

Video Game Design Composition © 2014

Chapter 10: Three-Dimensional Art Composition—Glossary

animator. Team member strong in rendering objects in motion; requires great technology skills to use animation software for 2D or 3D animation rendering.

art director. Team member who sets the vision for the game art and makes sure it is what is needed for the theme and story.

asset manager. Team member who keeps track of all art assets being produced and makes sure each asset is designed to specifications, catalogued, and properly stored.

backlight. Used to add a sense of depth to the scene by illuminating the back of the primary object.

bump map. Texture assigned to the bump property of a material.

byte. Unit of measure of storage capacity of computer data or information; one byte equals eight bits of information.

case laws. Enacted when the first lawsuit to deal with a problem has determined the outcome; that case is then cited in other lawsuits as an example of previous judgment (called precedence).

color palette. Standard set of colors used throughout the game.

concept art. Series of simple sketches that show what a character or other major game asset might look like; typically the first iteration of the visual appearance of a character, background, or other element of the game.

concept artist. Team member strong in creating new characters and objects that have never existed before.

confidentiality agreement. Contract that states one cannot share any information about the company or its products with any other company.

copyright infringement. Misusing or making unauthorized copies of a copyrighted work.

copyright laws. Protect the owner of a creative work; under US copyright laws, as soon as a creative work is in tangible form, it is automatically copyrighted.

Creative Commons license. Work can be used for free with or without restrictions; may require citing authorship and may prohibit derivative works.

derivative work. Anything based on, or derived, from any part of the original.

dice. Cubes with numbered sides commonly used to randomize gameplay.

digital watermark. Mark that makes the image unusable as final artwork, but allows somebody to review the art for potential use.

embossed. When an image is raised above the background.

environment artist. Team member who creates scenes for the game world; strong in use of color and landscape drawing.

exclusive right. Allows the creative work to be used or reproduced only by the person or company who owns the contract, or to whomever they give permission to do so.

fair use/fair dealings doctrine. Allows a creative work to be used without permission, but under very strict guidelines; allows someone to reprint or display a copyrighted work without permission for the purpose of describing or reviewing the creative work.

file size. Amount of storage space required for the file; measured in bytes, megabytes, or gigabytes.

fill light. Used to eliminate unwanted shadows or dark areas in the scene; also called *flood light*.

flood light. Used to eliminate unwanted shadows or dark areas in the scene; also called *fill light*.

geodesic sphere. Constructed of regular polygons such as triangles, pentagons, and octagons.

hierarchy. Structure in which one person has authority and decision-making power over others.

interpolation. Process of creating a new pixel; an approximation of combining the colors of the original pixels surrounding it.

isosurfacing. Uses the light and dark regions of the texture map to create raised and lowered areas on the model, like a bump map; unlike a bump map, isosurfacing actually alters the mesh.

key light. Provides the primary illumination.

lead artist. Team member who manages the details of a single project and makes sure all art is designed correctly.

lossless compression algorithm. Compresses the image and keeps perfect clarity when uncompressed; the file size may be larger than the same image compressed with the lossy compression algorithm; also called *losslessly compression algorithm*.

lossy compression algorithm. Compresses the image, but does not keep perfect image clarity.

mapping. Process of determining how a material is positioned on an object.

material. Image stretched over the model to make it look as if it is made of wood, plastic, skin, or any other material.

mesh. Combination of four or more polygons connected to make one piece.

noncompete agreement. Contract that states you cannot create work that competes with the company while you are employed by it and for a certain period of time after you leave the company.

NURBS. Model is based on a mathematical calculation that creates a curve or surface from specified control points; stands for non-uniform rational basis spline.

opacity. Quality of being see-through; the higher the opacity, the less see-through a material is.

point light. Light source that illuminates in all directions, like a common household lightbulb.

polycount. Number of 2D faces (polys) used to create the 3D mesh model.

primitives. Regular shapes and objects that are used to assemble more complex shapes or objects; standard building blocks used to create other objects.

public domain. Applies to any work for which the copyright term has expired.

raster images. Record the location and color of each picture element (pixel) of the image; made up of "dots."

rasterize. Existing image is converted into a raster image.

smoothing. Takes a sharp edge between faces and applies a radius to create a rounded transition.

software key code. Code used to unlock game software; allows only one installation.

spotlight. Projects light rays in a cone shape.

statutory laws. Passed by legislature.

sunlight. Light source that provides constant illumination in one direction; the light rays are parallel, like natural sunlight.

tangible. Capable of being perceived.

tessellation. Breaking up the overall texture image so a part of the image can be applied to each individual polygon in the model.

texture artist. Team member who creates 2D art using digital or traditional art media; strong in creating artwork that embodies all of the basic elements of art.

texture map. Picture or pattern assigned to an element of the material definition.

three-dimensional modeling artist. Team member who creates game objects in 3D; strong in the use of 3D modeling software such as 3ds Max, Maya, Blender, or Rhinoceros.

triangle lighting. Traditional way to illuminate a scene; consists of three lights: key light, fill light or flood light, and backlight.

UV sphere. Constructed of rectangular and triangular polygons.

vector image. Stores image data as a mathematical definition, not pixel-by-pixel data.

video director. Team member who creates the cinematic cut scenes between levels or records video for use in promotional materials.

work-for-hire contract. States what someone is expected to produce, the starting and ending dates of the work, and what he or she will be paid; also states the company owns the work he or she produces and whether he or she may use the work in any way.