



Drone Designer

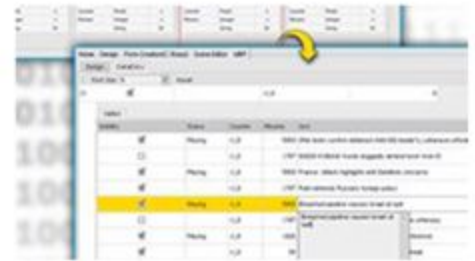
Drone Designer is the graphics creation environment of the WASP3D workflow. Drone Designer unleashes a graphic artist's creative power to generate, manipulate, animate and visualize 3D objects with great ease. A highly intuitive interface minimizes the learning curve while expanding the graphical expression capabilities of design professionals.

Drone Designer is built for speed and quality in the rapid creation of rich, data driven 3D graphics. It features a complete, self-contained, graphical development environment that can be used as an all-encompassing design tool or fit a multi-vendor workflow by importing files from popular applications. Drone Designer imports Autodesk (.FBX, .3DS), Rhino3D (.3DM), Microsoft DirectX (.X) mesh files along with their materials and UVW mapping negating the need to recreate such attributes. Moreover, NURBS surface (using via .FBX format) is tessellated with steps; and Adobe Illustrator (.AI) splines as well as other formats can be imported.

Application Design Features

User Defined Tables (UDT)

UDT or User-Defined Tables is a hierarchical database management architecture that can be accessed from within the Drone Designer, DataBuzz and Sting Client modules of WASP3D. Users can create customized tables to manage relational data for various projects that use analytical graphics such as elections, sports events and other data driven applications. Data cells from these UDTs can be wired (i.e. linked) to graphic elements contained within templates. This same architecture provides an interface for quick data-entry to populate tables generated by users.



Unified Basic Templating (UBT)

Making custom "data input" forms specific to any particular scene is as easy as using Window's "drag & drop" feature without any programming required. These forms can address many basic data driven graphics requirements and simplify how day to day operators can make changes to content in any graphic in a scene. In the template creation process, a graphic designer can use this workflow feature to link scene elements such as texts, images, parametric attributes etc. with User Tags and Custom Variables. In turn, these variables become the control elements in the data entry form in order to populate templates on to scene specific, customized forms. Applications with complex data requirements are addressed through the use of the Comb Builder module.



Candle Graphs

Added for Financial Data graphics. It is a combination of a line-chart and a Bar-Chart that can be used to show a range of price movement over a given time interval.



Blur Texture

The Blur Texture feature in Drone Designer provides a library of shaders to create various effects ranging from a simple Gaussian Blur to more advanced shaders such as Depth of Field, Ambient Occlusion etc.



Depth of Field

The Depth of Field shader adds a dimension of photorealism to virtual sets and graphics by emulating the blur created by a camera's lens on scene elements that move in & out of focus.



Screen Space Ambient Occlusion (SSAO)

Screen Space Ambient Occlusion enables a more realistic perception of 3D meshes and graphic elements by physically simulating the effect of contact-shadows.



God-Rays

The God-Rays shader enables graphic artists to incorporate volumetric light scattering effects in their designs. It creates brilliant streaks of light or blur around specified textures or objects, adding another level of visual richness to the graphics output. Graphic artists may control the effect's blur size, length, direction and sampling using the contrast parameter to manage the effect's coloration.



Water Ripple Shader

These shaders simulate realistic, water-like flow on various surfaces including Ripple and Heat-Haze textures. Moreover, 3D scene elements can be targeted onto the Water Ripple texture to create various effects like reflections on the surface of water, water falling along the edges of a wall, etc.



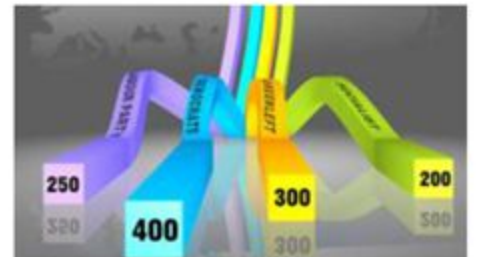
Skeletal Animation

The Skeletal Animation feature allows for the use of Motion Capture data-sets in real-time. Motion Capture sequences can be dynamically applied as behaviors on 3D models to recreate life-like simulations in news reenacting, sports analysis or game shows. This feature eliminates the need to "bake" a single animation to a 3D model thus reducing the load on the GPU and making it possible to "puppeteer" a 3D model by applying a variety of Motion Capture data sets in real time.



Mirror Reflection

Add realism to scenes and graphics with real-time reflection, including flat mirror reflections using a Render Target textures. Give objects a 'see through glass' real-time refraction using the snapshot texture.



Cast Shadows

The Cast Shadow feature, as the name suggests, helps artists in creating a better sense of depth and spatial positioning in scenes by allowing realistic shadows of scene objects to be cast upon multiple surfaces. These real-time shadows correspond to the direction of light(s) in the scene. Artists have control over the shadows' Feathering and Transparency.



3D Imports

Assets created in third-party authoring tools can be imported into the Drone Designer in a variety of formats providing greater flexibility in the creative workflow. Supported formats include: .X, 3DS, FBX, 3DM & DAE.



Character Animation

Graphic artists can create custom character animations such as typewrite, fly-ins, erase, translate, scale and rotate on the character's local or global transformation axis. Text objects can be defined to act as a countdown, date, time or clock objects, integers, among others.



AI/Shape Polydata Hit

When importing complex shapes or maps for analytical graphics in .SHP or .AI file formats, the Drone Designer allows users to access a table of polygonal data contained within the shape file. This information can be used to color each polygon based on data or the polygons themselves can be used as trigger points for interactive graphics.



Shift Copy Objects

Scene elements can be duplicated by simply holding the SHIFT key and dragging an object in the viewport. Users may choose to specify offsets in Position, Rotation, and Scaling or in frames in case of animated objects. The array creation dialog also provides control over creation of copies of materials used along with options to either make copies or clones of used textures. Triggers applied to an object may be copied as well. Results of the duplication process can also be previewed before committing to changes.



Reverse Play

The Reverse control key provides graphic artists with a quick mechanism to add out-animations to scenes with just a couple of clicks. Once playback for a scene has been completed the Reverse control key simply reverses the animation for each element before animation for the next scene begins thereby resulting in graphics playing back-to-back.

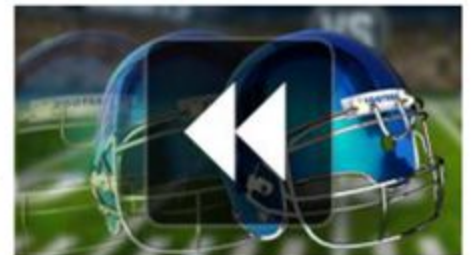


Table Text

The Table Text feature in the Drone Designer allows for speedy design and animation of tabular graphic elements such as league tables, results tables etc. It can be easily populated using data sources such as Excel files and SQL databases using a simple drag-n'-drop over the Table Text itself. Users can also control text attributes such as fonts, font-weights, color etc. for each column/row individually.



Theme Creation

The Themes feature allows graphic artists to create a set of templates with different color-schemes or layouts which can be changed in real-time without affecting any of the data elements contained within these templates.

