Glossary

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Alpha channel	The alpha channel is an additional eight bits used with each pixel in a 32-bit graphics system that can represent 256 levels of translucency. Black and white represent opaque and fully transparent, while various gray levels represent levels of translucency.
Ambient light	Represents a pseudo light source which controls the amount of ambient light present in a scene.
Anti aliasing	Technique of adjusting pixel positions or setting pixel intensities so that there is a more gradual transition between the color of a line and the background color in order to give a smoother appearance.
Asset	A binary compact format file containing all the user defined artifacts: scenes, animations and all their constituents' parts (meshes, vertex buffers, textures, keyframes).
Aspect ratio	The aspect ratio of an image is the ratio of the width of the image to its height, expressed as two numbers separated by a colon.
Billboard	Square polygon that can be scaled, rotated, moved and textured.
Billboard2D	In SceneComposer is used as a flat square polygon always facing the camera that can't be scaled.
Blending	Technique that allows to adjust how one layer or color mixes with the colors in the layers below.
Clear color	The color used for the background. It is needed in order to clear the window to some background color before computer is starting to draw the scene.
Clear depth	Property specifying the value used to clear the depth buffer.
Clipping plane	A perpendicular plane to the camera that occupies the entire viewport, used in real-time rendering in order to prevent the renderer from calculating surfaces at an extreme distance from the viewer.
Culling	The process by which polygons (usually triangles) that are not facing the camera are not rendered.
Directional light	Type of light source described by a direction alone useful for modelling light sources that are effectively infinitely far away from the objects they illuminate.
Display render target	Represent a type of render target that addresses the rendering in a native surface of the graphic device.

Dithering	Dithering is the process of juxtaposing pixels of two colors to create the illusion that a third color is present.
Field of view (FOV)	Field of view specifies the angle of viewing volume to determine the equal-sided left, right, top and bottom clip planes (comparable to zoom lenses).
Fragment shader	Also known as pixel shader, is a type of shader that calculates the color of individual pixels.
Frustum (View frustum)	The three dimensional viewing area on the screen where everything is drawn to.
Interpolation	Interpolation refers to the process of generating intermediate frames between keyframes to give the appearance that the first image evolves smoothly into the next image.
Keyframe	A frame from an animated sequence, at which a significant animation event or change takes place.
LookAt Vector	Defines the direction vector the camera looks alongside in the local coordinate space.
Mipmapping	Mipmapping is a texturing technique used to reduce artifacts caused by mapping a large texture onto a small area in screen space.
Mipmap levels	Each MipMap level describes a certain level-of-detail for a texture image. The highest resolution is at MipMap level 0. Each subsequent MipMap level has half width and height of its predecessor.
Orthogonal	Orthogonal projection (or Orthographic projection) is a means of representing a three-dimensional object in two dimensions.
Perspective view	Represents an approximate representation, on a flat surface (e.g. the screen), of the image as it is seen by the eye.
Point light	Type of light source defined as a single point in space. It produces shadows with sharp edges and is a good replacement for extended and other computationally expensive light source.
Point Sprite	In SceneComposer the point sprite is displayed as a flat square polygon which is always facing the camera (screen-aligned). It can be textured and scaled to simulate perspective.
Render order bins	Containers for items that can be rendered, used to specify the order in which the items contained in one Bin are rendered relative to the ones from other Bins.
Render target	Render Target is an abstraction of a rendering surface. In the field of 3D computer graphics, it is a feature of modern graphics processing units (GPUs) that allows a 3D scene to be rendered to an intermediate memory buffer, or Render Target Texture (RTT). It can then be manipulated by shaders in order to apply additional effects to the final image before displaying it.

Shader	A shader is a software program that includes instructions on how the graphics processing unit (GPU) should render certain images on the screen.
Specular light	Specular lighting is the use of bright spot highlights to give visual clues for light source locations. Specular lighting is most commonly used to give light reflection off of metallic surfaces such as mirrors and highly polished/reflective metal surfaces. It is also used on other materials such as reflecting sunlight off of water.
Sport light	Type of source light defined by its position, the direction in which its pointing, and the width of the beam of light it produces. Spotlights are useful for creating dramatic localized lighting effects.
Texture Render target	Texture Render Targets represent textures that can be used in the scene to render into them.
UpVector	Defines the local up-vector of this camera in the local coordinate space in order to define the orientation of the camera looking alongside the look-at vector.
Vertex/Vertices	In geometry is a special kind of point which describes the corners or intersections of geometric shapes. In computer graphics it is used to define the corners of surfaces (typically triangles) in 3D models, where each such point is given as a vector.
Vertex buffer	Memory buffer that contains vertex data. All the vertices that form an object are stored in a special data array (vertex buffer) and then sent to the graphical device so that it can render the model.
Vertex shader	Is a type of shader that is run once for each vertex given to the graphics processor in order to calculate the position and other characteristics, such as color and texture coordinates, for each vertex.
View frustum culling	The process of removing objects that lie completely outside the viewing frustum from the rendering process. Rendering these objects would be a waste of time since they are not directly visible.
Viewport	A viewport is a region of the screen used to display a portion of the total image to be shown. In 3D computer graphics it refers to the 2D rectangle used to project the 3D scene to the position of a virtual camera.
Widget	Special items(external written programs) that allow the definition of custom behaviour for one or more existing items.
ZFar	Defines the distance to the near-depth clipping plane.
ZNear	Defines the distance to the far-depth clipping plane.

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