

Layers 4: Layer Types 1:

Pixel and Media Layer Types in Corel® Painter™

John Derry



©2006 John Derry

Painter utilizes layers for more than just compositing pixels. Layers are also used to embody the characteristics of traditional media like watercolor and ink, as well as contain point and curve-based vector information. Painter's various layer types can be distilled into 4 groups: Pixel-based layers, Media layers, Vector layers, and Dynamic layers. Let's take a look at Painter's various layer types and see what each does.

The Canvas

The *Canvas* is a required component of every Painter image (a new image cannot be created without a *Canvas*). The *Canvas* is always the bottom-most element in the *Layers* palette. The *Canvas* is automatically filled with the color indicated in *Paper Color* square (File > New). The *Canvas's* required presence should be taken into account when creating variable-opacity artwork—like brushstrokes—on the *Canvas*. This artwork cannot be separated from the *Canvas* color to utilize it in a layer without unwanted artifacts. In order to maintain maximum flexibility, painting on layers is preferable.

Pixel-based Layers

The *pixel* is a basic unit of digital image-making. A generic pixel contains position-specific color and transparency (alpha channel) information within the context of an image made up of a massive array of pixels. A pixel-based image is akin to a mosaic of millions of colored tiles arranged to produce a recognizable image. It is only under extreme enlargement that individual pixels are obvious within an image. For the most part, Painter users do not deal with pixels on an individual basis. Painter handles all of the heavy lifting required to paint with millions of pixels in real-time to produce the illusion of oils, chalks, watercolors, and so on.

No discussion of pixels and layers would be complete without mentioning *Composite Methods* (*Blend Modes* in Photoshop). When multiple layers of pixels are overlaid, the *Composite Method* of each layer non-destructively controls how its pixels will be visually combined with any pixels found beneath it. A layer's pixels can be adjusted to darken, lighten, or tint the

pixels found in the layers beneath it, among other things. For example, Painter employs its *Gel Method* in order for a layer to simulate the richly colored transparency of watercolor.

The *Layer* palette's *Pick Up Underlying Color* control is another important concept relating to how layered pixels interact in Painter. *Pick Up Underlying Color* enables a layered brushstroke's current color to naturally intermix with the colors found beneath it. This enables a painting to be built up in multiple layers and yet appear as if it were created on a single surface. The result is a non-destructive approach to painting that allows post-editing of individual layered image elements without disturbing other overlapping imagery.

Pixel-based Layer: The Default Layer

The *Default* layer is Painter's default layer type, created via the *New Layer* command (*Layers* menu). The majority of Painter's brushes can be applied to pixel-based layers. The exceptions are *Watercolor*, *Liquid Ink*, and *Impasto-enabled* brushes. Additionally, brushes using the *Drip* and *Plug-in Methods* (*Brush Controls* > *General*), when applied to a layer, will not affect pixels on the underlying layers or *Canvas*. Examples are *Distorto* (*Liquid Brushes*) and *Blur* (*Photo Brushes*). They will only alter existing pixels on either a layer or the *Canvas*.

Pixel-based Layer: The Floating Object Layer

When an existing layer element is selected (*Tool Palette* > *Selection Tools*) and moved by the *Layer Adjuster* tool, a *Parent-Child* relationship is established between the two resulting elements. The existing layer becomes the *Parent* and the moved element becomes the *Child*. This is indicated in the *Layer Palette* list by displaying the *Child* element indented beneath the *Parent* layer.

When the *Layer Adjuster* tool is used to move the original (*Parent*) layer element (by clicking and dragging it), both the *Parent* and *Child* move uniformly. However, if the *Layer Adjuster* tool addresses the layer's *Child* element, only the *Child* element will move. This is primarily a safety measure designed to prevent the accidental dropping of a selected-and-moved layer element. The *Parent-Child* relationship is terminated by a variety of actions: selecting a *Selection Tool* and clicking in the image, painting on the layer, using the *Drop* command

when the *Child* is targeted in the *Layer list*, or relocating the the *Child* layer List entry to a new location in the list.

Pixel-based Layer: Gel Layer

The *Gel layer* composites its pixel colors as transparent, tinting any underlying color with the *Gel layer's* colors. This layer type is invoked when used by brushes employing the *Buildup* and *Digital Wet Methods* (Brush Controls > General). Examples are the *Art Marker* (Felt Pens) and *Simple Watercolor* (Digital Watercolor). A new, untouched layer will automatically change its Method from *Default* to *Gel* when acted upon by brushes employing either the *Buildup* or *Digital Wet Methods*. This ensures that transparent mediums will display as expected. A *Gel* layer is indicated in the *Layers* palette by the *pink Gel layer icon*. Note that you cannot intermix these brushes on layers requiring the default layer type and expect the strokes to properly display as transparent. Transparent media should be kept separately on *Gel* layers.

Media Layers

Media layers do more than act as a holder for pixels; they *emulate* the characteristics of a specific medium. Whereas Painter's brushes contain all of the information regarding a particular variant's mark-making attributes, a *Media layer* contains the attributes about a particular medium.

Media Layer: The Digital Watercolor Layer

The *Digital Watercolor* layer is Painter's original *Media layer*. This *Media layer* type provides a simplified simulation of traditional watercolor. A *Digital Watercolor* layer is invoked by brush variants employing the *Digital Wet Method* (General palette). These brushes are organized under the *Digital Watercolor Category* (Brush Selector Bar). When a *Digital Watercolor* brush is applied to a new blank layer, the layer's *Composite Method* is automatically changed to the *Gel* method. This provides the applied *Digital Watercolor* colors with the expected transparency of the traditional medium.

The *Digital Watercolor* layer contains the attributes of *Diffusion* (0-20 range) and the *Wet Fringe* (0-100%). *Diffusion* fuzzes out the edges of *Digital Watercolor* strokes, producing simulated fingers of diffusion. *Digital Watercolor* brushes with a *Diffusion* setting above 0 will be diffused according to the *Diffusion* amount (Property Bar). *Post-diffusion* can be applied via the *Diffuse Digital Watercolor* command (Layers palette). The diffusion strength applied is controlled by the *Diffusion amount*. The *Wet Fringe* adds the characteristic darkened color edge often found in traditional watercolor art.

A *Digital Watercolor* layer remains in a *Wet* state until dried via the *Dry Digital Watercolor* command (Layers palette). A wet *Digital Watercolor* layer maintains the *Digital Watercolor* attributes, enabling the layer to be further acted upon by *Digital Watercolor* brushes. Applying the *Dry Digital Watercolor* command will convert the *Digital Watercolor* layer to a *Default* layer. New *Digital Watercolor* strokes can be added to the existing dried watercolor imagery, enabling the buildup of rich transparent watercolor. *Wet Digital Watercolor* layers are preserved when saved in Painter's *RIFF* format.

Media Layer: The Watercolor Layer

Traditional watercolor is an aqueous medium that contains a suspended pigment. A brush-applied water/pigment combination interacts with the receiving paper and absorbs into it. Simultaneously, the suspended pigment spreads and migrates as the water evaporates and then binds to the paper's surface. The result of this complex activity is the unique appearance of watercolor. In order to realistically simulate watercolor, the *Watercolor* layer must encapsulate this behavior as a physical model. The result is a simulation of traditional watercolor far more complex than the simpler *Digital Watercolor* Media layer.

A *Watercolor* layer is invoked via the *New Watercolor Layer* command (Layers palette), clicking on the *New Watercolor Layer icon* (Layers palette), or painting in an image with a *Watercolor* brush (Watercolor Category > Brush Selector Bar). Only *Watercolor* brushes may be used on this layer type. A new *Watercolor* layer is automatically changed to the *Gel* Method to provide the correct color transparency characteristics.

Media Layer: Liquid Ink Layer

The *Liquid Ink* Media layer encapsulates several attributes associated with traditional ink-based media: adhesion, surface depth, resistive media, and softening. Viscous media, like ink and enamel, tend to self-adhere. In other words, viscous media is attracted to itself. A simple example is the manner in which two drops of ink will tend to merge as they come into proximity with each other.

When thick enough, viscous media will exhibit a three-dimensional appearance that is influenced by the manner in which it is lit. In some media, like enamel, this 3D appearance is desirable. Other media, like pen & ink, look better with a flat, graphic appearance. By default, Liquid Ink layers appear flat, but they can be adjusted to exhibit a three-dimensional appearance.

Several ink/oil-based mediums can utilize a resistive media like water or wax for creative effects. Wax and water are mediums that will repel ink and oil. Just as ink's self-attracting quality congeals image elements, interaction with a resistive media will still cause the ink to exhibit a self-simplifying congealing of elements. The combination of both a positive and negative form of ink interacting with each other can lead to very interesting visual results.

The term *soften* is used in conjunction with *Liquid Ink* to describe a self-simplifying force applied to existing *Liquid Ink* imagery. It is similar to the application of heat to wax. The original shape will reductively simplify its form. *Liquid Ink* softening tools impart a similar visual result to existing Liquid Ink visual elements.

A *Liquid Ink* layer is invoked via the *New Liquid Ink Layer* command (Layers palette), clicking on the *New Liquid Ink Layer* icon (Layers palette), or painting in an image with a *Liquid Ink* brush (Liquid Ink Category > Brush Selector Bar). Only *Liquid Ink* brushes may be used on this layer type.

Media Layer: Impasto Layer

The term *impasto* refers to thickly applied paint that projects from the surface. Any oil or acrylic paint applied to a surface exhibits some degree of impasto. An artist that intentionally applies thick paint for effect is said to be working in an impasto technique.

Mimicking impasto requires simulating the visual appearance of depth. Painter has always had *Surface Texture* effects that utilize the *Paper Grain* to apply a convincing three-dimensional appearance. However, this appearance is always applied subsequent to painting activity. The *Impasto* Media layer simulates a three-dimensional surface in real time. This marriage of painting with a three-dimensional simulation creates a powerful illusion for both the artist and the viewer. For the artist, the addition of three-dimensional visual cues while painting produces an immersive experience. For the viewer, the tactile qualities of the resulting painting are enhanced.

The *Impasto* layer operates in conjunction with *Impasto-enabled* brushes found primarily in the *Impasto Category* (Brush Selector Bar). *Impasto-enabled* brushes are sprinkled in other brush categories, as well. *Impasto* is controlled via the *Impasto* palette (Brush Controls).

More To Follow!

Well, this installment is getting a bit long, so I'll end it here for now. The next installment will finish up with Layer Types by describing Vector and Dynamic layers. See ya next time.

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.

Layer Types

in Corel® Painter™

John Davis

Pixel-based Layers

Default Layer



Gel Layer

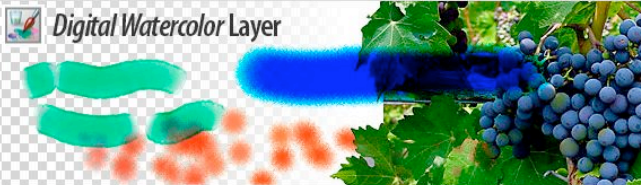


Floating Object Layer



Media Layers

Digital Watercolor Layer



Watercolor Layer



Liquid Ink Layer



Impasto Layer



Vector Layers

Shapes Layer



Text Layer



Dynamic Layers

Dynamic Plugin Layer



Reference Layer



The Canvas

Canvas

