

Creating an Expressive Bristle Brush in Corel® Painter™

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In this installment, we are going to get our hands dirty and create an expressive brush from scratch. I'll be describing several brush customization concepts here, so you expect to teach your copy of Painter a few new tricks. I'll follow up this tutorial with a continuation, in which we'll customize this brush even further. So, make some popcorn, gather the family 'round the monitor, and let's get started.

The Static Bristle Dab: It's Anything But Static!

One of the primary "pistons" in the Painter Brush Engine is found in the *Brush Controls: General palette*. This piston is the *Dab Type Pop-up list*. This pop-up controls what constitutes the mark-making tip of a brush variant. We are going to focus on the *Static Bristle* dab for our expressive brush. This powerful dab type enables the creation of a wide range of bristle-bearing brushes. Imagine controlling the number and thickness of bristles in your brush. It's all possible with the *Static Bristle* dab type. Perhaps a better name for this dab would be the *Dynamic Bristle*!

In order to start on a somewhat level playing field, we are going to use the *Flat Color* variant (*Brush Selector Bar: Pens Category*) as a starting point. Select this variant and try it out. The *Flat Color Pen* is as expressionless as they come: a round brush that opaquely lays down the current color. It is a good utility brush, however, for quickly painting in large areas of color. In order to preserve the *Flat Color* brush in your library, we'll make a new variant from it.

Throughout this brush build process, feel free to try out the brush on a test file. Some of the adjustments aren't even obvious unless a stroke is created with the brush.

Creating a New Variant

With the *Flat Color Pen* Variant selected, open the *Brush Selector Bar* flyout menu (disclosure triangle: top left corner). Select *Save Variant...* The *Save Variant* dialog will appear. Give your new variant a *unique name* and hit *OK*. Now look in the *Pens Category Variant list* and you'll find your newly created variant alphabetically installed in the list. It is this

new variant that we will mold into our expressive static bristle brush. Let's get started!

Visualizing the Static Bristle

The first thing we are going to do is change this newly created variant's dab type. Go to the *Brush Controls: General palette* and click on the *Dab Type* pop-up list. Select *Static Bristle* from the list. Did you feel the earth move? Probably not; that's because nothing visually changed in the *Brush Controls* (except that the *Dab Type* pop-up now says, *Static Bristle*). To get things going, we need to be able to visualize the *Static Bristle* dab. Here's where I pull the curtain aside for you to see a bit of Painter's inner-workings: Go the *Brush Controls: Size palette* and click anywhere inside the *Size Preview indicator* (the gray square with the black circle in it). It magically changes for the boring circle to an amazing graphic display of a cross-section of a bundle of bristles!

Adjusting the Dab Spacing

The *Flat Color* variant wasn't designed for for the type of expressive brush that we're re-casting it into. Consequentially, its dab spacing is larger than we'll need. This means that we are going to adjust the overall dab spacing. To do this, we'll temporarily navigate to the *Brush Controls Spacing palette*. For many dab types, Painter fools the eye into believing that it is seeing a single brush stroke. In fact, the stroke is composed of hundreds (if not thousands) of closely overlapping dabs.

At its current spacing, this brush exhibits *tire tracks*; the dabs are too far apart to portray a convincing fluid stroke. Let's eliminate this artifact by decreasing the distance of the overlapping dabs. Adjust the *Spacing* slider to the left. This decreases the dab overlap. Note that spacing affects performance; if the spacing is too close, Painter will draw the stroke slowly, and it is therefore unusable. This is less of an issue than it once was due to faster processors. It is good to be aware of this aspect of brush construction as it is one aspect of control that can be adjusted to maximize a variant's performance. For our example, adjust *Spacing* to 3%. Try the brush out; if it draws sluggishly, adjust it up a percent at a time until the performance is acceptable.

Adjusting the Static Bristle Size Display

To dynamically adjust the bristles, we will use the *Brush Controls: Bristles palette*. By default, this palette is a few sub-palettes removed from the *Size palette*. We can fix this by clicking on the *dark gray* of the *Bristles palette title bar* (the cursor changes to a hand cursor) and dragging it to just above the *Size palette*. This places the controls in close proximity to the *Size Preview* (Of course, you may organize your *Brush Controls* in any manner that works for you).

How Do I Adjust the Bristles? Let me Count the Ways

Let's begin by going through the *Bristles palette controls* to see what they do. Go to the *Thickness slider* and adjust it both to the left and the right. At *lower* settings (left) the bristles become *finer*; at *higher* settings (right) the bristles become *larger*. That was easy! For our example, set it to 45%.

Next, adjust the *Clumpiness slider* left (equal sized) and right (variable size). Note how the individual bristles become more varied as you adjust the slider to the right. Set it to 50%.

Moving down, adjust the *Hair Scale slider* left (more bristles) and right (less bristles). Don't stare at it too long or you'll hypnotize yourself. Set the slider to 740%

I want you to shift focus for a minute and look at the *Size palette*. We are going to adjust the size of our brush. Adjust the *Size slider* left (smaller) and right (larger). For our example, set the size to around 30. This value, by the way, is the *radius* (in pixels) of the brush dab. So, when you set a brush size in Painter to 50, it means that the brush dab is actually 100 pixels across.

Before we can use the *Bristle palette's Scale/Size slider*, we need to first adjust our dab so that it has a both a *maximum* and *minimum* size. In order to visualize our adjustment, we need to temporarily toggle the *Size Preview* back to its simple circular mode. *Click* in the *Size Preview* to do this. The dab preview is currently a single black circle. Adjust the *Min Size (Minimum Size) slider* (below the *Size slider*) to the *left*. You'll see the black circle *shrink* in size. The *black circle* now represents the *smallest* size you brush can be.

The newly revealed *dark gray circle* represents the *maximum* size of your brush dab. For our example, set the *Minimum Size slider* to around 30%. We additionally need to activate a means of expression to put this variable-sized dab to use. Use the *Expression pop-up* below the *Min Size slider* to

use *Pressure*. With a pressure-controlled, variable-sized dab, we can now utilize the *Bristle palette's Size/Scale slider*.

The *Size/Scale control* is subtle; it may not be obvious what it is doing. Basically, here's the dope: When *Scale/Size* is adjusted to the *left (0%)*, the bristles *remain the same size*. As the slider is adjusted to the *right*, Painter *re-scales* the bristle bundle between its *minimum* and *maximum* size limits. The effect is of a finer bristled brush.

You can *toggle* the *Size Preview* back to *graphic display mode* and adjust the *Scale/Size slider*. Notice that it does not change. That's because the only way to see the adjustment is by actually trying the brush out. For our example, set *Scale/Size* to around 60

Adding a Bit of Finesse

Our brush currently applies color in a flat, non-opacity-modulated manner (it started out as the *Flat Color pen*, remember!). We are going to add a bit of a soft touch to it. We are going to control our brush's transparency with *pressure*. Navigate back to the *Brush Controls: General palette*. There we will set the *Opacity control* to *Pressure*. In conjunction with a *Wacom tablet*, light pressure will dictate both *smaller* dab size and color *opacity*. Increased pressure will enable wider strokes and greater opacity.

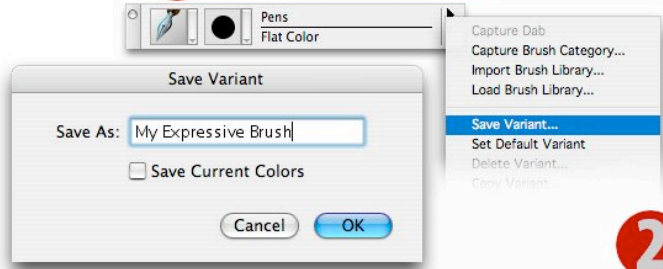
Play With Your New Toy!

This is as far into brush design as I want you to go today...you deserve to play with your newfound powers. Now that you have a grasp of the *Static Bristle's* controls, I encourage you to play with your brush and see if you can further refine it to suit your taste. You may want more bristles, coarser bristles, more size range. It's all up to you. In my next installment, we'll further customize this brush with sophisticated blending. Until then, have fun and post some examples of this brush in action!

Viva la Painter!

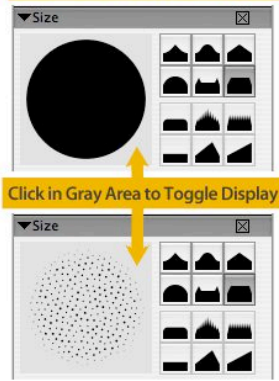
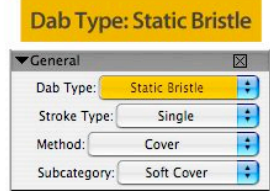
John Derry is a pioneer of digital painting and one of the original authors of Corel® Painter™. Since 1985, he has leveraged his background in drawing and painting to advance the look and experience of traditional art-making tools on the computer. John has a bachelor's degree and a master's degree in Fine Art and is a practicing artist and photographer. He is currently serving as Corel's Painter Ambassador-at-Large. John's Web site is at www.pixlart.com.

1 Save Variant Dialog



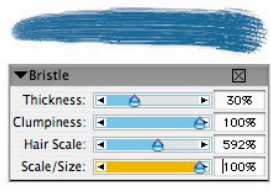
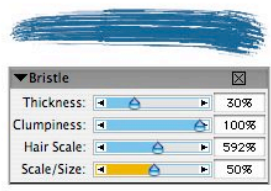
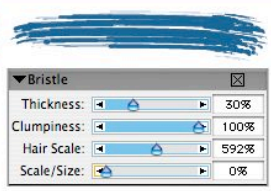
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Brush Dab Preview Toggle



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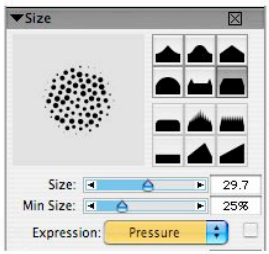
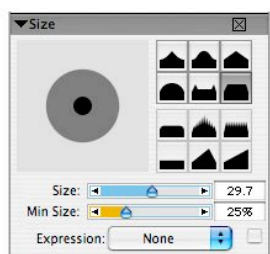
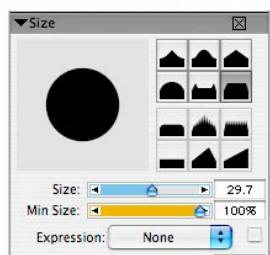
Hair Scale/Size Adjustment



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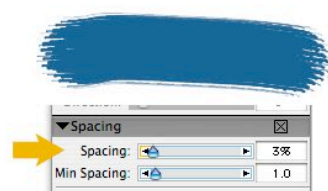
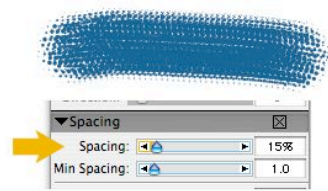
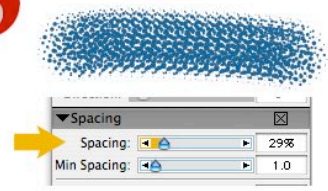
Size Expression: Pressure

Minimum Size Adjustment



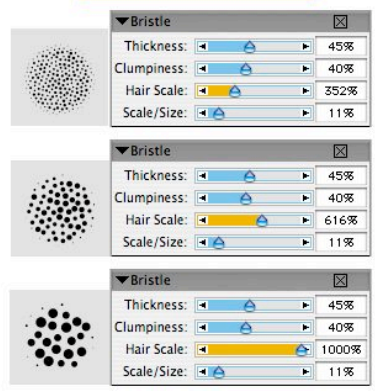
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Dab Spacing Adjustment

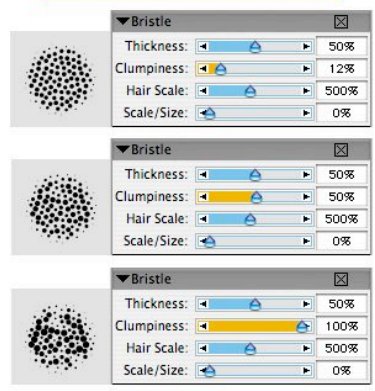


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Hair Scale Adjustment



Hair Clumpiness Adjustment



Hair Thickness Adjustment

