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Substance Painter

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tutorials.allegorithmic.com/courses/a97b433a5997fd800b5ed300d783cc41/youtube-IGG
QI9kVB1M.

Substance Painter is a 3D painting and texturing software designed by Allegorithmic designed mainly for game assets. This is comparable to Mari in the animated film industry, and the main difference between the two software packages is the usage. The usage differs in part due to the fact that video games are rendered in real time and need to have textures that support the real-time render process while films do not need to have textures that support the real-time rendering process. Additionally, Substance has a workflow that works better with procedural texturing which is something that benefits the games industry. Thus, substance painter is something that is good to learn for those going into the games industry.

Substance Painter has various workflows that allow for different types of texturing of assets. The main one that this tutorial focused is the standard workflow of substance painter and how to texture a prop. This program has slowly been replacing Photoshop which is also used for texturing 3D assets. Photoshop is similar to Painters workflow in that both rely on layers for painting different textures on to the asset. However, the painting in Photoshop is done in 2D using UV maps while Substance Painter paints layers straight on to the 3D asset. This tutorial was done by using the most common system of using Substance for beginners.

The interface of Substance Painter is based on various panels that can be docked in any location based on user preference. Working through each panel there are various features that are all very helpful for creating the textures and the environment surrounding the textures. Many of these panels are based on standard functions such as layers, colors, and tools that are holdovers from photoshop and allow for a similar workflow. The texturing process began by determining the rotation of the environment which in turn determines the rotation of the lighting.

Additionally, the changes in the environment change the intensity of the lighting, but the default gives an accurate depiction of the asset in a standard 3D lighting setup. This is similar to the set up that renders out of standard 3D packages such as Maya and 3DS Max. Once the final piece of set up is complete the texturing process can begin with no issues.

To begin the texturing process a base layer is needed to have a full coat for the asset. Following the base of an asset other layer and maps can be added to allow for a higher level of detail and quality to the model. For example, the dirt map allows for a layer of darkness and shadow giving a way to add depth to the asset. This can be seen in the added dirt on an older model. Another map that can be added is a bump map which gives the illusion of portions that

are raised on a model. This is done based upon the tone level from white to black on a model as white areas appear raised while black areas allow for areas to look inset into the model. The main advantage to using map is that a lot of data is baked into the textures rather than adding to the polygon count of a model. This, in turn, allows for a better rendering speed in games and better performance. Following the addition of the standard maps in Substance, the final step is to add procedural textures such as rust. This is done by the computer and the artist controls the various values of how the procedure will take place. Following the finalization of texture, the model can be rendered out with textures in a high-quality render.

As a whole, Substance Painter allows for high-quality textures that can be effectively used in the games industry. Through these tutorials, I was able to learn a great deal of information that will be very helpful in the future as far as creating my original work and final product.