

# User's Guide

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## 1. Overview

This application (Impasto, ImPasto, IPasto or Impasto Studio/Paint, ) is a world-wide first professional 3D oil painting simulation. It simulates closely the nature oil painting process and tools using in 3D technology. It gives you a huge set of powerful capabilities in a very simple application. In summary, here is the highlight of the available key features:

- Nature Painting Process
- Paint Color system
- 3D realist simulation of Painting tool such as Brushes and Knives (Impasto and Sgraffito)
- Support different kinds of Painting surfaces
- Stroke in multiple colors with a powerful Color Pattern management
- Dry and Wet liquid support
- Possible to change the light environment after-hands for different effect
- Replay or export the entire painting process
- Undo/Redo and possible to go back to any point in History timeline

This application can be used both for Beginners and Expert Artists. For beginners, it is a very valuable solution to master each tools of Oil Painting and train the painting process. For Expert Artist, it is very useful solution to make some quick sketches.

## 1.1. Prerequisites

To use this application, you need to have an iPad Pro 12.7 or IPad pro 9.7 with an Apple Pencil.

## 1.2. Apple Pencil

When you're working with Apple Pencil, you can orientate it in three dimensions. Up and down direction is called **altitude**, while side-to-side is called **azimuth**:

## 1.3. Oil Painting Simulation

The goal of this application is to simulate as closely as possible to the real Oil Painting. Precisely, the simulation consists of the following aspects:

1. Painting Process
2. Painting Tools
3. Color Management
4. Liquid
5. Painting Support

### 1.3.1. Painting Process

This application simulates as closely as possible to the real Painting approach. It provides not only a Palette for Color preparation, but also a capability to produce painting strokes very hard to repeat. Under the same conditions, all strokes made by users are very similar, but never the same. They aren't closed mechanically.

### 1.3.2. Painting Tool

Most of Oil Painting tools are supported such as Brush, Knife and Fluffy Mop.

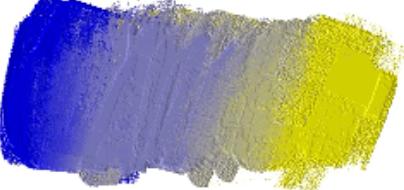
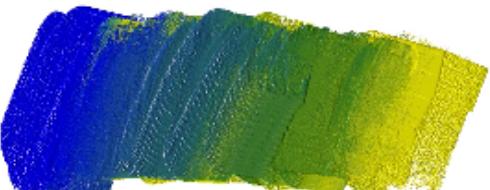
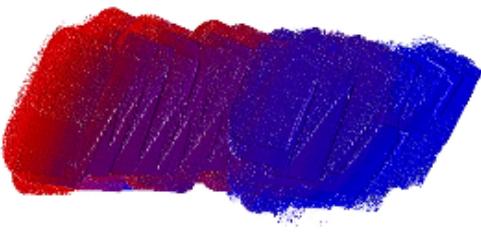
### 1.3.3. Color Management

The application simulates the nature painting processes. Color blending is a primary feature for a painting solution. Of course, we support it. Furthermore, we simulates the real color process in the Painting process. We target to provide the following advanced features

- Color System
- Color Transfer Process
- Color Pattern

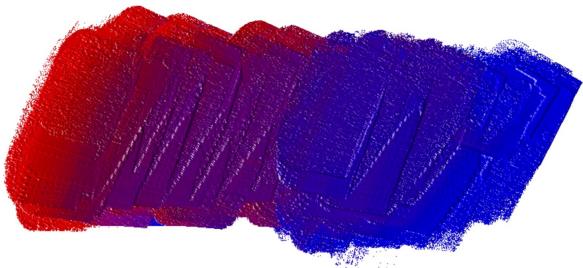
#### 1.3.3.1. Color System

Traditional software works with color in ways that are faithful to the way machines display color, which is based on light *emission*. The colour of dyes and pigments is based on light *absorption*. The blend of light emission is different to the one of light absorption for some colors. For example, with light emission, Yellow blended with Blue produces Gray. But it is Green in Light absorption. Therefore, use of light emission system for Painting not only unintuitive to users, but also gives a wrong result in gradient.

	Light Emission	Light Absorption
Gradient: Red to Yellow		
Gradient: Blue to Yellow		
Gradient: Red to Blue		
Color Wheel		

The gradient from Red to Yellow and from Red to Purple can be produced using Light emission blending. But only Light absorption blending can blend the gradient from Blue to Yellow for Green, and Black from Red, Blue and Yellow. And more general speaking, the blending in Light emission tends to White, and the blending in Light absorption tends to Black.

	Our Simulation	Real Oil Blending
Gradient: Blue to Yellow		

Gradient: Red to Blue		
Gradient: Re d to Yellow		
Color Wheel		

Our application uses the system of Light Absorption, the primitive colors are Red, Yellow and Blue. So you can blend colors in the same way as real Oil Painting with a Limited Palette.

### 1.3.3.2. Color Transfer process

Our Painting Tools like Knife and Brush are a Color carrier. It can take some color from one location on Painting Support and put to another location. All properties are kept during the transfer such as quantity and density.

### 1.3.3.3. Color Pattern

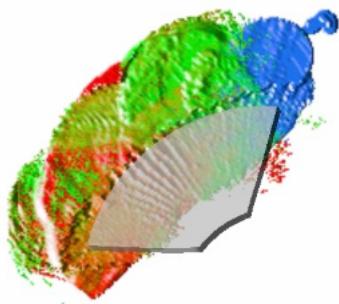
During the painting, some Painting Tools like Knife and Brush collects different colors in different locations. It forms a Color Pattern.

Description	Screen Shot

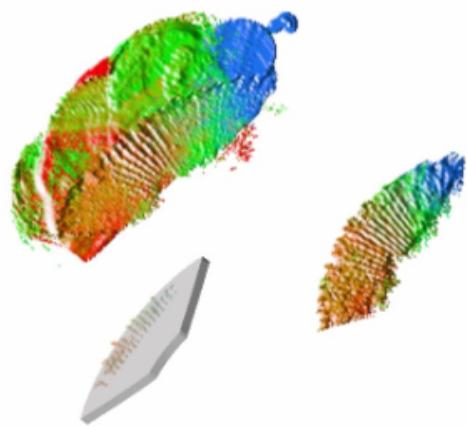
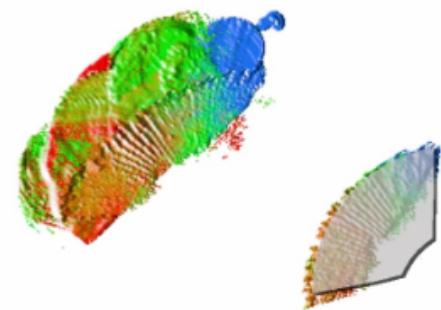
The creation of Color Pattern

1. Prepare some colors on any Painting surface
2. Take a Painting Tool
3. Pick up the colors using Pick up Gesture  
(Tapping on the surface quickly with maximum of pressure)

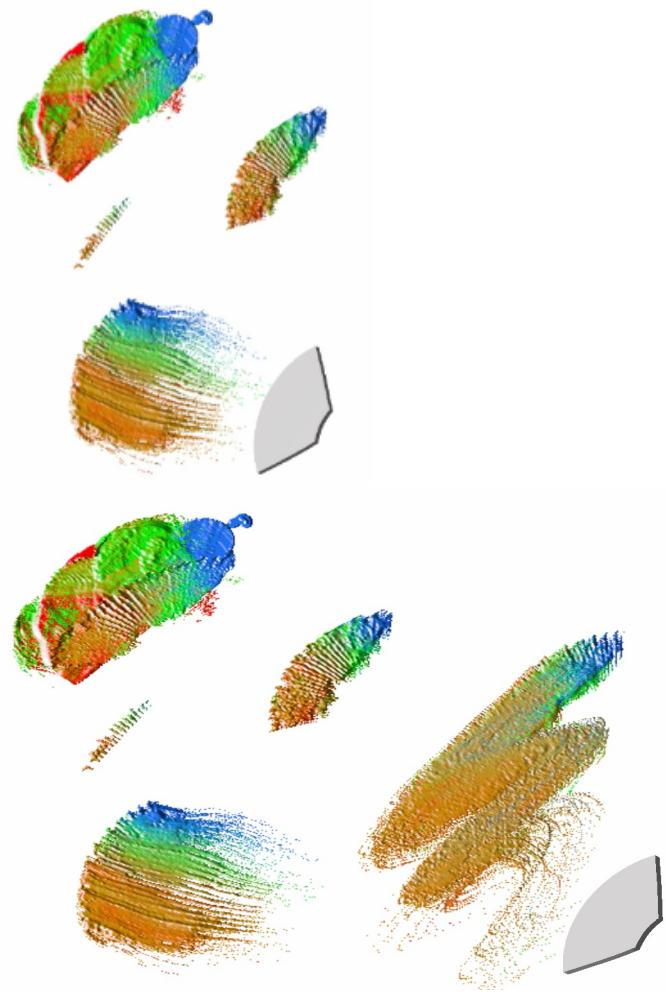
Pattern is kept in the Painting tool, it can be saved in Application



Dot Stroke with Color Pattern



Different Painting strokes with the same Color Pattern



A Color Pattern can be saved in two ways:

Color Pattern Management	Description
Stored In the current Artwork	It is a Color Pattern associated with this Painting Tool. It can be reused with the option Auto Reset.
Stored In the Application	A separated Painting Tool will be created.

#### 1.3.4. Liquid

In the real physic world, the density of Color plays an important role on Painting. It influences the thickness of layer and capability of color spreading and blending. More density of liquid can produce easier the effect Impasto, and thinner liquid can give an effect of water or cloud.

This application simulates the medium like Turpentine. In the real Oil Painting, Turpentine is a thinner, it will make the painting look more like water-color, depending on the quantities and it makes it opaque.

The simulation of Color Liquid consists of a Color management in two states: Dried and Wet. Color Liquid in Dried is in fact a liquid anymore, it is a solid state. It doesn't participate the color blending in painting. However, Color Liquid in Wet is managed by a property named as Wetness, which is used to control the density of Color Liquid. A Wet Color can become Dried via a tool Dryer, which shows dryness state of entier Artwork in a dedicated view. But the Dried liquid can never come back to Wet. The Wetness is controlled by the tools Turpentine, Fluffy Mop and Wetter. The last shows Wetness of entier Artwork in a dedicated view.

The simulation of Wetness consumes a lot of iPad processors. With a important value of Wetness, the response time of Apple Pencil will be impacted. In worst time, it increases by a factor of 2. But it is still acceptable.

### 1.3.5. Painting Surface

Painting Surface is a medium support, where you produce your Artwork. The difference of texture of medium support may influence Strokes when the layer is thin. Our application supports a lot of supports with different fabric texture and degree of rough.

## 1.4. Setting

Item	Description	Default Value
Left and Right Hand	Panel Layers for Right or Left hands	Right hand
Tool Panels timeout	The time out to display the tool bars and views after each stroke. The purpose of this parameter is to prevent any collision of painting touch with tool selection during the repeated Painting.	1.0 second
Enable state of Tool panels timeout	The timeout can be disabled.	true
Error Silence	Sound for an error or alert	false
Save Interval time	The interval time to save the artwork	1 minute
Auto Save	Enable/Disable the automatic save of the artwork	true
Sensibility	It controls the sensibility of pressure of Apple Pencil. When it is 1.0, it uses directly the pressure of Apple Pencil. When it is 2.0, only 0.0 - 0.5 of device pressure will be used for Painting. The value could be from 1.0 to 5.0.	2.5

## 1.5. Sharing, Import & Export

A Painting can be imported and exported in two formats:

1. Public well-known Images such as png
2. Impasto file, which contains all information of Painting such as Tools, wet state, thickness, etc.

### 1.5.1. Image

The purpose of image format support is to communicate with other applications.

The import of image file be done in two ways

1. Inside of Workshop
2. Outside of Impasto, for example in Photo Gallery of IPad

From outside of Impasto such as Photo Gallery of IPad, you can select an image and then creates a new Painting in the same size of imported image and imports the image. In fact, this import consists of two steps:

1. Create a temporary file in a shared folder
2. Create an Painting inside of Impasto, which can occurs on the startup or in the Gallery when you scroll down.

The export can be done only inside of Workshop

Sharing deals with only image files.

### 1.5.2. Impasto file

The purpose of his file is to exchange paintings between IPad and for backup/restore.

The export can be done only inside of Gallery. All exported files are saved in Sharing Folder of our App. A Folder is created per Group. These files are accessible via ITures.

You may need to clean up from time to time in the Setting panel of Impasto.

## 2. Gallery

### 2.1. Edition

In edition mode (tap 'Edit' button in navigation bar), you can manage all your groups and paintings, such as rename and delete.

You can also share and move paintings as you wanted:

- Share:  
A Painting can be shared with standard 'Share' actions of iPad in edition mode.
- Move:  
A Painting can be moved freely if and only if they are sorted with 'Group'.

### 2.2. Import

This feature imports an exported Painting in its own format from Sharing folder of this App.

You have two ways to import it:

1. Using the Import feature of Gallery, but firstly, you need to drag and drop your painting files with its own format to sharing folder by using iTunes.
2. Using 'Open with' action of iPad, when you tap a painting file with its own format or even a picture, there should be a popup window, just select 'Import with Impasto' to import and open it with this App. For example open it in an email.

### 2.3. Export

A Painting can be exported in a special format to contain all information such as Tools, wet state, thickness, etc. It can be done using the Export button in Gallery to create a file in the Sharing folder.

And then you can download them using iTunes.

Since exported files are saved in Sharing Folder of our App, you may need to clean up from time to time in the Setting panel of Impasto.

### 2.4. Sorting

By default, all paintings and their groups are sorted by most recently modified time, but you have 3 additional choice:

- Title: Sort all paintings with their title names.
- Date: Sort all paintings with the time of creation.
- Group: Sort all groups with the name of them, and then, you can move the paintings freely in edition mode.

## 3. Workshop

### 3.1. Painting Tools

A painting tool is used to produce the artwork directly. During the painting process, a painting tool may have different states. For example, Knife and Brush has three states: Clean, Dirty, Pattern.

State	Description	Transition
Clean	Tool has a non color	A Clean tool becomes Dirty when we use it to paint to interact with the colors on surface.  If the option Auto Reset is enabled, this action cleans the current saved pattern. In this case, the tool has the same effect as the option Auto Clean.

Dirty	Tool has kept some colors produced during the painting process.	A Dirty tool can be back to Clean by the button Clean. If the option Auto Reset is disabled, a Dirty tool keeps dirty between strokes.  If the option Auto Reset is enabled, it comes back to Pattern state after each stroke. If a Pattern state has no color, it is in Clean state.  The temporary Dirty state can be saved as a Pattern to be reused easily afterwards.
Pattern	Tool has some colors and	The tool like Brush and Knife may become Dirty when it interacts with the colors on surface. The state is known as color pattern. This state can be saved and then reused repeatedly by the option Auto Reset.  This state goes back to Clean by the button, Clean.

The Tube Tool is simplest painting tool since it has no bi-directional interaction with canvas. The purpose of Tube is enabled to put some color liquid on canvas. Therefore, the options Auto Reset and Auto Clean don't make sense for Tube.

The option Auto Reset is a property of Painting Tool. The change on these options is applied to the current Painting Tool. And the both options cannot be used together. Only one of them can be enabled.

When the option Auto Reset is enabled, the pattern is saved on the following cases:

1. Pickup action over the Color bowl
2. Using Pickup tool
3. Clean action

### 3.1.1. Color Tubes

Color Tube contains color liquid. It is used to add some color liquid on the support directly. The pressure of Apple Pencil controls the quantity of color: more pressure, bigger diameter of color liquid on canvas. The direction of Altitude and Azimuth has no effect.

### 3.1.2. Brushes

Brushes are the most important part of your equipment. Brushes come in different shapes, the most common shapes brushes come in are: Flats, Filberts, Fans and Mops. The detail of each is described in the following paragraphs.

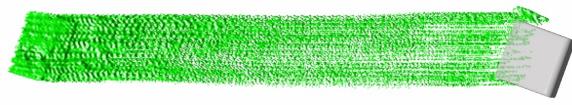
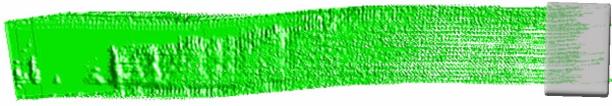
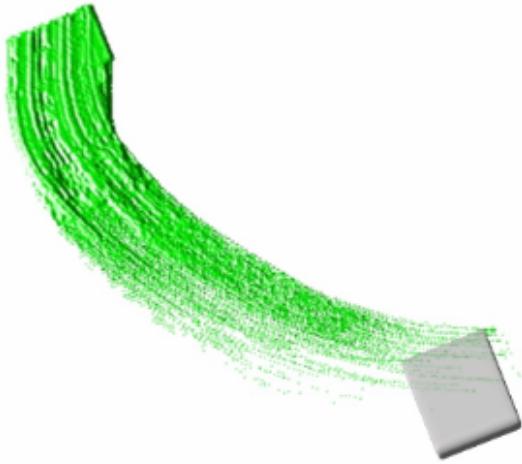
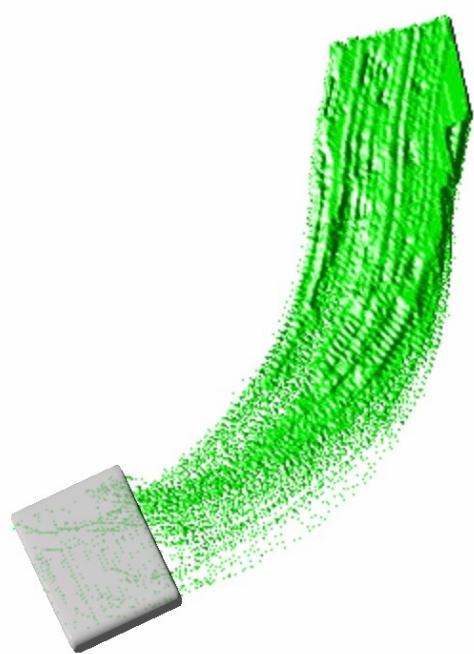
All these Brushes have a common behaviour and control. Comparing to Knives, Brushes leaves always Bristle traces in strokes, and bristles of Brush spread slightly on the pressure you applied to painting support. Same as Knife, the pressure plays an important role on the thickness of wet color layer. The thickness is inverse-proportional to the pressure: more pressure, thinner of the layer.

Apple Pencil	Description of Brushes						
Pressure	Control the thickness of color. More pressure, thinner of color layer on painting support. Pressure on the painting support plays slightly a role on the widespread of Brush's bristles.  Here are the screen shots of Brushes that shows the influence of pressure on the texture of Stroke.  <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Filbert</td> <td></td> </tr> <tr> <td>Falt</td> <td></td> </tr> <tr> <td>Fan</td> <td></td> </tr> </table>	Filbert		Falt		Fan	
Filbert							
Falt							
Fan							
Altitude	Control Brush's vertical direction.						
Azimuth	Control the Brush's orientation in the plan of painting support.						

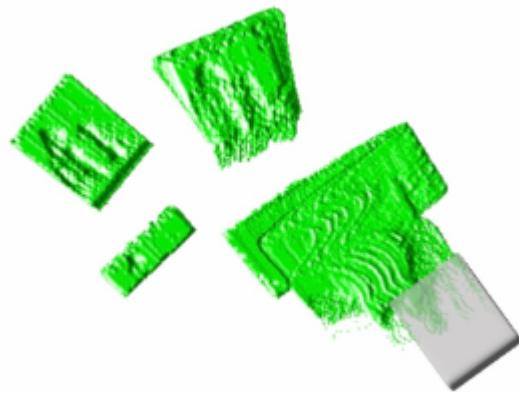
The direction of brush head can be controlled by the Joystick to rotate on the axis of Apple Pencil.

#### 3.1.2.1. Flat

A Flat brush has hairs arranged in a rectangular shape that is longer than it is wide. From the side it is narrow. The Flat is the most versatile of brushes. You can make a broad stroke, a narrow stroke and, with a little twist, a triangular stroke.

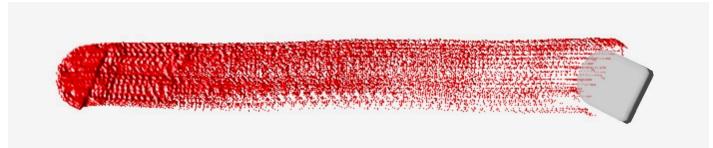
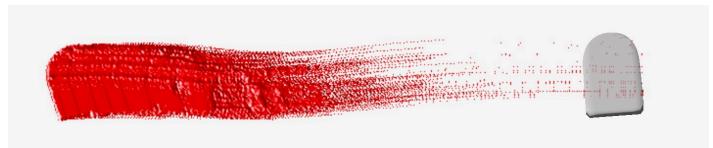
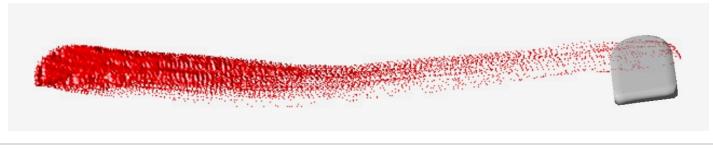
Description	Screen shot
Azimuth ~ 0° Altitude ~ 30	
Azimuth ~ 90° Altitude ~ 30	
Azimuth ~ 70° Altitude ~ 30	
Azimuth ~ 70° Altitude ~ 30	

Dot strokes with different angles and pressures



### 3.1.2.2. Filbert

A Filbert looks like a Flat with the corners rounded. The stroke is oval shaped or half circular. They are used when you want a softer edge or for smaller blends than you get with a Flat. Because of its distinctive, semi-circular shape, a fan brush can easily create a series of marks in your painting that are repetitive and predictable.

Description	Screen shot
Azimuth ~ 0° Altitude ~ 30	
Azimuth ~ -90° Altitude ~ 30	
Azimuth ~ 70° Altitude ~ 60	

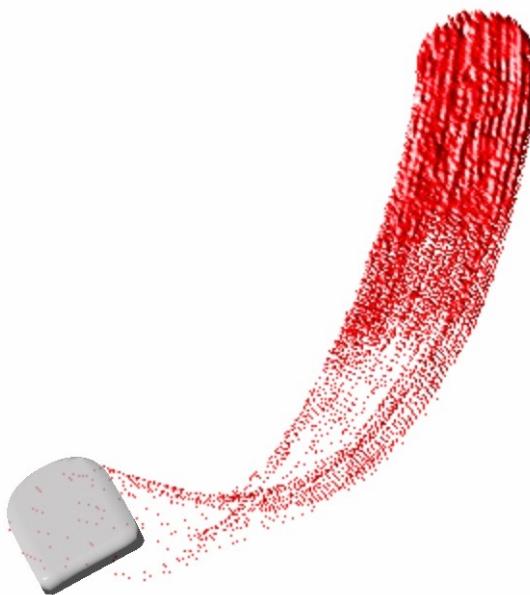
Azimuth ~ -90°

Altitude ~ 30



Azimuth ~ -90°

Altitude ~ 30



Dot strokes with different angles and pressures

### 3.1.2.3. Fan

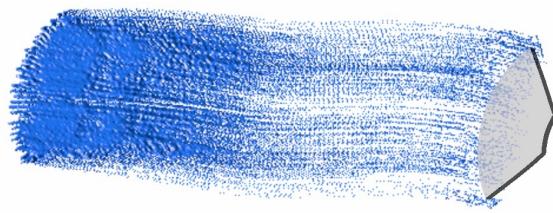
Fan brush is a thin flat brush with the spread out in a semi-circle, like a hand-held paper fan. These brushes are also extremely useful for mark-making.

Description

Screen shot

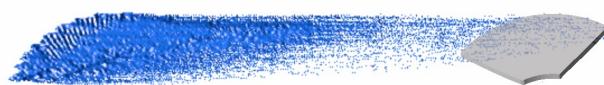
Azimuth  $\sim 0^\circ$

Altitude  $\sim 30$



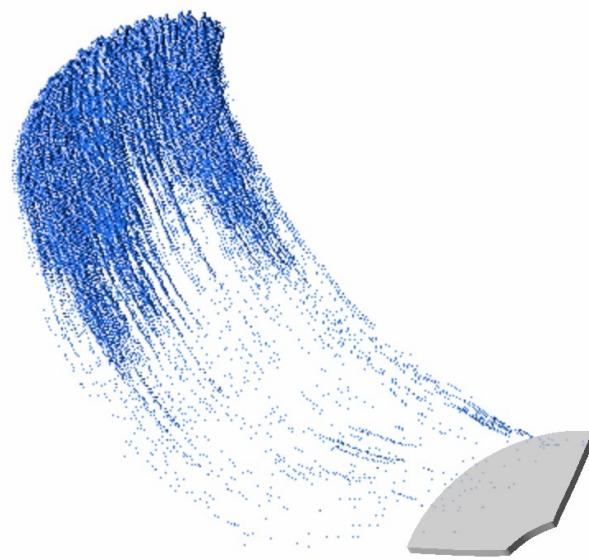
Azimuth  $\sim -60^\circ$

Altitude  $\sim 30$



Azimuth  $\sim -90^\circ$

Altitude  $\sim 30$

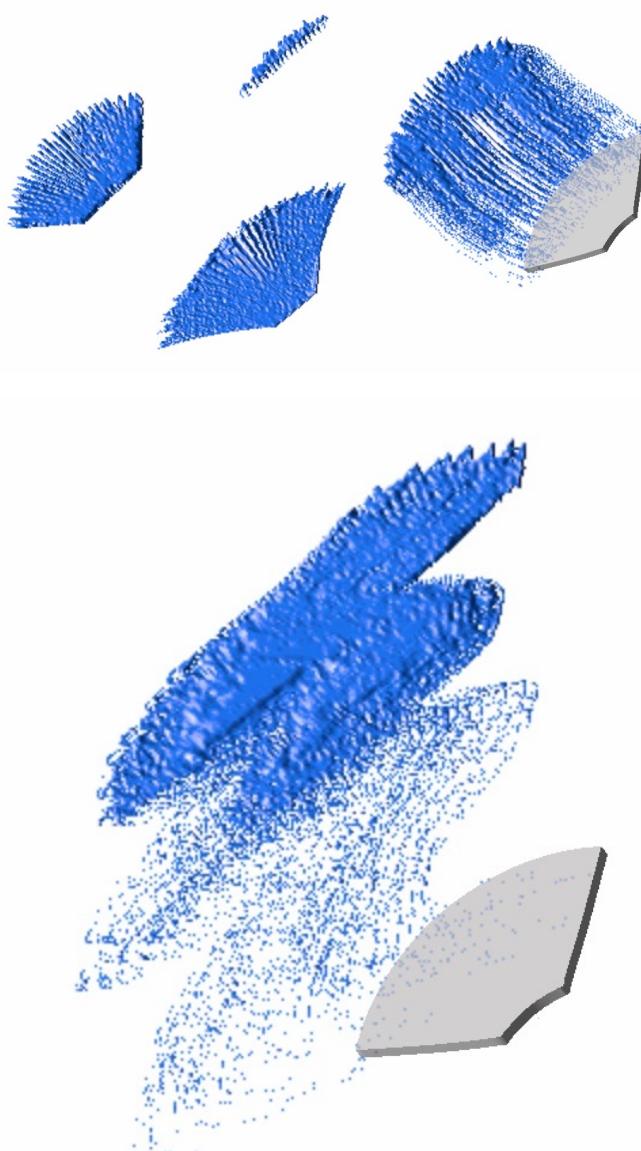


Azimuth ~ -90°

Altitude ~ 30



Dot strokes with different angles and pressures

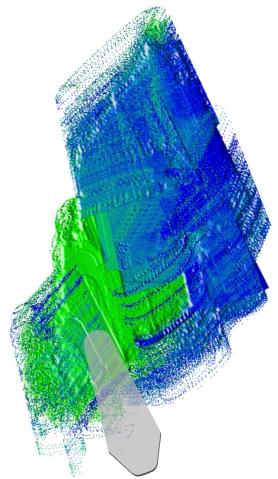
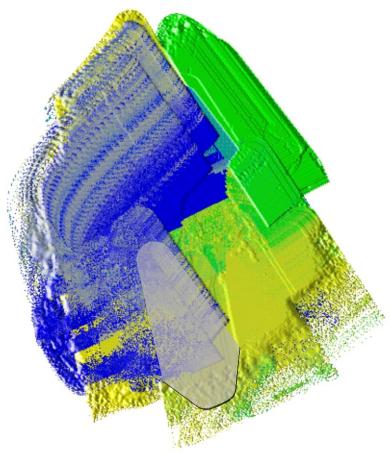
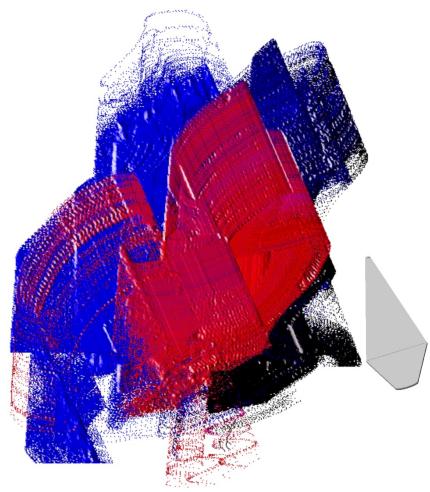


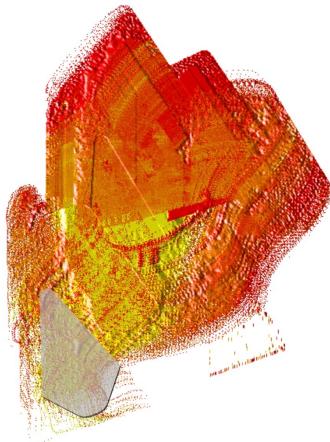
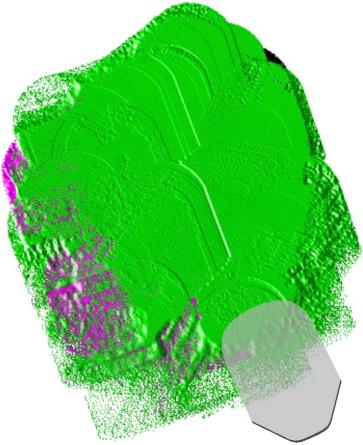
### 3.1.3. Knives

Painting with a knife produces quite a different result to a brush. They are excellent for producing a range of effects, from textured impasto work to sweeping areas of flat color, even tiny shapes of color. Different shaped painting knives obviously produce different effects.

- A short blade produces angular strokes
- A long blade makes it easy to put down sweeps of color.
- A sharp-pointed blade will allow you to scratch into the paint for sgraffito effects .

Useless to say that Knives are one of the most used paint tools by artists.





With our application, a knife can be controlled by Apple Pencil as following:

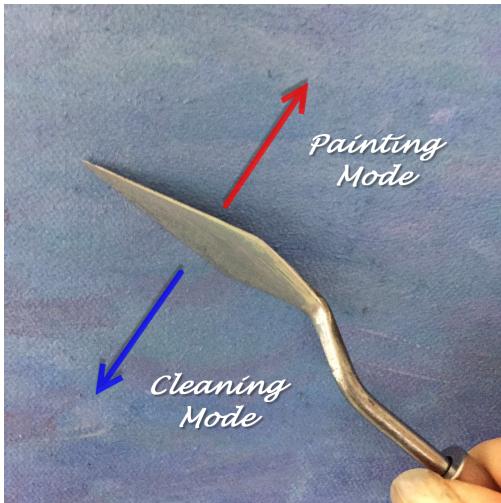
Apple Pencil	Description of Knife
Pressure	Control the thickness of color. More pressure, thinner of color layer on painting support. Pressure on knife can effect neither on the size of the Knife, nor on the Knife form.
Altitude	Control Knife's vertical direction. The knife lays totally on the surface when the Altitude Angle is less than 30°. The vertical angle is controlled by the Altitude of Apple Pencil between 30° and 90°.
Azimuth	Control the knife orientation in the plan of painting support.

A rotation of Knife on it axis provides a lot of capabilities. Unfortunately, Apple Pencil doesn't provide this information. Same as Brush, the rotation is controlled by a UI Widget named as Joystick.

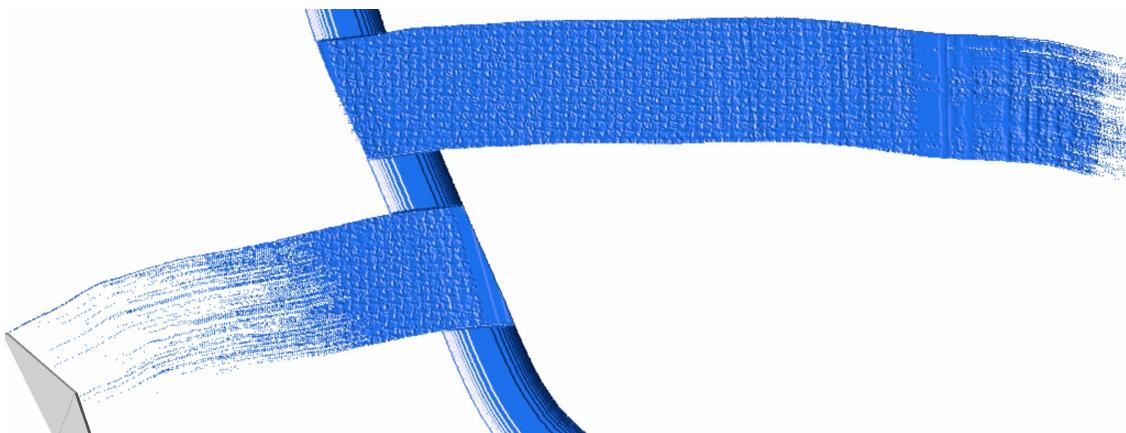
### 3.1.3.1. Knife Painting

General Speaking, a Knife has two roles in Painting: blending color and removing color. It depends on direction, orientation and rotation of Knife.

When the Knife has a rotation, that means the Knife has an angle with the paint surface, the motion direction of Knife has different painting effect. The Knife moves to the direction of angle < 90, it is in Blending mode, known as Forward Painting. When it moves to opposite direction (angle > 90), it is a Cleaning mode, known as Backward Painting. In this mode, the quantity of the liquid on the surface will decrease.



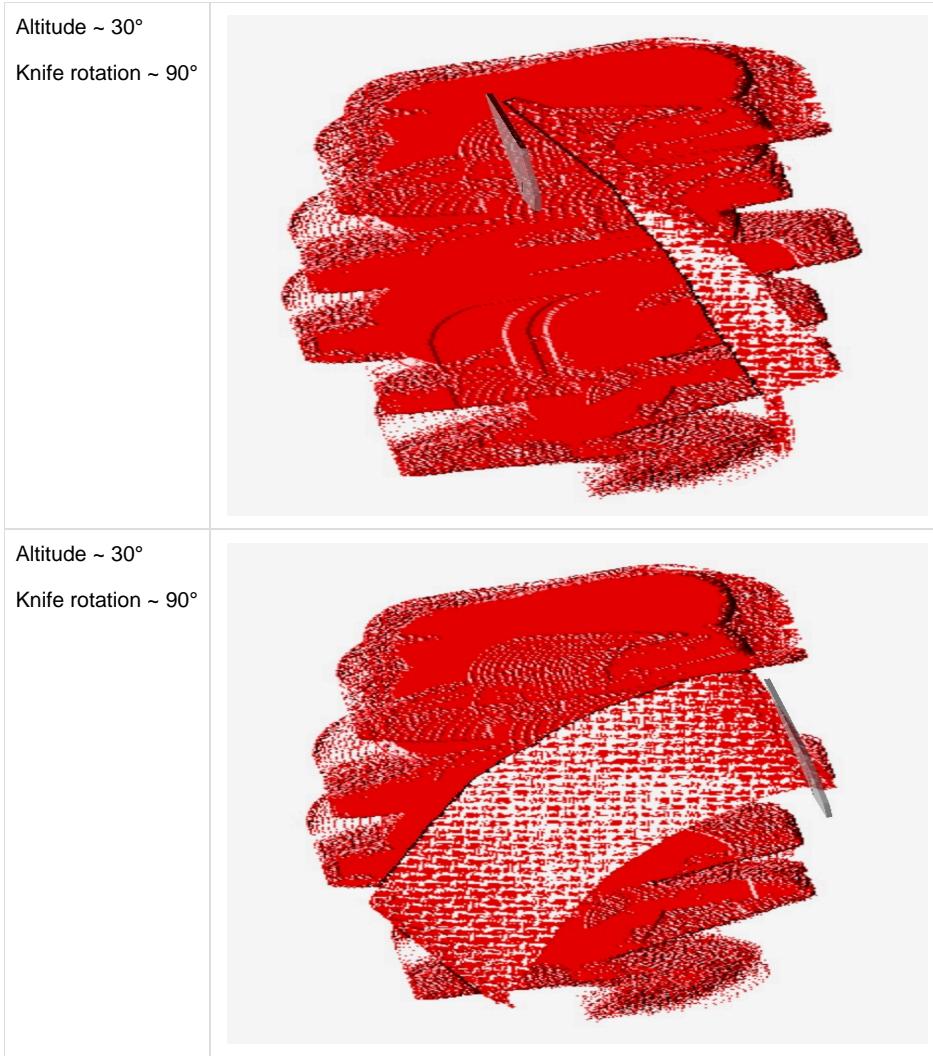
In the following screen shot, the rotation of the Knife is 45°. Moving to left is in Cleaning mode. Moving to right is in normal Painting mode.



### 3.1.3.2. Sgraffito Effect

In Cleaning mode, when a knife stands up near to 90° or rotate near to 90° or - 90°, it produces the **Sgraffito** effects. The effects are pressure sensitive.

Description	Description
Altitude ~ 90° Knife rotation ~ 0°	



### 3.1.3.3. Pick Up Gesture

In general, when we paint slowly, most of color will leave on the surface. But some time, we need to pick up the color from painting surface. Typically, it is the purpose of Palette. A gesture is provided to meet this need. This gesture consists of the following steps:

1. Select a more thick color region
2. Press you knife hardy on paint surface
3. And then, rise it up very quickly

It performs like a Tap. The most important is to leave the surface as quickly as possible.

### 3.1.4. Chamois Leathers

Chamois Leather is excellent when a soft finish is required. The Chamois is an ideal tool for cleaning paper surfaces and dip pen nibs, also offers protection when changing 'needle pointed' nibs.

### 3.1.5. Towel

### 3.1.6. Tortillion

## 3.2. Utility Tools

### 3.2.1. Color Filling

This tool is used to select a Color on painting support. It isn't a really Painting tool. It simulates the action to fill the current painting tool with Color such as Tube, Knife, Brush, etc. This action is similar as you dip your painting tool in color liquid.

Drawing Tool	Description
Tube	Select a color of tube  The quantity of filling is independent of pressure of Apple Pencil when you click on Painting support or color icon. It is maximum.
Knife	Select a color and fill the current knife with this color liquid.  The quantity of filling depends on the pressure of Apple Pencil when you click on Painting support or color icon
Brush	Select a color and fill the current brush with this color liquid.  The quantity of filling depends on the pressure of Apple Pencil when you click on Painting support or color icon

When you select the Color Picker, the current drawing tool gets disabled. It will be enabled after the selection operation.

The color selected is a pure color without any light and shadow influence by the 3D display engine.

### 3.2.2. Color Pattern Picker

This tool selects a color pattern using the Pickup Gesture. The current painting tool gets clean before the color pattern pickup.

Drawing Tool	Description
Knife	Select a color pattern for the current knife.  The quantity of filling depends on the pressure of Apple Pencil when you click on Painting support.
Brush	Select a color pattern for the current brush.  The quantity of filling depends on the pressure of Apple Pencil when you click on Painting support.

Same as Color Filling, the color selected is a pure color without any light and shadow influence by the 3D display engine.

### 3.2.3. Dryer

Dryer is a utility to control the dry state of color on canvas. You can use it make some regions dry. When you click on this tool, the current canvas will be overlaid by a layer. The wet region is displayed in white semi-transparent layer. The dried region is totally opaque and white. You can place the dryer anywhere to change it.

Once it is done, this dried region becomes rigid surface: the color in this region can be changed: neither be blended, nor be removed.

The dryness of color can give some special effect with Knifes. You can remove the wet colors in erase mode to show the color under layer.

This tool can be used only on the canvas. It cannot be used on Palettes.

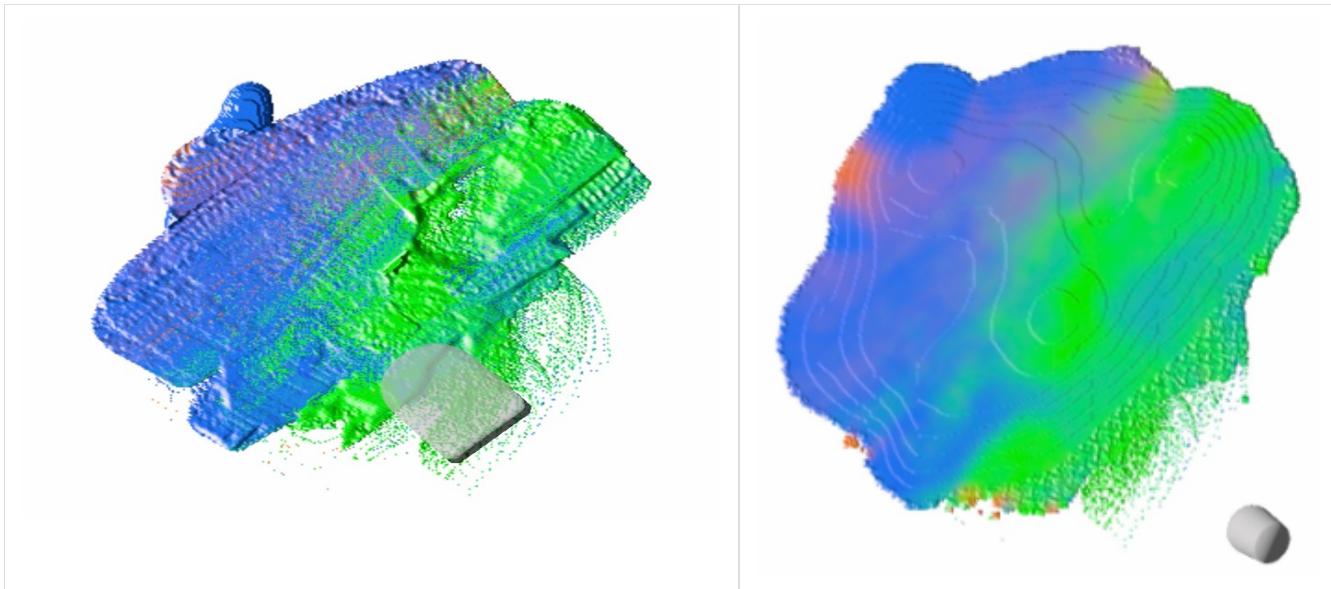
### 3.2.4. Wetter

The user interface of this tool is similar to Dryer. When you click on this tool, the current canvas will be overlaid by a thin layer. The wetness is displayed in black semi-transparent color. The degree of black represents wetness.

### 3.2.5. Turpentine

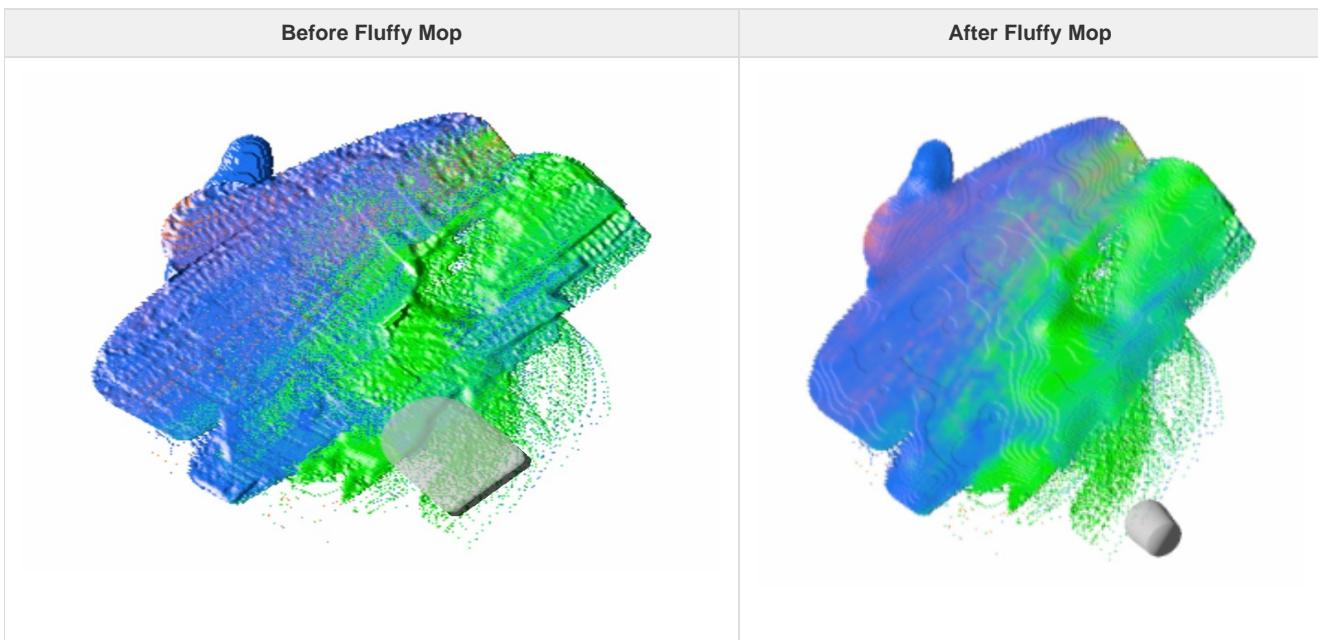
This tool is used to dilute colors to thinner the layer and spread the liquid. It modifies the Wetness of color on Painting support.

Before Turpentine	After Turpentine
-------------------	------------------



### 3.2.6. Fluffy Mop

The tool can be used to eradicate paintbrush marks, and smooth and little blur the liquid surface. It doesn't touch the Wetness of color on Painting support.



### 3.2.7. Painting Surface

Painting Surface is a medium support, where you produce your Artwork.

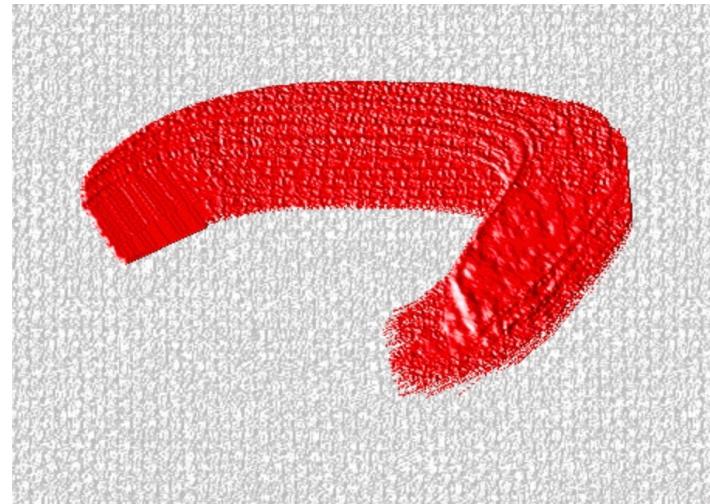
The texture of support surface plays an important role when the color layer is very thin.

Description	Screen Shot
-------------	-------------

The surface is completely flat.



The surface has a texture. But the surface texture is shown.



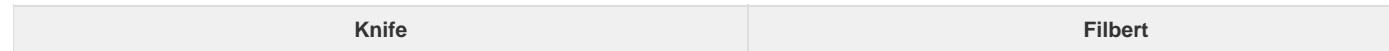
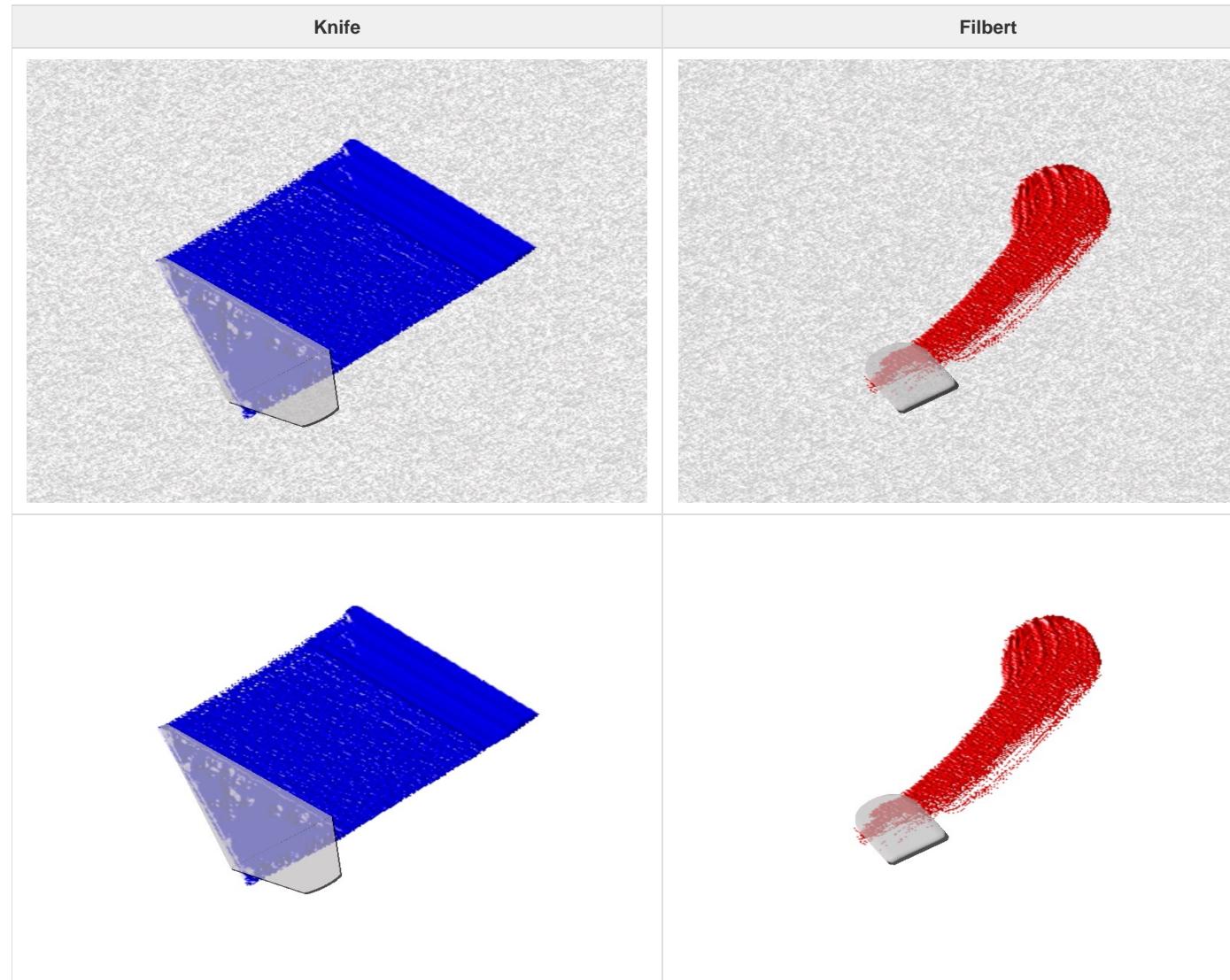
The surface has a texture. And the surface texture is hidden.

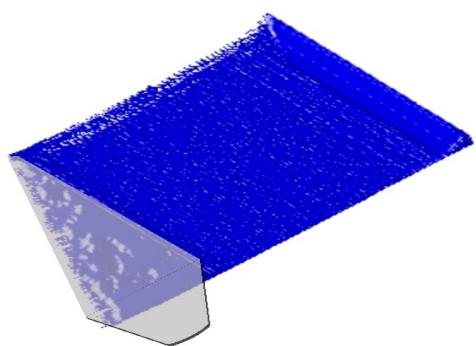
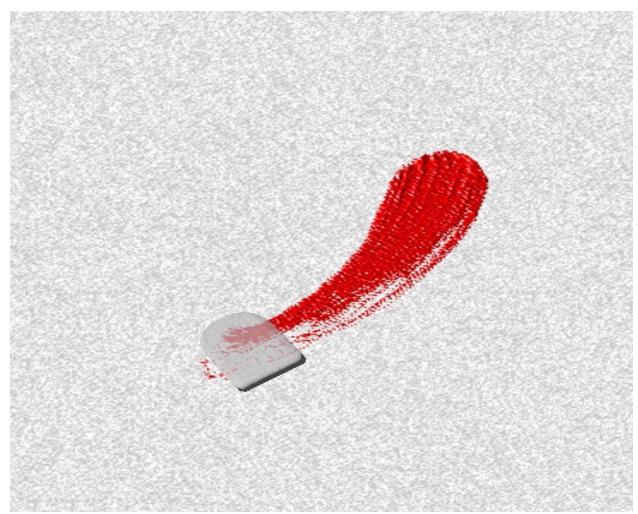
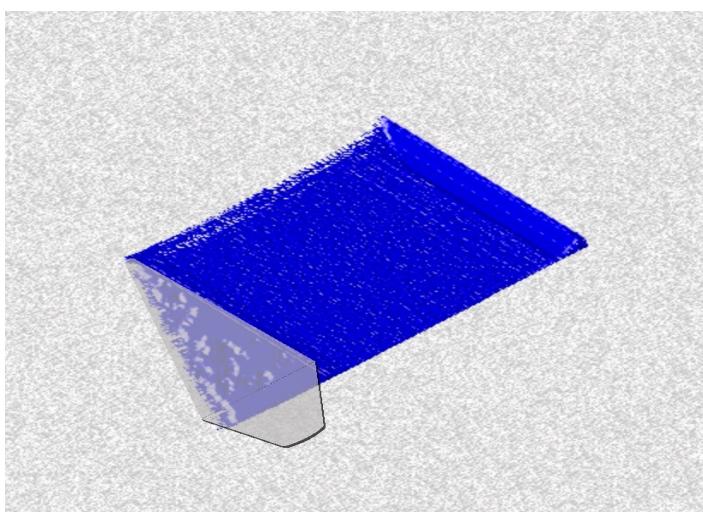


The type of Painting surface is selected during the Artwork creation. It cannot be changed afterwards.

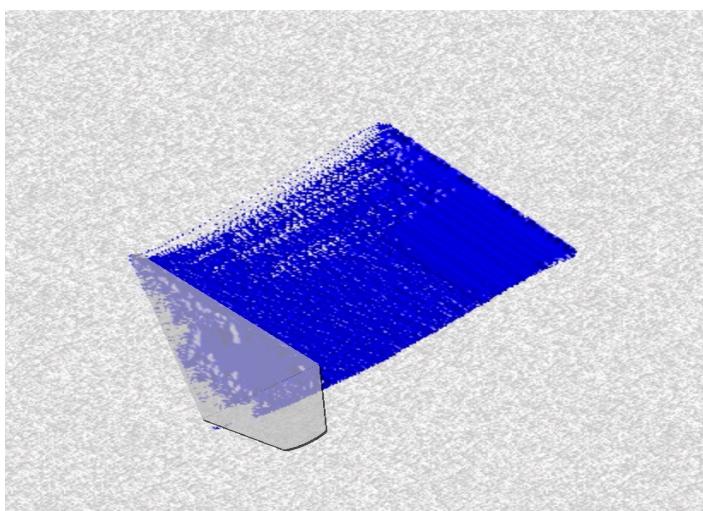
The available Painting surfaces are listed in the degree of rough in ascending order:

Rough degree: 3

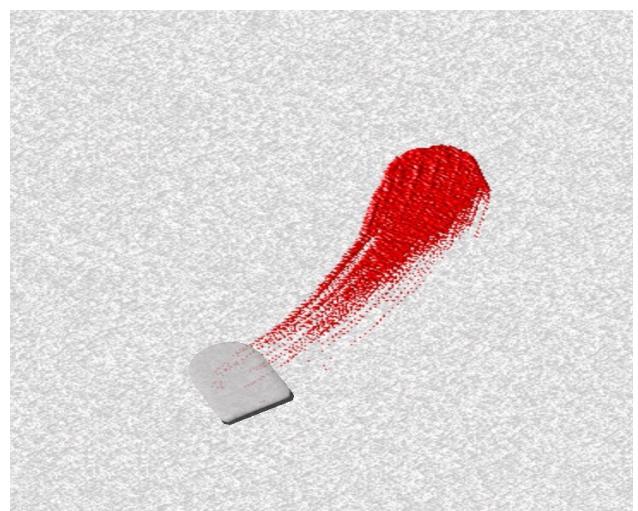


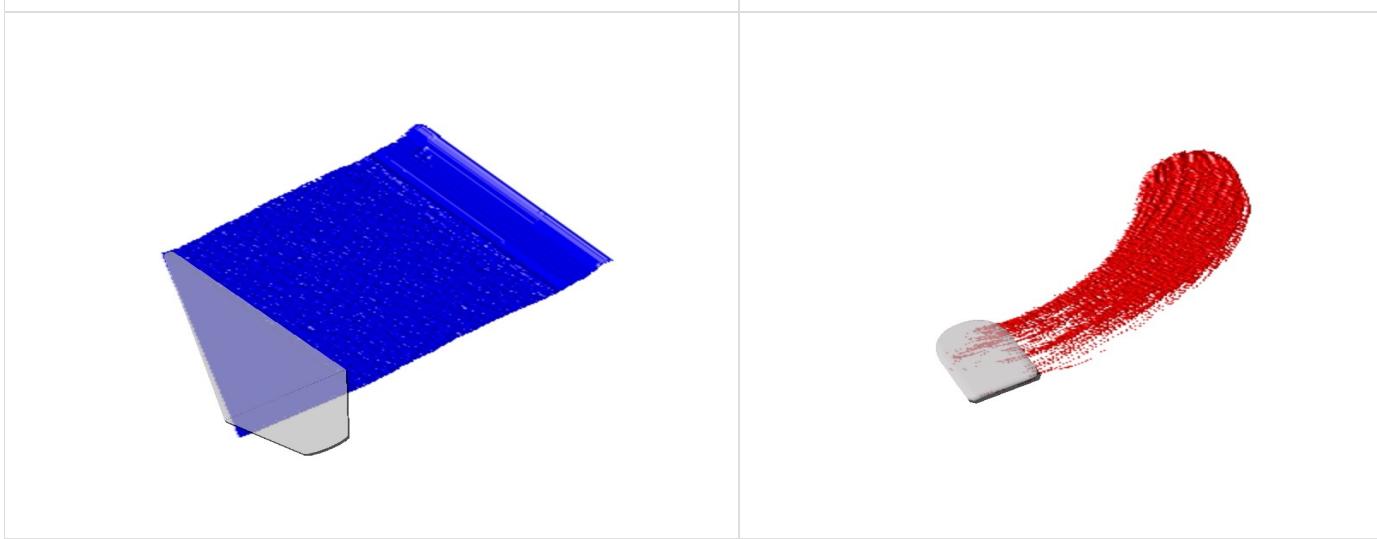
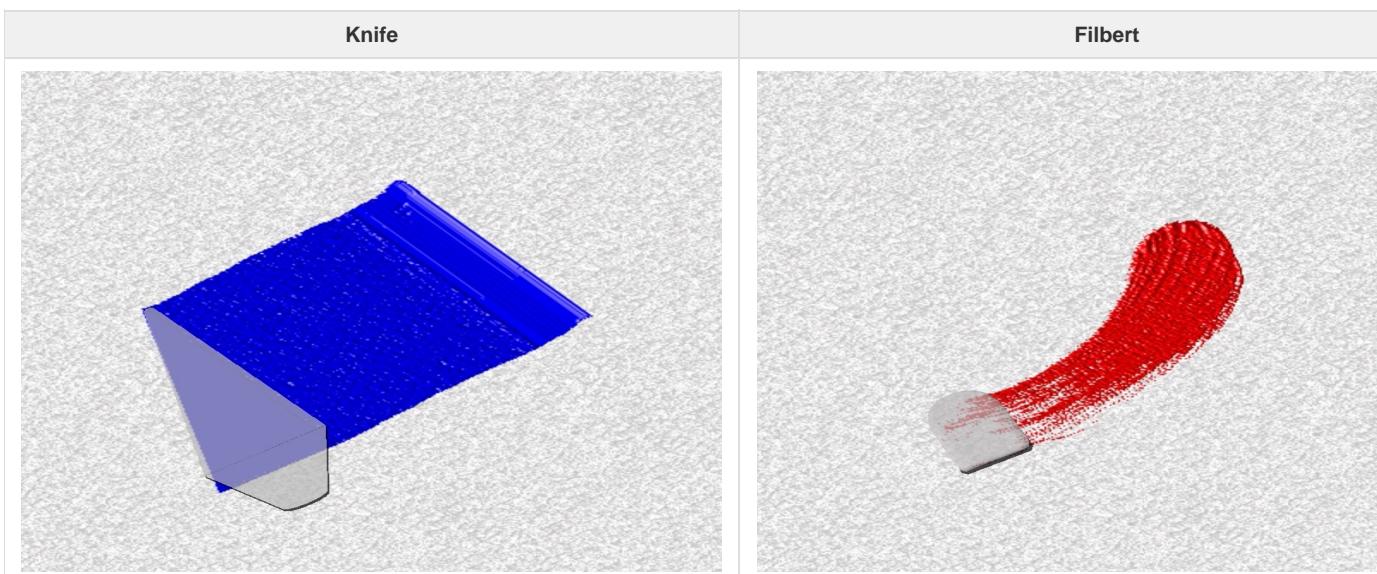
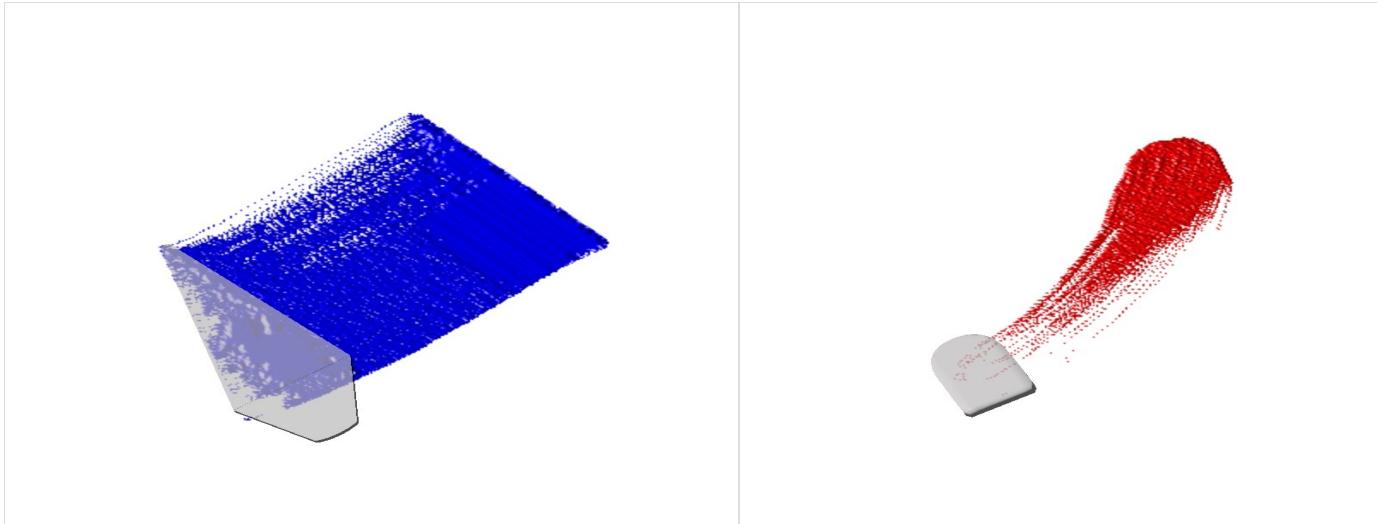


**Knife**

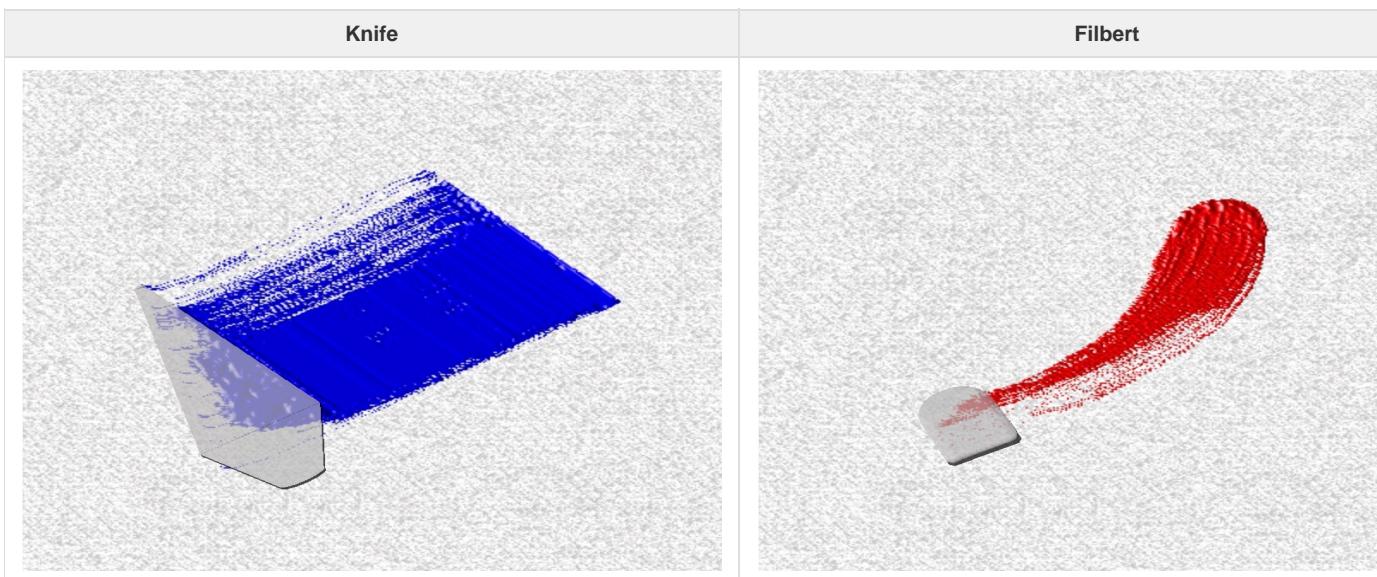
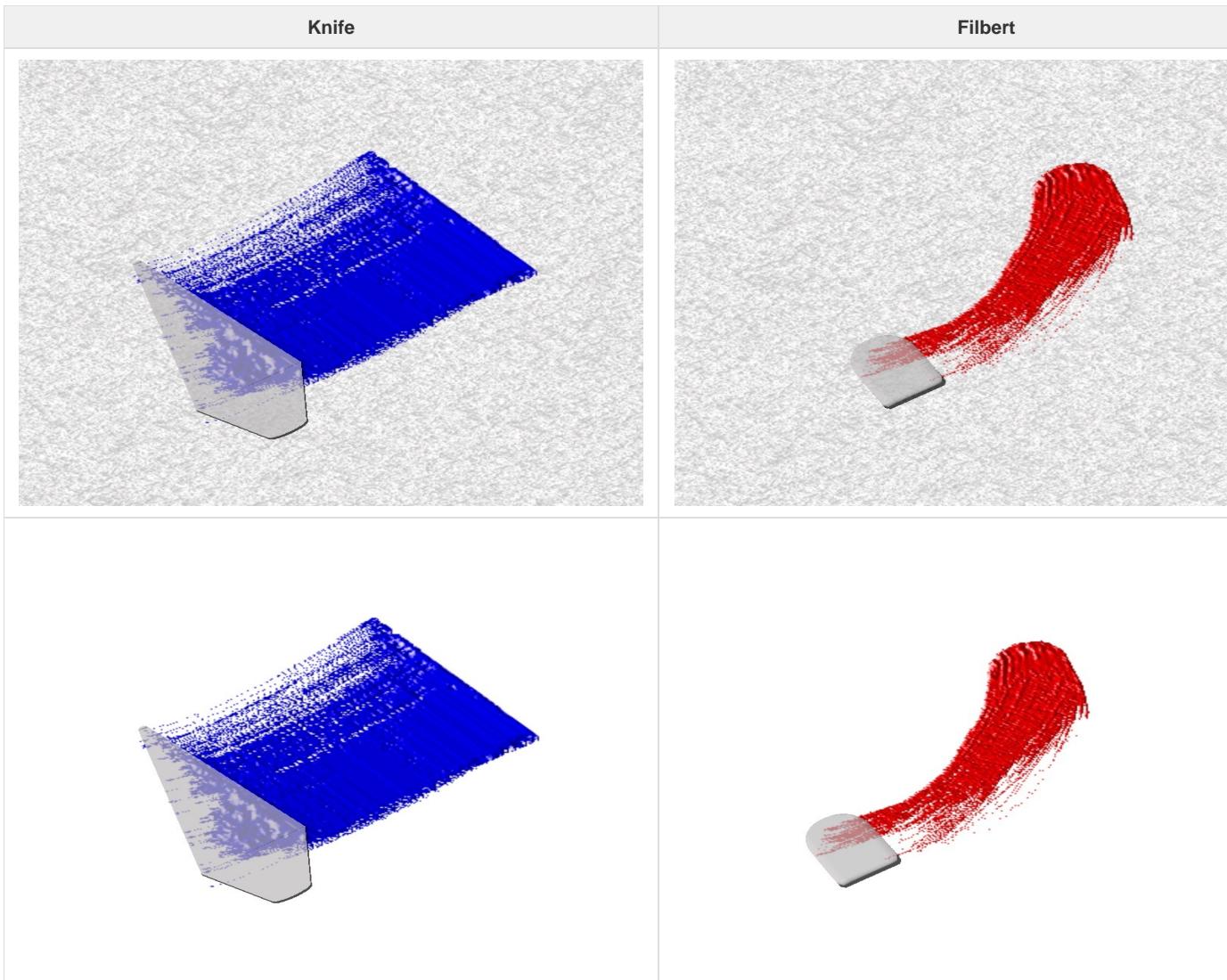


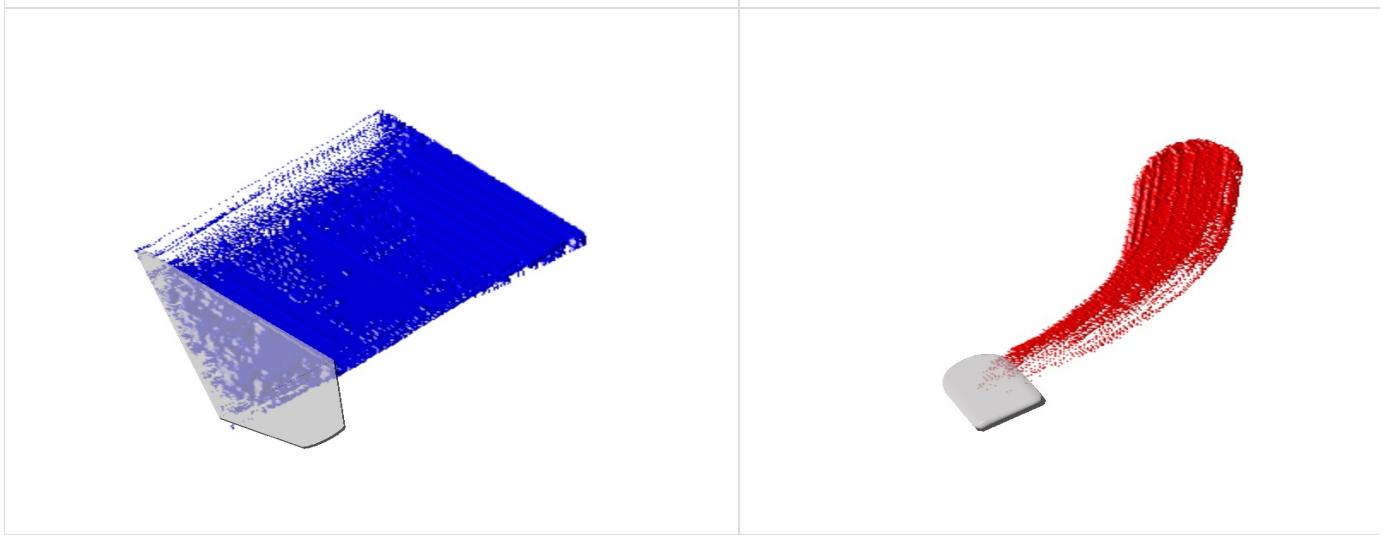
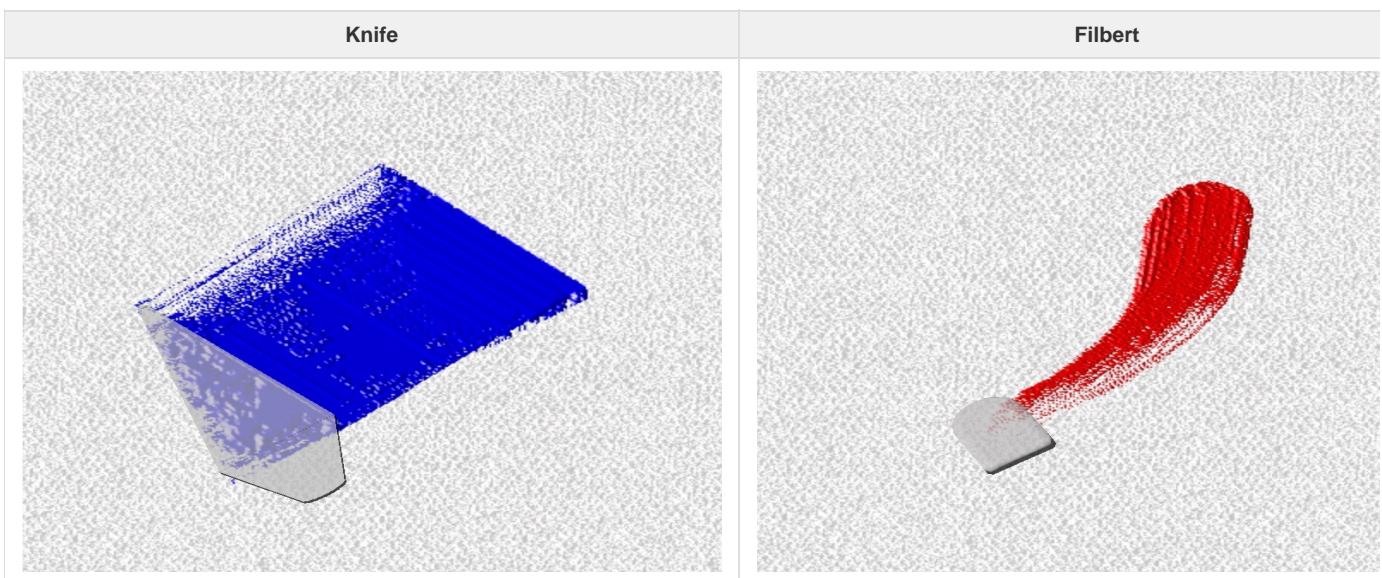
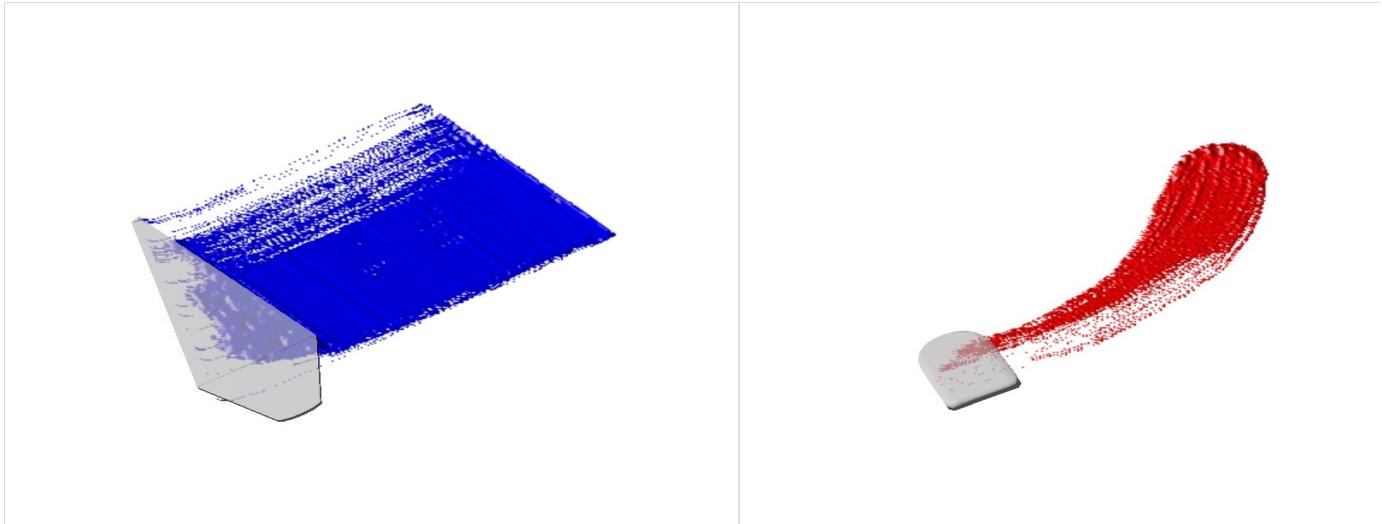
**Filbert**



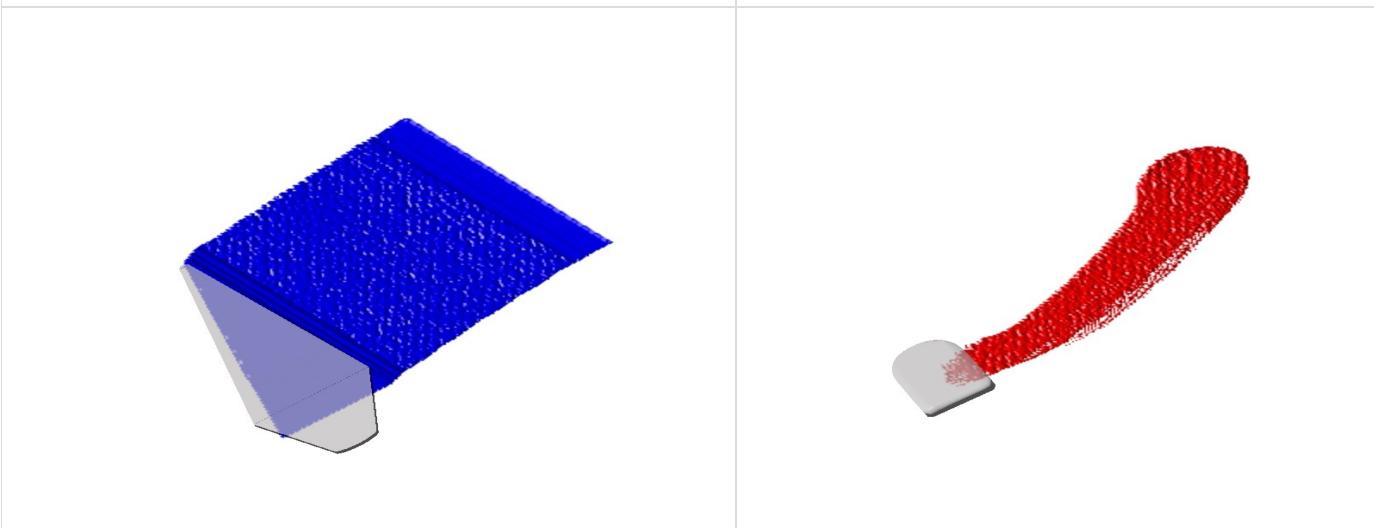
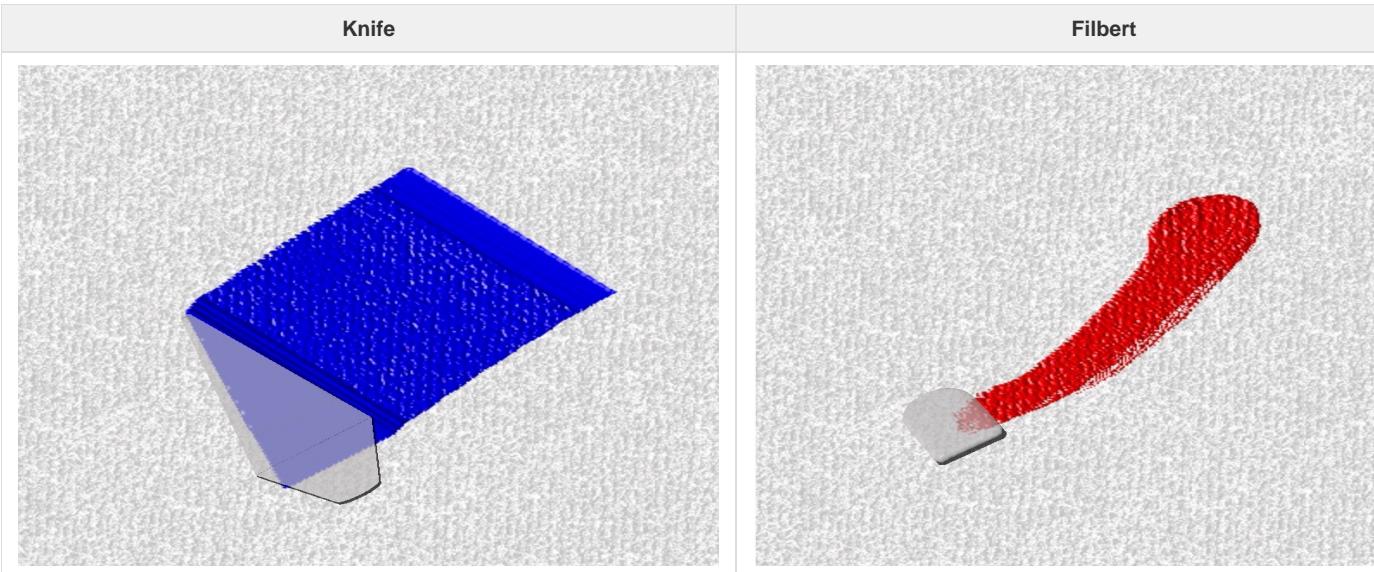


Rough degree: 4

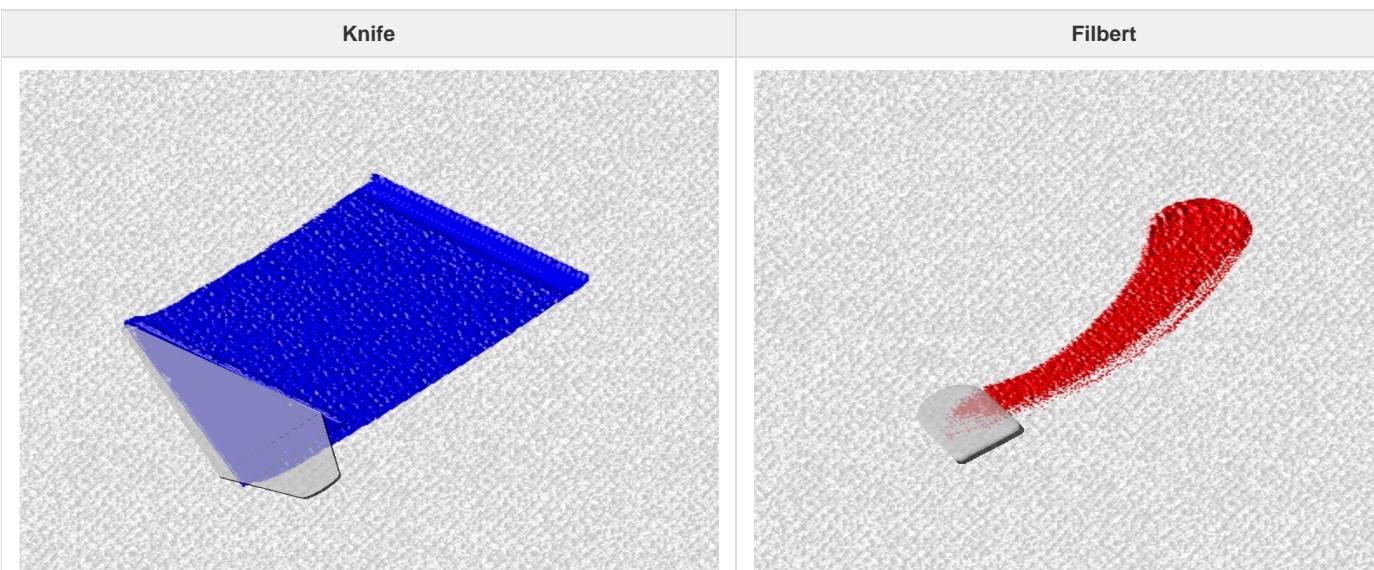


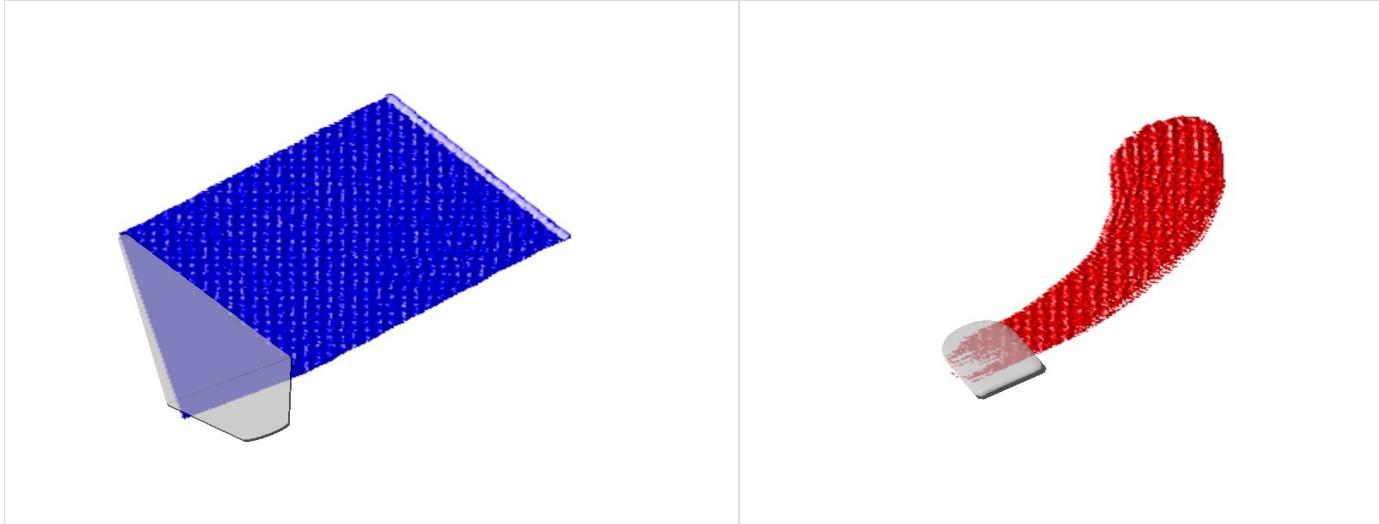
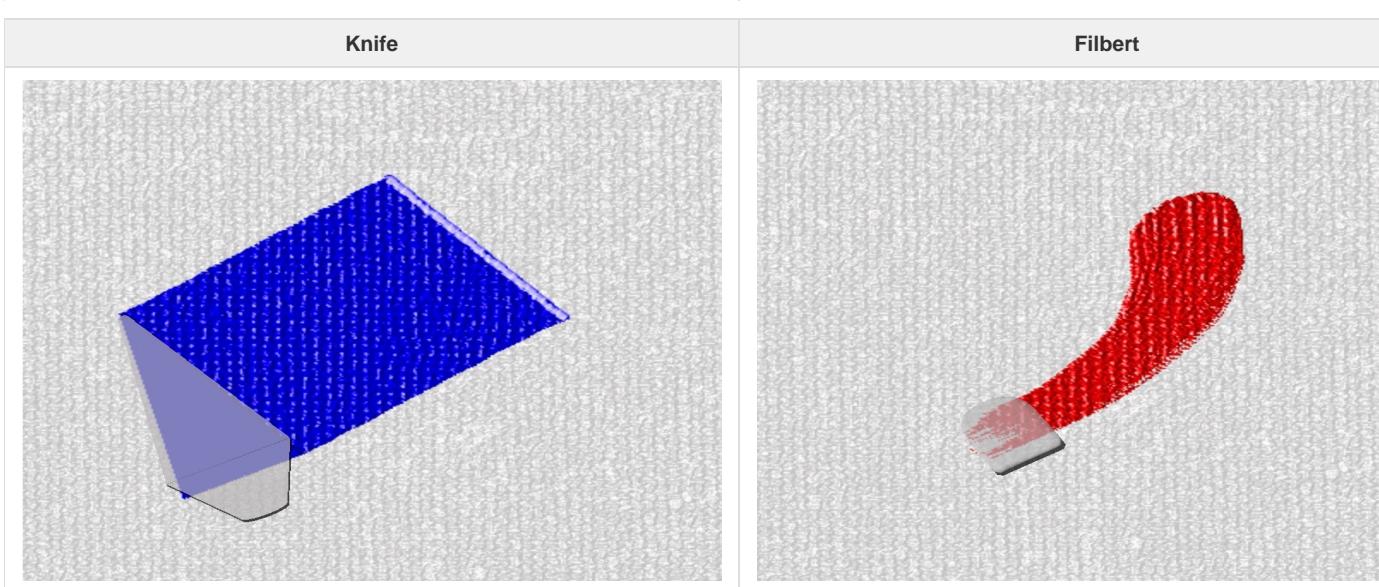
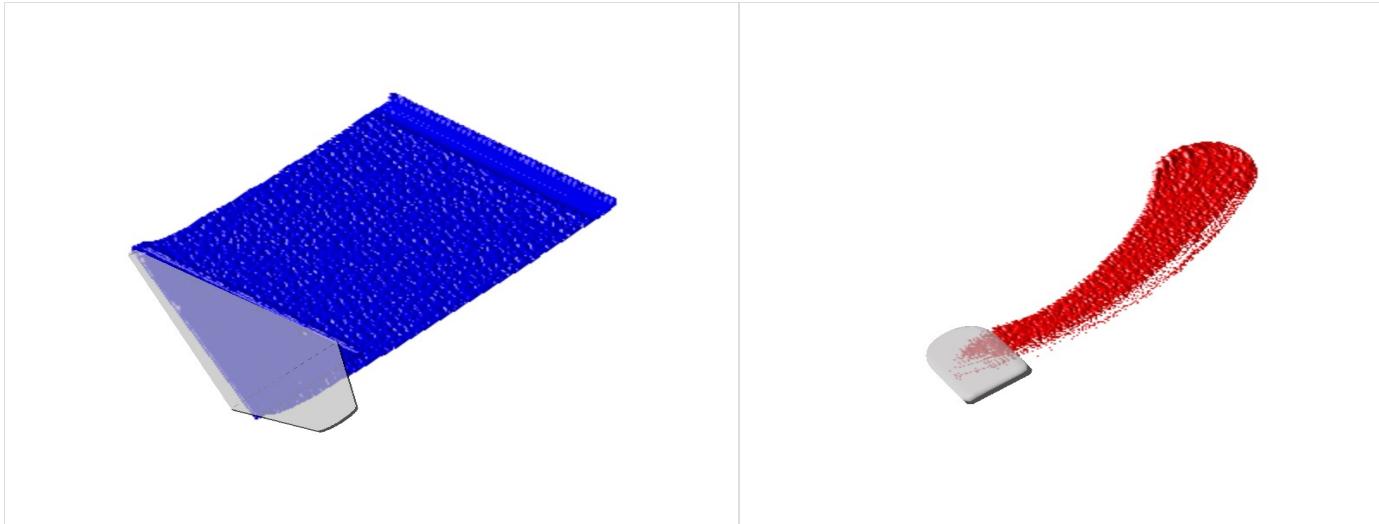


Rough degree: 5

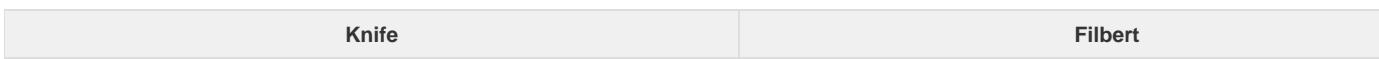


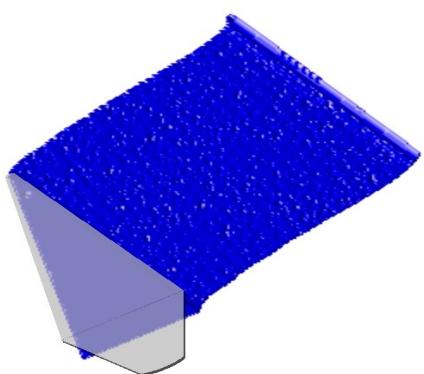
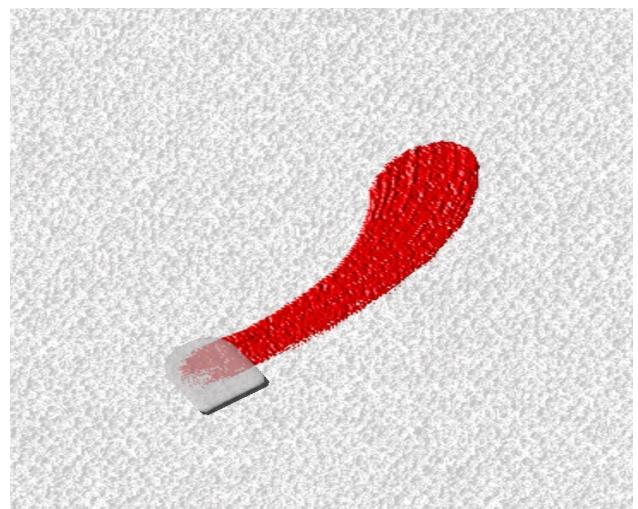
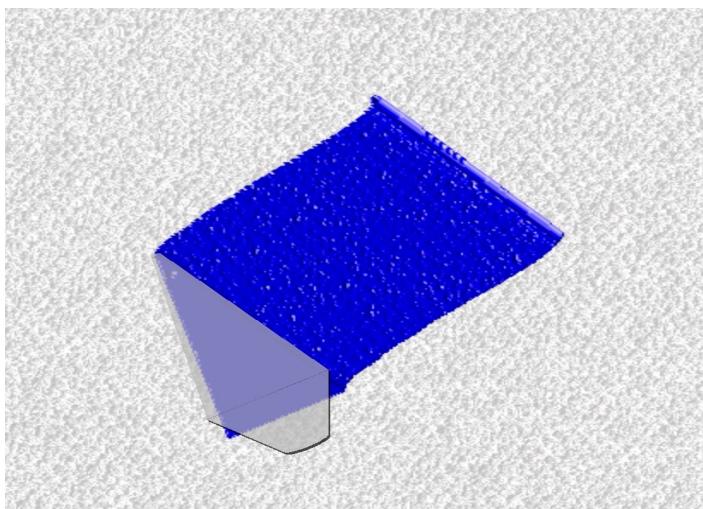
Rough degree: 6



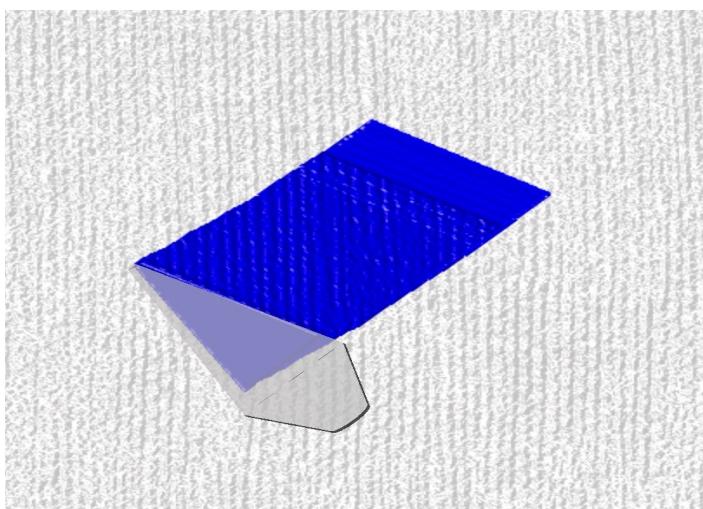


Rough degree: 7

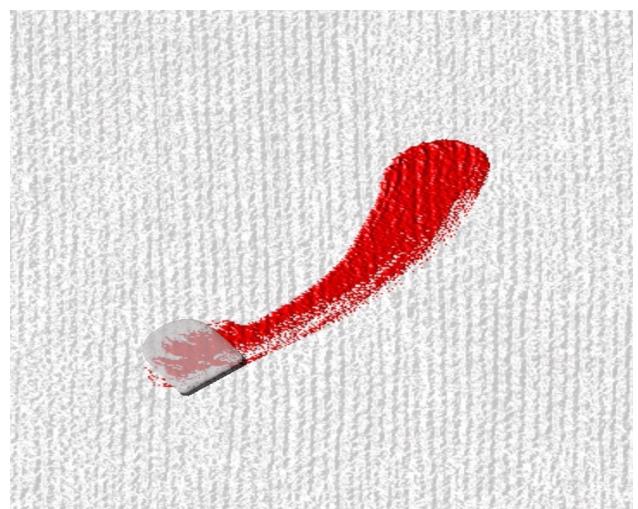


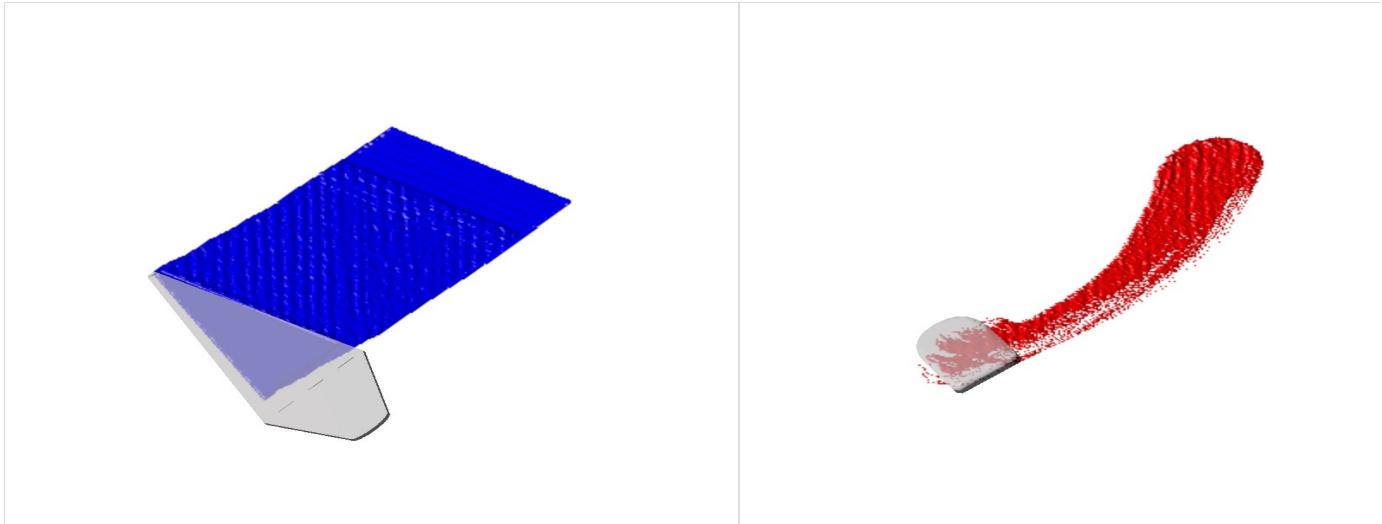


**Knife**

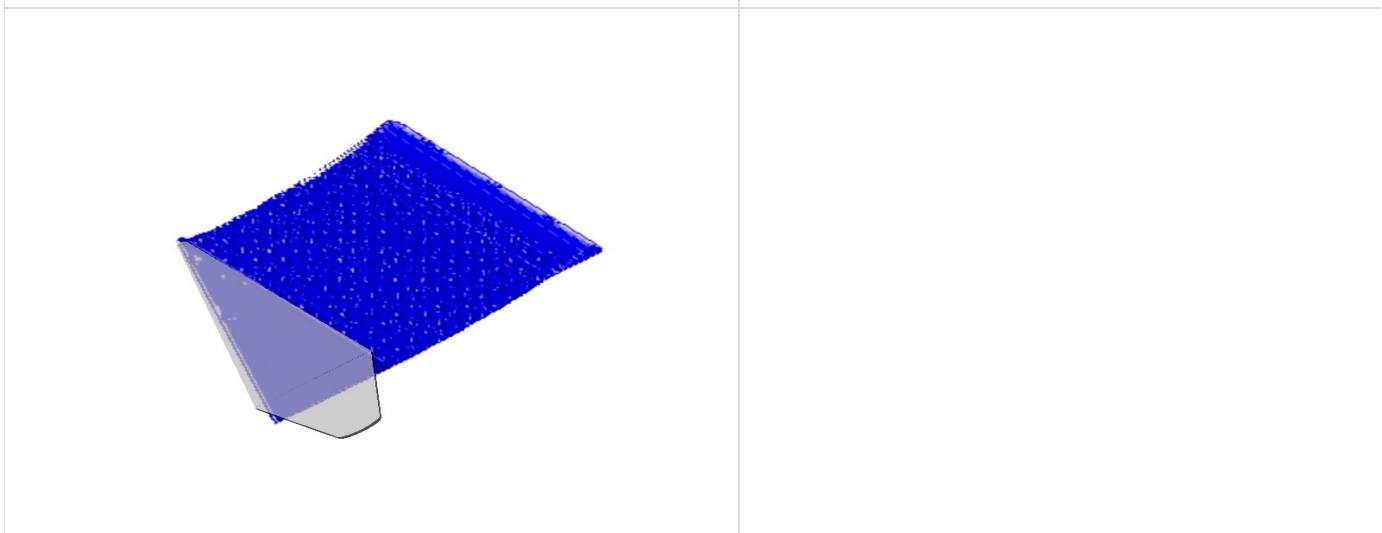
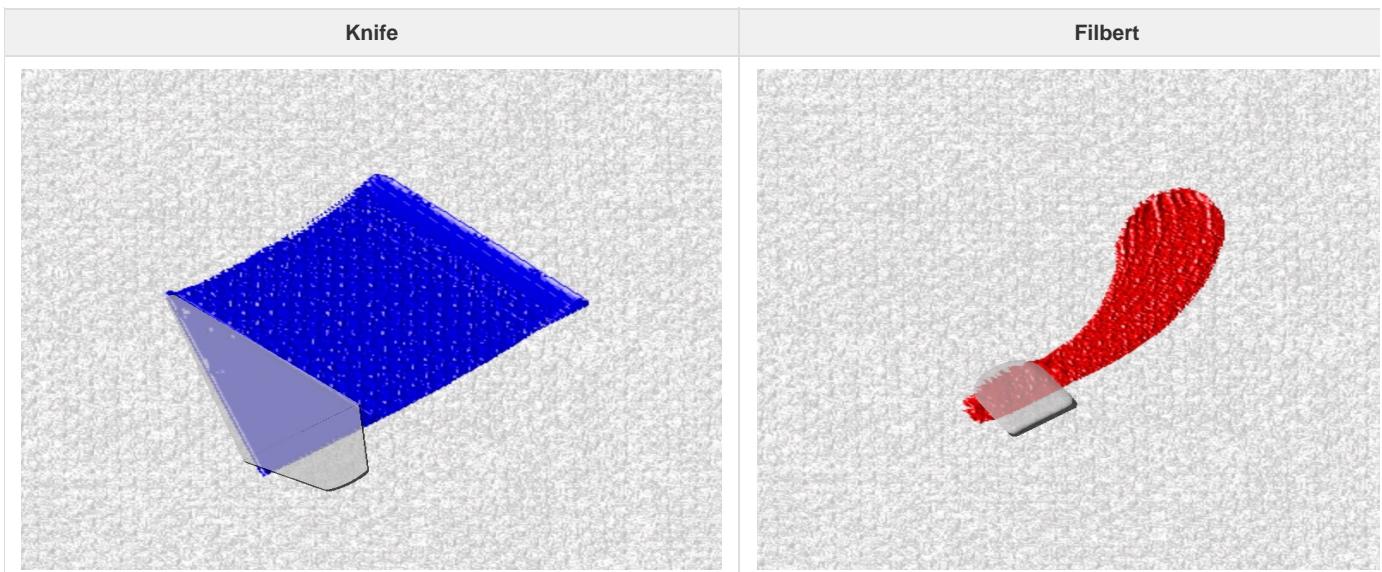


**Filbert**





Rough degree: 8



### 3.2.8. Palette

Palette is an extension of main Canvas. We use it to prepare colors and patterns of Painting Tools. It shares Painting tools with main Canvas.

### 3.2.9. Automatic Save

There are two parameters in this App to enable the Automatic Save. One parameter is to enable/disable this feature. Another is to set the interval of each save.

In the editor, if this feature is enabled and after the each stroke, a timer is created with the interval parameter defined in the App. The action of save will be invoked after the interval time.

### 3.2.10. Sharing, Import & Export

A painting can be Imported and exported from/to image in png format.

#### 3.2.10.1. Import

There are two mechanisms to import an Image:

- From a Workshop, an image can be imported on top of the current Painting content. The content before the import will be put in Dry.
- From outside of Impasto such as App Photo, you can select an image and then creates a new Painting in the same size of imported image and imports the image. In fact, the import consists of two steps:
  - Create a temporary file in a shared folder
  - Create an Painting inside of Impasto, which can occurs on the startup or in the Gallery when you scroll.

Please note that when you import a lot of images, the next startup of Impasto can be slow down.

#### 3.2.10.2. Export

Inside of Workshop, the button "Export" converts the current Painting only in Image and then saves it in Photo Library.

#### 3.2.10.3. Share

This feature converts the current Painting in Image and then publishes it in any social network you have such as Facebook, WeChart etc.

## 3.3. Undo/Redo

Due to the limitation on memory of IPad, the only 20 undo/redo operations is supported. If you can more undo operations, you need to use the Timeline to go back to anytime.

## 3.4. Timeline

The Timeline shows all your artworks through the time axis. You can select any time to go back. When you go back to a past time and modify it, the following operations will be lost.

## 4. Gestures

Gesture	Description	Status
Single Finger Swipe left	Undo	Supported
Single Finger Swipe right	Redo	Supported
One finger in single Tap on Palette	Force the focus on the Palette, it brings the Painting tool bar on top of Palette	Supported
One finger in single Tap on painting Canvas	Show/hide the tool views such as tool bars, palette, light setting and tool controller	Supported

One finger in double Taps on screen	Enable or Disable the Auto Reset option of the current tool.	Supported
Two Fingers in single Tap	Smart Zoom:  First tap to Fit to screen  Tap again to go back the previous zooming state	Supported
Two Fingers Swipe Up		
Two Fingers Swipe down		
Two Fingers Pinch	Zoom in/out	Supported
Four Fingers Swipe left and right	Clean All	

## FAQ

1. How to pick up a color of painting surface?

There are two possible solutions:

- a. Use the Pickup Tool to locate a color on surface and fill the color of the current painting tool.
- b. Use the Pickup Gesture to collect the color liquid

The first solution put more quantity of liquid on the Painting Tool. The second one may have blended colors and different color pattern on the Painting Tool.

2. How to produce the Impasto effect?

The most important is to keep the density of color liquid. That mean you shouldn't dilute it using Turpentine. And then you should try to produce the thick layer. There are several ways:

Tool	Description
Tube	Produce the maximum thick layer
Knife	Fill Knife with a Color with maximum pressure to get more quantity, and then tag Knife on Painting Support. To repeat the same action, you can enable "Save Color Patterns" with "Auto Reset" option.
Brush	Same as Knife

3. There are too much color on my canvas, how to remove it?

With Knife, you rotate angle > 45° and use the backward painting direction to remove it.

With Brush, you can turn on the Auto Clean option and paint repeatedly.

4. How to prepare a gradient color ?

You can use a knife in Blending mode (rotation angle < 45°) to blend two or more colors.

5. How to produce bristle marks ?

To produce bristle marks, the quantity of color liquid loaded in Brush is very important. You need first to prepare the color on Palette and use the Pickup Gesture to load the color in Painting Tool, and then paint on the surface with maximum pressure to produce thin layer of color.

6. How to prepare a background ?

A background should be a very thin layer. The solution is to use the more wet color. To prepare the wet color, two tools can be used: Wet ness Plan and Turpentine. Once the wet color is prepared, you can use either Knife or brush to pant the thin layer. And the option Auto Reset is very help for the repeated blending operations.

## 5. Feature Comparaison

Tropic	ArtRage	ProCreate	Fresh Paint	Impasto
Platform	IOS, Android and Windows	IOS	Winfows	IPad Pro only
Color Blending	Light Emission by default  Possible to use Light Absorption in Windows Desktop Edition	Light Emission	Light Emission	Light Absorption
Color Pattern	NA	NA	Available	Available

<b>Palette</b>	NA	NA	Available	Available
<b>Color Thickness</b>	Available	NA	NA	Available
<b>Color Wetness</b>	Supported at Tool level same as Dryness	NA	NA	Available
<b>Color Dryness</b>	Supported at Tool level	NA	Available for entire Paint	Possible to change per region
<b>Knife</b>	Available for blur purpose  Support of 2 static parameters: Pressure and Softness	Support for Blur  Support of 1 dynamic parameter: Pressure	NA	Real simulation with the support of different modes.  Support of 5 dynamic parameters: Pressure, Thinner, Loading, Altitude and Azimuth  Support of 1 static parameter: Rotation  Two modes: Mixing and Erasing
<b>Brush</b>	Available but only a segment of line to paint  Support of 3 static parameters: Pressure, Thinner and Loading	Available, it is an image to cloned in each Stroke  Support of 1 parameter: Pressure	Available, but the brush cannot be rotated.  Support of 1 parameter: Pressure	Available  Support of 5 dynamic parameters: Pressure, Thinner, Loading, Altitude and Azimuth  Support of 1 static parameter: Rotation
<b>Painting Surface</b>	Supported	NA	Supported	Supported
<b>Layers</b>	Supported	Supported	NA	Supported
<b>3D Rendering</b>	Simulation of 3D in 2D	NA	Simulation of 3D in 2D	True 3D Rendering

## 6. Useful References

### 6.1. General Documentations

Aspect	Category	References
Blending Techniques	Documentation	<a href="http://www.oilpasteltechniques.com/blending-with-oil-pastels/">http://www.oilpasteltechniques.com/blending-with-oil-pastels/</a> <a href="http://www.from-sketch-to-oil-painting.com/blending.html">http://www.from-sketch-to-oil-painting.com/blending.html</a>

### 6.2. Tutorials

#### 6.2.1. Brush State

The purpose of this tutorial is to master the state of Painting tool such as Knife and Brush

#### 6.2.2. Color Blend

The goal of this tutorial is to practice the Color Blend. This tutorial produces a Color Wheel like this video:

### 6.2.3. Make Gradient color

The purpose of this tutorial is to master the Color Blending. This tutorial is a reproduction of this following tutorial, which is in acrylic paint.

To practice this tutorial, you need to master the Brush State first.

## 6.3. Demonstrations

### 6.3.1. Knife

Portraits

Landscapes

## 7. Summary of Painting Tools

Painting Tool	Color filling	Color Pattern	Rotation	Pressure	Vertical Orientation	Horizontal Orientation
Tube	Yes	No	No	Propotional Size	No	No
Knife	Yes	Yes	from -90° to 90°	Inverse proportional Thickness of Paint	Yes	Yes
Brush	Yes	Yes	from 0° to 360°	Inverse proportional Thickness of Paint	Yes	Yes
Turpentine	No	No	No	Propotional Size	No	No
Fluffy Mop	No	No	No	Propotional Size	No	No
Towel						

## 8. Terminology

Term	Description

Stroke	A stroke is the result of a painting action on the painting support, it starts when you push Pencil on the iPad surface, it ends when you left it from the painting surface.
Forward Painting	
Backward Painting	
Color Pattern	
Pick Up Gesture	It is a gesture to pick up some color from painting surface. This gesture can be used for Knife and Brush.
Painting Tool	It is a mandatory tool to produce directly the artwork such as Brush, Knife, Tube, etc.
Sgraffito	Sgraffito a technique used in painting, which consists of putting down a preliminary surface, covering it with another, and then scratching the superficial layer in such a way that the pattern or shape that emerges is of the lower colour.
Impasto	Impasto is a technique used in painting, where paint is laid on an area of the surface very thickly, usually thick enough that the brush or painting knife strokes are visible. Paint can also be blended right on the support. When dried, impasto provides texture, the paint appears to be coming <i>out</i> of the canvas.
Oil Painting Medium	