The following tutorial will provide a basic overview of the Unreal 3 Editor's interface. The editor interface for both Unreal Tournament 3 and Gears of War are very similar with only minor differences. This overview acts as a something of a prerequisite to the "Material Editor" and "Scripting with Kismet" tutorials. This tutorial assumes basic knowledge of software such as Autodesk's Maya and other general game engine knowledge.

The Interface
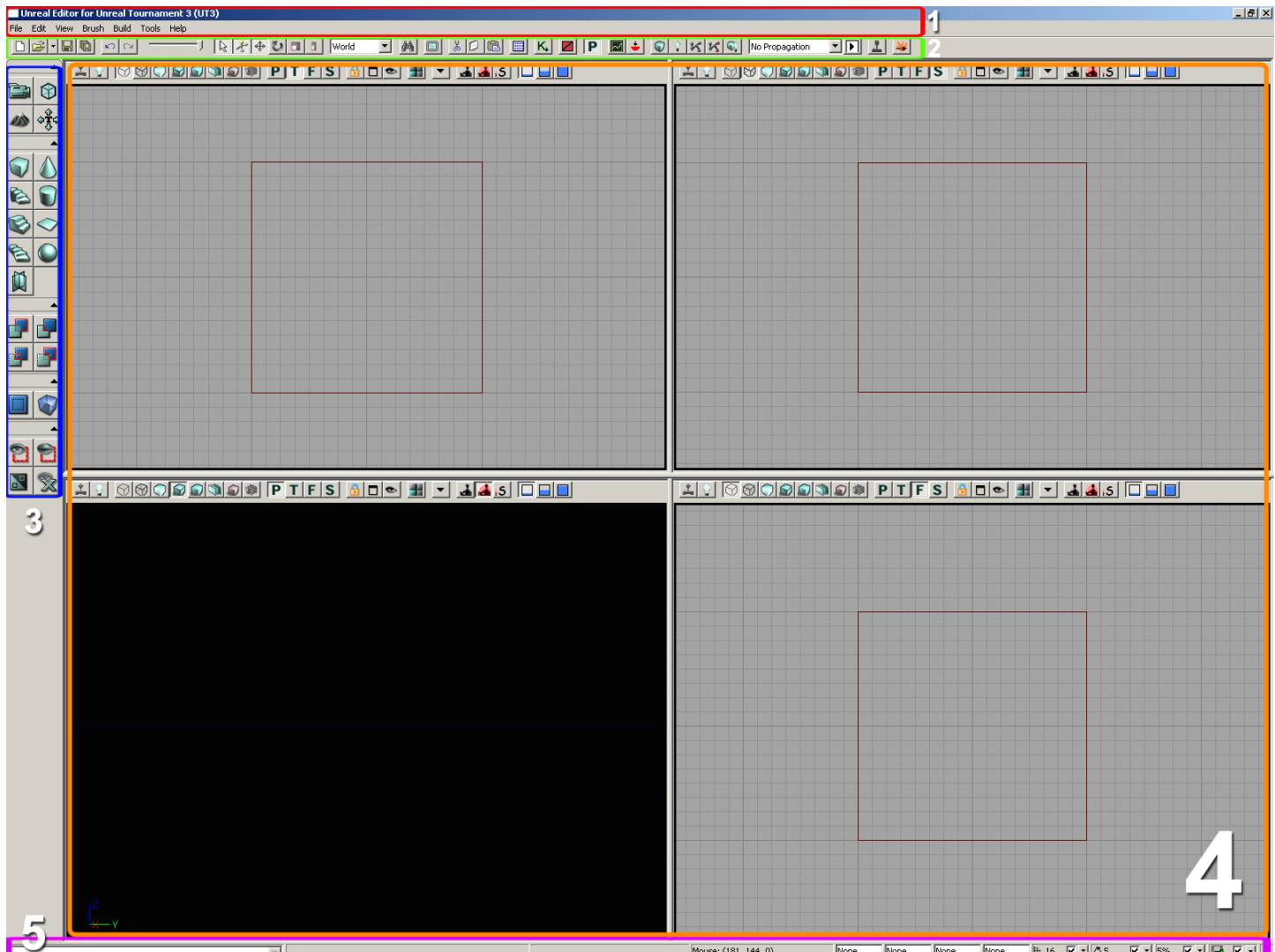
Fig 1.0 – The Unreal 3 Editor's Interface divided into five sections

Upon loading the Unreal 3 Editor, you'll be hit with a wealth of options, buttons, and viewports, similar to that

seen in most 3d modeling packages (Fig 1.0). It is important to understand the grouping of these so you will know where to look for particular options, which will ultimately become more valuable than memorizing what each icon represents. The breakdown is simple:

> **Section 1:** Standard Windows Title Bar and Unreal's Main Menu
> **Section 2:** The Toolbar.
> **Section 3:** The Toolbox (organized vertically on the left)
> **Section 4:** Unreal's viewports (can show your level from different cameras). Note that each viewport has the
>   same options/icons in a toolbar above it.
> **Section 5:** The Console bar (contains grid controls and location feedback.

Now, after familiarizing yourself with these major sections, we can get into some of the most commonly used functions and options available on the interface. First, let's look at the transformation and widget type controls found on the toolbar (Fig 1.1).
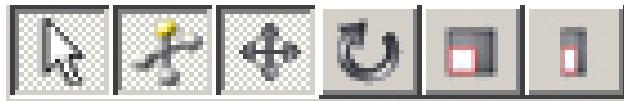
Fig 1.1 – Basic Transformation Controls

These are some of the most commonly used controls as they allow object translation, rotation, and scaling within your level. The arrow on the left will prevent you from transforming any objects while it's on which is super useful when trying to select a particular object or actor in your scene. The second button enables widget (aka your handles) visibility in the viewport. The rest of these buttons are the familiar translate, rotate, scale, and non-uniform scale for manipulating actors. Another important tool for locating/selecting actors is the "Search for actors" button (Fig 1.2) seen below.
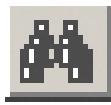
Fig 1.2 – Search For Actors

This option will allow you to search for various actors in your level in a list format, even allowing more refined searching through tags. This will become incredible valuable when your level increases in size and all objects are not visible in one area. Another frequently used tool would be the Generic Browser, activated by selecting the grid-like icon seen below (Fig 1.3). The generic browser is used for managing all of your level's textures, models, materials, and so on. Many editors throughout Unreal will give you an option to "Use selected from Generic Browser" which will see you're the object you last selected in the browser and link to its path automatically.

The Generic Browser
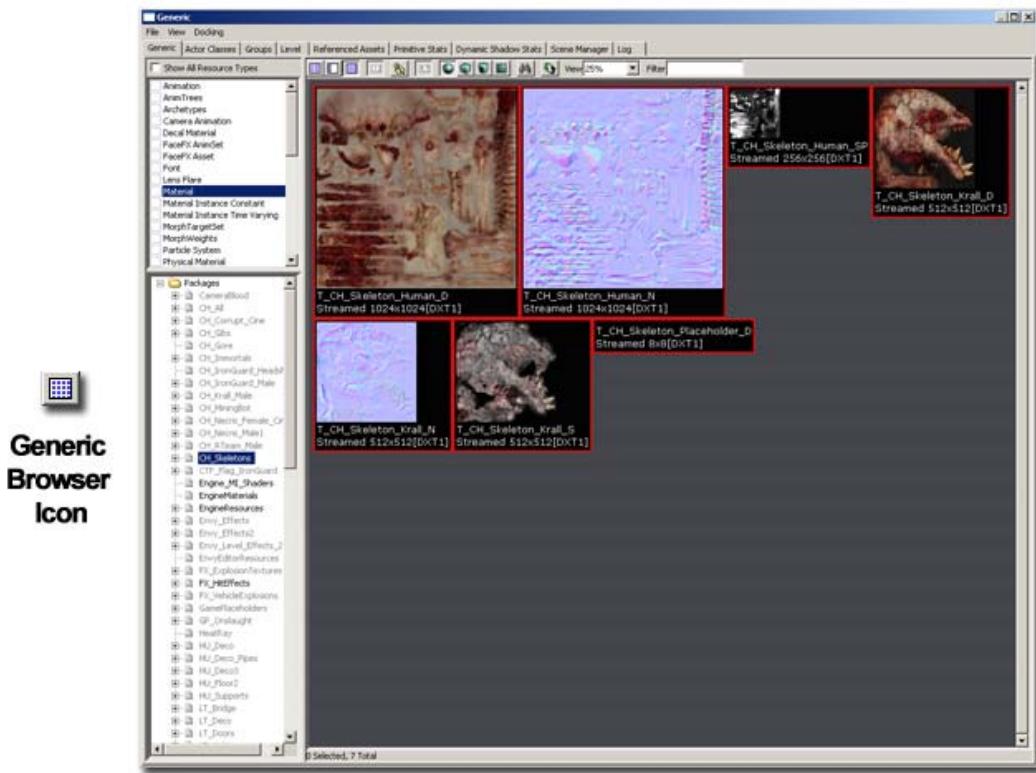
Fig 1.3 – The Generic Browser Icon and Generic Browser

Within the generic browser you'll notice a number of tabs that line the top including Generic (currently visible), Actor classes, groups, level, and so on (Fig 1.4). I'm going to quickly list what some of these tabs do for organization, etc. but I advise you to go into the tabs and see what the full extensibility of each option is.
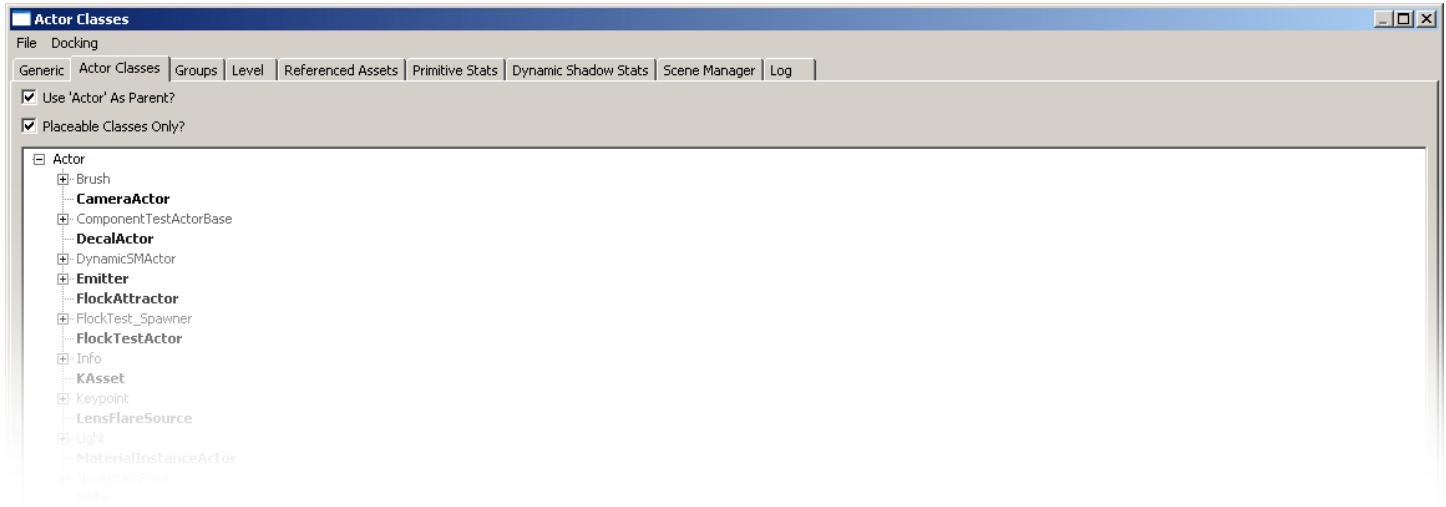

Fig 1.4 – The tabs of the Generic Browser

Generic – A listing of various models, effects, materials, etc. as both a list and nodes.

Actor Classes – A list of actors that are available to you for level implementation. You can add a particular actor   of any type here.

Groups – Groups will allow you to organize your actors in groups. For example, you can put all of your walls into a group for easy access.

Level – Allows the breakdown of a large level into smaller sections to reduce load time or so multiple users can   work on a level at once.

Building and Running Options

Back in the toolbar menu, you'll see a few other options which are buttons to open additional editors, as well as building options for running your level (Fig 1.5).

Fig 1.5 – Additional Options on the Toolbar include: Kismet Editor, Building Options, and "Play."

The UnrealKismet editor can be found on the left as the "K" icon, and the following icons can be somewhat advanced and will be covered in more detail in later tutorials. The cube, light bulb, and other icons in that area are very important however as they allow you to build the geometry, lighting, or both for the current level. The joystick button on the right will allow you to run and play your level after building.

The Toolbox

 Moving out of the Generic Browser, the various objects in the tool box will also be used quite frequently for level creation in both additive and subtractive methods of working. You can adjust and add any of the objects from the toolbox by right clicking, inputting the desired parameters, and then entering it into the level. Important volumes can also be added here such as trigger volumes (for triggering events) and physics volumes (for setting a particular physics setting within an area) (Fig 1.6).
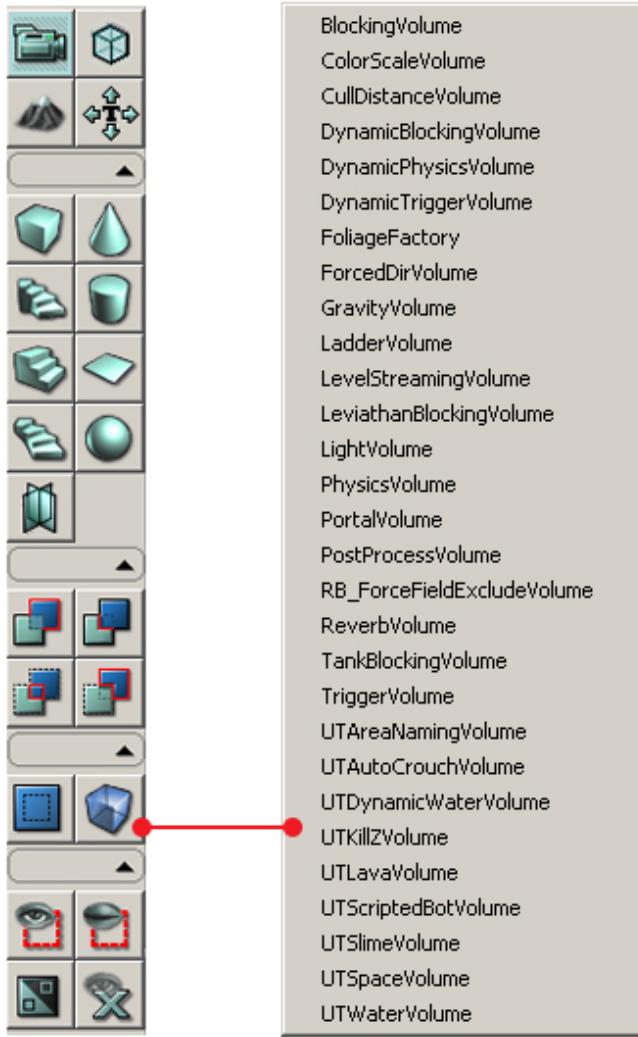
Fig 1.6 – The Toolbox and "Add Volume" Menu

The four buttons at the top of the tool box are also extremely useful. The camera icon will allow you to change the camera mode, the transparent cube icon will allow you to make more granular selects of the primitives within your scene (i.e. edges, vertices, etc.), the mountain icon will take you into the terrain editor, and the "T" icon will allow you to align textures within the level.

The Viewports

The viewports in Unreal are very similar to that of Maya and other 3D modeling packages. Each viewport has their own individual options in a toolbar above the actual viewing area where you can change various settings. The letters, "P, T, F, and S" stand for the current view within that viewport, referring to your options of Perspective, Top, Front, and Side. On the left, you have the option to view the level in complete real-time, un-lit movement for increased performance, as well as a number of options as to how you would like to view the objects within your level (i.e. wireframe, shaded, lit, and so on) (Fig 1.7). Other options regarding viewport size and camera movement speed within that viewport are also available.
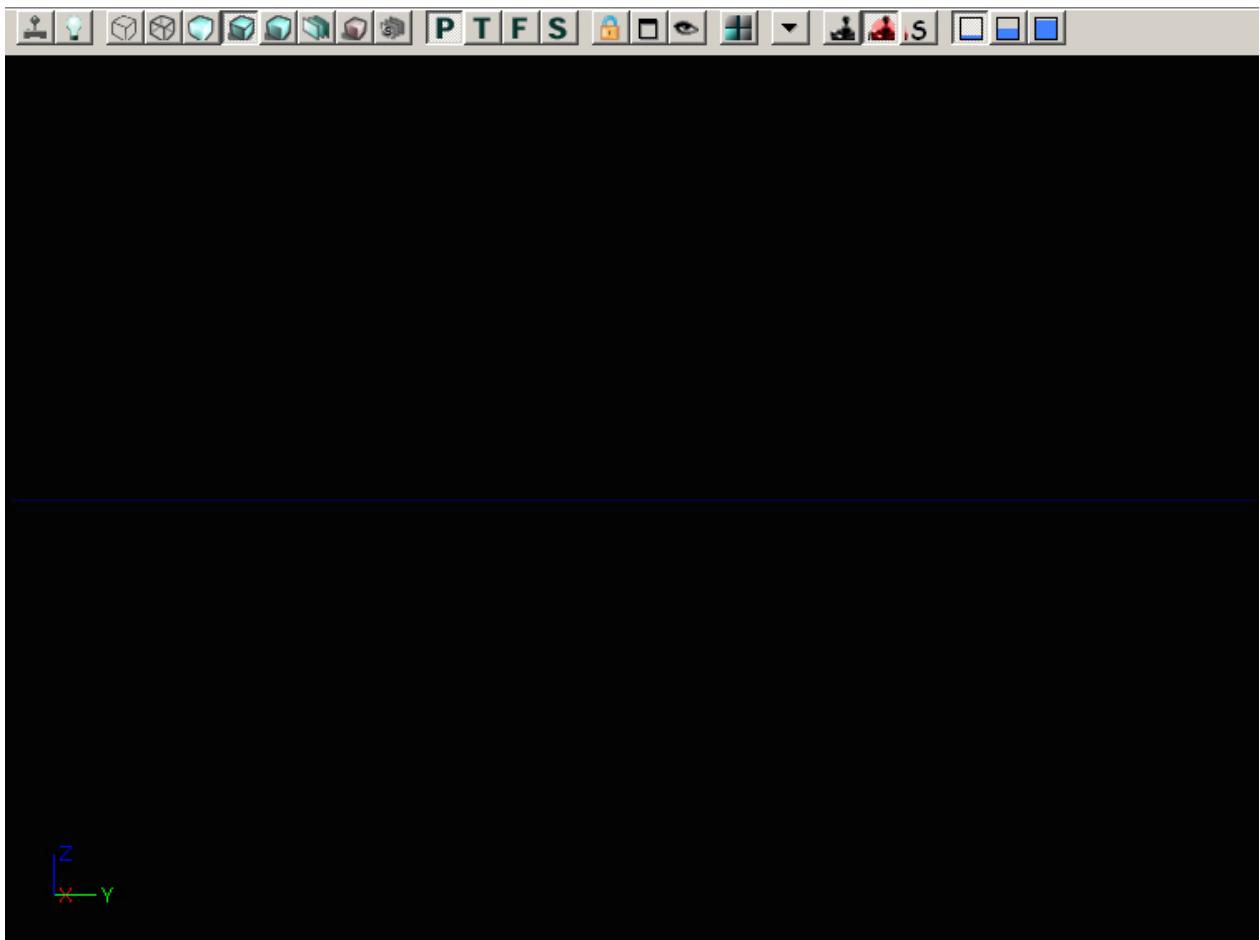
Fig 1.7 – Every viewport has an individual toolbar.

This has been a basic overview of some of the more frequently used options in the Unreal Editor. Again, it is important to understand where options can be found over where specific options are when first starting as it will help you beat the learning curve of the software. Below are some additional resource materials you may find useful when first starting to get a feel for the Unreal 3 interface:

UT3 Forums (Links to Reference Material from Epic Games)
http://forums.epicgames.com/showthread.php?t=598243

Building Your First Level (Architectonic)
http://architectonic.planetunreal.gamespy.com/tutorials/first_level_part2.html

Unreal Editor 3.0 Basics (Architectonic)
http://architectonic.planetunreal.gamespy.com/tutorials/first_level_part1.html#Concepts

3DS Max Mesh/Texture -> Unreal Workflow (Jesse Moody)
http://www.artbyjessemoody.com/ue3_tut1.html

Maya Mesh -> Unreal Workflow (Jason Welsh)
http://www.wonderhowto.com/how-to/video/how-to-import-a-maya-mesh-into-the-unreal-engine-3-0-196633/

3DBuzz.com Video Tutorials (UE3 Section)
http://www.3dbuzz.com/