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Live interaction on  
**Creating Animation  
using Synfig Studio  
(Hindi)**

4:00pm - 5:00pm  
10 May 2021

**Speaker**

**Ms. Vineeta Garg**

National Teachers' Awardee, Shaheed  
Rajpal DAV Public School, Dayanand Vihar

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# What Is Animation?

Animation is the rapid display of a sequence of images in order to create an illusion of movement.

Traditionally 2D animation is created by drawing each displayed image individually.

Those images are called "frames" and thus such method is called "***frame-by-frame animation***".

To create a good illusion of movement you need to draw many frames, that's why this method requires a lot of time and resources.



A traditional frame-by-frame animation taken from : <http://flipily.com>

# SYNFIG STUDIO



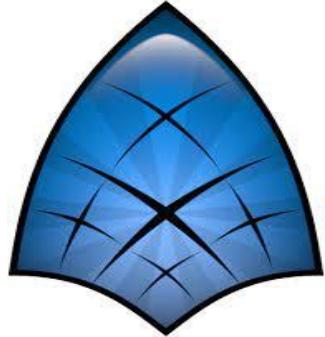
Synfig Studio is an open-source 2D vector animation software. It is designed to produce film-quality animation with less people and resources.

In 2005 it was released as free/open source software, under the GNU General Public License.

Synfig Studio is built to eliminate the need to draw each frame individually. There are two techniques for that:

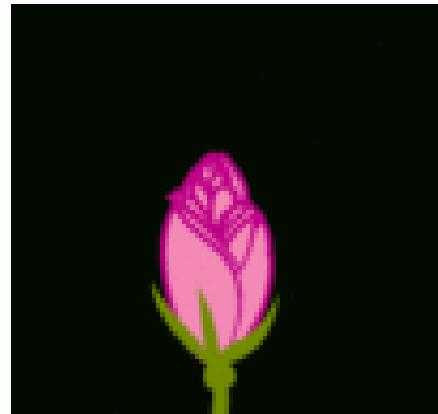
- Morphing animation
- Cutout animation

# SYNFIG STUDIO - MORPHING



**Morphing** is a technique that takes two images and creates a smooth transition between them. In the process of morphing, one shape is deformed into another and this transformation is usually defined by control points.

In Synfig Studio images are constructed from vector shapes and the morphing is done automatically. This allows us to create animations by drawing only the key positions at relatively wide time intervals. You need only to draw a few frames as needed to create a basic sense of motion for the scene, and Synfig Studio will create the in-between frames.



Morphing animation  
of a rose, by Rore

# SYNFIG STUDIO – CUTOUT ANIMATION

**Cutout animation** is created by splitting objects into parts and applying some simple transformations to them (like translation, rotation or scale) at different moments of time.

Synfig Studio uses those values to interpolate the motion for in-between frames. Cutout animation can be produced from bitmap images or vector graphics.



Cut out animation in  
Synfig's tutorials

# SYNFIG STUDIO



\*Synfig Animation 1 - Synfig Studio

File Edit View Navigation Canvas Toolbox Layer Plug-Ins Window Help

Tool Box

Canvas

Transform Tool

Ctrl to rotate  
Alt to scale  
Shift to constrain

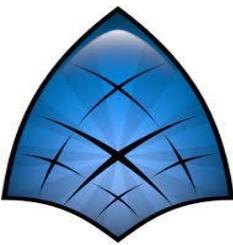
Tool Options Panel

Layers Panel

Parameters Panel

Time Tracks Panel

The screenshot shows the Synfig Studio interface. The main window title is "Synfig Animation 1 - Synfig Studio". The menu bar includes File, Edit, View, Navigation, Canvas, Toolbox, Layer, Plug-Ins, Window, and Help. The toolbar contains various tools like selection, drawing, and transformation icons. The "Tool Box" panel on the left contains icons for selection, drawing, transformation, and other tools, with a zoom slider set at 1.0000. The "Canvas" panel in the center displays a 500x500 grid with a checkered pattern. A vertical dashed line is positioned in the center of the canvas. The "Tool Options Panel" on the right shows the "Transform Tool" selected, with keyboard shortcuts for rotation, scaling, and constraining. The "Layers Panel" below it lists layers with columns for Icon, Name, and Z Depth. The "Parameters Panel" at the bottom left shows a table with columns for Name, Value, Type, and Time Track, with a message "Edit canvas metadata Successful". The "Time Tracks Panel" at the bottom right shows a timeline with frames 120f, 124f, 148f, 172f, and 196f, and a note "Clamped".

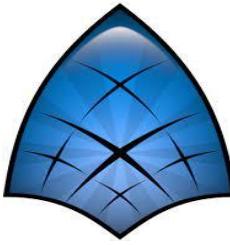


# SYNFIG STUDIO

Synfig Studio main interface components are:

- **Toolbox** — is the main Synfig Studio window. It contains tools and more to create and edit your artwork.
- **Canvas** — displays your artwork and animation.
- **Panels** — contain tools and information about certain elements of your project. Some panels will allow you to modify those elements.

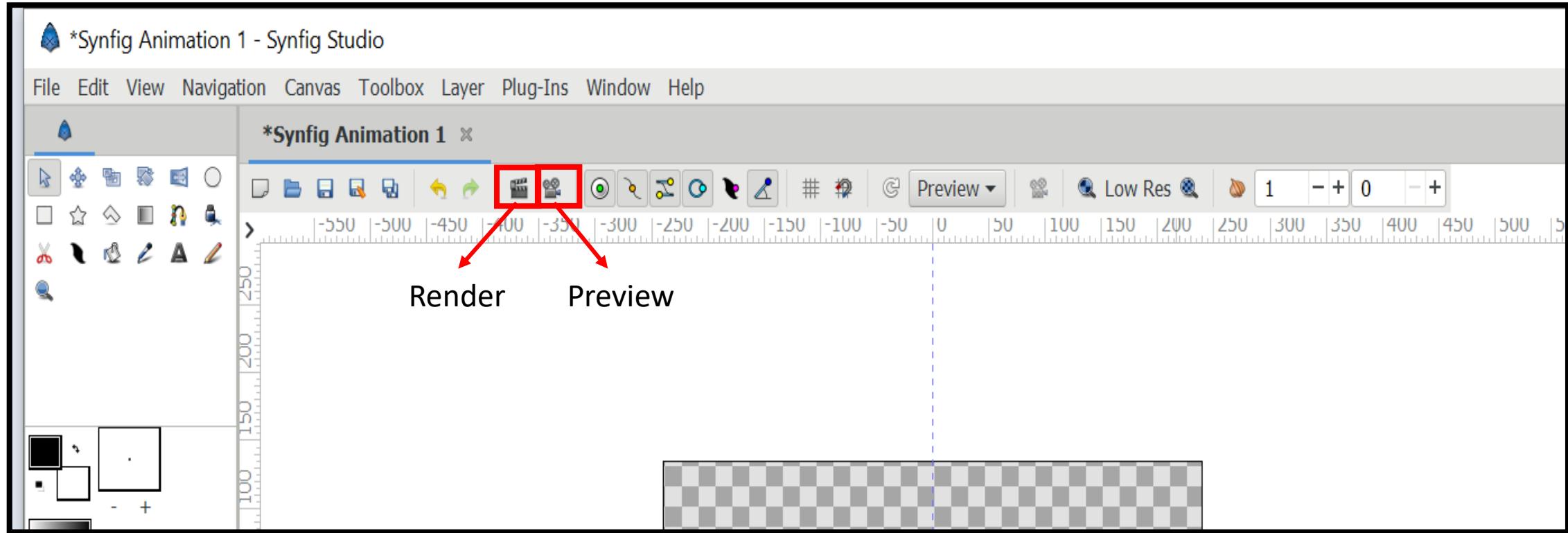
# SYNFIG STUDIO

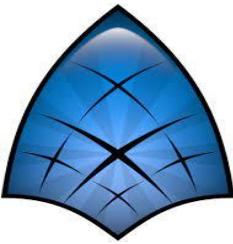


The most important panels are:

- **Layers Panel** — shows you the hierarchy of the layer of your working canvas. It also allows you to manipulate these layers. Each layer has a set of parameters which determine how it behaves.
- **Parameters Panel** — shows you the parameters of the layer currently selected. When multiple layers are selected, only the parameters that the selected layers have in common are displayed.
- **Tool Options Panel** — shows you any options specific to the currently selected tool.
- **Navigator** — shows a thumbnail image of what the currently selected canvas looks like. You can also zoom in and move the focus around with this panel.
- **History Panel** — shows you the history stack for the current composition. You can also edit the actions in history.

# SYNFIG STUDIO





Thank You