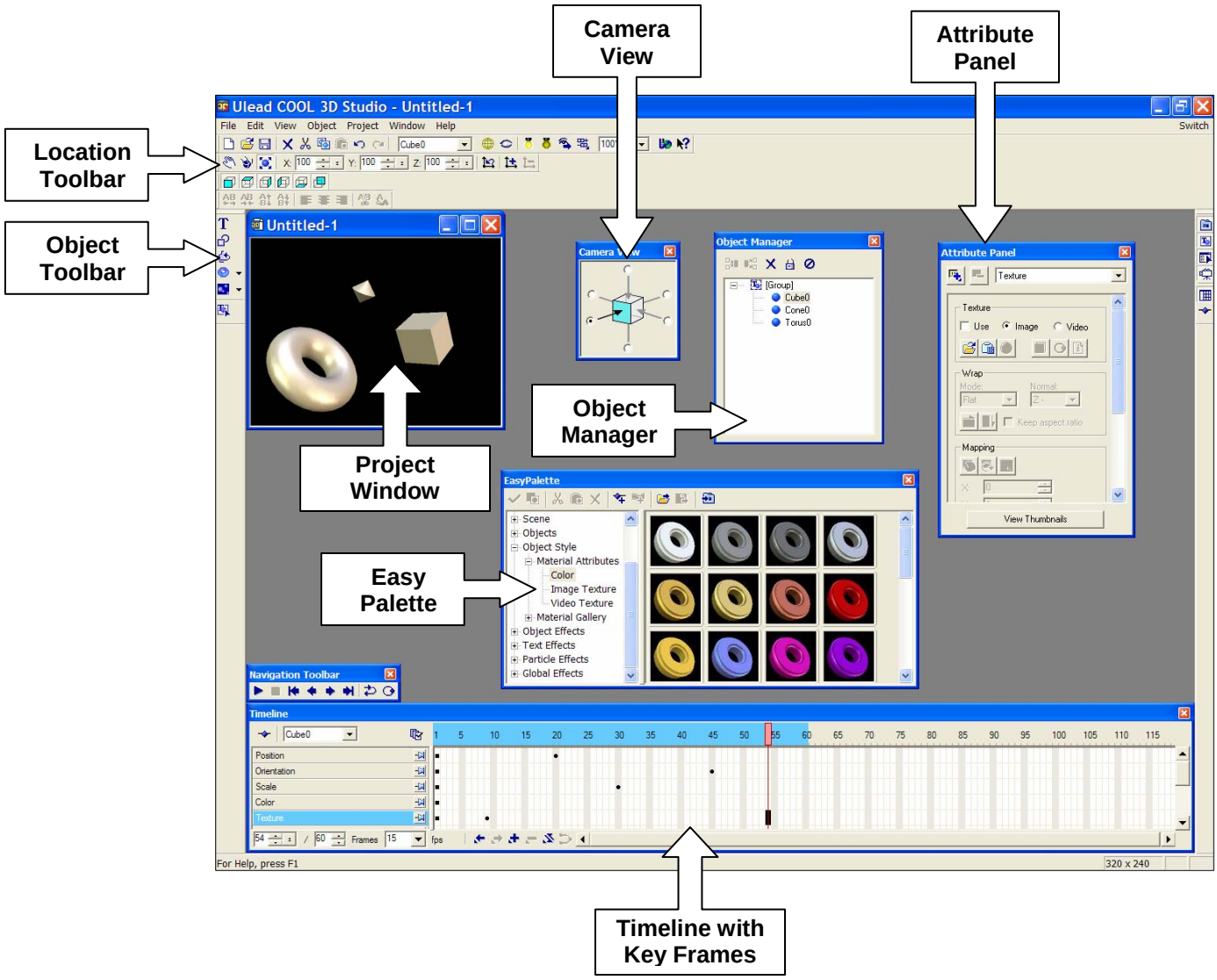
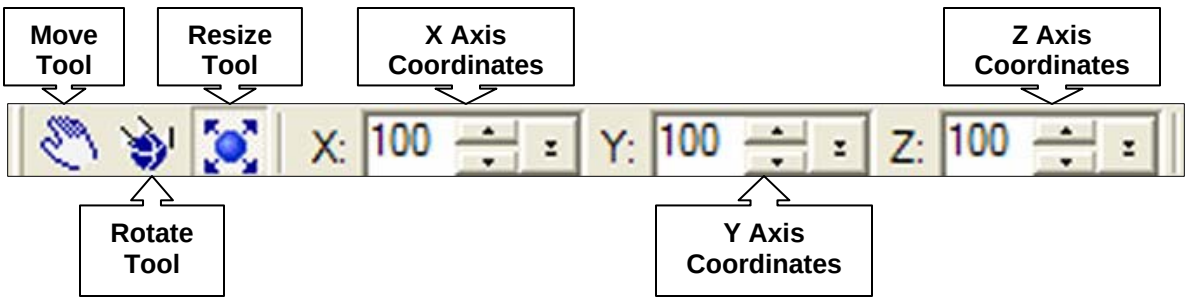
Ulead Cool 3D Production Studio Handout

Ulead Cool 3D Production Studio is a program designed to allow people to easily create 3D images and animation without having to understand all the complexities of 3D graphics. Yet the program is powerful enough to achieve some very professional results if you learn more about how 3D graphics work.

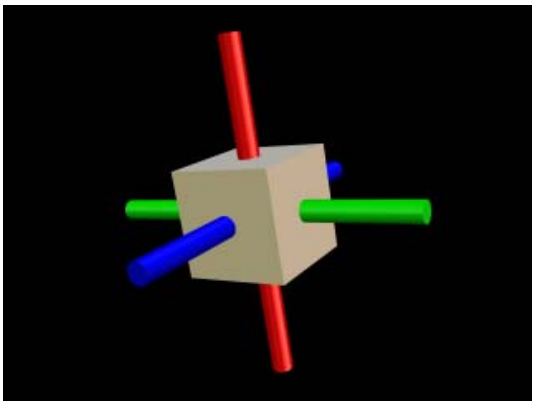
Cool 3D Production Studio Layout



Location Toolbar Layout



Axis Coordinate Reference



X Axis – Runs through object left and right (Width)

Y Axis – Runs through object up and down (Height)

Z Axis – Runs through object forwards and backwards (Depth)

Move Tool

Default Object Coordinates X: 0 Y: 0 Z:0
X Changes: Negative numbers moves object to left / Positive numbers moves object to right
Y Changes: Negative numbers moves object down / Positive numbers moves object up
Z Changes: Negative numbers moves object forward / Positive numbers moves object backward

Rotate Tool

Default Object Coordinates X: 0 Y:0 Z:0
X Changes: Negative numbers rotates object up / Positive numbers rotates object down
Y Changes: Negative numbers rotates object to left / Positive numbers rotates object to right
Z Changes: Negative numbers rotates object to left / Positive numbers rotates object to right

Resize Tool

Default Object Coordinates X:100 Y:100 Z:100
X Changes: Numbers below 100 shrinks object on the left & right / Above 100 enlarges object
Y Changes: Numbers below 100 shrinks object on the top & bottom / Above 100 enlarges object
Z Changes: Numbers below 100 shrinks object on front & back / Above 100 enlarges object

Create a simple animation

Note: The key concept of this activity is introduce dragging and dropping objects from the Easy Palette window and how to create a basic animation using the Timeline.

1. If a new project window is not already open, do **File / New** to create one.
2. Go to the **Easy Palette** window and browse the **Objects** menu. When you find an object you wish to place in your project, point to the object preview in the Easy Palette then drag and drop it into the project window.
3. Return to the **Easy Palette** window and browse the **Scene** menu for a background. When you find a background, drag and drop the background into the project window.
4. Go to the **Timeline** window and note the current number of frames in the animation (indicated by the highlighted range of frames along the timeline.) Right-click anywhere along the timeline and choose **Change duration**. Set the **Change duration to** box to **60** and click OK. Frames 1 through 60 should now be highlighted in the **Timeline** window.
5. Click on Frame 1 in the **Timeline** window. Use the **Move**, **Rotate** and **Resize** tools to set the 3D object to the view you desire for the animation to start with. Be careful not to accidentally change the frame you are working on, otherwise you may have unexpected results.
6. Click on Frame 60 in the Timeline window. Once again use the **Move**, **Rotate** and **Resize** tools to create the ending view that you want your object to have in the animation. As you make changes, note that small black dots are placed under frame 60 which indicate a change in object properties at that point in the animation.
7. Go to the **Navigation** toolbar and click on the **Play** button to view the current animation given the properties you have set. You can edit these properties at any point in the timeline until you have the animation you want.
8. To create a completed animation file, do **File / Create Video File**. Enter a name in the **File Name box** and use the default AVI file settings. Click on the **Save** button and a preview window will open as the final animation is rendered frame by frame. When the render is complete, you can play the animation with Media Player or place it into a PowerPoint presentation, web page or video-editing project.

Create an animated still life

Note: The key concept of this activity is creating objects from scratch and modifying their properties using the Attributes panel.

1. If a new project window is not already open, do **File / New** to create one.
2. It is very helpful to have the **Object Manager** window show all the objects in a project. To open this window, do **View / Toolbar Manager** and select **Object Manager.**
3. Go to the **Insert Geometric Object** tool and click on it's drop down menu. You will see a variety of 3D shapes to choose from. Select one and it will appear in the project.
4. Go to the **Attribute Panel** and select **Geometric Objects** from the drop-down menu. You can change the shape properties from this menu. Experiment with the values until you have it the way you like.
5. In the **Attribute Panel** select **Color** from the drop-down menu. In the Surface Color section, click on the color box and then select a color from the palette. You should see the object color change to the new color. Use the **Surface Color** option sliders to change the brightness and saturation of the color. To change the object's highlight color, go to the **Specular Color** section and make the desired changes.
6. Use the **Move** tool to shift the first 3D shape from the center of the project window to prepare for adding another shape.
7. Now use the **Insert Geometric Object** menu again and add a different 3D object. Remember that new objects are placed in the center so if there is an object already there you may not see it until the other object is moved because object can exist one inside the other. Note that the **Object Manager** window should list a new object in the project.
8. Go to the **Easy Palette** window and go to **Object Styles / Material Attributes / Image Texture.** Select a texture and then drag and drop it on top of the second 3D shape you added. (You can also use any graphic file as your own custom texture by using the Texture menu on the Attribute Panel.) Change the 3D shape by using the **Geometric Objects** menu on the Attribute Panel. When finished, use the **Move** tool to shift the shape away from the center of the project.
9. Make another 3D shape and use the **Material Gallery** under **Object Styles** on the **Easy Palette** to assign a color and/or texture. With this object experiment with transparency. Go to the **Attribute Panel** and select **Transparency** from the drop-down menu. Move the slider to the right to make the object transparent. You can increase the effectiveness of the effect by placing the object in front of another object.
10. Make a flat plane for all of your objects to rest on. Insert a 3D cube into the project. Use the **Geometric Objects** property on the **Attribute Panel** to change the **Height** property to **3** and change the **Width** and **Depth** properties to make the area of the plane large enough to hold the objects. Use the **Camera View** window and change to the **Top** view to look down on the scene to make sure the plane is large enough. You can also use this view to change the arrangement of your objects.
11. Once you have an interesting arrangement of objects, group the objects together so you can animate the entire still-life at once. To do this, go to the **Object Manager** window. Click on the first object name in the list so it is highlighted. Now hold down the **CTRL key** on the keyboard and click on each of the remaining objects in the list until are highlighted. You can now group the selected objects by clicking on the **Group Objects** icon at the top of the window. A **Pivot Settings** window will appear. Click on **Center of all subgroup's pivot** and click "OK." The individual object will be placed under a group name which can also be edited to help you remember different groups of objects. You can now work with either the entire group at once or still work with the individual objects by selecting them in the **Object Manager** window.
12. Create an animation by right-clicking on the **Timeline** and set the **Duration** of the animation for **60** frames. Go to frame 1 and then select the still-life group in the **Object Manager** window. Set the still-life view the way you want. Now go to frame 60. Click on the **Rotate** tool and set the **Y** box to **360**. Click on **Play** in the **Navigation** window and you should see the still-life spin around one time.
13. To create a completed animation file, do **File / Create Video File**. Enter a name in the **File Name box** and use the default AVI file settings. Click on the **Save** button and a preview window will open as the

final animation is rendered frame by frame. When the render is complete, you can play the animation with Media Player or place it into a PowerPoint presentation, web page or video-editing project.

Creating Animated Text with Effects

Note: The key concept of this activity is that complex animations should be built out small steps that build upon one another.

1. If a new project window is not already open, do **File / New** to create one.
2. It is very helpful to have the **Object Manager** window show all the objects in a project. To open this window, do **View / Toolbar Manager** and select **Object Manager.**
3. Go to the **Insert Text** tool and click on it. In the Insert Text window type a single word using a large font (such as Impact.) Click OK when complete.
4. Go to the **Easy Palette** window and browse to the **Object Style** and select a color or texture from the Material Attributes or Material Gallery. Drag and drop the selection into the project window on top of the just created text.
5. Create an animation by right-clicking on the **Timeline** and set the **Duration** of the animation for **60 frames**. Click on **frame 50** and then click on the text object to select it and then click on the **Move** tool. Return to the **Timeline** and make sure that the Position attribute in the Timeline is highlighted. Then click on **Add Key Frame** icon (the "+" symbol at the bottom of the Timeline) so that a key frame is created on frame 50 for object position (check for the "black dot" to appear in the Timeline.) By doing this you have set the position point at which the text object should be at frame 50 because we will be making the text zoom in to this point.
6. Click on **frame 1** in the **Timeline**. Make sure the **Move** tool is still active and then hold down the right-mouse button and repeatedly drag the cursor down to cause the text object to move towards you until it just goes out of view. (This should cause a value around -800 to appear in the Z axis box.) If you play the animation at this point, the text should appear to suddenly appear near your view point and then move back away from you into the middle of the scene.
7. Click on **frame 50** and then click on the **Rotate** tool. Enter the value **360** into the **Y axis** box. Playing the animation at this point will have the text rotate one time while traveling towards the center of the scene.
8. Click on **frame 1** in the **Timeline**. Go to the **Easy Palette** window and browse to the **Text Effects** and click on the **Explosions** listing. Locate the second to last effect where the word "cool" appears to reform from exploded pieces. Drag and drop this effect into the Project Window. Playing the final animation has all of the earlier actions plus the text seeming to form out of many fragments that swirl around. If needed, you can tweak the Explosion settings in the **Attributes** panel to see how the effect can be changed.
9. If you wish to take the activity further, try adding other motion, text or global effects to the animation. Remember that if the added effect does not work out, go to the **Attribute** panel and remove the effect by clicking on the **Remove Plug-in** button (the "-" symbol on the Attribute window.)
10. To create a completed animation file, do **File / Create Video File**. Enter a name in the **File Name box** and use the default AVI file settings. Click on the **Save** button and a preview window will open as the final animation is rendered frame by frame.

Advanced: Creating the planet Earth

1. Obtain a texture map of the planet Earth so it can be wrapped around a sphere to create an illusion of the planet. NASA maintains a website where the have various pictures of Earth suitable for creating 3D objects. Go to http://earthobservatory.nasa.gov/Newsroom/BlueMarble/BlueMarble.html and download the **Land Surface, Sea Color, Sea Ice, and Clouds** JPEG image (580 KB in size.) Although there are higher resolution versions of this image, these will take much more processing time to use and may max out your computer in the process.
2. Once you have the image downloaded, start a new project. Make sure that you always stay on frame 1 in the animation timeline while constructing your object. Use the **Insert Geometric Object** tool and place a single sphere into the scene.
3. In the **Attribute Panel** select **Camera** and move the **Distance** slider to the left so you can place the camera view near the sphere, giving you a better view.
4. In the **Attribute Panel**, select **Texture.** Select the **Use** box and then **Image**. Click on the **Folder** icon and browse to the image you downloaded in step 1 and select it. It should now appear on the surface of the sphere, but its mapping will need to be corrected.
5. While still in the **Texture** settings, go to the **Wrap** section and change **Mode** to **Spherical**. **Normal** should be set to **Z -**. Go to the **Mapping** section and click on the **Position Texture** icon. Set the **X**, **Y** and **Z** boxes to read "**0**." This will make the image now wrap only once around the sphere. Go to the **Emboss** section and select the **Emboss** box and set **Width** to "**2**" and **Depth** to "**3**"
6. Switch to **Color** in the **Attribute Panel** and set the **Surface Color** to **white** by using the color selection icon and set the **Brightness** slider all the way to the right. Go to the **Specular Color** section and set slider for **Brightness** all the way to the left. You should see the light highlights disappear from the sphere.
7. On the **Location Toolbar**, click on the **Rotate** tool and set **X** to "**- 90**" and then press the **Enter key**. The sphere should now be rotated so that Earth is now upright.
8. Because Earth has an atmosphere, you need to create a thin area of haze around the planet. Open the **Object Manager** window if it isn't visible. (Go to the menu bar and do **View / Toolbars Manger / Object Manger**.) Set the object name of the sphere to "**Earth**." Now while it is still highlighted, go to the menu bar and do **Edit / Copy** and then do **Edit / Paste**, which now places a second copy directly on top of the first one. Rename this second sphere to "**Atmosphere**."
9. You will now change the atmosphere attributes. Making sure that it is still selected in the **Object Manager**, go to its **Texture** attributes and unselect the **Use** box so the image disappears and returns to a solid color. Go to the "Color" attributes and change the color to the **RGB** settings of **121**, **188**, **255** giving it a light blue color. Now go to the **Transparency** settings and move the slider to the **70%** setting.
10. On the **Location Toolbar**, click on the **Resize** tool and set **X**, **Y** and **Z** to all read "**103**." This will make the atmosphere slightly larger than the Earth and create a subtle "haze" around the planet.
11. You will now combine the two spheres into a single group so you can then work with the two as one object. Go to the **Object Manager** window and select both "Earth" and "Atmosphere" by holding down the **CTRL key** on the keyboard while you click on them. Click on the **Group Objects** icon. When the **Pivot Settings** window appears, select **Center of all subgroup's pivot** and click OK. Name this new sub-group "Planet Earth" and then save your work.
12. You can now use this object to create animations of Earth. Experiment with using the Lights property in the Attribute Panel to control the placement and intensity of the light sources in the scene. You can also place different backgrounds behind the object to create a variety of different scenes. You can check out the Hubble Space Telescope website at http://hubblesite.org to find some very nice space imagery or use a image editing program to create your own space backgrounds. Remember that to have Earth turn around on its axis, you must use the **Rotate** tool and change the **Y** settings.

Where to purchase Ulead Cool 3D Production Studio
You can buy the program directly from Ulead at http://www.ulead.com or download the free trial version of the program. The program can also be purchased at any online software vendors at prices less than those found at Ulead's site.

The recommended system requirements for the software are a computer with a Pentium III 800Mhz processor or faster with 256Mb of RAM. The program requires 128Mb of hard drive space to install not to mention the many megabytes needed to create any animations you create with it. Remember that 3D graphics require tremendous amounts of computing power to generate the images so you will be running at the maximum levels of your computer, so save often when working with any 3D graphics program.

If you start into 3D graphics, you will also most certainly need a good image-editing program for working with image textures for your objects. I would recommend JASC Paint Shop Pro (www.jasc.com) or Adobe Photoshop (www.adobe.com) Finally, if you want to turn animations into longer videos or combine them with live action, a good video editing program will be needed. The videos that I have made were created with Pinnacle's Studio 8 video editing software (www.pinnaclesys.com)