

Chapter 1

Understanding the Softimage Interface

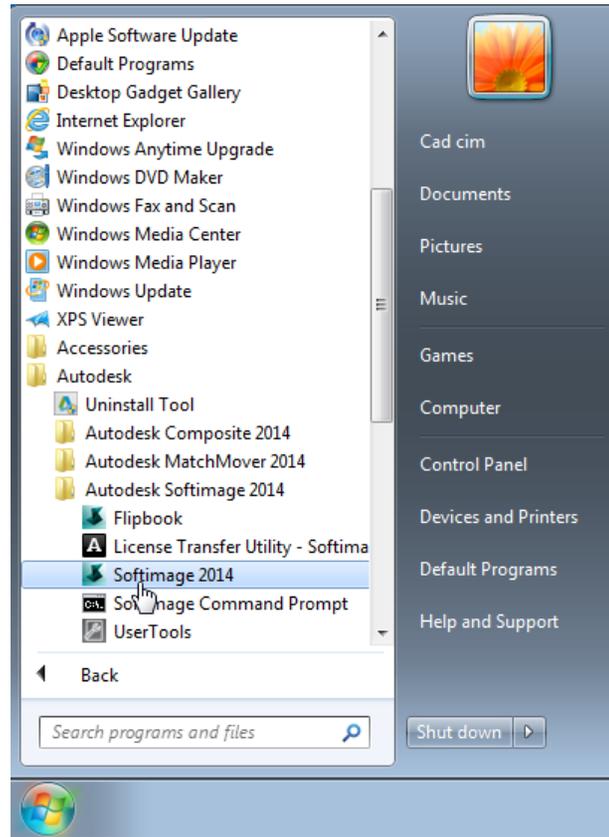


Figure 1-1 Starting Autodesk Softimage 2014 from the taskbar

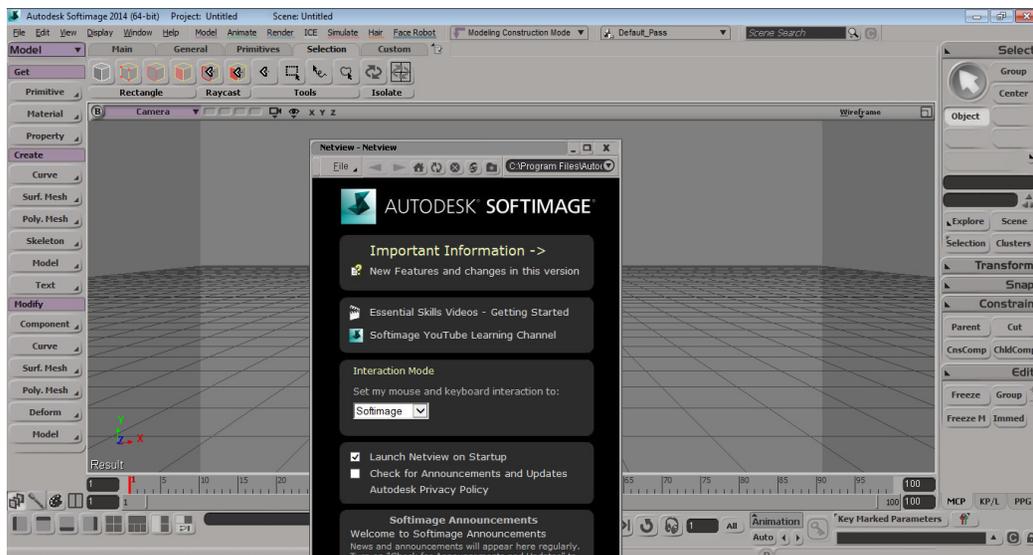


Figure 1-2 The Netview - Netview window

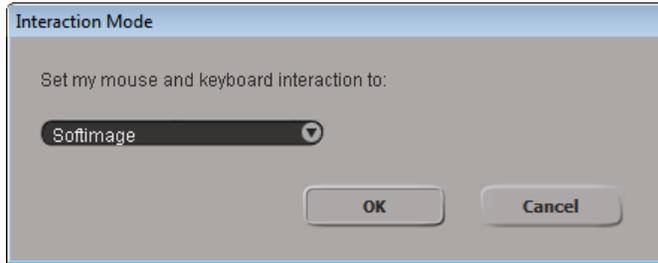


Figure 1-3 The Interaction Mode dialog box

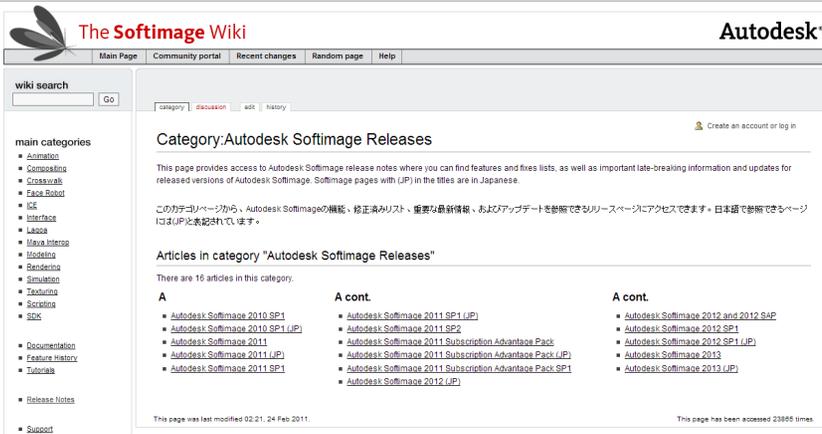


Figure 1-4 The Softimage Wiki webpage

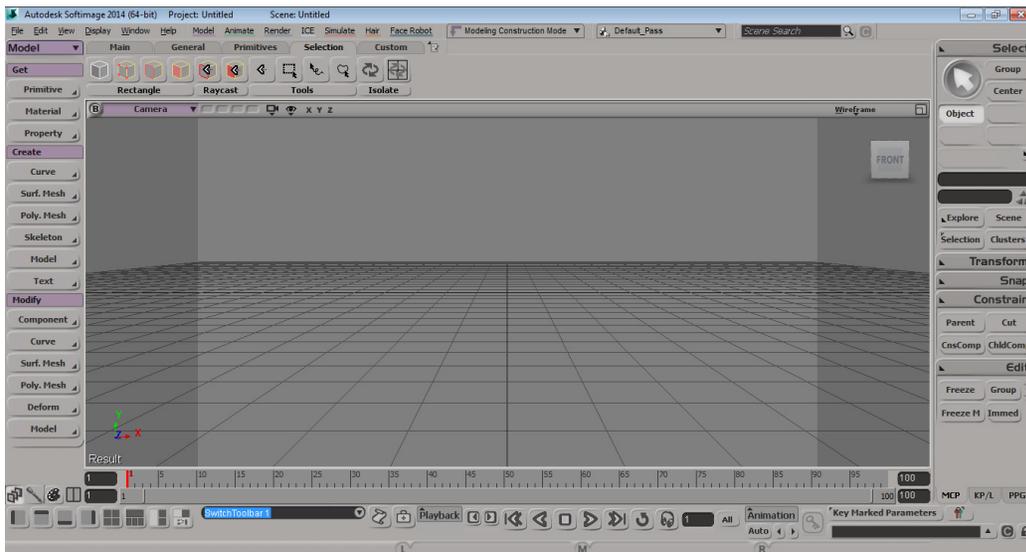


Figure 1-5 The default interface of Autodesk Softimage 2014

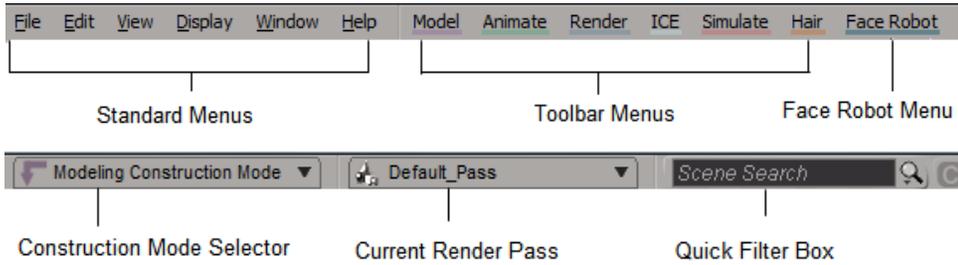


Figure 1-6 The menu bar and its sections



Figure 1-7 Flyout showing different toolbar options

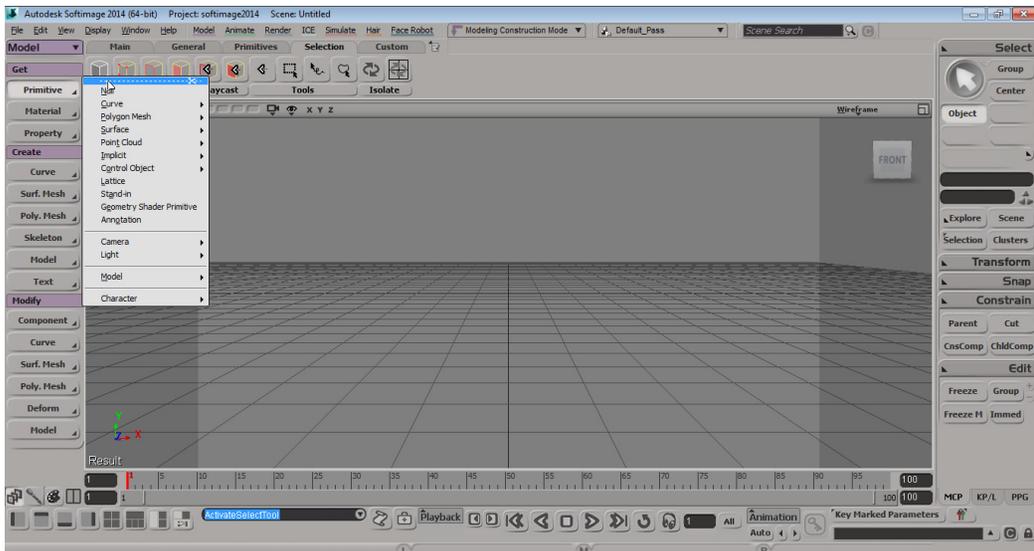


Figure 1-8 Clicking on the dotted line

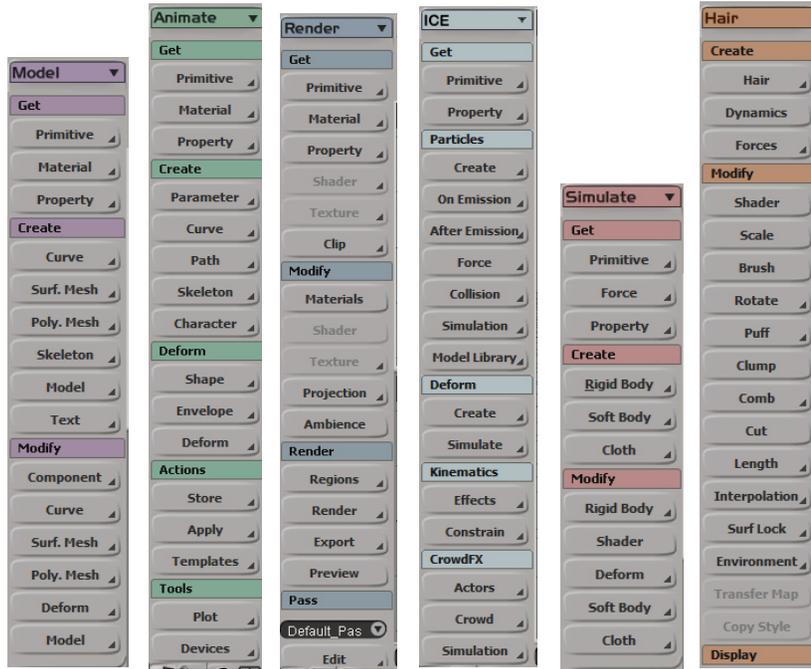


Figure 1-9 Different types of toolbars



Figure 1-10 The buttons on the bottom left corner of the interface

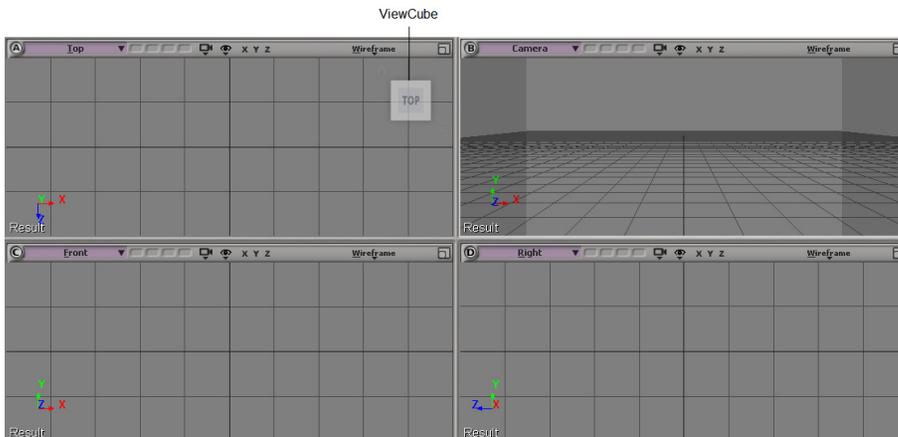


Figure 1-11 The ViewCube displayed in the active (Top) viewport

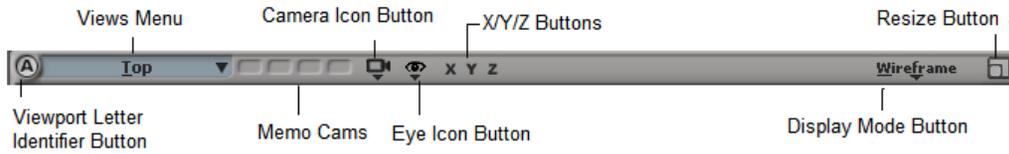


Figure 1-12 Various options in the Viewport menu bar

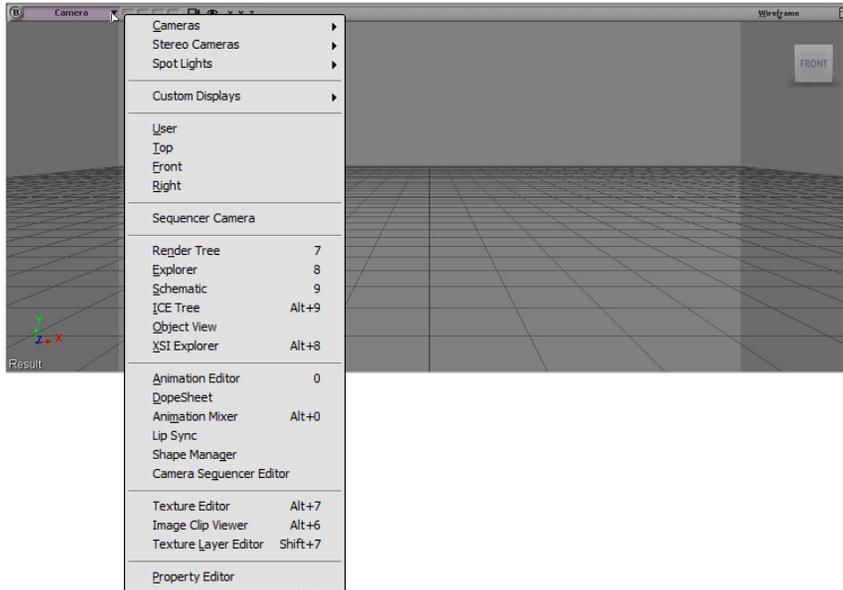


Figure 1-13 Various options in the Views menu

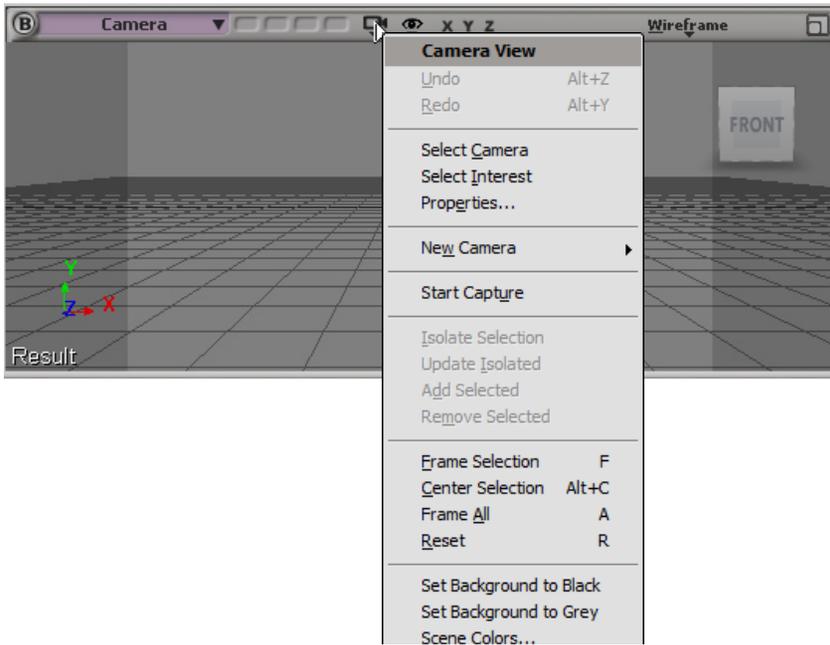


Figure 1-14 Partial view of Camera Icon menu

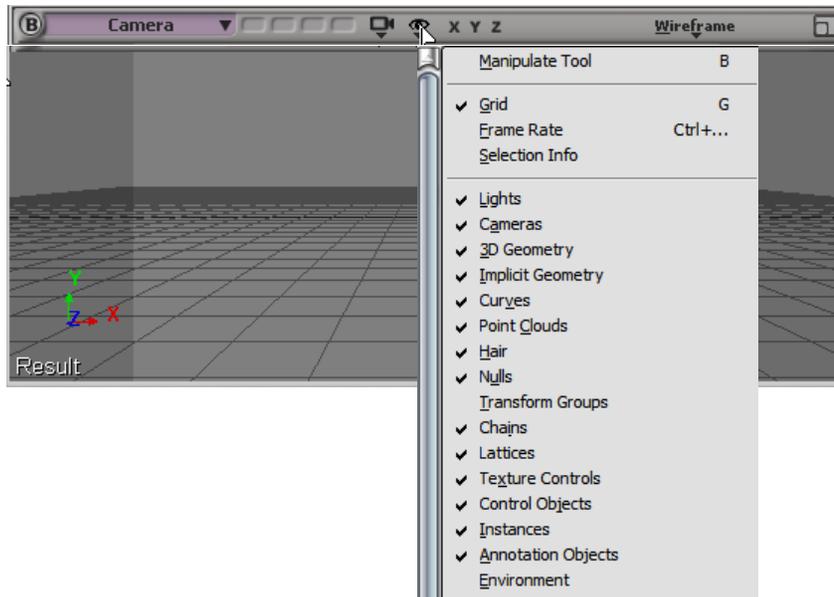


Figure 1-15 The Eye Icon menu

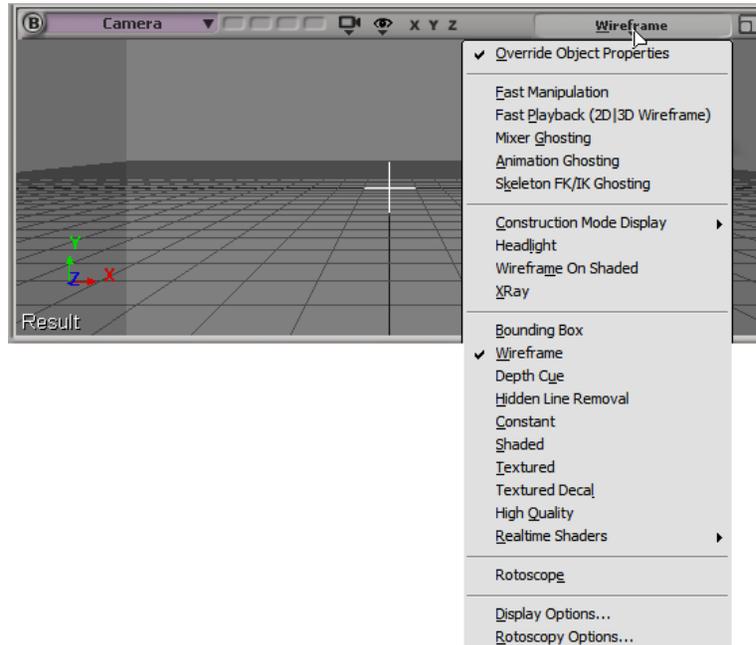


Figure 1-16 The Display Mode menu

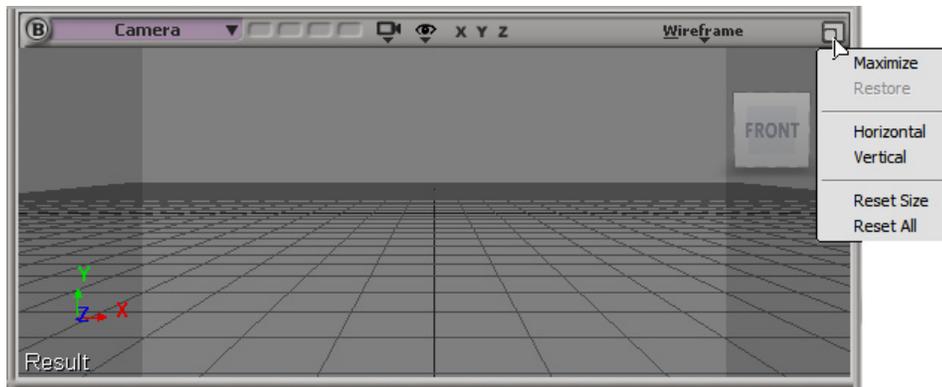


Figure 1-17 The shortcut menu displayed on right-clicking on the Resize button



Figure 1-18 The Main Command Panel

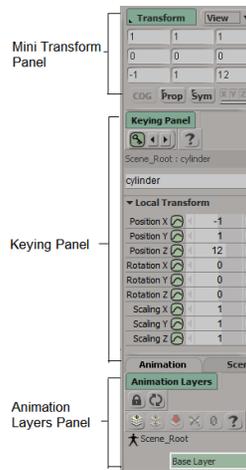


Figure 1-19 The KP/L panel

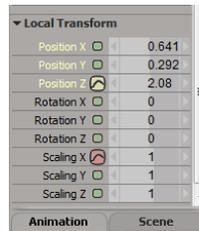


Figure 1-20 The Local Transform property set

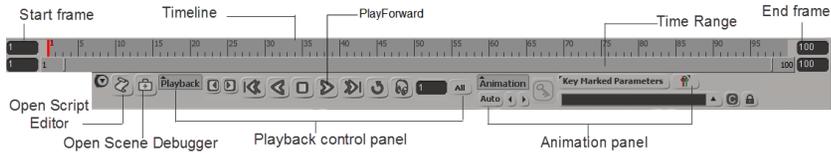


Figure 1-21 The lower interface controls

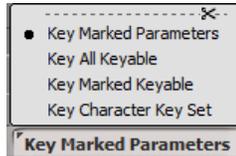
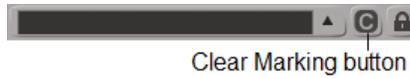


Figure 1-22 A flyout with various options



Clear Marking button

Figure 1-23 The Marked Parameter drop-down list and the Lock and Clear Marking buttons

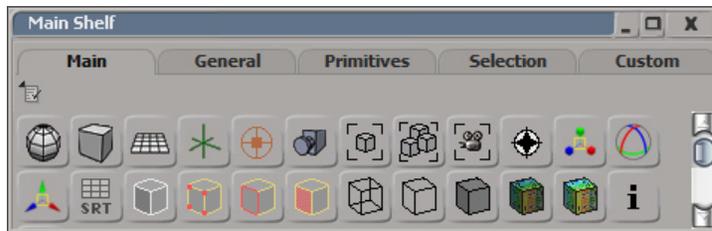


Figure 1-24 The Main Shelf

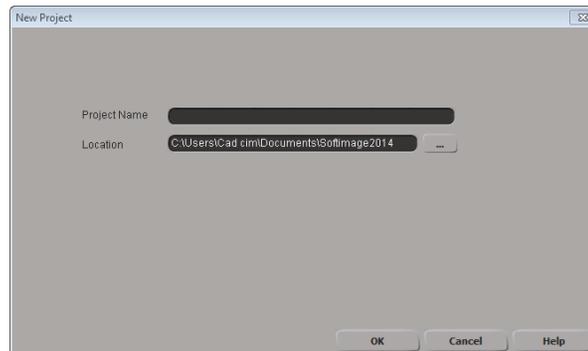


Figure 1-25 The New Project dialog box

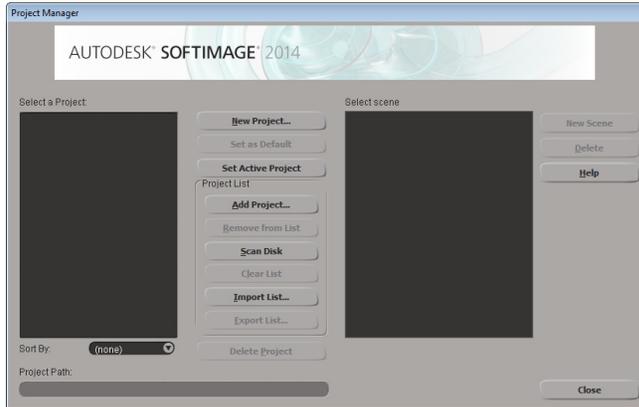


Figure 1-26 The Project Manager dialog box

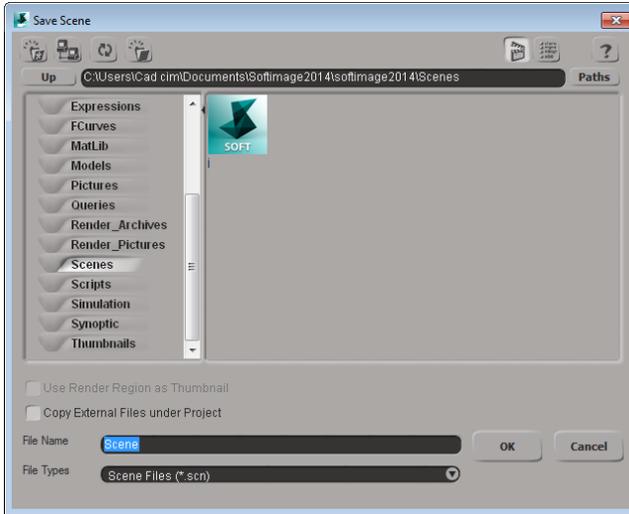


Figure 1-27 The Save Scene dialog box

Chapter 2

Polygon Modeling

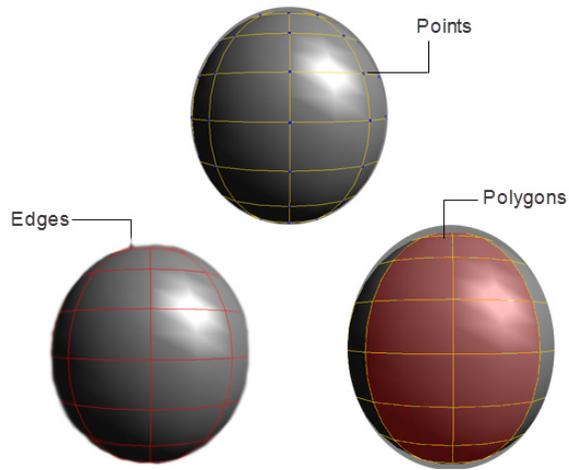


Figure 2-1 Different components of a polygon mesh

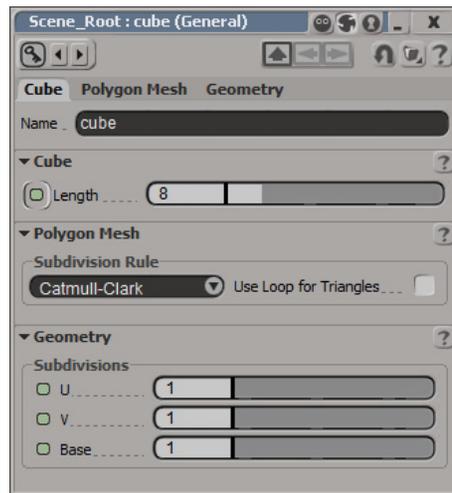


Figure 2-2 The Scene_Root: cube (General) property editor

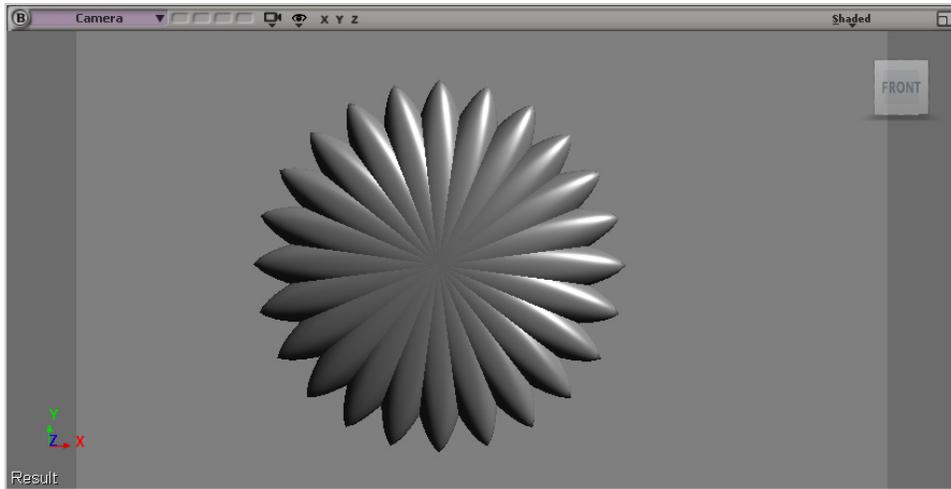


Figure 2-3 Duplicate copies of object displayed in the viewport

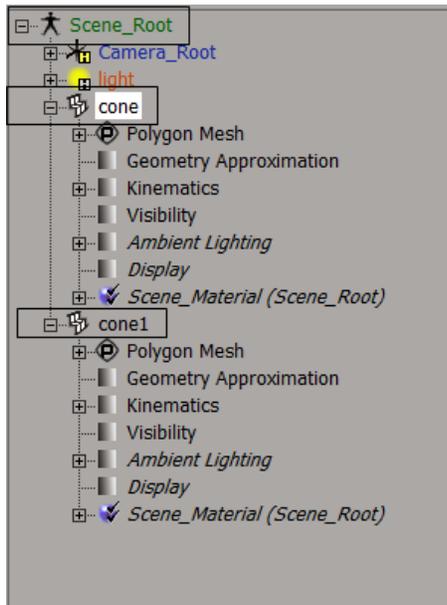


Figure 2-4 The original (cone) and duplicated (cone1) geometries displayed in the **Explorer** window

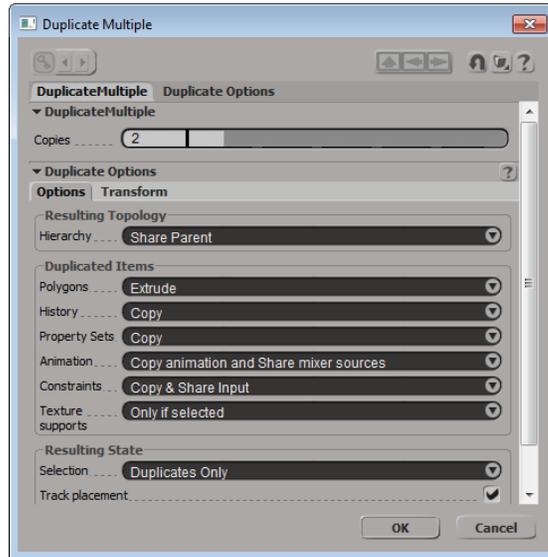


Figure 2-5 The Duplicate Multiple dialog box

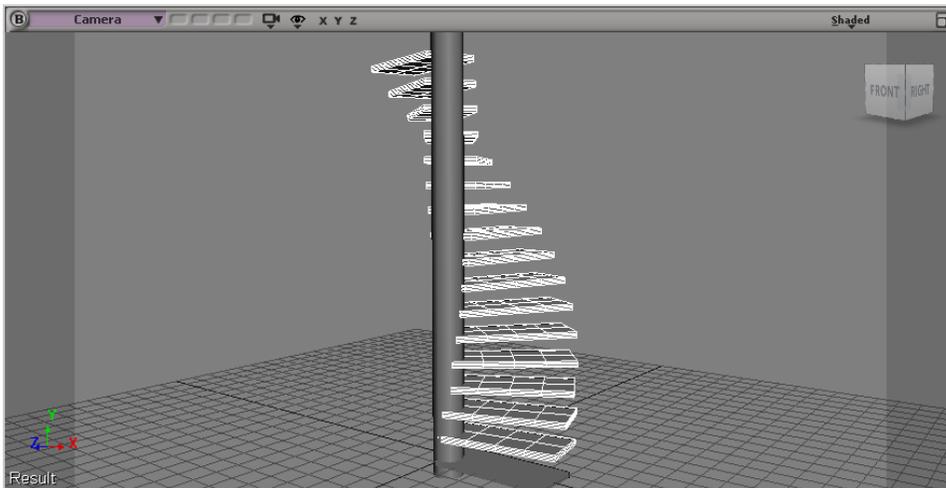


Figure 2-6 Transformation applied to the duplicated cube objects

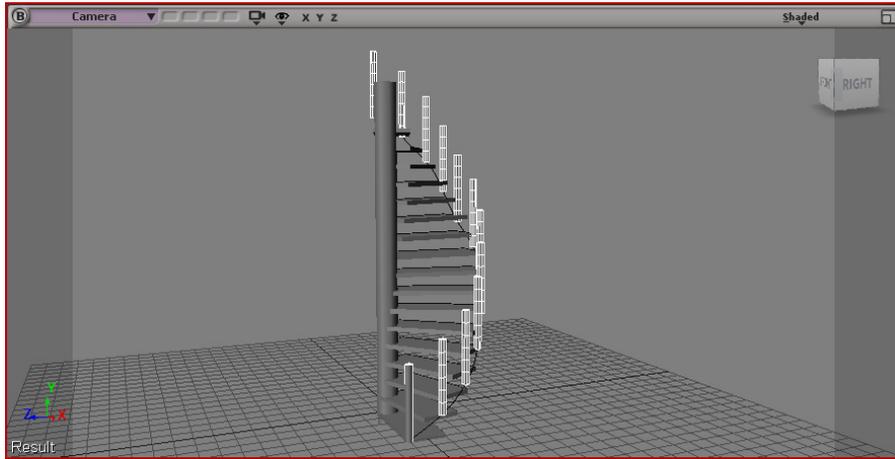


Figure 2-7 Duplicated cylinder objects placed along the curve

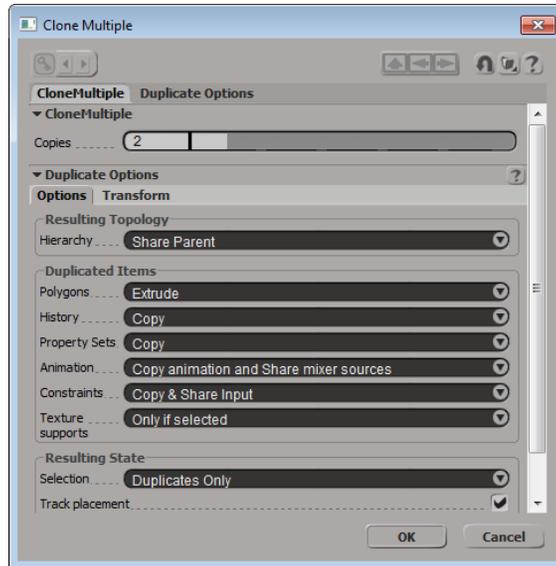


Figure 2-8 The Clone Multiple dialog box

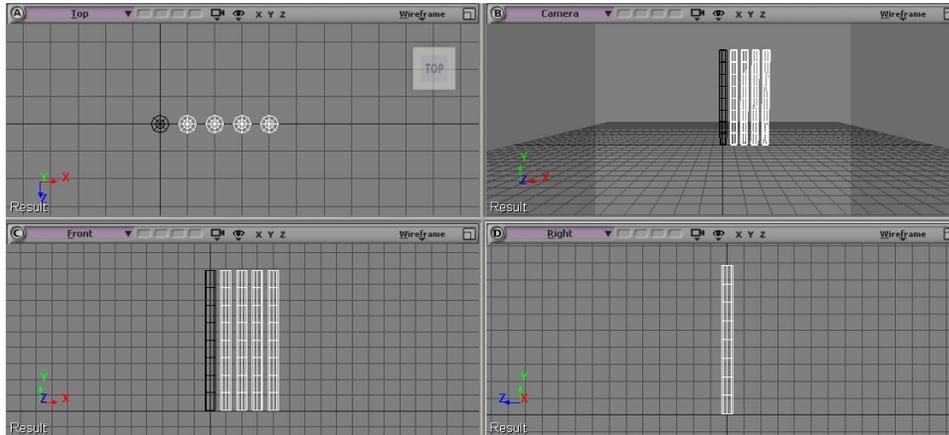


Figure 2-9 The instances of the cylinder in all viewports

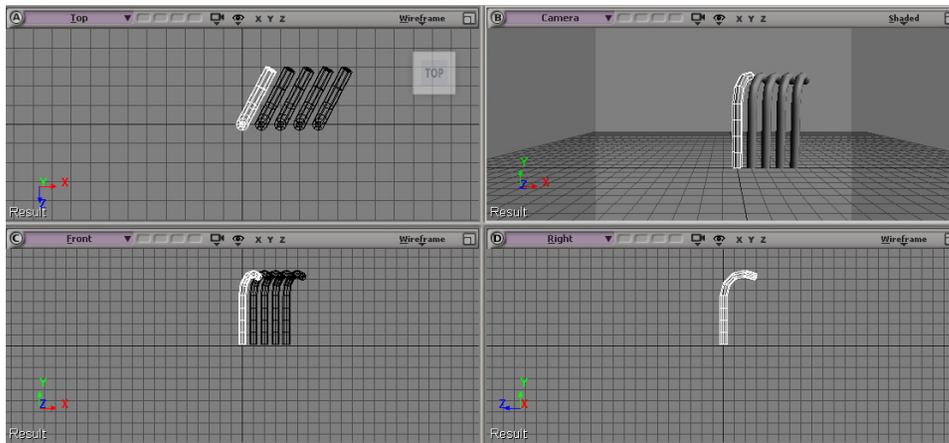


Figure 2-10 The instanced cylinder objects after applying the **Bend** deformer

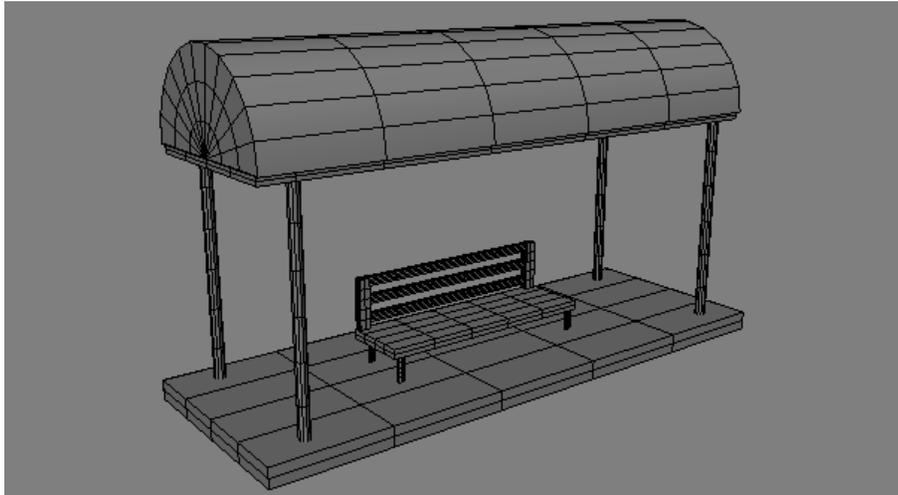


Figure 2-11 The bus stop model

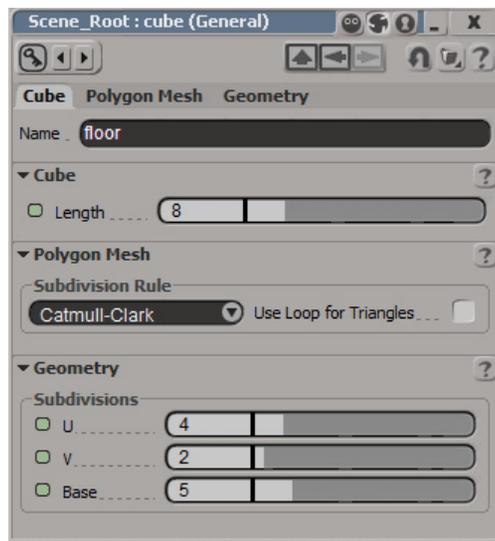


Figure 2-12 The Scene_Root: cube (General) property editor

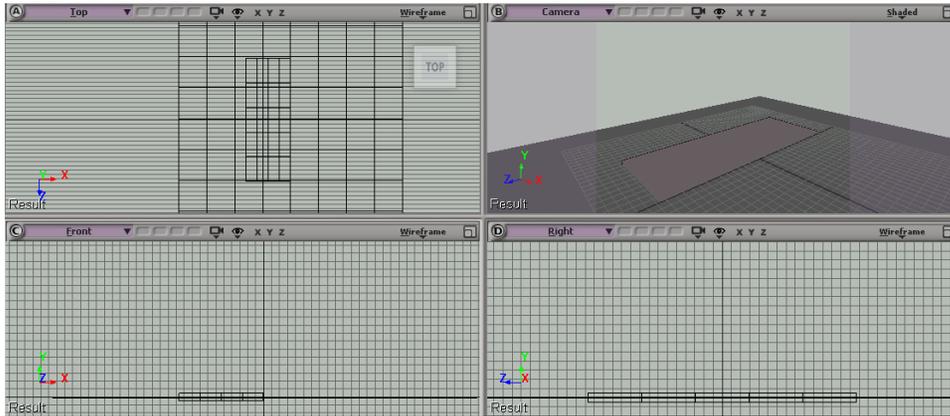


Figure 2-13 The floor displayed in viewports

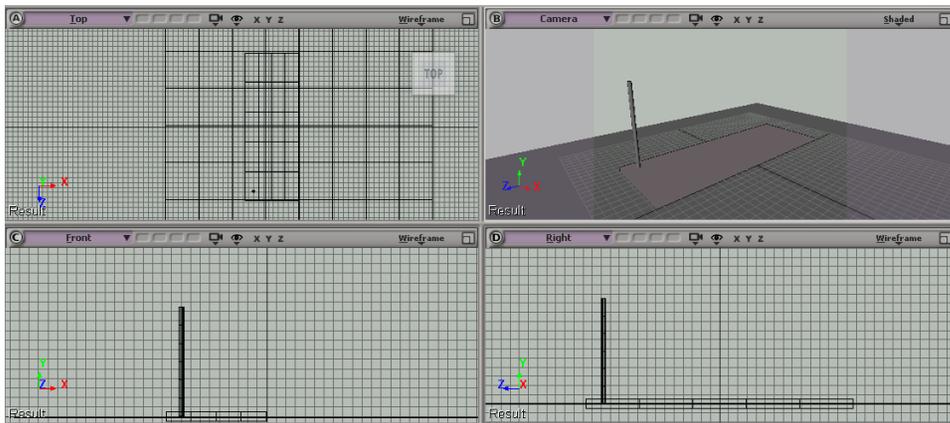


Figure 2-14 The pillar1 displayed in viewports

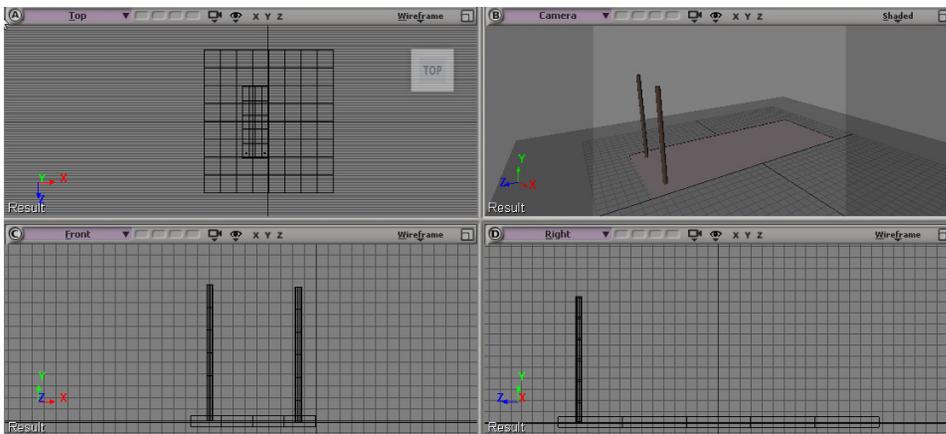


Figure 2-15 Aligning pillar2 with floor in viewports

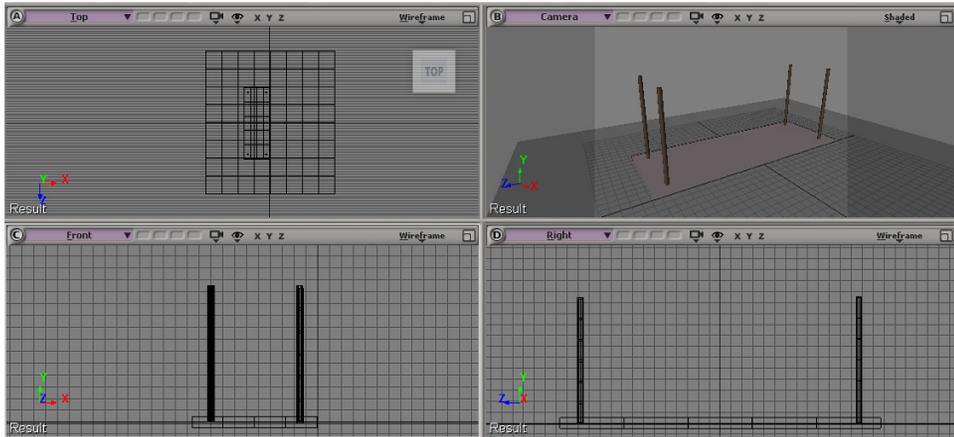


Figure 2-16 Aligning the duplicate pillars in viewports

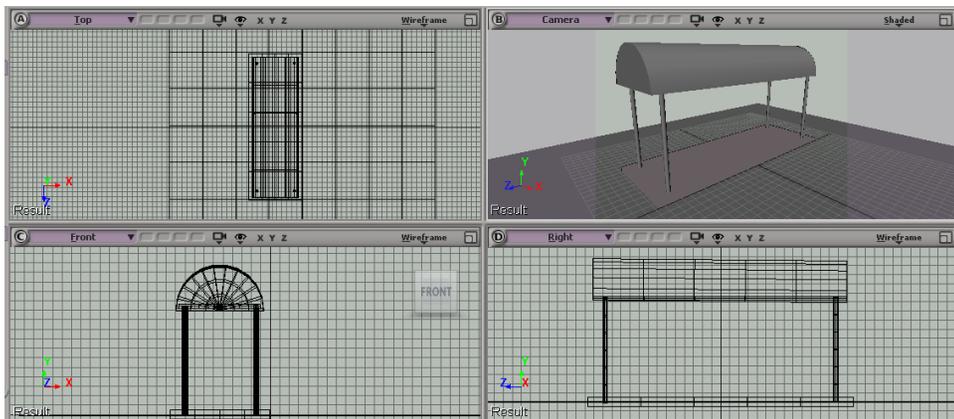


Figure 2-17 The roof of the bus stop displayed in viewports

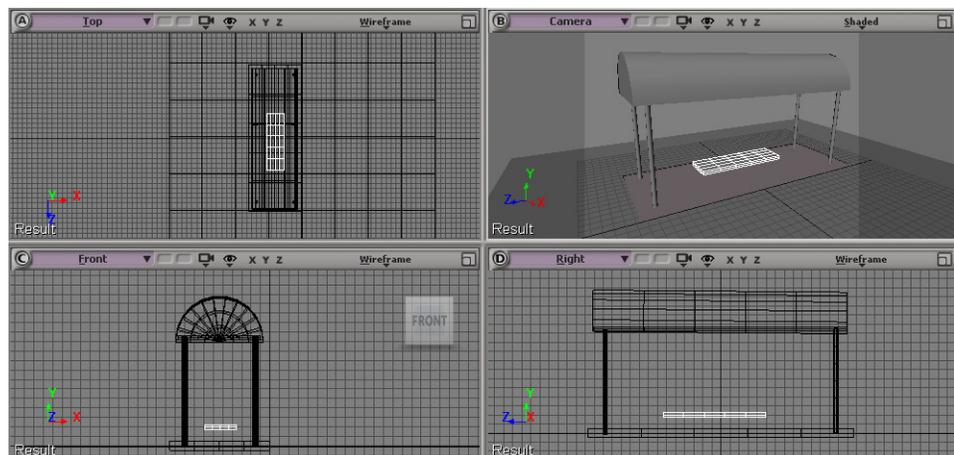


Figure 2-18 The base of bench displayed in viewports

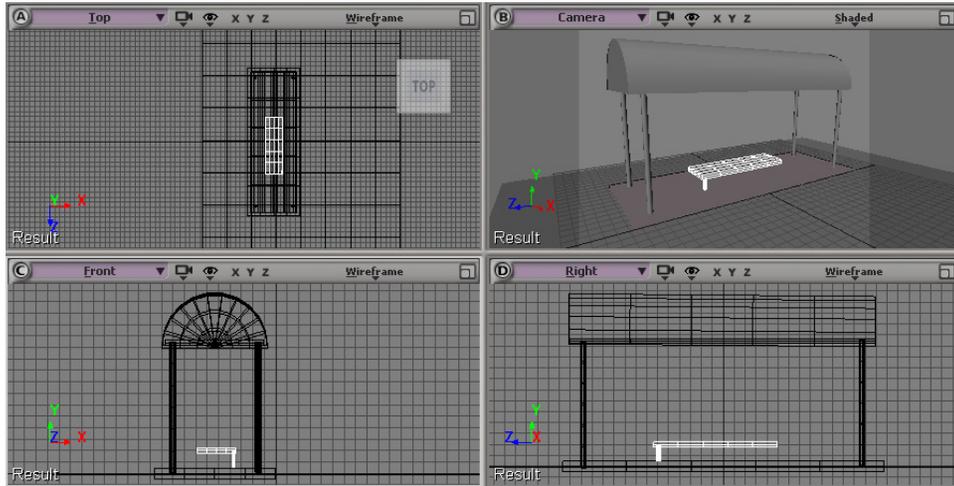


Figure 2-19 The leg1 displayed in viewports

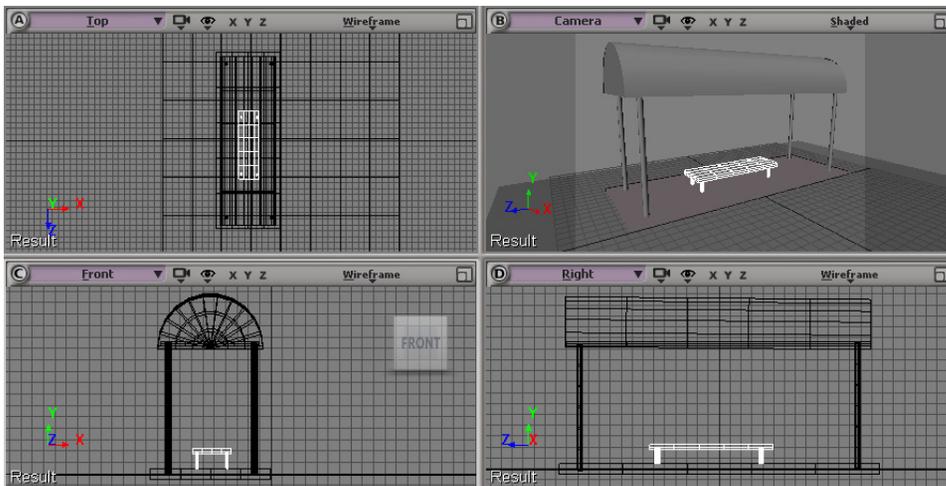


Figure 2-20 Aligning the legs in viewports

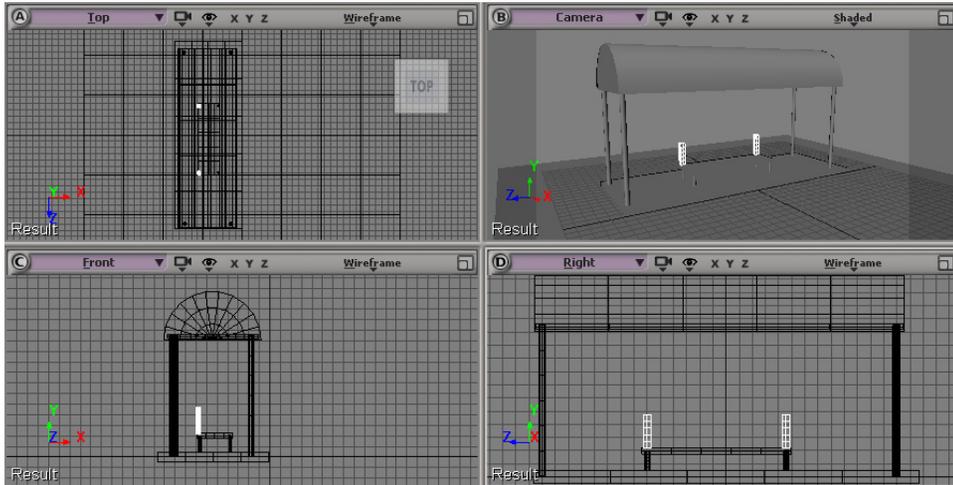


Figure 2-21 Backsupports displayed in viewports

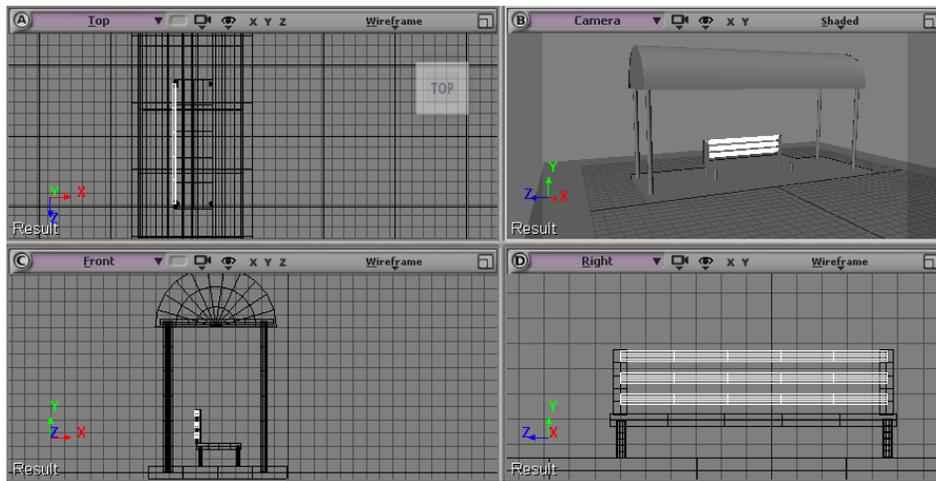


Figure 2-22 Aligning the copies of backrest1

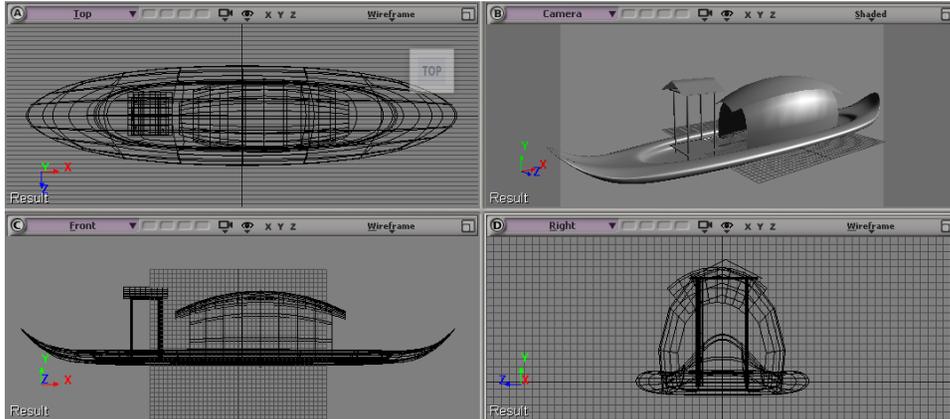


Figure 2-23 The model of a house boat

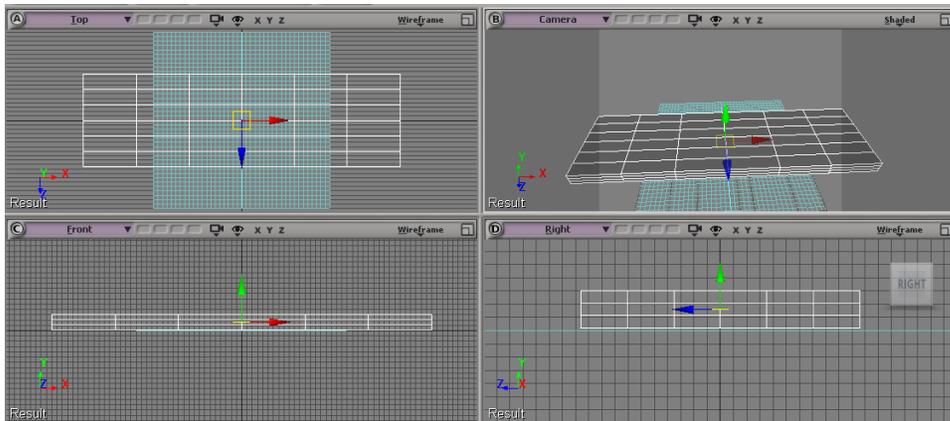


Figure 2-24 The hull displayed in viewports

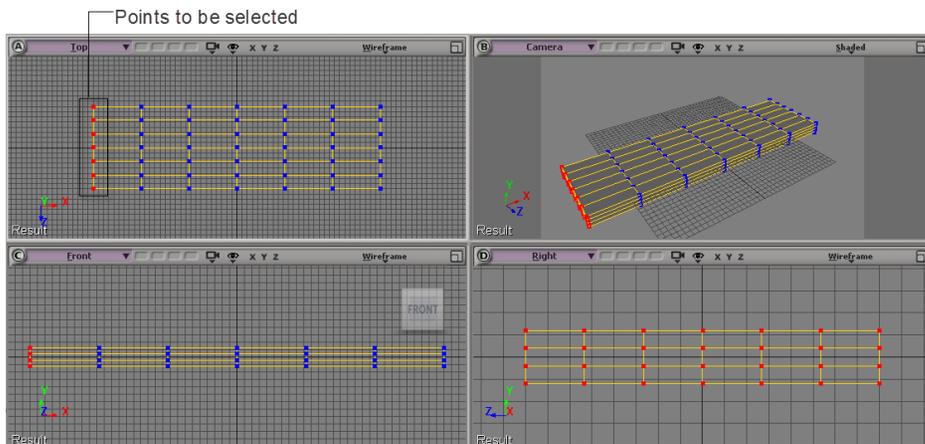


Figure 2-25 Points selected in the Top viewport

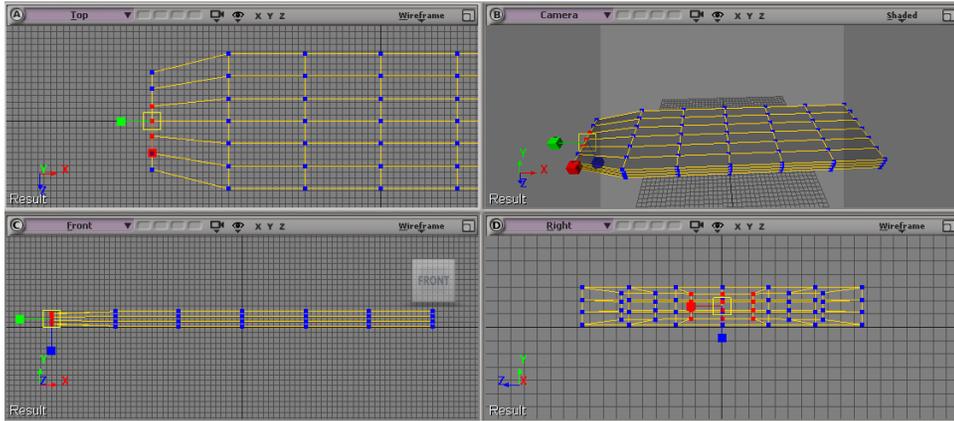


Figure 2-26 Selected points scaled inward

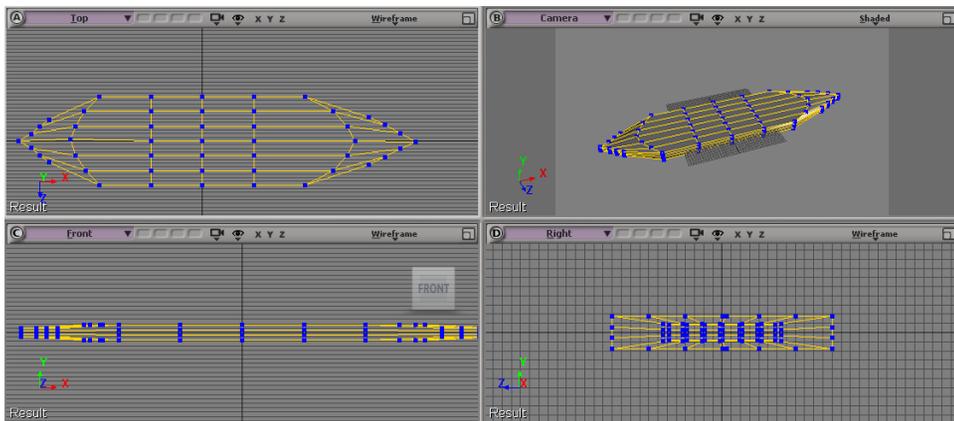


Figure 2-27 Modifying the shape of hull

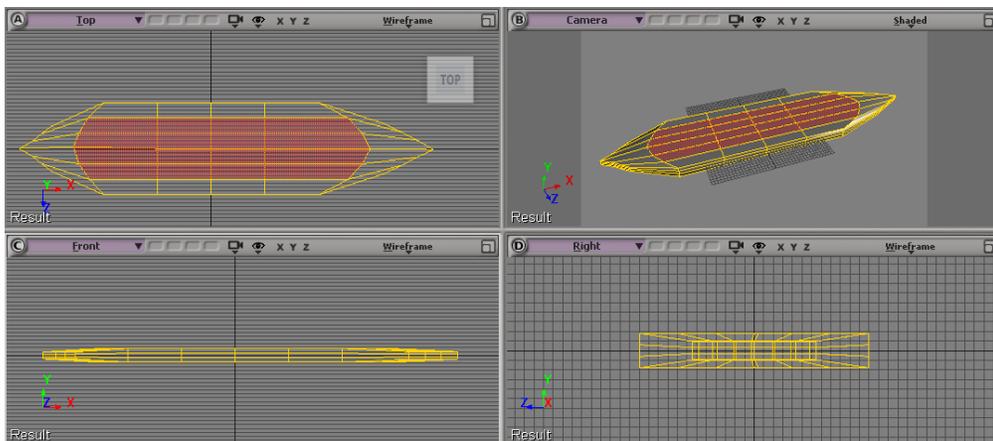


Figure 2-28 Selecting the center polygons of hull in viewports

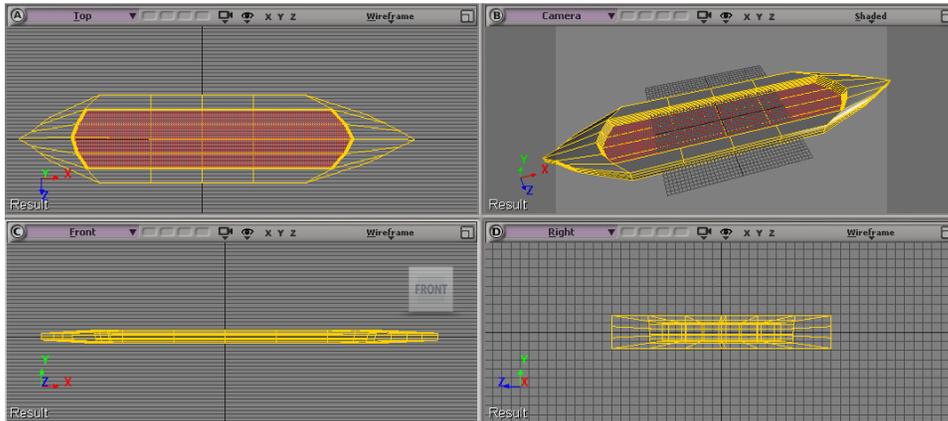


Figure 2-29 The extruded polygons of hull displayed in viewports

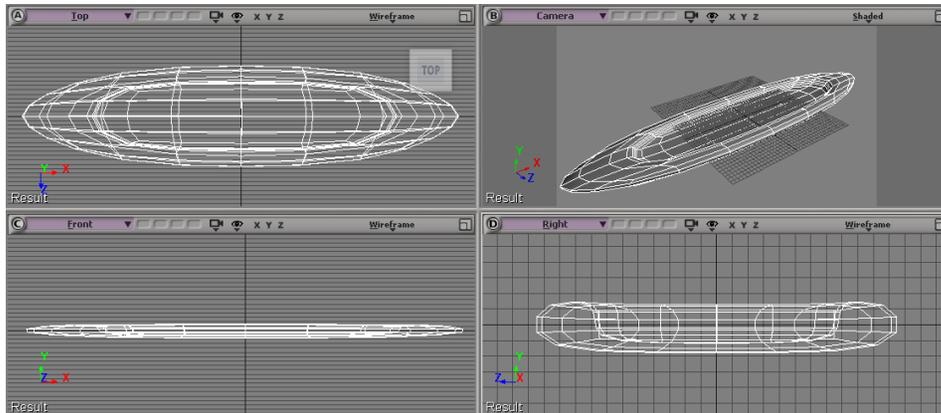


Figure 2-30 The smooth hull displayed in viewport

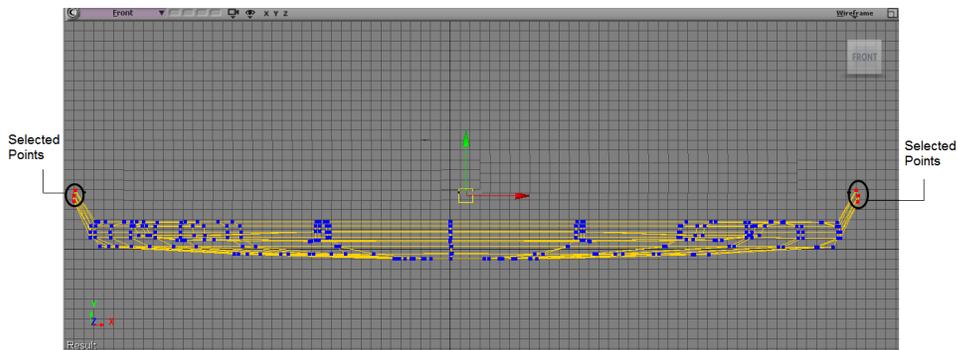


Figure 2-31 Moving the selected points up along the Y axis

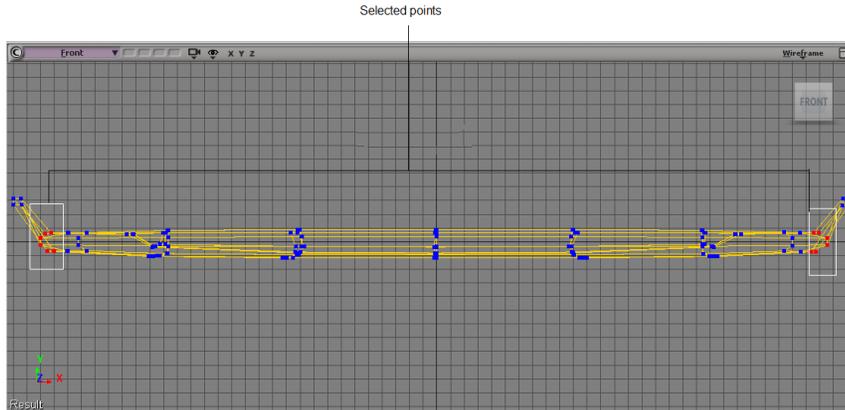


Figure 2-32 Points selected in the Front viewport

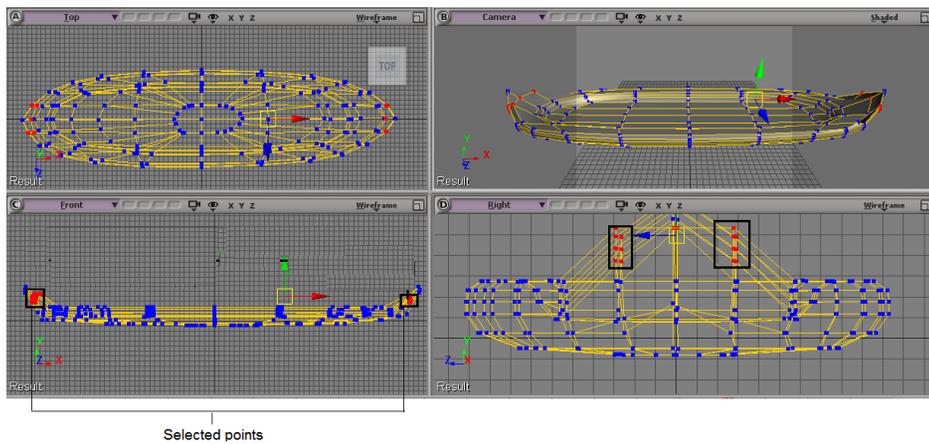


Figure 2-33 Moving the selected points up along the Y axis

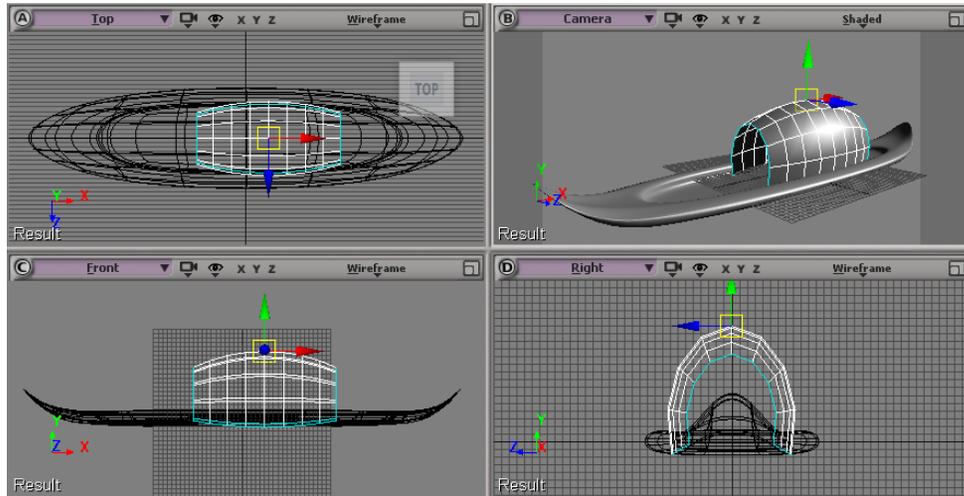


Figure 2-34 Aligning boatshelter in viewports

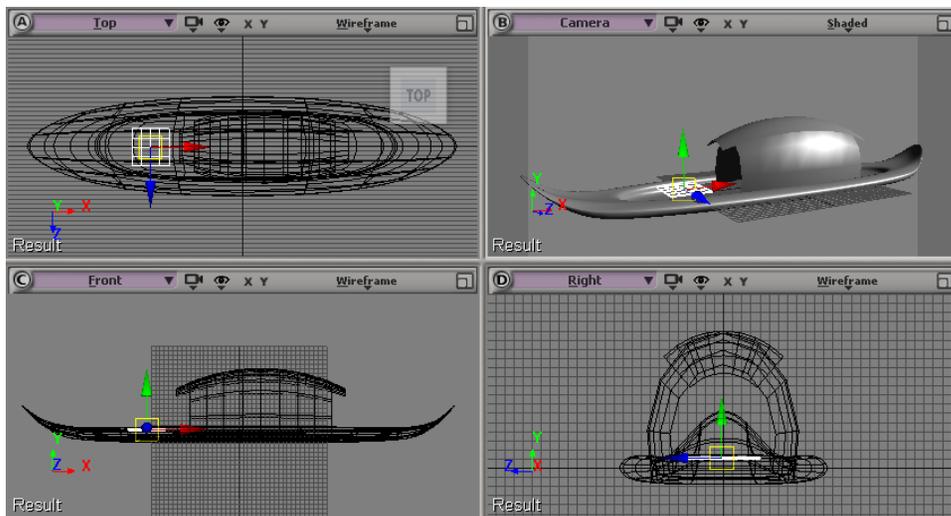


Figure 2-35 The floor displayed in viewports

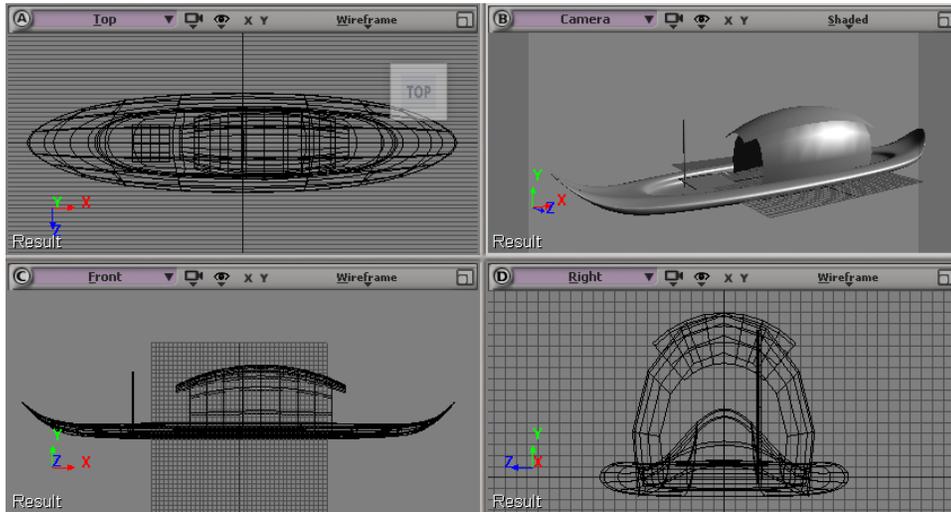


Figure 2-36 The pillar1 displayed in viewports

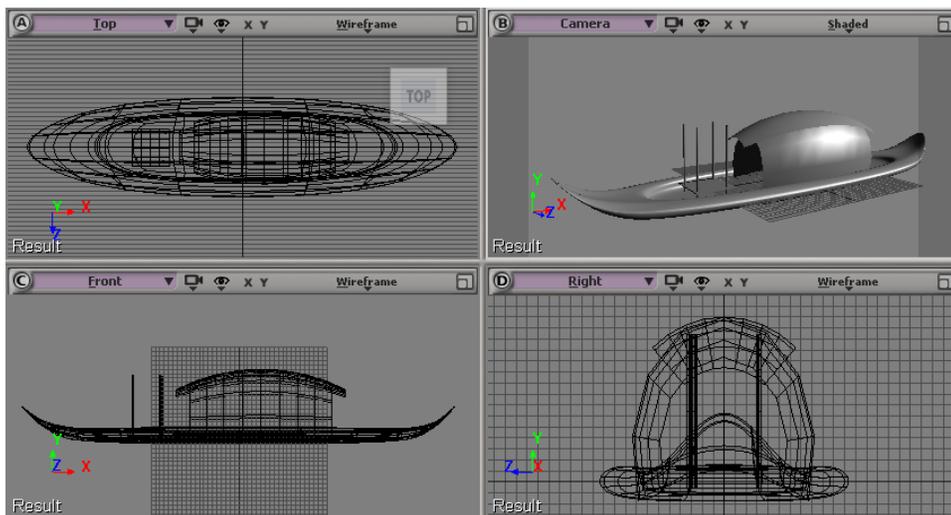


Figure 2-37 Aligning pillars in viewports

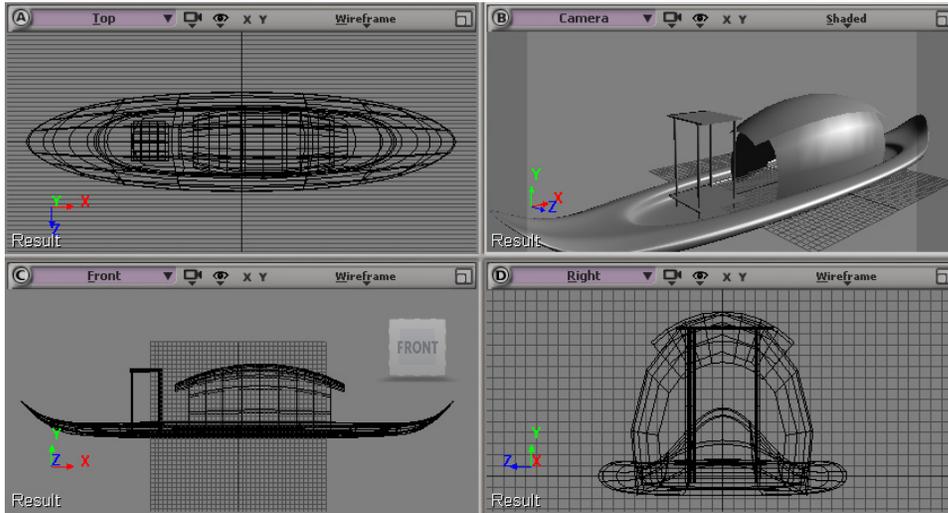


Figure 2-38 The shedroofbase displayed in viewports

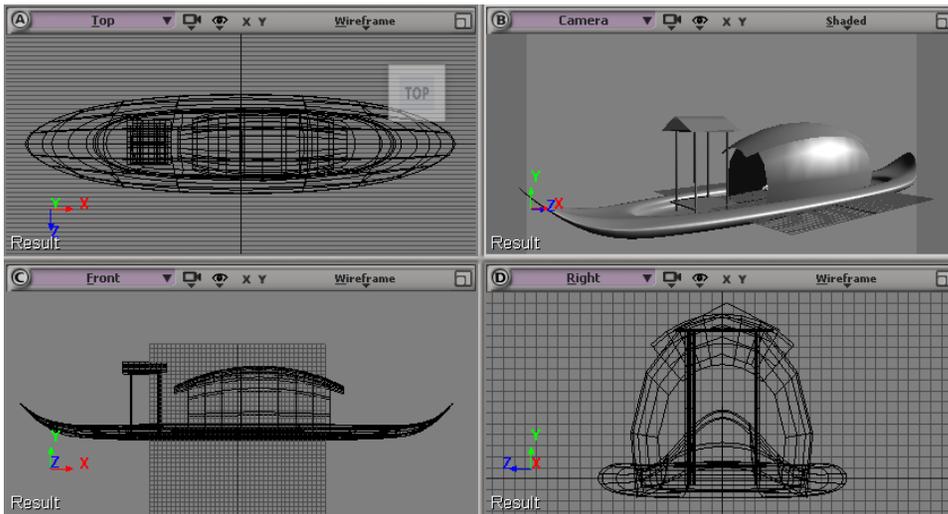


Figure 2-39 The shedroof displayed in viewports

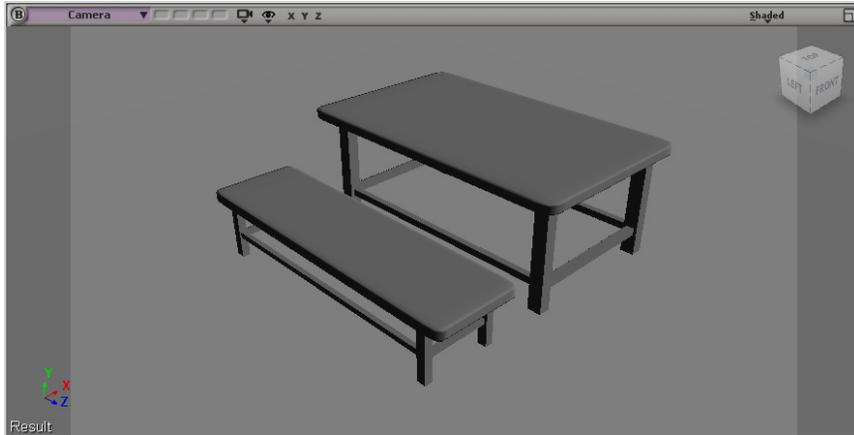


Figure 2-40 The models of the table and bench

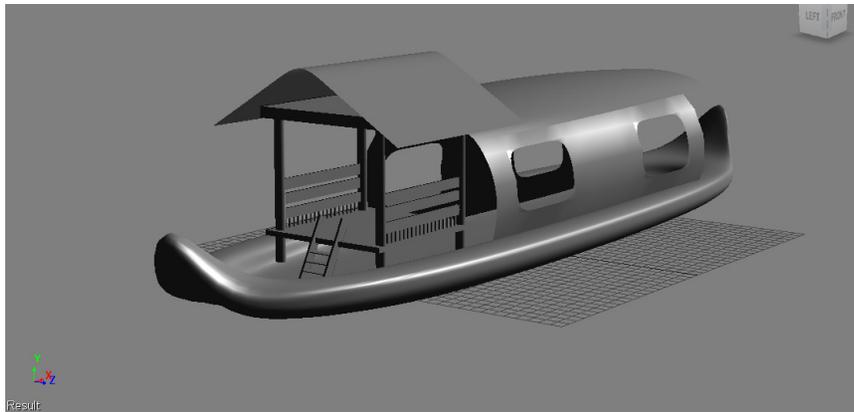


Figure 2-41 The model of the houseboat



Figure 2-42 The models of the chair and the center table



Figure 2-43 The model of a cartoon character

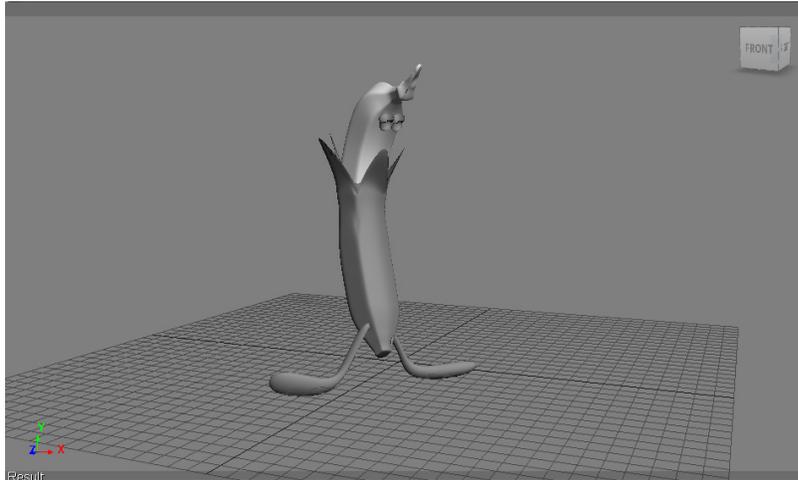


Figure 2-44 The model of a cartoon character

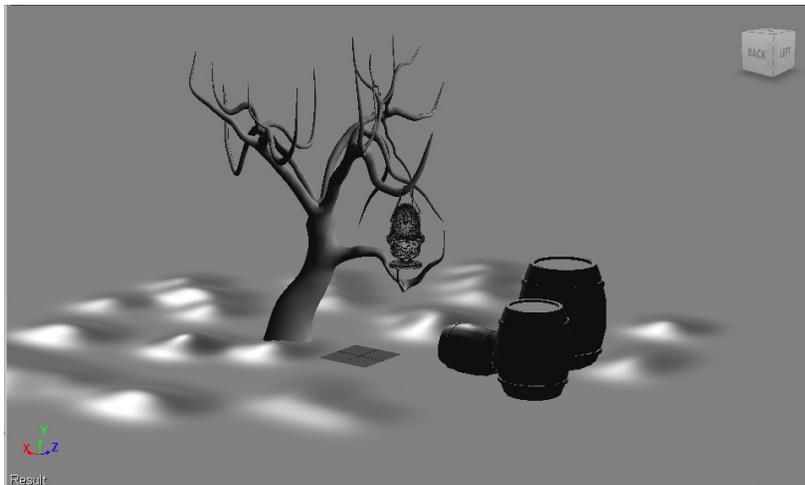


Figure 2-45 3D scene created using primitive tools

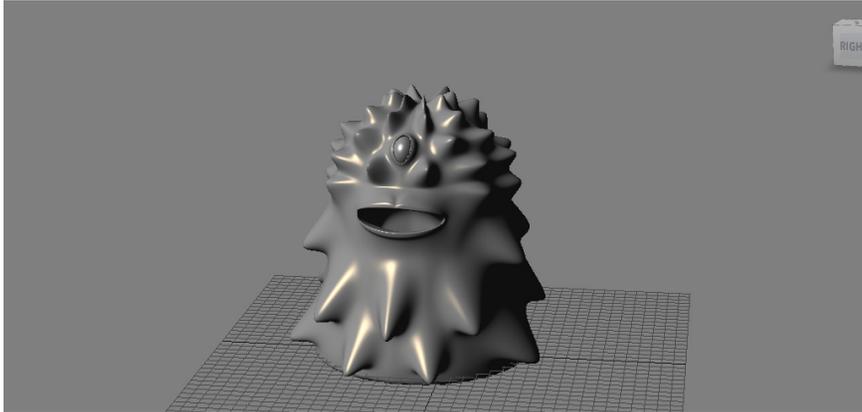


Figure 2-46 The model of a cartoon character

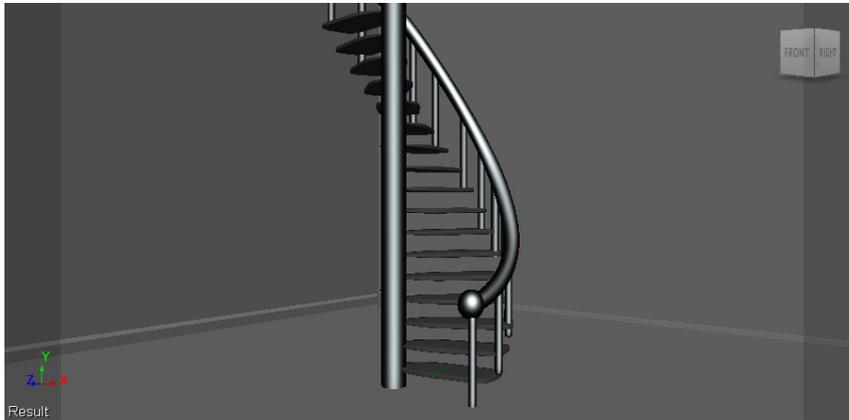


Figure 2-47 Stairs created using various primitive tools

Chapter 3

Surface and Curve Modeling

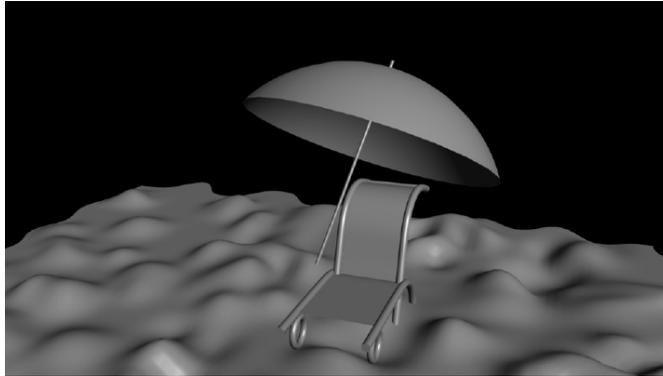


Figure 3-1 The sea beach scene

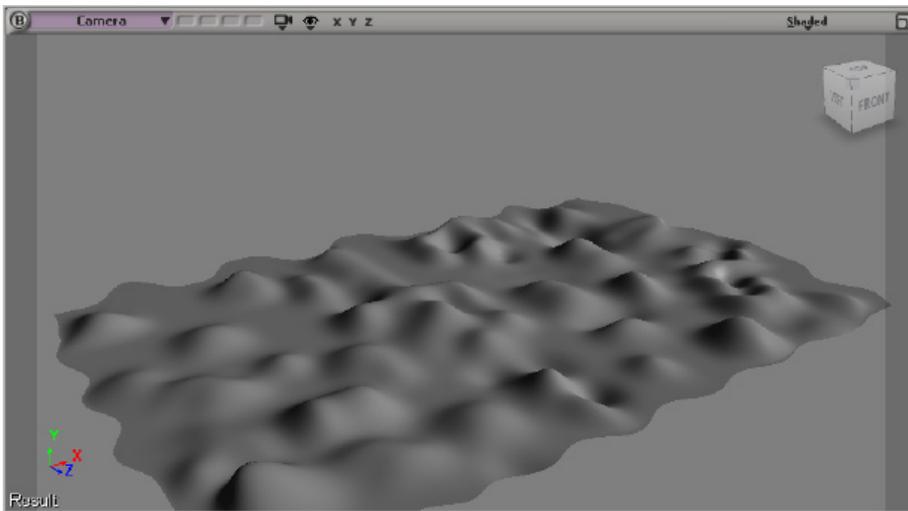


Figure 3-2 The surface displayed in the shaded view

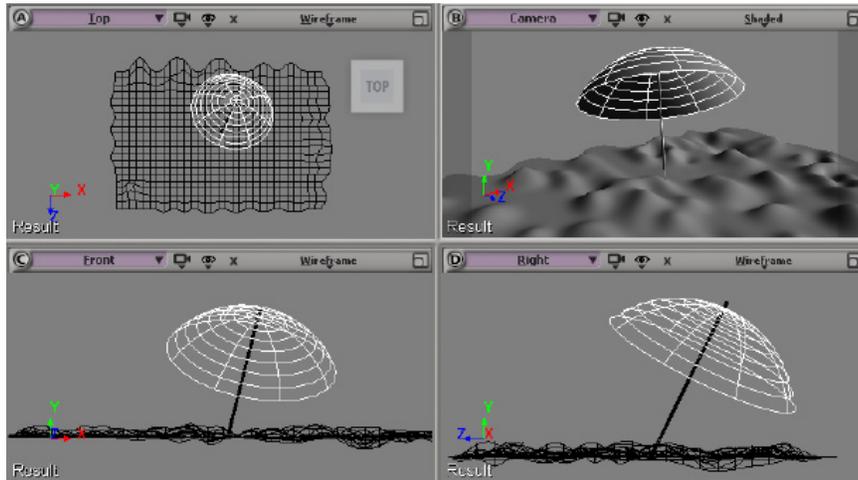


Figure 3-3 The canopy aligned at the top of the pole in viewports

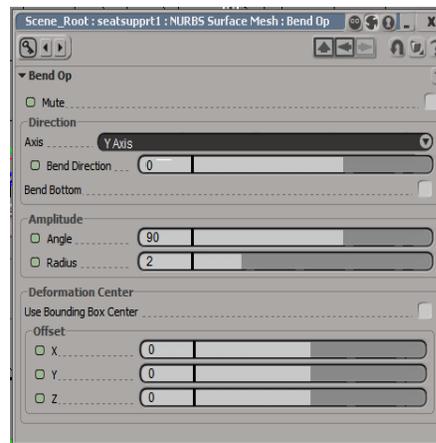


Figure 3-4 The Scene_Root : seatsupport1 : NURBS Surface Mesh : Bend Op property editor

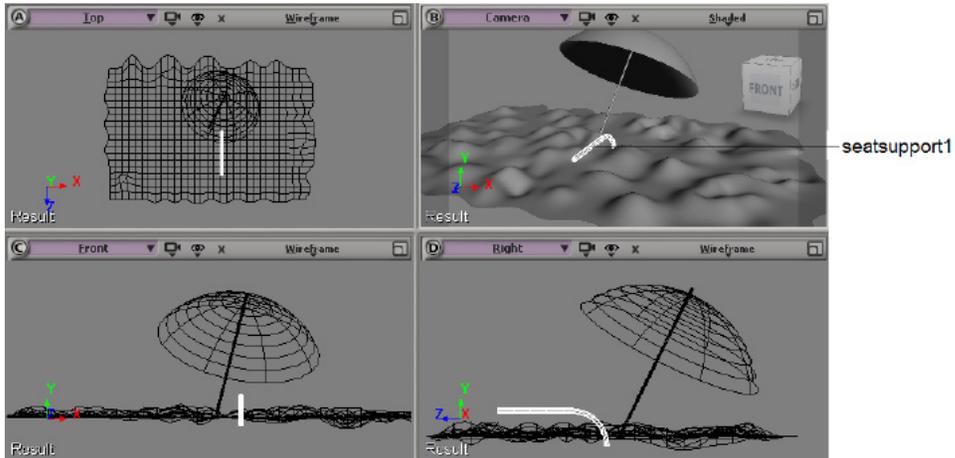


Figure 3-5 The seatsupport1 displayed in viewports

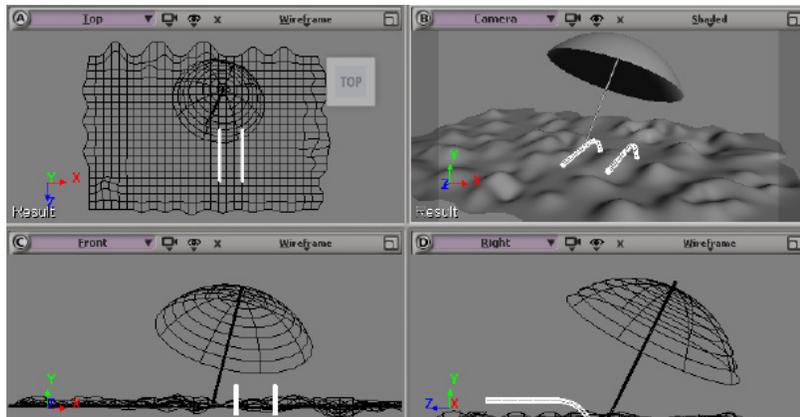


Figure 3-6 Alignment of seatsupport1 and seatsupport2

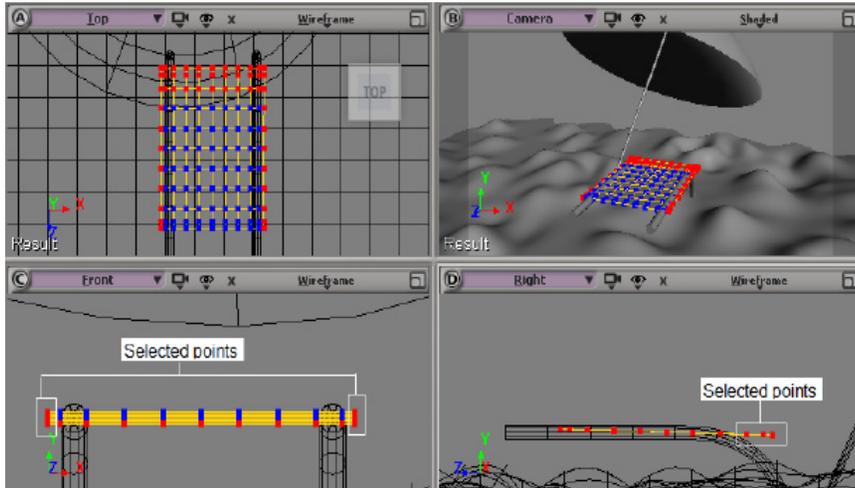


Figure 3-7 Points selected in viewports

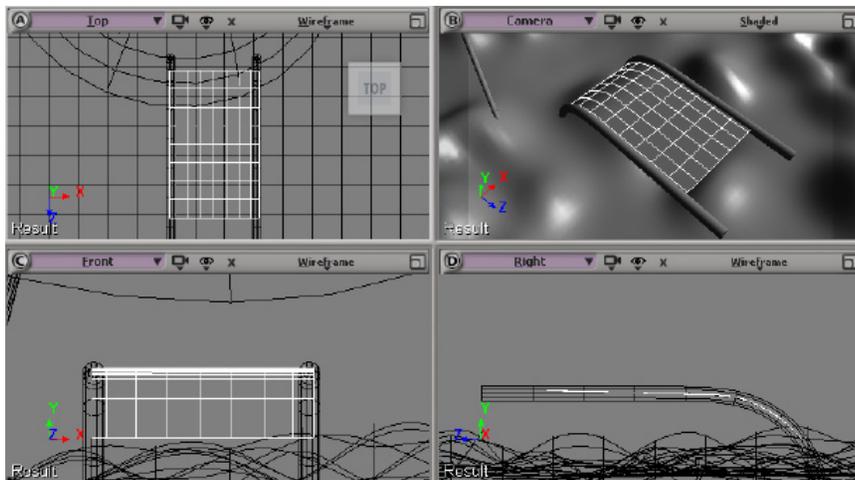


Figure 3-8 The modified shape of the seat

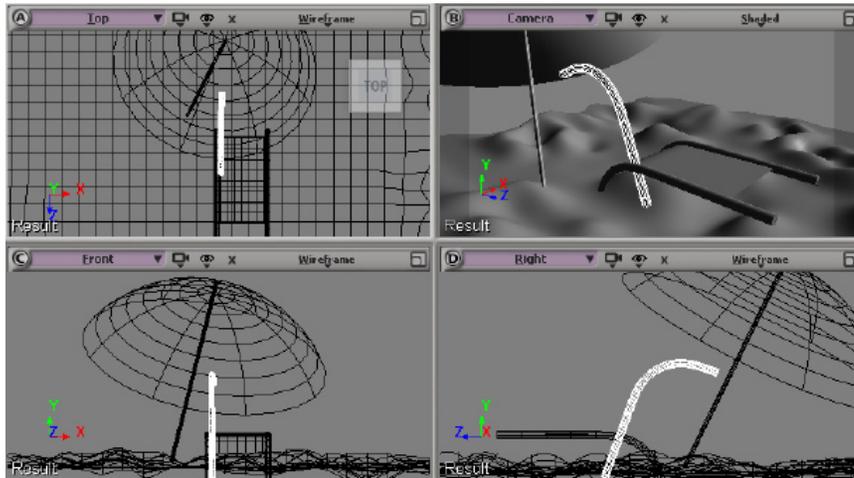


Figure 3-9 Alignment of backsupport1 with seatsupport1

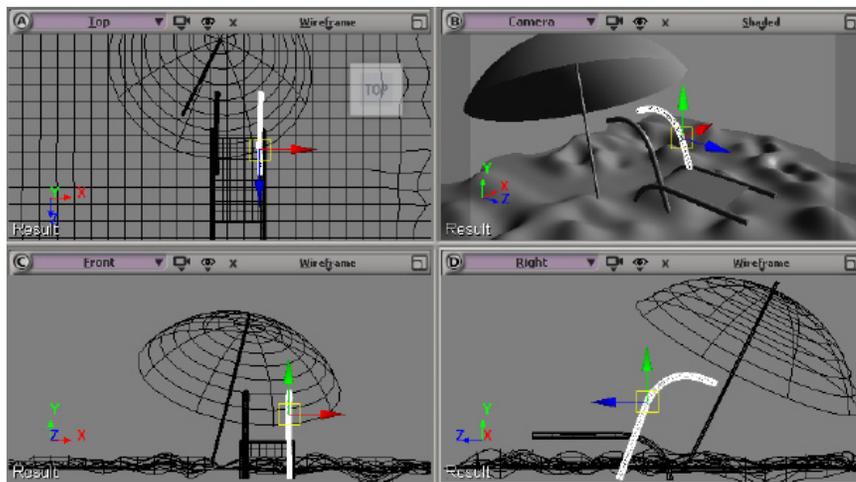


Figure 3-10 The alignment of backsupport2 with seatsupport2

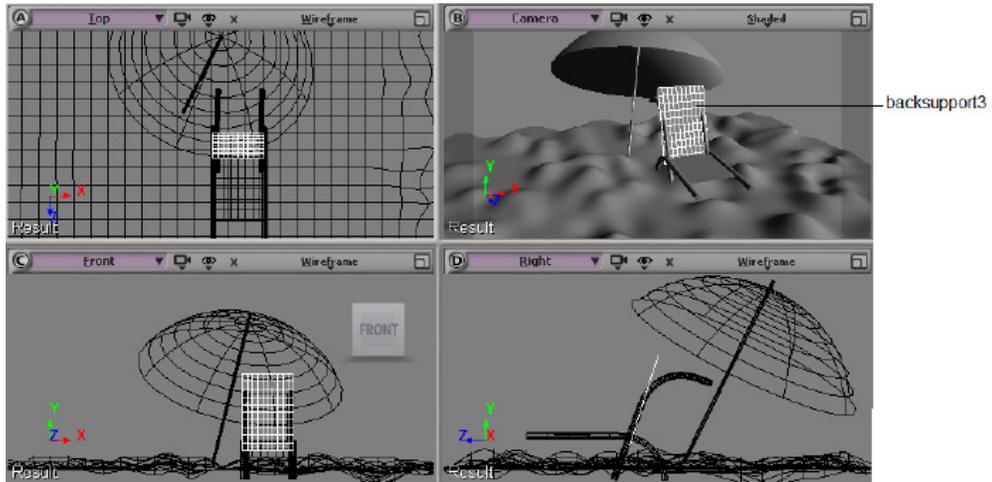


Figure 3-11 The *backsupport3* placed between *backsupport1* and *backsupport2*

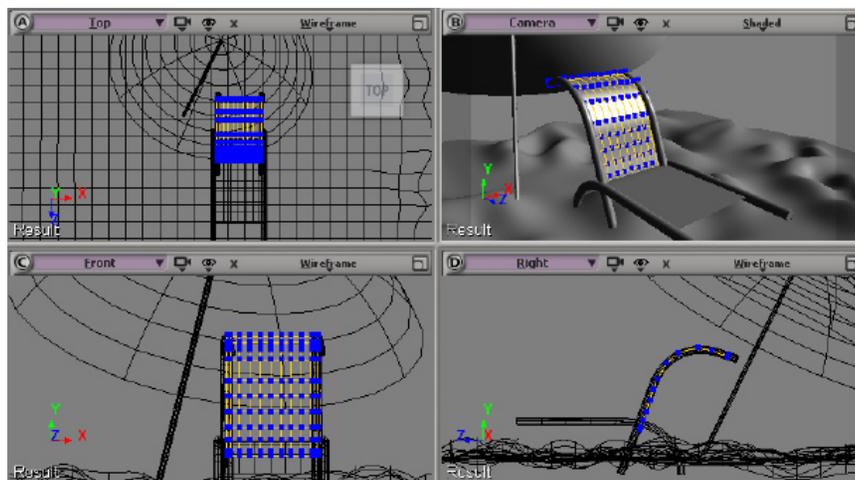


Figure 3-12 The shape of *backsupport3* changed

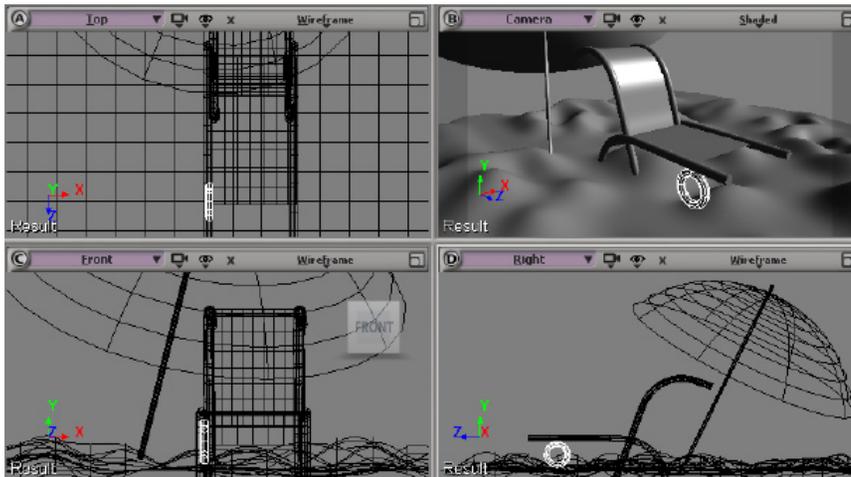


Figure 3-13 Placing wheel1 in viewports

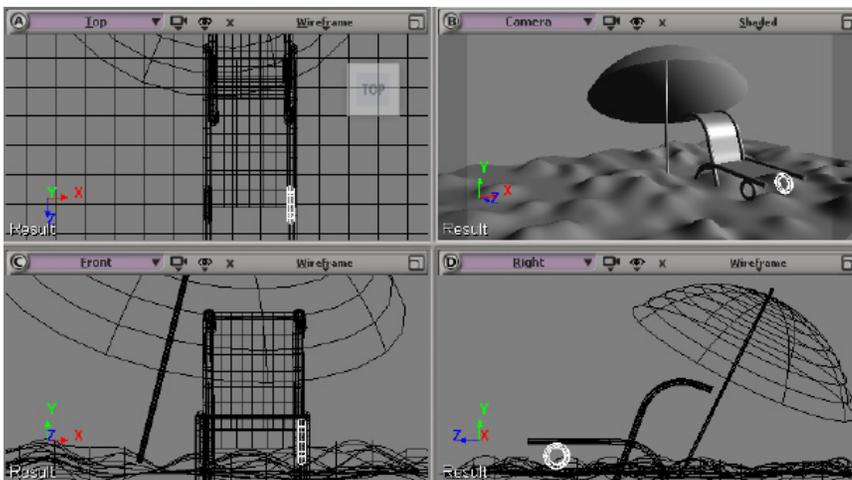


Figure 3-14 Aligning wheel2 with seat support2 in viewports

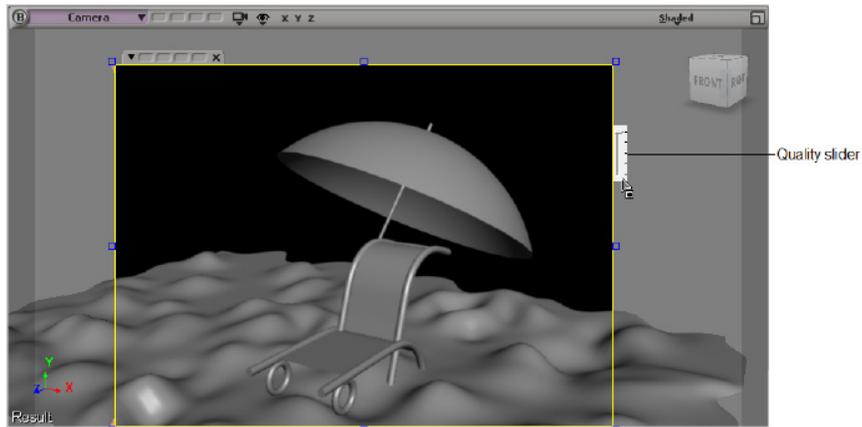


Figure 3-15 The render region window and the quality slider

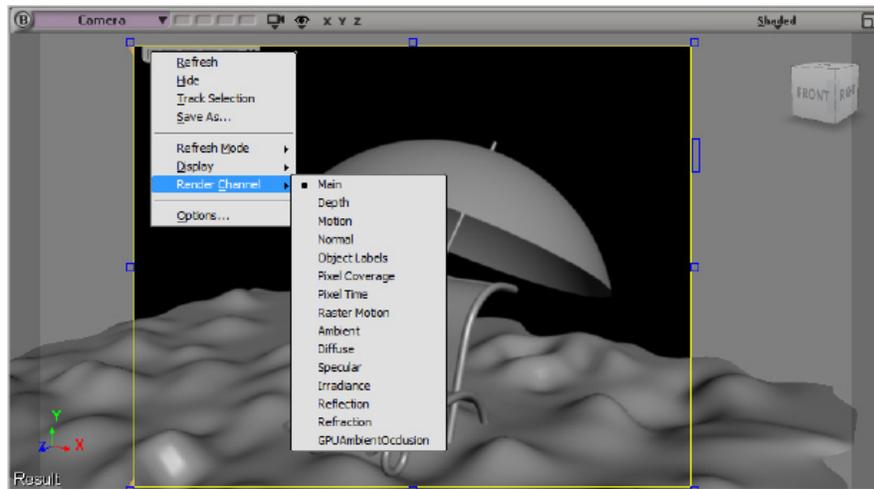


Figure 3-16 The flyout displayed on clicking the black triangle

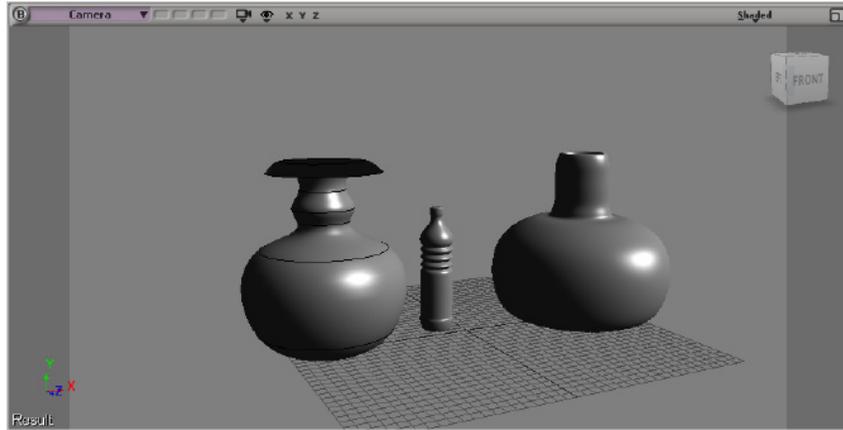


Figure 3-17 The models of pot, bottle, and vase

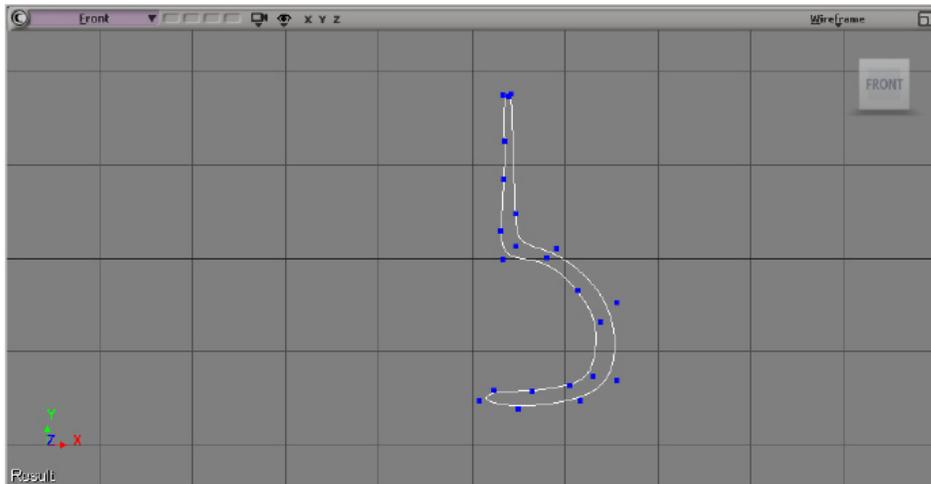


Figure 3-18 Shape of the curve created in the Front viewport

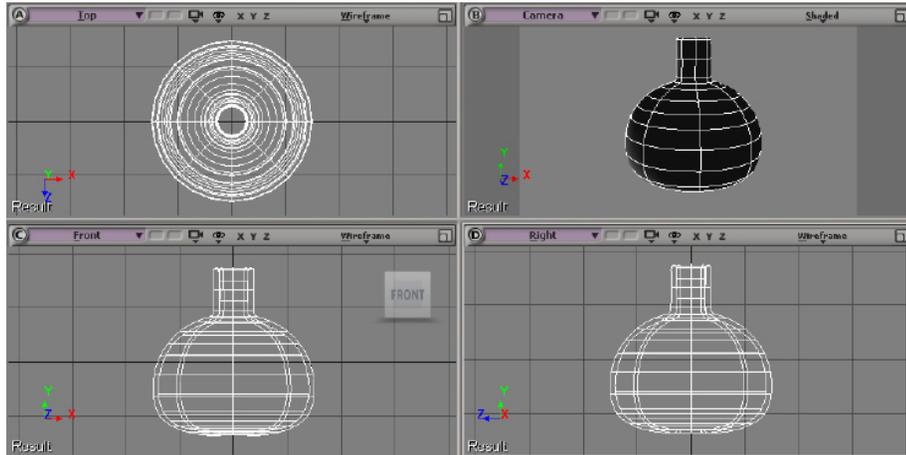


Figure 3-19 The shape of the pot displayed in viewports

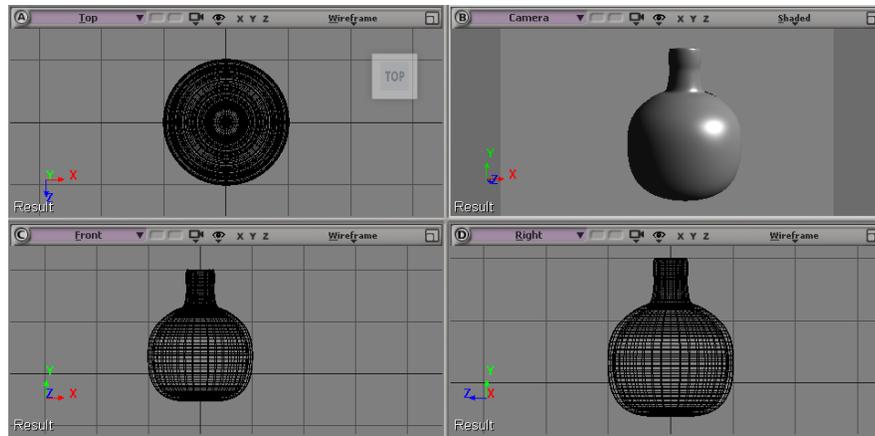


Figure 3-20 The color of the pot changed using the *Invert Normals* option

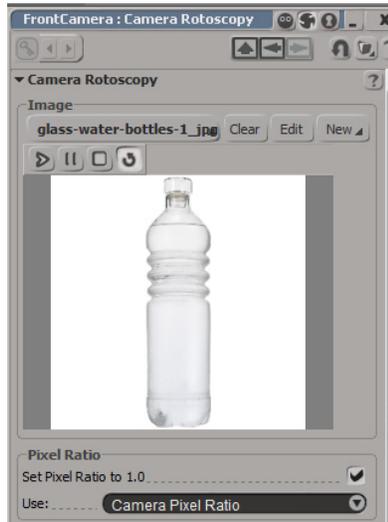


Figure 3-21 The image of the bottle displayed in the **Front Camera : Camera Rotoscopy** property editor

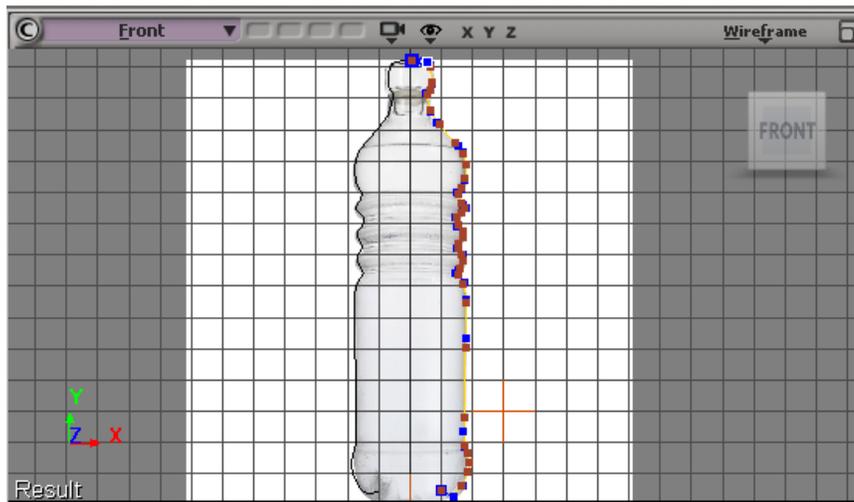


Figure 3-22 The outline of bottle created in the **Front** viewport

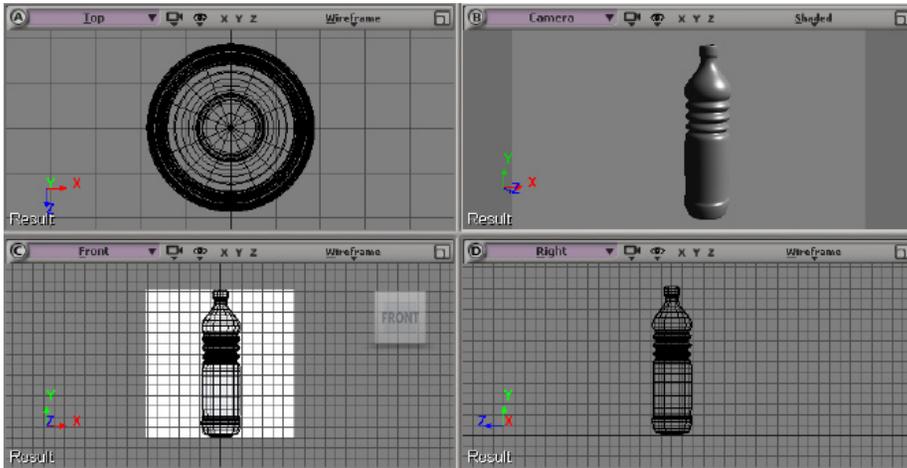


Figure 3-23 The model of bottle displayed in viewports

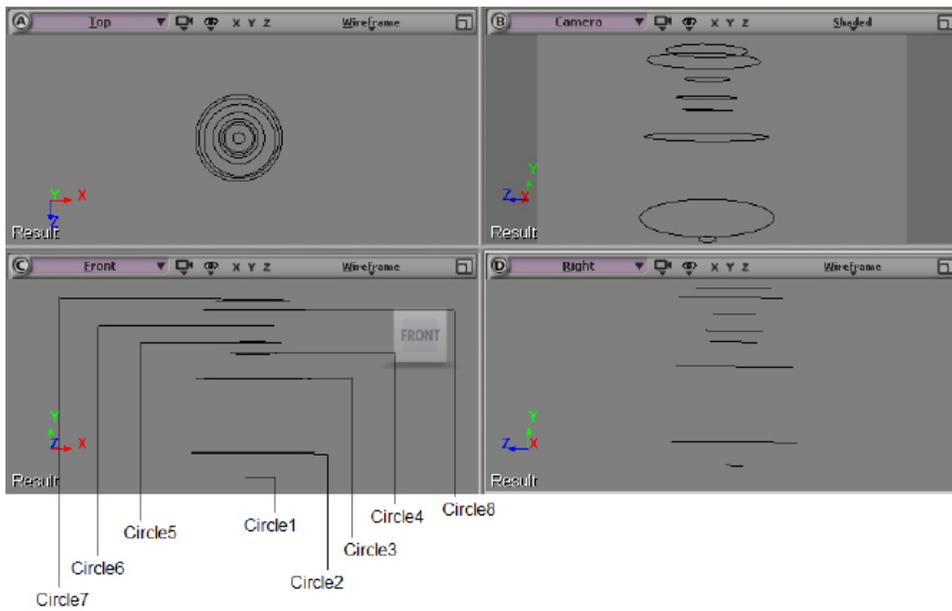


Figure 3-24 Circles transformed and scaled in viewports

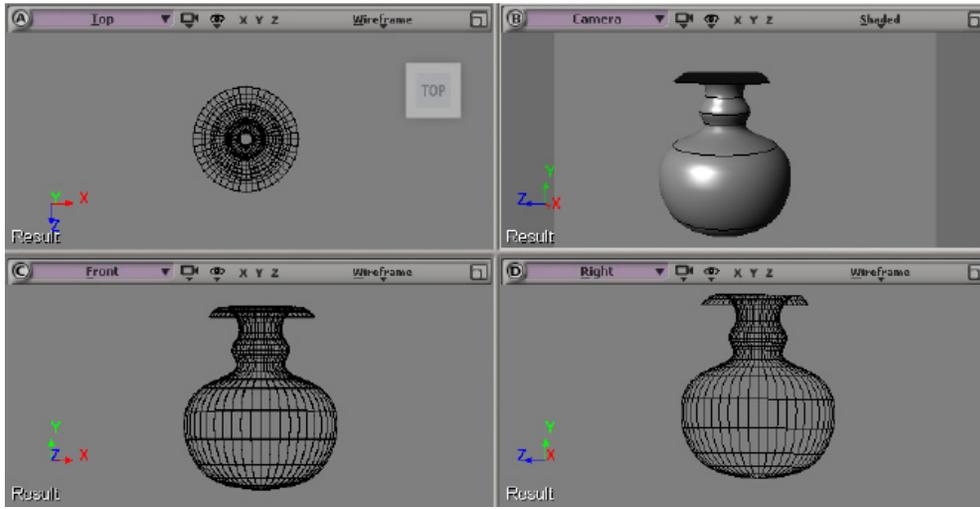


Figure 3-25 The lofted 3d model of vase displayed in viewports

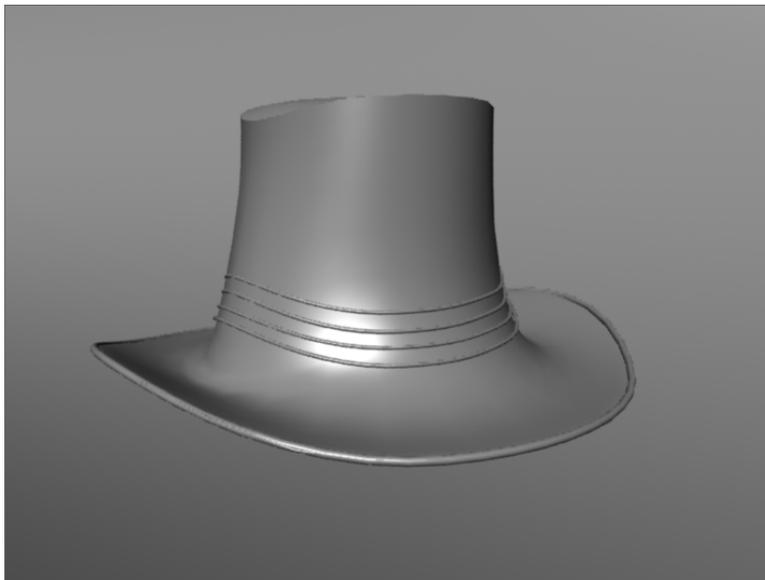


Figure 3-26 The model of hat

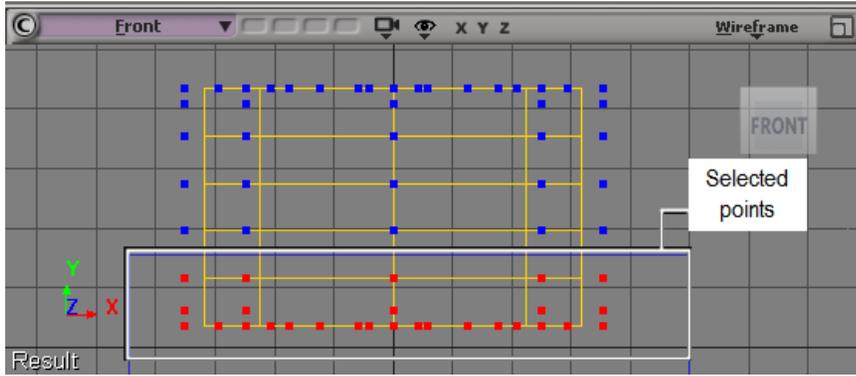


Figure 3-27 Points selected in the Front viewport

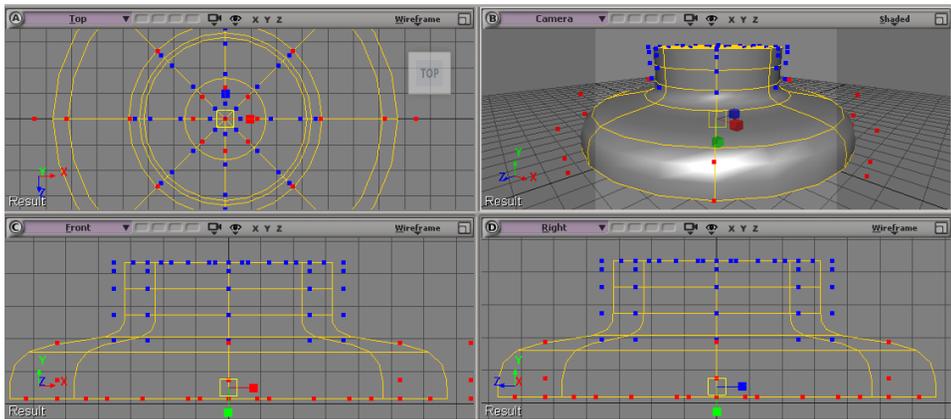


Figure 3-28 The points scaled uniformly

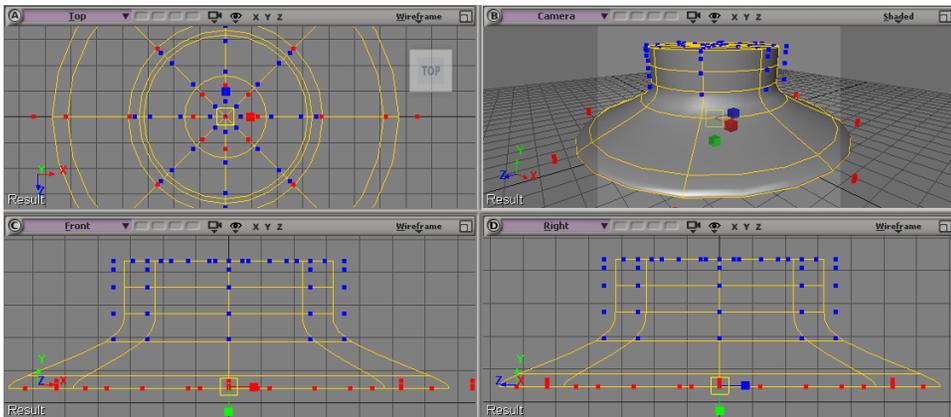


Figure 3-29 Selected points scaled along the Y axis

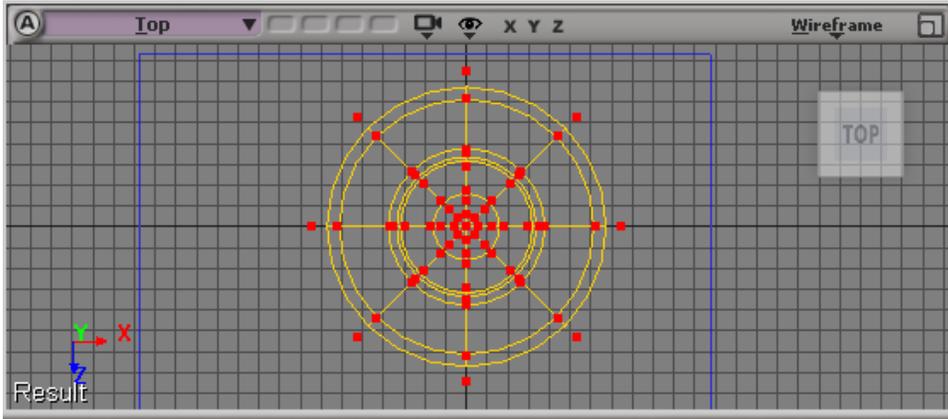


Figure 3-30 Points selected in the Top viewport

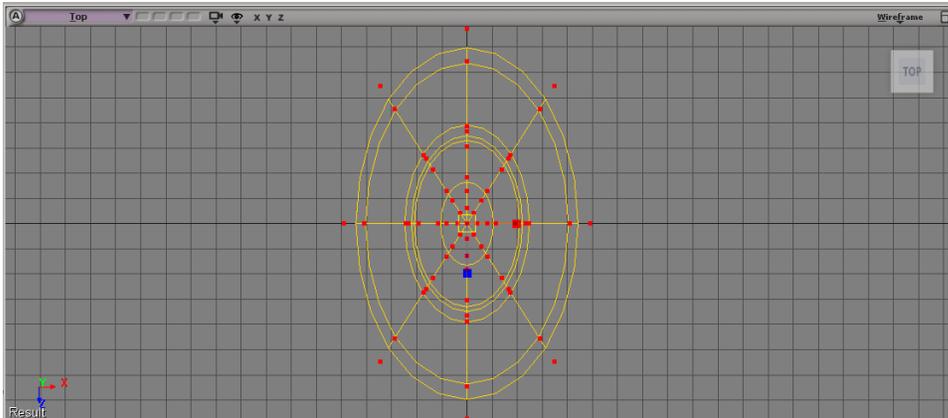


Figure 3-31 Selected points scaled along the Z axis

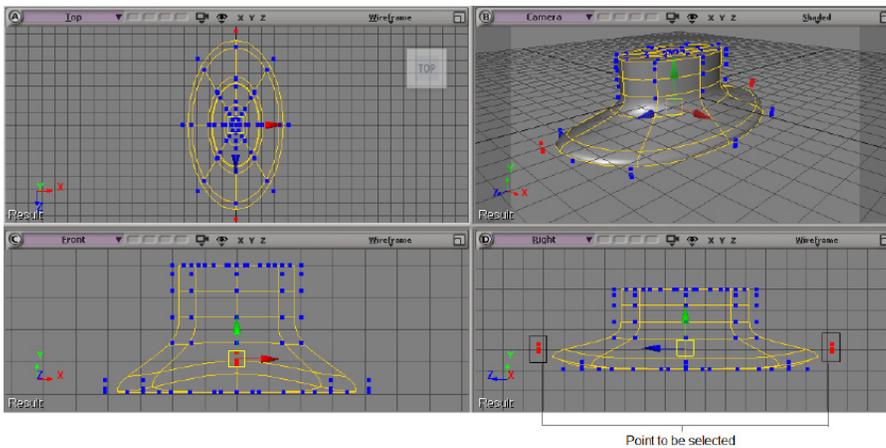


Figure 3-32 Moving the selected points along the Y axis

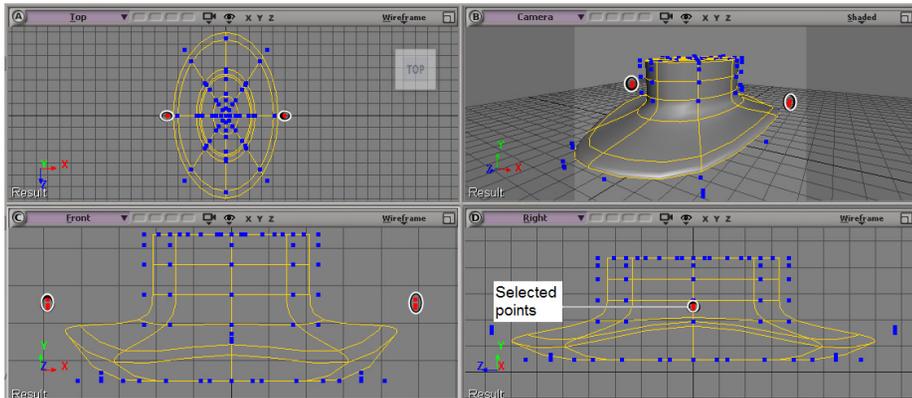


Figure 3-33 The selected points moved up along the Y axis

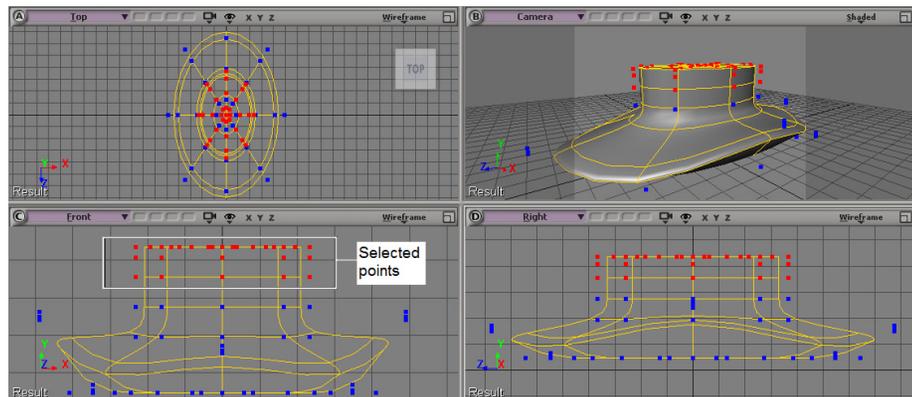


Figure 3-34 Points selected in the Front viewport

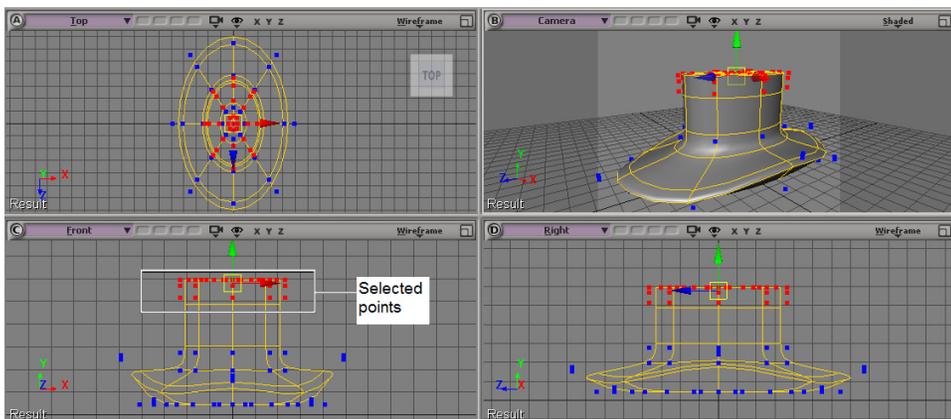


Figure 3-35 Moving the points up along the Y direction

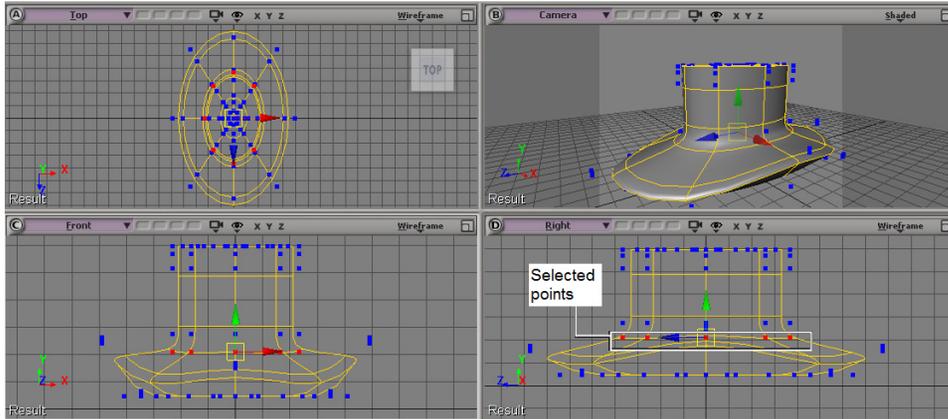


Figure 3-36 Points selected in the Right viewport

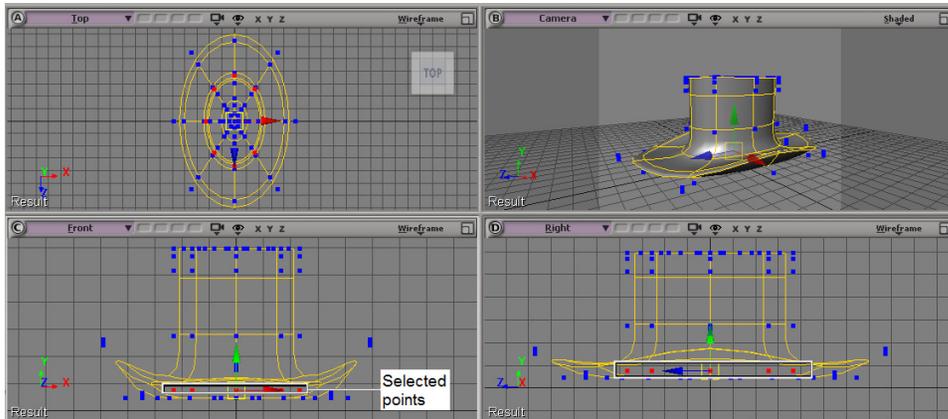


Figure 3-37 Moving the points down along the Y direction

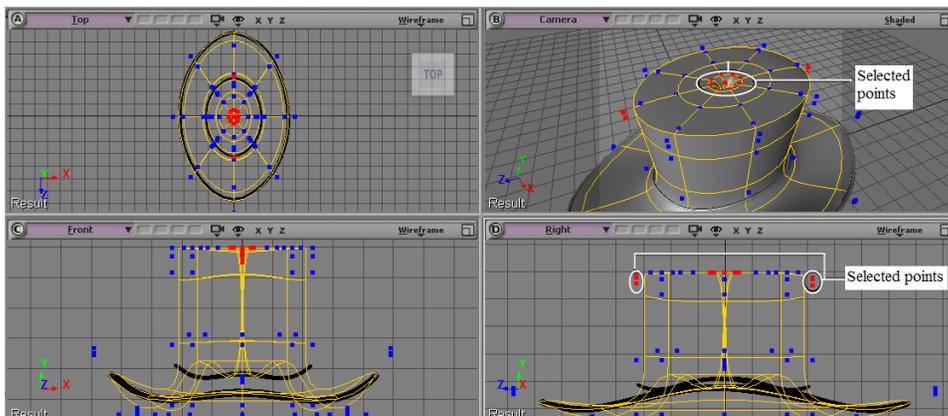


Figure 3-38 Points selected in the Top and Right viewports

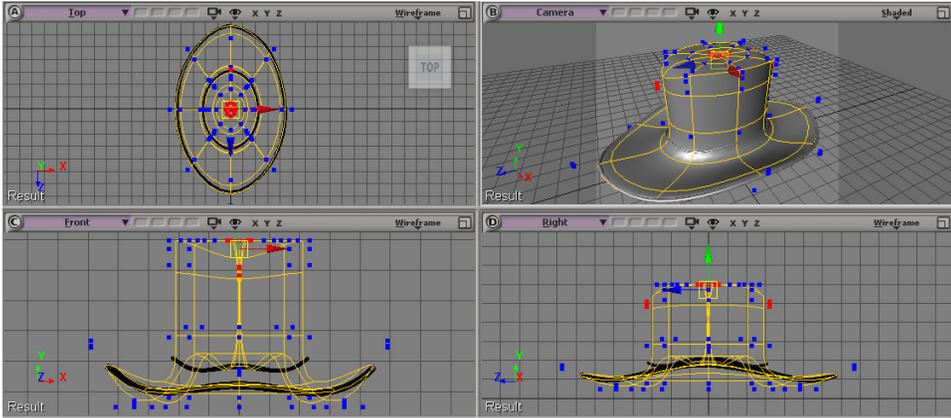


Figure 3-39 Moving the points down along the Y direction

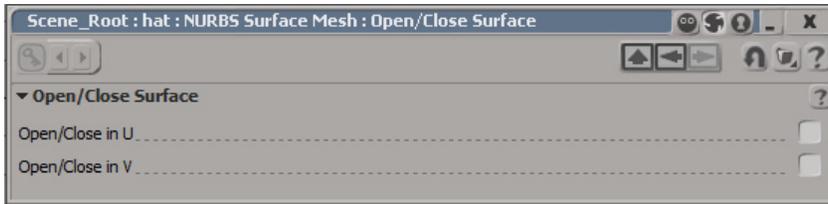


Figure 3-40 The Scene_Root : hat : NURBS Surface Mesh : Open/Close Surface property editor

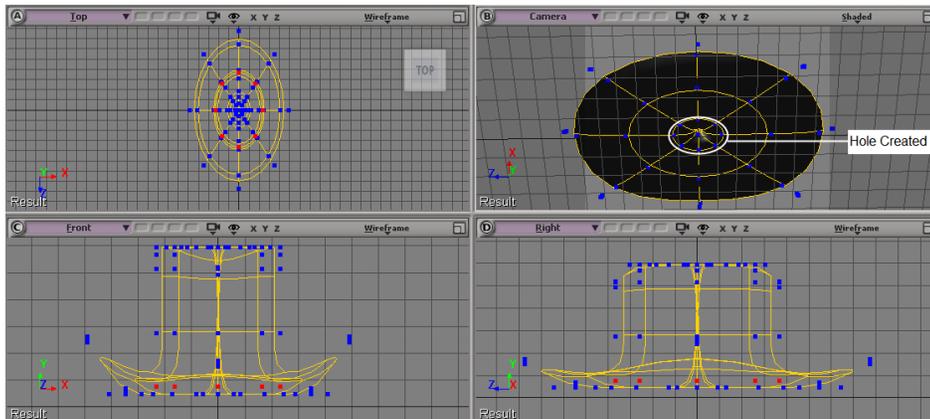


Figure 3-41 The hole created in the selected area of hat

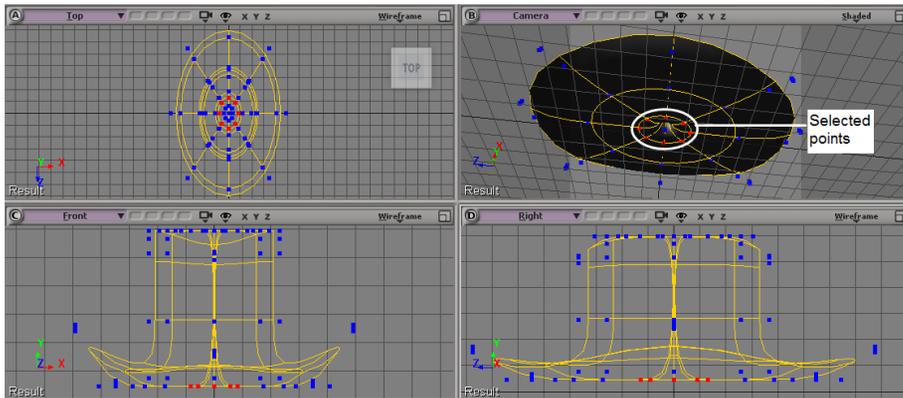


Figure 3-42 Selecting points in the Camera viewport

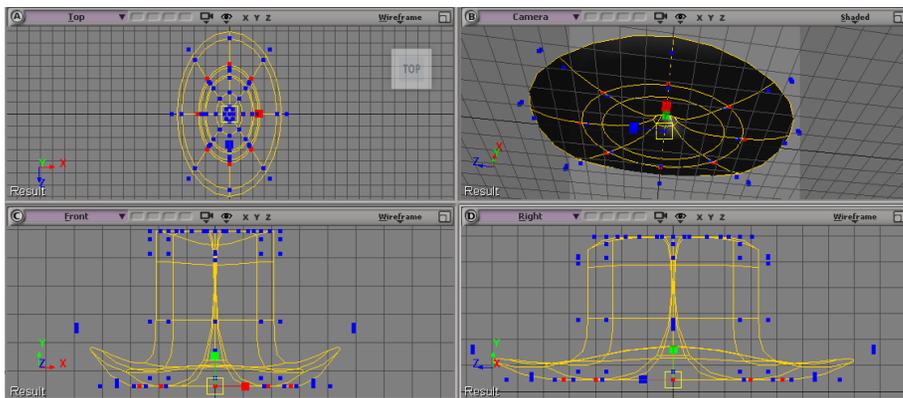


Figure 3-43 The selected points scaled

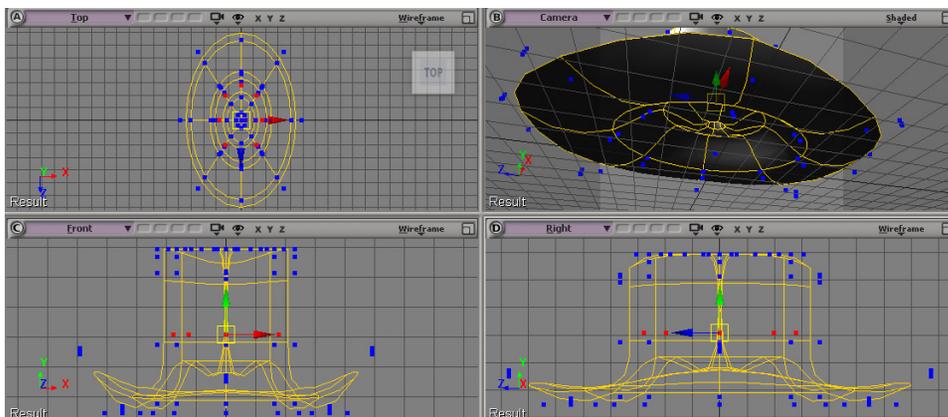


Figure 3-44 Moving the points up along the Y direction

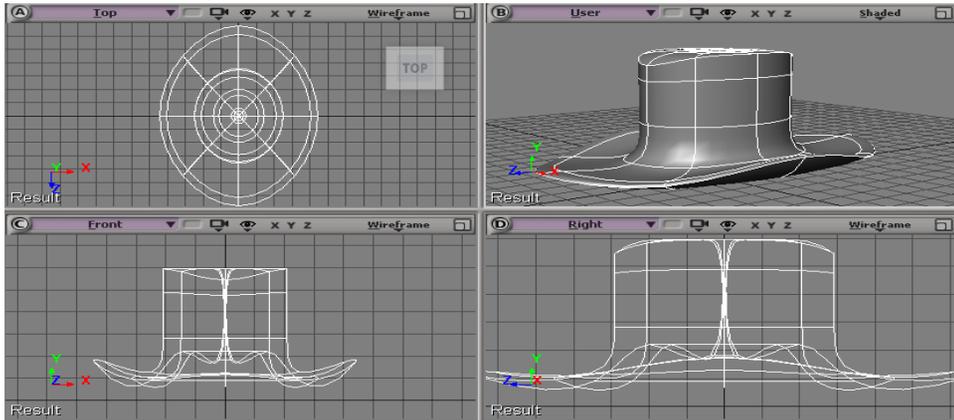


Figure 3-45 The hat model in viewports

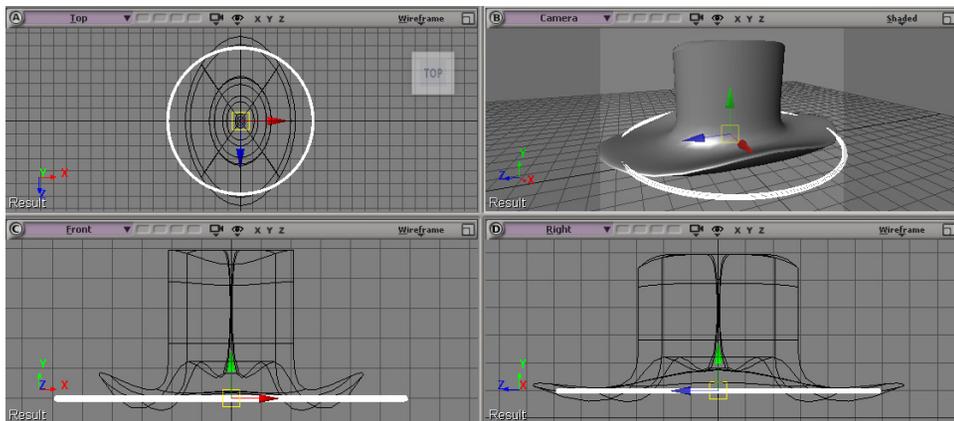


Figure 3-46 Moving the torus up along the Y axis

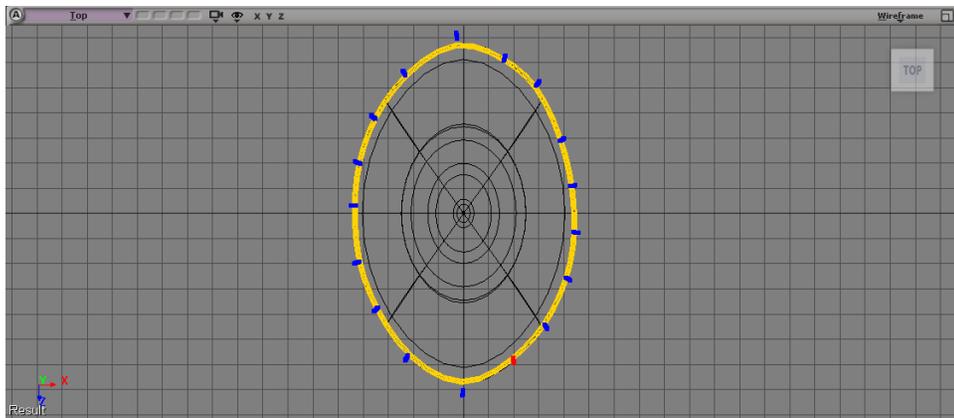


Figure 3-47 The points to be scaled

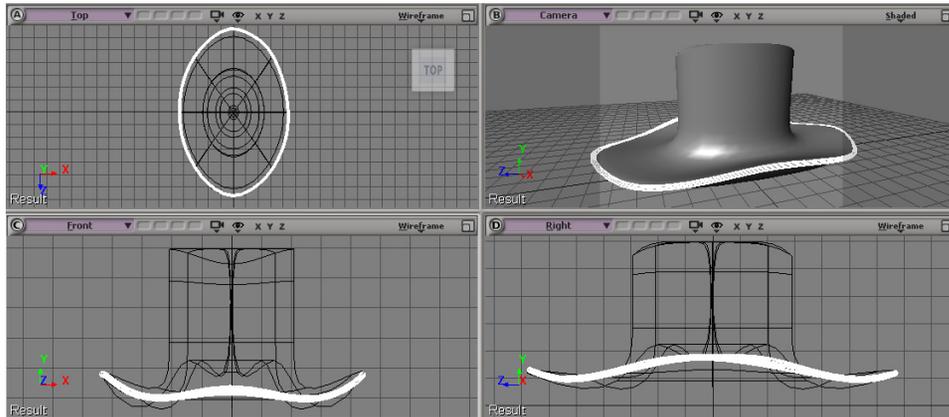


Figure 3-48 Modifying the shape of the torus

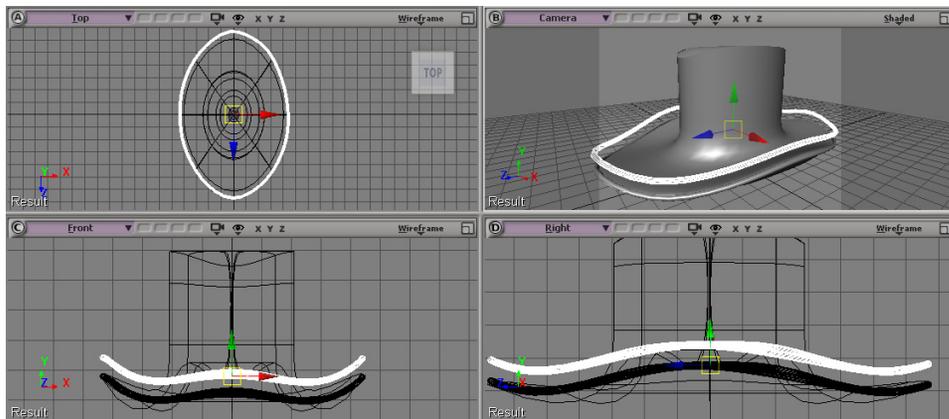


Figure 3-49 Moving the torus1 along the Y axis

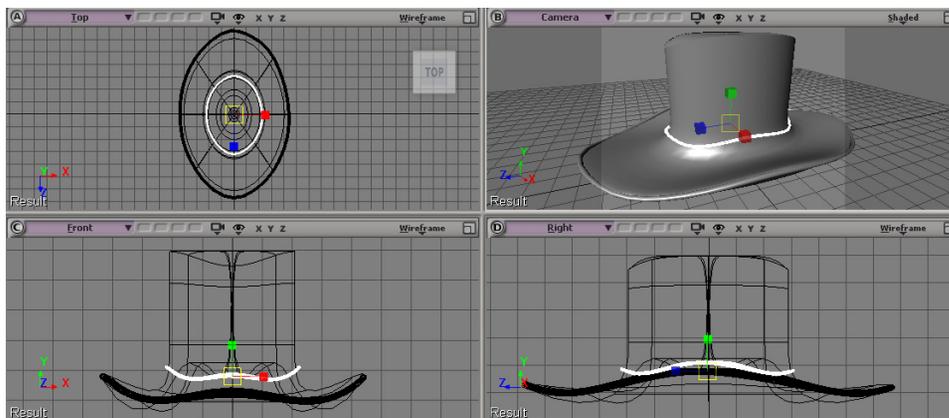


Figure 3-50 Scaling torus1 in the Camera viewport

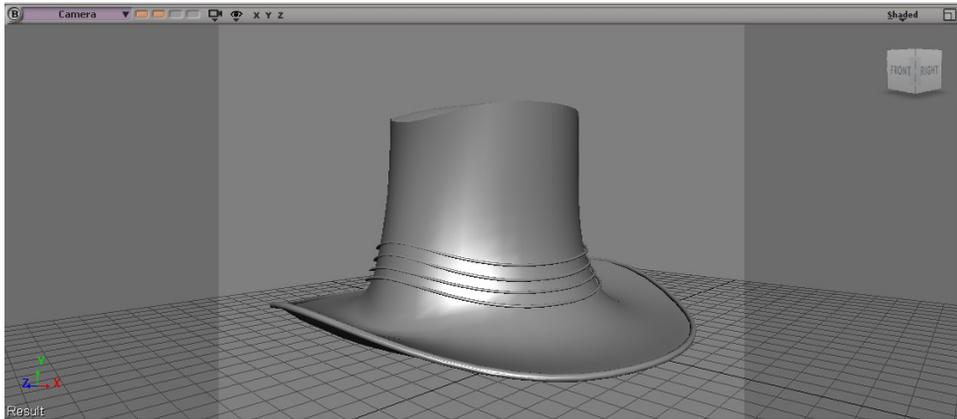


Figure 3-51 The final output

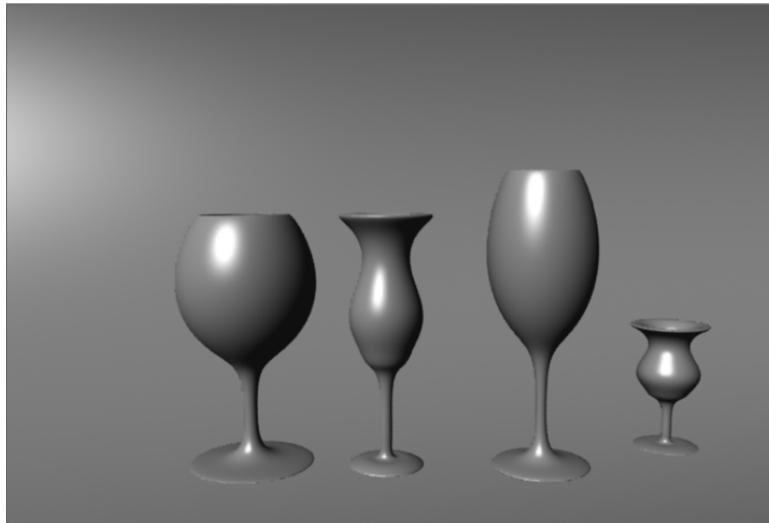


Figure 3-52 The models of wine glass

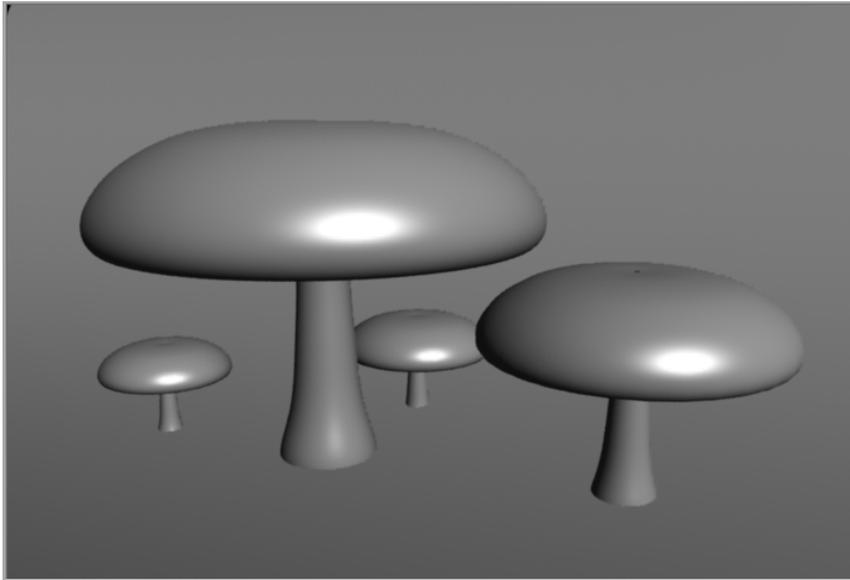


Figure 3-53 The models of mushroom



Figure 3-54 The model of bulb



Figure 3-55 The model of dining table and chairs

Chapter 4

Texturing

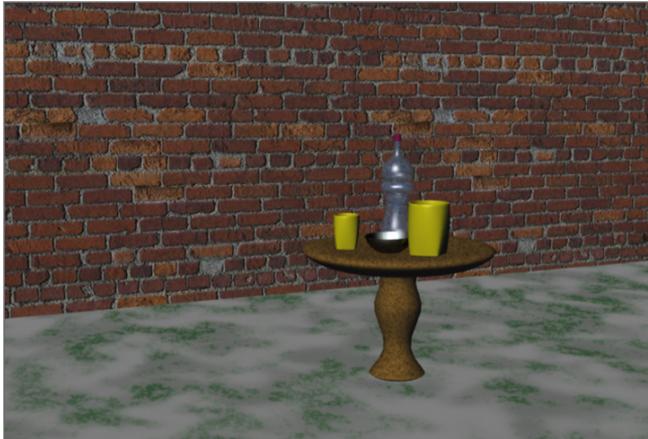


Figure 4-1 The final rendered output

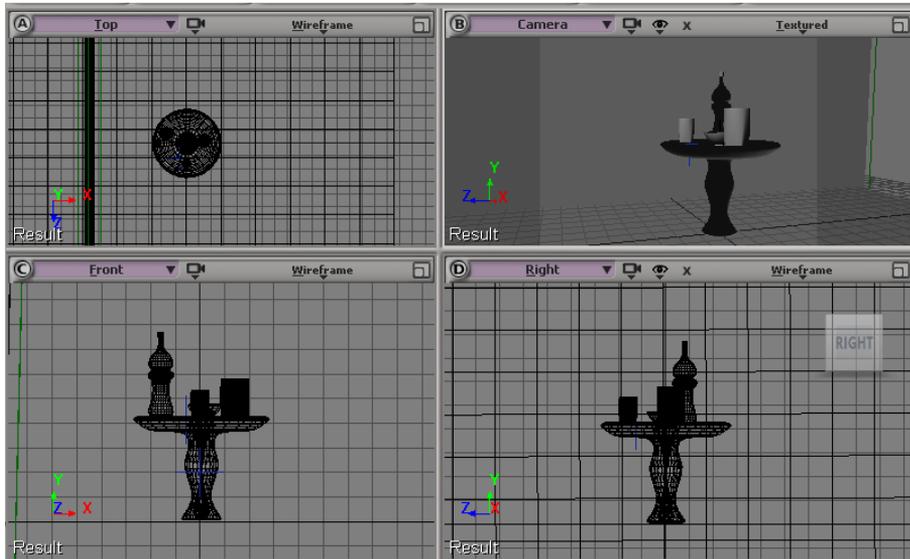


Figure 4-2 Scene displayed in viewports

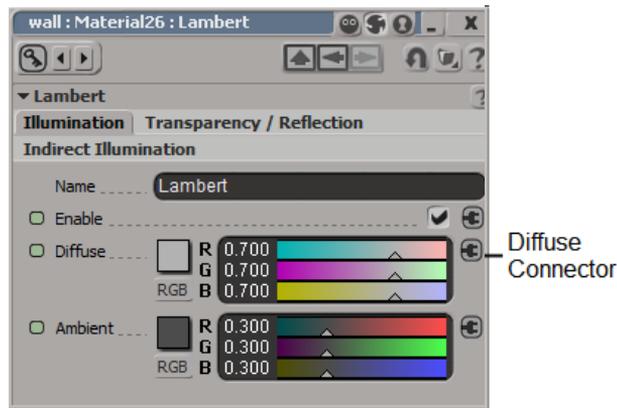


Figure 4-3 The wall : Material# : Lambert property editor



Figure 4-4 Partial view of the Material # : Image property editor

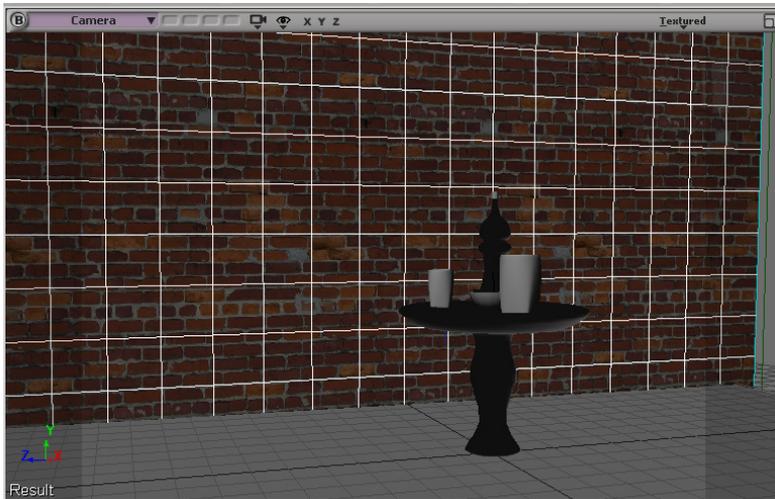


Figure 4-5 Brick texture displayed in the Camera viewport

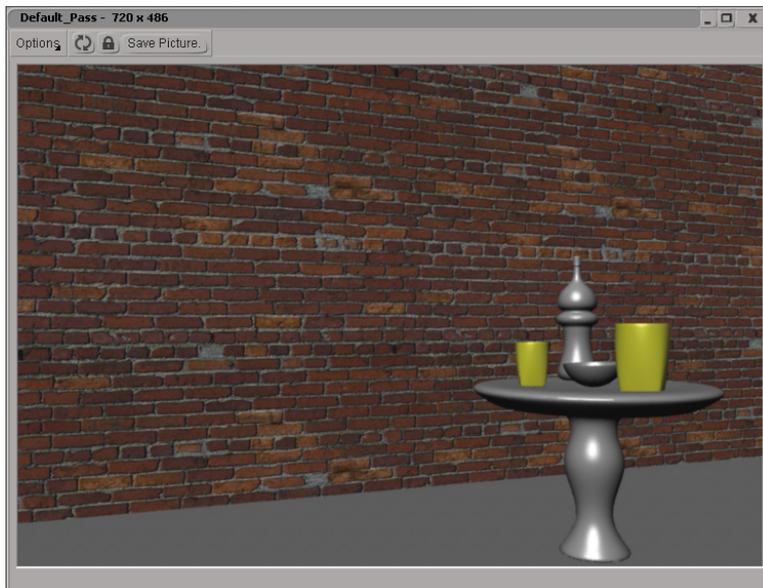


Figure 4-6 The Default_Pass 720 x 486 window

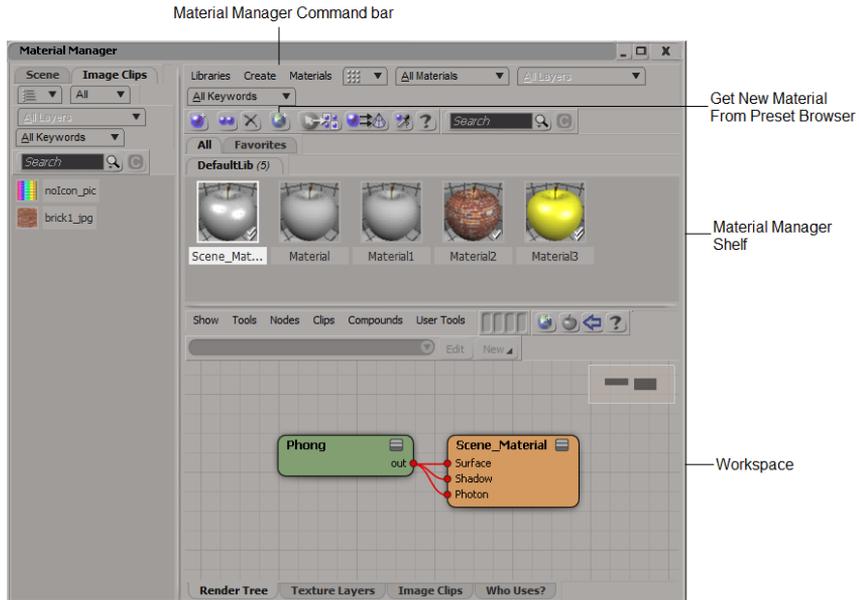


Figure 4-7 The Material Manager window

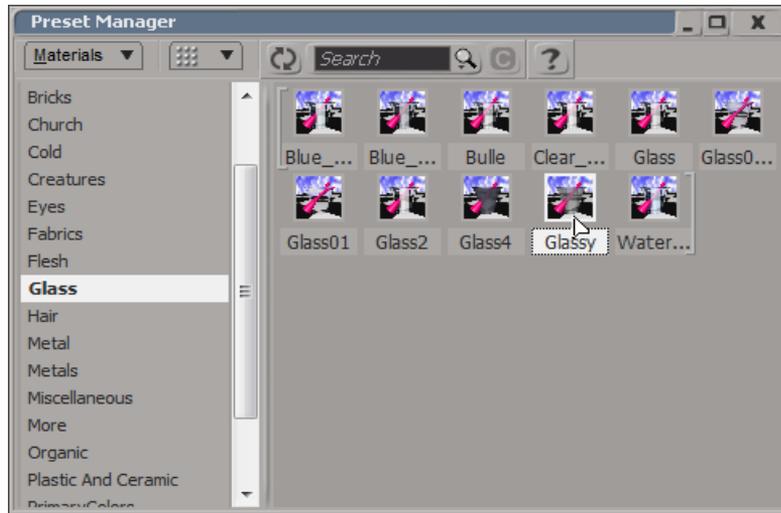


Figure 4-8 The Preset Manager window



Figure 4-9 Textured bottle with the glass material



Figure 4-10 The platinum metal applied on the bowl

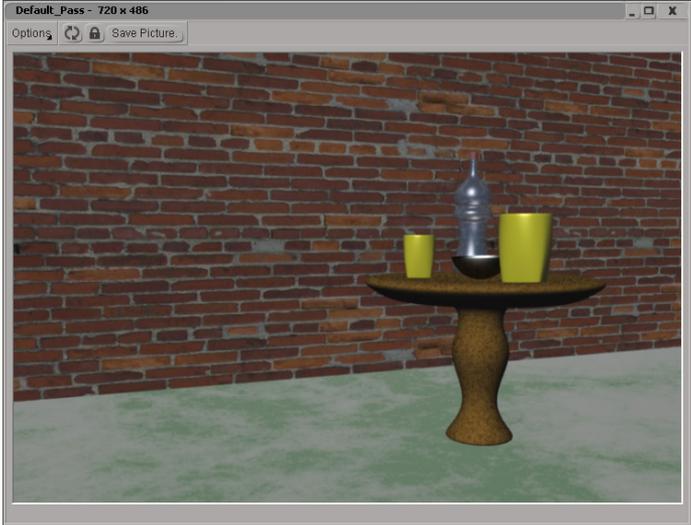


Figure 4-11 The final rendered image



Figure 4-12 The final output of the textured scene

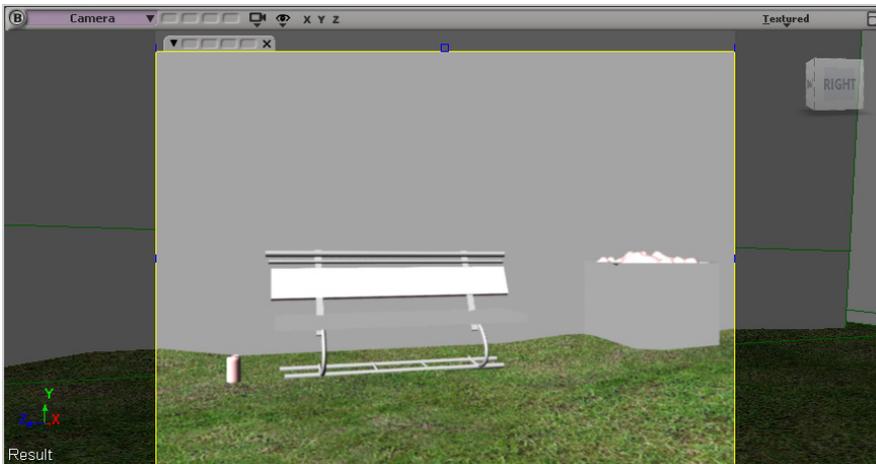


Figure 4-13 Displaying the rendered image of the grass.

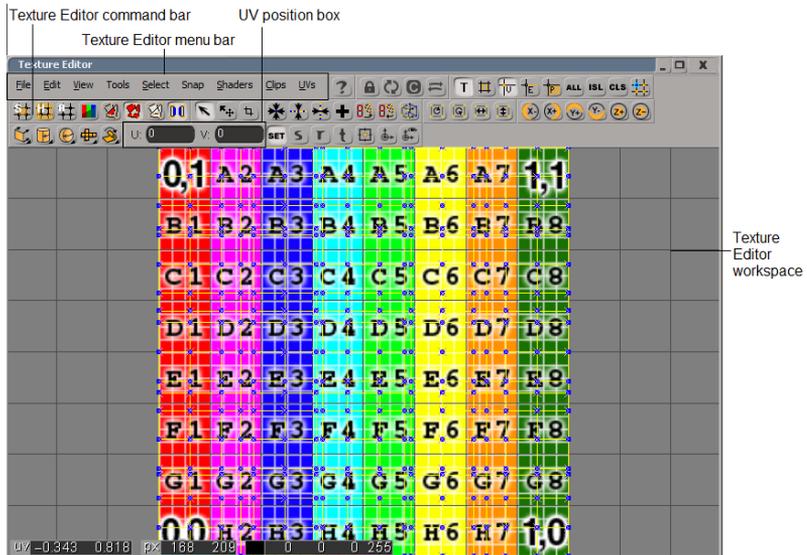


Figure 4-14 The Texture Editor

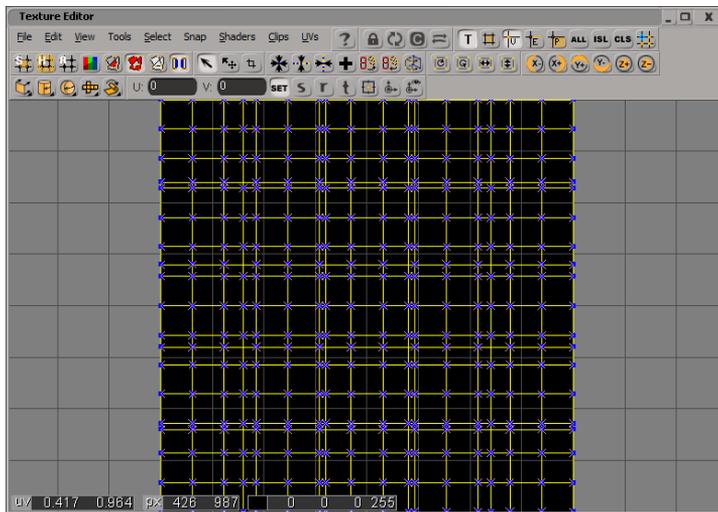


Figure 4-15 The black colored background displayed in the Texture Editor

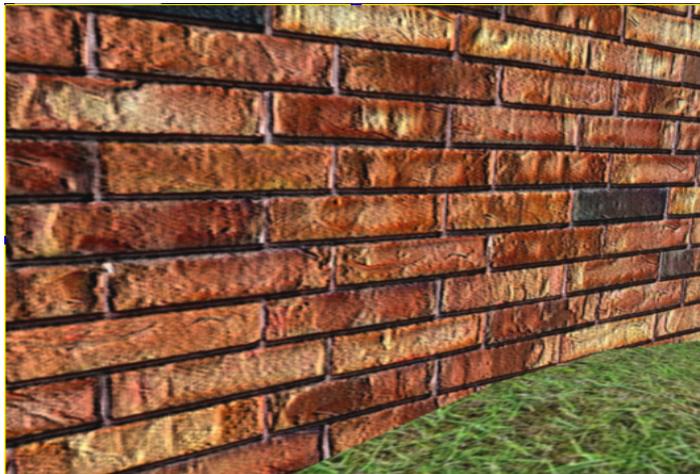


Figure 4-16 The textured wall with bumps on it

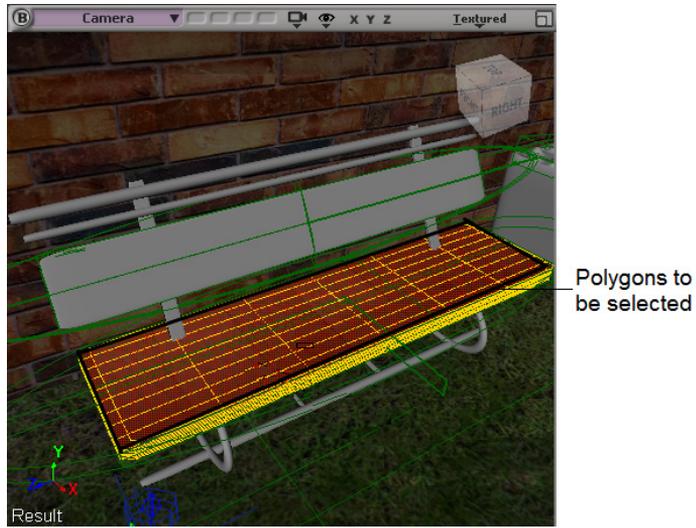


Figure 4-17 Selecting top polygons of the seat

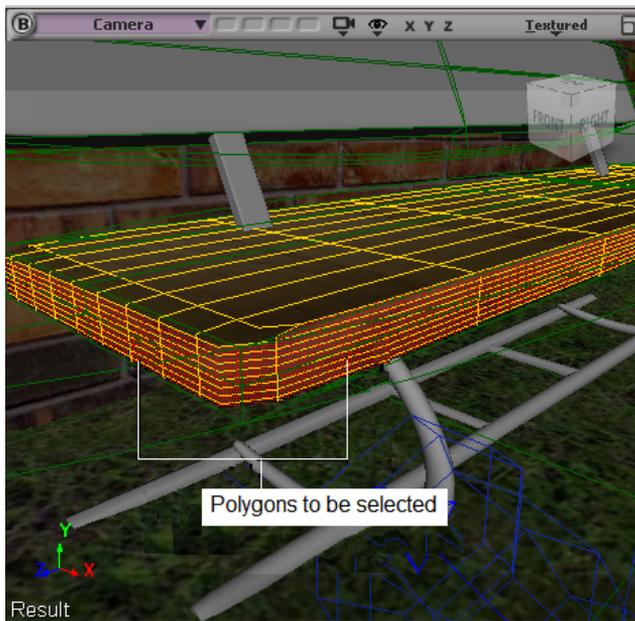


Figure 4-18 Selecting side polygons of the seat



Figure 4-19 The final output of the textured bench

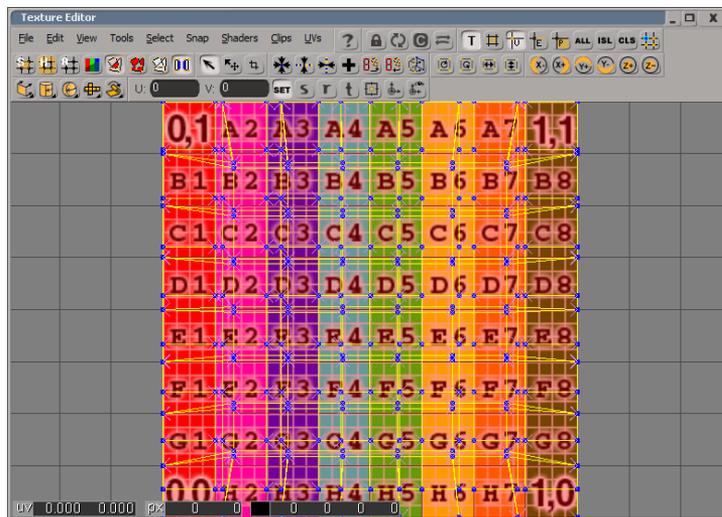


Figure 4-20 The Texture Editor with UVs

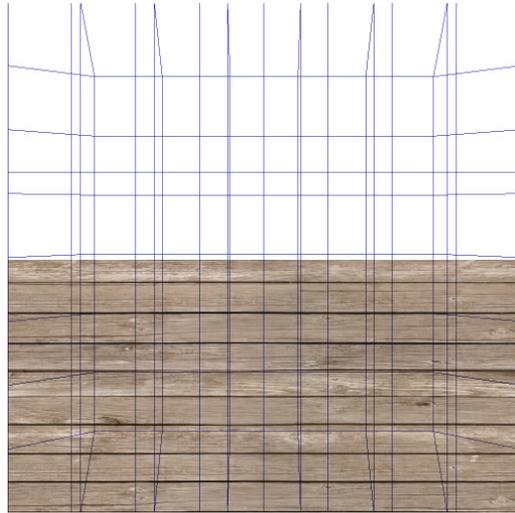


Figure 4-21 Adjusting the **Layer 1** in the Photoshop file



Figure 4-22 Adjusting the **Layer 1 copy**



Figure 4-23 The final textured image of the garbage



Figure 4-24 Adjusting image and fit it in center



Figure 4-25 Rectangular selection box at the top and bottom empty area



Figure 4-26 The empty area filled with blue color

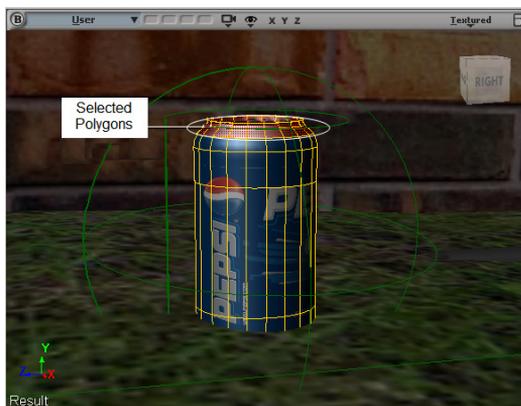


Figure 4-27 Selecting the top polygons in the Camera viewport



Figure 4-28 Textured image of can



Figure 4-29 The final rendered output of the scene



Figure 4-30 The textured pot

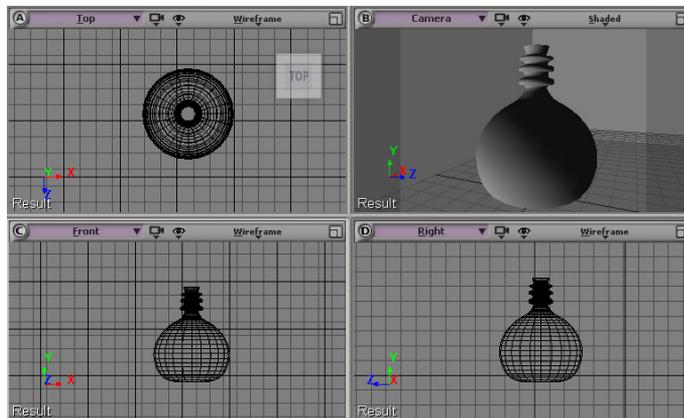


Figure 4-31 The pot displayed in viewports

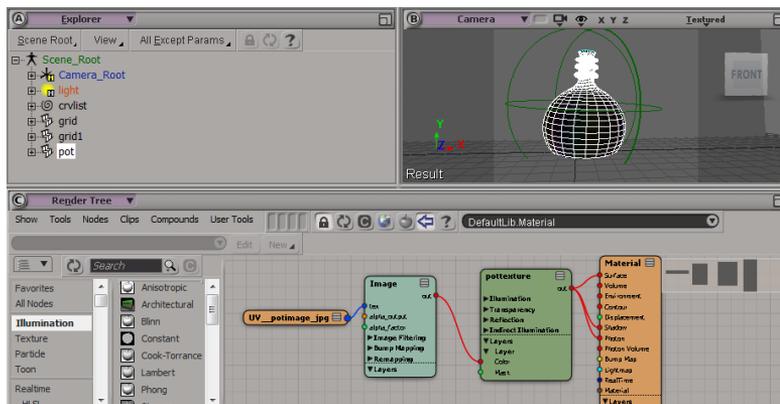


Figure 4-32 The Explorer window, Render Tree window and Camera viewport

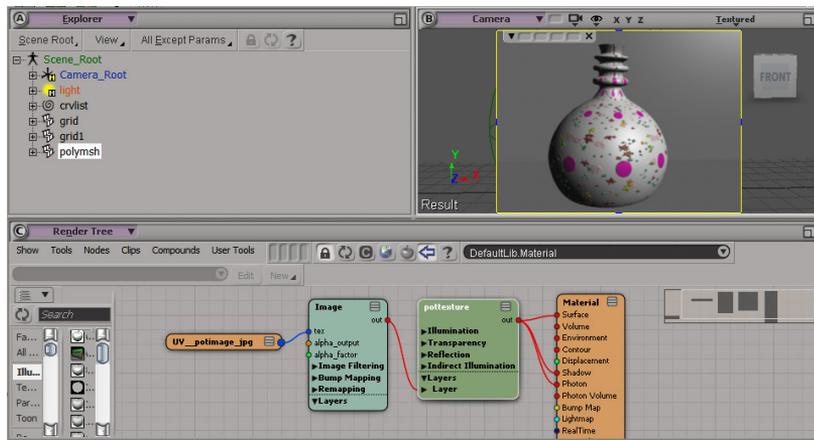


Figure 4-33 The texture visible on the pot

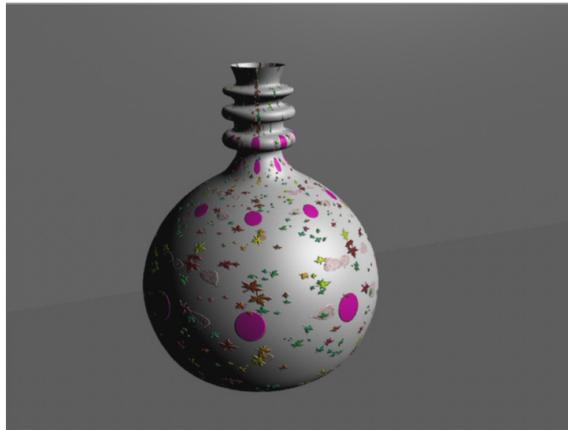


Figure 4-34 The final rendered output of the pot

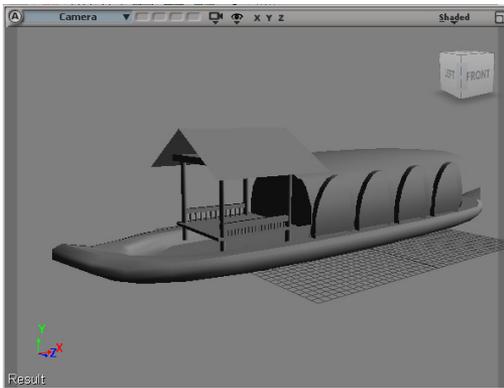


Figure 4-35 The house boat model before applying the textures



Figure 4-36 The house boat model after applying the textures

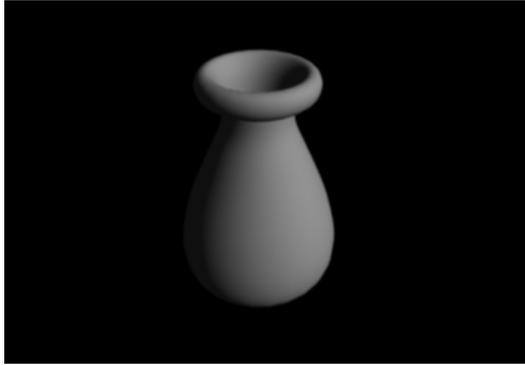


Figure 4-37 The pot model before applying the texture

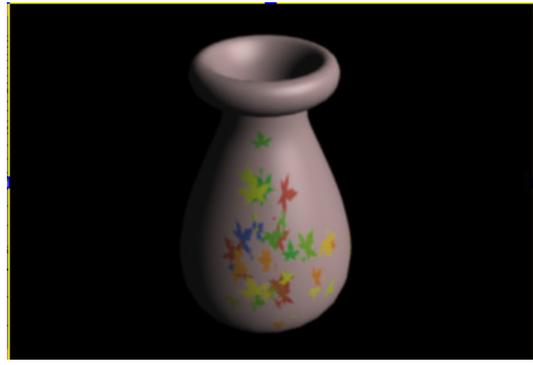


Figure 4-38 The pot model after applying the texture

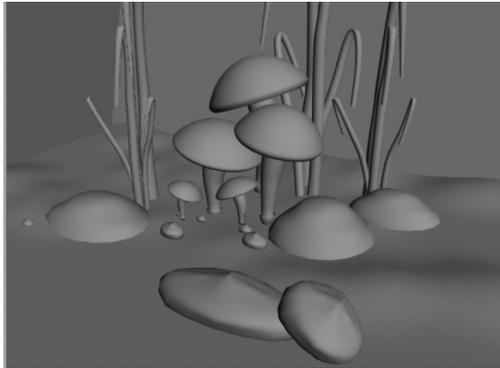


Figure 4-39 The scene before applying the textures



Figure 4-40 The scene after applying the textures

Chapter 5

Introduction to Lighting

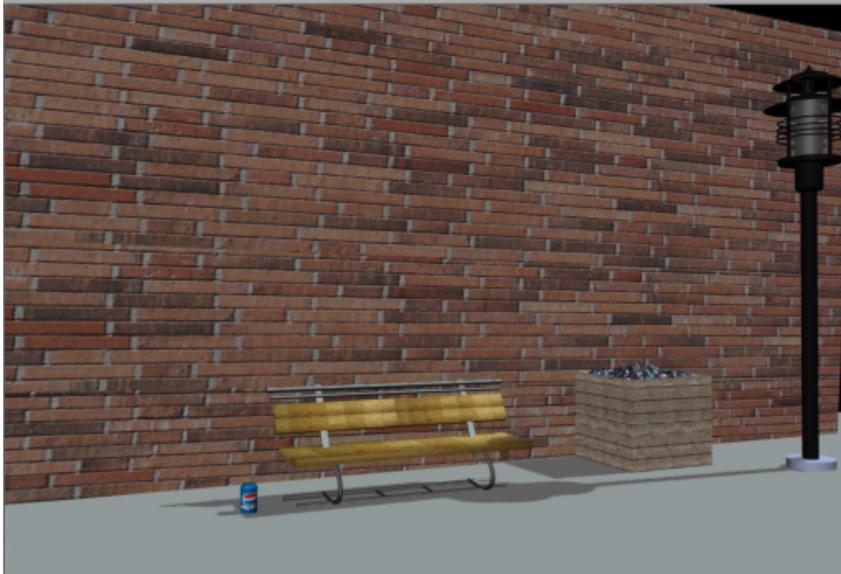


Figure 5-1 A scene lit by the Infinite light



Figure 5-2 A scene illuminated using a Point light

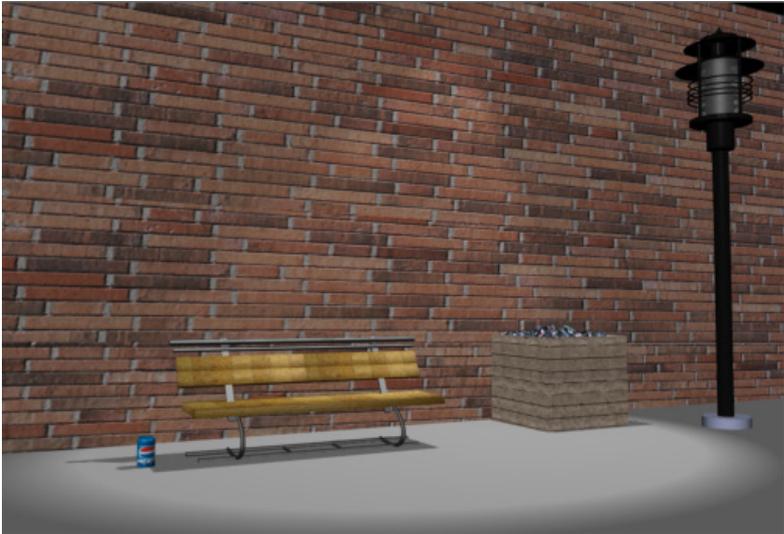


Figure 5-3 A scene lit by a Spot light



Figure 5-4 A scene lit by the Light Box light



Figure 5-5 A scene lit by the Neon light



Figure 5-6 The scene illuminated using studio light setup

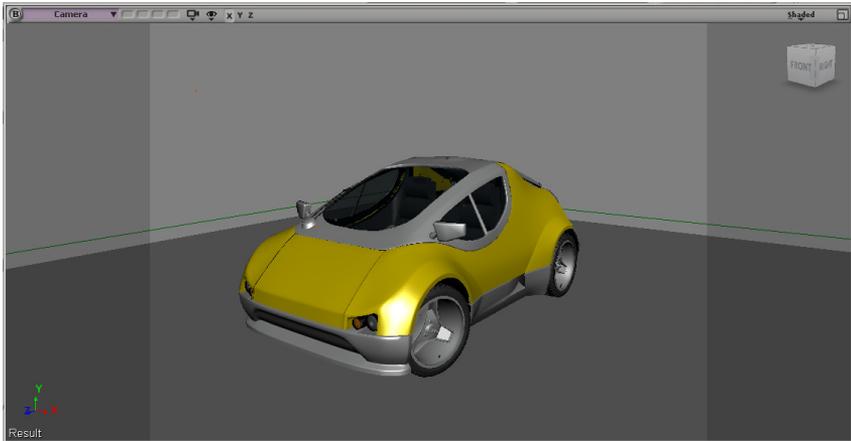


Figure 5-7 The c05_tut1_start file displayed in the Camera viewport

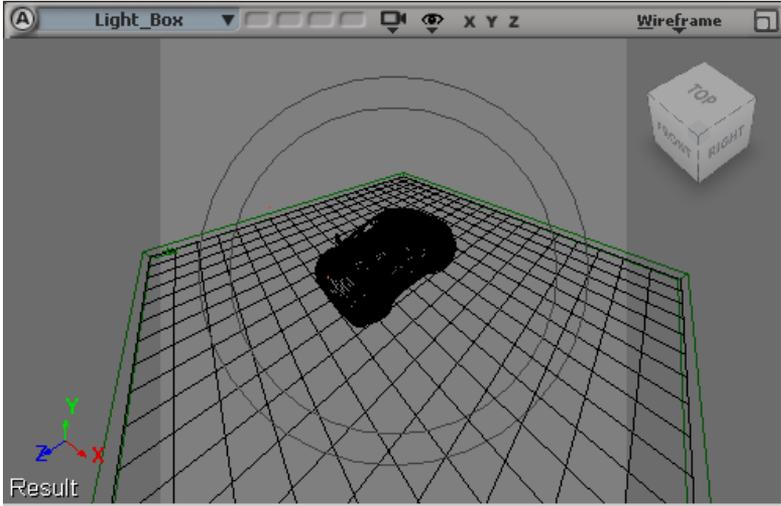


Figure 5-8 Setting the focus view of the Light_Box light in viewports

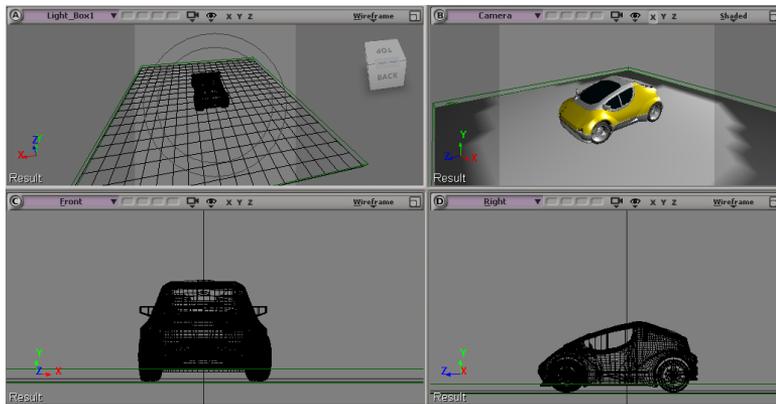


Figure 5-9 Alignment of the Light_Box1 of the car

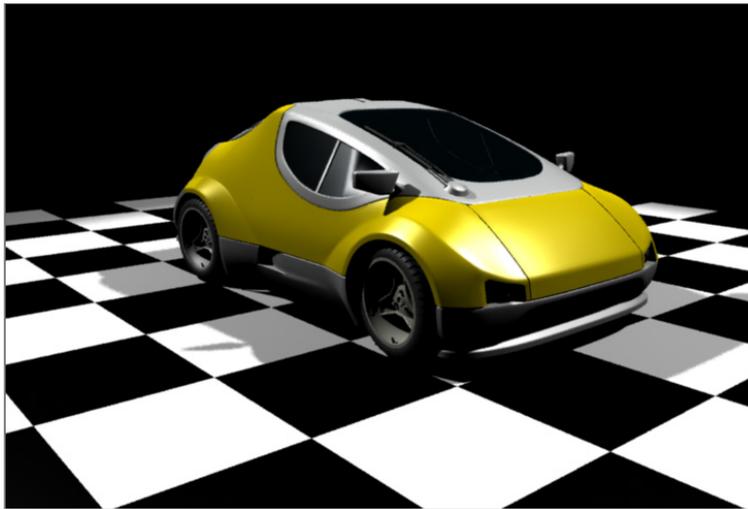


Figure 5-10 The rendered image of the car

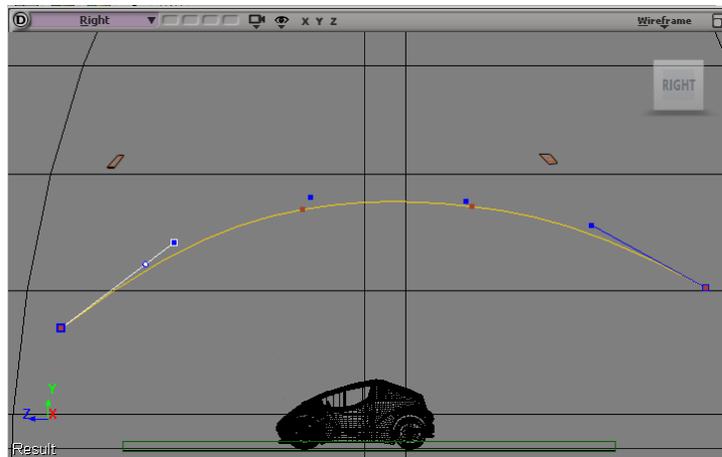


Figure 5-11 The curve drawn below the lights

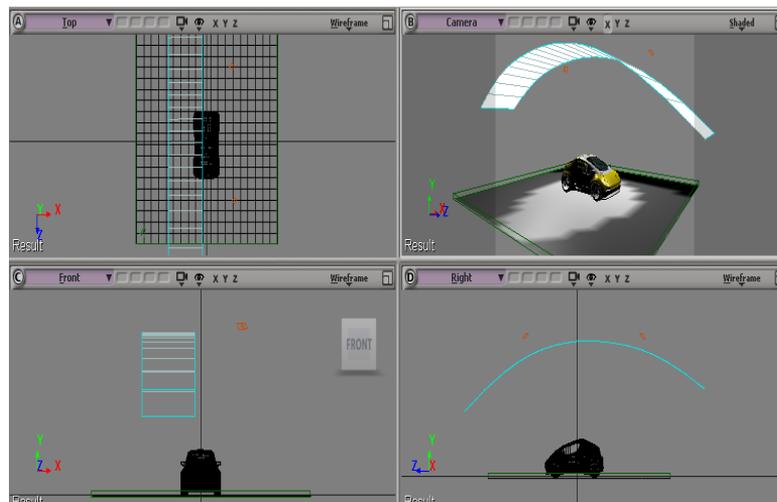


Figure 5-12 Moving polymsh by using Translate Tool

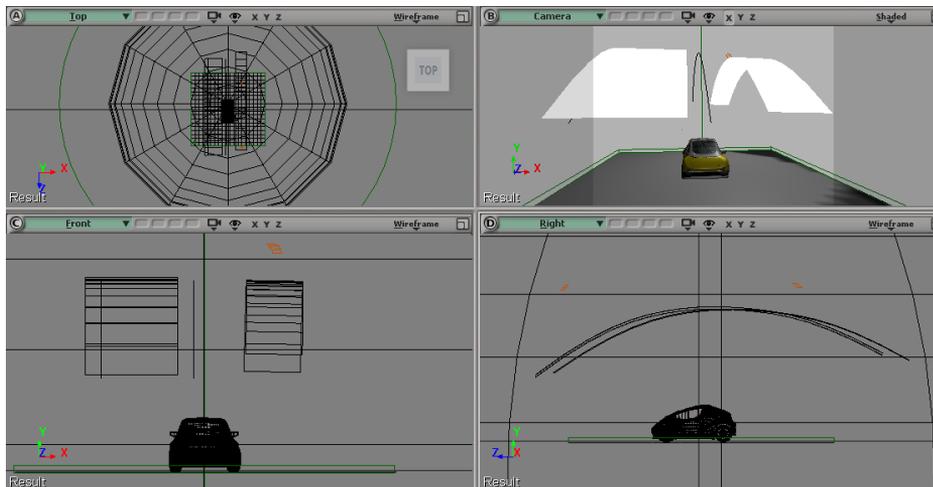


Figure 5-13 Scaling down polymsh1

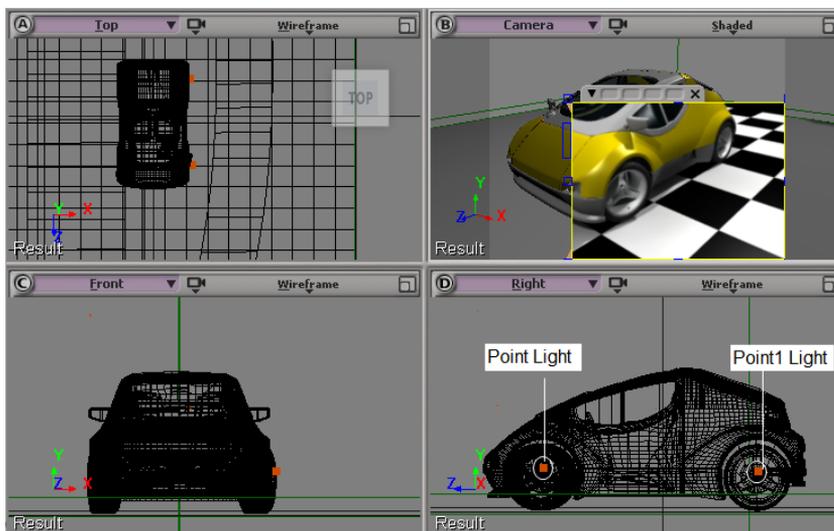


Figure 5-14 Placement of the point lights and render view in the Camera viewport

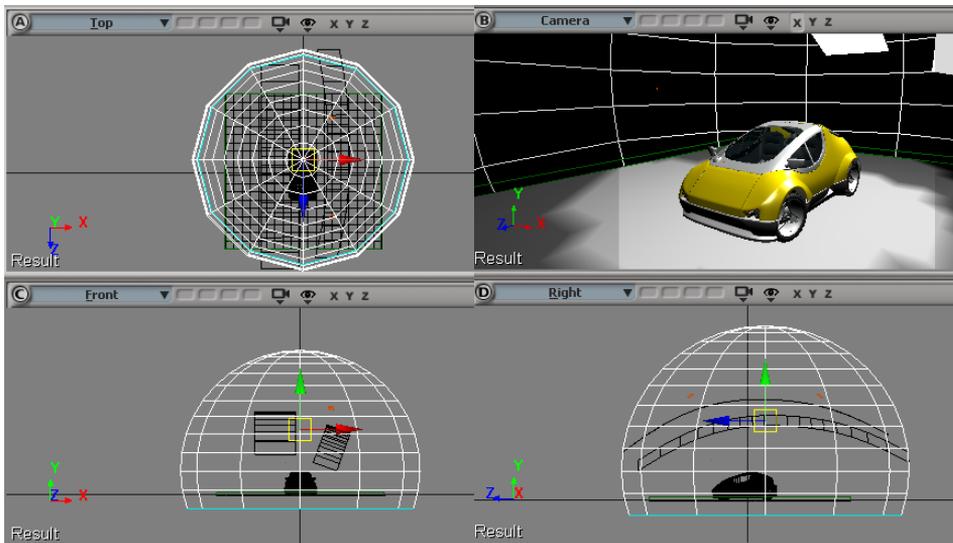


Figure 5-15 Aligning the sphere in all viewports

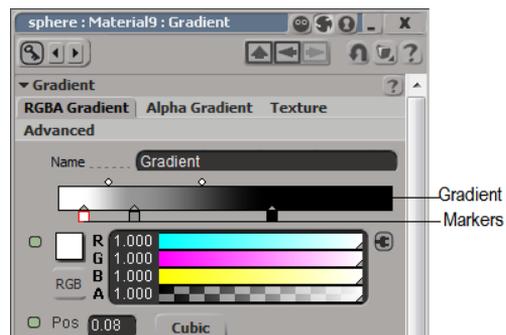


Figure 5-16 Partial image of the *sphere : Material# : Gradient* property editor

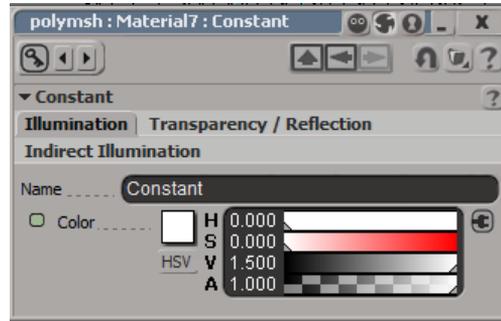


Figure 5-17 The dialog box showing the **RGB** button changes to **HSV**

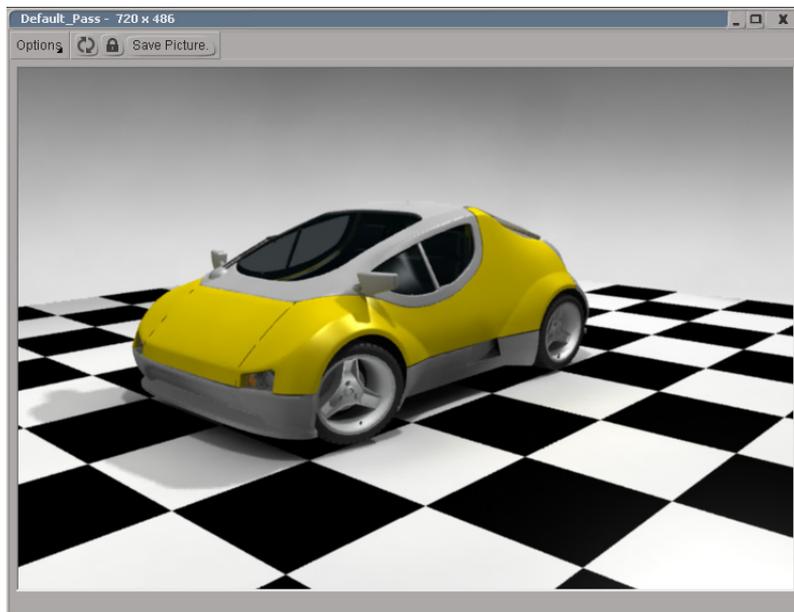


Figure 5-18 The final rendered output of the scene



Figure 5-19 The final output with a volumetric light

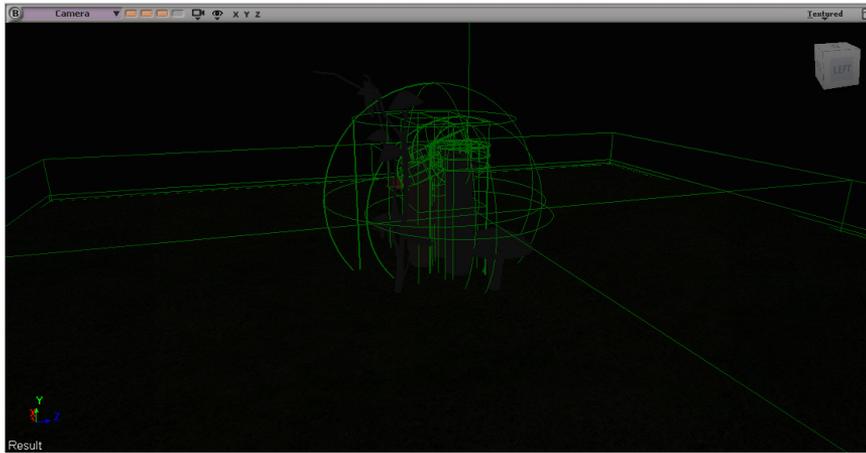


Figure 5-20 The c05_tut2_start file displayed in the Camera viewport

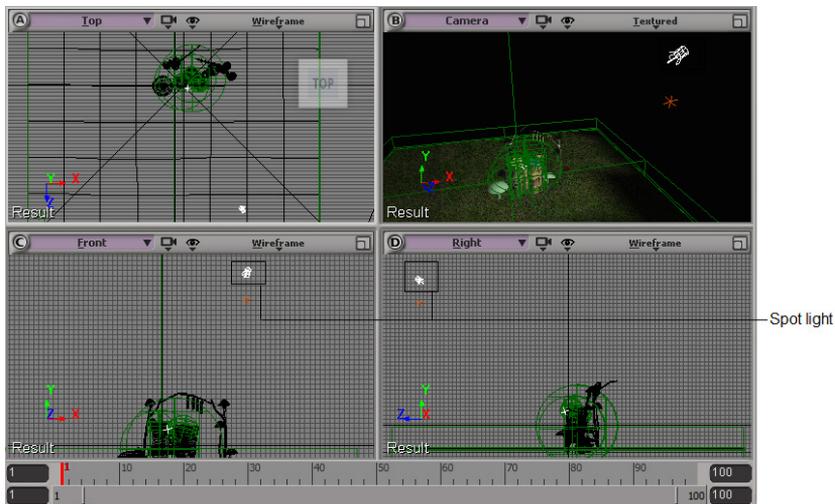


Figure 5-21 Alignment of the Spot light



Figure 5-22 The final rendered image of the scene



Figure 5-23 The final rendered output of the scene

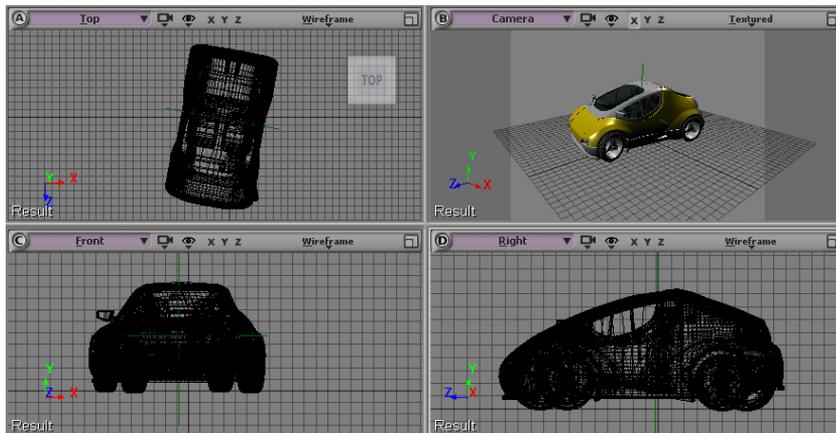


Figure 5-24 The c05_tut3_start file displayed

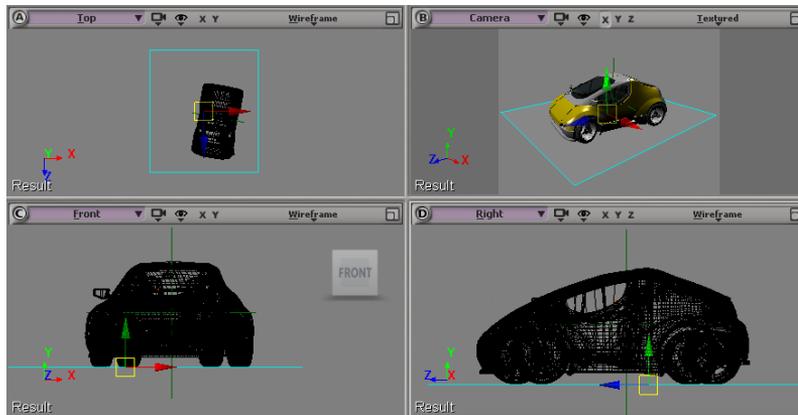


Figure 5-25 Alignment of grid in viewports

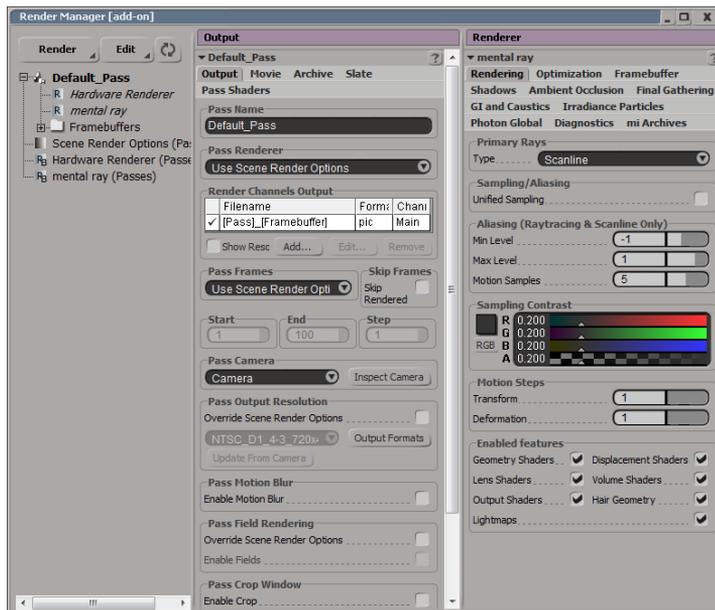


Figure 5-26 The Render Manager [add-on] property editor

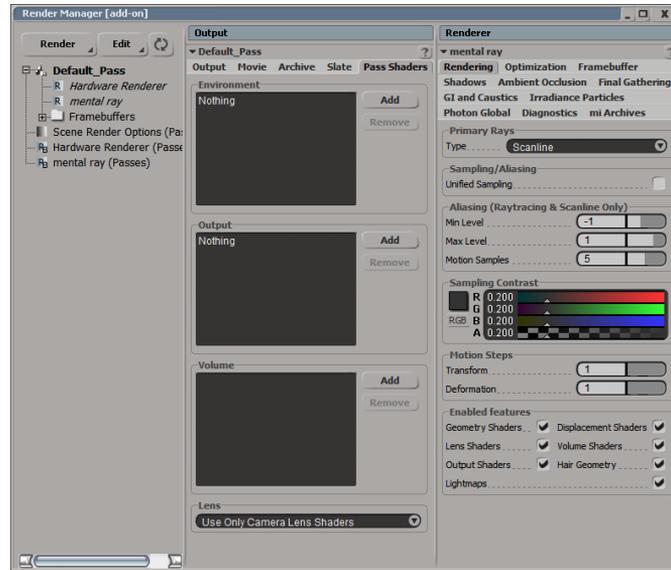


Figure 5-27 Displaying the Pass Shaders properties



Figure 5-28 The rendered view in the Camera viewport

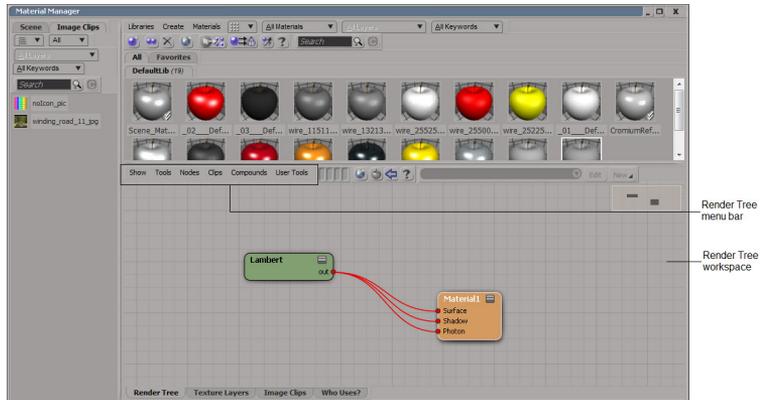


Figure 5-29 The *Lambert* and *Material#* nodes displayed in the Render Tree workspace

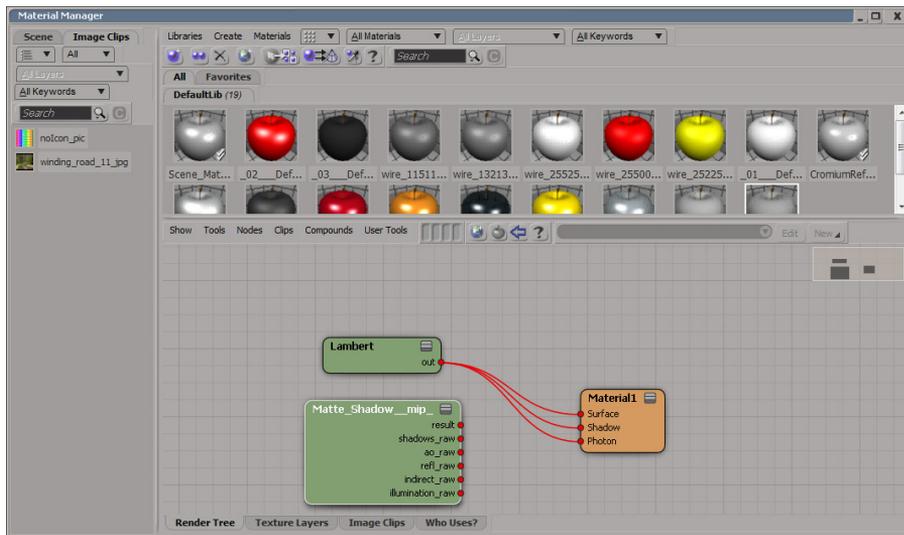


Figure 5-30 The *Matte_Shadow_mip*(mr Surface Material Shader) node in the Render Tree workspace

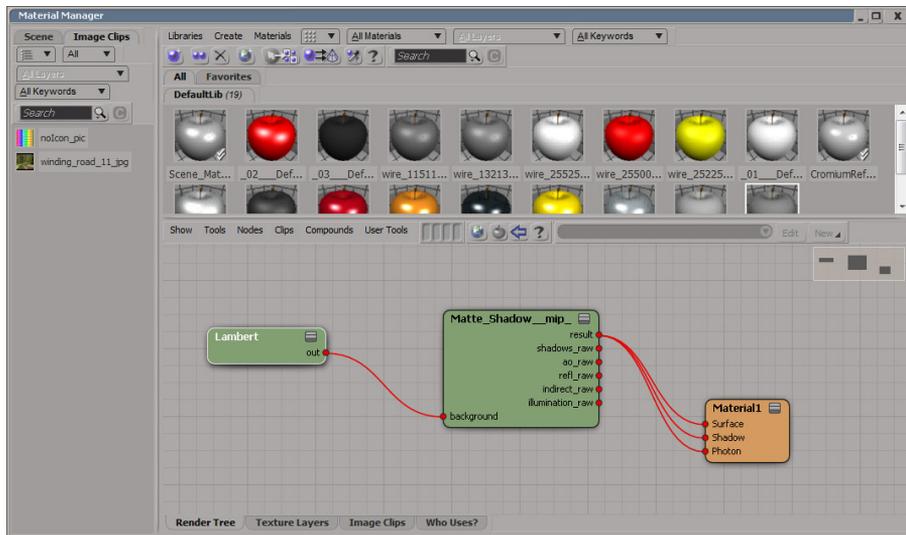


Figure 5-31 Final node network in the Render Tree workspace



Figure 5-32 The final rendered output of the scene

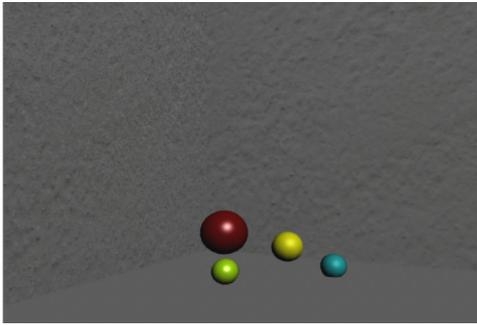


Figure 5-33 The c05_exr1_start file

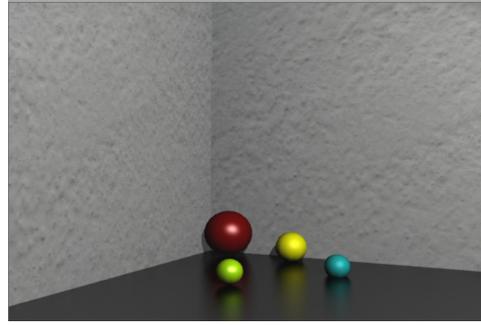


Figure 5-34 Final output of scene with reflection

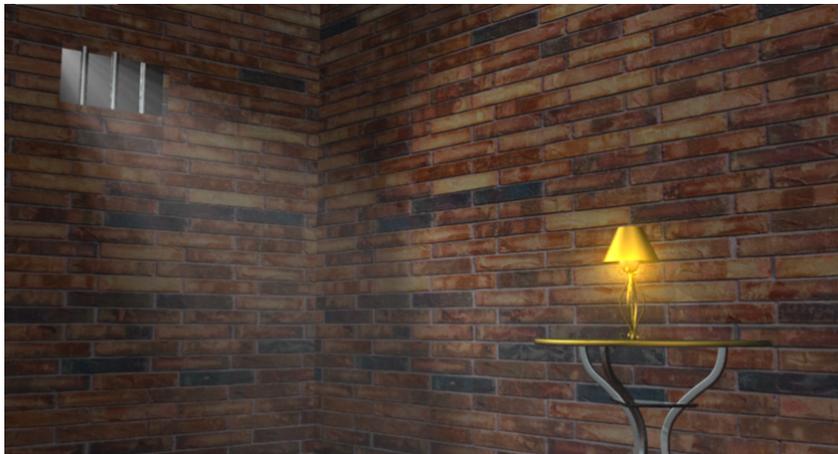


Figure 5-35 Final output of scene with volumetric light and glow



Figure 5-36 Displaying the chick model in matte_shadow environment



Figure 5-37 The final output of the scene

Chapter 6

Animation and Rigging



Figure 6-1 The animated soccer ball at frame 40

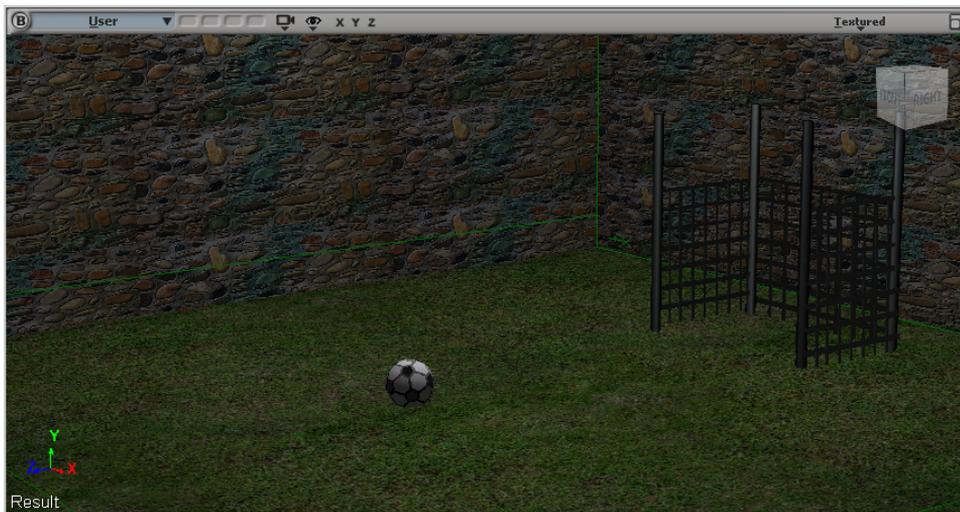


Figure 6-2 The c06_tut1_start file displayed in the User viewport

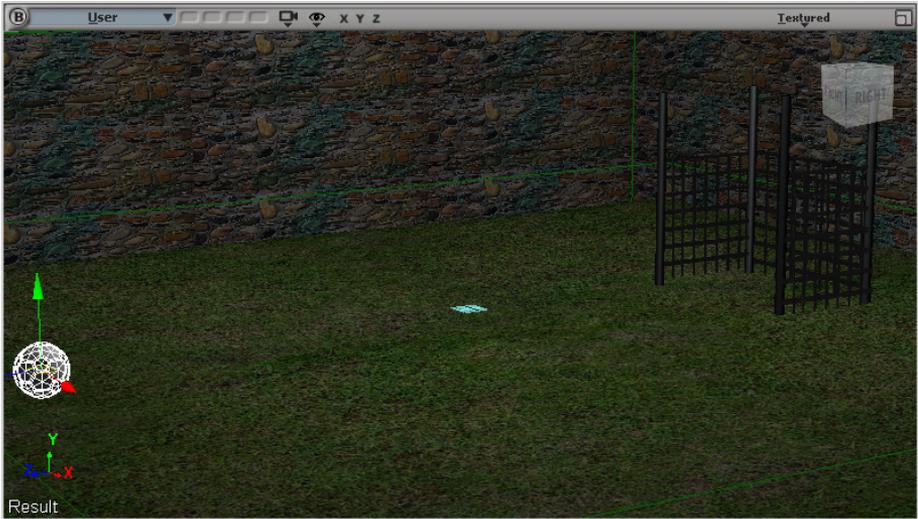


Figure 6-3 The position of Soccerball at frame 0

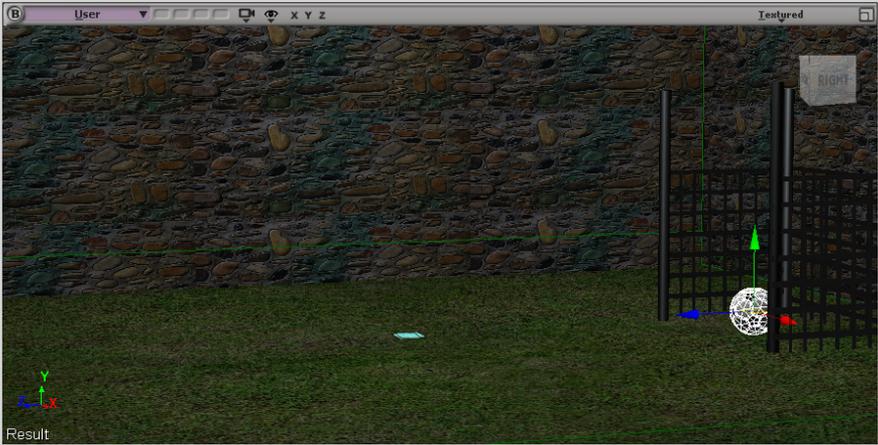


Figure 6-4 The position of Soccerball at frame 100



Figure 6-5 The animated windmill blades at frame 50

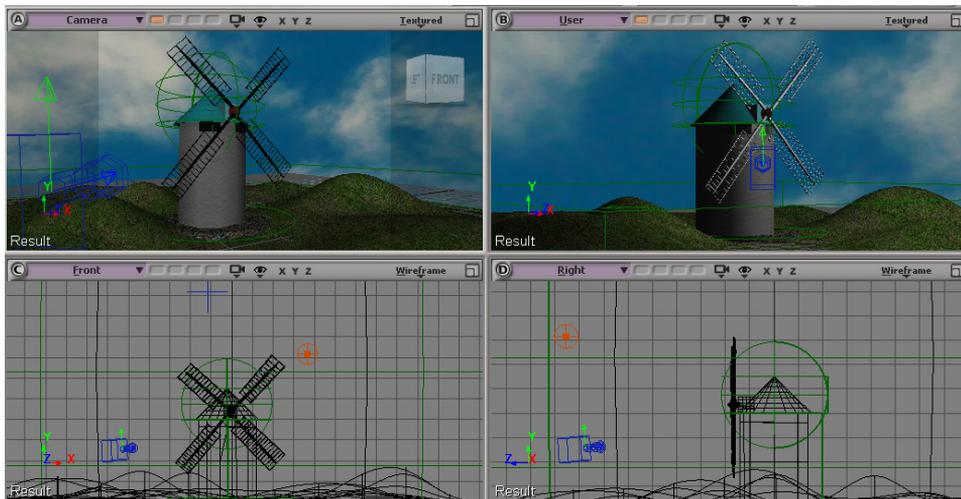


Figure 6-6 The c06_tut2_start file displayed in viewports

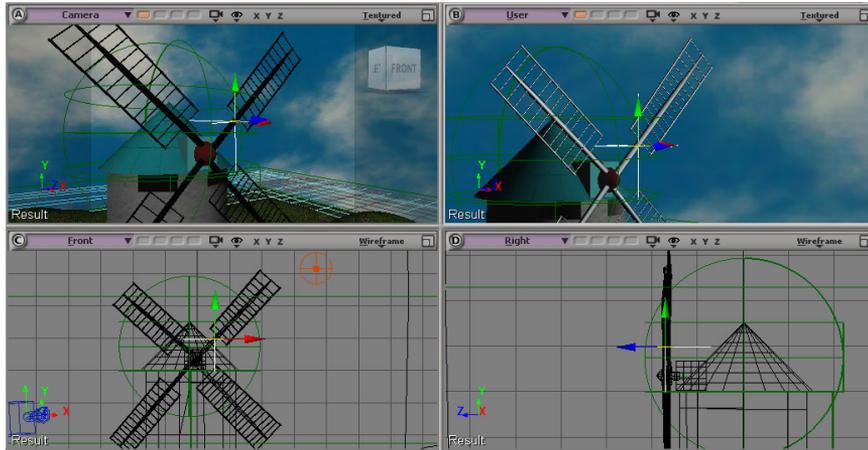


Figure 6-7 Aligning null with blade1 in viewports

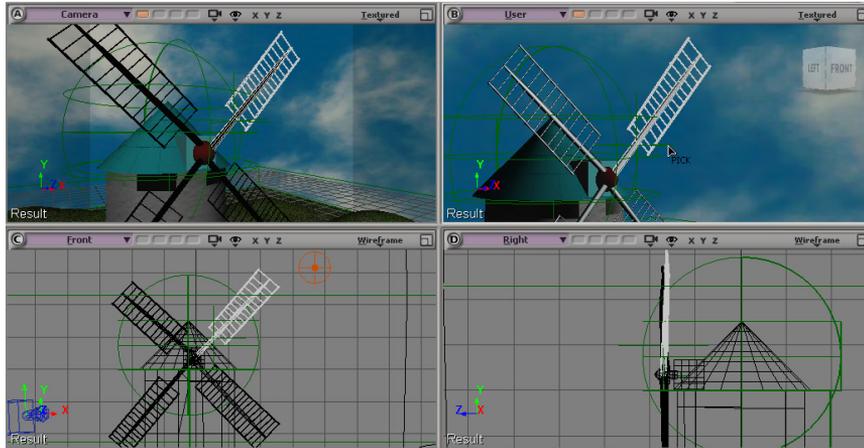


Figure 6-8 The changed shape of the cursor in the User viewport

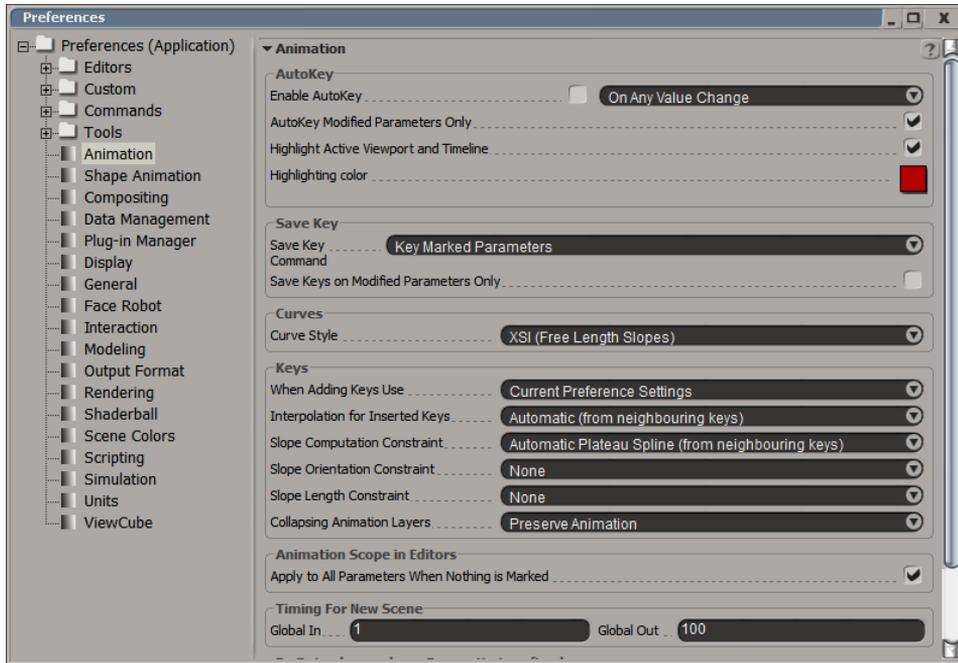


Figure 6-9 The Preferences dialog box

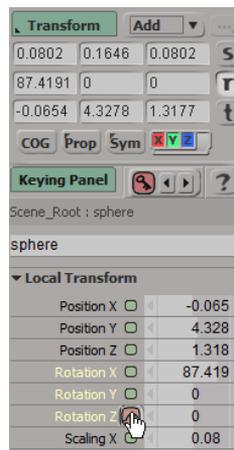


Figure 6-10 Choosing the Rotation Z animation button



Figure 6-11 The final rendered output in the QuickTime Player window



Figure 6-12 The rendered output of path animation at frame 70

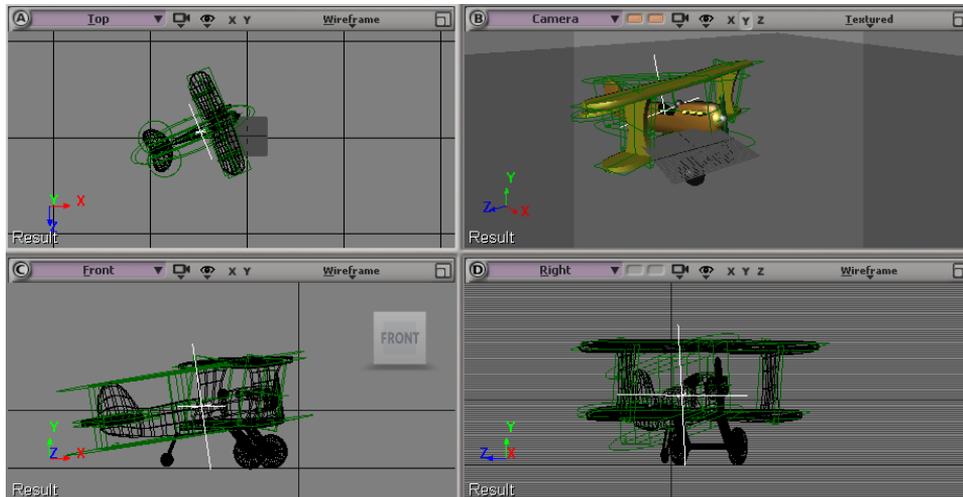


Figure 6-13 The toy plane model displayed in viewports

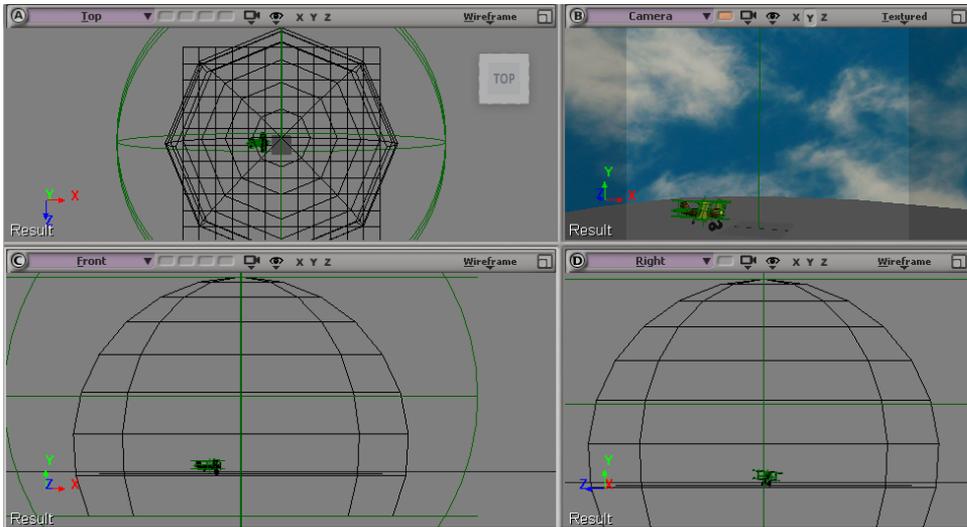


Figure 6-14 The texture projected on sphere in viewports

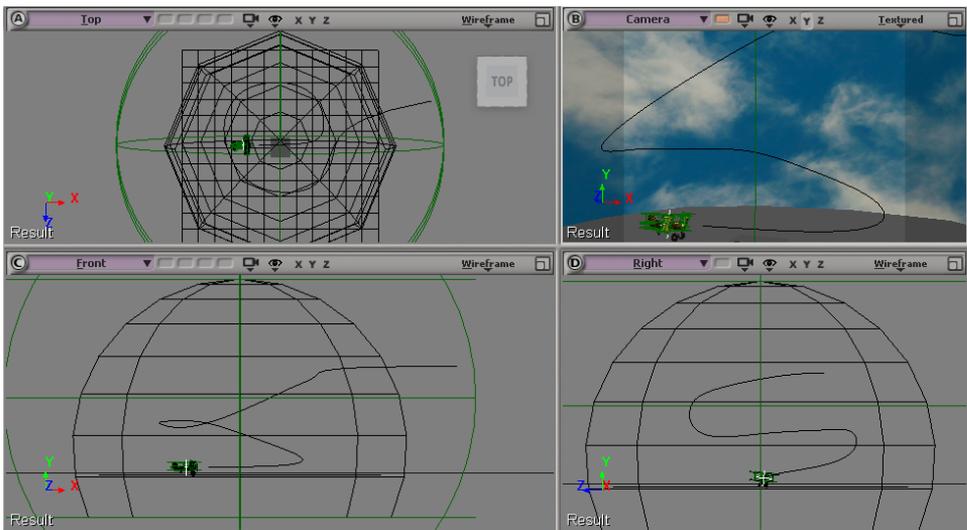


Figure 6-15 The curve created for path animation

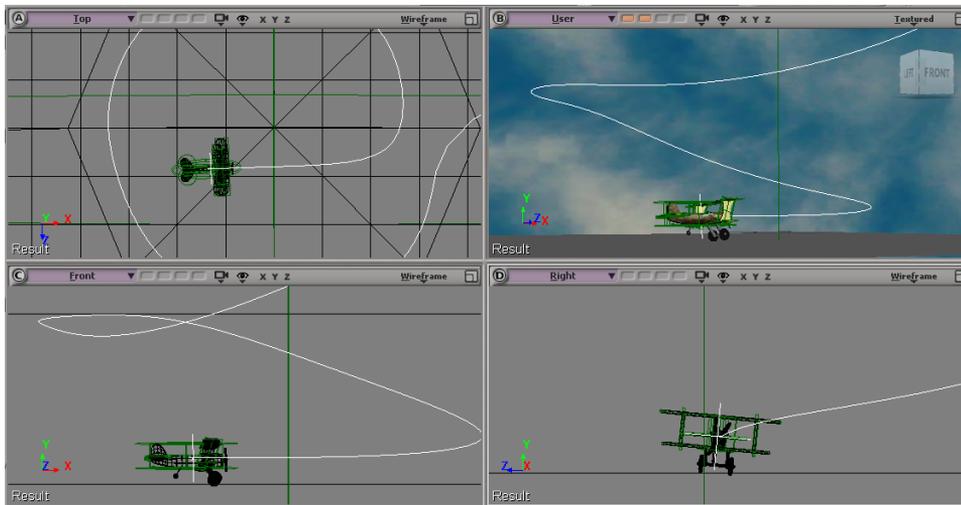


Figure 6-16 Toy plane linked to the path

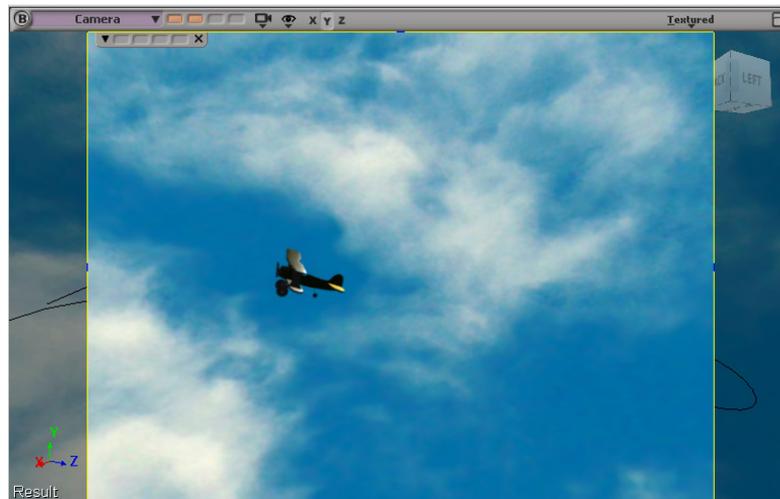


Figure 6-17 Final rendered scene at frame 70

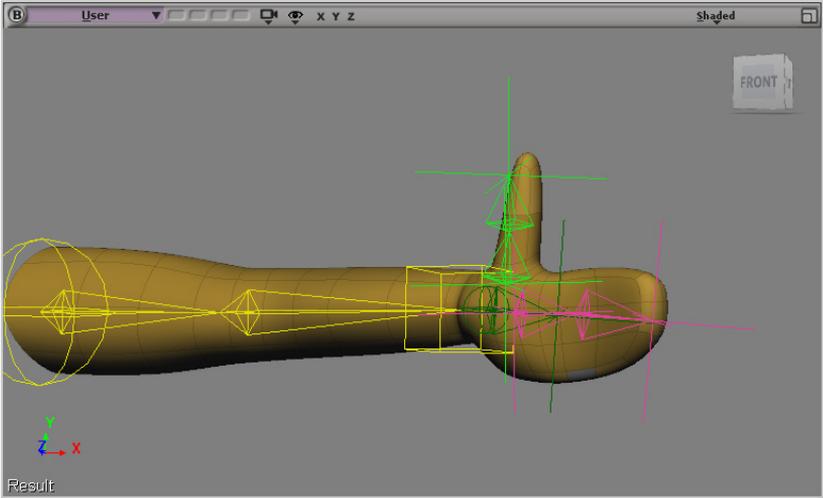


Figure 6-18 The bone structure of a hand

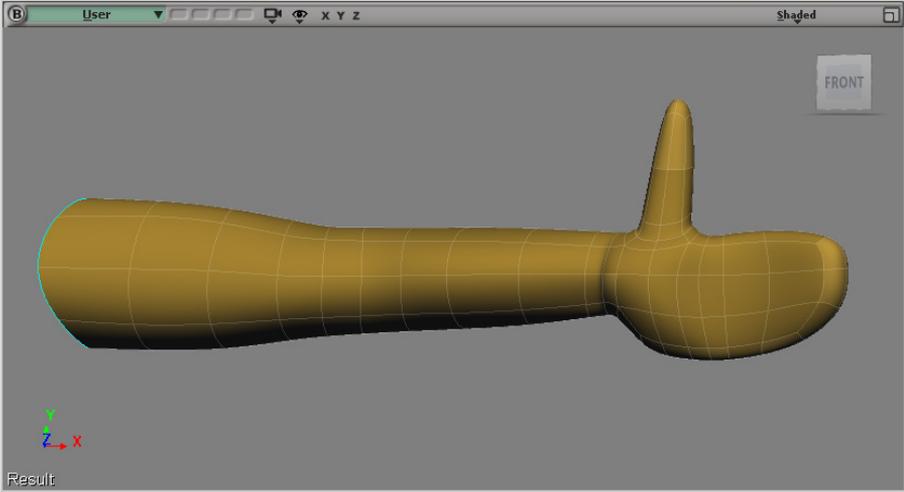


Figure 6-19 Hand model displayed in the Textured mode in the User viewport

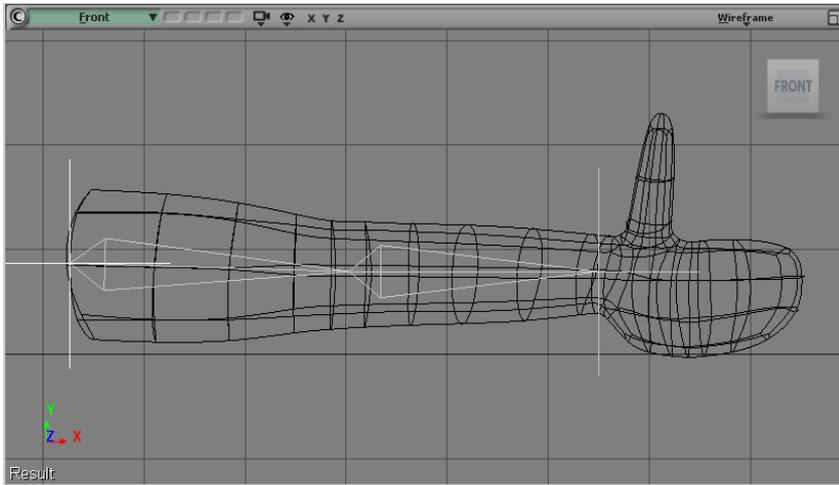


Figure 6-20 The hand bone structure created in the Front viewport

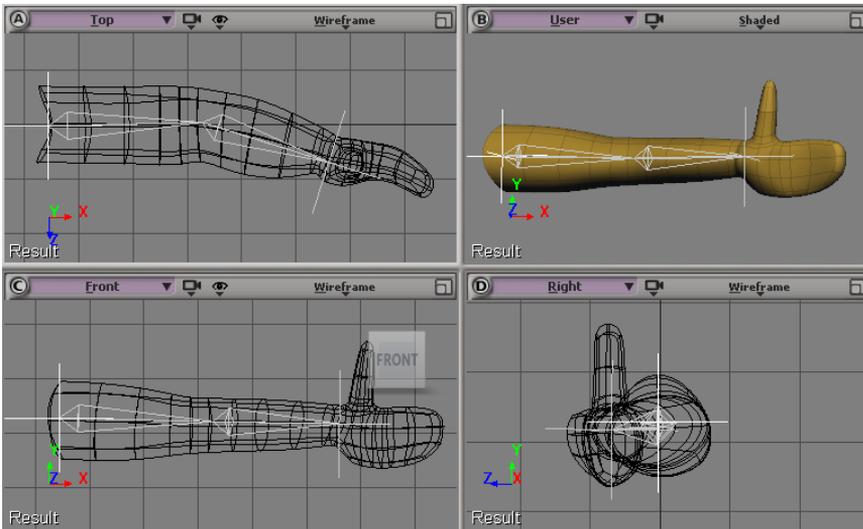


Figure 6-21 Alignment of the hand bone structure in viewports

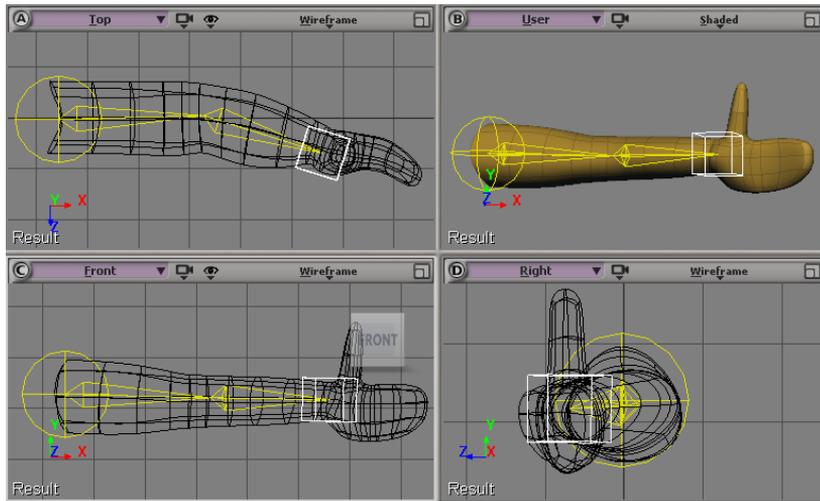


Figure 6-22 The symbol of the leftshoulder and leftarmeff changed to rings and box, respectively

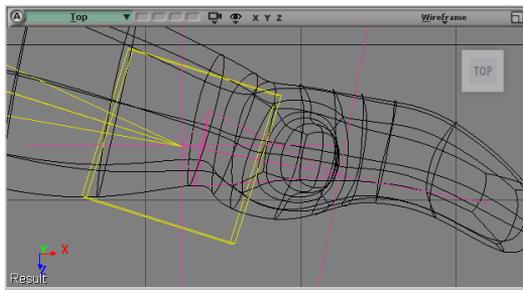


Figure 6-23 Creating the palm bone structure in the Top viewport

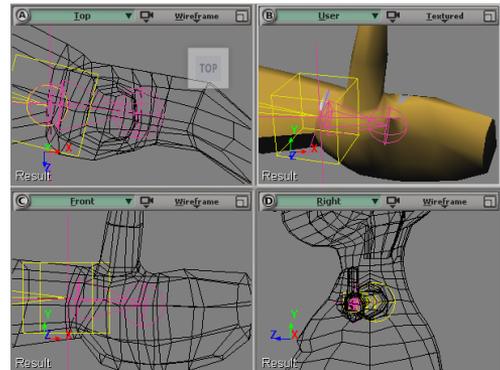


Figure 6-24 The symbol of leftpalmeff changed to rings

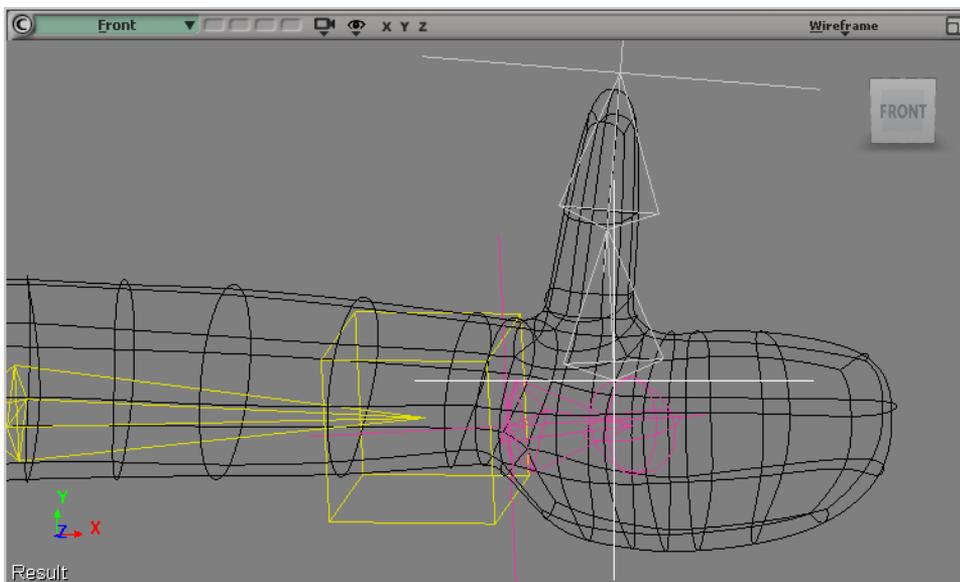
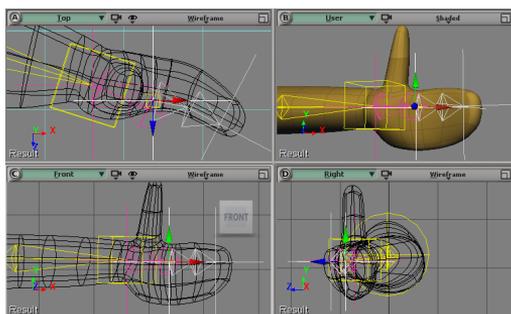
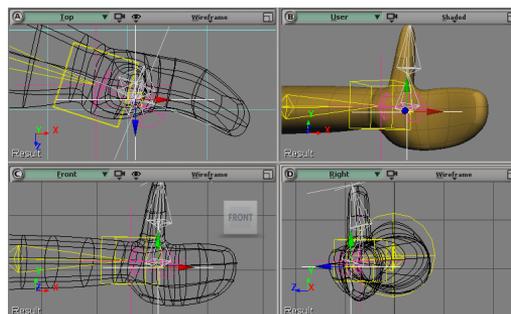


Figure 6-25 The thumb bone structure drawn



*Figure 6-26 Aligning the thumb bone structure using **Translate Tool***



*Figure 6-27 Positioning the thumb bone structure using the **Move Joint/Branch tool***

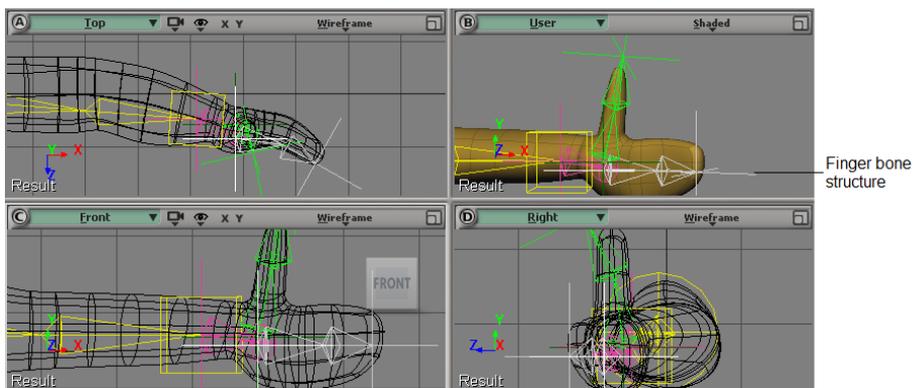


Figure 6-28 Aligning the finger bone structure

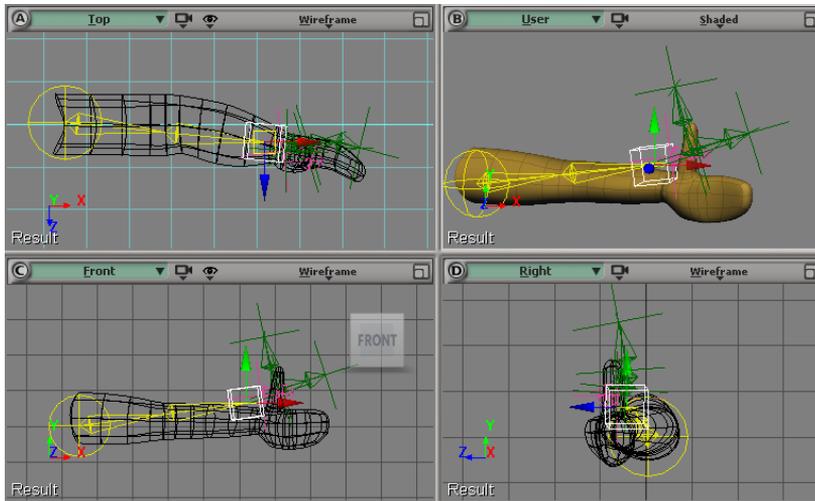


Figure 6-29 Displaying the effect of moving leftarmeff

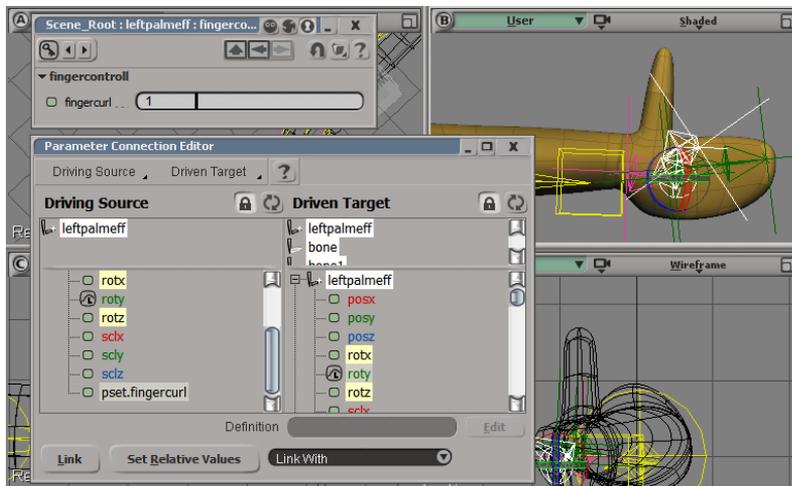


Figure 6-30 Bending leftthumb

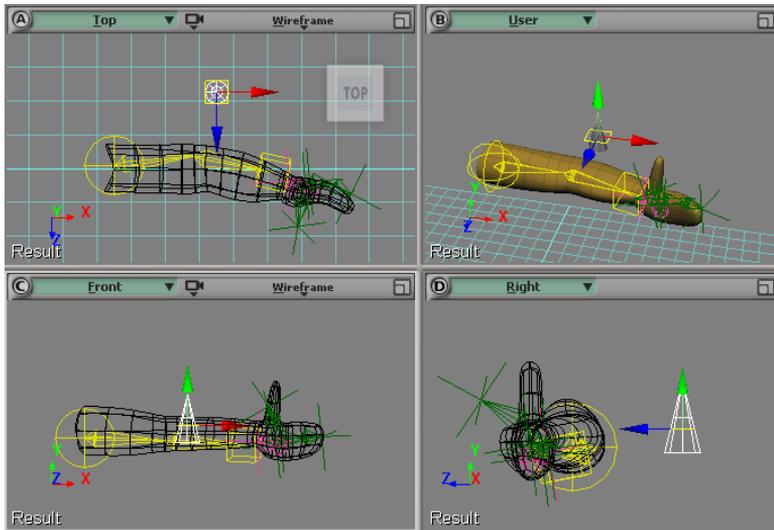


Figure 6-31 Alignment of cone in viewports

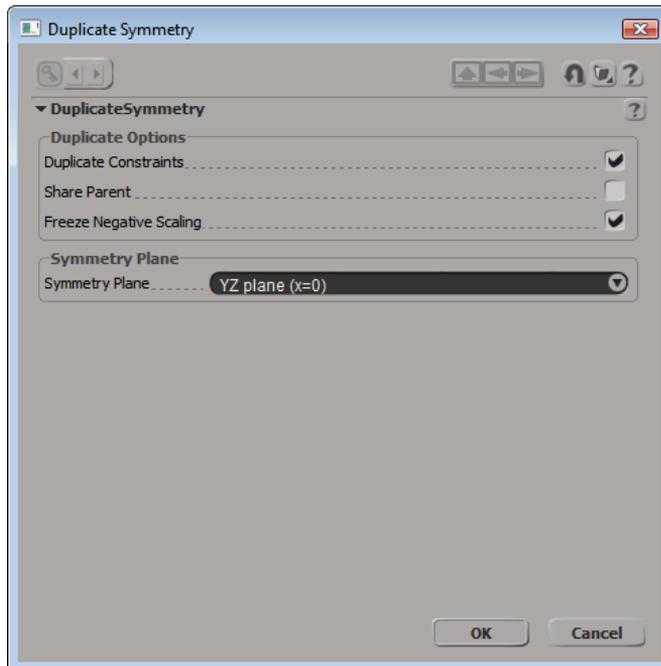


Figure 6-32 The *Duplicate Symmetry* dialog box

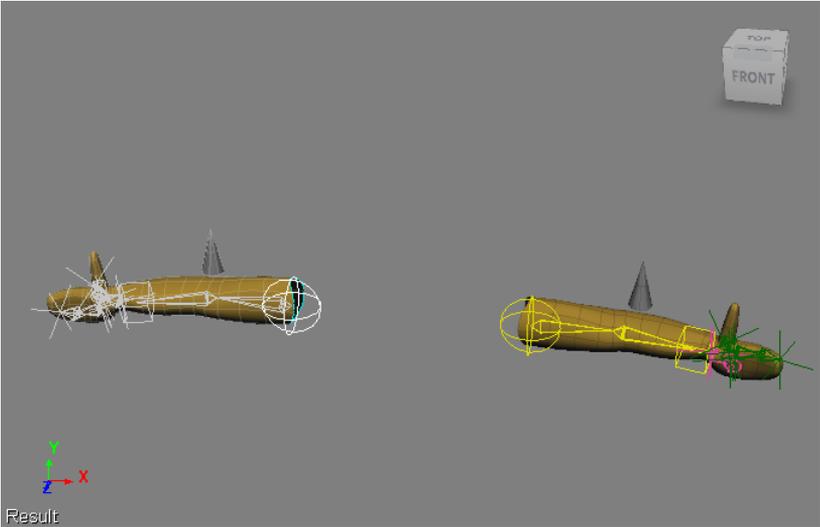


Figure 6-33 Duplicate copy of the hand bone structure

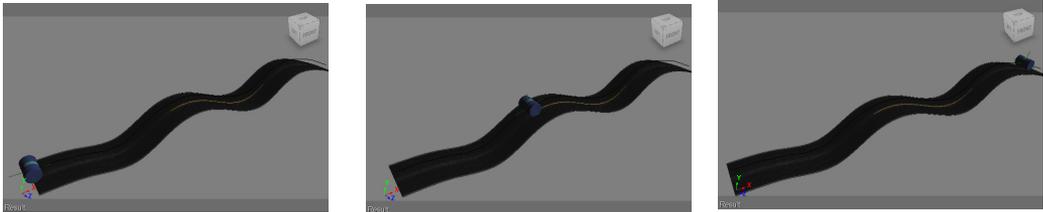


Figure 6-34 Path animation at different frames

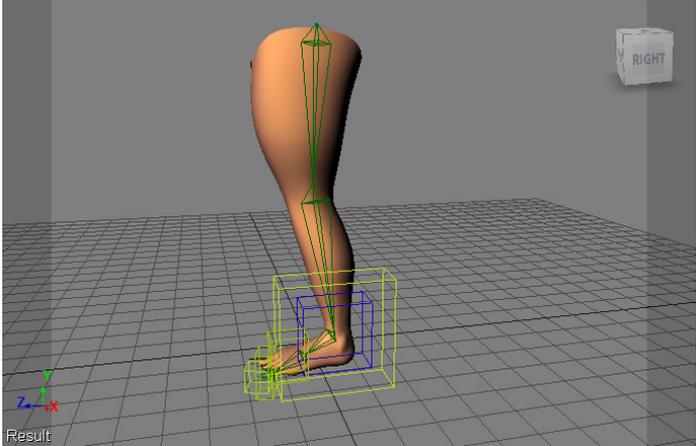


Figure 6-35 The bone structure of the leg

Chapter 7

Rigid Bodies, ICE, and Lagoa



Figure 7-1 The rendered output of the rigid body simulation at frame 150

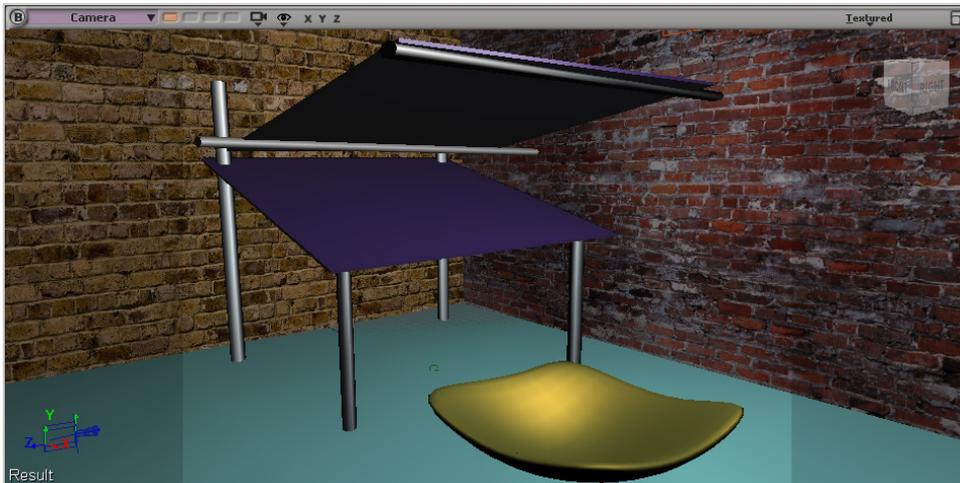


Figure 7-2 The c07_tut1_start file displayed in the Camera viewport

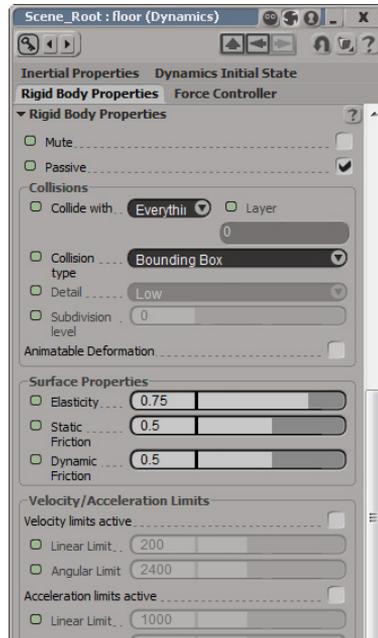


Figure 7-3 Partial view of the Scene_Root : floor (Dynamics) property editor

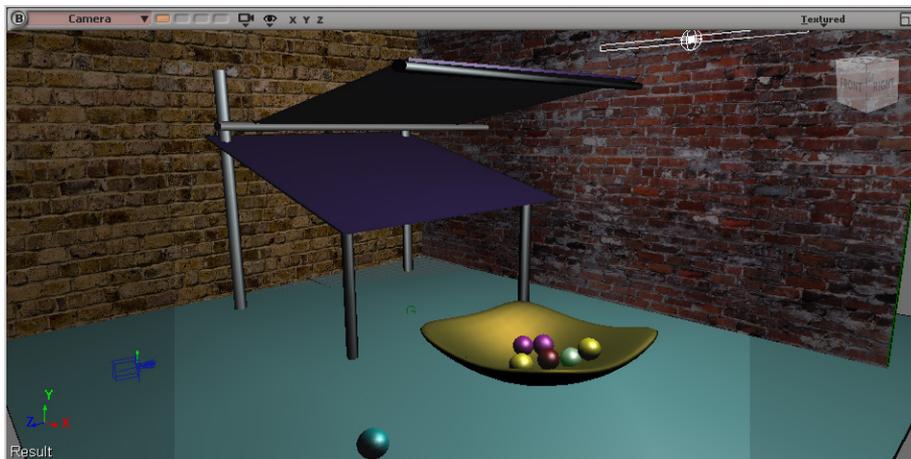


Figure 7-4 Simulation displayed at frame 200

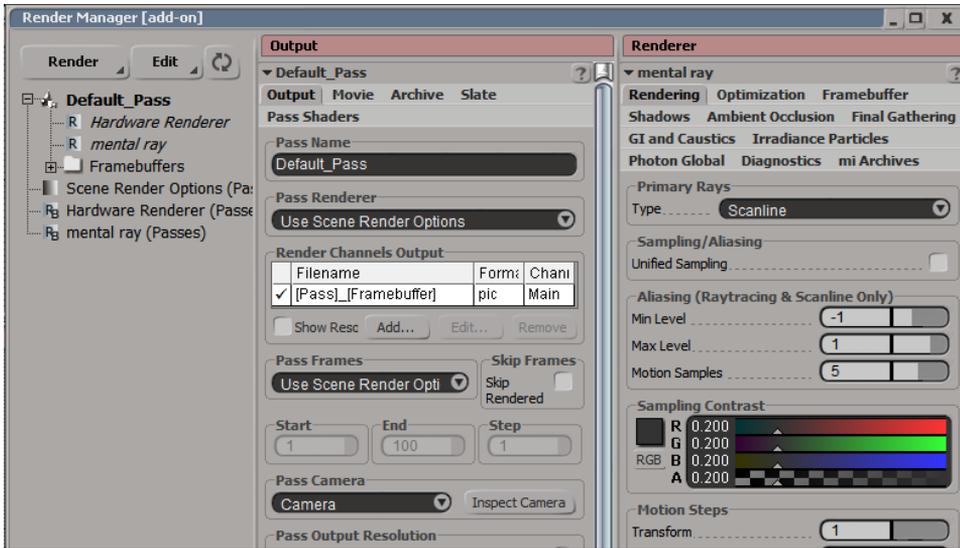


Figure 7-5 Partial view of the *Render Manager [add-on]* window

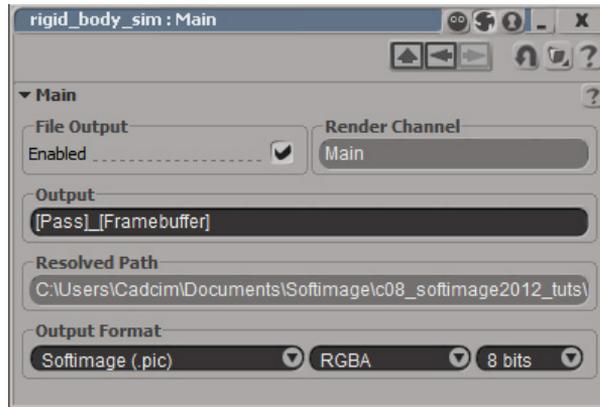
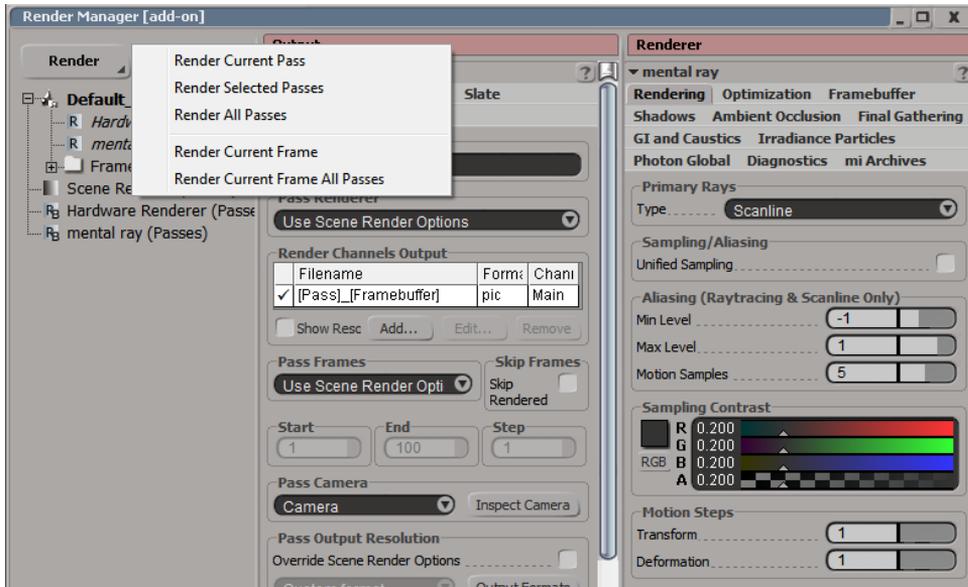


Figure 7-6 The *rigid_body_sim:Main* property editor



*Figure 7-7 Flyout displayed on choosing the **Render** button*

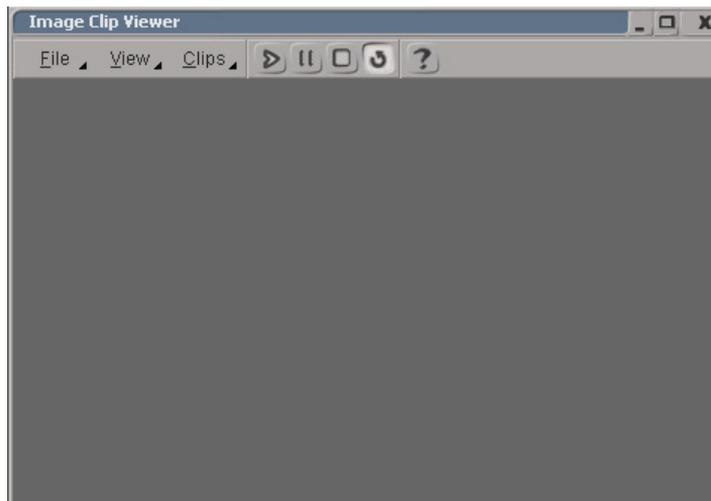


Figure 7-8 The Image Clip Viewer window



Figure 7-9 The final output of the smoke at frame 200

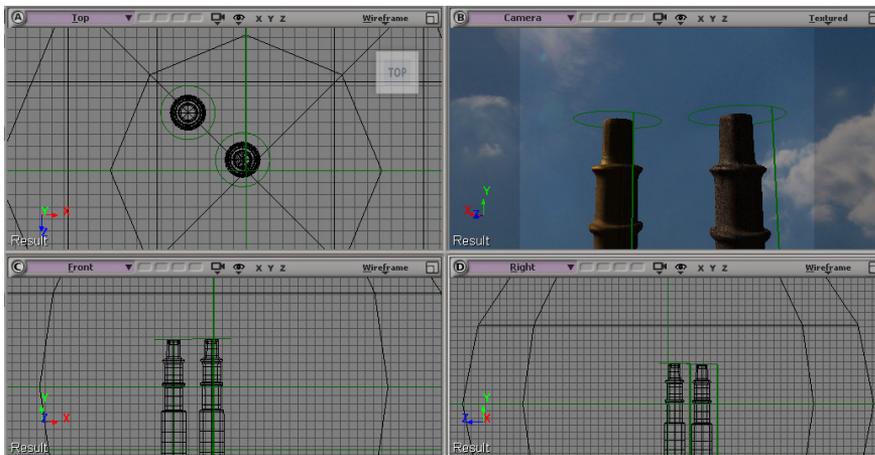


Figure 7-10 The c07_tut2_start.scn file displayed

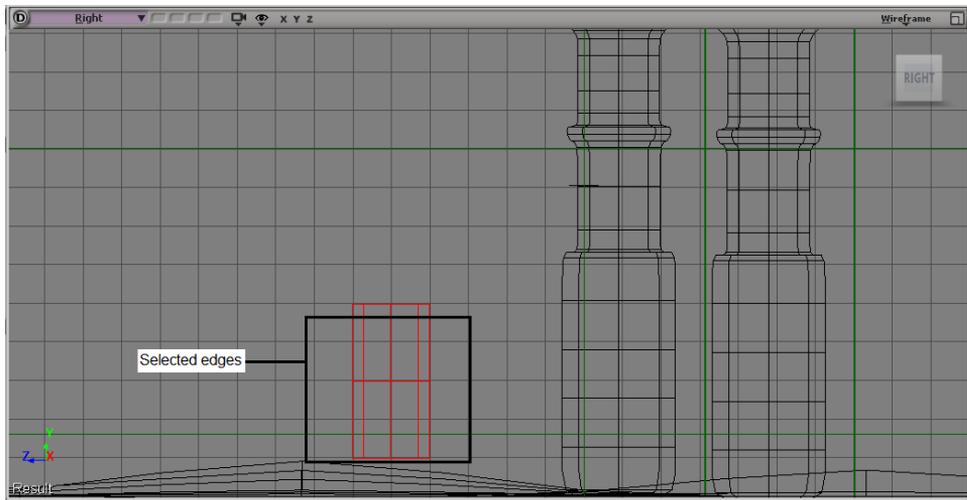


Figure 7-11 Selecting edges in the Right viewport

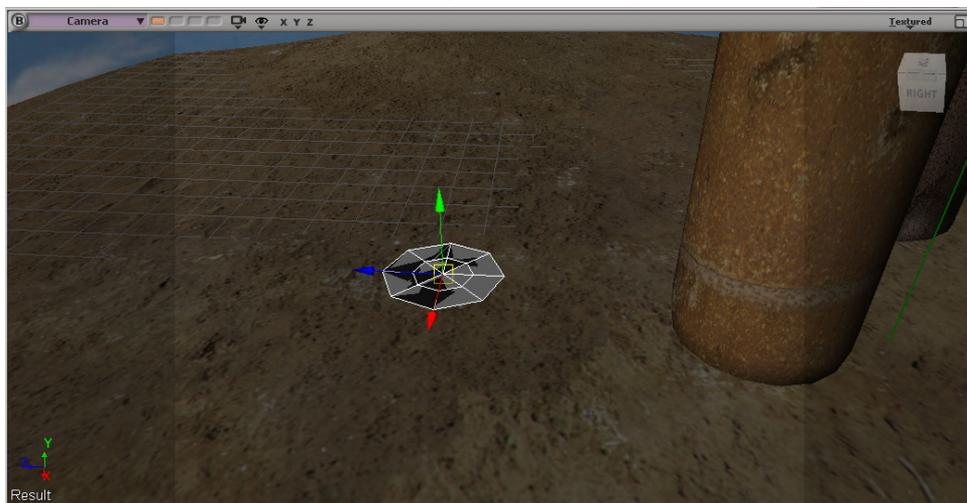


Figure 7-12 The pivot point of the base placed at the center of the base

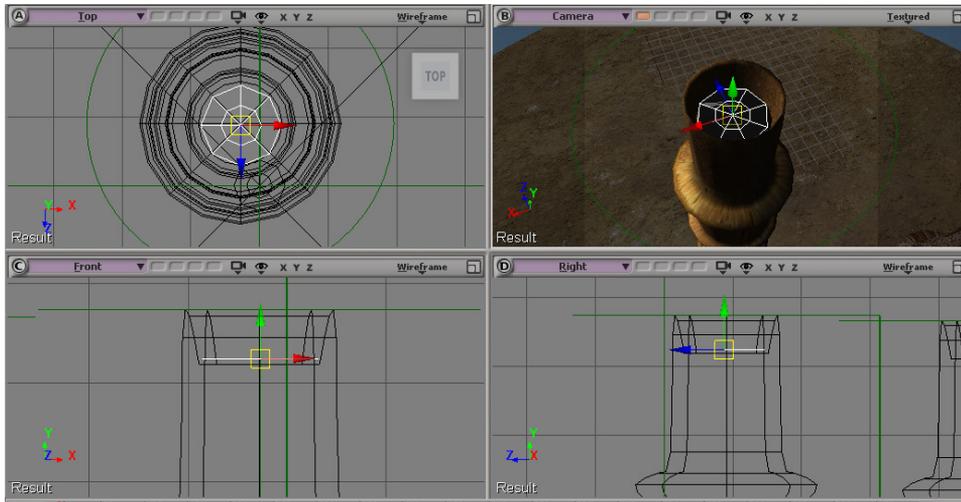


Figure 7-13 Aligning the base inside the chimney

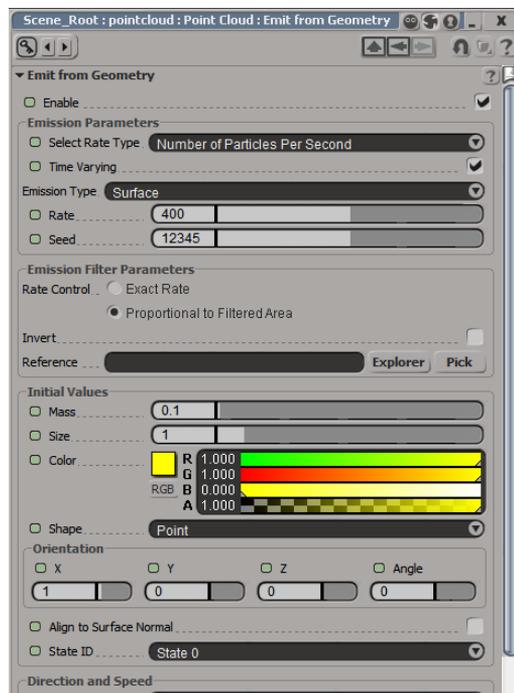


Figure 7-14 Partial view of the `Scene_Root : pointcloud : Point Cloud : Emit from Geometry` property editor

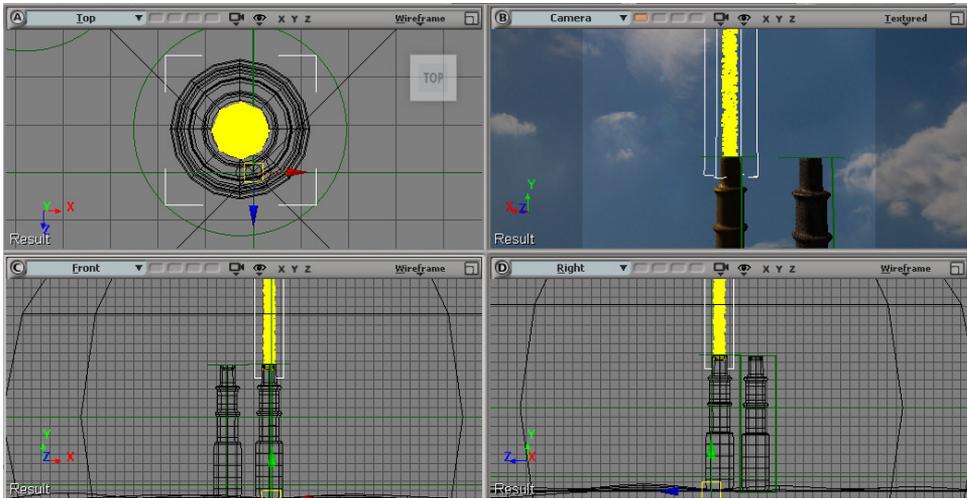


Figure 7-15 The emitted particles from the base displayed in viewports

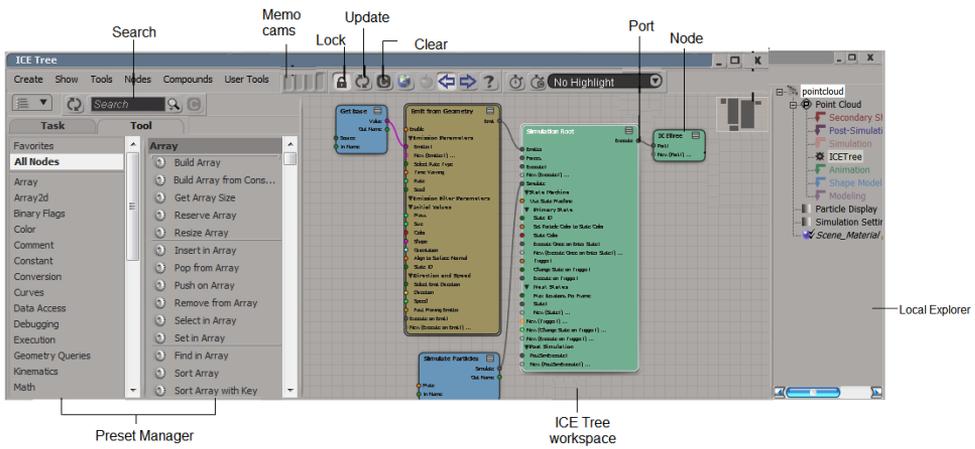


Figure 7-16 The ICE Tree window

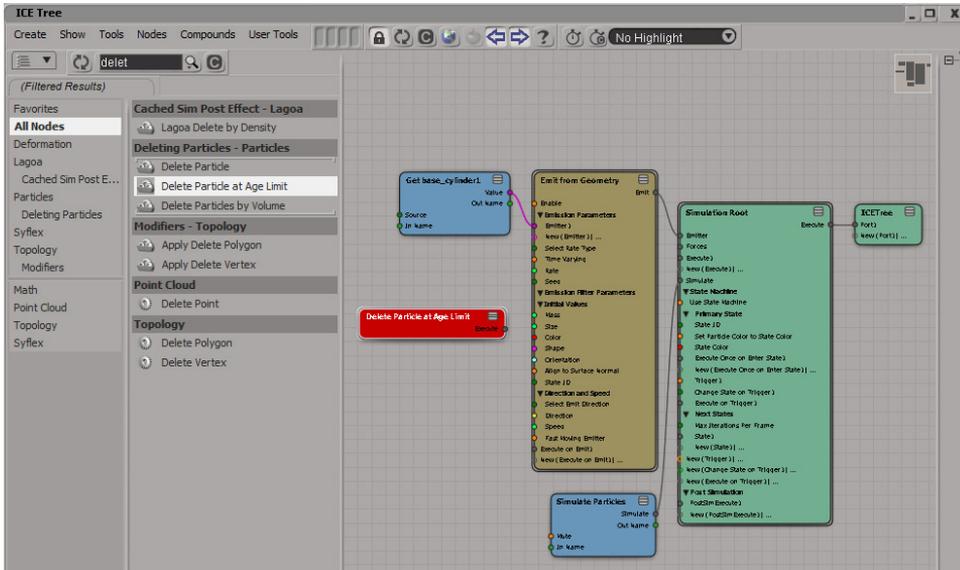


Figure 7-17 The *Delete Particle at Age Limit* node added in the *ICE Tree* workspace

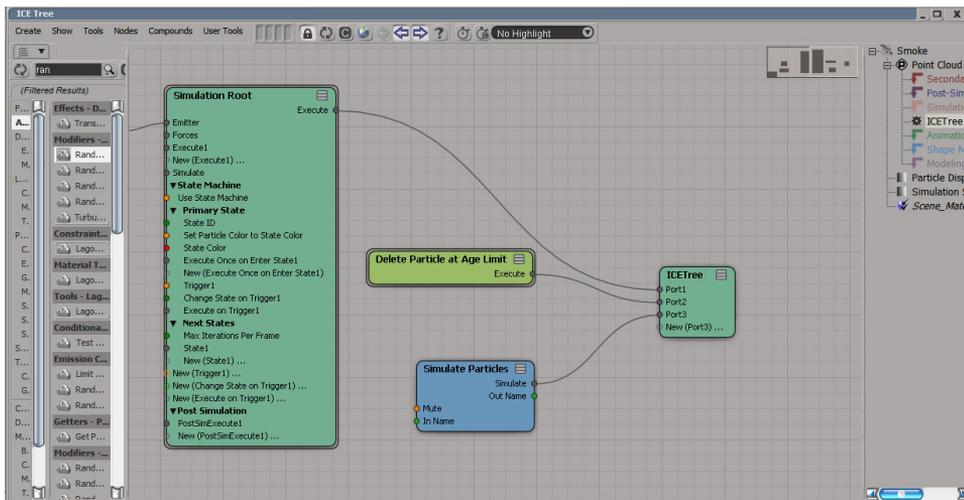


Figure 7-18 Connection established between the *Simulate Particles* and *ICE Tree* nodes

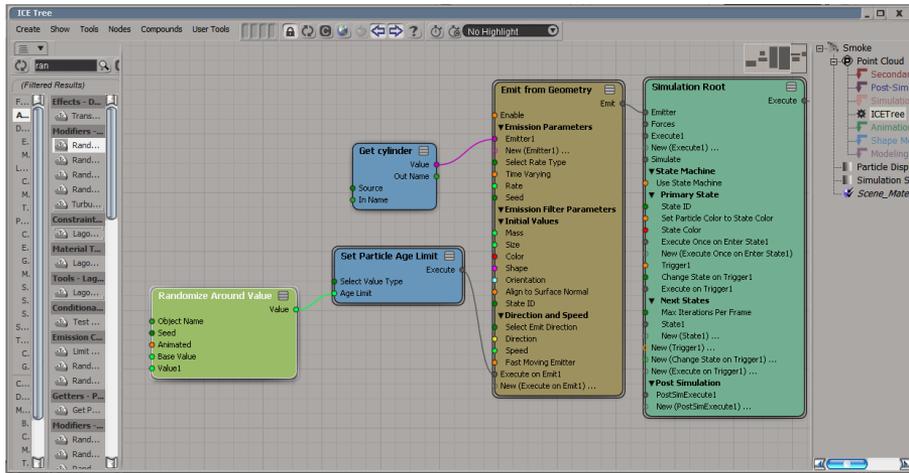


Figure 7-19 Connection established between the *Randomize Around Value* and *Set Particles Age Limit* nodes

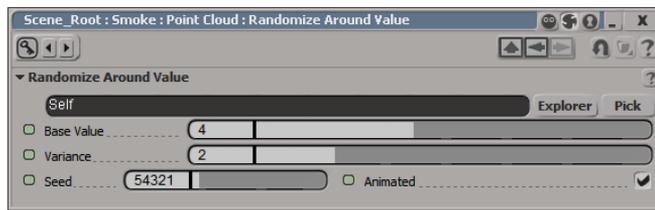


Figure 7-20 The *Scene_Root : Smoke : Point Cloud : Randomize Around Value* property editor

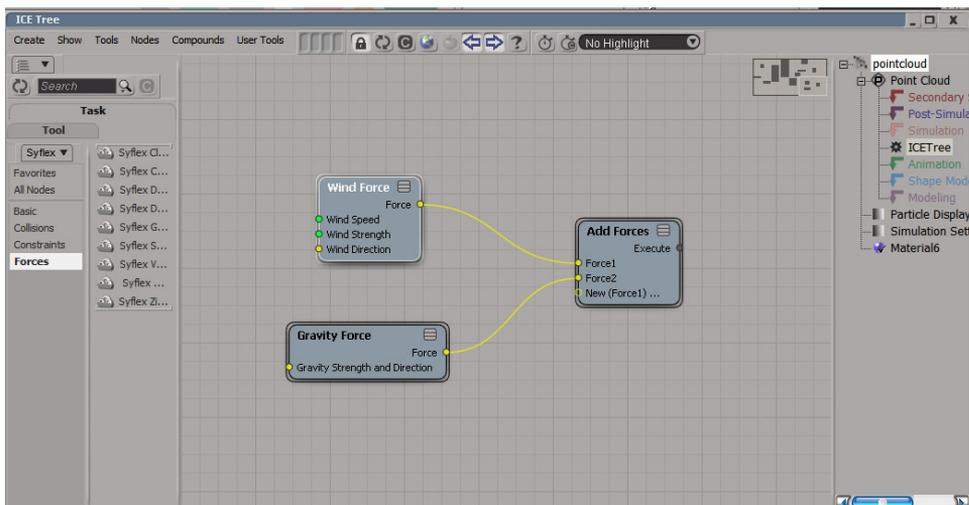


Figure 7-21 The network of the force nodes

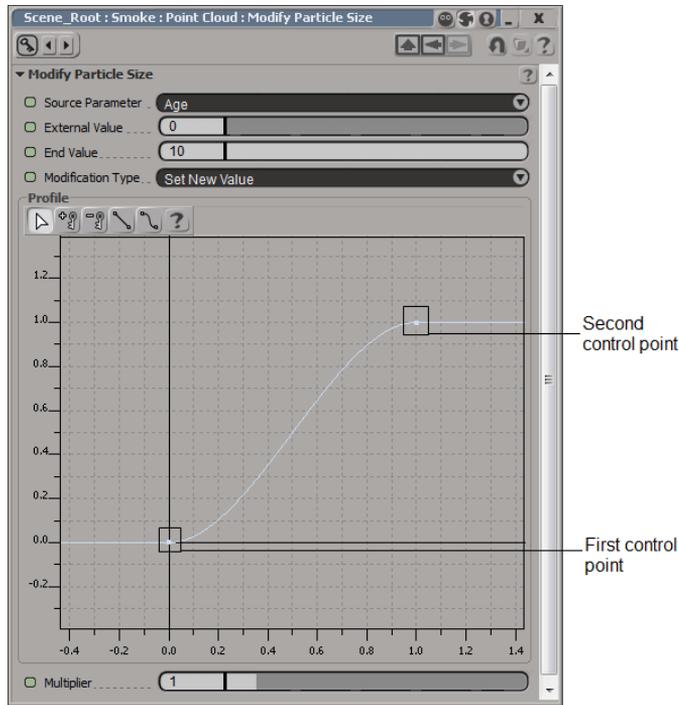


Figure 7-24 The Scene_Root : Smoke : Point Cloud : Modify Particle Size property editor

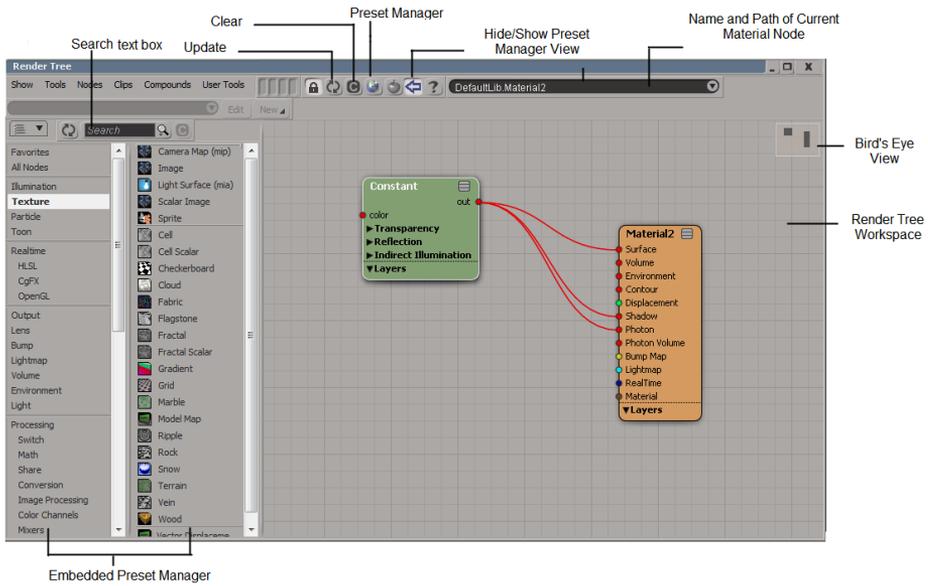


Figure 7-25 The Render Tree window

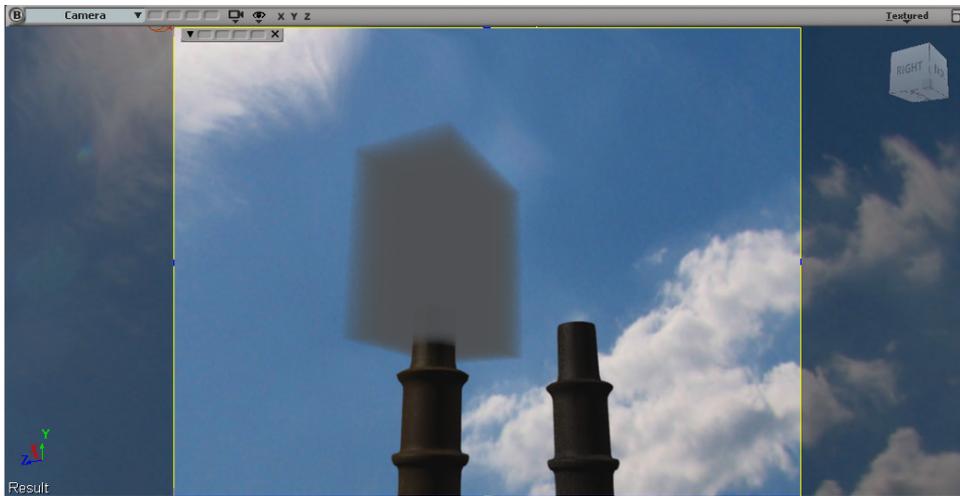
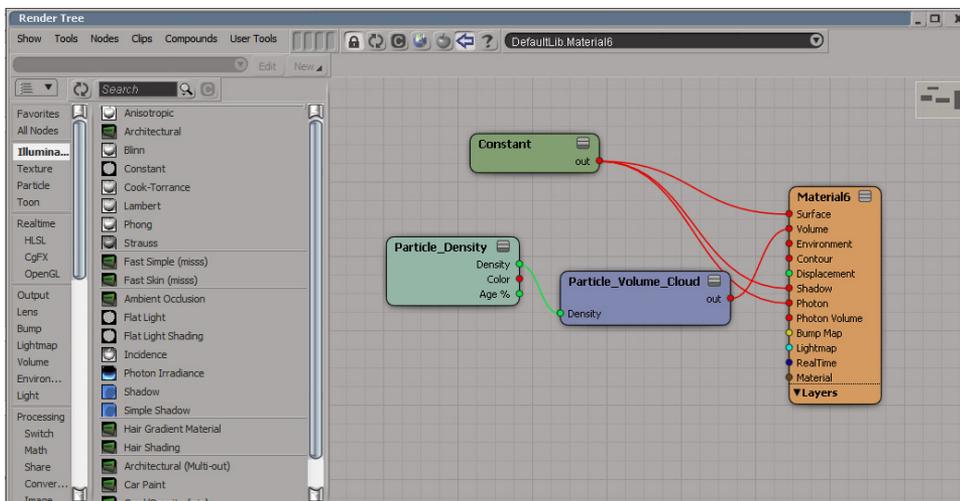


Figure 7-26 The rendered view of the particles at frame 120



*Figure 7-27 Connection established between the **Particle_Density** and **Particle_Volume_Cloud** nodes*

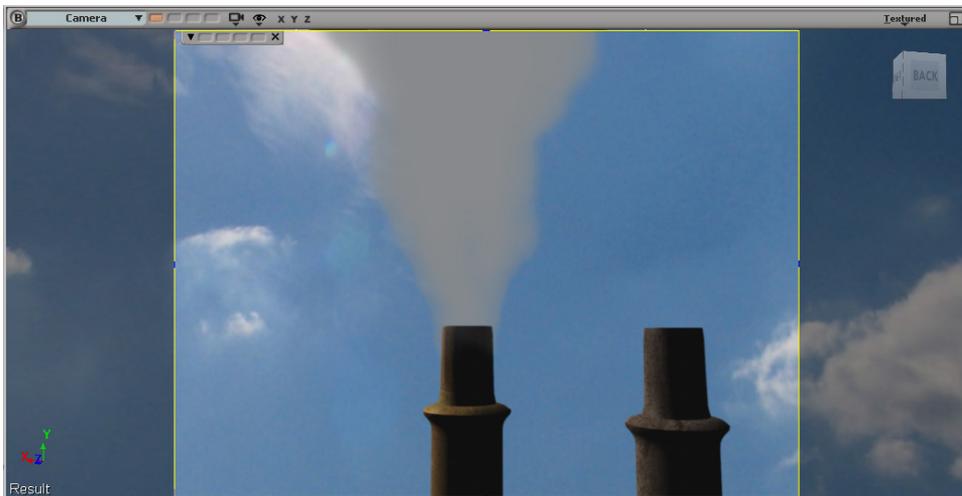


Figure 7-28 The simulation at frame 120

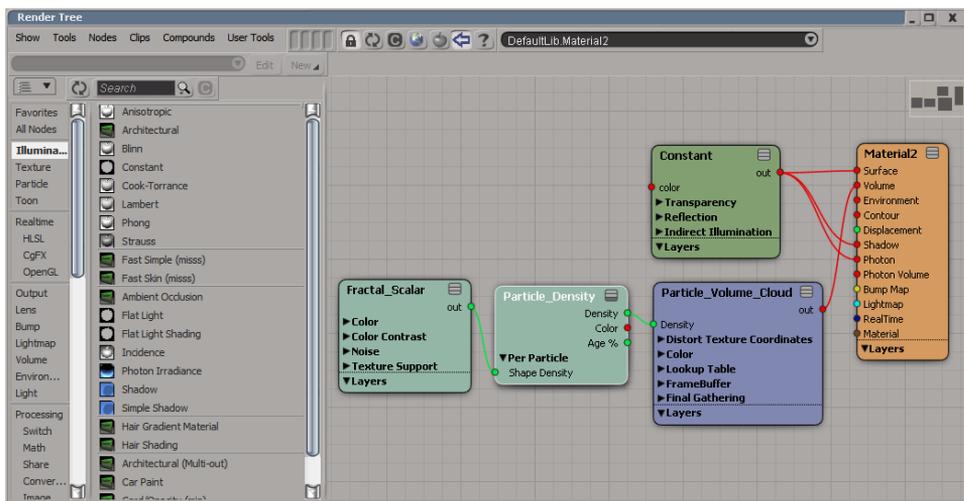


Figure 7-29 Connection established between the *Fractal_Scalar* and *Particle_Density* nodes established

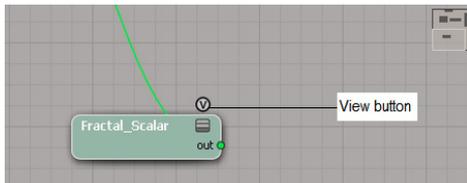


Figure 7-30 The View button displayed in the *Fractal_Scalar* node

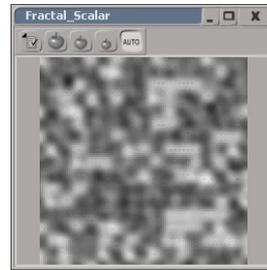


Figure 7-31 The *Fractal_Scalar* window displayed on choosing the View button



Figure 7-32 The rendered smoke in the scene

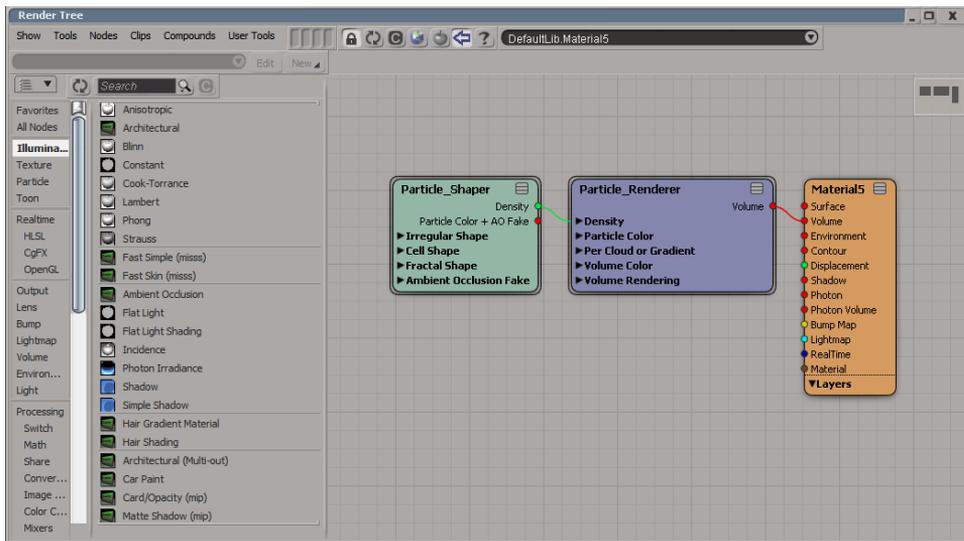


Figure 7-33 Connection established between the Material#, Particle_Renderer and Particle_Shaper nodes

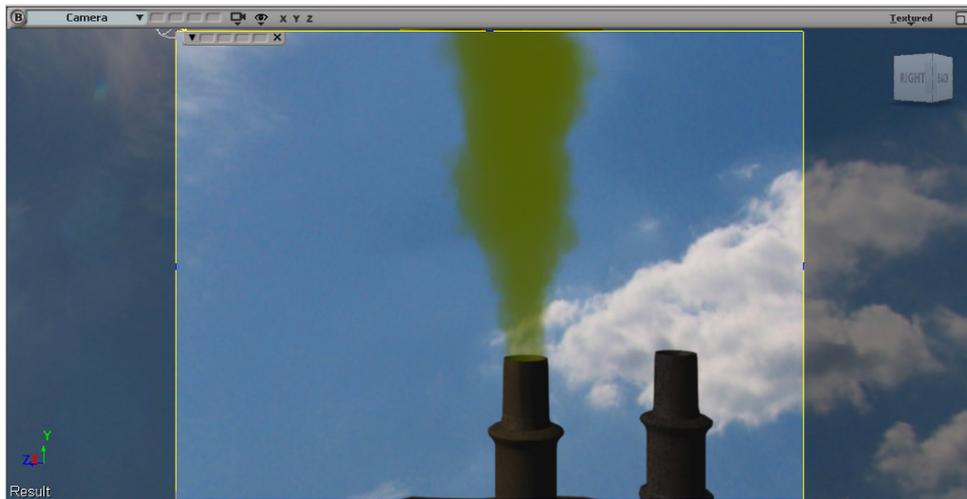


Figure 7-34 The rendered particles in yellow color



Figure 7-35 The color of particles changed to white

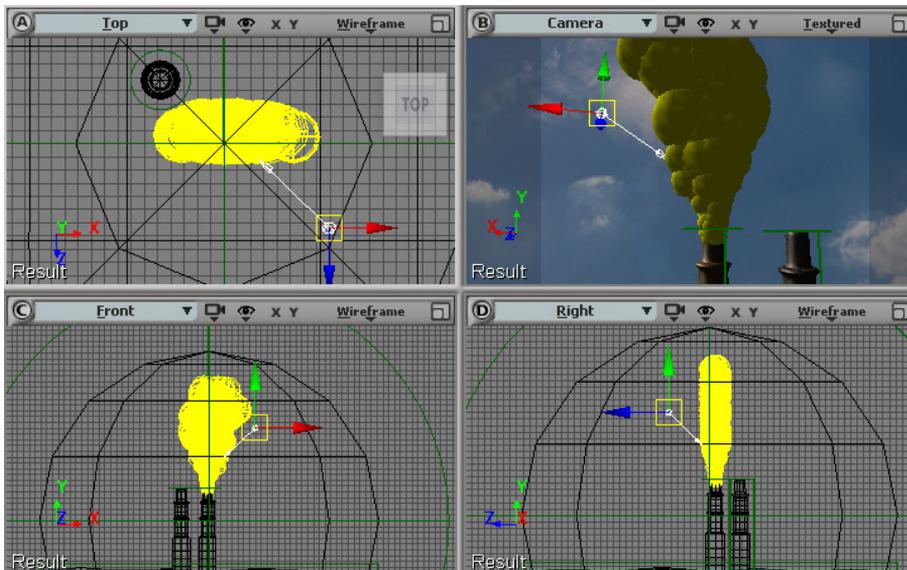


Figure 7-36 Alignment of light in viewports

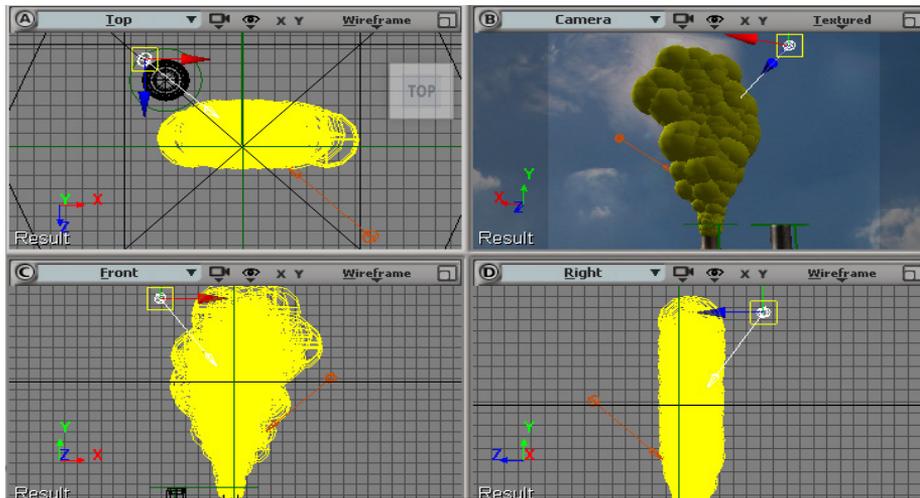


Figure 7-37 Aligning the light1 in all viewports



Figure 7-38 The final output of the smoke



Figure 7-39 Cloud created using the ICE particle system

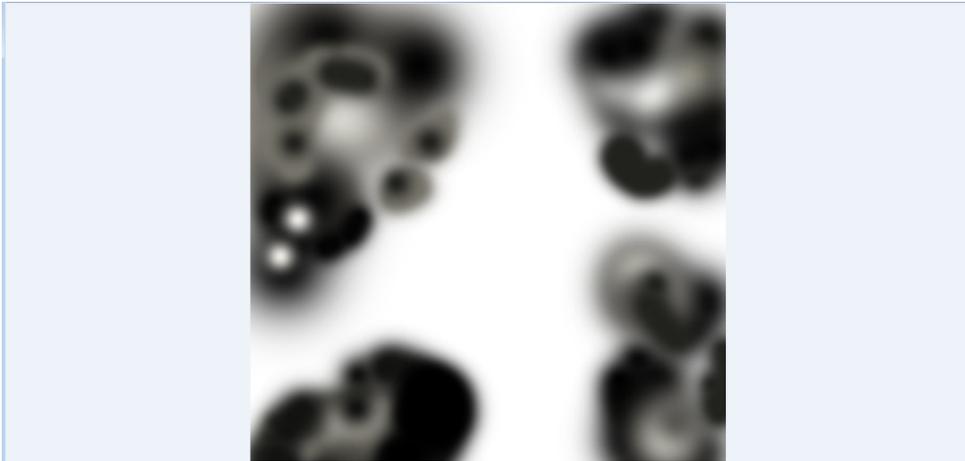


Figure 7-40 The black and white image

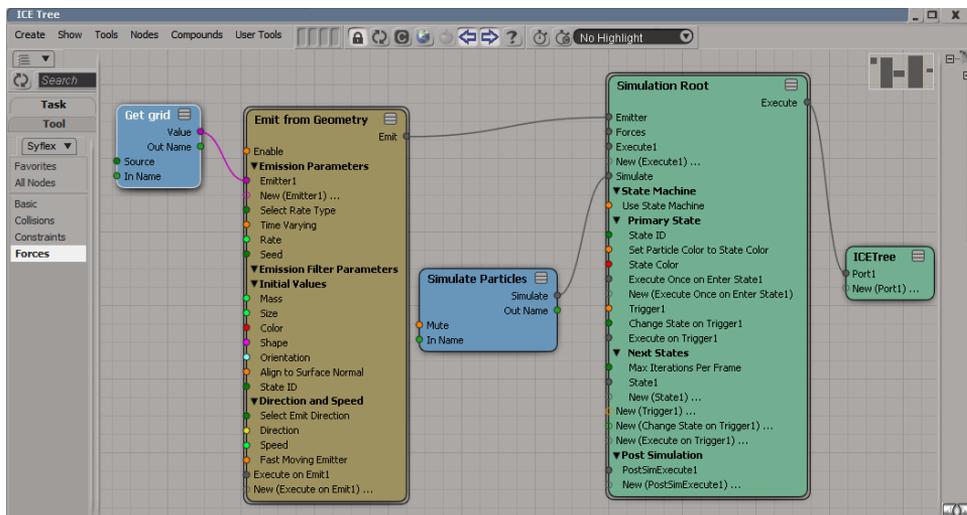


Figure 7-41 The ICE Tree window

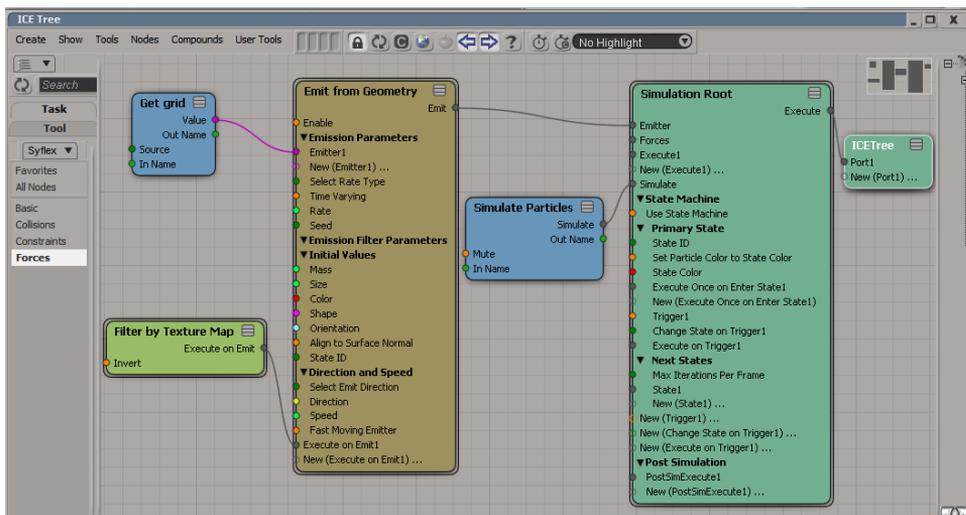


Figure 7-42 Connection established between the **Filter By Texture Map** and **Emit from Geometry** nodes

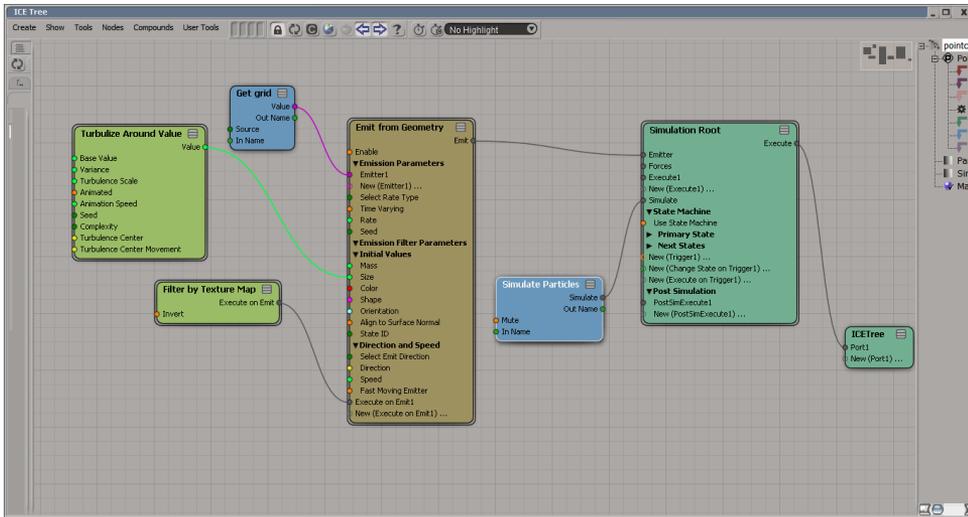


Figure 7-43 Connection established between the *Turbulize Around Value* and *Emit from Geometry* nodes

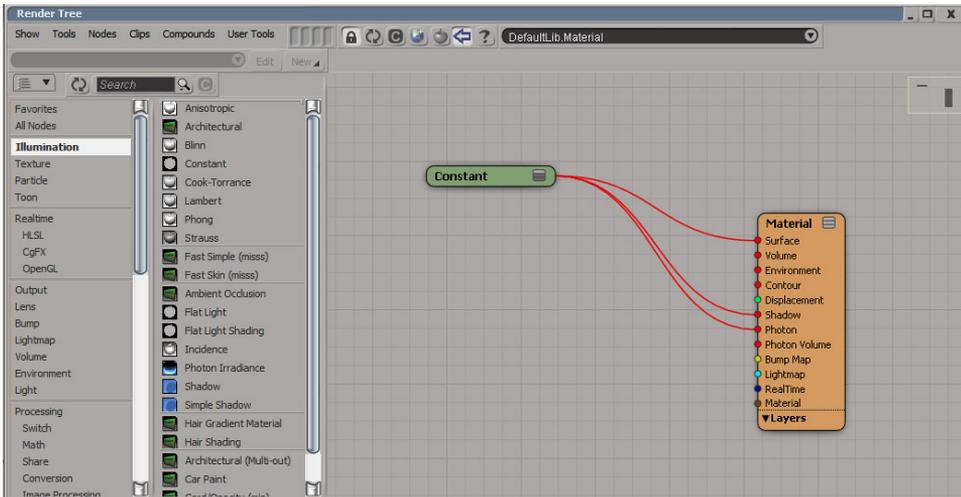


Figure 7-44 The *Render Tree* window

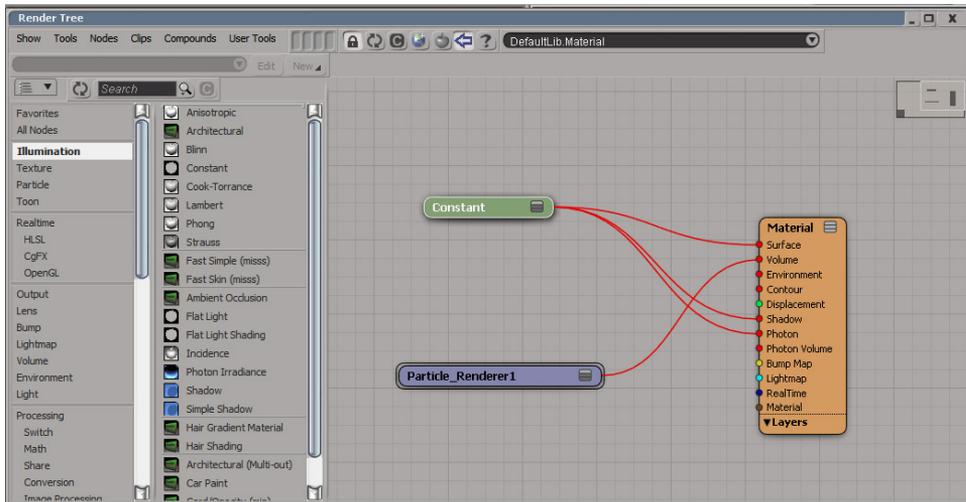


Figure 7-45 Connection established between the *Particle Renderer* and *Material* node

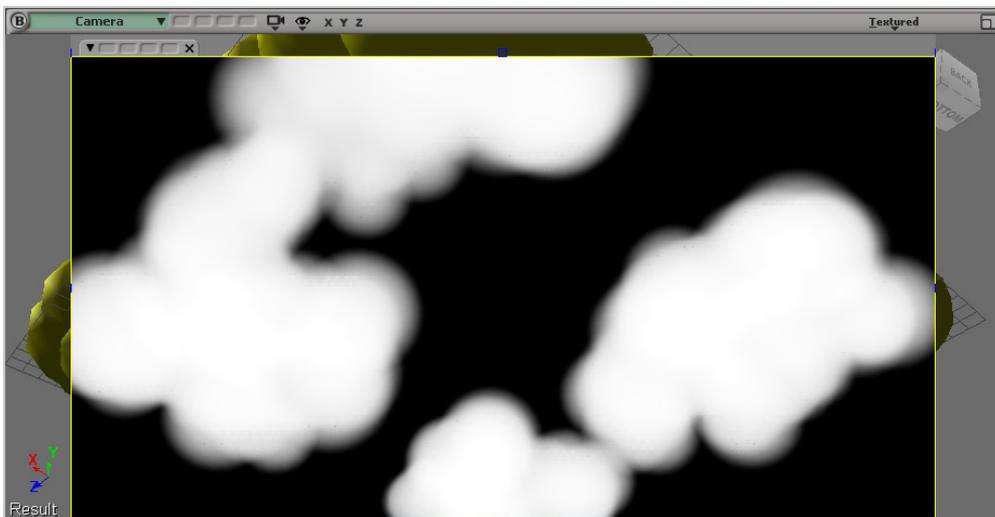


Figure 7-46 The rendered particles at frame 100

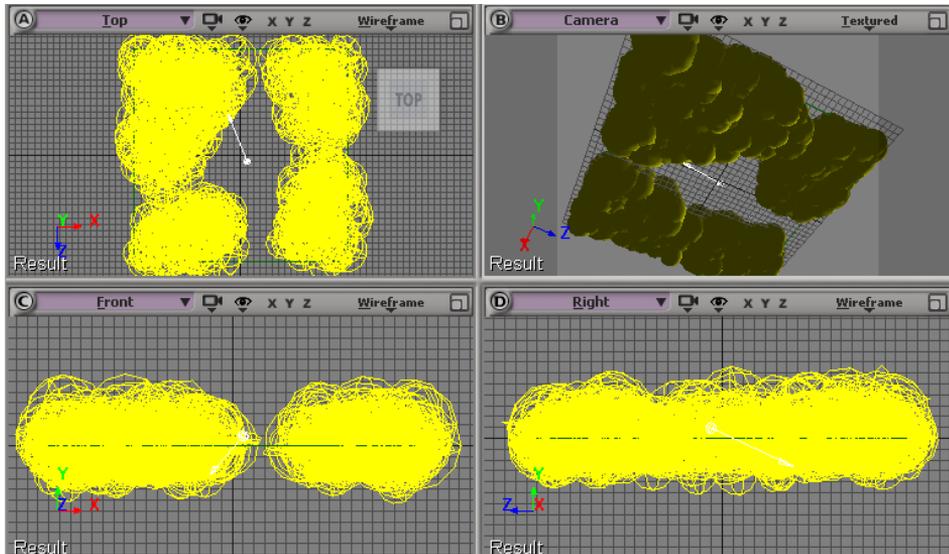


Figure 7-47 Aligning the default light in viewports



Figure 7-48 The clouds in the render region on clearing the **Caster** and **Receiver** check boxes

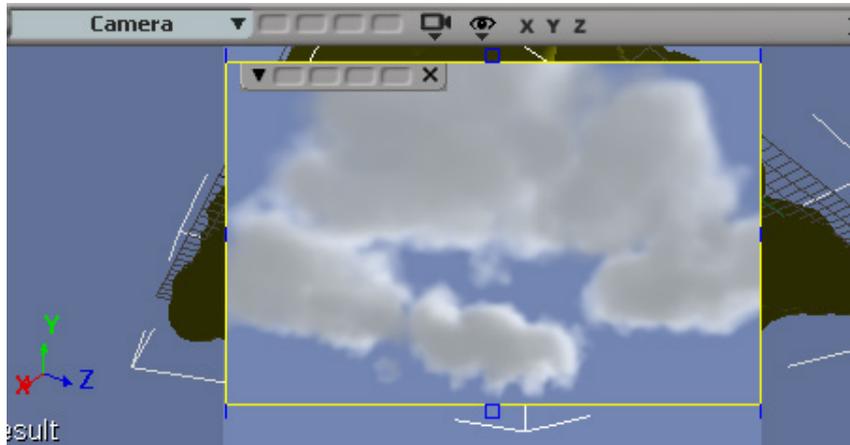


Figure 7-49 The rendered Cloud at frame 100

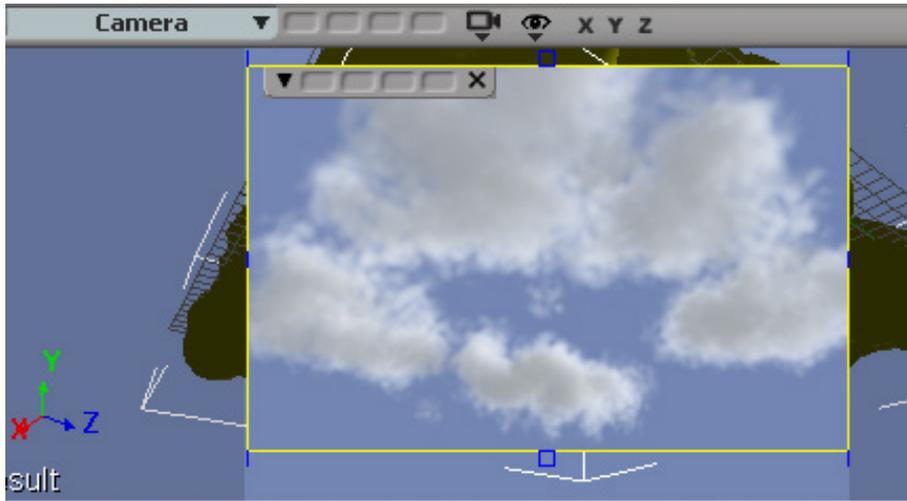


Figure 7-50 The crispy cloud effect at frame 100

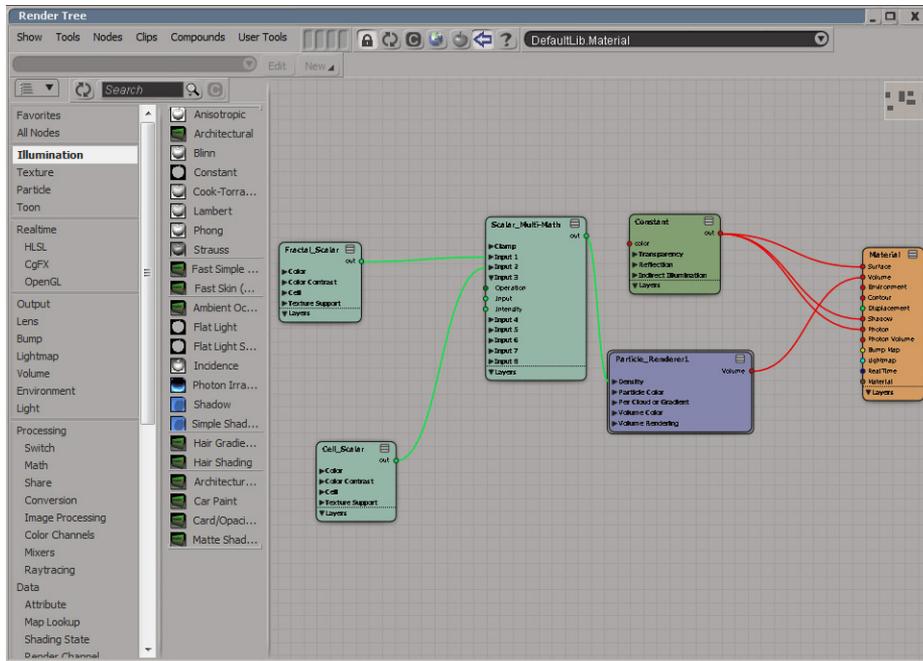


Figure 7-51 The node network in the Render Tree workspace

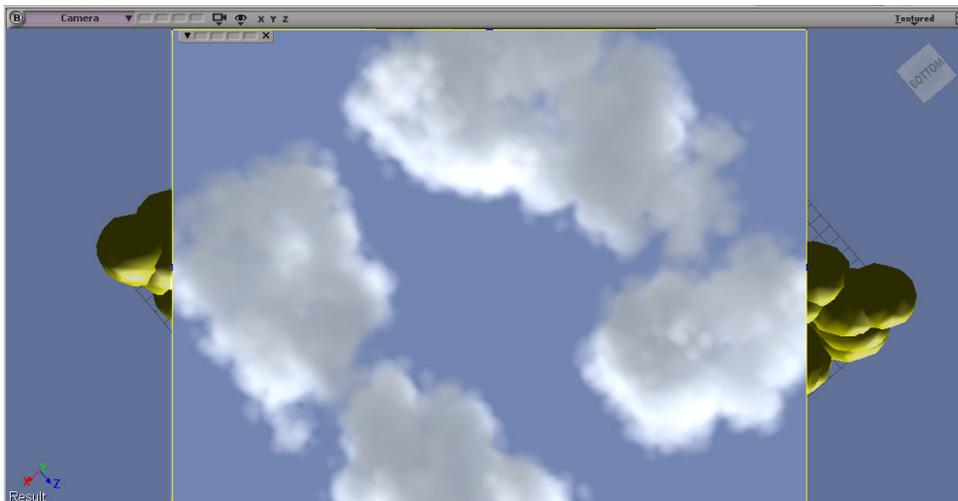


Figure 7-52 Final rendered image of cloud at last frame

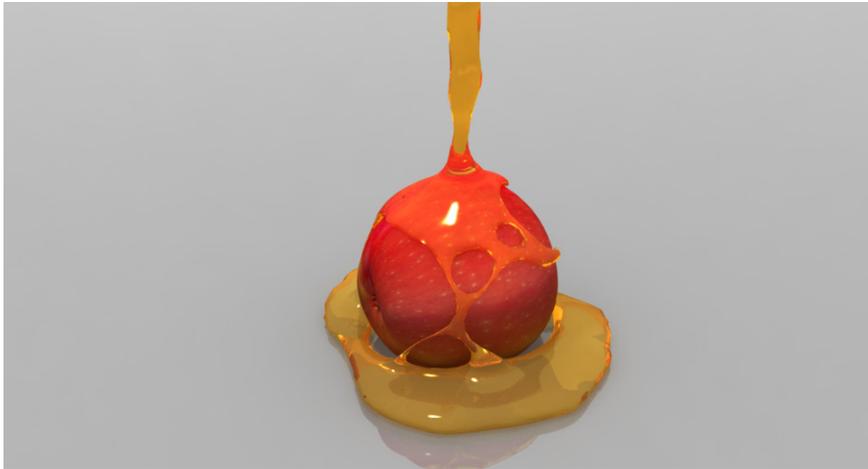


Figure 7-53 Final rendered output of the Lagoa simulation at frame 250

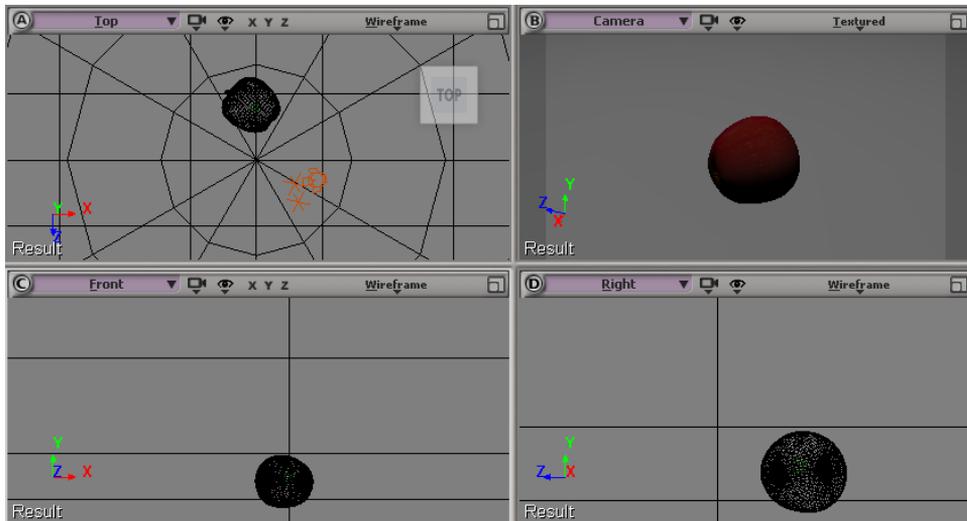


Figure 7-54 The c07_tut4_start file displayed in viewports

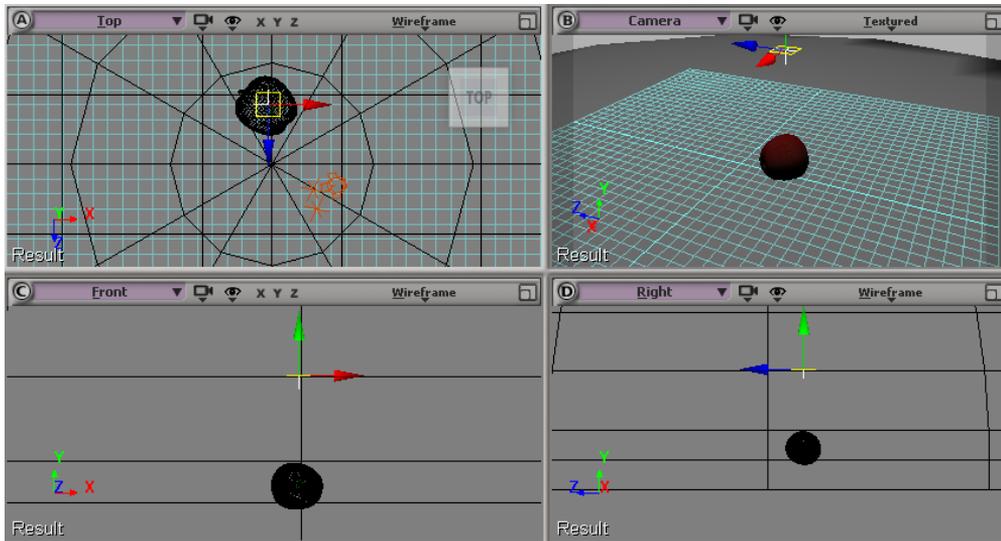


Figure 7-55 The null object aligned in viewports

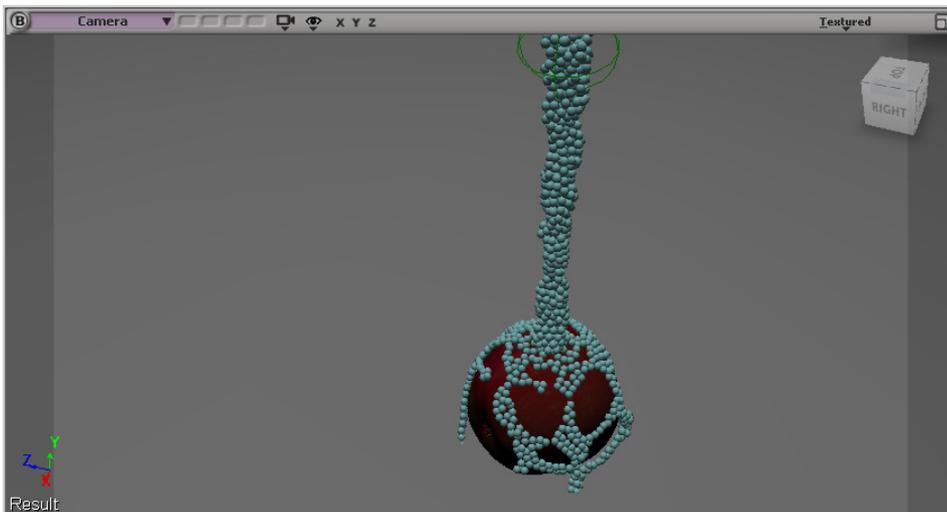


Figure 7-56 The Lagoon simulation at frame 201

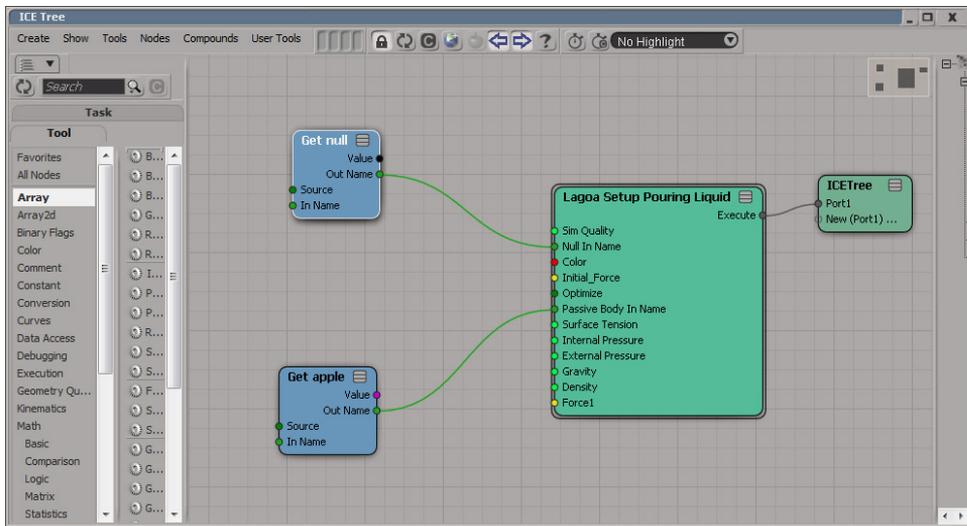


Figure 7-57 The basic nodes of Laga in the ICE Tree window

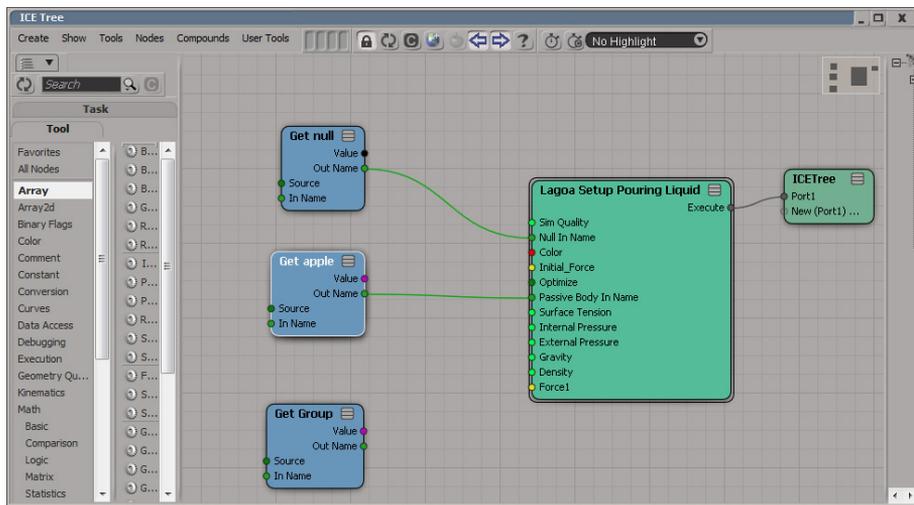


Figure 7-58 The Get Group node added in the ICE Tree workspace

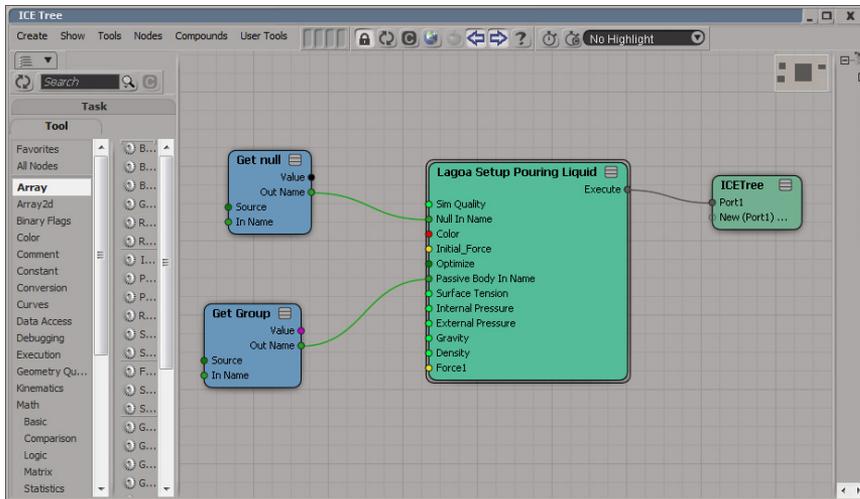


Figure 7-59 The apple node deleted from the **ICE Tree** workspace and connection established

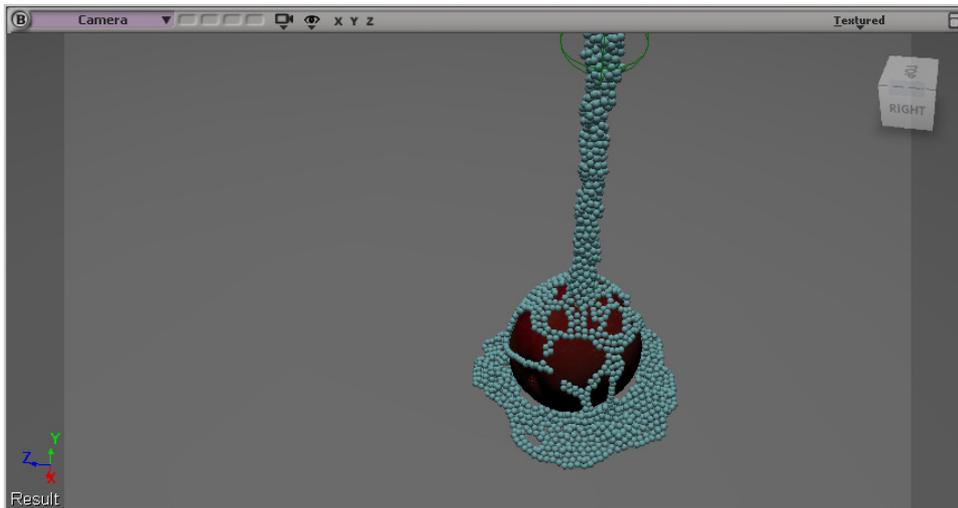


Figure 7-60 The Lagoa particles colliding with apple and floor

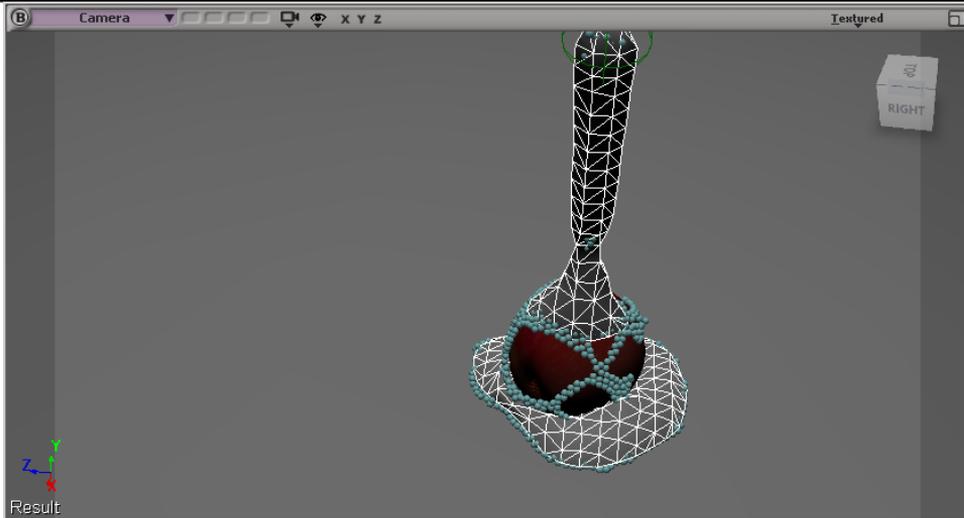


Figure 7-61 The particles converted into the polygon mesh

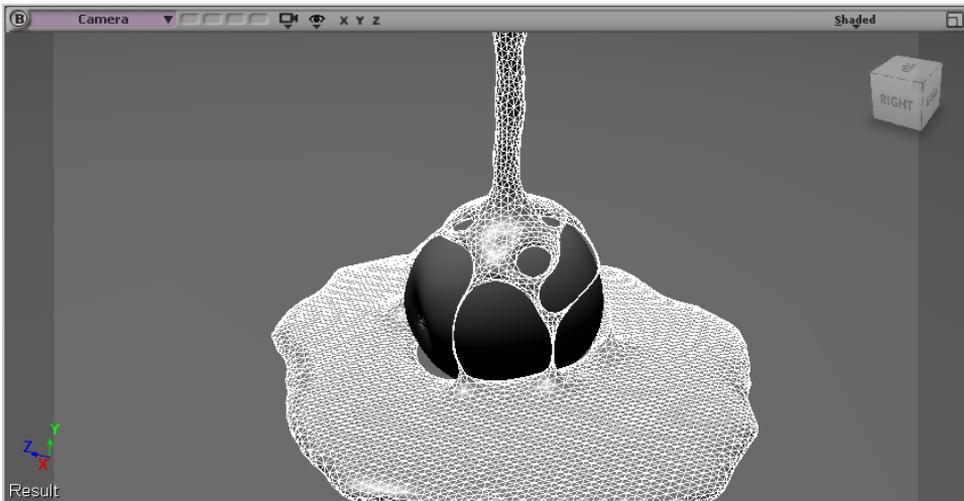


Figure 7-62 The polygon mesh settling down in the Camera viewport

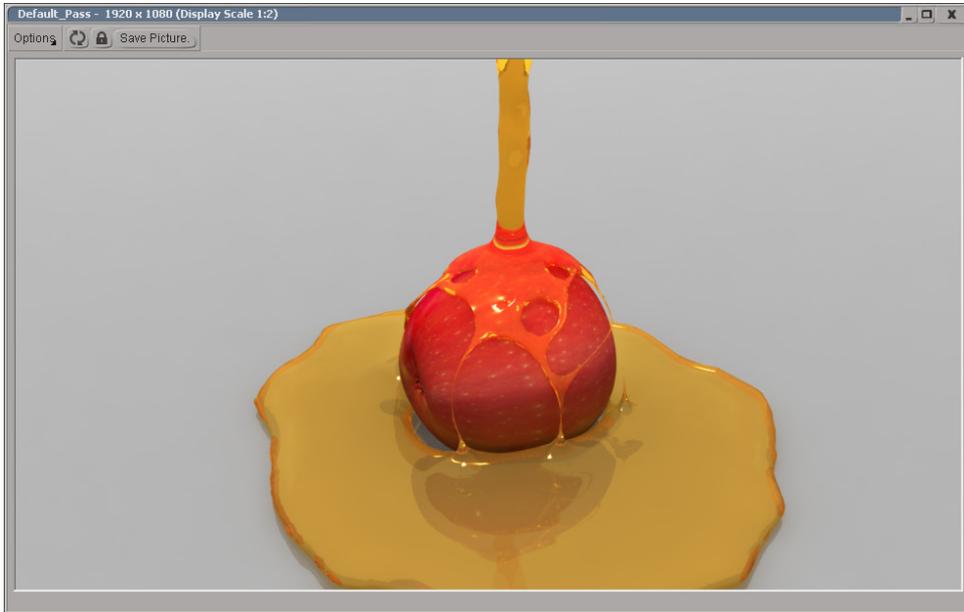


Figure 7-63 Final rendered image of Lagoa simulation



Figure 7-64 Rigid body simulation

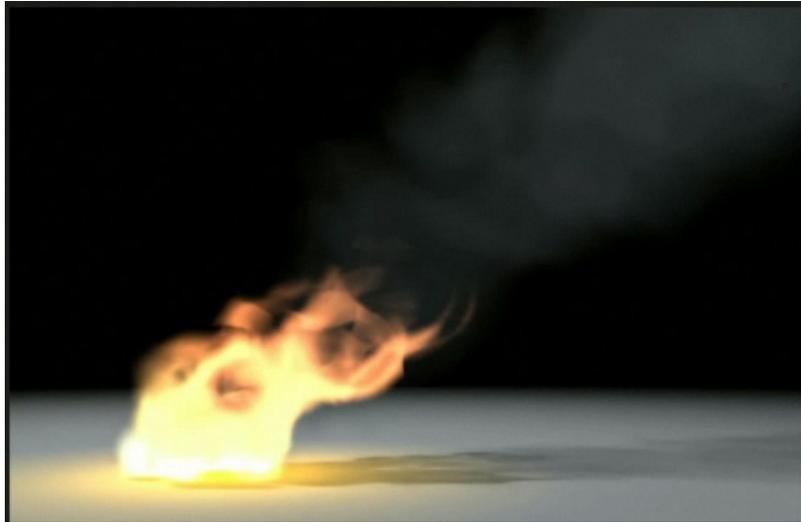


Figure 7-65 Fire and smoke effect in the scene



Figure 7-66 Creating the snowfall using ICE particles



Figure 7-67 The flowing water created using Lagoa simulation

Chapter 8

Syflex Cloth and Hair

Model	1
Animate	2
Render	3
ICE	4
Simulate	Ctrl+4
Hair	Ctrl+2

Figure 8-1 The main toolbar

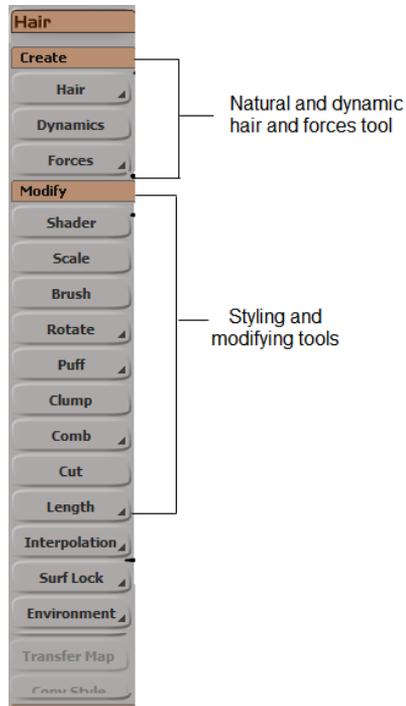


Figure 8-2 The Hair toolbar

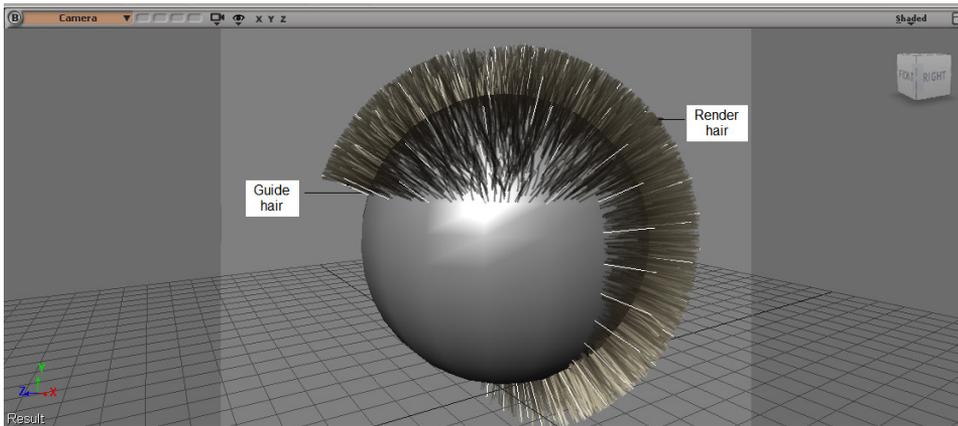
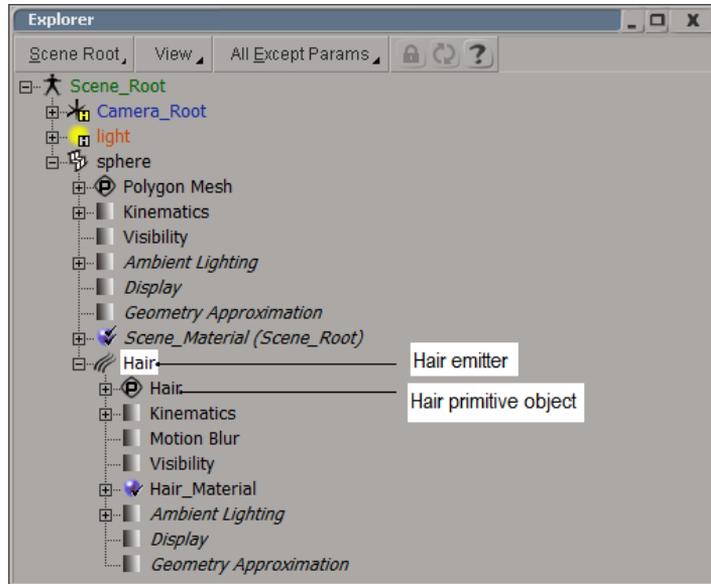


Figure 8-3 The Guide (styling) hair (selected and white in color) and Render hair



*Figure 8-4 The **Hair** emitter and the **Hair** primitive object in the Explorer window*



Figure 8-5 The cloth simulation at frame 55

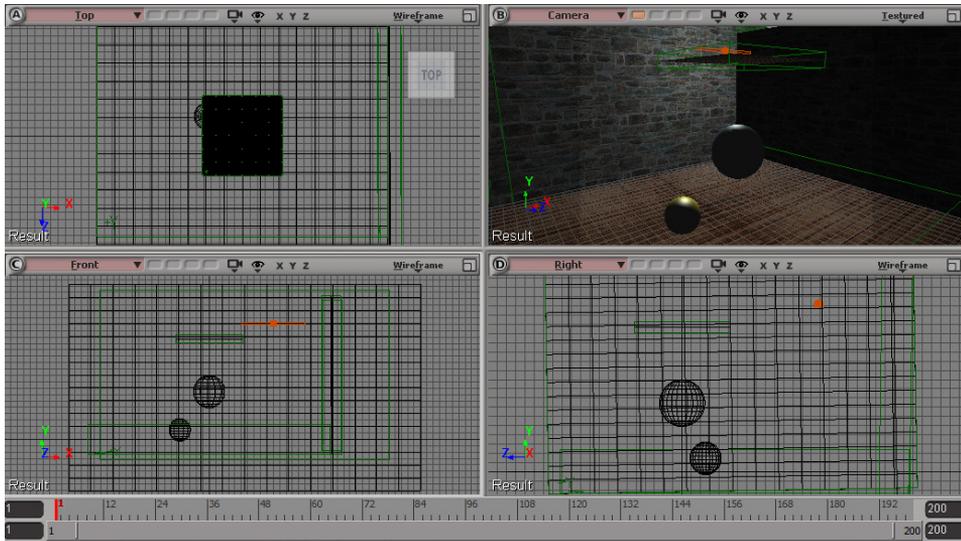


Figure 8-6 The c08_tut1_start file displayed in viewports



Figure 8-7 The Syflex toolbar

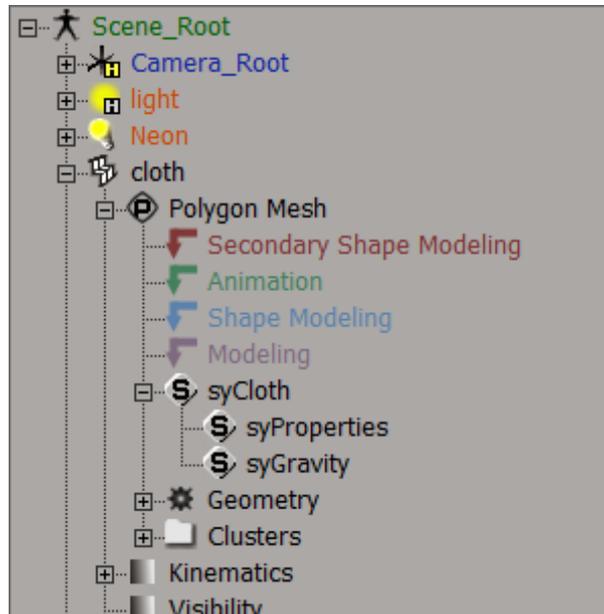


Figure 8-8 The *syGravity* option displayed in the flyout

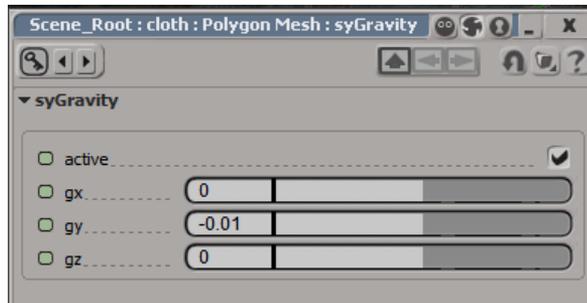


Figure 8-9 The *Scene_Root: cloth : Polygon Mesh :syGravity* property editor

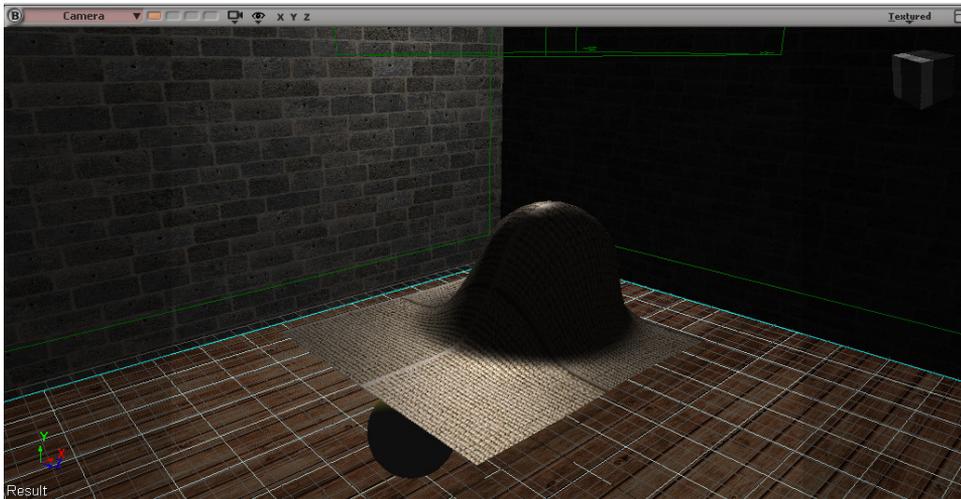


Figure 8-10 The cloth colliding with sphere at frame 40

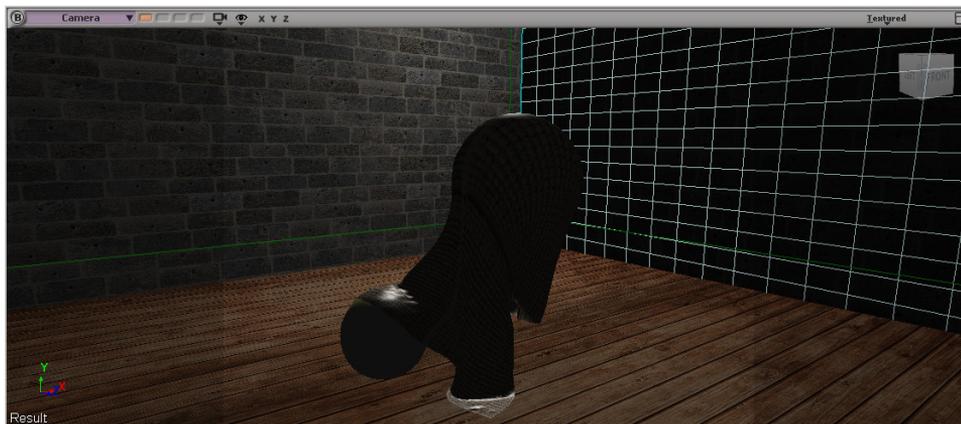


Figure 8-11 The cloth colliding with sphere1 and floor at frame 55

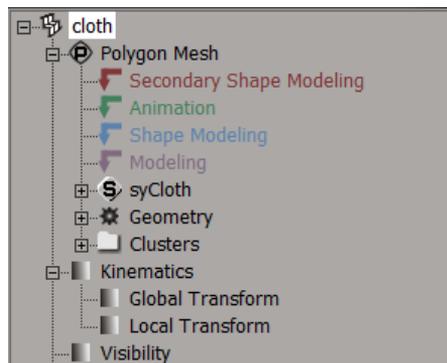


Figure 8-12 The syCloth option displayed in the Scene flyout



Figure 8-13 The simulation of cloth at frame 200

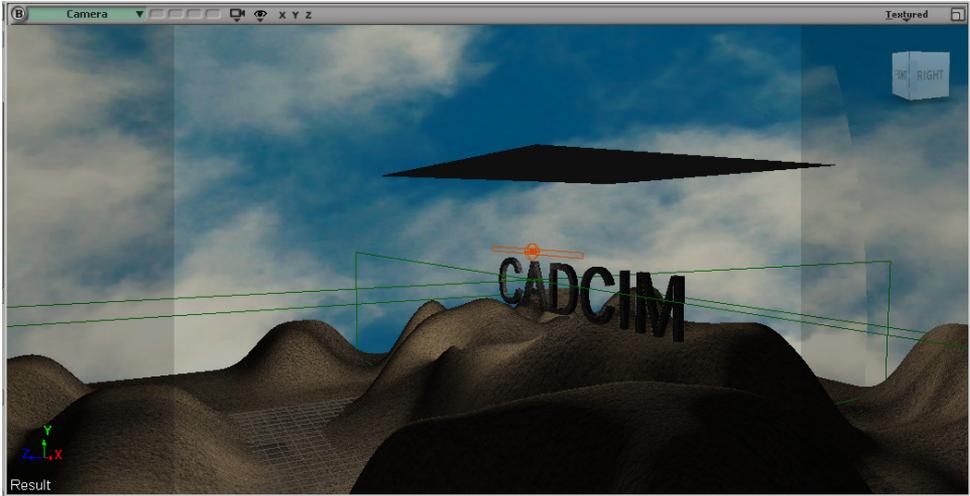


Figure 8-14 The c08_tut2_start file displayed in the Camera viewport

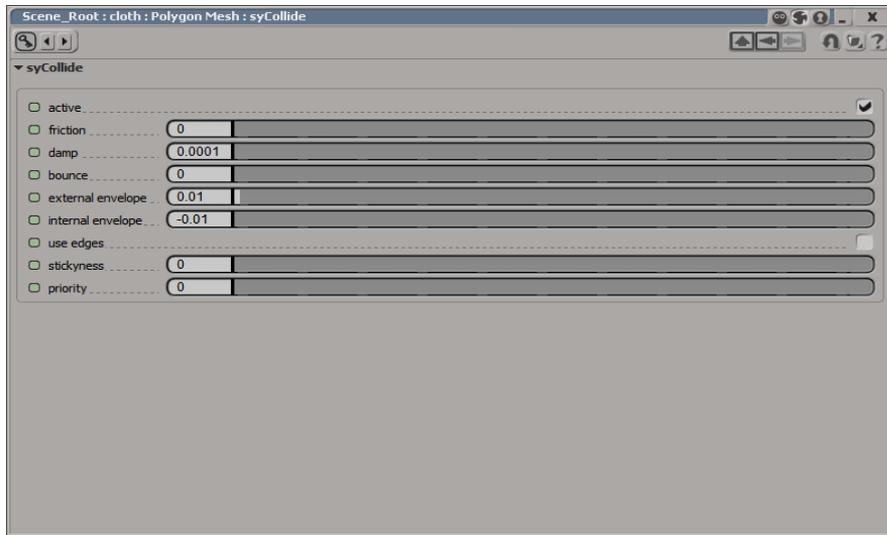


Figure 8-15 Partial view of the `Scene_Root : cloth : Polygon Mesh : syCloth` property editor

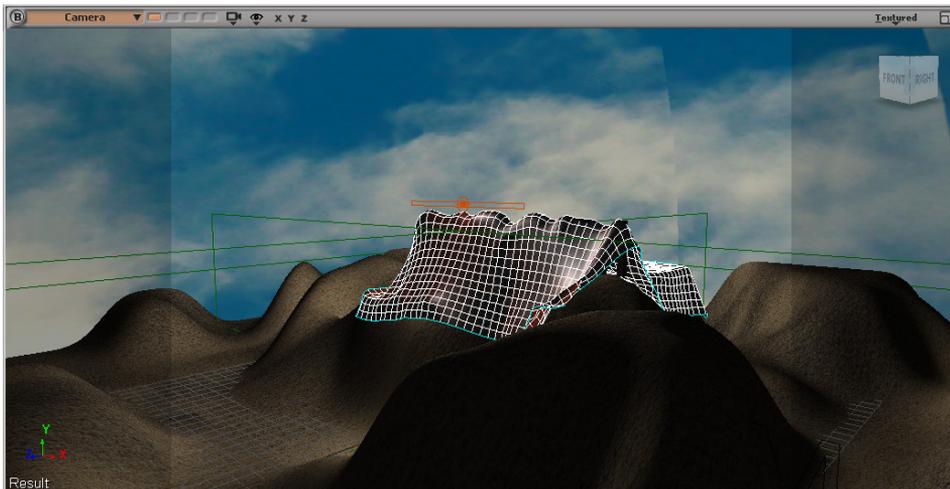


Figure 8-16 The deformation state of the cloth at frame 200

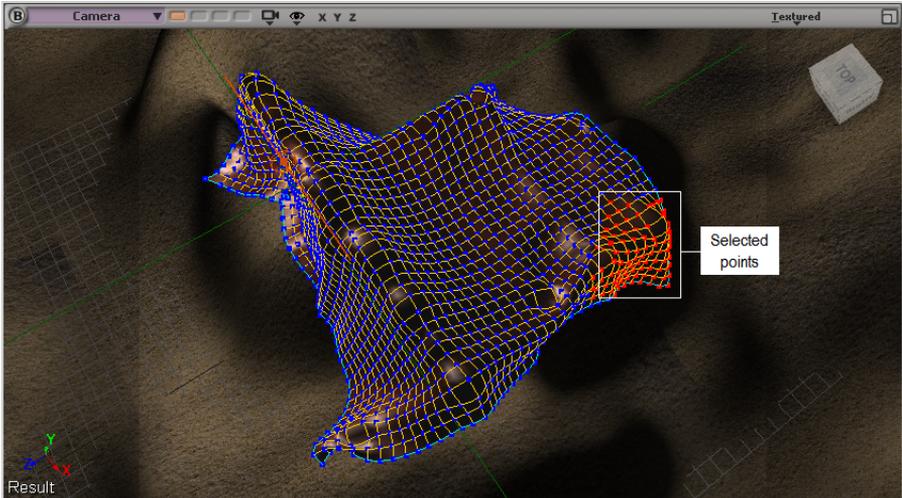


Figure 8-17 The selected points in the Camera viewport

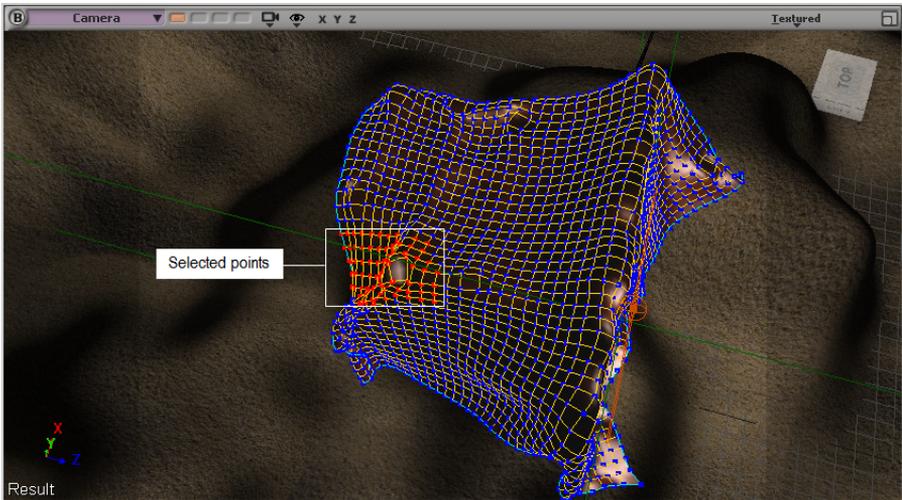


Figure 8-18 The selected points in the Camera viewport

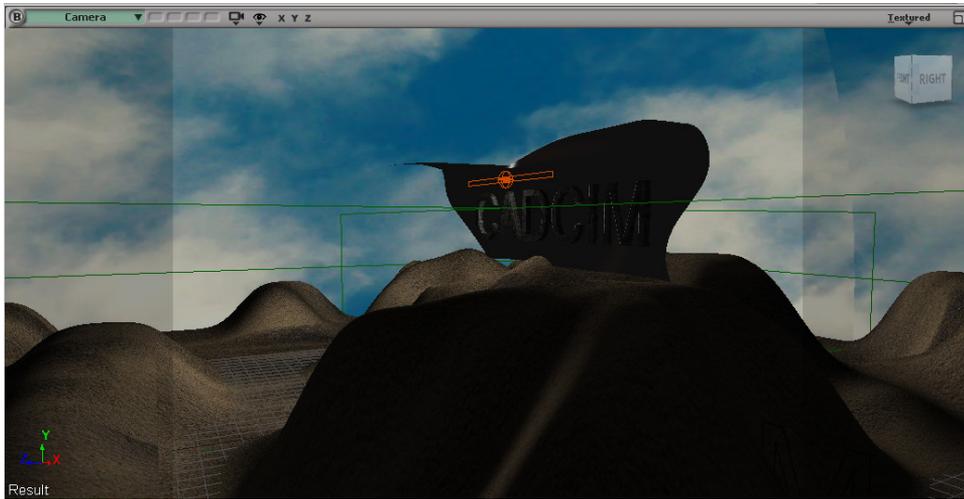


Figure 8-19 The simulation of cloth after applying the forces at frame 40

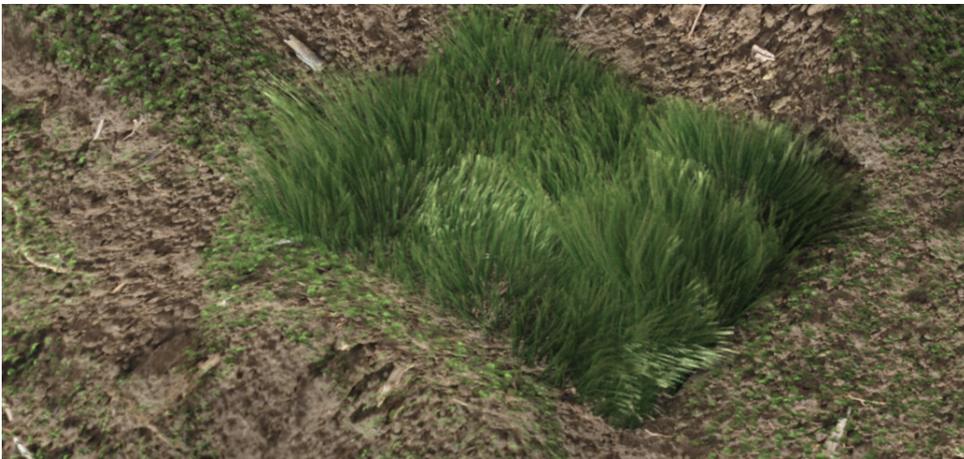


Figure 8-20 The simulated grass on the ground

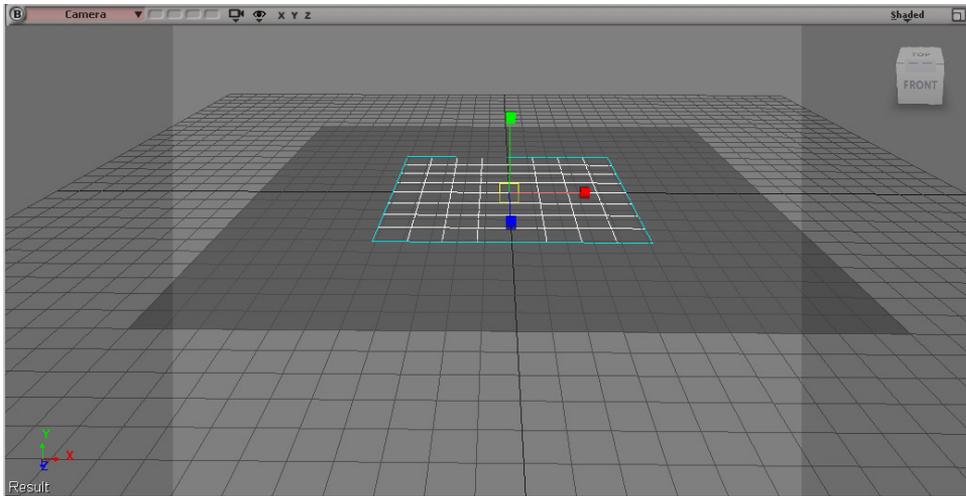


Figure 8-21 The ground1 scaled uniformly in the Camera viewport

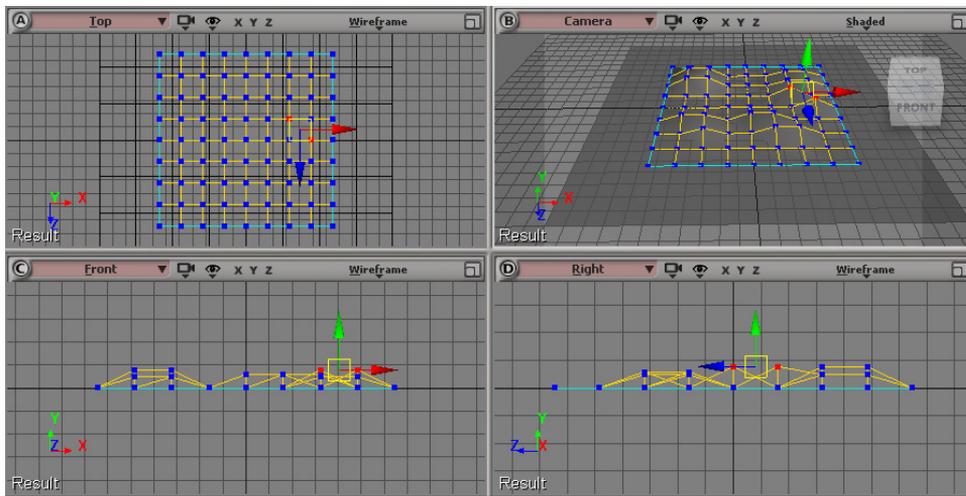


Figure 8-22 Moving the selected points in the positive Y direction

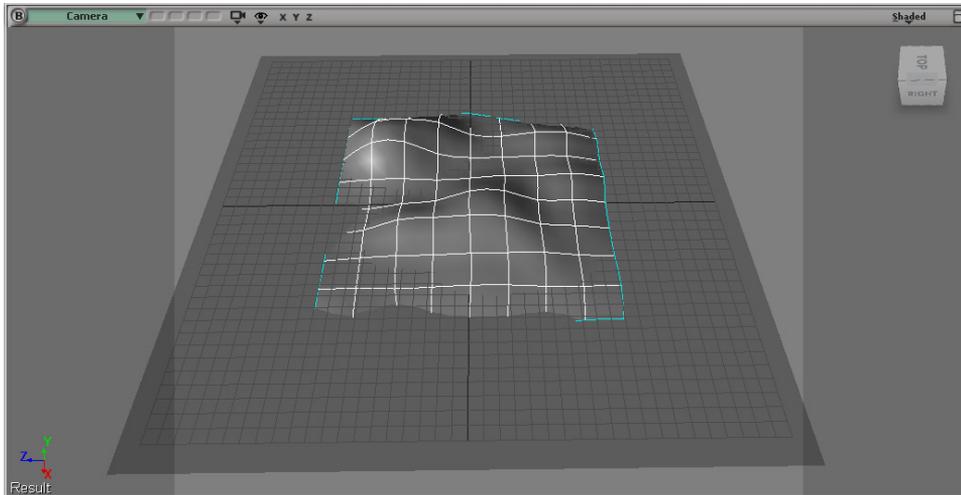


Figure 8-23 The smoothed ground1 in the viewport

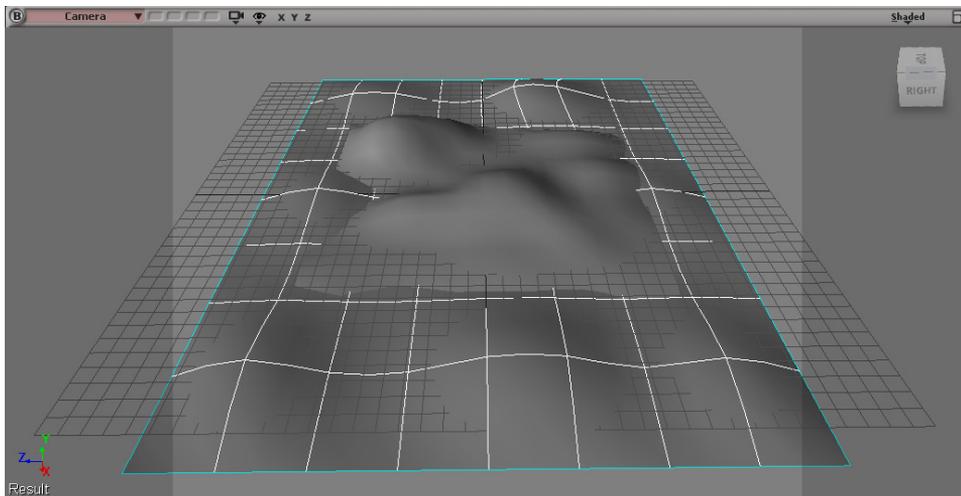


Figure 8-24 The bumpy ground surface created on the ground

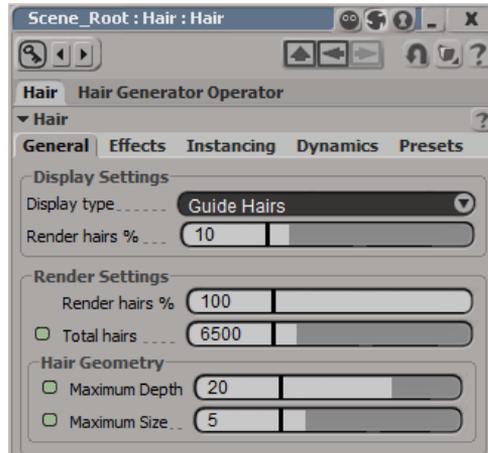


Figure 8-25 Partial view of the `Scene_Root : Hair : Hair` property editor

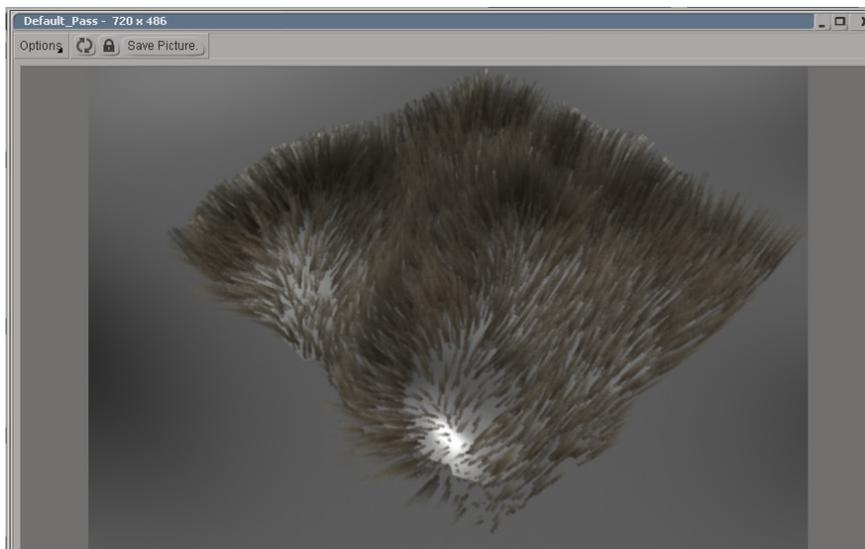


Figure 8-26 The render preview of Grass created on the ground1

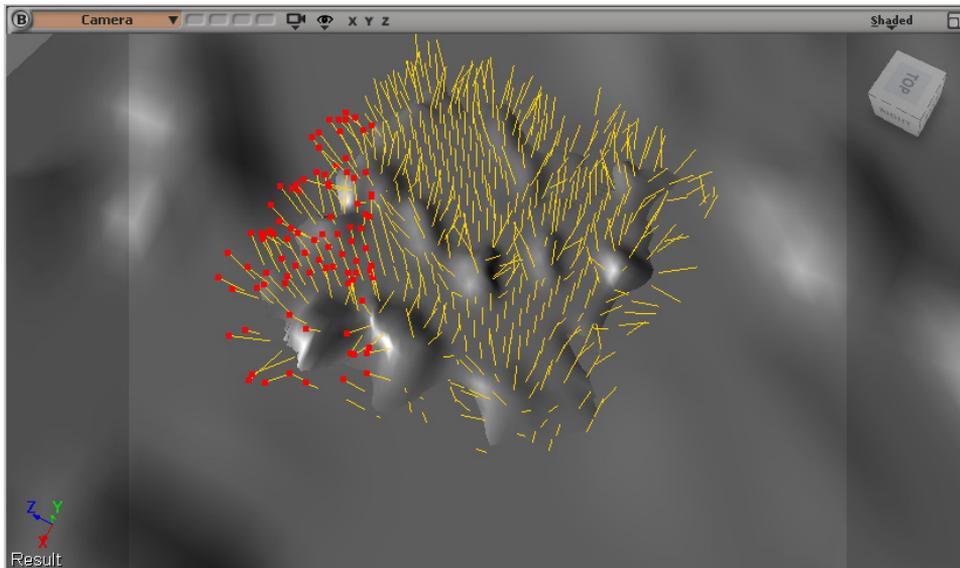


Figure 8-27 The tips of the strands selected

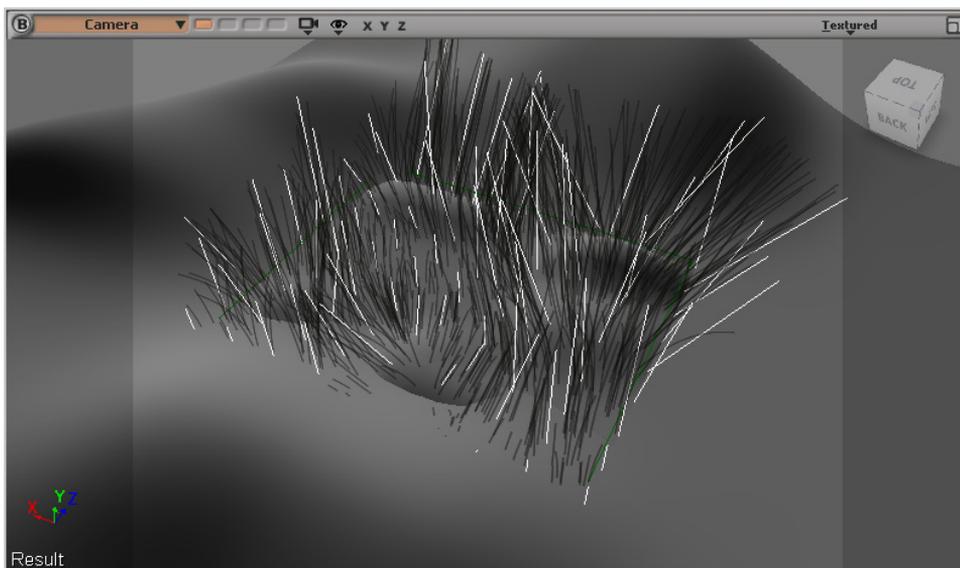


Figure 8-28 The length of the Grass strands changed randomly

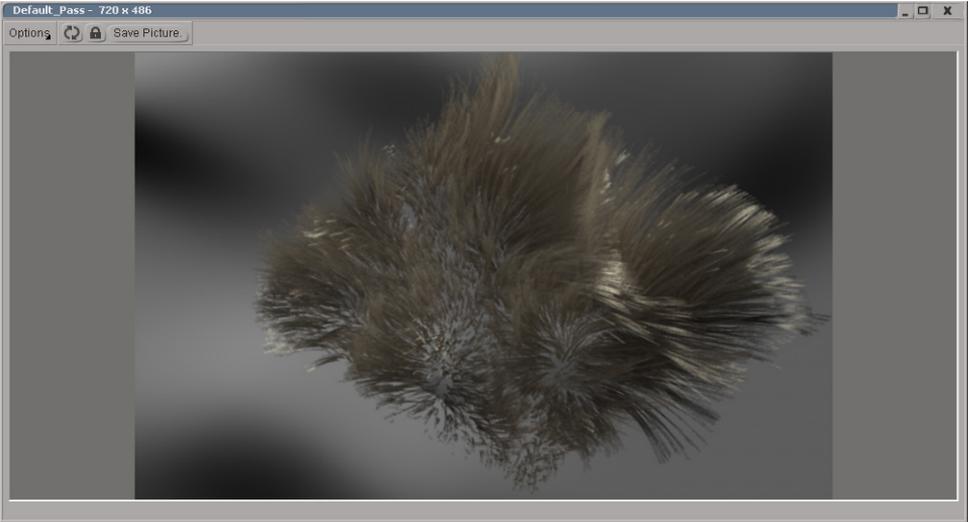


Figure 8-29 Rendered output of the brushed Grass

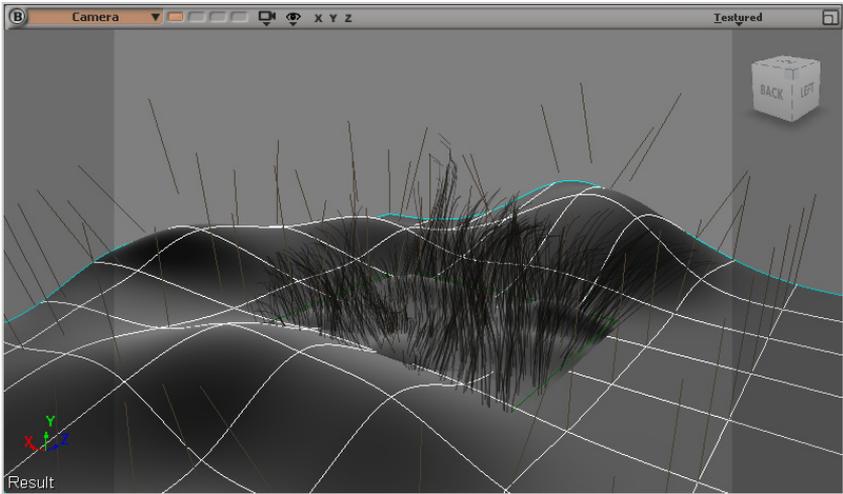


Figure 8-30 The hair applied to ground

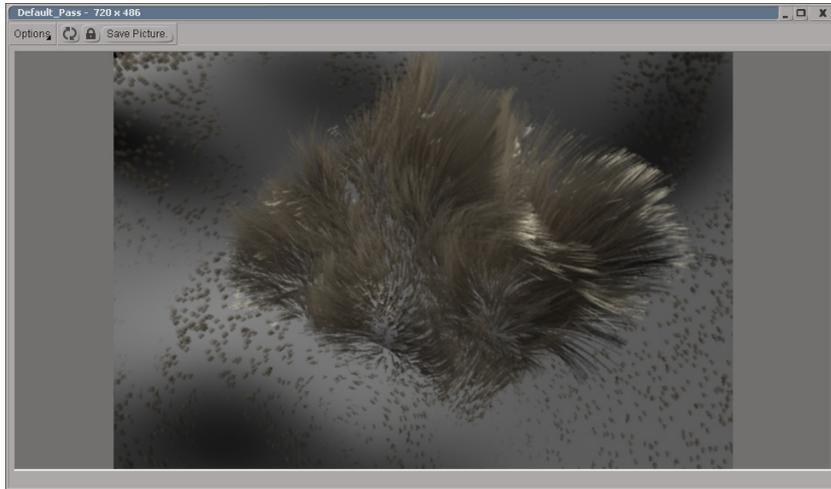


Figure 8-31 Rendered preview of the scene

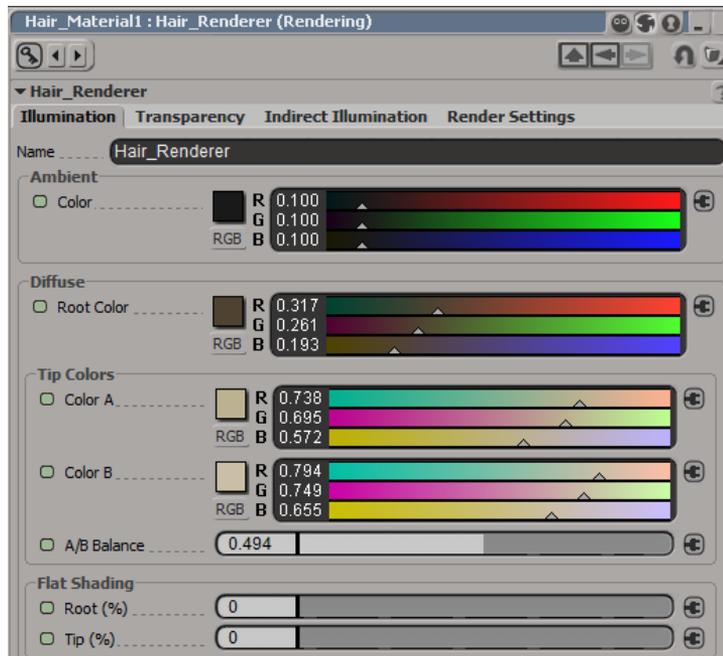
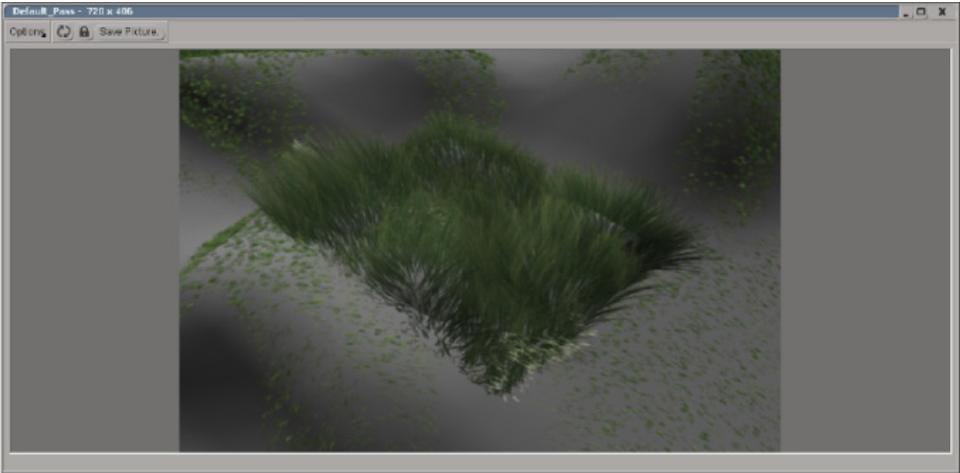


Figure 8-32 Partial view of the *Hair_Material : Hair_Renderer (Rendering)* property editor



*Figure 8-33 The final output in the Default_Pass 720*486 window*



Figure 8-34 The final output of the scene



Figure 8-35 Flag simulation using Syflex cloth



Figure 8-36 Hair applied on a human head

Chapter 9

Face Robot and Compositing

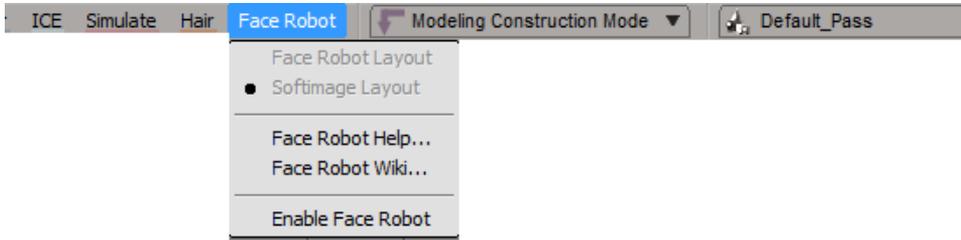


Figure 9-1 Choosing the Face Robot option from the flyout

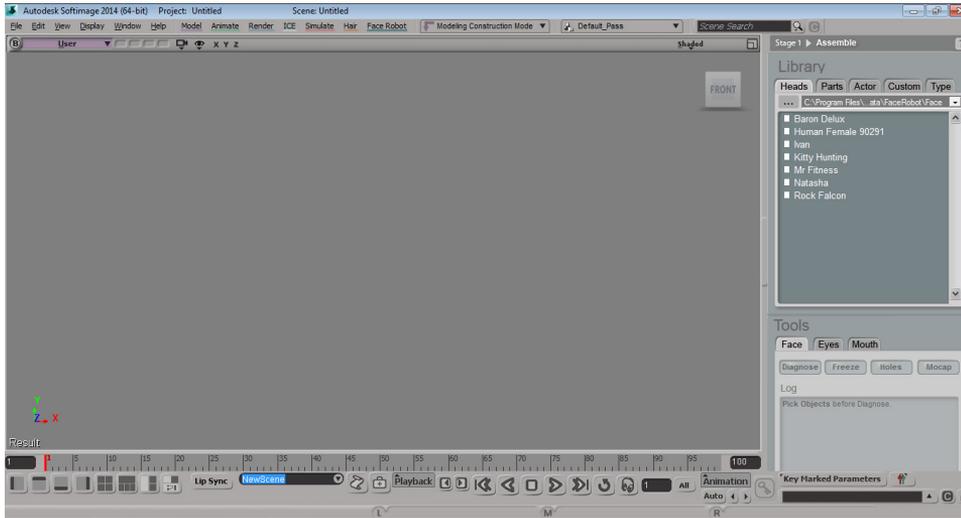


Figure 9-2 The Face Robot Layout

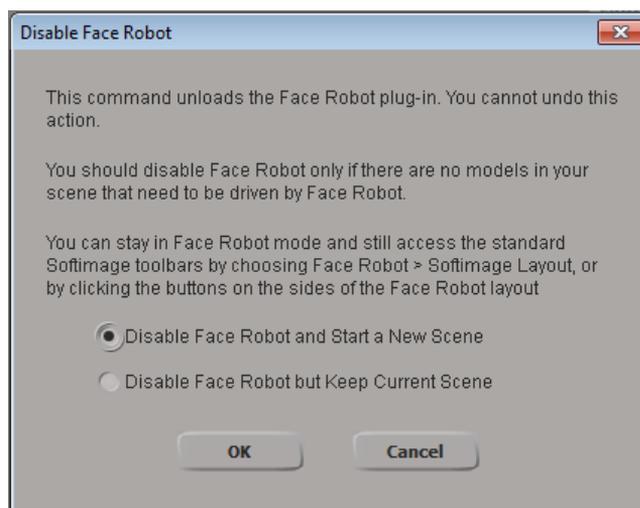


Figure 9-3 The Disable Face Robot message box

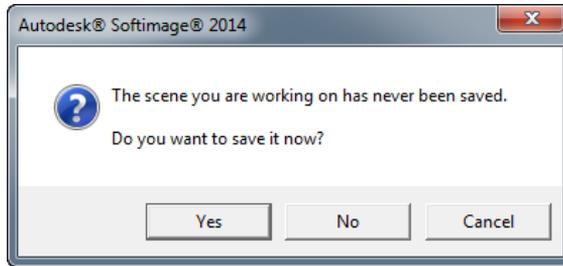


Figure 9-4 The Autodesk Softimage 2014 message box

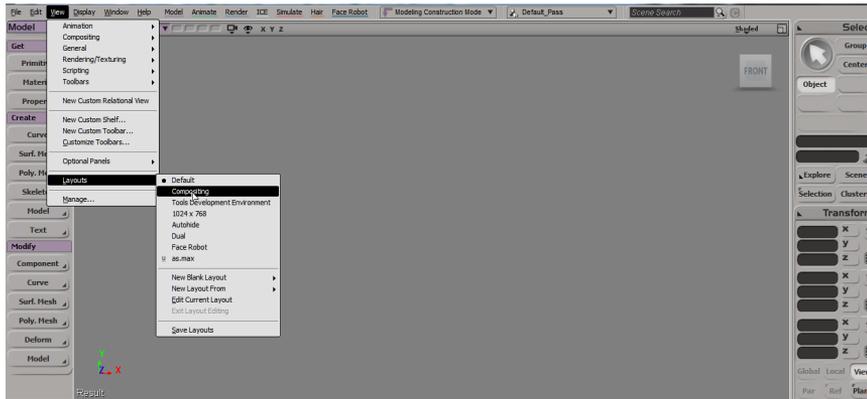


Figure 9-5 Selecting the Compositing from the cascading menu

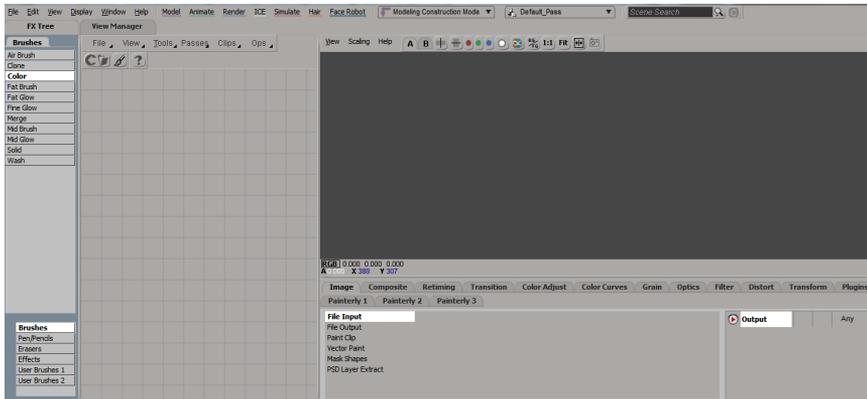


Figure 9-6 The FX Tree layout

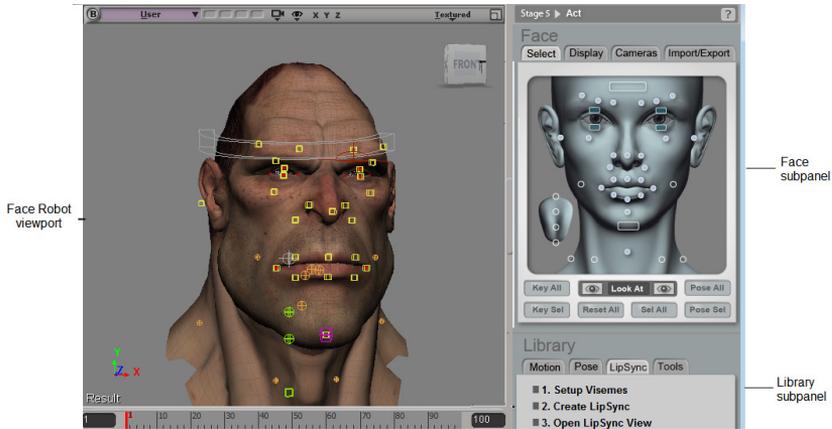


Figure 9-7 The c09_tut1_start file displayed

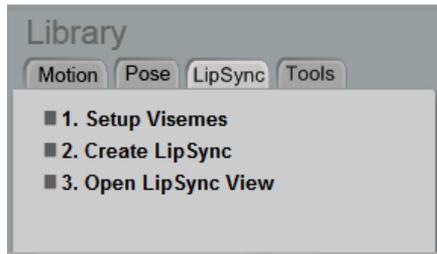


Figure 9-8 List of tools displayed in the LipSync tab

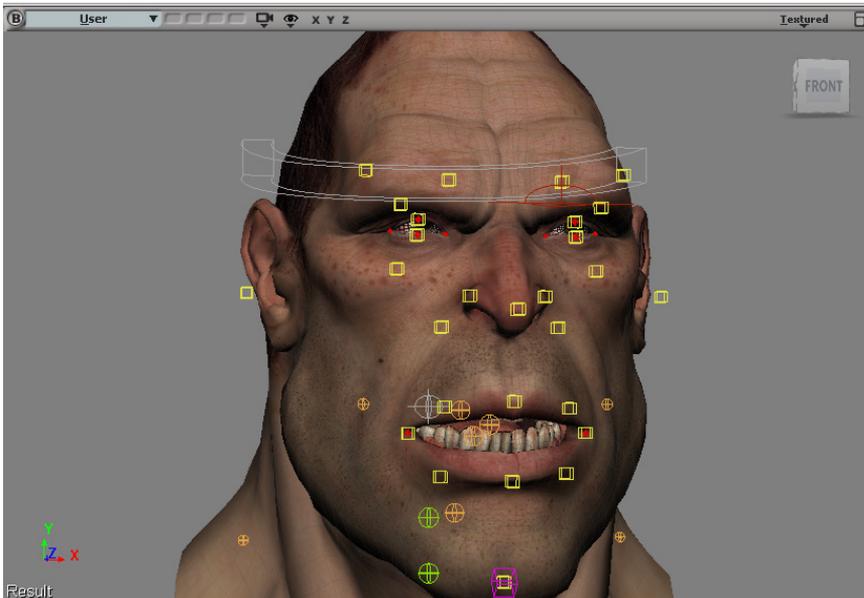


Figure 9-9 The lip pose changed



Figure 9-12 The final composition

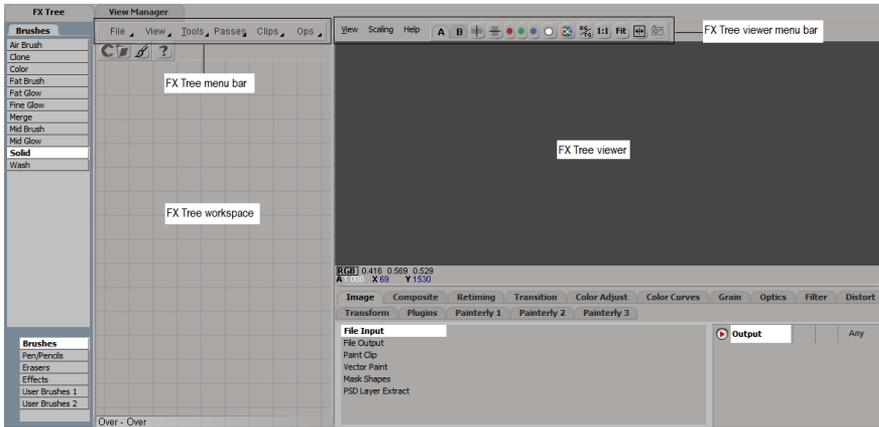


Figure 9-13 The FX Tree layout

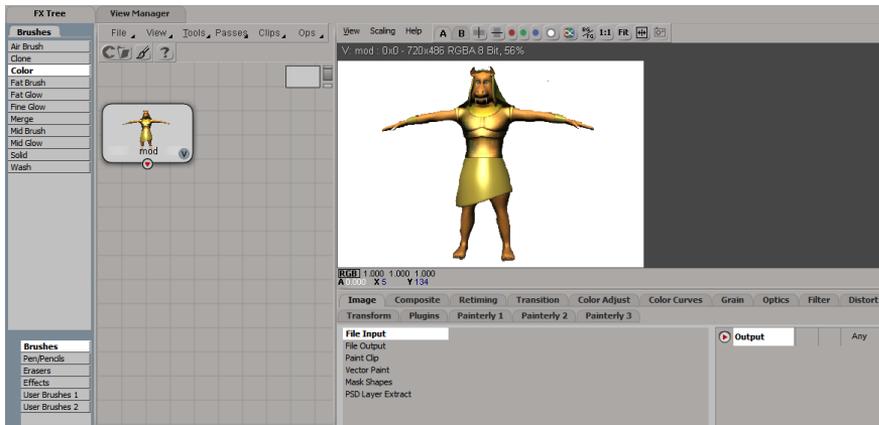


Figure 9-14 The image displayed in the FX Tree viewer

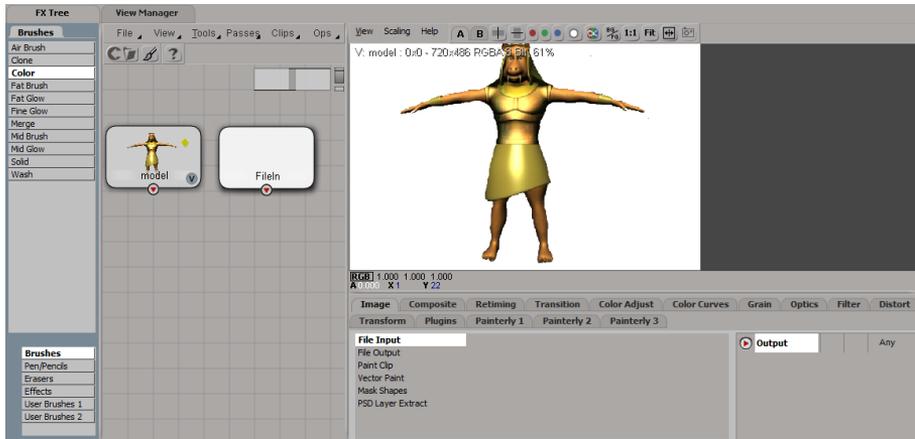


Figure 9-15 The *FileIn* node added in the FX Tree workspace

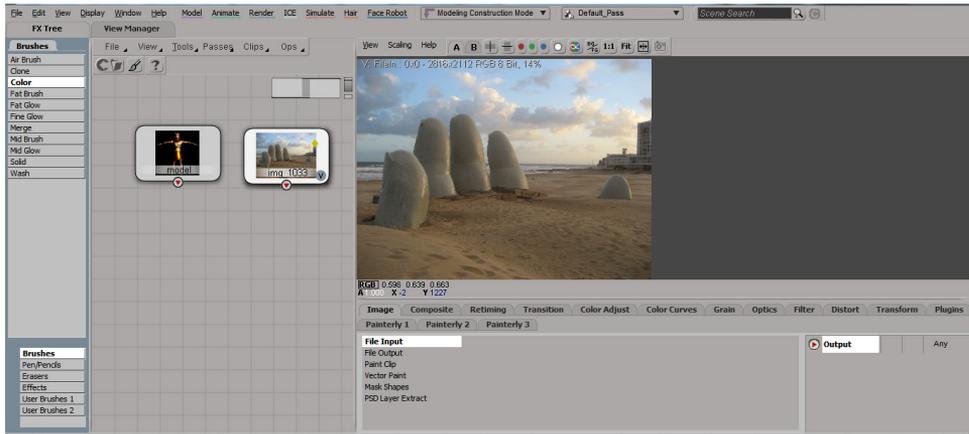


Figure 9-16 The image fit in FX Tree viewer

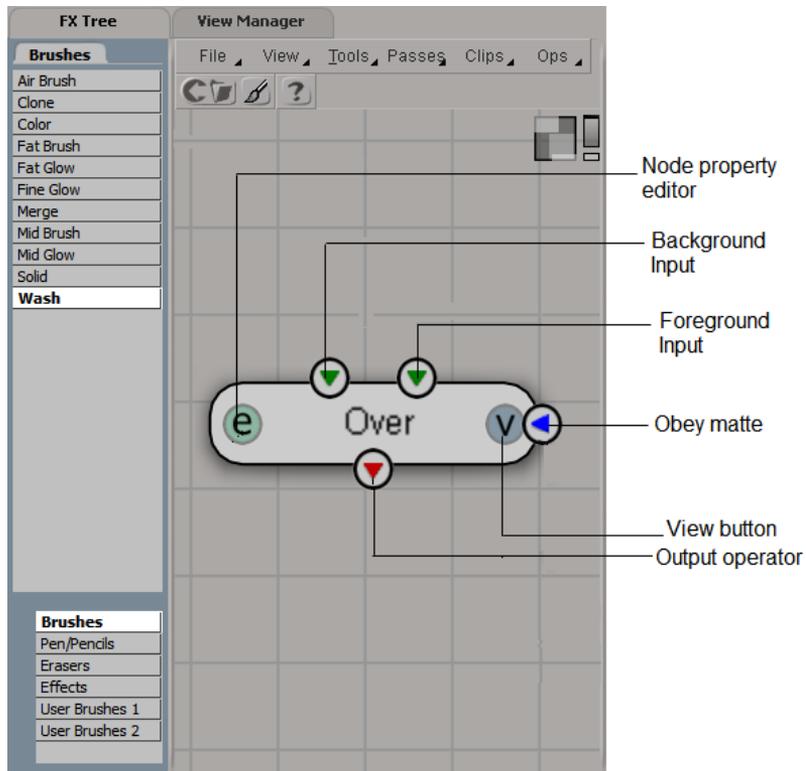


Figure 9-17 The operators of the *Over* node

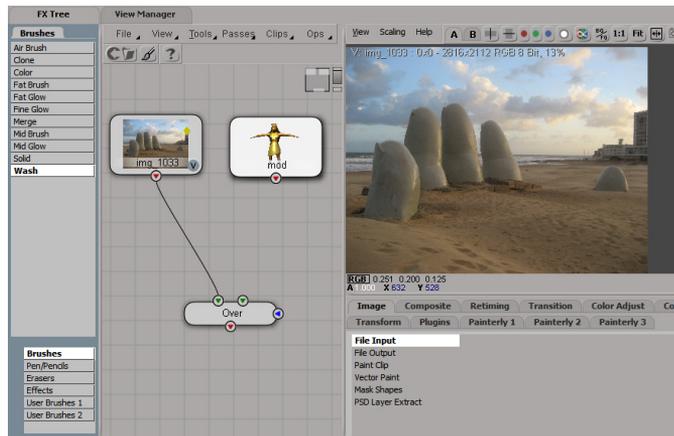


Figure 9-18 The connection established between the *img_1033* and *Over* nodes

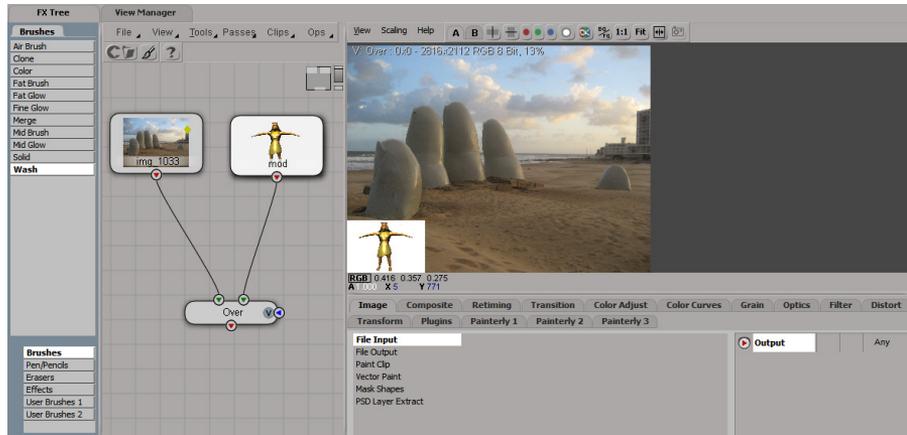


Figure 9-19 Images displayed in the FX Tree viewer

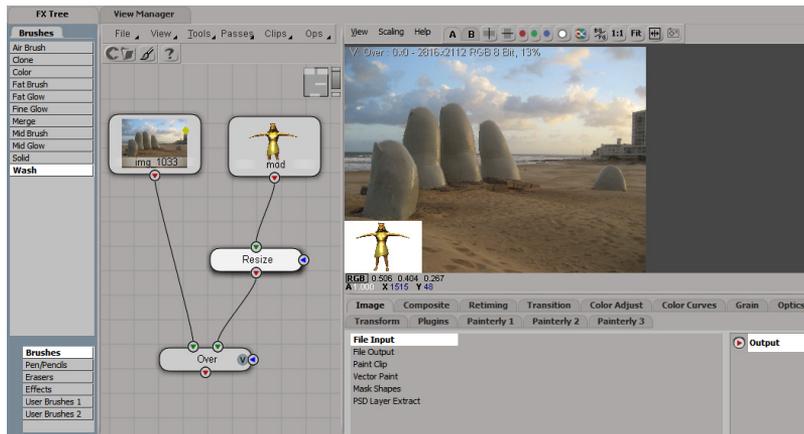


Figure 9-20 Displaying the connection between the **Over** and **Resize** nodes

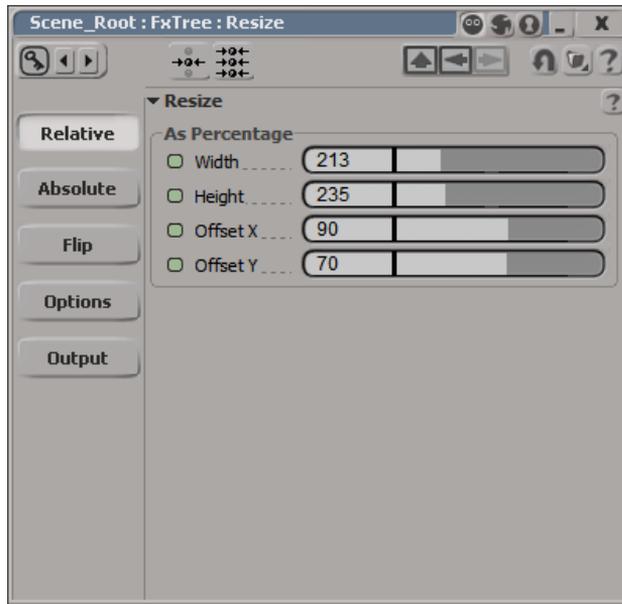


Figure 9-21 The Scene_Root : FxTree : Resize property editor

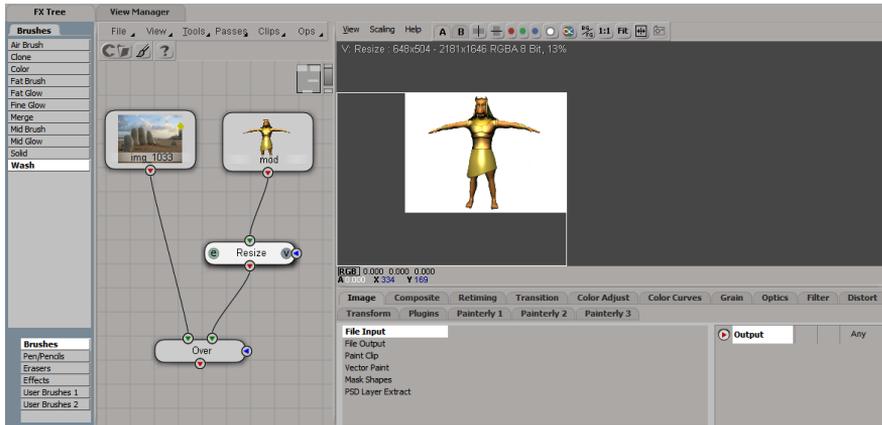


Figure 9-22 Resized image in FX Tree viewer

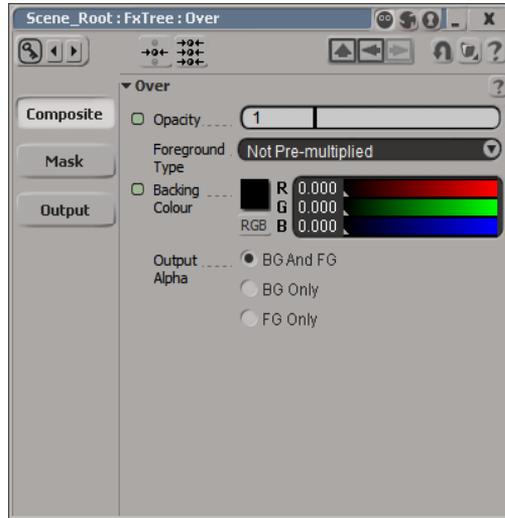


Figure 9-23 The Scene_Root : FxTree : Over property editor

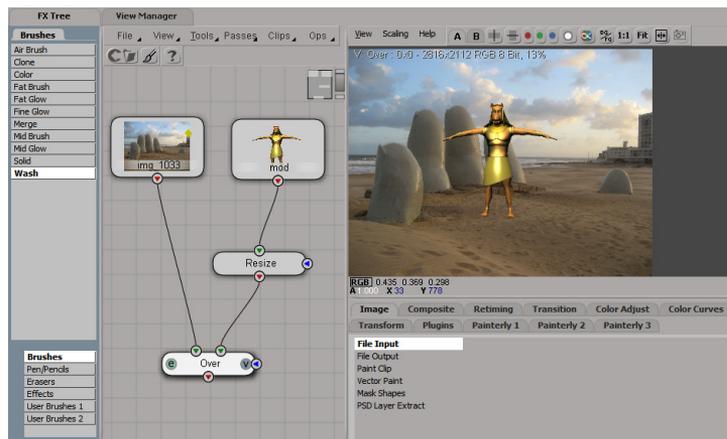


Figure 9-24 The final output of the images

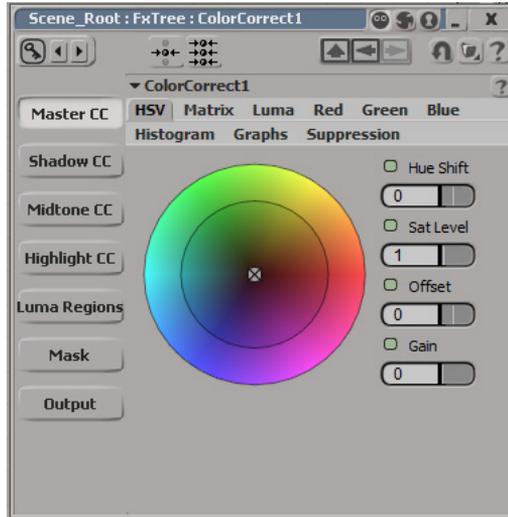


Figure 9-25 The Scene_Root : FxTree : ColorCorrect property editor

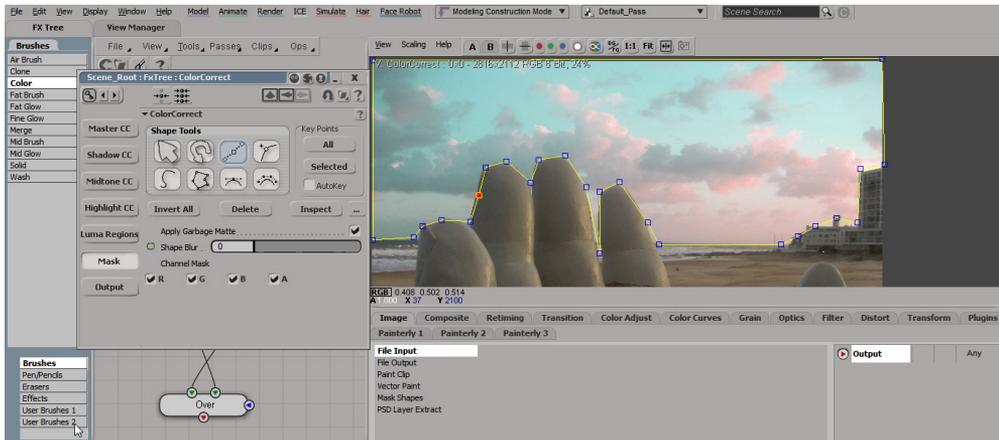


Figure 9-26 Separating the sky for color correction using the Draw Polygone button

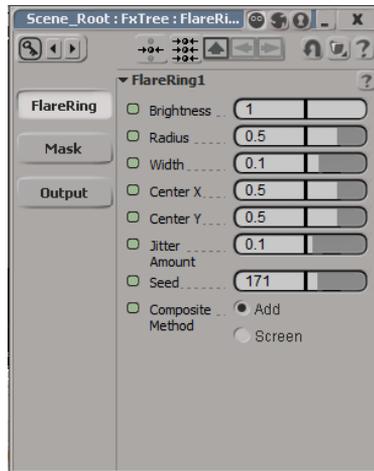


Figure 9-27 The Scene_Root : FxTree : FlareRing property editor

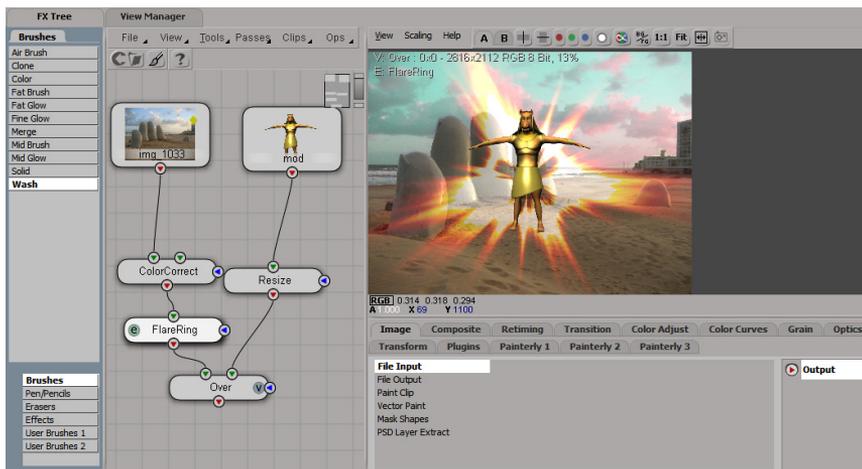


Figure 9-28 The final composed image in the FX Tree viewer



Figure 9-29 The composition for Exercise 1



Figure 9-30 The background image used in creating the composition



Figure 9-31 The composition for Exercise 2



Figure 9-32 The background image used for creating the composition

Chapter 10

Rendering

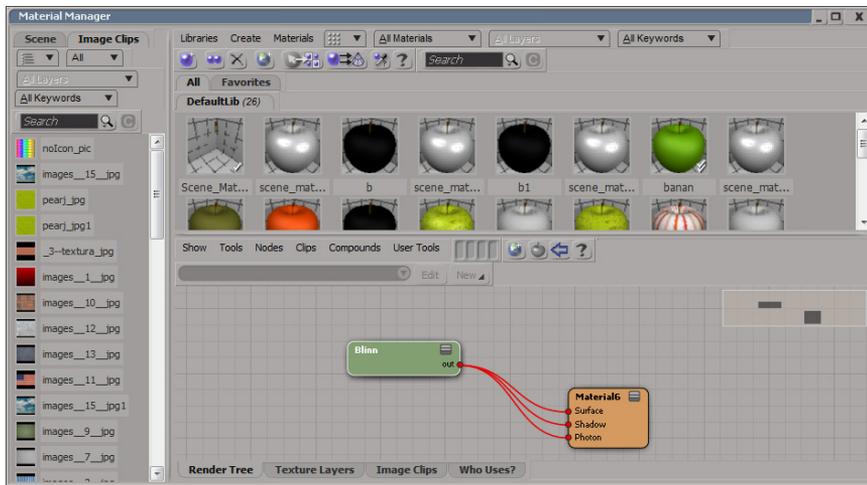


Figure 10-3 The connections between the *Blinn* and *Material#* nodes displayed in the *Render Tree* workspace

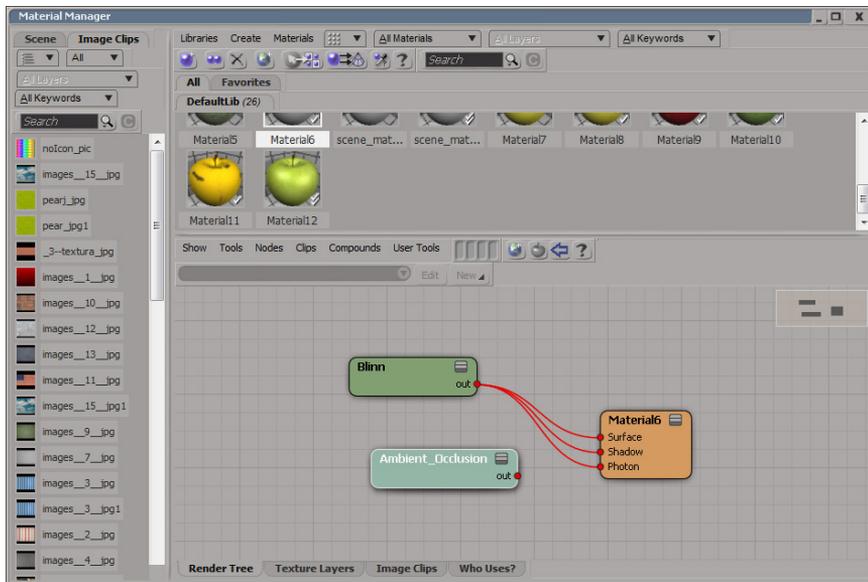


Figure 10-4 The *Ambient_Occlusion* (*mr Texture Shader*) node added in the *Render Tree* workspace

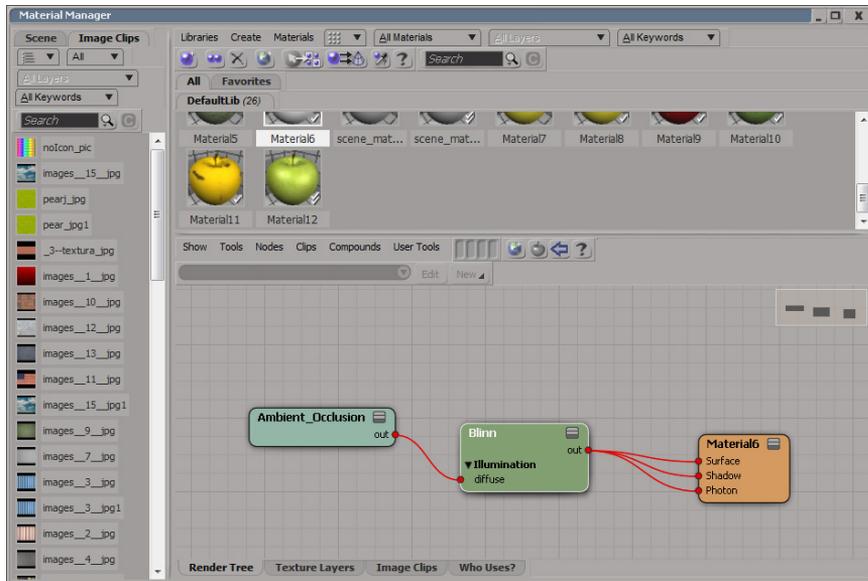


Figure 10-5 Connection established between the **out** port of the **Ambient_Occlusion** (mr Texture Shader) node and the **diffuse** port of the **Blinn** node

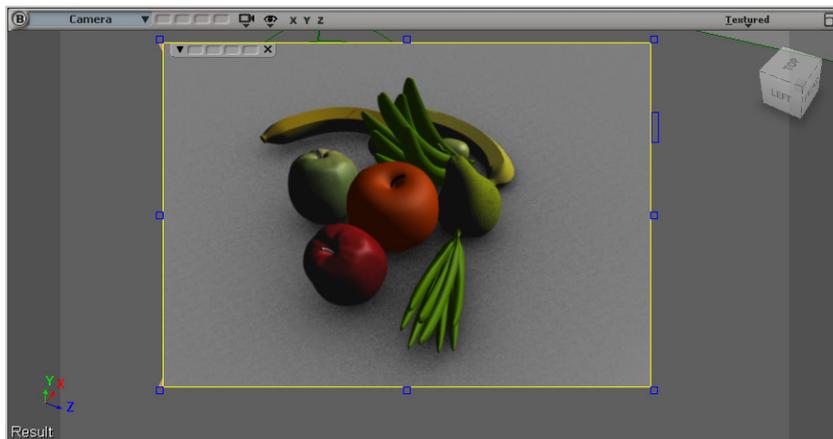


Figure 10-6 The rendered output of the scene

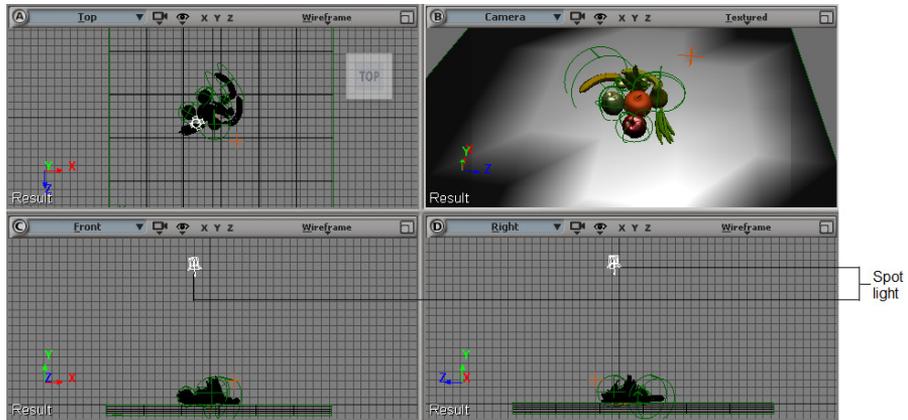


Figure 10-7 The Spot light aligned in viewports

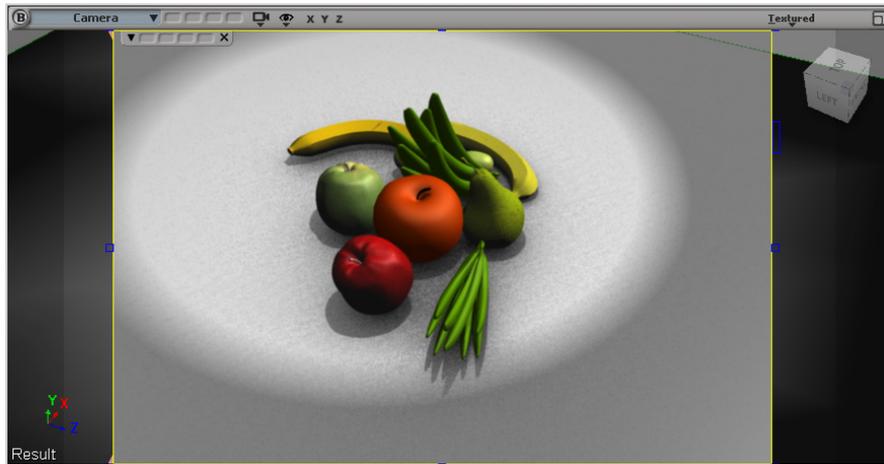


Figure 10-8 Rendered region displayed in the Camera viewport

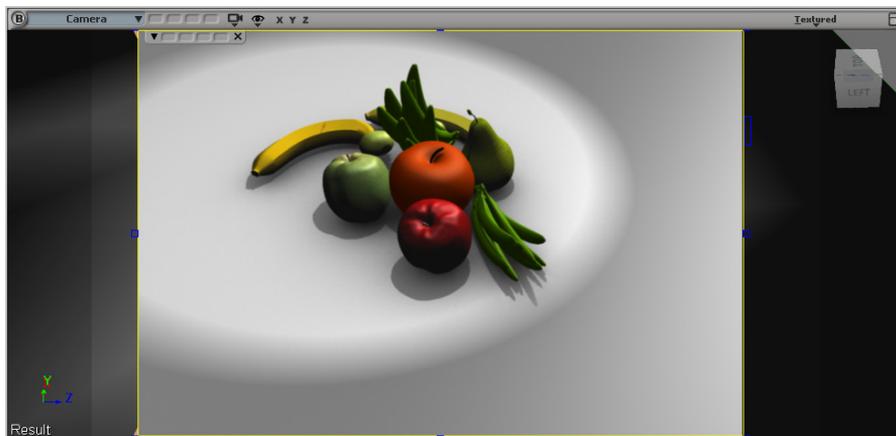


Figure 10-9 Noise removed from the surface

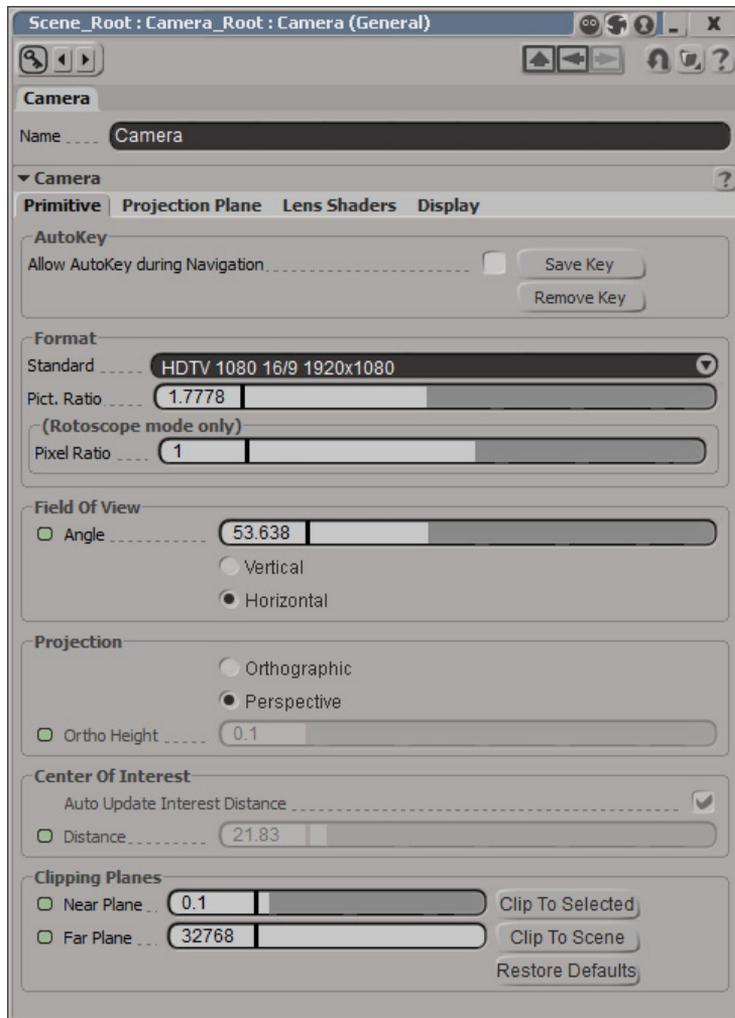


Figure 10-10 The Scene_Root : Camera_Root : Camera (General) property editor



Figure 10-11 The final output of the scene



Figure 10-12 The final output of the scene

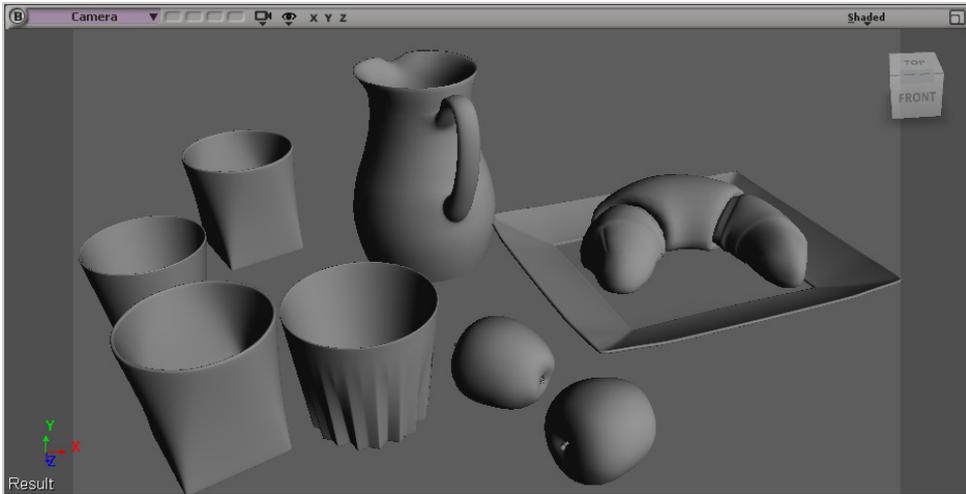


Figure 10-13 The `c10_tut2_start` file displayed in the Camera viewport

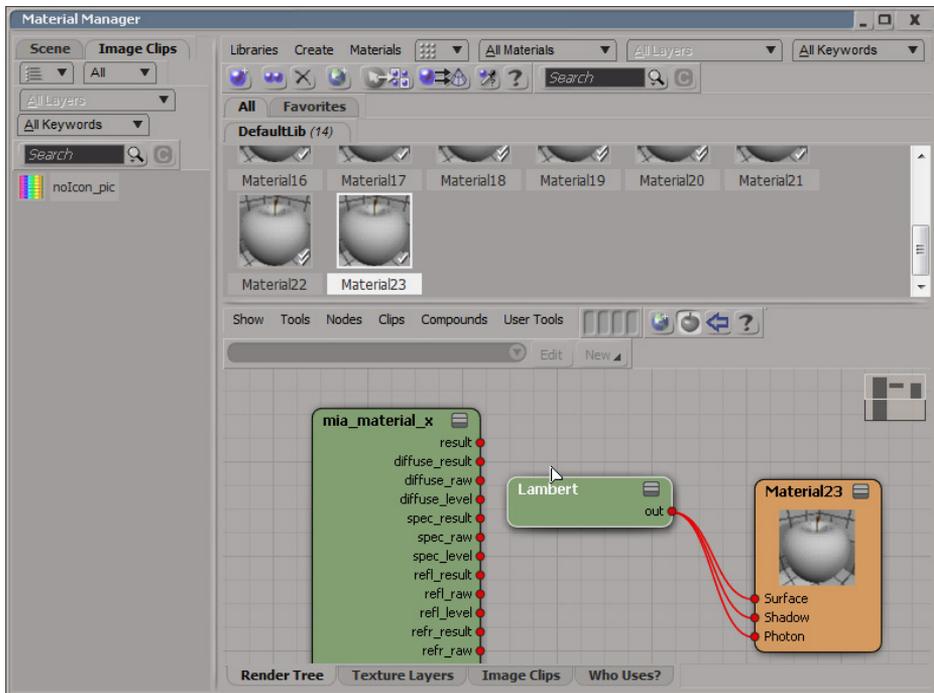


Figure 10-14 The `mia_material_x` (mr Surface Material Shader) node in the Render Tree workspace

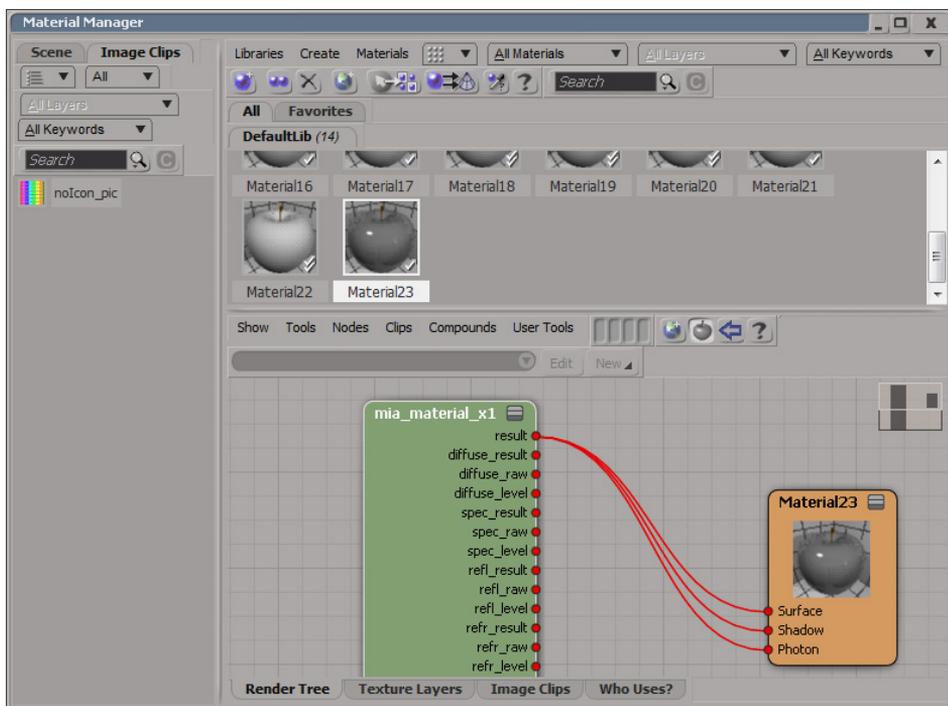


Figure 10-15 Connections established between the *mia_material_x* (*mr Surface Material Shader*) node and the *Material#* node

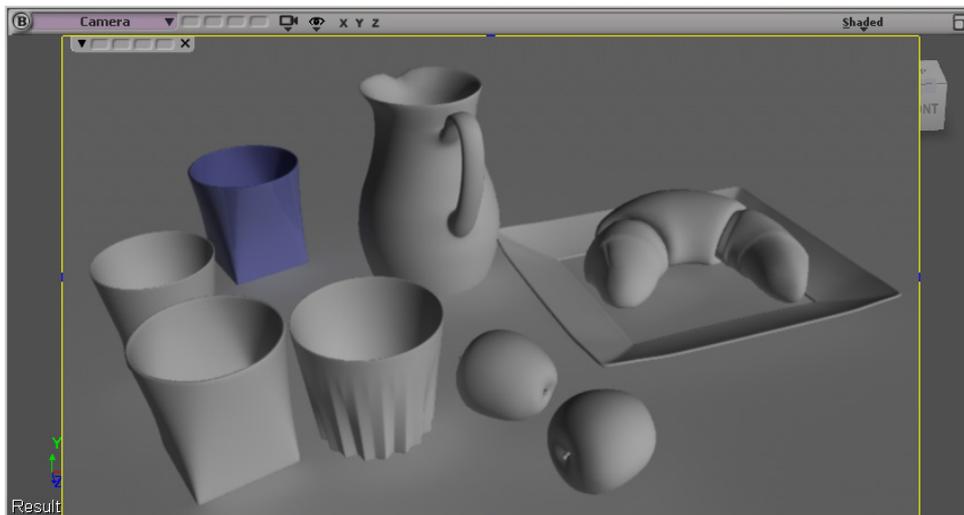


Figure 10-16 Scene with purple glass in the render region

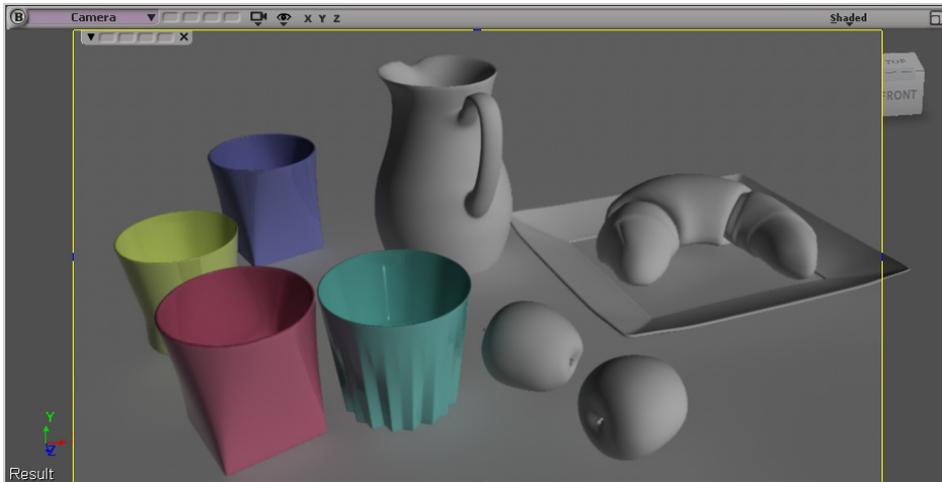


Figure 10-17 Rendered output of the scene after applying material to the glasses

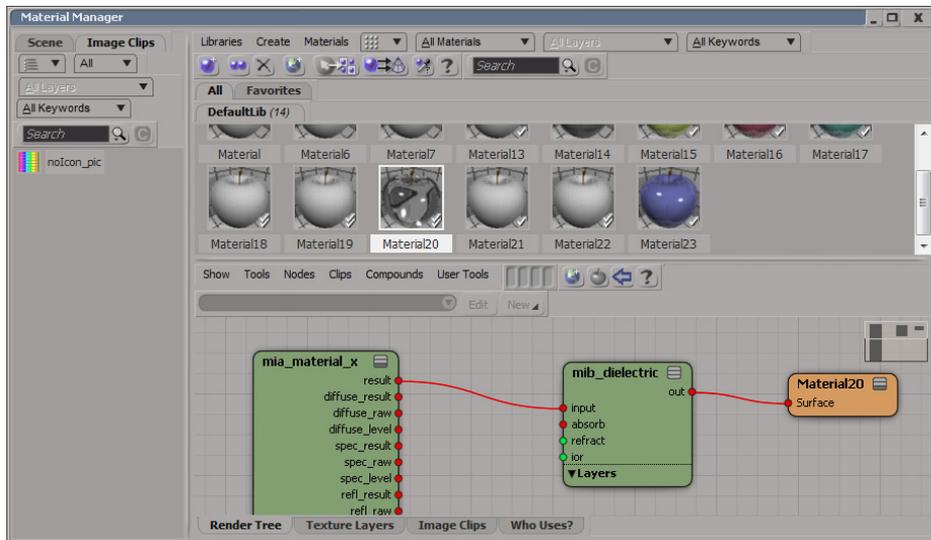


Figure 10-18 Connection established between the mia_material_x (mr Surface Material Shader), mib_dielectric, and material# nodes

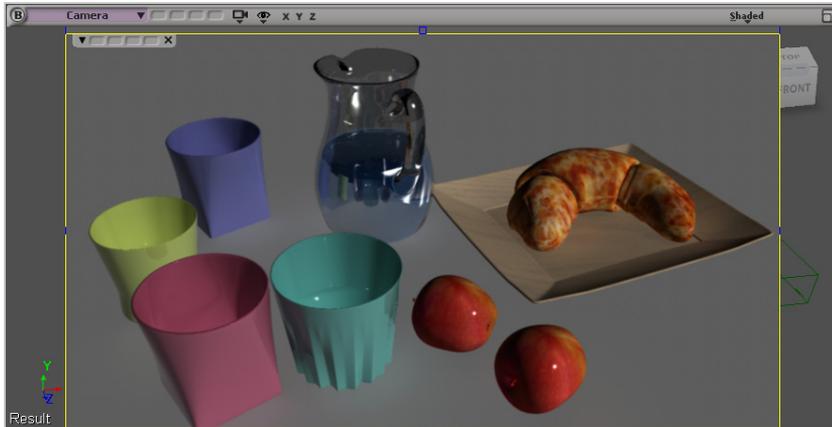


Figure 10-21 Rendered output of the scene

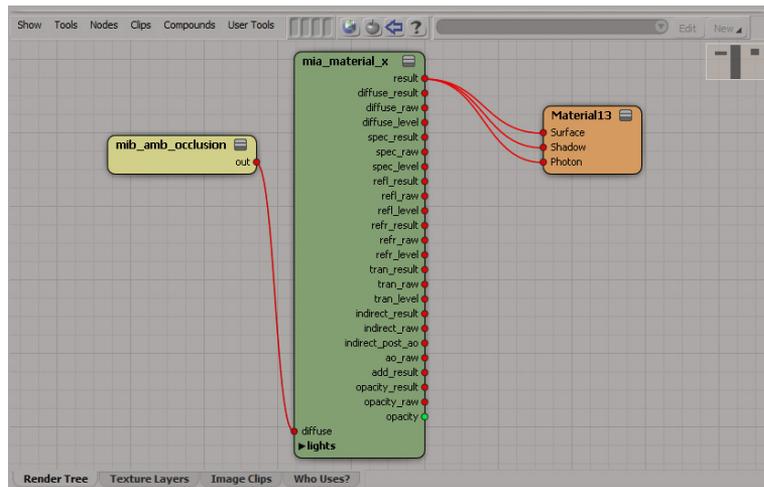


Figure 10-22 Connection established between the *mib_amb_occlusion* (mr Light Shader) and *diffuse* port of the *mia_material_x* (mr Surface Material Shader) nodes

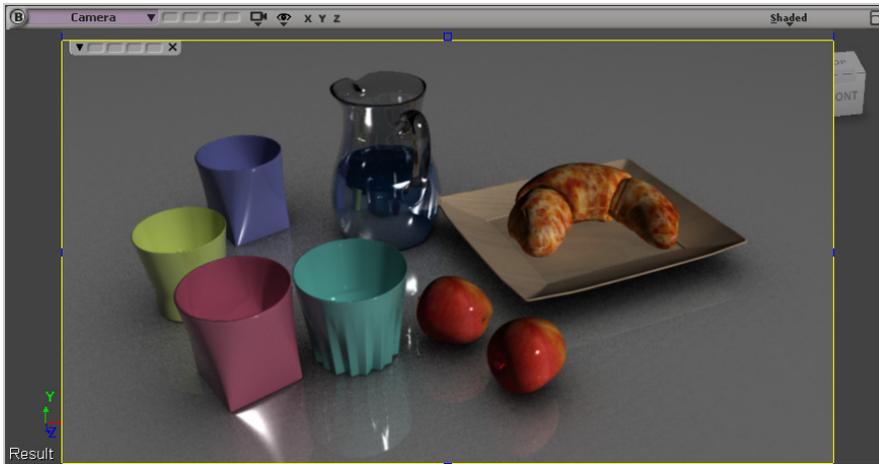


Figure 10-23 The noise surface displayed in the render region

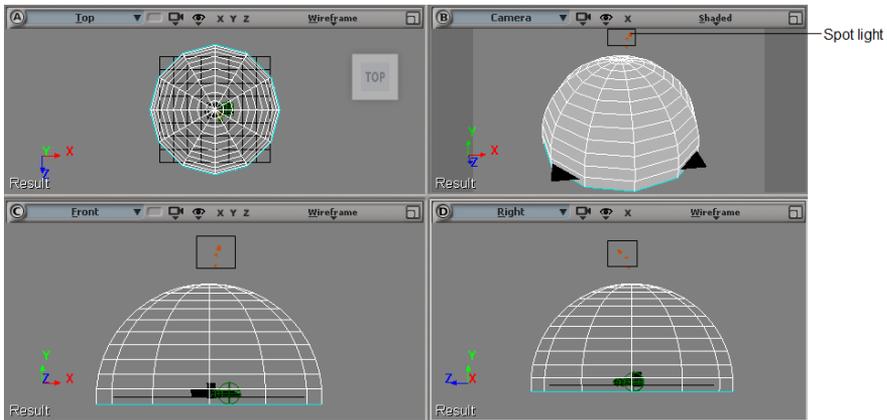


Figure 10-24 Alignment of the spot light in viewports



Figure 10-25 The rendered output of the scene

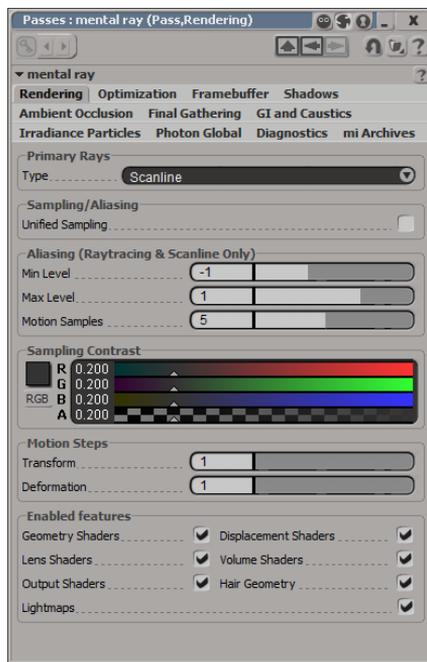


Figure 10-26 The Passes : mental ray (Pass,Rendering) window

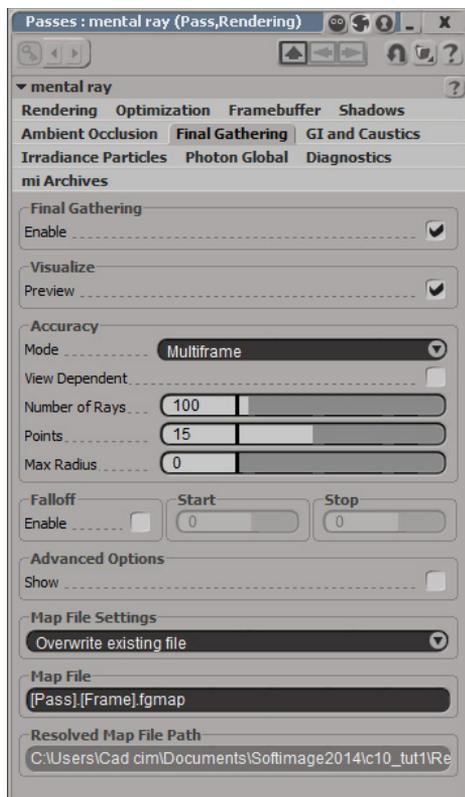


Figure 10-27 The attributes of *Final Gathering*

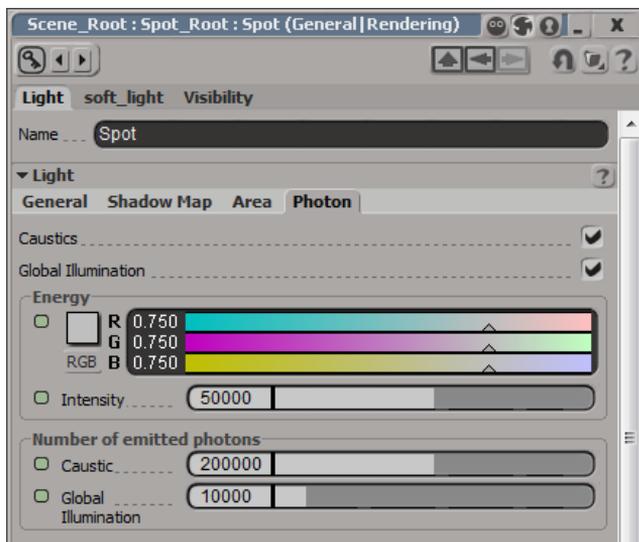


Figure 10-28 The values displayed in the *Scene_Root : Spot_Root : Spot (General|Rendering)* property editor

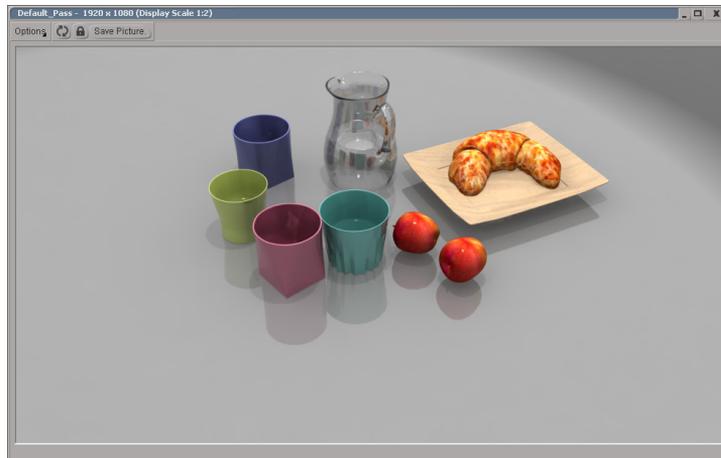


Figure 10-29 The rendered output of the scene



*Figure 10-30 Rendered output of the scene after entering the **Caustic Accuracy** value*



Figure 10-31 Rendered output of the shadow pass

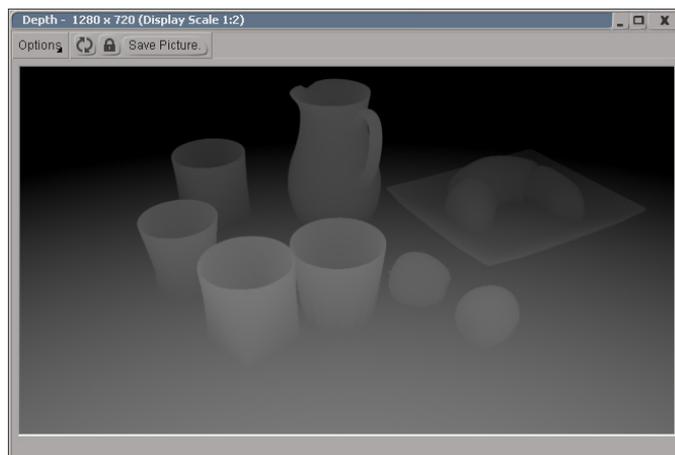


Figure 10-32 Rendered output of the depth pass



Figure 10-33 Rendered output of the diffuse pass

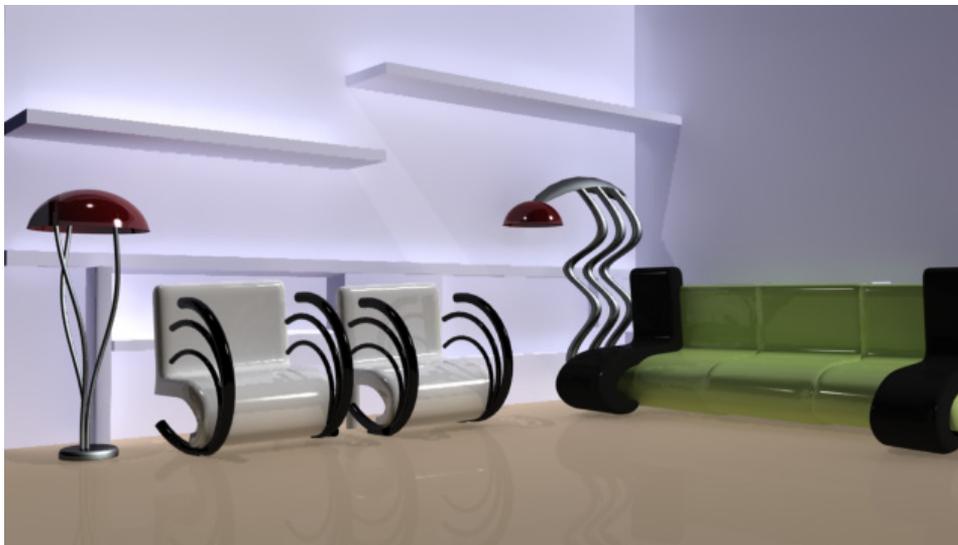


Figure 10-34 The final output of the scene

Project 1

ICE Simulation



Figure P1-1 The final output of the simulations at frame 200

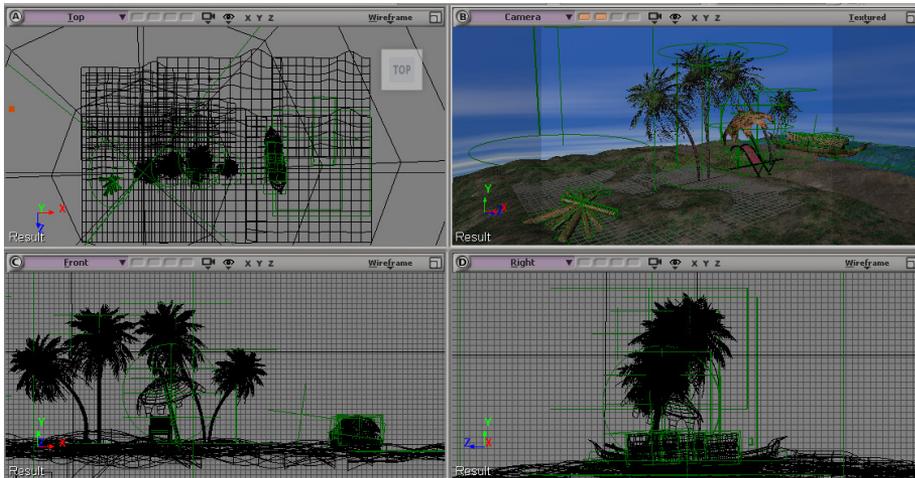


Figure P1-2 The proj1_start file displayed in viewports

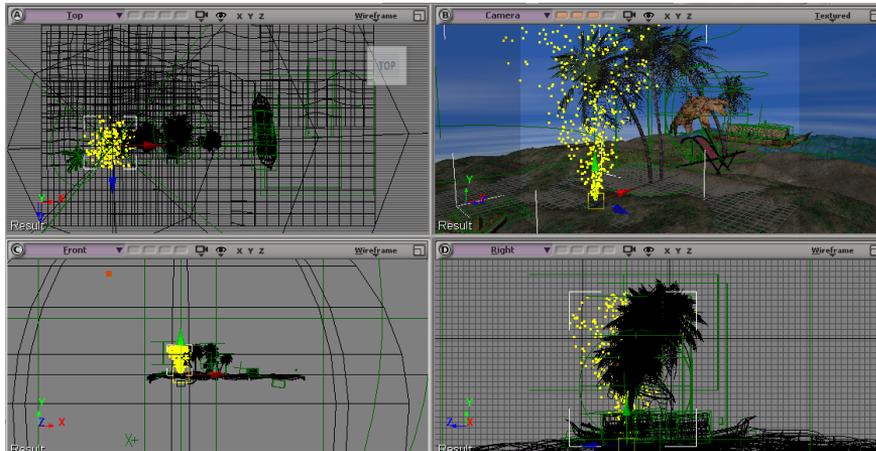


Figure P1-3 Particles displayed at frame 173

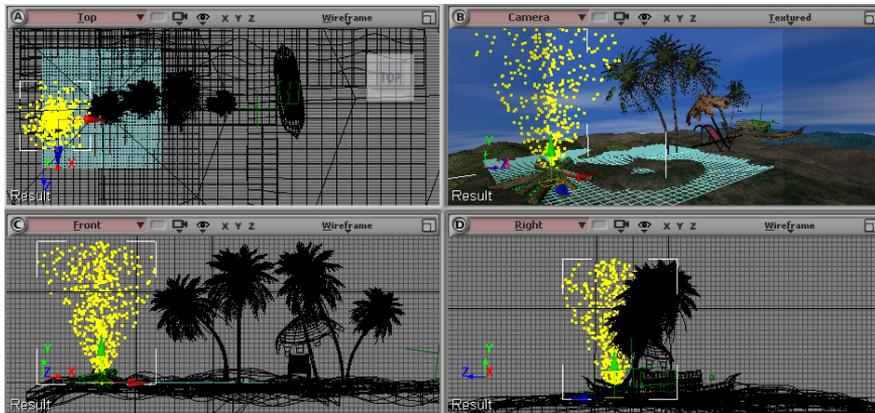


Figure P1-4 Alignment of particles in viewports

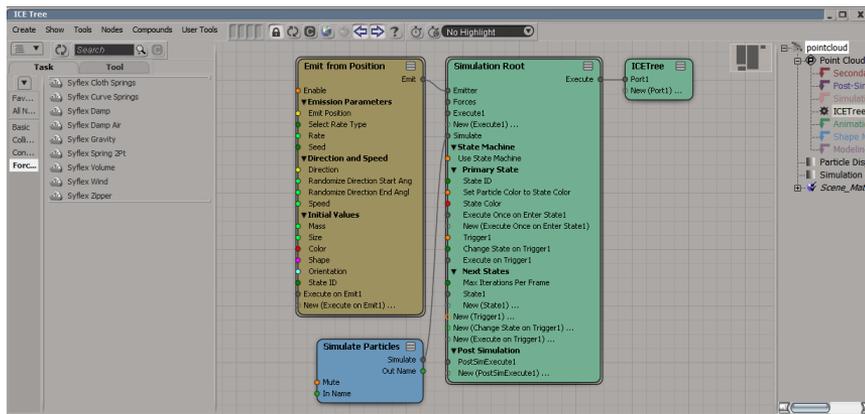


Figure P1-5 The ICE Tree window

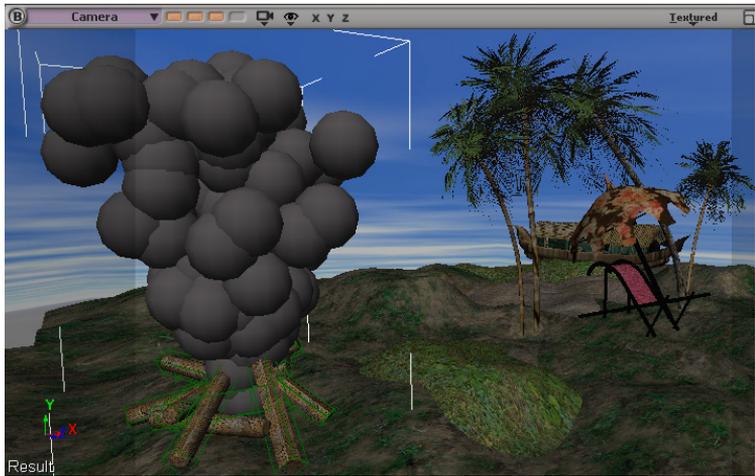


Figure P1-6 Smoke displayed in the Camera viewport

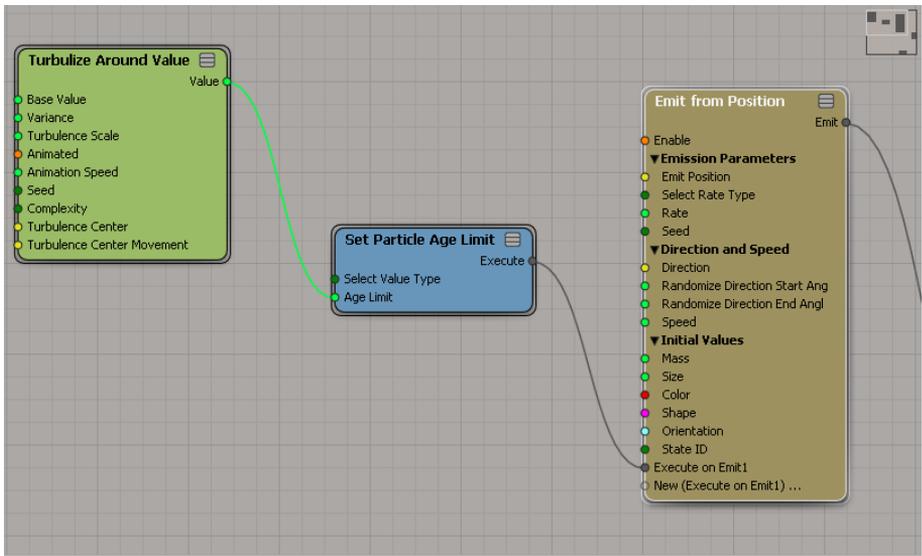


Figure P1-7 Connection established between the Set Particle Age Limit and Turbulize Around Value nodes

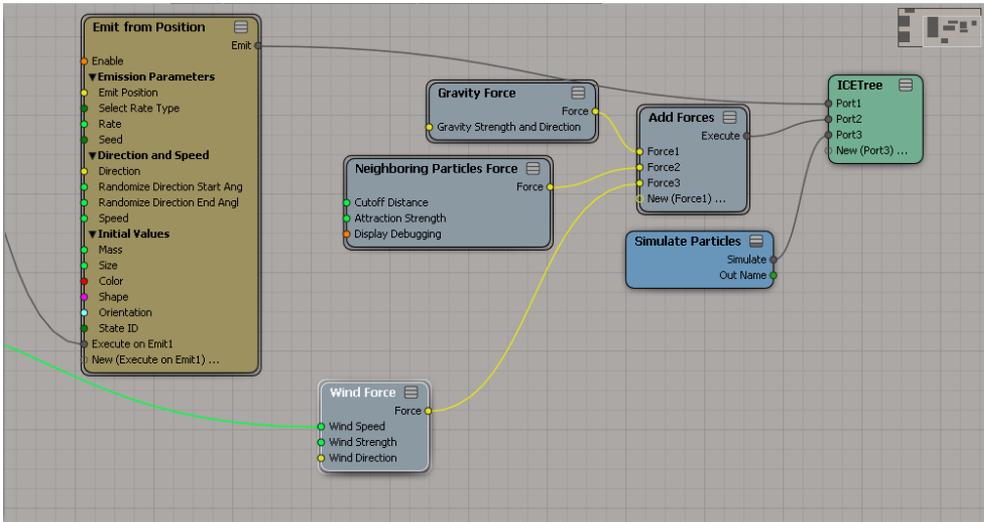


Figure P1-8 Connection displayed between the force nodes in the ICE Tree window

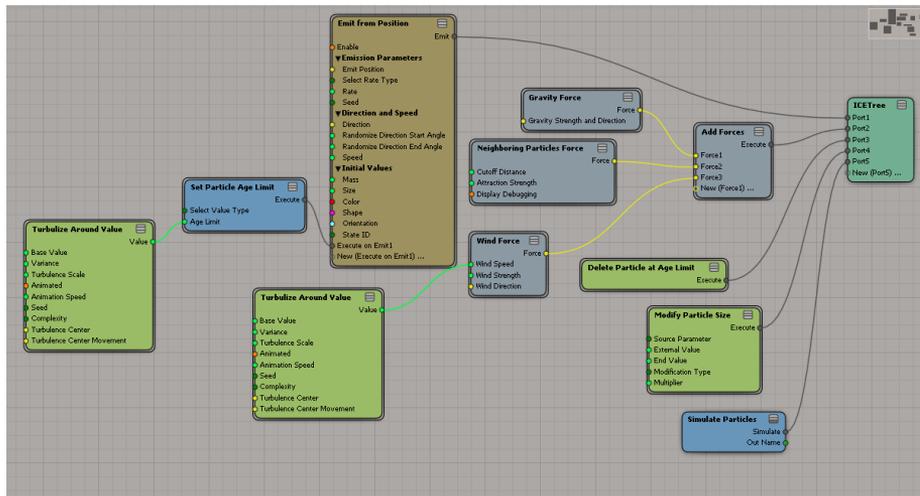


Figure P1-9 Connection displayed between the node networks in the ICE Tree window

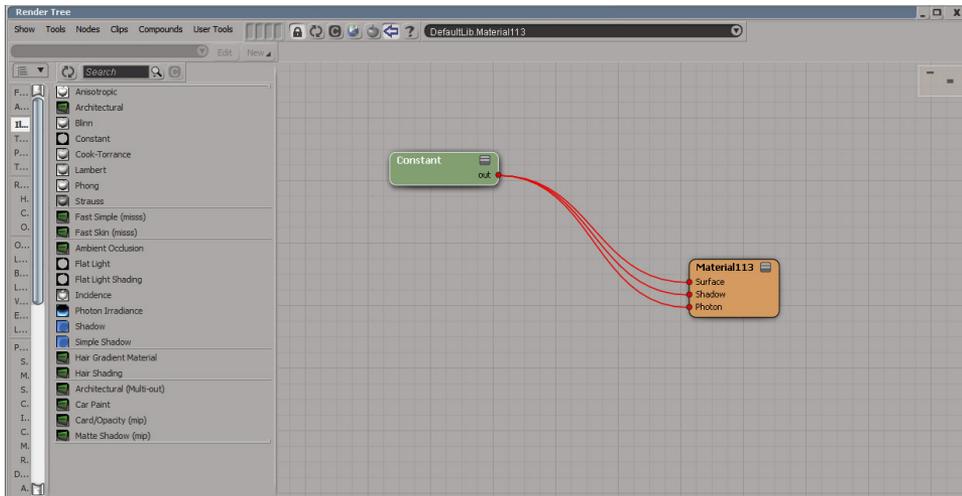


Figure P1-10 The Render Tree window

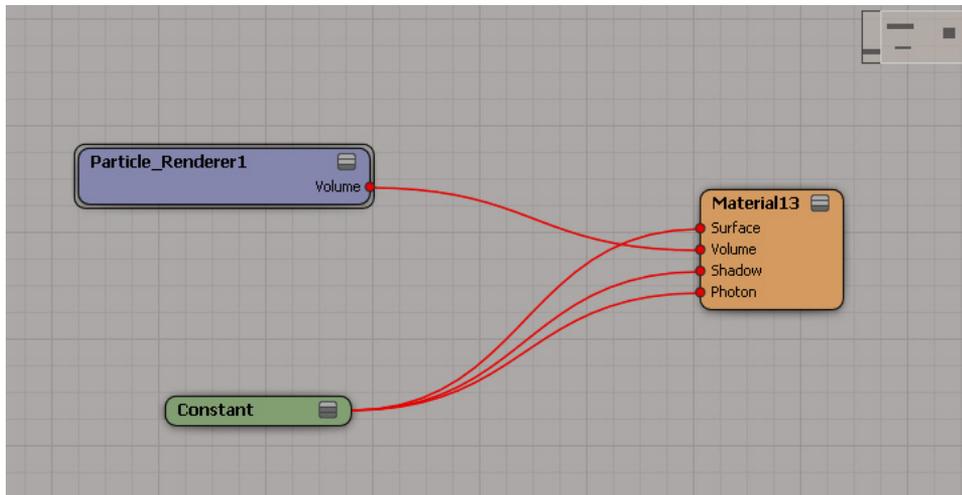


Figure P1-11 Connection established between the **Particle_Renderer1** and **Material#** nodes in the **Render Tree** window

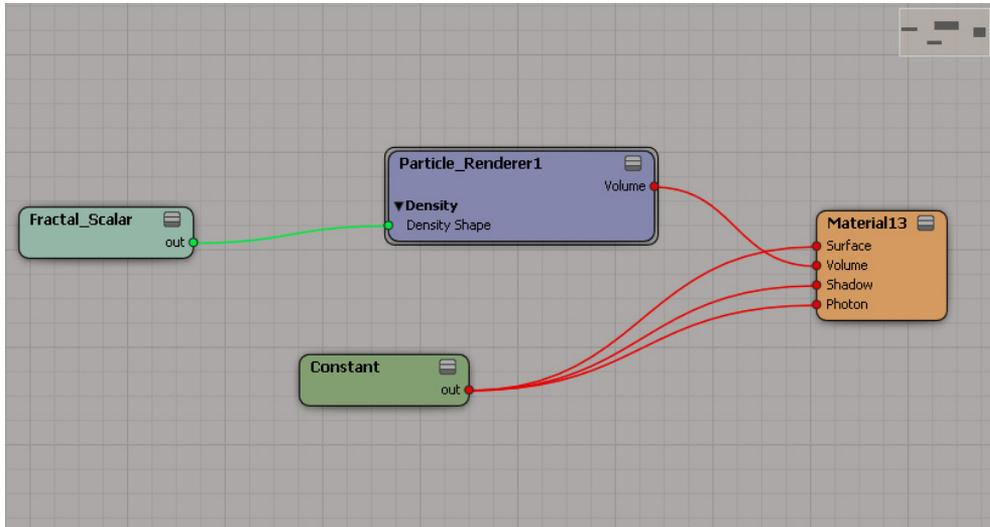


Figure P1-12 Connection established between the *Fractal_Scalar* and *Particle_Renderer1* nodes

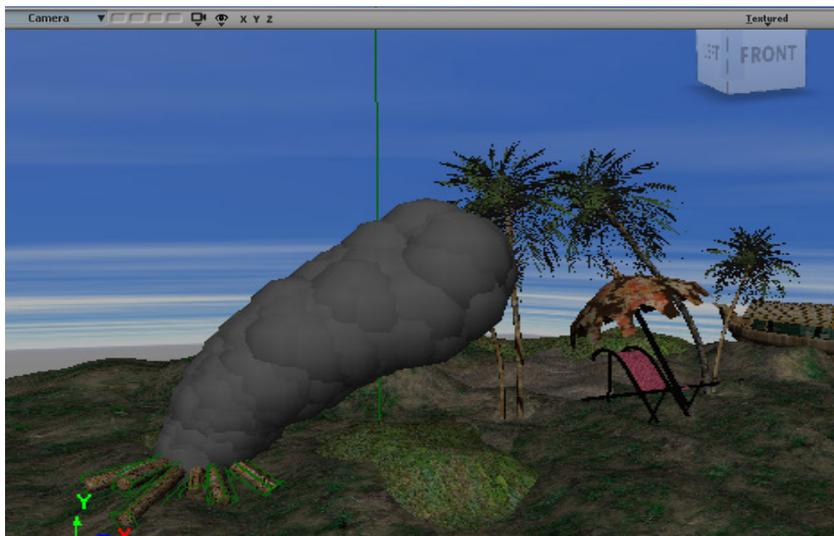


Figure P1-13 Displaying the smoke simulation at frame 150 in the Camera viewport



Figure P1-14 The rendered output of the smoke simulation at frame 150



Figure P1-15 The rendered output of the fire and smoke at frame 200



Figure P1-16 Rendered output of the water simulation at frame 150

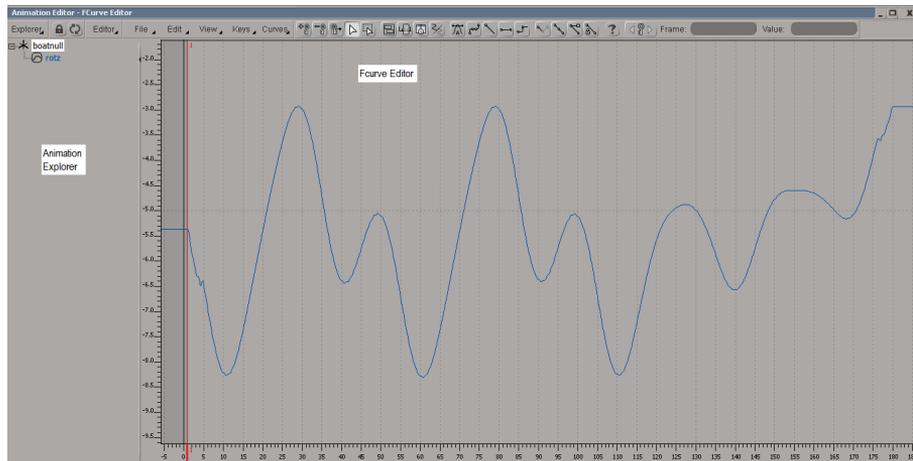
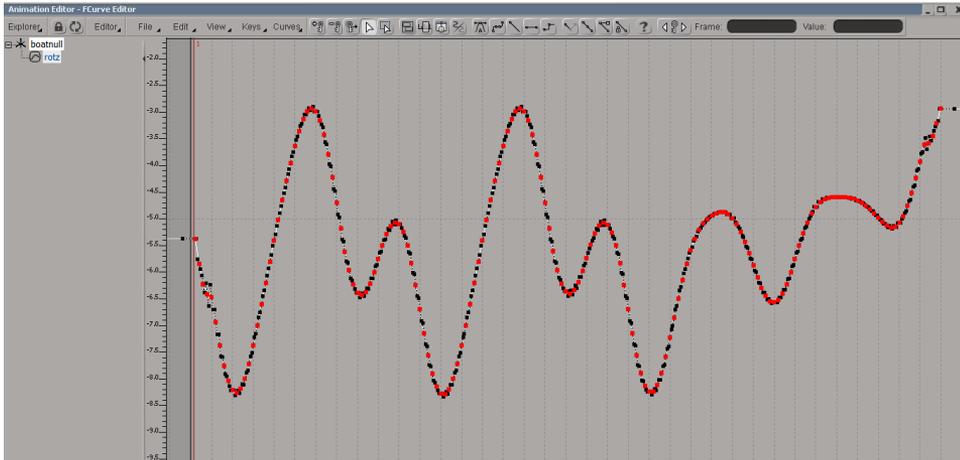


Figure P1-17 The Animation Editor - FCurve Editor window



*Figure P1-18 Selected points of the **rotz** animation curve*

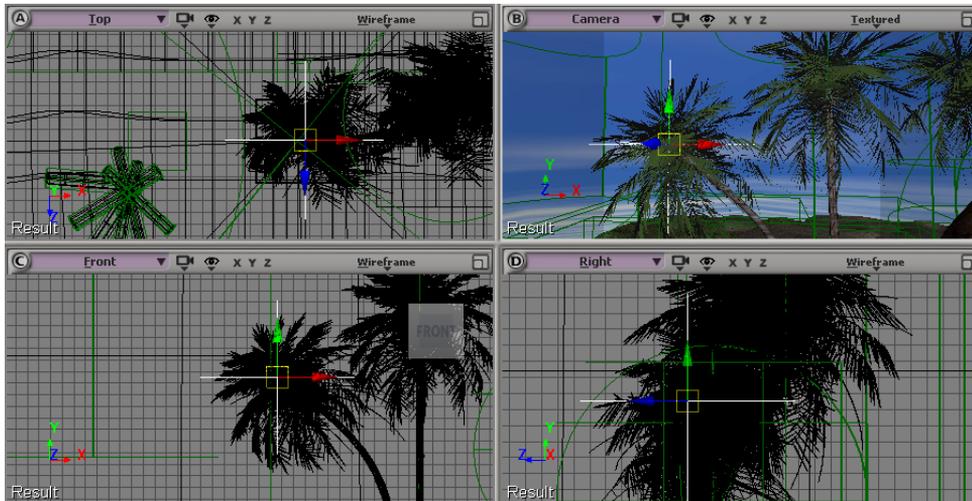


Figure P1-19 Alignment of the null in the Camera viewport

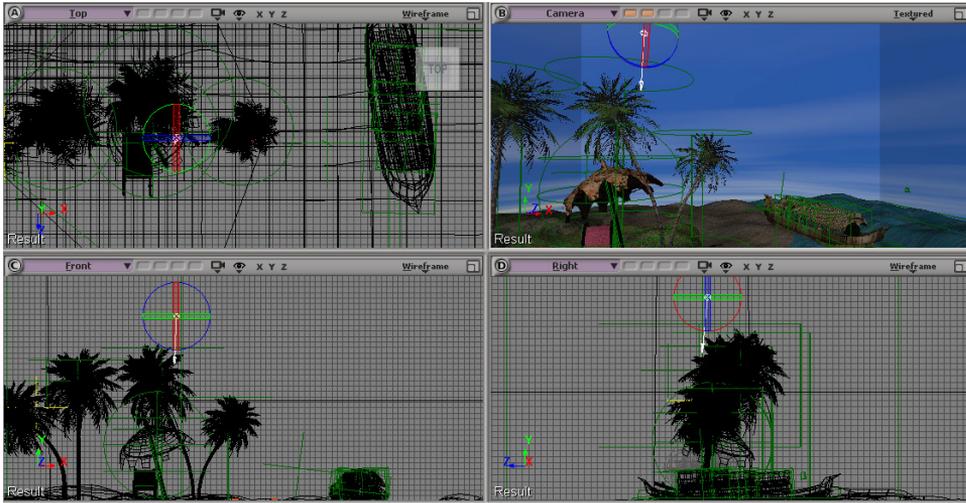


Figure P1-20 Rotation of the Infinite light in viewports

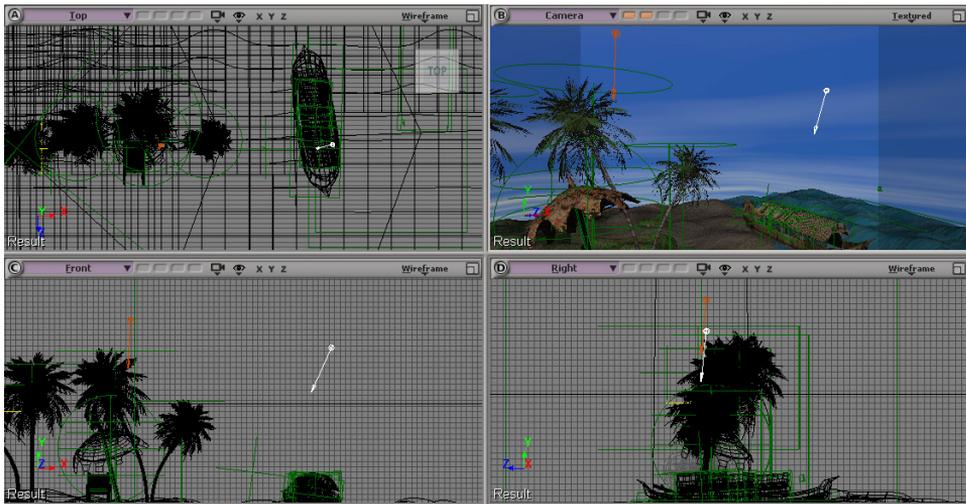


Figure P1-21 Alignment of Infinite1 light in viewports

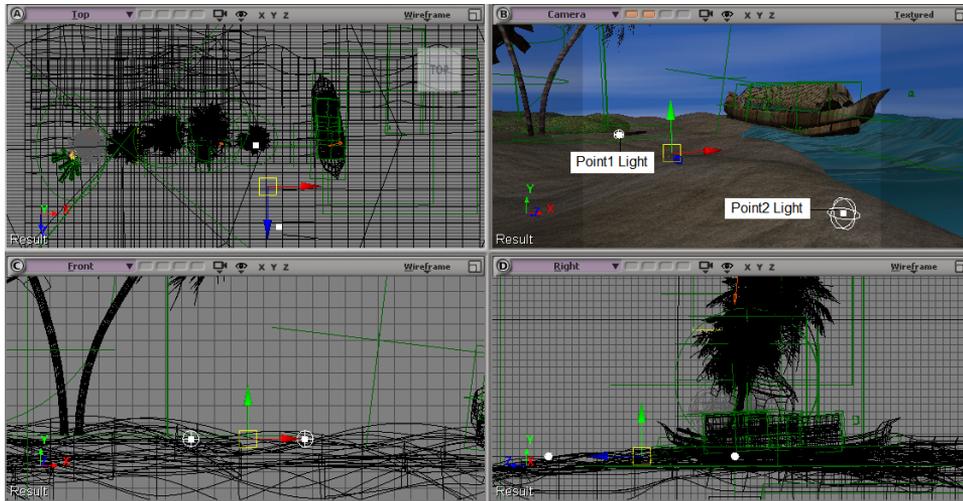


Figure P1-22 Alignment of Point1 and Point2 lights in viewports



Figure P1-23 Final rendered image at frame 200

Project 2

Texture with Transparency Map



Figure P2-1 The final output of textured objects

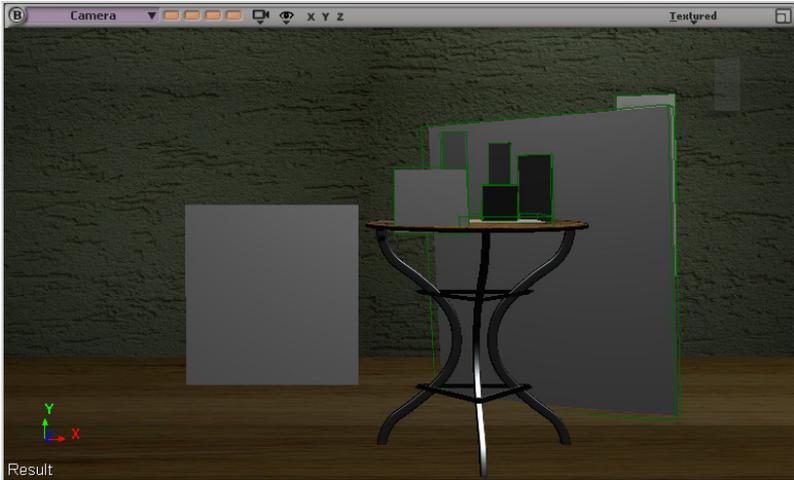


Figure P2-2 The proj2_start file displayed in the Camera viewport

t

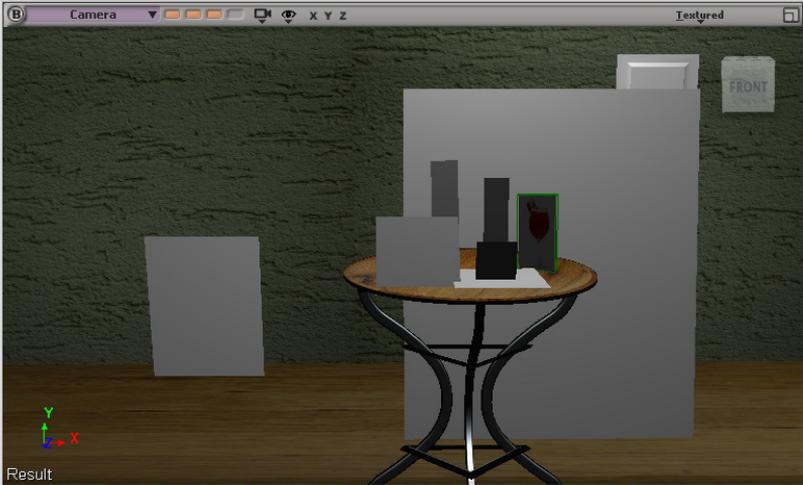


Figure P2-3 Texture projected on delight_glass

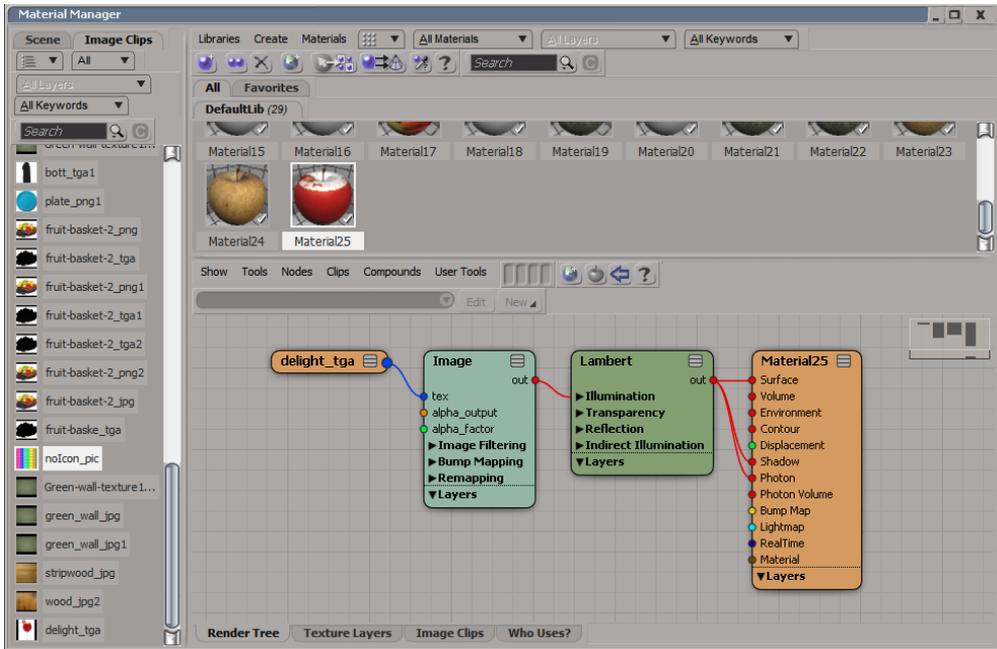


Figure P2-4 The Material Manager window

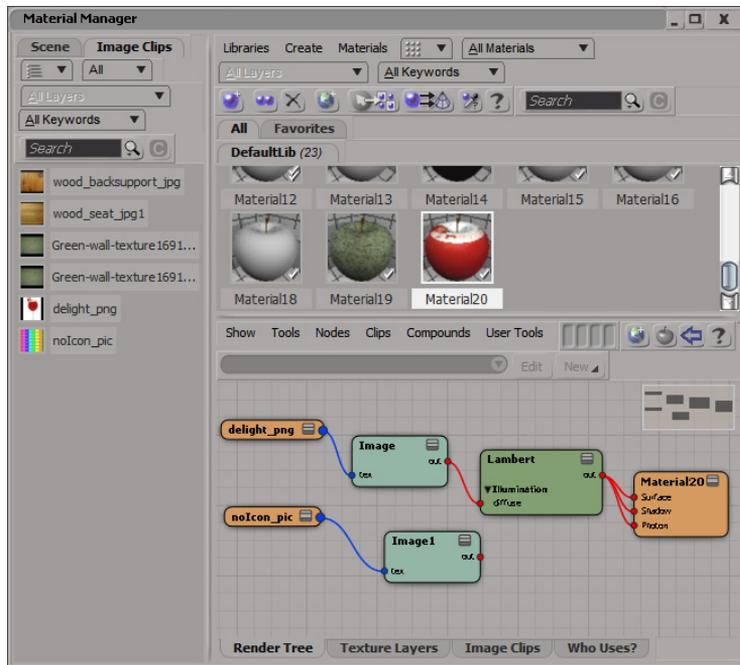


Figure P2-5 The Image1 and noIcon_pic nodes added in the Render Tree workspace

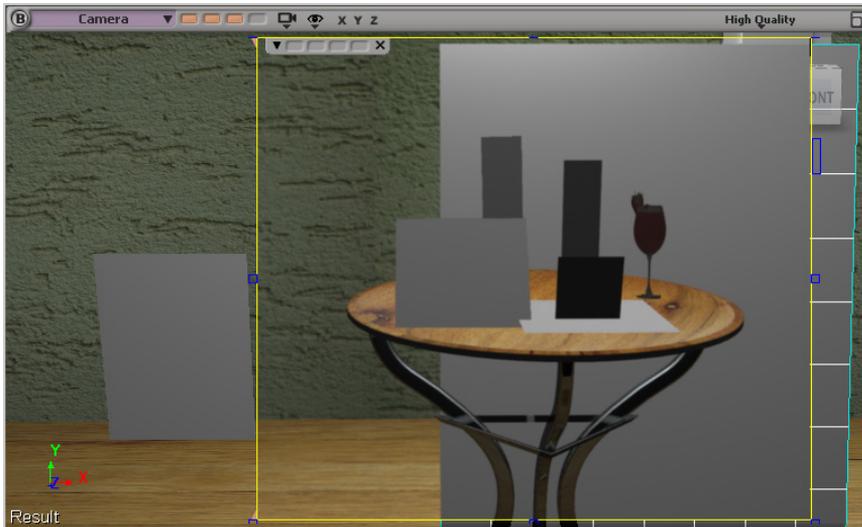


Figure P2-6 The texture on the delight_glass displayed with transparency

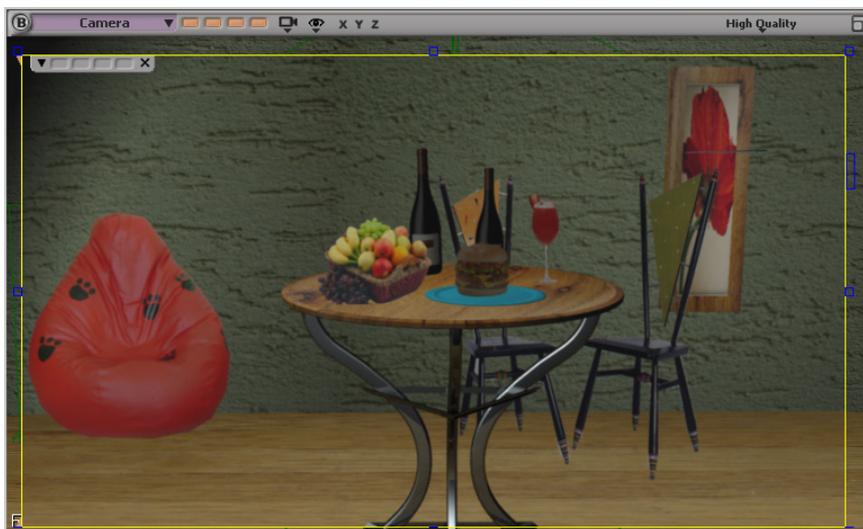


Figure P2-7 The final rendered output of the textured image

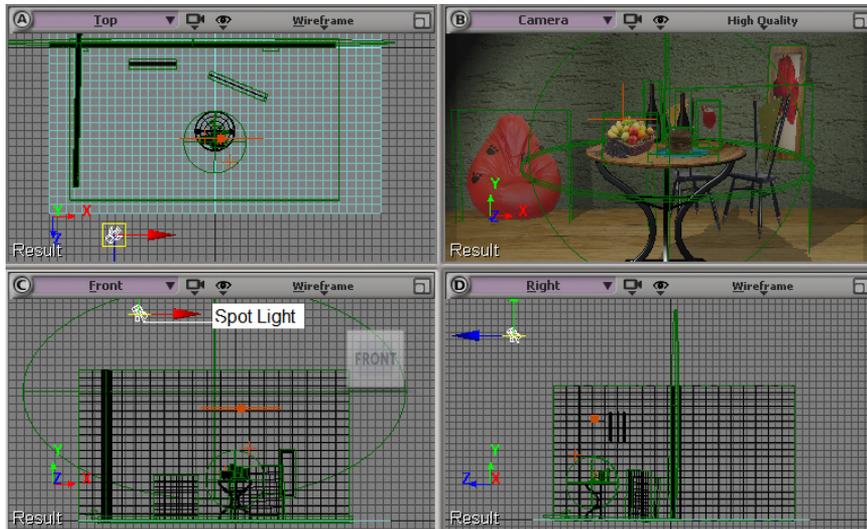


Figure P2-8 Alignment of the Spot light in viewports

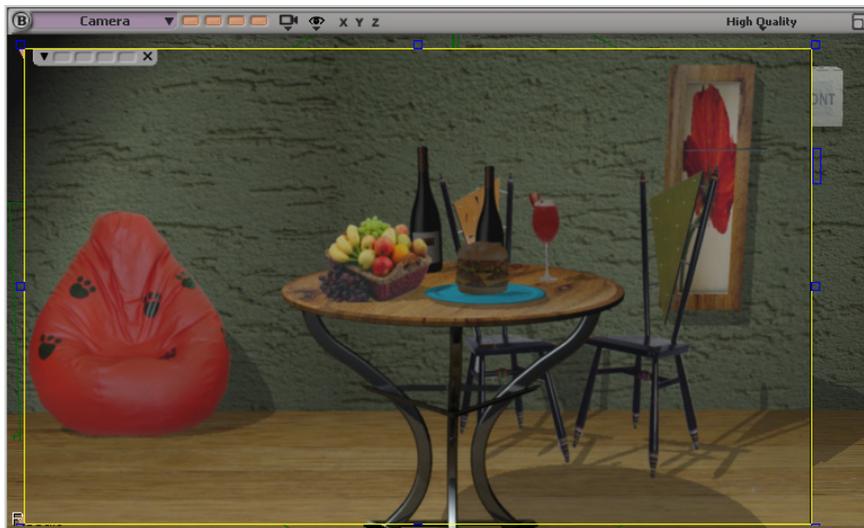


Figure P2-9 Shadows of the objects displayed in the render region in the Camera viewport

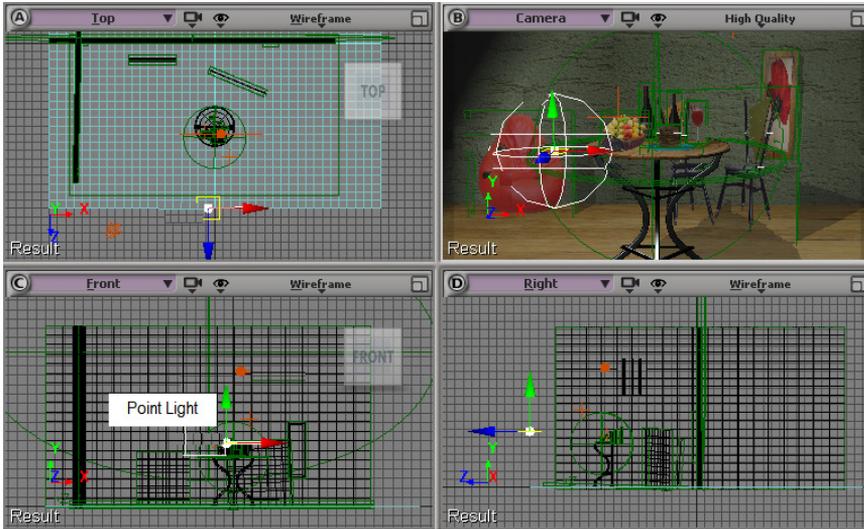


Figure P2-10 Alignment of the Point1 light in viewports



Figure P2-11 The final output of the project

Project 3

Crowd Simulation

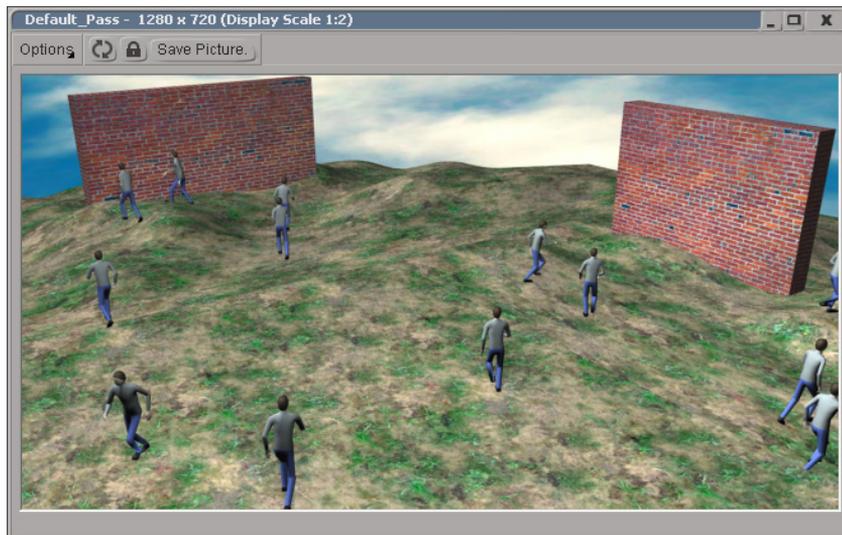


Figure P3-1 Final rendered output of the crowd simulation



Figure P3-2 The Crowd : CrowdFX_PedestrianSetup dialog box

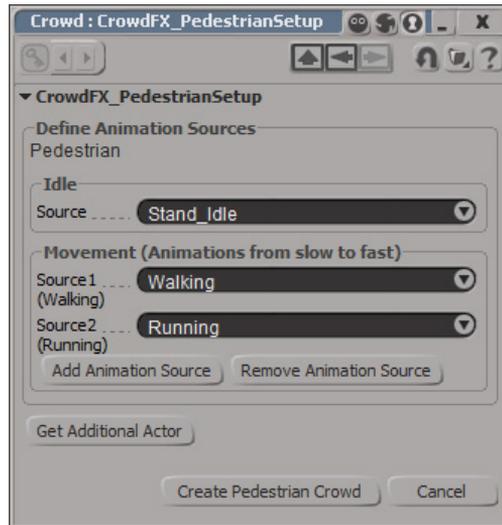


Figure P3-3 The more options displayed in the Crowd : CrowdFX_PedestrianSetup dialog box

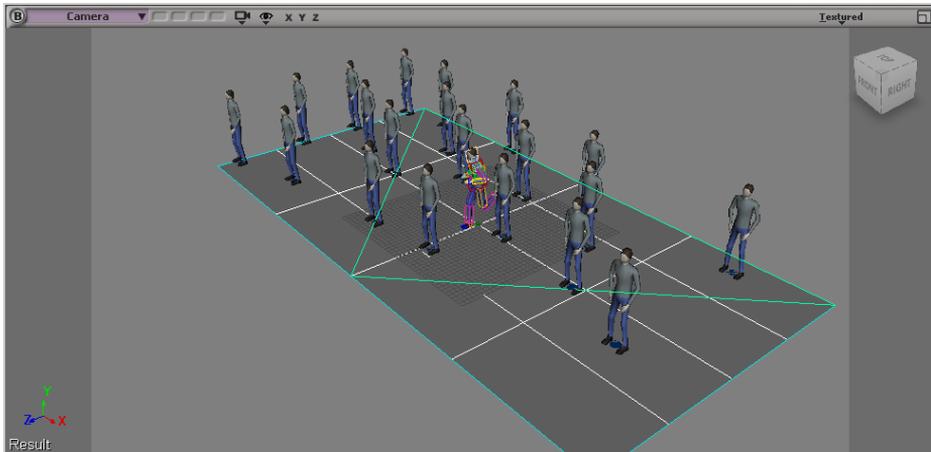


Figure P3-4 The crowd displayed in the Camera viewport

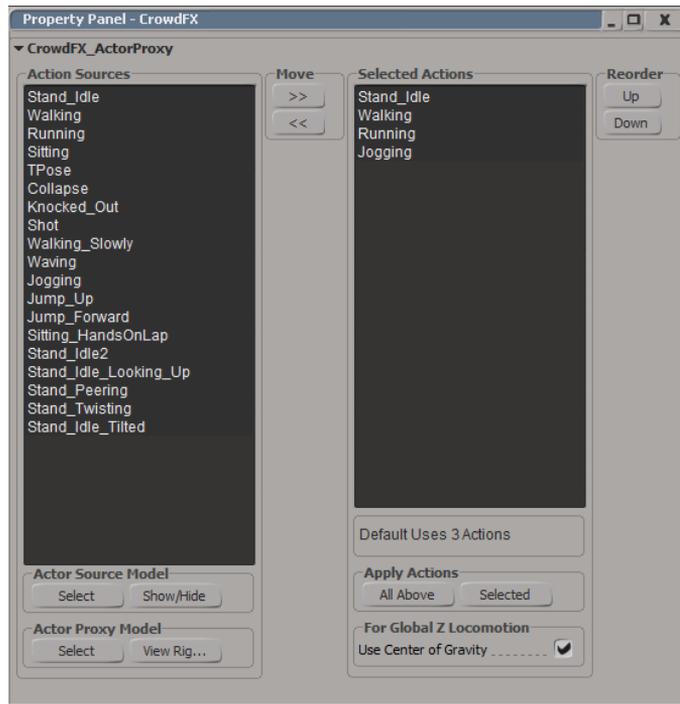


Figure P3-5 The Property Panel - CrowdFX dialog box

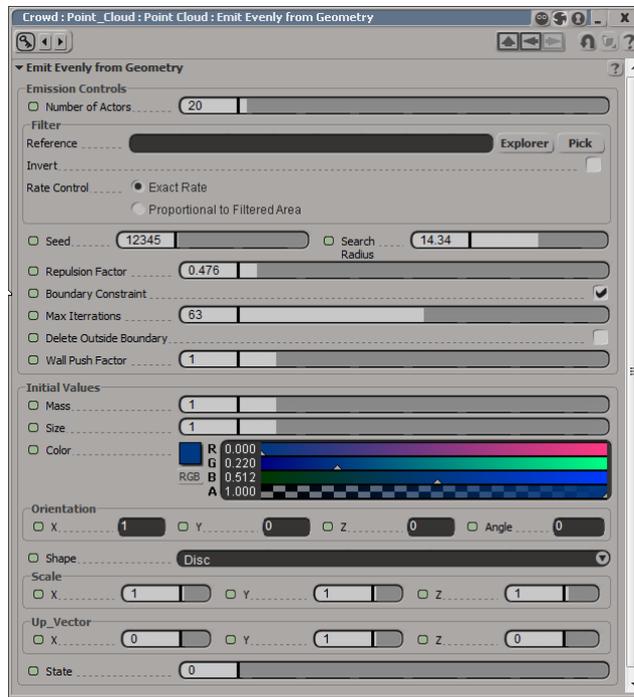


Figure P3-6 The Crowd : Point_Cloud : Point Cloud : Emit Evenly from Geometry property editor

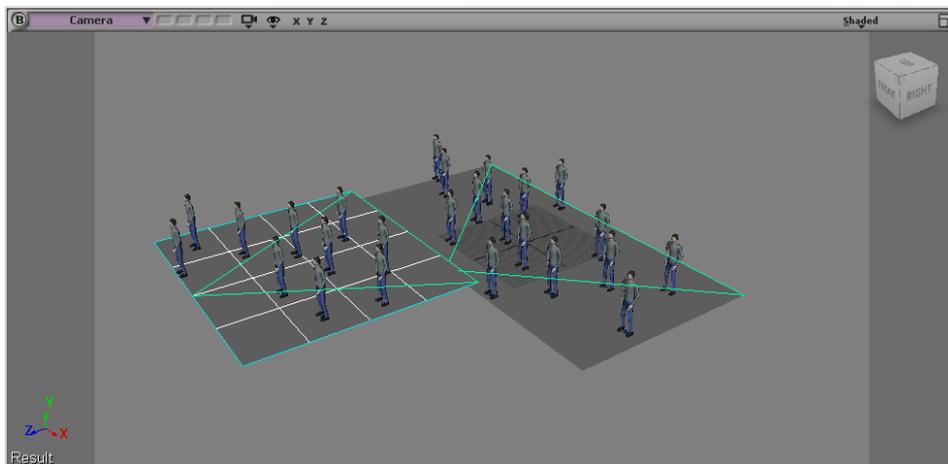


Figure P3-7 Crowd.Emitter2 created in the Camera viewport

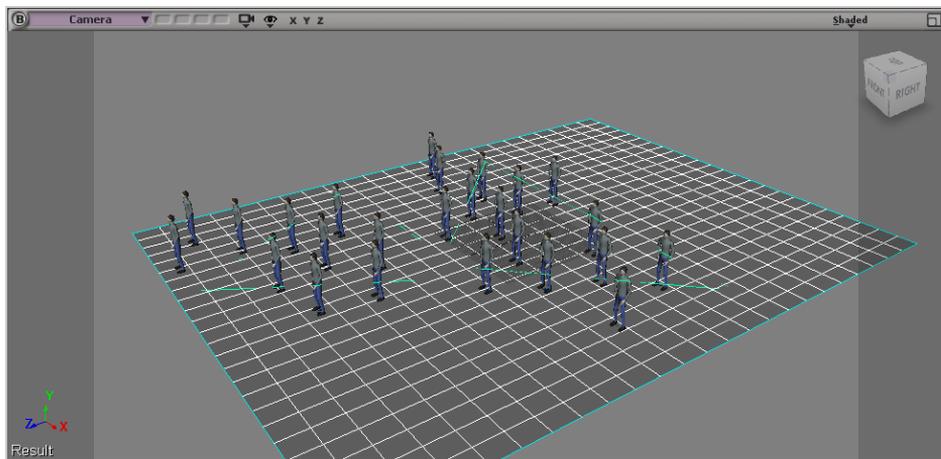
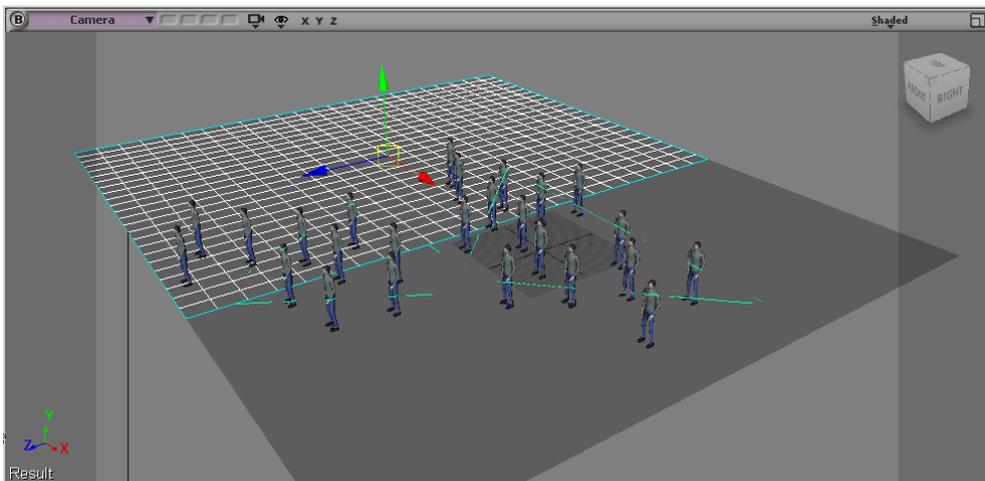


Figure P3-8 Land created in the Camera viewport



Land1

Figure P3-9 Land 1 aligned in the Camera viewport

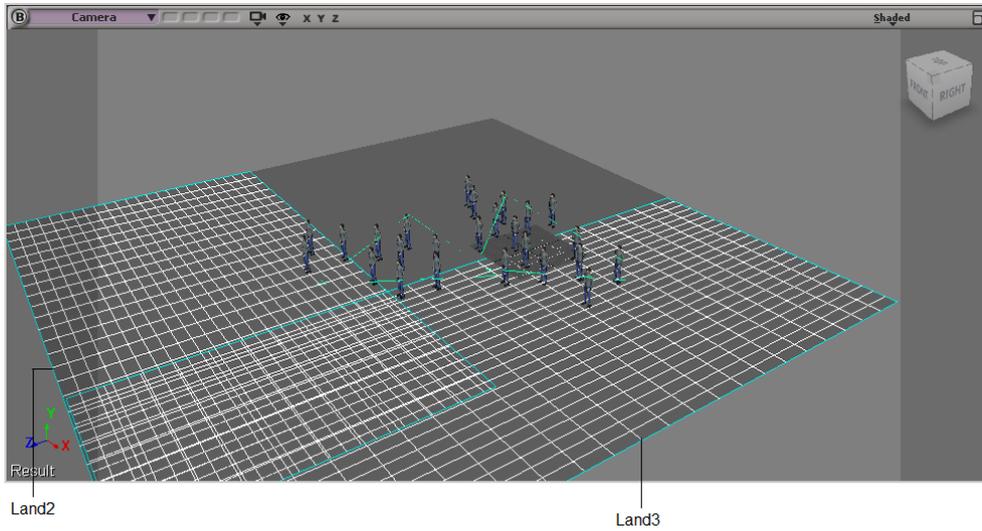


Figure P3-10 Alignment of Land2 and Land3 in the Camera viewport

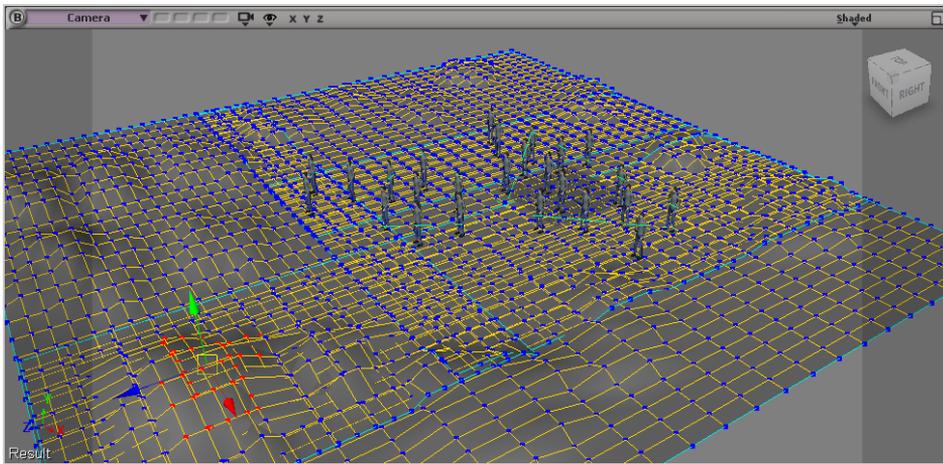


Figure P3-11 The bumped Land

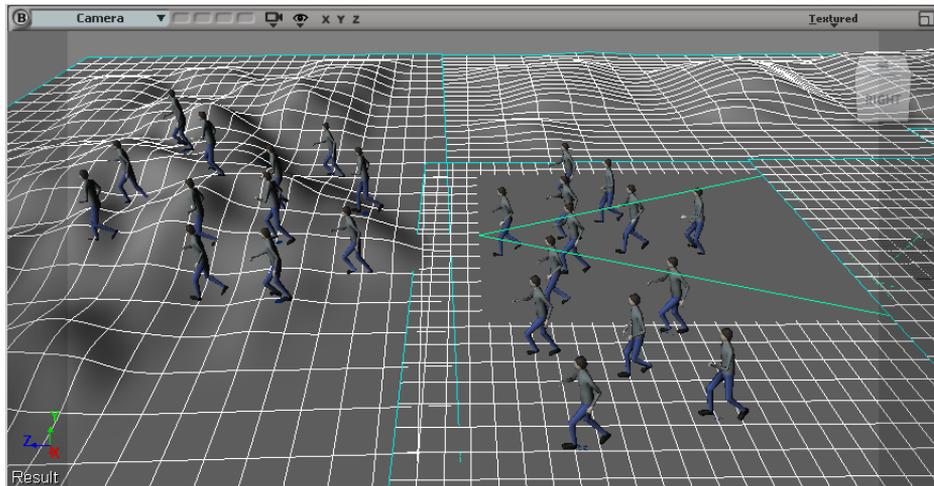


Figure P3-12 The crowd simulation at frame 310

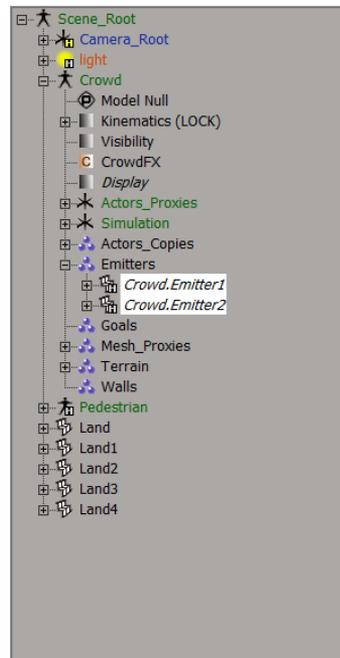


Figure P3-13 The *Crowd.Emitter1* and *Crowd.Emitter2* selected in the *Explorer* window

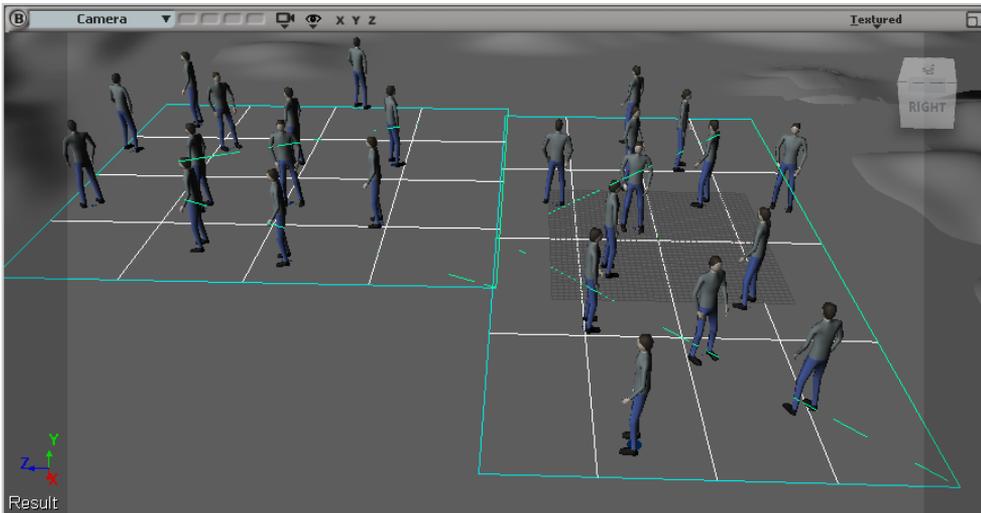


Figure P3-14 The direction of the models changed in the Camera viewport

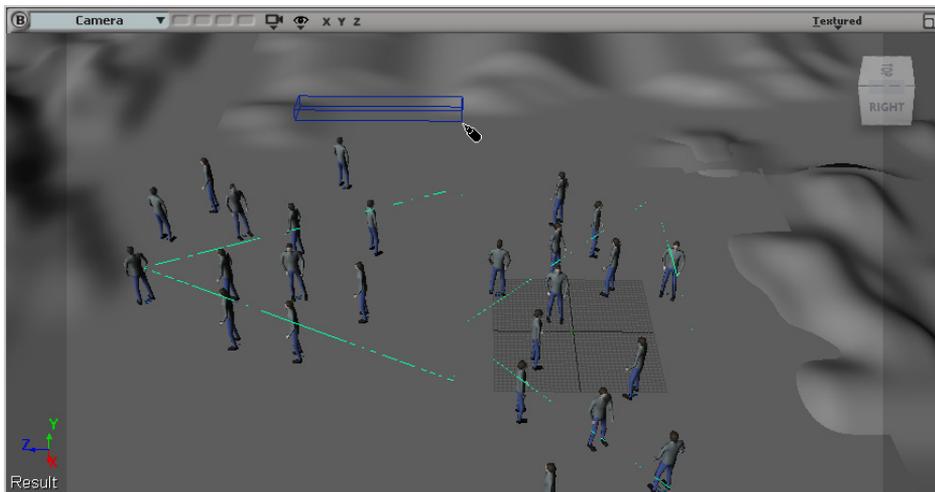


Figure P3-15 The wall created in the Camera viewport

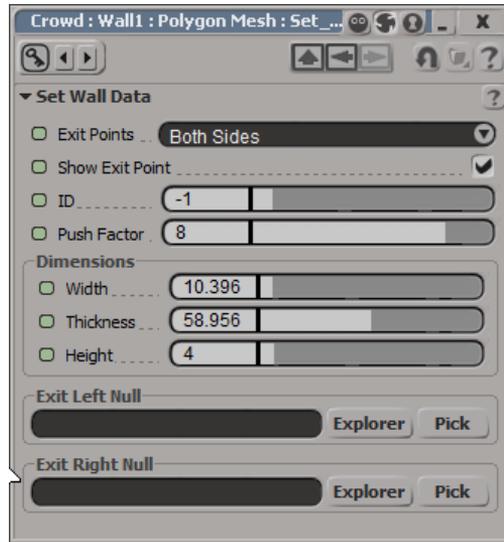


Figure P3-16 The Crowd : Wall1 : Polygon Mesh : Set_Wall_Data property editor

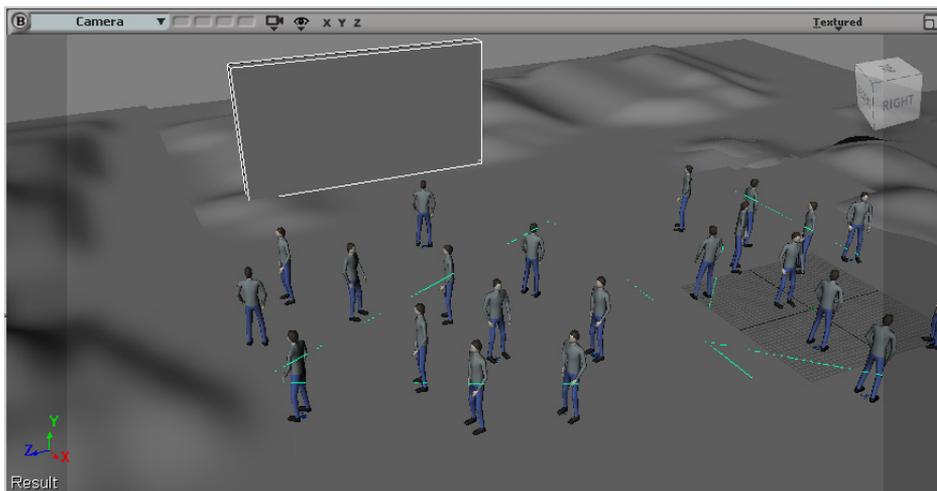


Figure P3-17 The wall aligned in the Camera viewport

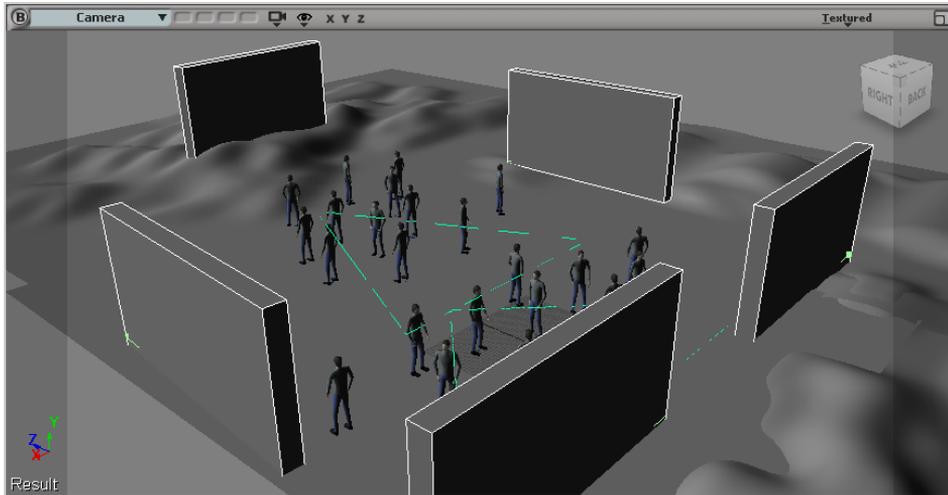


Figure P3-18 The walls aligned at different positions

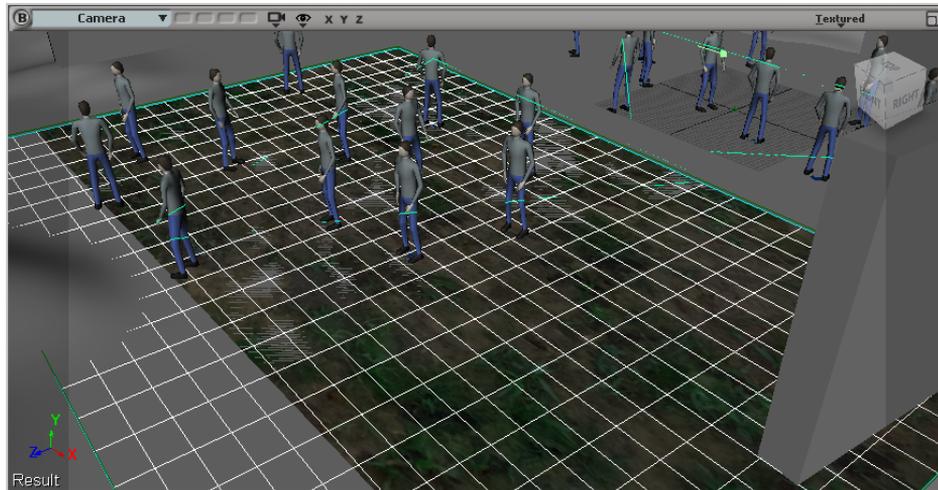


Figure P3-19 The grass texture displayed on Land

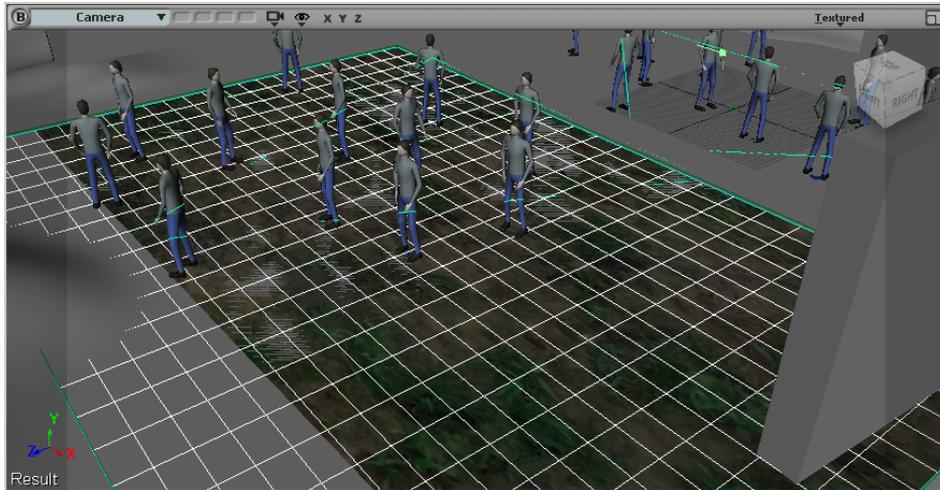


Figure P3-20 The grass texture after entering the value in the *Texture Repeats* parameter

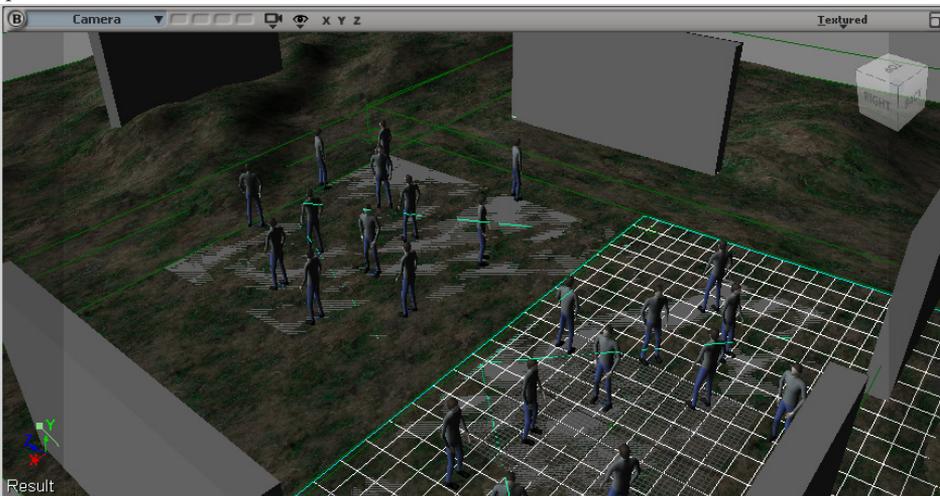


Figure P3-21 The textured land displayed in the *Camera* viewport

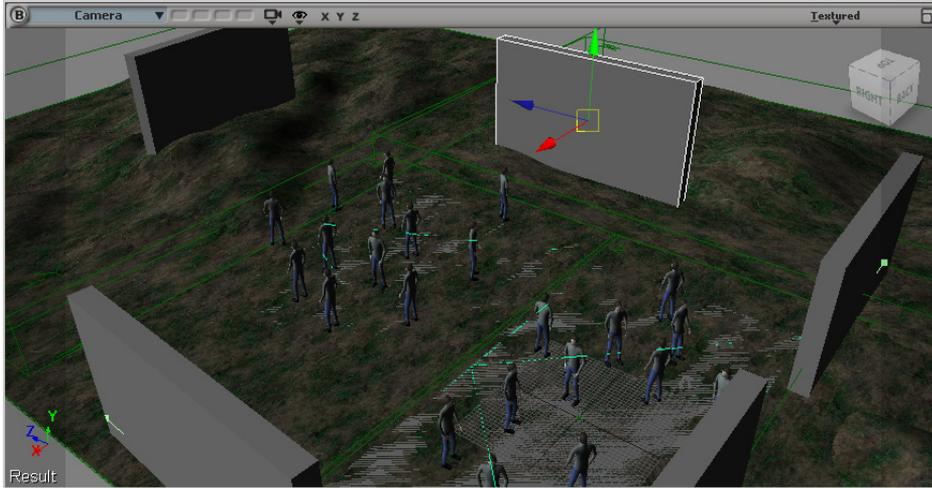


Figure P3-22 Alignment of Wall with Crowd.Wall1

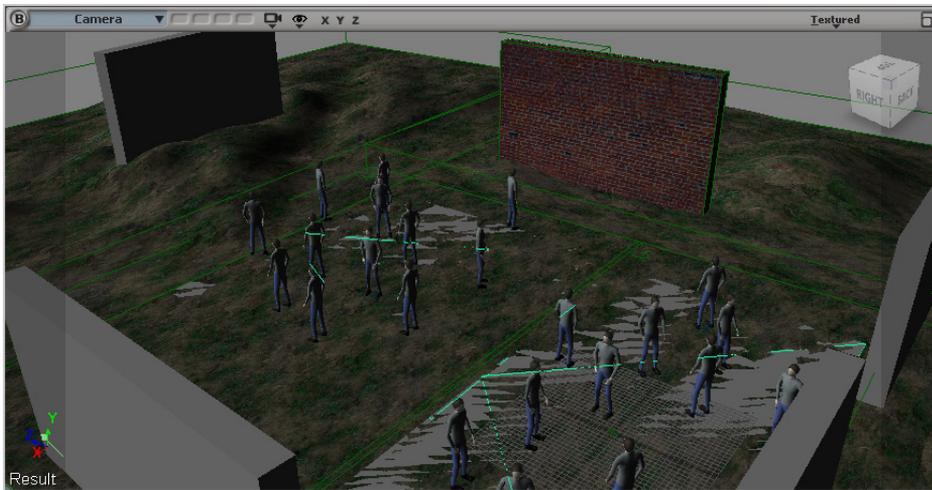


Figure P3-23 Textured wall in the scene

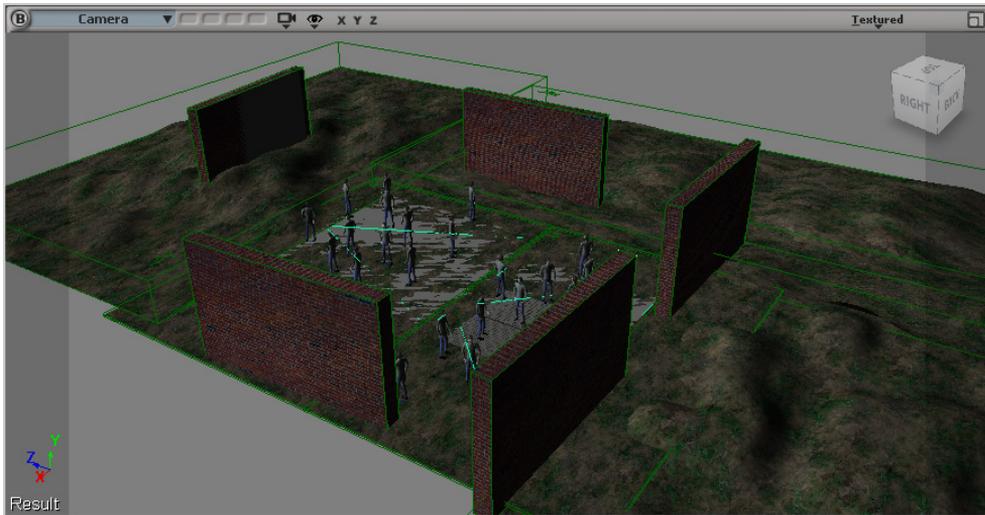


Figure P3-24 Textured walls in the scene



Figure P3-25 Textured scene in the Camera viewport

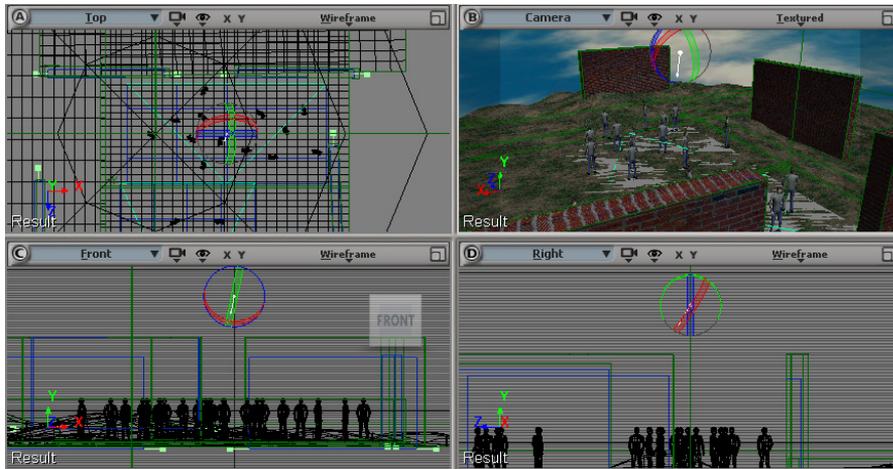


Figure P3-26 The light placed at the center in the Camera viewport



Figure P3-27 Rendered view of the scene

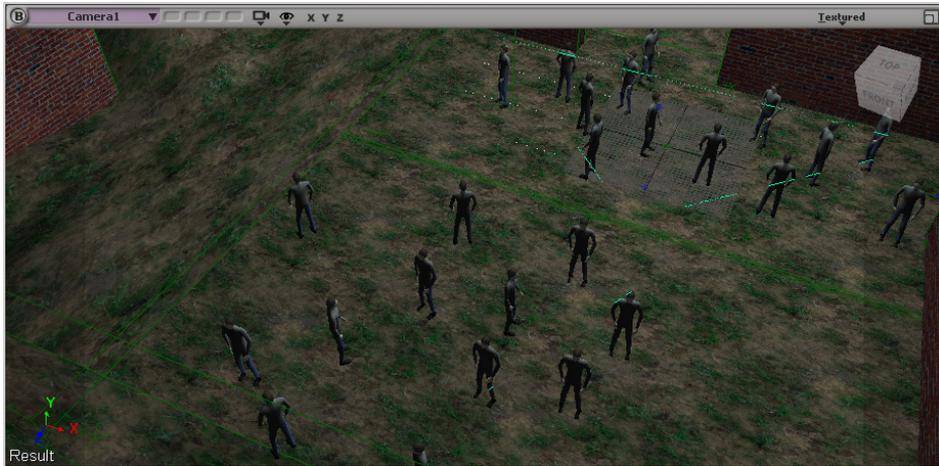


Figure P3-28 The scene displayed in the Camera1 viewport



Figure P3-29 The scene adjusted in the Camera2 viewport



Figure P3-30 The scene adjusted in the Camera3 viewport

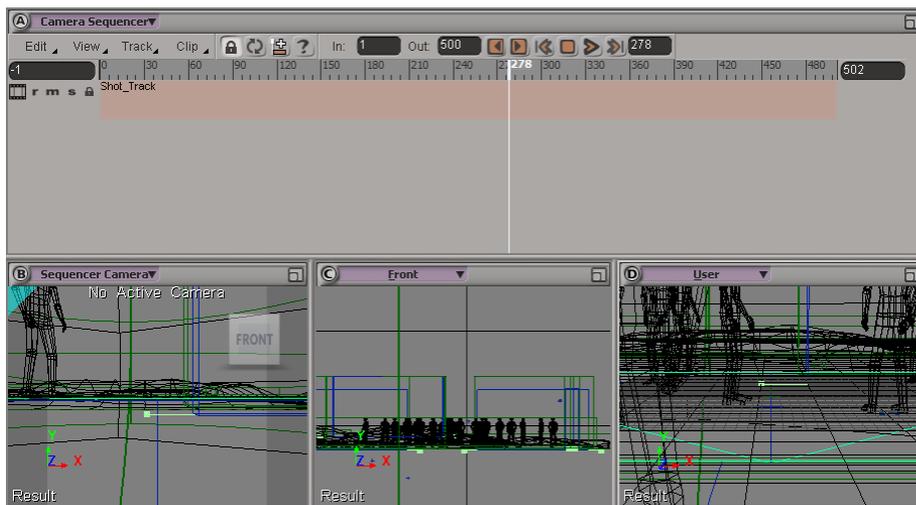


Figure P3-31 The Camera Sequencer layout

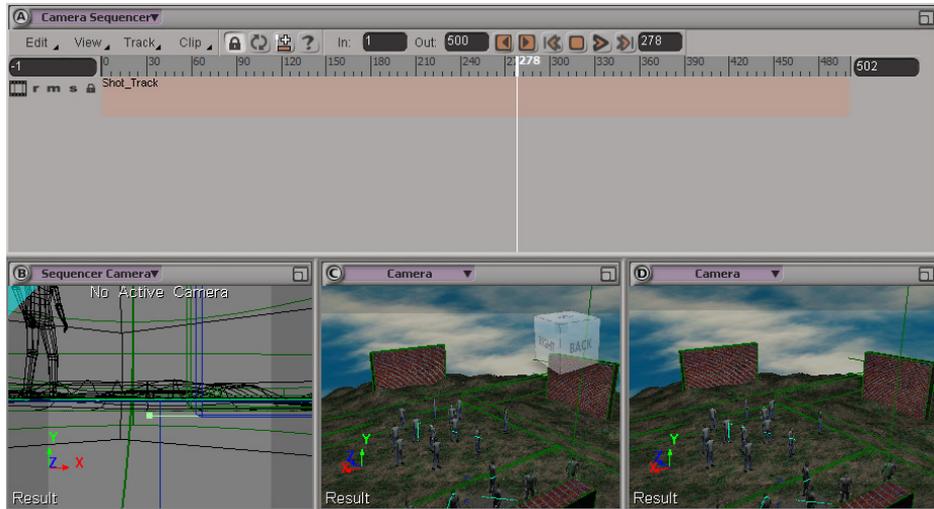


Figure P3-32 Set the Camera viewport in the Front and User viewport

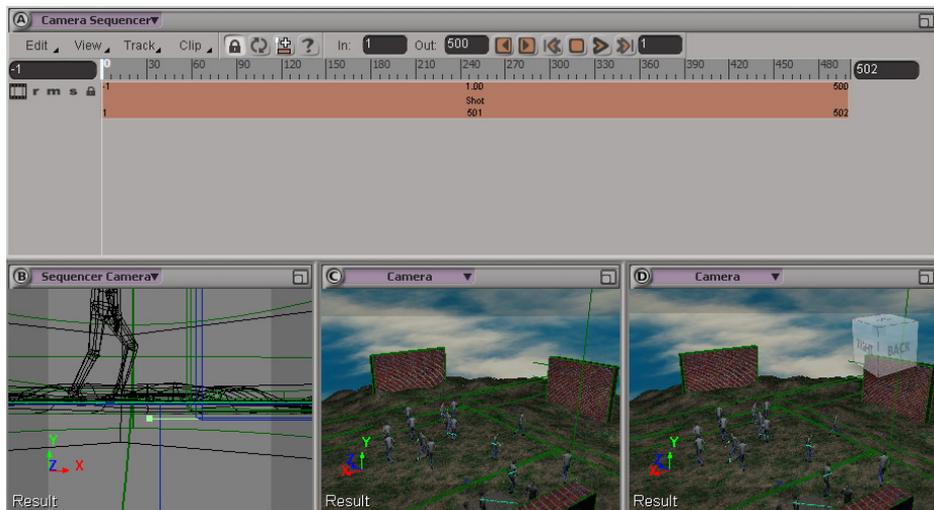


Figure P3-33 A clip added in the Camera Sequencer Editor

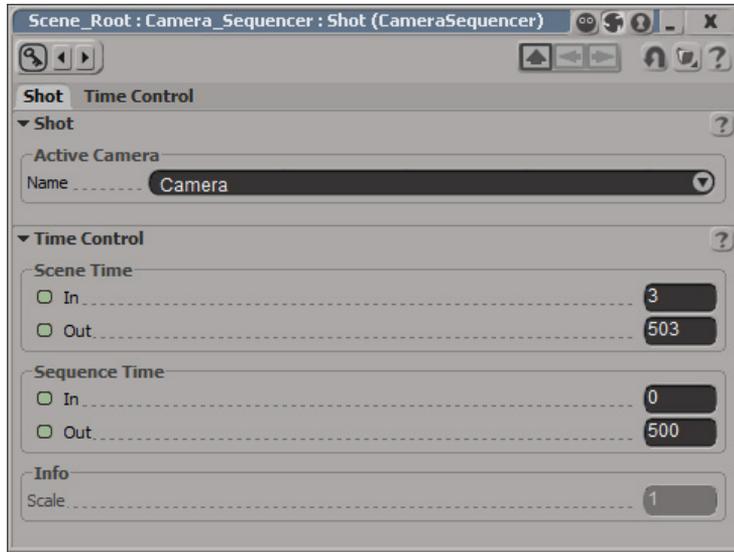


Figure P3-34 The Scene_Root: Camera Sequencer: Shot(CameraSequencer) property editor

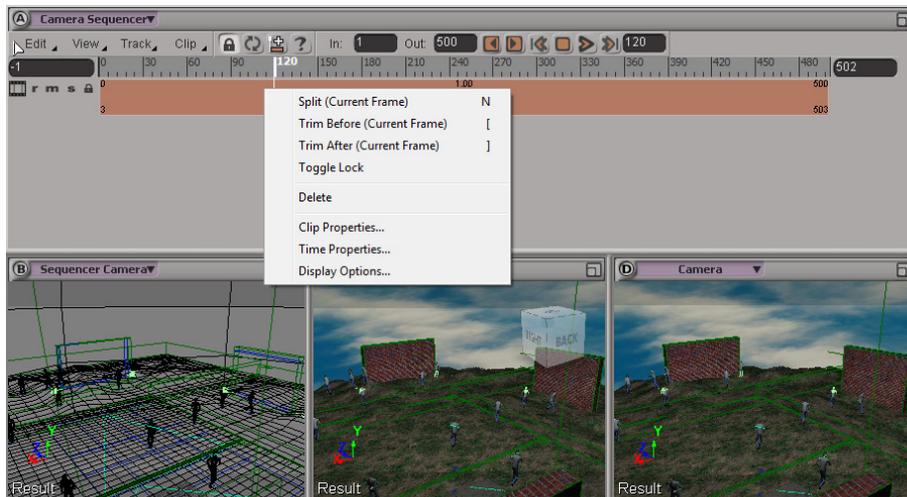


Figure P3-35 The Split (Current Frame) option chosen from the flyout

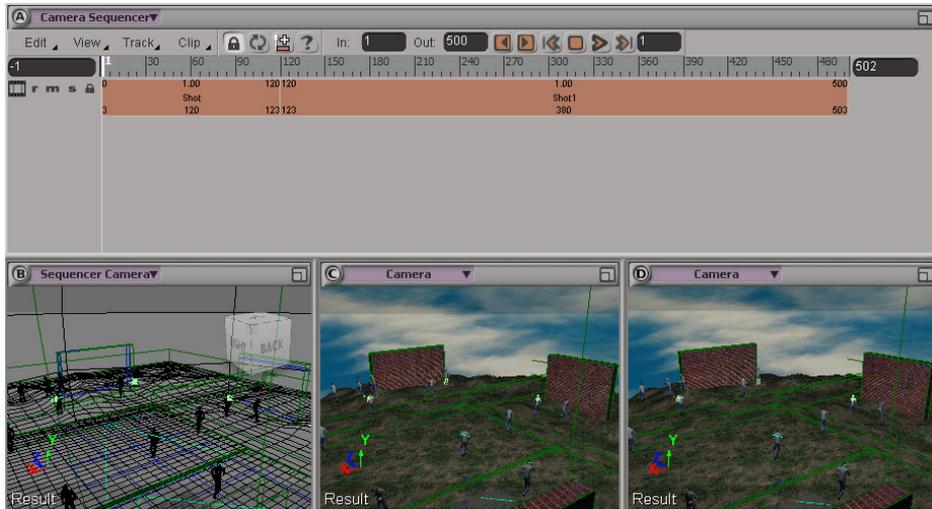


Figure P3-36 The clip splitted at frame 120 in the Camera Sequencer Editor

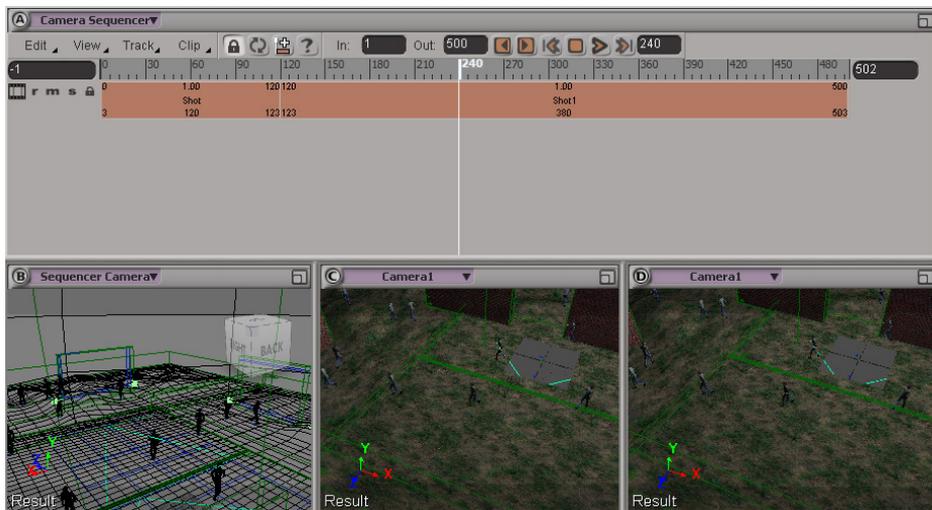


Figure P3-37 The animation stop at frame 240

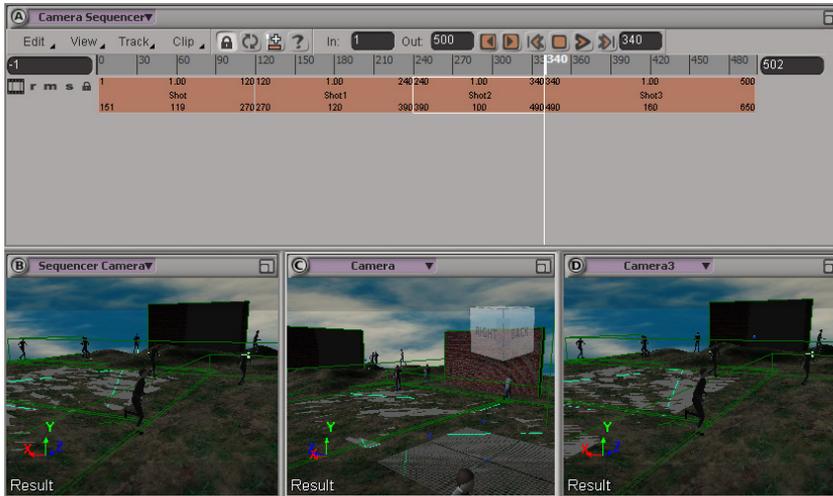


Figure P3-38 Last camera shot displayed in the Camera Sequencer viewport