouped objects (for example color) all objects will change the style. In case of our numbered bullet all objects inside will change the color to the same. In our example background circle, the text and outline will become all red - which is not exactly what we want. Therefore we have a special property called Override Changes.

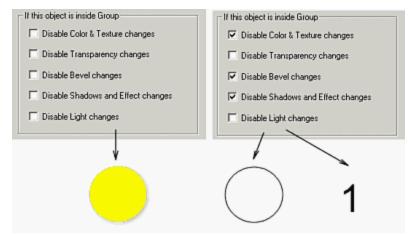
The numbered bullet is already stored in the Object library using this special setting. That means when we place the bullet on canvas and then change color on it only the background circle will change. There is also a complimentary effect:

If we hold CTRL and then change any colors of the bullet only the outline and text will change the color.

Few of the objects in arrows and Objects library are treated this way.

The trick is that before we added the multiple object to the library we change the Override Changes property of each of the separate object. *(menu Composition Editor - Grouping - Override Changes)* 

In case of the bullet we disabled Color, bevel and Shadow changes on the Outline circle and the text object (the number)



Then we put these three objects together and stored it in Objects library. The override changes works *only* when the objects are grouped together.

# 2.10.26 Magnifier Object

One of the special objects stored in the Objects library is a magnifier.



Everything below the magnifier is enlarged.

**Note**: The magnifier works within the canvas size (this is one of the very few cases you would care about the canvas size). The virtual canvas size is marked by the gray dashed line. You can simply click Finish Editing button then immediately press the Edit Mode button and the canvas will be enlarged around all the objects. You can also simply press CTRL+Q or use *Trim Canvas* from the *Composition Editor* menu.

**Trick**: You can create magnifier effect on any shape. Drag the magnifier object from Object library and ungroup it (CTRL+U). Take the objects apart and locate the one object that is the magnifier glass. Now copy it to the clipboard. Draw a new custom shape and then use Paste Attributes (CTRL+Shift+V) on it.

## 2.10.27 Other tools

#### Arrange objects

Each object you put on the canvas is on its own layer and you can see it because top objects cover the bottom ones.

You can move the objects between layers, bringing the object back or forward, moving the object to the bottom or to the very top.



The first two arrows select the previous or next object. Great if you can't select an object from behind another one.

The other 4 buttons that move the object in layers are

- On the top of all
- On the bottom
- Move one layer up
- Move one layer down

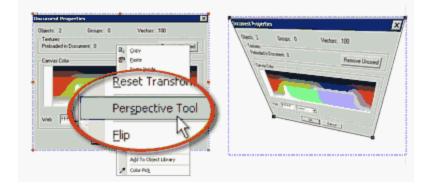
### Align and Flip Objects

You can align multiple objects or flip an object along vertical or horizontal axis.



#### Perspective Transformation of images

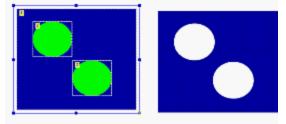
This command works like a tool where you can drag each corner of the image to stretch it in perspective space. The tool is accessible when you right click on an image.



#### Combine XOR two objects

Using a combination of primitive objects is the easiest way how to create any complex shapes, for example a rectangle with a circular holes in it.

Select two or more objects and use menu Composition Editor - Combine Objects - Boolean XOR.



#### **Color Correction**

Any object color can be adjusted in a non-destructive way, with the Color Correction. Similar to the Interactive Sharpen, this is non-destructive, and you can adjust it or remove it any time you want.

You can switch Color Correction into 2 types: RGB and HSL.

When you are working with **RGB**, you are adjusting gamma of the particular primary color. This is good to tone up photos.

In **HSL** mode you are working similar way as with the Hue, Saturatiion and Lightness option in Bitmap menu. You can change colors of the Object, change saturation, desaturate, make it lighter, darker or colorize it in one tone. This is very powerful tool because it takes from you the need to adjust textures and colors if you need to see different color variation of the object.

The colorize option is active only in HSL mode. This will make the image in one color tone determined by the Hue Slider.

**Note:** Color Correction is **Non-Destructive** tool. That means you can not only apply it but also remove it or change it any time later, even on a bitmap images.

# 2.10.28 Clipboard Functions

There are many clipboard formats that you can use from within UltraSNAP to communicate with outside world without saving anything.

	<u>С</u> ору	Ctrl+C	Tab	le View Help						
	C <u>o</u> py As Bitmap	Ctrl+Shift+C	•	Arial	- 10 - E					
	Copy w/ Transpa	rency 🕨		Copy Selecion As 32-bit PNG						
<b>B</b>	<u>P</u> aste	Ctrl+V		Copy Selection As 32-bit DIB						
	Paste As <u>B</u> itmap			Copy Selection as Explorer Handle						
	Paste <u>I</u> nside			Copy Selection as Vector (Illus	strator format)					
	Paste <u>A</u> ttributes	Ctrl+Shift+V		Copy All As 32-bit PNG						
	Duplicate			Copy All As 32-bit DIB						
	Select All	Ctrl+A		Copy All as Explorer File Hand	lle S					

First: the simple **Copy** in Edit mode will copy objects in the UltraSnap format (which means you will not be able to paste them somewhere else only within UltraSnap.

For a simple bitmap copy you can switch to Basic Quick Mode using "Finish Editing" button which will then send automatically everything to clipboard as an image.

Alternatively using Copy from the Quick mode will copy everything to clipboard as image.

But from within editor you can also copy in various other formats.

**Copy as Bitmap** will copy the selected objects as bitmap and you can then paste them in other applications.

But we can also copy the selected objects with a transparency and then paste it in supported applications that understand transparency.

This saves a lot of time Exporting it to transparent PNG and then importing it back in other application!

You need to copy it in appropriate format as there is not yet commonly agreed system: Edit->Copy w/ Transparency-> **Copy Selection As 32-bit PNG** (or 32-bit DIB) Some applications will be able to paste 32-bit PNG, some will work with 32-bit DIB (also known as DIB5). Some application may understand DIB5 but will paste it as 24-bit and you can't do anything about it.

For example:

32-bit PNG copy/paste: Adobe Fireworks, Microsoft office, Affinity Photo 32-bit DIB (DIB5) copy/paste: XARA Designer PRO

Some applications will be not able to paste with transparency regardless what you choose: for example Adobe Photoshop will recognize 32-bit DIB but paste it as normal 24-bit DIB. In that case you need to export as transparent PNG to file and then import it back in the application (ex: Photoshop)

### **Explorer Handle**

This is a method that works with file managers. Selecting objects and then using Copy as Explorer

Handle will allows us to paste it in Windows explorer which will then create a PNG file there. (So you may think of it as a quick PNG export).

But that is not all, pasting it this way also works on NAS (network disks), inside many FTP applications and other apps and devices that understand Explorer file handles. It often simplify the amount of operations you need to do.

The Copy as Vector was explained in <u>Illustrator</u> section.

# 2.11 Animation

UltraSnap PRO can create small Animated GIF animations using keyframes and tweens.

You can switch to animation mode:

Animation - Switch to Animation Mode

### 2.11.1 Animation basics

Animation - Switch to Animation Mode

Before we can do anything else, we need to set the canvas size and FPS.

Any object placed on the canvas is initially static and will appear on every frame of the animation. To animate object, you need to select it on the canvas and add a first key frame to it with Add Keyframe button.

Tim	eline													
Tools	; ♦⁺	5	Options:	ىلما 🏷	00:	еļэ́	ġш	<u>00</u> 7 ⊮≻	>	Add	Lane:	5	<b>11</b> +	
		ŝ	Frame:		5			10	1 1	15			1	20

From then on the object is an animated object

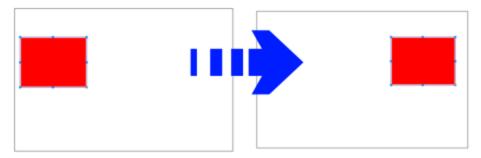
Timeline								
Tools: 🔶 🕇	⊘⁻	Options:	$\diamond$	யி	00:	еļэ́	ģ	jт ğ
		Frame:			5			1
Rectangle		•						

**Creating First Tween Animation** 

After you added your first keyframe at zero position, move the playhead to further frame (for example 15).

Timeline				
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Rectangle				

Then move the object to another position.



This creates first Tween animation.

Timeline				
Tools: 🔷 🔿	Options: 💍 🔓	00: e	திய 🛱 🖉 📂 ┥	Add L
	Frame:	5	10	15
Rectangle	<u>&gt;</u>			<b></b>

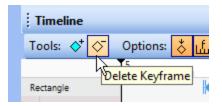
When you move the object, a new keyframe will be added at the playhead position, but only if Autocapture keyframes is set to on:

ions:	\$	ىلى	00:	۴Íð	ģ	ġщ	0.2			->
e: Auto Capture Keyframes								1		

If you set it to OFF, you can add keyframes manually by pressing the Add keyframe button again.

Now if you add another object that you want animate, you need to add a keyframe to it again to become animated.

To delete keyframe, you can select it, press Delete key or press Delete keyframe button.



### 2.11.2 Object Visibility

If you move the keyframe you created last time to another position and place playhead in front of first keyframe, you may see the object disappear.

Options: 💍	<mark>네네</mark> 00: 태	<u>ф</u> ф. (к.	-≪II Add Lane: 🔄 <sup>+</sup>	" ¤⁺ ■⁺ @⁺
Frame:	5	10	15	20

You can note that the first keyframe has a special mark with two lines in front. This signal a visibility change. However last keyframe doesn't have such mark and if we move the playhead after last keyframe - object will remain visible.

To control how each object behave we have a visibility buttons:



If you select object in the timeline, you can change its visibility options, that will chnage how first and last keyframe behaves.

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10 Dbject Starts Hidden	10 15 20 Object Ends Hidden

You can also break the animation at playhead, using Split button:

n:	÷	<	<mark>xk</mark> 🖻 🛱	
0			Split (Motion Break)	

The visibility buttons will directly affect how split point behaves. If Object Ends Hidden is set to ON, split point behaves as an end keyframe and the object will momentary disappear from the screen until new start keyframe. If Object Ends Hidden is OFF, the object will stay at the screen but will stop animating for that period of "break".

<u>ې الله ۱۹۵ کې </u>	ш 🕮 🕪 🗝	Add Lane: 🔂 🙀	" <b>■</b> <sup>+</sup> ₪ <sup>+</sup> 𝕵 <sup>+</sup>
5	10	15	20

Using visibility option you can hide objects from screen when the last keyframe or motion break keyframe occurs.

## 2.11.3 Object Lanes

If you move object around in different time frame , you create Motion keyframes.

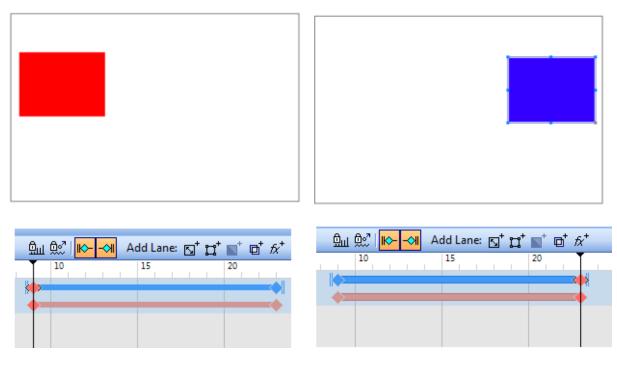
You can change the Object color or transparency, but this will not animate, because all you have now is only Motion lane.

Each object can have multiple Lanes that will animate a particular property. The Motion Lane is the default lane and it is always present (however it doesn't mean object has to move)

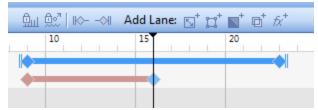
To add additional lanes, use the Add Lane Buttons:

A	dd Lane	[]	<b>¤</b> ⁺		┣	fx <sup>+</sup>	Playback
	15			al y	Add	Colo	25 r Lane
	•	>			-		

In the new Lane you can now animate changes, in this case changes to object color.



You can now move each keyframe around - the animation of movement and color doesn't have to correspond to each other.



Here the color change completes in the middle of the motion.

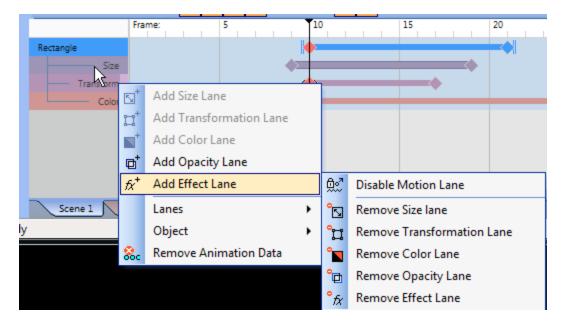
There are few Type of lanes:

Motion Lane - captures motion (but not size changes) Size lane - captures size changes Transformation lane - captures object points change Color Lane - captures changes in color and gradient Opacity Lane - captures object Transparency, Global Opacity and vector completion Effect Lane - captures changes in bevel, shadow and lenses. Also capture changes in <u>Squeeze</u>

**Note:** When you add Transformation Lane, also Size lane will be added - because moving points of objects usually also changes its size.

#### To Remove Lane:

Lane can be removed by right-clicking on the Left part of the timeframe window - where the names of the lanes are written in color. Then select the lane you want to remove from the menu.



Motion lane cannot be removed this way as it would remove the object from animation, it can be however disabled (the object will not move)

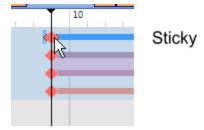
If you want to remove Motion Lane and all other lanes with it and make object non-animated, use Remove Animation Data from the same menu.

## 2.11.4 Moving keyframes

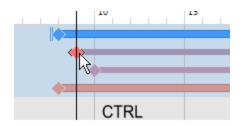
You can move keyframes in the timeframe editor around in many ways.

If you hold the keyframe in nte Motion Lane and move it, also keyframes just underneath on other lanes will move with it - the Motion lane is Sticky...

To disable this behavior you can hold Ctrl while moving the keyframe on Motion lane.

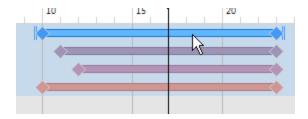


All other keyframes on other lanes are not sticky and they move independently. (You can make them sticky momentarily, by holding Shift) One exception is moving keyframes on Size and Transformation lanes - as they will move together. Holding CTRL will again detach them. This is because Sie and Transformation usually goes together.



### **Moving Block**

If you click on the line between keyframes, you can move them all as one block



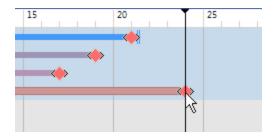
Again the stickiness rule apply - Moving Motion lane will also move all blocks in underneath lanes, but you can detach it by holding CTRL. Moving other lanes blocks will move independently (except Size and Transformation lane)

### Select Keyframes

Drawing a rectangle around keyframes (you have to start on empty space) will make a keyframe Selection.

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<b>b</b>	<b></b>		

After Selection is made, moving selected keyframe will move all in the selection.



Selection works across multiple objects!

You can also use selection to add Ease funvtion ot multiple keyframes, or delete multiple keyframes.

## 2.11.5 Anchor Move

Enter topic text here.

ର୍ ପ୍	Selection	🕹 🚥 🎇 xk   🖻 💼	
45	50	Anchor and Stretch Selection	

Anchor is a special way of moving keyframes relative to each other. It works on selection of keyframes.

Select the Anchor option Button and then draw rectangle to select keyframes.

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		$\frown$		
<b></b>	-		-	

You will see the very first keyframe from left in the selection is marked as Anchor. Now if you drag the last selected keyframe, all other selected keyframes will move, but relative to the anchor and each other.

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<b>+</b>			× 2

With this you basically expanded the animation in time (slow it down) but the relative distances between the keyframes will remain.

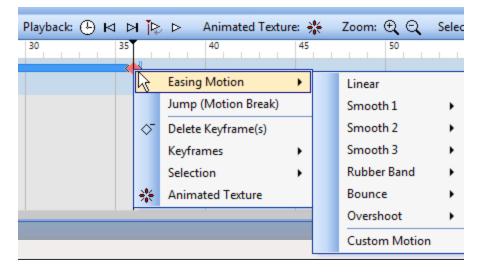
Because you can use selection across multiple object - this is a great way how to slow or speed up entire block of animation while keeping the relative distances between the keyframes.

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### 2.11.6 Easing

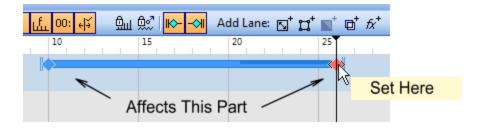
When you add two keyframes the motion between them is linear.

To change the motion acceleration, we can apply Easing Motion



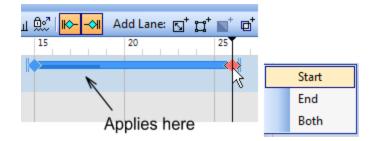
Select keyframe, right click on it and you can see Easing Motion menu.

When you add Easing Motion to the keyframe it applies to the whole motion on the left side from the previous keframe on the left to this one where the Easing is set.



Each Easing function has 3 subitems Start, End and Both.

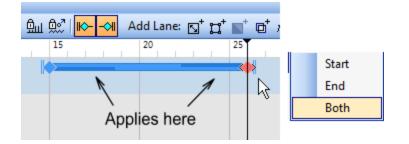
Easing Motion can be applied to the start of motion:



To the End of Motion:

டிய ஹீ   <mark>ஸ– - ≺</mark> ו Add Lane: ந⁺ ஜ⁺ ந⁺ ம்	
15 20 25	Start
	End
Applies here	Both

Or to both ends:



A motion between two keyframes will use the same Easing functions on both ends. You can't make Start with one type and End with another type, however you can design your own nonsymetric easing function.

While adding easing function to the Motion is obvious - you can add easing function to any other lane!

For example object can chnage size with a little bounce. Or adding bounce at the end of color lane keyframe will make the color blink.

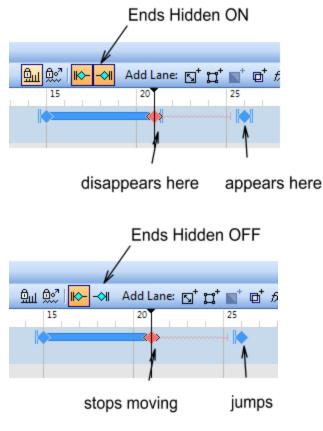
### 2.11.7 Motion Jump

Jump motion is a special Easing function that doesn't do any easing - it simply jumps from one state to another abruptly.



The jump happens at the keyframe where it was set. On the above picture the object will remain in the place of the last keyframe 22 up to keyframe 25 then jump abruptly to the new place at keyframe 26.

Object visibility affect how Jump behaves on motion lane. if object **ends hidden** is set to ON, the object will actually disappear during the time of motion break, if it is set to OFF the object will stay on screen but stop animating for that time.



Split

One way how to add motion break is to use split function.

Select a block at place where you want to split it:

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Use Split (Motion Break):

Selection	on: 🖞 🛲 🎇 🕪 🖻 🕄
	55 Split (Motion Break)

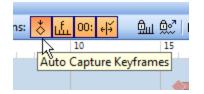
This splits the block in two blocks using the Motion break "Easing" function:

த்து ( <mark>ரு.</mark> –அ. 4	\dd Lane: 🔂 t 😭		Playback: 🕒 🖡
15	20	25	30

Split is useful when using FBF animation files which allows for removing part of animation or cutting it, just like you would in video editor.

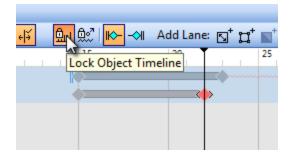
### 2.11.8 Locking

Locking Objects or Lanes is a way of preventing creating keyframes by accident when Auto Capture Keyframes is ON.



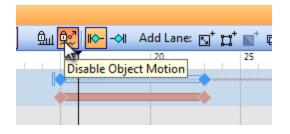
Using **Lock Object Timeline** will lock all object lanes against any changes. The object will still animate, but a new keyframe will not be added, nor keyframes can be moved.

This is a great option to avoid accidental changes. Moving the object on canvas will not affect the animation - object will return to the correct state as set on timeline.



Using **Disable Object Motion** will have different effect - the motion will be not performed - object will stay still regardless the keyframes. No new keyframe can be added to Motion lane either. But you can move the keyframes around.

All other lanes will animate accordingly and will work as normal.

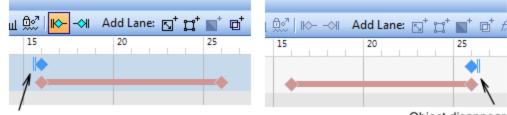


This is good option if you don't want object to move, but you want animate some other properties. Instead setting both keyframes on start and end to the same position, you can Disable the Motion Lane.

### Single keyframe

A similar effect is a Single Keyframe in a Motion Lane that holds position but doesn't animate.

A lane such as Motion can have just a single keyframe that will hold the position of the object. But object motion will not animate. End and Start Hidden options can be used on the keyframe to affect when object appear or when disappears.



Object appears here

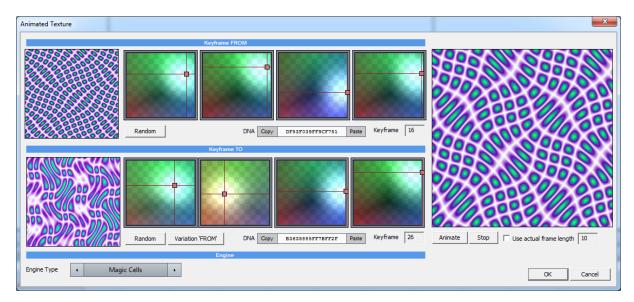


#### Zero keyframe

Motion lane can have zero keyframes. Object will stay on the canvas where it was placed last and we can animate other properties.

## 2.11.9 Animated Texture

There is a whole area of Parametric textures that can be animated. The Animated textures are animated in Color lane.



The animated Texture wizard will take the current selected keyframe as the end point and the keyframe on left as a start point and animate the texture between them.



The Texture settings is a hands-on settings. There are no made up parameters that would be hardly meaningful. Each texture is animated using 8 parameters that are divided into four XY controls. Moving the controls will change the texture parameters in certain way. Each set of parameters is also know as its DNA and storing such DNA (which is just a sequence of numbers) can recall the settings. You can copy the sequence to clipboard.

It is very easy to create various psychedelic animated objects with these.

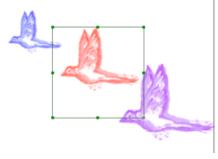
### 2.11.10 Compound Animation

You can export your animation into FBF file, then load it in another animation to create a compound animation.

Think of creating a small animation with just few frames of person walking or a bird flying. Then import it in another animation and make it move!



Then we can drag the file from explorer into another project, copy it few times, then animate each copy separately to have flock of birds each flying different way.



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bird2				-
bird2	k 🛌 👘			-

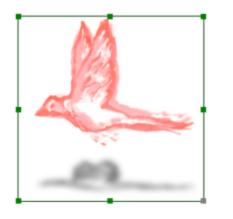
FBF File stands for Frame-By-Frame. It is our own video format that has some special property.

- it is fully transparent background format.
- it has fast access to frames in random order
- effects can be still applied to it after it has been exported

FBF files remain external to the project - they can be large, think of video editing and video files.

### Applying effects to FBF files.

When you have FBF file imported in another project there is a large amount of effects you can apply to it, even it is a rendered video. You can change its color, transparency, add shadows, bevels or even change the Global Paint Style.

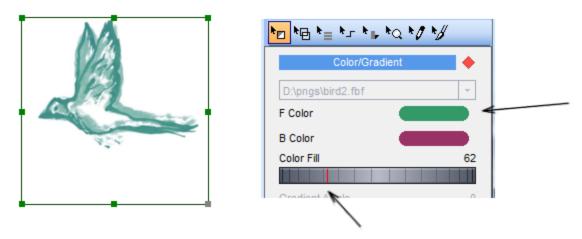


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		1.10

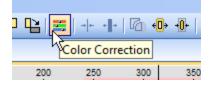
### Changing Color of FBF file

There are few ways to change color of imported FBF file.

First is to use Color property, change the F Color and move the Color Fill towards left side which will recolor the FBF object

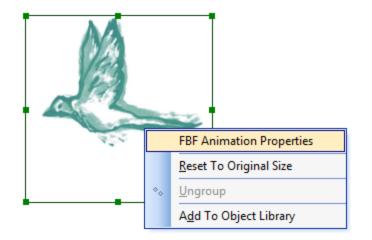


Other way is to use Color Correction and change the Hue.



### **FBF** Properties

To open FBF file properties, right click on the file and choose FBF Animation Properties



FBF Animation File	x	
External Animation File		
D:\pngs\bird2.fbf		
Internal ID 1	Copy FBF File to My Documents	
Frames 7 Original FPS 30		
Playback	Display Inside Object	
Coop	C Repeating Pattern	
Reverse	Stretch to Object Size	
Speed 1 x Original		
Transparency Blendin	ng (if Alpha Exist)	
C PRE-Multiplied		
<ul> <li>Normal (typical)</li> </ul>		
Object will animate only if it has keyframes.		
	OK Cancel	

Here you can adjust if the animation Loops, the direction of animation, Speed and how it is displayed.

### **Display Inside Object:**

Repeating Pattern will tile up the animation inside object as you resize it - creating a wall paper like effect.

Stretch to Object Size will stretch the animation to the size of object.

### Transparency Blending

This apply only if the FBF file has alpha channel and it affects how semi-transparent pars are rendered. **Normal** - will use the original background color as the matte color so the object will appear with the same colors it was designed.

**Pre-Multiplied** - will overlay on a black background matte. In case you use your animation over very different background than it was designed on, there may be some light color ringing at the edges. In that case you may use PRE-Multiplied blending which will completely remove any color ringing, but semi-transparent parts may then have different shade than they were designed.

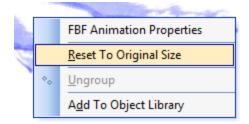
### **Extracting Frames**

if you need to extract the individual frames from FBF object, you can use this option. Note, it may create a large number of bitmap objects!

	Ani	mation Window Help	_	
Þ		Change Frame Size		프님막 4 쇼 (ㅎ 盐 퍆 많 뭐 내리
		Canvas Color		
-	~	Auto Capture Keyframes		0 50 100 150 200
л	00:	Show Big Timecode		
		Tools 🔸	$\hat{\gamma}^0_0 \dot{\gamma}$	Create Animated Texture
	٠	Screen Recorder		Animate Completion (Polynome/Text)
	Þ	Export Animation	Extract Frames from FBF	

#### **Reset Size**

To reset the object to original size (1:1 of the animation files), Right click on it and select Reset to Original Size



#### Add Object to Library

You can add FBF object to user library for next time. This will do few things: First it will copy the FBF file from its current location to My Documents FBFcache and then add the object with internally linked FBF file to the Quick Palette Animations

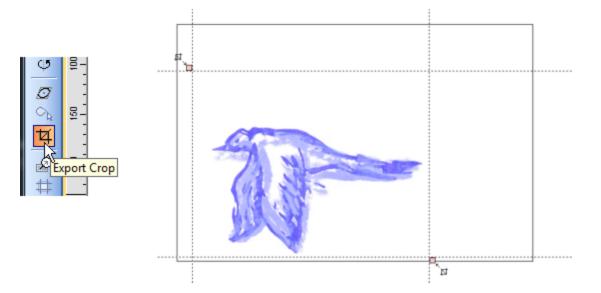
	FBF Animation Properties
	Reset To Original Size
**	<u>U</u> ngroup
	A <u>d</u> d To Object Library

Quick Pale	ette		Д	×
Color	Transp	Bevel	Effect	
Lights	Style	Global Pa	int Style	
Arrows	Objects	Animatic	ons	
				*

## 2.11.11 Export Crop

Export Crop is a great option to export only part of a canvas. Instead of trying to fit a canvas around your animation, simply draw crop rectangle around the objects you want to export.

This is especially good for creating Animation GIFs or FBF animation where you may not always be sure what is the size before you start making it.



Export Crop will affect every export option.

To remove crop either move its left point beyond right point or click the Export Crop again.

### 2.11.12 Animation Export

#### Preview

Before you export the file, you may want to see the preview, how it will look in real time. In that case, click Render Preview.

To see preview before Export, Re	ender Preview First
Render Preview	Preview Export (FPS, Size)

Once the preview is completed you can then play it with the Play Button under the preview window in Real-Time.

	17	Play
_	,	

#### Change FPS, speed and frame Size.

The whole reason to do so is to make the file smaller for web - either in size as frame an/or size as filesize. Once you change the file-size, it may be a good idea to also increase sharpness.

Number of Frames 18 @ 30 FPS
FPS
Change Export FPS 15 Frames 18 Full Half
Playback Speed 1 Delay 33 ms
Frame Size
Resize         New Size         400         x         266         Full         Half
Method Bicubic 👻
Sharpening
Sharpen
To see preview before Export, Render Preview First
Render Preview Preview Export (FPS, Size)

In General Half FPS still looks relatively smooth and gives you half the file filesize in most cases. Animated GIFs are usually good candidate to export with half FPS (15 or 12).

You can also change the playback speed - playback speed of 0.5 will play the file twice as slow, playback speed of 2.0 twice as fast. Changing playback speed doesn't increase or decrease file size.

When you made changes you can preview these with Preview Export

To see preview before Export, Render Preview First					
Render Preview	Preview Export (FPS, Size)				

This is different than the preview with **Play** button as it will show the result **with** the changes set as FPS, Resize, Sharpen. If the option is disabled you need to Render preview first.

#### Make Loopable

This is a simple option, best for for web formats where the first few frames and last few frames will blend together creating a smoother transition between end and the beginning. The amount of transition frames can be set here as well.

Once you use Loopable option the whole video will change slightly as it will start not from zero but from zero plus transition frames and those frames from the beginning will be then blended with frames at the end producing transition at the end. It should be obviously used for videos that loop - such as Animated GIF.

Export Range	
Make Loopable (Blending Start an Loop Transition Frames	

### **FBF** Animator

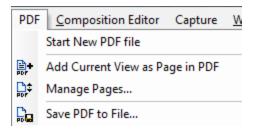
This is an internal format that is used for <u>Compound animations</u> inside our Animator. It offers full alpha transparency. FBF files are supported only in Style Animator.

## 2.12 PDF Pages

The version 4 brought tools for multi-page PDF export, which was added as most of the tools for internal purpose at mediachance office. This is a simple, but effective tool to create a PDF file from some of the screen captures, such as documents, web pages etc...or even from scratch.



Menu - PDF



Anytime you have captured something in Capture mode or you are in the Editor mode, you can press Add to PDF button (Add current View as page in PDF) and that view will be added as a page in PDF. The page doesn't have to be a screen capture. just switch to editor and draw some text, shapes etc and Add to PDF. Great for creating title pages.

When you have all pages collected, press Save PDF to File.

#### Start new PDF File

Starts a new PDF file - all previous pages will be deleted.

### Add current View as Page in PDF - Add to PDF button

Adds the current view in Capture or Editor mode to the PDF as a new page. To speedup work-flow, there is no confirmation feedback, just a little sound beep. The status bar will then show how many pages are now in the PDF.

PDF: 8 pages 195, -15

#### Manage pages

Let's you see, delete and re-arrange the pages added to the PDF.

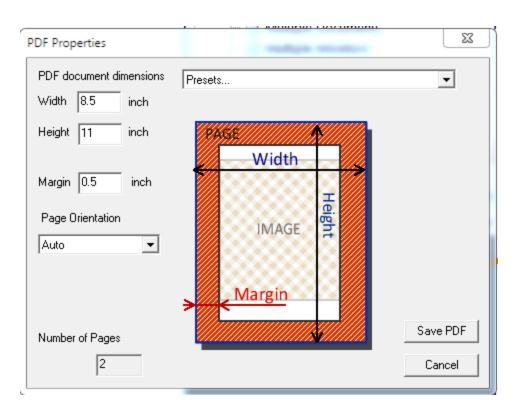
page1.jpg page2.jpg page3.jpg page4.jpg page5.jpg page6.jpg	^	Hey		
page8.jpg			$\bigcirc$	

If you have multiple documents (tabs) open in the UltraSnap - they will all share the same PDF, so you can add pages from different tabs.

### Save PDF to file

Saves the pages to a PDF file. You will need to set the PDF dimensions. The image will be placed so it fits the page dimensions. You can (and should) specify a small margin so the image doesn't go to the edges of the document.

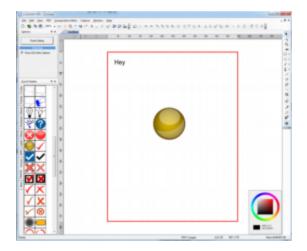
Page Orientation - the PDF can have some pages in Portrait and some in Landscape mode. You can either force it one way or have it Auto - which will create Landscape mode for images that have width > height and Portrait for everything else.



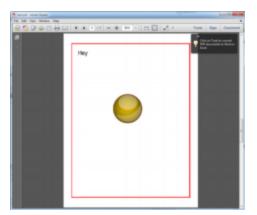
Tip:

If a good page layout is important, create a large rectangle in the correct page aspect ratio, for example for Letter size, it could be 600 width and 780 height.

Then place the objects on top of the rectangle as you would in a desktop publishing editor.



In this image the rectangle borders are highlighted red so it is more obvious. In PDF file this would fit the page optimally:



The PDF export is a image pdf file, the text will be also exported as an image - not as a searchable text.

# 2.13 Tips and Tricks

The UltraSnap allows for many neat tricks while working with screen captures. Particularly when you open few documents.

- If you want to permanently crop a screen capture in Editing mode you can copy it to a new document and crop it there, then paste it back. In edit mode, select object press CTRL+C (copy) and then click New document, then press CTRL+V (paste), Click Finish Editing and then Quick Crop. After you are done paste the new object back in the first Editing document. You can do that with multiple objects.
- You can also use the Interactive Crop in editing mode to mark part of the image, switch to Capture mode (Finish Editing) and then again switch to Editing mode. Now press CTRL+V (paste) and the marked image will appear as new object.
- You can start working in Editing mode right from empty document. You don't have to capture anything, just press Edit mode.
- You can copy and paste object or multiple objects between two documents, both in editing mode
- You can use Copy as Bitmap on multiple objects in Edit mode. The selection will be stored in clipboard as one single combined image and you can then paste it in a web editor or word document. You can even paste it back in the editor as a new image.
- You can create magnifier effect on any shape. Drag the magnifier object from Object library and ungroup it. Take the objects apart and locate the object that is the magnifier glass. Now copy it to the clipboard. Draw a new custom shape and then use Paste Attributes (CTRL+Shift+V) on it.
- If you want to "erase" part of the screen capture, just draw a rectangle over it and set it as white so it looks like the background
- You can save the whole editable project for future and then any time open it back menu *File-Open/Save document*
- To apply multiple fading effects (for example on long toolbar where both ends fade out) you can use the copy as bitmap trick and linear transparency. Set first linear transparency, then Copy as Bitmap the object, Delete the object and Paste. Now apply next linear transparency to the pasted object.
- Use the Drag and Drop from Capture mode to Explorer or to any other software that accepts files. For example you can directly drag image from UltraSnap to e-mail client and it will be added as attachment.

# III Animation Basics

## 3.1 Size and Color (2)

### Frame Size and Rate

Animation - Change Frame Size.

Before we can do anything else, we need to set the canvas size and FPS.

Animation Frame Size/Rate	×
Presets	Frame Settings
1 320x200 Small web animation	Animation
2 480x480 Square web animation	Width 600
3 600x400 Large web animation	Height 400
4 720p Video Frame Using Mega-Render 2x during Export	Framerate
5 Full HD Video Frame Using Mega-Render 2x during Export	
6 <b>2K Video Frame</b> Using Mega-Render 2x during Export	
7 4K Video Frame Using Mega-Render 4x during Export	
8 Render	
	Add User Preset
	Remove User Preset
	OK Cancel

One special property of Animator is that it can export animation 2x or 4x of the canvas size using Mega-Render engine. So if you want to export for a certain video size, you can choose to create canvas that is a division of 2 or 4 for that size, instead of trying to animate a very large canvas. All the Video presets are using this feature.

The Mega-Render option can be set in the Animation Export and it can be selected regardless what preset is chosen here.

You can change the frame settings at any time, but also export only a part of the animation canvas using Export Crop, without changing the size.

You have 3 choices for FPS - 30 FPS, 25 FPS and 24 FPS.

### Canvas Color.

You can change the canvas color in menu Animation - Canvas Color.

Objects: 0 Groups: 0 Vectors: 0 Textures Preloaded in Document: 0 Canvas Color		Document Properties
Canvas Color		Textures
	]	Canvas Color
Web FFFFFF Select  OK Cancel		

## **3.2 Animation Steps**

Any object placed on the canvas is initially static and will appear on every frame of the animation. To animate object, you need to select it on the canvas and add a first key frame to it with Add Keyframe button.

Timeline					
Tools: ♦ <sup>†</sup> ♦ <sup>¯</sup>	Options: 💍	ufin 00: el¥	∰	- Add Lane	: 🖸 🛱 🗖
- La	Frame:	5	10	15	20

From then on the object is an animated object

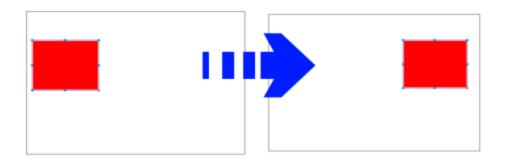
Timeline					
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	Frame:		5		1
Rectangle					

### **Creating First Tween Animation**

After you added your first keyframe at zero position, move the playhead to further frame (for example 15).

Tools: 🔷 🔿	Options: 👗 🛓	f. 00: 🛒	டிய 😥 🕪 \prec	🛛 🛛 🕹 🕹
	Frame:	5	10	15
Rectangle				

Then move the object to another position.



This creates first Tween animation.

Timeline				
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Rectangle	<u>&gt;</u>			<b>_</b>

When you move the object, a new keyframe will be added at the playhead position, but only if Autocapture keyframes is set to on:

ions: <mark>ठ 止</mark>	<b>00: elž</b> 현패 현재   IN~ ->
e: Auto	Capture Keyframes

If you set it to OFF, you can add keyframes manually by pressing the Add keyframe button again.

Now if you add another object that you want animate, you need to add a keyframe to it again to become animated.

To delete keyframe, you can select it, press Delete key or press Delete keyframe button.

Timeline	
Tools: ♦	🔆 Options: 💍 🚠
	Delete Keyframe
Rectangle	k

That is basically how Tween Animation works in a nutshell.

## 3.3 Object Visibility

If you move the keyframe you created last time to another position and place playhead in front of first keyframe, you may see the object disappear.

Options: 💍	<u>(뉴</u> 00: 태	டிய 👷 🕪 \prec	🗏 🛛 Add Lane: 🗔 🕇	" ¤* ■* @*
Frame:	5	10	15	20

You can note that the first keyframe has a special mark with two lines in front. This signal a visibility change. However last keyframe doesn't have such mark and if we move the playhead after last keyframe - object will remain visible.

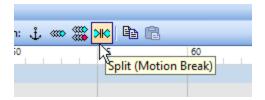
To control how each object behave we have a visibility buttons:



If you select object in the timeline, you can change its visibility options, that will chnage how first and last keyframe behaves.

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10 15 Object Starts Hidden	10 15 20 Object Ends Hidden

You can also break the animation at playhead, using Split button:



The visibility buttons will directly affect how split point behaves. If Object Ends Hidden is set to ON, split point behaves as an end keyframe and the object will momentary disappear from the screen until new start keyframe. If Object Ends Hidden is OFF, the object will stay at the screen but will stop animating for that period of "break".

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5	10	15	20
		~ .	

Using visibility option you can hide objects from screen when the last keyframe or motion break keyframe occurs.

## 3.4 Object Lanes

If you move object around in different time frame , you create Motion keyframes.

You can change the Object color or transparency, but this will not animate, because all you have now is only Motion lane.

Each object can have multiple Lanes that will animate a particular property. The Motion Lane is the default lane and it is always present (however it doesn't mean object has to move)

To add additional lanes, use the Add Lane Buttons:

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	15	1			2	Add	Colo	25 r Lane
		•				-		

In the new Lane you can now animate changes, in this case changes to object color.



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You can now move each keyframe around - the animation of movement and color doesn't have to correspond to each other.

<u>@</u> @?   ⋈–_→>	Add Lane:		* @* <i>fx</i> *
10	15	20	
· ·	T T		

Here the color change completes in the middle of the motion.

There are few Type of lanes:

Motion Lane - captures motion (but not size changes) Size lane - captures size changes Transformation lane - captures object points change Color Lane - captures changes in color and gradient Opacity Lane - captures object Transparency, Global Opacity and vector completion Effect Lane - captures changes in bevel, shadow and lenses. Also capture changes in <u>Squeeze</u>

**Note:** When you add Transformation Lane, also Size lane will be added - because moving points of objects usually also changes its size.

### To Remove Lane:

Lane can be removed by right-clicking on the Left part of the timeframe window - where the names of the lanes are written in color. Then select the lane you want to remove from the menu.

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		Add C	Color La	ane												
	₫	Add C	pacity	Lane												
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Scene 1		Lanes				)		•	Rem	iove	Size	lane				
ly		Objec	t			)		าม	Rem	iove	Tran	sfor	matio	on L	ane	
	8.	Remo	ve Ani	matio	n Data			°	Rem	iove	Colo	r Lar	ne			
								⁰₽	Rem	iove	Ора	city l	ane			
								°fx	Rem	ove	Effec	t La	ne			

Motion lane cannot be removed this way as it would remove the object from animation, it can be however disabled (the object will not move)

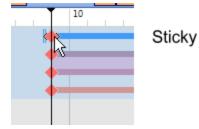
If you want to remove Motion Lane and all other lanes with it and make object non-animated, use Remove Animation Data from the same menu.

## 3.5 Moving Keyframes

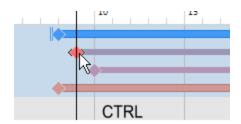
You can move keyframes in the timeframe editor around in many ways.

If you hold the keyframe in nte Motion Lane and move it, also keyframes just underneath on other lanes will move with it - the Motion lane is Sticky...

To disable this behavior you can hold Ctrl while moving the keyframe on Motion lane.

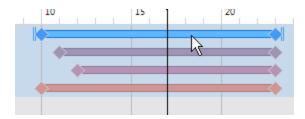


All other keyframes on other lanes are not sticky and they move independently. (You can make them sticky momentarily, by holding Shift) One exception is moving keyframes on Size and Transformation lanes - as they will move together. Holding CTRL will again detach them. This is because Sie and Transformation usually goes together.



#### **Moving Block**

If you click on the line between keyframes, you can move them all as one block



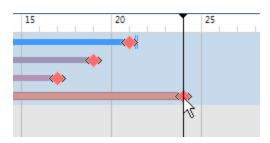
Again the stickiness rule apply - Moving Motion lane will also move all blocks in underneath lanes, but you can detach it by holding CTRL. Moving other lanes blocks will move independently (except Size and Transformation lane)

### Select Keyframes

Drawing a rectangle around keyframes (you have to start on empty space) will make a keyframe Selection.

>> Add Lane: S <sup>+</sup> B <sup>+</sup> S <sup>+</sup> S <sup>+</sup>	Playback: 🕒 너 더 🏷 Þ
15 20	25 30

After Selection is made, moving selected keyframe will move all in the selection.



Selection works across multiple objects!

You can also use selection to add Ease funvtion ot multiple keyframes, or delete multiple keyframes.

## **3.6 Anchor Move**

Enter topic text here.

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45	5	Anchor and Stretch Selection	

Anchor is a special way of moving keyframes relative to each other. It works on selection of keyframes.

Select the Anchor option Button and then draw rectangle to select keyframes.

You will see the very first keyframe from left in the selection is marked as Anchor. Now if you drag the last selected keyframe, all other selected keyframes will move, but relative to the anchor and each other.



With this you basically expanded the animation in time (slow it down) but the relative distances between the keyframes will remain.

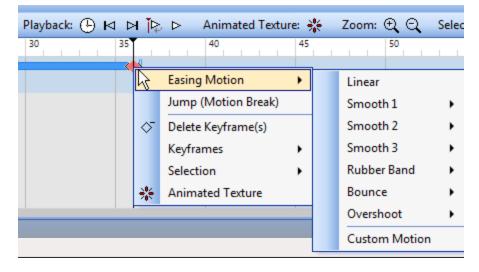
Because you can use selection across multiple object - this is a great way how to slow or speed up entire block of animation while keeping the relative distances between the keyframes.

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## 3.7 Easing Motion

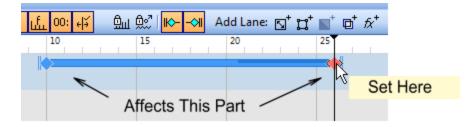
When you add two keyframes the motion between them is linear.

To change the motion acceleration, we can apply Easing Motion



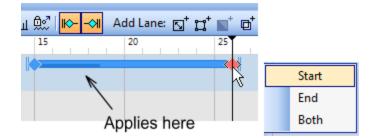
Select keyframe, right click on it and you can see Easing Motion menu.

When you add Easing Motion to the keyframe it applies to the whole motion on the left side from the previous keframe on the left to this one where the Easing is set.



Each Easing function has 3 subitems Start, End and Both.

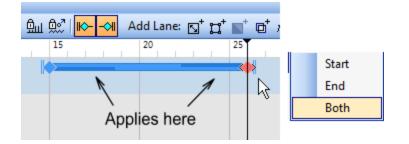
Easing Motion can be applied to the start of motion:



To the End of Motion:

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15 20 25	Start
	End
Applies here	Both
Applies liele	

Or to both ends:



A motion between two keyframes will use the same Easing functions on both ends. You can't make Start with one type and End with another type, however you can design your own nonsymetric easing function.

While adding easing function to the Motion is obvious - you can add easing function to any other lane!

For example object can chnage size with a little bounce. Or adding bounce at the end of color lane keyframe will make the color blink.

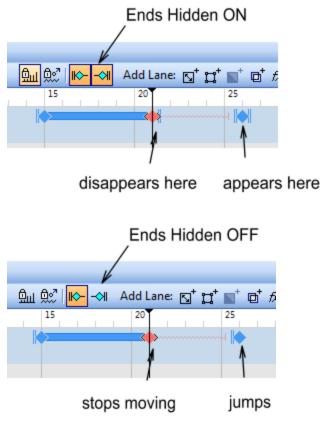
## 3.8 Motion Break - Jump

Jump motion is a special Easing function that doesn't do any easing - it simply jumps from one state to another abruptly.



The jump happens at the keyframe where it was set. On the above picture the object will remain in the place of the last keyframe 22 up to keyframe 25 then jump abruptly to the new place at keyframe 26.

Object visibility affect how Jump behaves on motion lane. if object **ends hidden** is set to ON, the object will actually disappear during the time of motion break, if it is set to OFF the object will stay on screen but stop animating for that time.



Split

One way how to add motion break is to use split function.

Select a block at place where you want to split it:

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			+

Use Split (Motion Break):

Selection	on: 🖞 🚥 🎇 🚧 🖻 🖻
	55 Split (Motion Break)

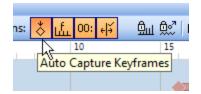
This splits the block in two blocks using the Motion break "Easing" function:

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15	20	25		30
<b> </b>	~			-

Split is useful when using FBF animation files which allows for removing part of animation or cutting it, just like you would in video editor.

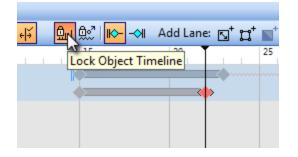
## 3.9 Locking Motion/Object

Locking Objects or Lanes is a way of preventing creating keyframes by accident when Auto Capture Keyframes is ON.



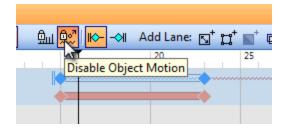
Using **Lock Object Timeline** will lock all object lanes against any changes. The object will still animate, but a new keyframe will not be added, nor keyframes can be moved.

This is a great option to avoid accidental changes. Moving the object on canvas will not affect the animation - object will return to the correct state as set on timeline.



Using **Disable Object Motion** will have different effect - the motion will be not performed - object will stay still regardless the keyframes. No new keyframe can be added to Motion lane either. But you can move the keyframes around.

All other lanes will animate accordingly and will work as normal.

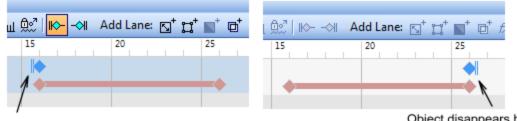


This is good option if you don't want object to move, but you want animate some other properties. Instead setting both keyframes on start and end to the same position, you can Disable the Motion Lane.

#### Single keyframe

A similar effect is a Single Keyframe in a Motion Lane that holds position but doesn't animate.

A lane such as Motion can have just a single keyframe that will hold the position of the object. But object motion will not animate. End and Start Hidden options can be used on the keyframe to affect when object appear or when disappears.



Object appears here

Object disappears here

## Zero keyframe

Motion lane can have zero keyframes. Object will stay on the canvas where it was placed last and we can animate other properties.

## 3.10 Keyframe Maintenance

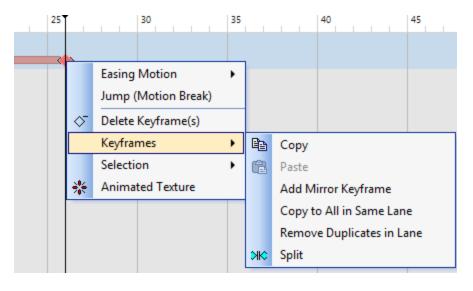
There are few actions you can perform on a keyframe.

Copy/Paste - you can copy a keyframe and paste it somewhere else or paste its properties over another keyframe.

Add Mirror keyframe. A keyframe to the left of selected keyframe will be mirrored on the right side of the selected keyframe. In essence this will create a reverse motion. So an object that moves from left to right will then moves back from the right to left.

Copy to All in same Lane - properties of selected keyframe will becopied to all keyframes on entire lane. Remove Duplicates - if any neighbor keyframes are the same, the right one will be removed as redundant.

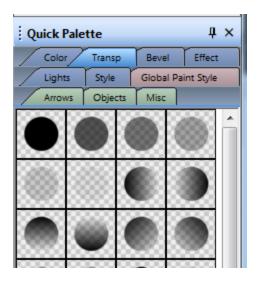
Split - splits block at playhead using Jump (Motion Break)



# **3.11 Object Properties**

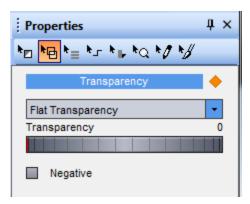
We learned how to add Lanes. To change properties of Canvas object at each keyframe we can use few options:

Use Quick palette:



Selecting object on canvas and then selecting item in Quick Palette will change the object properties and if corresponding lane is added it also adds keyframe there. (If Auto Capture Keyframes is ON) Remember, in order to animate a property, the lane that holds the property has to be added - so for Transparency and opacity lane needs to be present.

Another option is to use Properties window



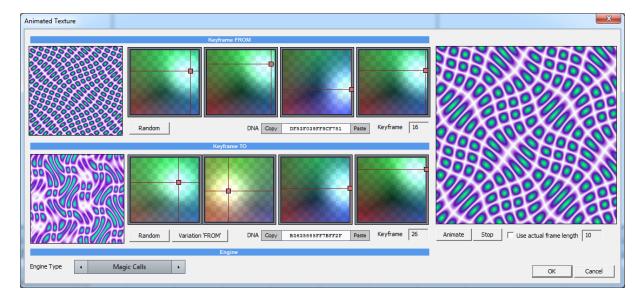
Moving cursor over the colored keyframe next to the property name will show you which lane the property is animated in:



Most of the Properties are self-explanatory, but there are few we will explain in next chapters.

# 3.12 Animated Texture

There is a whole area of Parametric textures that can be animated. The Animated textures are animated in Color lane.



The animated Texture wizard will take the current selected keyframe as the end point and the keyframe on left as a start point and animate the texture between them.



The Texture settings is a hands-on settings. There are no made up parameters that would be hardly meaningful. Each texture is animated using 8 parameters that are divided into four XY controls. Moving the controls will change the texture parameters in certain way. Each set of parameters is also know as its DNA and storing such DNA (which is just a sequence of numbers) can recall the settings. You can copy the sequence to clipboard.

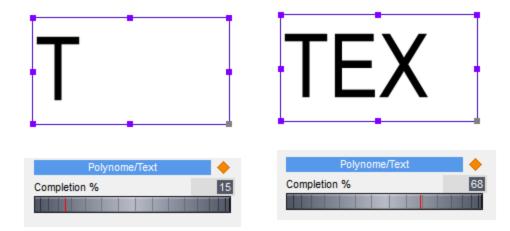
It is very easy to create various psychedelic animated objects with these.

## 3.13 Polynome Completion

Polynome Completion is an Opacity Lane animated property that sets how much of the polynome is drawn at a time. When animated, it creates an objects that draws itself.

Properties	ų×
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- Blending Mode	•
Normal	-
Global Opacity	255
Polynome/Text	•
Completion %	100

This can be easily demonstrated on Text.



The Completion works on:

- Text
- Complex Closed Polynomes that have multiple separate parts (just like text has letters)
- Object created by Tracing
- Open polynomes hand drawings

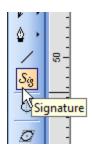
It will not work on Bitmap or primitive objects (such as circle, square...)

The best use is however with Signature Object - which is a hand-drawn vector object that when used with completion will draw itself on the screen in the same order it was created.

Note: a normal text may be drawn with letters each in different speed - this is because some letters such as S may have more polynome points than say a letter A, so the completion will spend more time on the S than on A. You can fix it with keyframes on Opacity lane, if required.

## 3.14 Signature object

Signature Object is an object that can be (among other things) animated used Completion.



Signature Object is an Open polynome. The object is created to be used with mouse, yet it can produce smooth - stylus like drawings or written text (signatures)



The smoothing is controlled with Auto Smoothing. Higher the number the more smooth the text/drawing will be. After the text is written it can also be relaxed with Relax Curves (the auto-smoothing slider has also effect on the Relax Curves)

othing	
70	Relax Curves

### Line Art Import, Line Tracer

Drawing is not its only purpose. Signature can also vectorize line drawing - such as pencil sketch imported as image. Such image should be of good contrast - black pen on white paper.

Line Tracer	
Remove Orphans	< 40

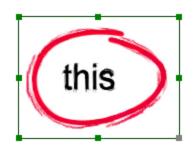
Remove Orphans will remove small lines or artefacts from the tracing, with the threshold set by the number next to it.

## **Completion Animation**

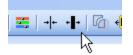
As described in previous chapter, the Signature object can be animated using Completion that will draw it on the screen in the order it was created.

Anin	nation	
Add Writing An	imation (Completion)	)
ОК	Cancel	]
Add Lane: 🔂 🙀	■ <sup>†</sup> ⊡ <sup>†</sup> ∧ <sup>†</sup> P	'layback: 🕒 너 너 🏌
15		25

Of course Signature doesn't need to be used to create hand drawn text - you can use it to make anything you need, such as arrows, circle highlighters, underlines etc...



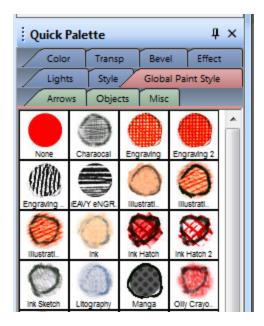
After the object is placed on the canvas you can increase/decrease its thickness with the tools on main toolbar:



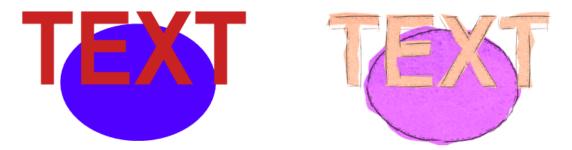
Or with the mouse wheel - while the object is selected.

# 3.15 Global Paint Style

Global paint Style is an unique property of our Style Animator that can turn vector objects into a handdrawn or hand painted style with a single click.

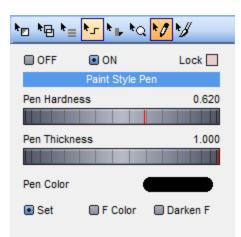


Global Paint Style is a Scene global setting. Applying it to Scene from Quick Palette will change all object using that selected style. However, objects can be locked or the effect can be removed from certain objects using Properties.



This instantly makes a significant impact to how the animation will be perceived.

While the Paint Style is Global, each individual object can be then changed separately from the two Properties panels:



This adjusts the Pen - outline of the painted object. Pen can have its own color that is independent of the object fill color (Set) or it can be Fill color (F Color) that is set in the Color properties. Darken F will draw pen with fill color but darkened.

Properties	џ×
<sup>▶</sup> □ <sup>▶</sup> ⊟ <sup>▶</sup> ≡ <sup>▶</sup> 」 <sup>▶</sup> ⊪ <sup>▶</sup> Q <sup>▶</sup> ∕	*#
OFF ON	Lock 🗌
Paint Style Fill	
Fill Color Thinning	1.00
Random Uneven Edges	80
No Edge Shimmer Animation	-
Fill Smear	0.00

This adjusts the fill. The fill color is determined by various parameters such as the F color in Color palette, texture, even animated texture.

The object can be drawn with uneven edges that spills beyond the outline. Those edges can be also animated!. When you set the edge animation you need to choose the rate of animation:

Random Uneven Edges	80
No Edge Shimmer Animation	•
No Edge Shimmer Animation	
Every Frame (Fast Flutter)	
1/2 Rate Fast Shimmer	
1/3 Rate Medium Shimmer	ŀ
1/4 Rate Slower Shimmer	
1/5 Rate Slow Shimmer	

**Remember in order for the object to animate its edges, it has to be animated object** - it needs to have at least one keyframe. Animated edge is not a Tween animation, but a property. That means there

is no lane assigned to it, nor you need to put a certain keyframe. It will animate if it is set in and the object is animated regardless of how many keyframes it has.

The rate controlls how fast you want to randomize the edges. If you animate it every frame, it will be pretty shimmery effect in 30 FPS. To simulate Hand Drawn frame-by-frame animation 1/2 or 1/3 rate works best.

The property panels modify few major settings of the already applied Global Paint Style on the object in a sort of refinement way.

### Locking object Paint Style.

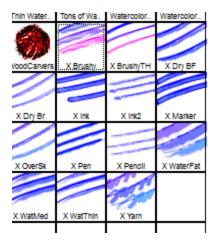
On both properties there are options to set or remove the part of Global Paint effect on that object and then Lock that settings. Locking will prevent that properties from changing when you apply different global properties. You can Lock the properties in OFF state as well.

This works separately for Pen properties and Fill properties allowing you to quickly mix and match styles.

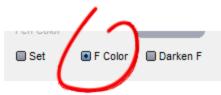
OFF ON Lock
-------------

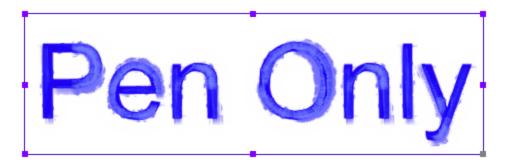
## Hand Drawn Pen-only Styles

A special part of the Global styles are Pen only styles that can create Hand Drawn look on a single line graphics as well as object such as text.



Those presets will not change the fill, only change the outline to be hand drawn, yet with the same color as fill (due to its F Color properties), creating a hand painted natural look.





You can use Color Gradient applied on objects with such Global Style for some interesting watercolor effects:

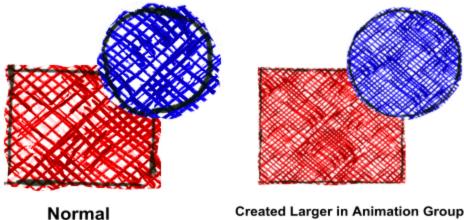


Color/Gradient	•
Burst Gradient	-
F Color	
B Color	
Color Fill	157

## **Scaling The Style**

The styles are created using a certain default size. If you scale the objects, the fill, such as shading will not scale with it. (This is how it would be in real life if you draw it on a paper, you don't scale shading with the object, it would look unnatural)

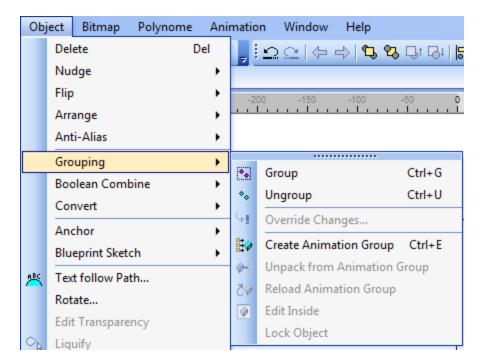
To scale the Paint Style, you can use Animation Groups. You can resize the objects inside Animation Group to be larger than required, then size it down in your main document which will automatically scale the shading.



Created Larger in Animation Group then sized down in main document

## 3.16 Groups and Animation Group

To animate multiple object as a single group there are few choices. A simple choice is to group the objects into a soft Group (Ctr+G) and they will move together as you drag the group around. However each object in the soft group will have its own keyframe lane and in fact can animate independently from other objects in the same group if you wish so.



The second choice is a sort of "hard" group - called Package or Animation group.

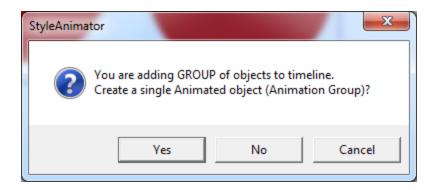


Objects inside Animation Group will all animate together. Animation Group will have only single set of keyframe Lanes.

Using Animation Group has many other hidden benefits. You can change, add or remove objects to it without disturbing the overall animation.

#### Adding Group to timeline

If you try to select multiple objects and press Add Keyframe or if you select a previously created Group of objects (created with CTR+G), there will be a choice:

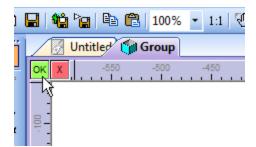


If you answer NO, then all objects will be added as soft Group - each object will have its own keyframe lane.

If you select YES, then the Group will be made into a Package - that we call here Animation Group and only a single keyframe lane will be added.

**Animation Group** is a representation of multiple object that behaves as a single object in your document, but can be still changed inside.

If you double-click on Animation Group you will open it in a separate document where you can edit the inside of the Group independently from the overall animation in main document.



#### Effects and Paint Styles

A package (Animation Group) behaves as a new single object. If you add effect to a package it will be applied to it as a whole.

The Animation Group however **keeps its own Paint Style locked inside**. You need to apply the Paint Style inside the Package as applying it outside (in the main animation) will have no effect.

#### Scaling Effects - such as Paint Style

There are other ways to use Animation Groups - For example if you want to scale a paint Effect effect. See <u>Global Paint Style</u>.

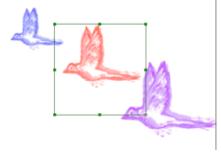
## 3.17 FBF Compound Animation

You can export your animation into FBF file, then load it in another animation to create a compound animation.

Think of creating a small animation with just few frames of person walking or a bird flying. Then import it in another animation and make it move!



Then we can drag the file from explorer into another project, copy it few times, then animate each copy separately to have flock of birds each flying different way.



bird2	5	10	15
a transmission of the second sec			-
bird2			
			-
bird2			

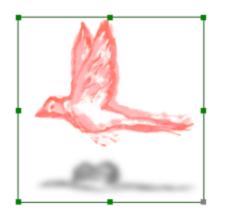
FBF File stands for Frame-By-Frame. It is our own video format that has some special property.

- it is fully transparent background format.
- it has fast access to frames in random order
- effects can be still applied to it after it has been exported

FBF files remain external to the project - they can be large, think of video editing and video files.

## Applying effects to FBF files.

When you have FBF file imported in another project there is a large amount of effects you can apply to it, even it is a rendered video. You can change its color, transparency, add shadows, bevels or even change the Global Paint Style.

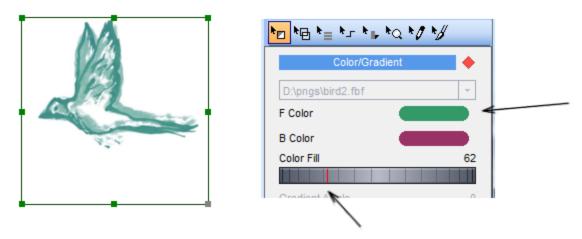


▶ <mark>⊡</mark> ⋫⋳ ।	t≣ tr <b>t</b> rtq t∕	ß
	Shadows Effect	•
Sun Sh	adow	-
Color		
Width		3.06
		1.12

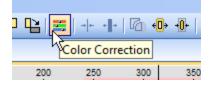
## Changing Color of FBF file

There are few ways to change color of imported FBF file.

First is to use Color property, change the F Color and move the Color Fill towards left side which will recolor the FBF object

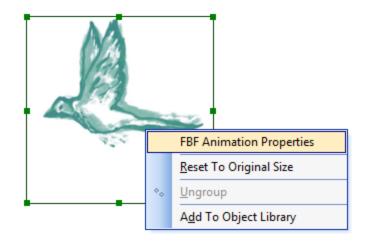


Other way is to use Color Correction and change the Hue.



## **FBF** Properties

To open FBF file properties, right click on the file and choose FBF Animation Properties



FBF Animation File	x
External Animation File	
D:\pngs\bird2.fbf	
Internal ID 1	Copy FBF File to My Documents
Frames 7 Original FPS 30	
Playback	Display Inside Object
Coop	C Repeating Pattern
Reverse	Stretch to Object Size
Speed 1 x Original	
Transparency Blendin	ng (if Alpha Exist)
C PRE-Multiplied	
<ul> <li>Normal (typical)</li> </ul>	
Object will animate only if it has keyframes.	
	OK Cancel

Here you can adjust if the animation Loops, the direction of animation, Speed and how it is displayed.

## **Display Inside Object:**

Repeating Pattern will tile up the animation inside object as you resize it - creating a wall paper like effect.

Stretch to Object Size will stretch the animation to the size of object.

## Transparency Blending

This apply only if the FBF file has alpha channel and it affects how semi-transparent pars are rendered. **Normal** - will use the original background color as the matte color so the object will appear with the same colors it was designed.

**Pre-Multiplied** - will overlay on a black background matte. In case you use your animation over very different background than it was designed on, there may be some light color ringing at the edges. In that case you may use PRE-Multiplied blending which will completely remove any color ringing, but semi-transparent parts may then have different shade than they were designed.

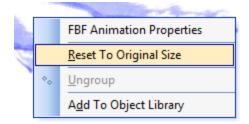
## **Extracting Frames**

if you need to extract the individual frames from FBF object, you can use this option. Note, it may create a large number of bitmap objects!

	Ani	mation Window Help	_					
Þ		Change Frame Size	L, t	프님막 4 쇼 (ㅎ 盐 퍆 많 뭐 내리				
		Canvas Color						
-	~	<ul> <li>Auto Capture Keyframes</li> </ul>		0 50 100 150 200				
л	00:	Show Big Timecode						
		Tools 🔸	$\hat{\gamma}^0_0 \dot{\gamma}$	Create Animated Texture				
	٠	Screen Recorder		Animate Completion (Polynome/Text)				
	Þ	Export Animation	Extract Frames from FBF					

### **Reset Size**

To reset the object to original size (1:1 of the animation files), Right click on it and select Reset to Original Size



### Add Object to Library

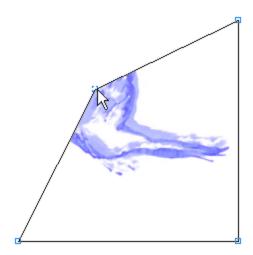
You can add FBF object to user library for next time. This will do few things: First it will copy the FBF file from its current location to My Documents FBFcache and then add the object with internally linked FBF file to the Quick Palette Animations

	FBF Animation Properties
	Reset To Original Size
**	<u>U</u> ngroup
	A <u>d</u> d To Object Library

Quick Pale	ette		Ψ×
Color	Transp	Bevel	Effect
Lights	Style	Global Pa	int Style
Arrows	Objects	Animatic	ons
			*

# 3.18 Animation inside Objects

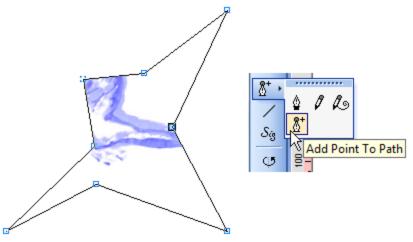
Another interesting part of FBF files is that they are not represented as bitmaps, but as an animation inside vector object. If you double click on the FBF file you will see it is a rectangle with 4 points that you can move and it will change the shape of the animated file.



This has some important implications!

It means the FBF file is a **vector object** that has animated texture. As such you can use other vector tools to change shape of it.

For example you ca add more points by simply Adding points to path.



But not only that, you can use all the vector merging tools to create a completely unique shape of the object with animation inside.

Let's abandon our bird for now as it is hard to see inside objects and create a new animation that is more like a texture effect:

	Frame:	5	J	10	15	20	25
Circle					<b>*</b>		<
Circle			~~~~~		<b></b>		
Circle	<u> </u>						
Circle	(				λ		
Color	T				Ĭ		
Rectangle	<u></u>				<	•	<b></b>
Color							

Just few circles and square running chaotically across the screen with bouncing motion.

Now Export it to FBF Animator file with Transparent BG (see next chapter)

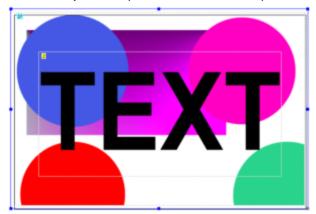


Open new project and drag the FBF file into it. Not our best work, but it will do to demostrate.



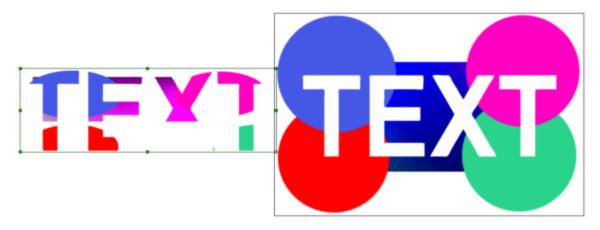
Timeline							
Tools: 🔷 🔿	Options:	ىلما 🏷	. 00: elž	<u> </u>	<mark>0.7</mark>   IK-	≪I Ad	ld Li
	Frame:	5	10	15	20	25	30
weirdo	K)						

Put a text object on top of it, select both and press Cut with Object.





Now you have two objects, the original animation that has now text shaped hole in it and a new object that doesn't animate. If you double click on the objects you will see it has vector points, it is a vector object.



The new TEXT object is however also a FBF file, but it has no keyframes - that's why it doesn't animate yet.

If we add keyframes to the new Text Object - its texture will animate as well inside the text shape.

## Adding the FBF file to editable text

Our last object is a polynome with points that came up with the Cut with Object operation, it is no longer a text. It demonstrated that you can use vector editing tools. But there is an easier way to add FBF animation inside any object without all that cutting or vectorizing.

Edit	:	View	Object	Bitmap	Poly
$\Omega$	Undo		Ctrl+Z		
2	Redo		Ctrl+Y		
4	Сору		Ctrl	+C	
	Copy As Bi		Bitmap	Ctrl+Shift	+C

Create a new Text object, select it and press Paste Attributes.

8	Paste	Ctrl+V
	Paste As Bitmap	
	Paste Inside	
	Paste Attributes Ct	rl+Shift+V
	Duplicate K	
	Select All	Ctrl+A

That's all to it, Now add keyframes to your new text and you will see it is a text with animated textured from our FBF file! And you can still double-click and type entirely different text.

ÉD		A	<b>3L</b>	.E
TE	X			
Tools: 🔷 🔿	Options: 💍	<u>(뉴</u> 00: 태	<u>ф</u> т ф.,   <mark>К</mark>	Add I
	Frame: 5	10 1	5 20	25 30
Text	K>			

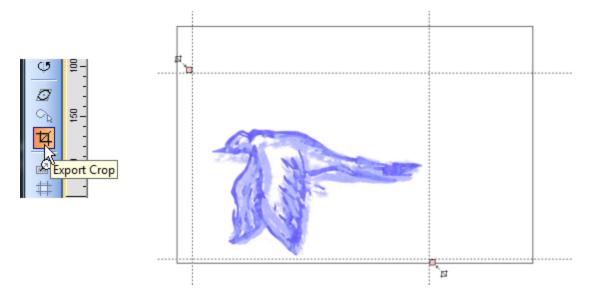
As with any other objects, we can now add any effect to our text- bevel, shadow, transparency, or even Global Paint Style and it still remain editable text with our very custom animation texture inside:



# 3.19 Export Crop

Export Crop is a great option to export only part of a canvas. Instead of trying to fit a canvas around your animation, simply draw crop rectangle around the objects you want to export.

This is especially good for creating Animation GIFs or FBF animation where you may not always be sure what is the size before you start making it.



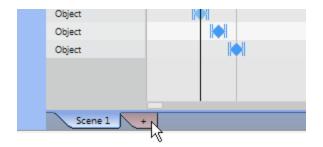
Export Crop will affect every export option.

To remove crop either move its left point beyond right point or click the Export Crop again.

## 3.20 Scenes

A project can be divided into Scenes.

Instead of having lot of objects you can split your animation into logical scenes - at the logical cut. For example your first scene can be animating a title, the next scene can be showing a logo. The export will allow you to eaither choose to export current scene or all scenes in the order arranged here.



To create new scene, just click on the Scene + button.

## Arrange Scenes

To arrange scenes, use either right click menu or button on the right side of timeline.

Scene 1 Scene	2	+			
y	Ę,	Arra	nge Sce	enes	
	$\overline{\times}$	Dele	te Scen	e	_
		-	oocarvers	X BIUS	
A	rrange	<u>l</u>			
-253, 479 600 x 4	00	CASP	NUM	SCRL	

Here the scenes can be copied, arranged or renamed. To change order, simply drag the scenes in the Arrange Window

Arrange Scenes		×
	c <b>ene 1</b> frames	Scene Name
	c <b>ene 2</b> i frames	1
	cene 3 frames	Tools
	Scene 3	Duplicate Scene
5 (( <b>A</b> Sc	) frames cene 5 frames	Reverse All Keyframes
		Delete Scene
		Drag and drop scenes to re-arrange the order. Drag to right side to delete scene.
		Close

# **3.21 Animation Export**

This is where all the hard work is gong to be exported.

Export Animation	×
Preview	Export Range
	C All Scenes  Make Loopable (Blending Start and End)
	Current Scene Loop Transition Frames 5
	Number of Frames 95 @ 30 FPS
	FPS
	Change Export FPS 15 Frames 95 Full Half
	Playback Speed 1 Delay 33 ms
	Frame Size
	Resize         New Size         400         x         266         Full         Half
	Method Bicubic v
	Sharpening
	Sharpen
	To see preview before Export, Render Preview First
	Render Preview Preview Export (FPS, Size)
	Export Format
	Mega-Render   Normal  C HD (2x)  C UHD (4x)
76 Play	File Format Animated GIF (ffmpeg)
	30 FPS, 95 frames, 600x400 Export Close

## **Export Range**

Export can process current scene or all scenes as one sequence.

	Export Range	
C All Scenes	Make Loopable (Blending Start and	d End)
Current Scene	Loop Transition Frames	5

## Preview

Before you export the file, you may want to see the preview, how it will look in real time. In that case, click Render Preview.

To see preview before Export, Re	ender Preview First
Render Preview	Preview Export (FPS, Size)

Once the preview is completed you can then play it with the Play Button under the preview window in Real-Time.



## Internal vs FFMPEG export

Export allows you to choose between Internal encoders and an optional external (FFMPEG). In order to use FFMPEG you need to have *ffmpeg.exe* somewhere on your computer - or you may drop it to the StyleAnimator program folder.

To download ffmpeg, go to official windows build of FFMpeg: <u>https://ffmpeg.zeranoe.com/builds/</u> First time you attempt to export with ffmpeg you will be asked for the ffmpeg.exe file (if it is not in the StyleAnimator folder)

## **Export Type**

There are generally three types of export:

- Web with Reduced quality allows you to change FPS, Speed, Frame Size, add Sharpening - producing smaller files but with reduced quality
- Full Export
- exports the exact FPS and frame size it has been designed with
- Mega-Render
   exports the same FPS but much bigger frame size

The Selected Export format determines which type of export it is:

	Export Format	
Mega-Render	© Normal C HD (2x) C UHD (4x)	
File Format	Animated GIF (ffmpeg)	•

## **Reduced Quality Web Formats:**

Animated GIF (Internal Encoder) Animated GIF (ffmpeg) CSS Sprite Animation JPG Sequence (Resized, Change FPS)

Basically first 4 items allow you to change FPS, speed and frame Size.

The whole reason to do so is to make the file smaller for web - either in size as frame an/or size as filesize. Once you change the file-size, it may be a good idea to also increase sharpness.

Number of Frames 18 @ 30 FPS
FPS
Change     Export FPS     15     Frames     18     Full     Half       Playback Speed     1     Delay     33 ms
Frame Size
Resize         New Size         400         x         266         Full         Half
Method Bicubic 💌
Sharpening
Sharpen
To see preview before Export, Render Preview First
Render Preview Preview Export (FPS, Size)

In General Half FPS still looks relatively smooth and gives you half the file filesize in most cases. Animated GIFs are usually good candidate to export with half FPS (15 or 12).

You can also change the playback speed - playback speed of 0.5 will play the file twice as slow, playback speed of 2.0 twice as fast. Changing playback speed doesn't increase or decrease file size.

When you made changes you can preview these with Preview Export

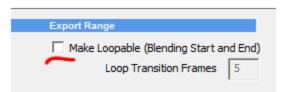
To see preview before Export, Re	nder Preview First
Render Preview	Preview Export (FPS, Size)
	V

This is different than the preview with **Play** button as it will show the result **with** the changes set as FPS, Resize, Sharpen. If the option is disabled you need to Render preview first.

## Make Loopable

This is a simple option, best for for web formats where the first few frames and last few frames will blend together creating a smoother transition between end and the beginning. The amount of transition frames can be set here as well.

Once you use Loopable option the whole video will change slightly as it will start not from zero but from zero plus transition frames and those frames from the beginning will be then blended with frames at the end producing transition at the end. It should be obviously used for videos that loop - such as Animated GIF.



## Full Export and Mega-Render export

The rest of the export format offer Full Export and Mega-Render.

You can't change FPS or frame size (that would be counterproductive) and the entire animation is exported with the project FPS and with the Project frame size or a multiply of it.

	Export Format
Mega-Render	Normal C HD (2x) C UHD (4x)
File Format	JPG Sequence (Full Size)
	Animated GIF (Internal Encoder) Animated GIF (ffmpeg) CSS Sprite Animation JPG Sequence (Resized, Change FPS)
19 files (30 FPS): 600 x 40	JPG Sequence (Full Size)
	PNG Transparent Sequence AVI M-JPG (Solid Background) AVI + Matte M-JPEG Normal AVI + Matte M-JPEG PRE-Multiplied MP4 + Matte Normal (ffmpeg) MP4 + Matte PRE-Multiplied (ffmpeg)
	FBF Animator (Solid BG)
	FBF Animator (Transparent BG)
	Other MP4/MKV/WebM (ffmpeg)

## Video Export

There are few types of Video Export.

AVI M-JPEG with solid background or Matte - using internal engine and MP4 using FFmpeg (if you have one installed on your computer).

The video Export allow you to export video layer and Matte.

Matte is a video where only alpha channel will be exported as black and white video. This avoids the issues with software video editors support of fully transparent video - some do, some don't, but all of them are able to use a matte file as an alpha channel. How to do so depends on the software itself.

The color layer can be either Normal or Pre-multiplied. Normal exports the objects overlayed on the same background you design it for. When combined with Matte it will produce same results as on animation. However if you place it on a very different background, (for example you design it on white background, but want to put it over dark video) there may be slight color ringing around the objects - MAY BE is the key word, it not always has to be true - as it depends on the way you use semi-transparencies. In this cases Pre-Multiplied option is offered. Pre-Multiplied file assumes the transparent is black. A pre-multiplied video will fit over any background, but semi-transparent colors may be changed (what looked like pink semi-transparent object, may become gray etc...)

It is best to try first use the Normal video and see how it fits over your other video layers.

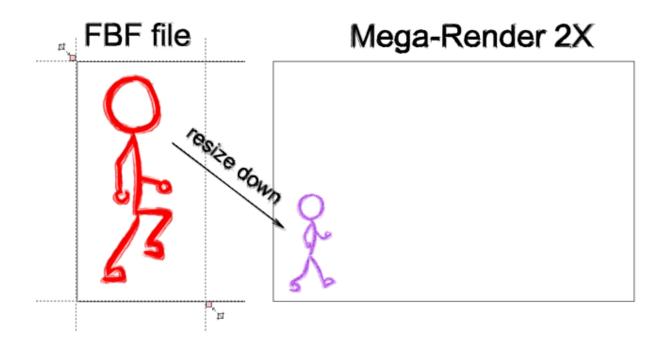
#### Mega-Render

Because the design is a vector file, we can export the video in multiplies of the basic resolution without creating pixelation. However the Mega-Render export takes longer than normal export.

With bitmap object it is a bit different. Bitmaps can't be enlarged without loss beyond their original size. If you use bitmap objects in the animation and then use Mega-Render you need to import these bitmaps

**larger** than you place them on the canvas. Mega-Render will use the best size of the bitmap it can find. Importing large image, then resizing it down inside StyleAnimator will keep the original image data for Mega-Render to use.

The same apply to FBF files. If you intend to use FBF file in a mega-render animation, you need to design it either larger or export it with the same Mega-Render option. Then place it on canvas in your final video and resize it down.



The last option: Other.. offers few other video files through ffmpeg.

#### **FBF** Animator

This is an internal format that is used for <u>Compound animations</u> inside our Animator. It offers full alpha transparency. FBF files are supported only in Style Animator.

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