



Artist PROFILE

Adam Benton

COUNTRY: England

CLIENTS: Activision,
Visa, MacFormat,
Powergen, MGM, Saatchi
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Adam is a
freelance
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fantasy. He is currently
producing regular
illustrations for MGM's
official Stargate SG-1/
Atlantis magazine.
www.kromekat.com

DVD Assets

The files you need
are on the DVD in
the folder Adam Benton.
Demos of C4D and Vue
can be downloaded
from maxon.net and
e-onsoftware.com

Cinema 4D & Vue

CREATE CLASSIC SCI-FI ART

Adam Benton uses Cinema 4D and Vue 6 Infinite to create a 3D illustration in the style of Chris Moore

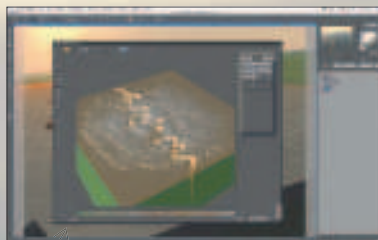
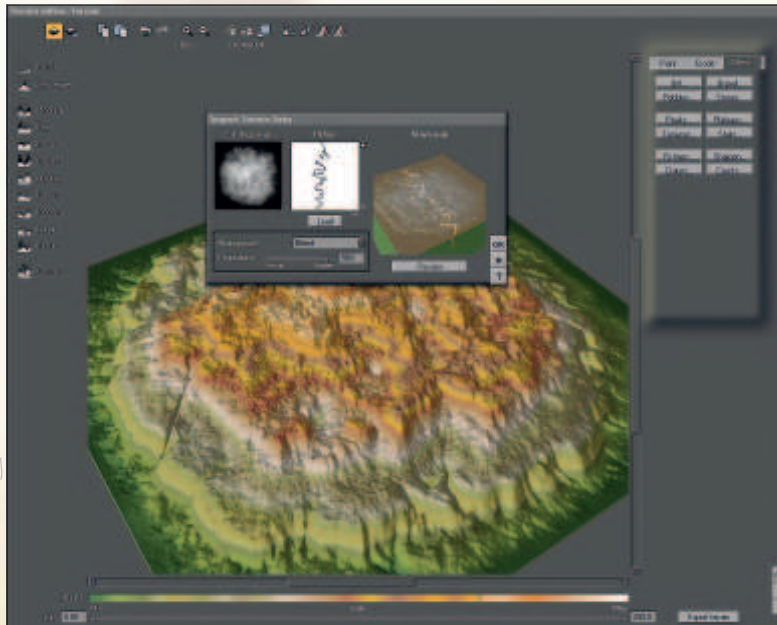
There are a handful of legendary artists and illustrators whose work you'll see adorning the cover of classic sci-fi novels by the likes of Isaac Asimov, Ben Bova or Greg Bear. One of the veterans of the genre is Chris Moore, a prolific artist since the early 70s, who has worked in most facets of commercial illustration and has

a distinctive, slick and vibrant style. Primarily an airbrush artist, Chris's sci-fi illustrations have a three-dimensional, rounded and graded tonality to their forms and structures, which I've often felt would lend themselves well to an actual 3D/digital recreation.

In this workshop I'm going to create a sprawling background landscape using

Vue 6 Infinite and explore some visually complex, yet surprisingly simple, modelling in Cinema 4D, to emulate the style of structural elements typical in Chris's work. I'll then light and match the perspectives and render both the landscape and models in their respective programs. Finally, I'll composite the results together in Photoshop.





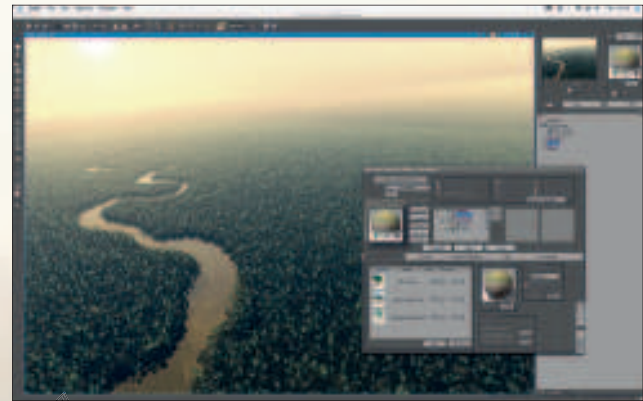
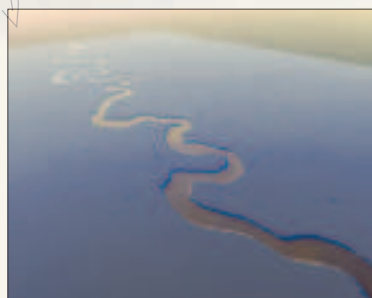
1 The landscape

My first step is to form the foundation of my picture by creating the right kind of landscape look using Vue Infinite. In a couple of Chris's paintings, he has used a huge, meandering river to lead a viewer's eye from the foreground element in and through the scene to the horizon, such as in his picture Beyond Lies the Wub (view it by going to www.chrismooreillustration.co.uk and clicking on the Sci-fi option in the menu bar), and this is something I know Vue will be perfect for replicating.

I start off in Photoshop and create a suitable greyscale, snaking river line using a hard edged black brush against a white background. I then save this as a JPEG. In Vue Infinite, I start by creating a terrain object and double-click its icon to open the Terrain Editor. I click on the Picture option and load in my newly created river image. By using the extreme black-and-white image merged with the existing terrain, I can be sure the river line cuts from top to bottom, which will be important when I flatten the terrain later in the creative process.

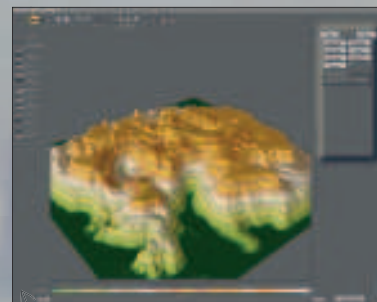
2 Amazon

In the main window I squash the terrain down to almost flat and, using the default Ground plane as a guide, lower it so that there's just enough visible to reveal what appears to be a recessed river. I also apply a general Grass Preset to the ground plane to depict vegetation in the distance. I add a simple plane object and scale it to match the dimensions of the river recess, putting it just below the highest surfaces of the terrain. From the Material Presets library I give the plane a muddy water texture and remove the bump.



3 Forest Eco-System

Vue Infinite's Eco-System (ES) tools really help create a large and natural landscape by creating clones of vegetation objects. I opt to use the Scrubland material preset on the riverbank terrain and to this I add a variety of ES trees. I want these to look plentiful and small to help with the sense of scale in the final composition, so I reduce their scales to 0.050 from the default 1.000. In the Density tab, it's tempting to set the percentage to 90 plus, but this will be a struggle for Vue with such a large number of trees and the scale of the terrain, so I set mine at about 75-80 per cent.



4 Mountain plateaus

To border the edge of this vast woodland and to add further scale, I decide to create some plateau-like mountains. I start with a new terrain object and click on the Canyon preset. To add more interest, I use the Paint tools to carve out some of the terrain down to the ground. To rough the terrain up, I up the res to 2,048 and then apply Glaciation, Dissolve and Thermal Erode presets.

Back in the main window, I place the terrain and make some duplicates that I resize and rotate to create some variety and distance. I add the same material I put on the river terrain and, on all but the nearest terrain, I remove the ES trees. ➔

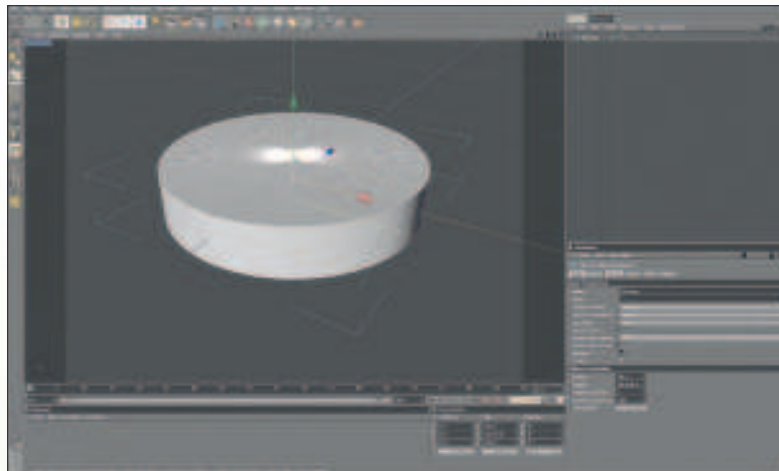
PRO SECRETS

Polys, points and edges

A model can be manipulated and edited by selecting and moving a number of elements. In C4D, you have the options of the polygons themselves, the edges that make these polys, or the actual points in between the edges. On a typical modelling project, each of these modes will be used for tweaking at some point to refine details. You can switch between each mode by either going to the Tools menu, or by clicking on their relative icons on the left side of the interface.

Shortcuts Edit polygons (Cinema 4D)

After creating a primitive object in Cinema 4D, press [C] to make its polygons editable.



5 Tower modelling

I switch to Cinema 4D to do some modelling of the technological structures. I'm struck by a particular image of Chris's which has a series of vast tower-like structures stretching from foreground to horizon. They're almost mushroom-like, so I start with a Cylinder primitive. I am going to get quite close to this object in my image, so to prevent any obvious polygon/faceting, I increase the cylinder's rotational segments from 36 to 180. I make the cylinder editable, and select Optimise. This ensures the top and bottom of the cylinder are connected to the sides for editing with the Knife.



6 Tower shaping

Using the Knife, I create some lateral loop cuts, choose Loop Selection and grab a ring of polys to rescale.

I return to the Knife, and add some further loop cuts on the inner sloping faces. I make a few pairs of concentric circles spaced equally, then by using Loop Selection again with Edge mode, I select the bottom row of each pair, and using Move, lower them slightly in the Y axis to create steps in the wall. In Poly mode, I use Live Selection to randomly select polys within each stepped loop, then use Inner Extrude to create an inset around those I want as windows.



7 Making life easier with Selection tags

With these polys still selected, I go to the Selection menu and choose Set Selection. This creates a tag that I can use to limit my window material to appear only on these polygons. I return to the Knife and continue to make lateral cuts. I add these additional polygons to my existing window Selection tag by clicking on the tag, holding down Shift and clicking on Select Polygons. I select Set Selection again and all the new polys are part of the same material selection. To help make this more visible, I create a quick black material, add it to my cylinder object and drag and drop the Selection tag to the material's Selection field.

PRO SECRETS

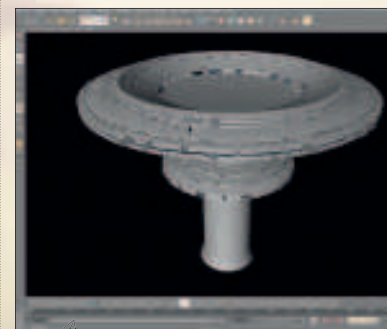
Texture mapping modes

When applying materials to an object in the Object Manager, clicking on the Materials tags reveals attributes that can be edited to better enable how the textures fit on to the object, such as cylindrical, cubic and spherical. It's worth experimenting with these modes, especially when combined with Selection tags.



8 Adding 'Moore' detail

I need to create some indents and extrusions to make the surface of the tower more complex. Again, I start by making random selections of polygons, on the rim and on the angled faces, and use the Inner Extrude function, along with the Extrude function to recess or raise the selected details.



9 Let there be lights

It's time to make those windows light up and add a suitable material for the rest of the tower. I have a detailed lights texture I made previously, which I add to my black window material's Luminance channel, making them glow and appear self-illuminated. Clicking on the Light Texture tag in the Object Manager reveals its mapping settings in the Attributes Manager. Here I change the mapping mode to match my model – cylindrical. I also change the amount of times it tiles/repeats to adjust the scale of the windows.

10 Making metal

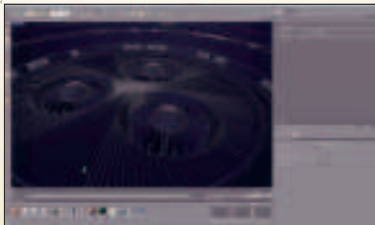
I create a new dark grey, almost black, material, because I intend to add some strong lighting to my picture reminiscent of Chris's work and, for this to work without looking washed out, I need a dark base colour. Next I find a suitable metal panel texture from my library, which I add to the Bump and Specular colour channels.

Shortcuts Extrude tool (Cinema 4D)

[D], [I]
Press [D] to access the Extrude tool and press [I] to access the Extrude Inner tool.

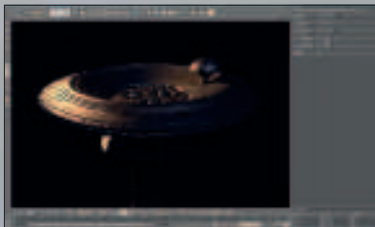
11 Finished tower

I decide to add another couple of items, very typical in Chris's work – large fans. To carve the tubes out of the central plane, I add a solid cylinder and place both this and the tower inside a Boolean object. By default, the Boolean is set to have object A subtract object B, so I place my tower first under the Boolean, and the cylinder second. The result is a clean, tubular hole in the tower, to which I add a Capsule object and use Extrude to pull out the fan blades and fill the hole. I duplicate this twice and arrange them on the centre plane. I also add a small dome made from a simple sphere primitive.



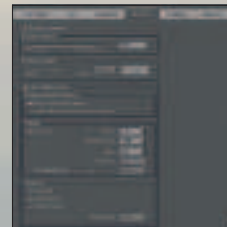
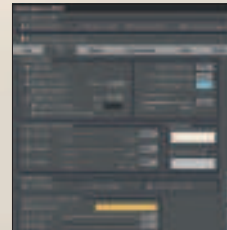
12 Lighting

Chris often employs high-contrasting highlight and shadow, and strong oppositional colours. I decided early on that this would be a sunset scene so that I could use low yellow/orange, and strong key lighting, balanced by some blue backlight near to the camera.



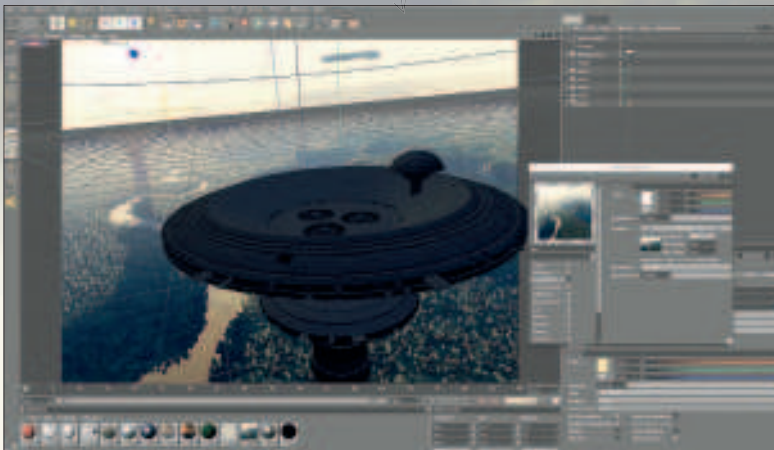
13 Setting the scene

To bring the tower and landscape together, I need to match the light direction as carefully as possible and composite them using Photoshop. I go to File and select Export>Wavefront then returning to my landscape scene, I go to File>Import and locate Tower.obj. As I place the tower further away, it becomes a silhouette. I duplicate it a few times and push the towers further along the river. I also import some ship models I made for an earlier project, edit the Atmosphere settings and make sure I'm using slightly soft shadows for the sunlight, since there's a lot of diffuse haze in the atmosphere.



14 Into alignment

I have selected the Vue camera and rotated it five degrees clockwise. I do a quick screen render then back in C4D, I create a Background object. I create a new material, to which I load in the screen render from Vue to the Luminance channel, and drag this to the Background object. I create a camera object and make the C4D camera match Vue's five-degree angle. Using Move, I put the light in the same place it appears in the Vue render.



15 Bounced light

To make the tower look as though it's actually present in the Vue scene, I add a few more lights to fill out the darkest areas and create the rich colour opposition between the cool sky blue and warm sun yellow. There is also an accurate way to accentuate this bounced light effect using Global Illumination. There are a couple of places that this could really enhance – the light reflecting between the various surfaces of the tower, and the green, forested ground below it. Since I don't have any actual landscape below this tower, I can emulate it by creating a floor object and adding a medium/dark green material to it. Now, by adding a Compositing tag, I simply turn off the Seen By Camera option.



16 Final touches

Finally, I decide to create a foreground ship based roughly on one of Chris's designs. Returning to Vue, I make any last compositional changes and render out a Final quality image. In Cinema I do the same, making sure I check the Alpha Channel option. I open both in Photoshop, use the Alpha to isolate the tower and foreground ships in the C4D render, and copy the Vue render behind the C4D layer. Finally, I do some standard postwork tweaks with contrast and create some subtle glows by duplicating layers, blurring them slightly and layering them using Screen mode.

Shortcuts
Viewpoint
(Vue Infinite)
Ctrl+drag
Hold down the Ctrl
key and drag to move
the camera viewpoint.

