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# 3D Artist

EXPERT RIGGING WORKOUT

## 3DS MAX

EXERCISE YOUR SKILLS BY  
CREATING THIS CHARACTER

## ANIMATE WITH BLENDER

Master soft forms using modifiers



## NINJA THEORY

Inside the indie AA studio

## SECRETS OF CG HUMANS

MPC, Image Engine & Lola VFX reveal all

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RENDER  
TIPS  
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ABSTRACT  
ART WITH  
FOREST PACK

BUILD  
PHYSICALLY  
ACCURATE  
ATMOSPHERES





is still no improvement in quality, set the value back to the default. **Marcin Miodek**

## 07 **EXPORT REDSHIFT MODELS**

Exporting models with dense geometry, for example trees and rocks, as Redshift proxies is a great way to improve viewport performance and render times. They are stored on disk in an optimised format and are loaded on demand as needed by Redshift, helping to reduce GPU memory overhead and scene translation times.

**Greg Zdunek**

## 08 **REDSHIFT SPRITE NODES**

When using alpha/opacity maps to mask out parts of a surface that are entirely transparent, such as leaves, try using a Redshift Sprite node instead of connecting the opacity map to the opacity/transparency inputs on your material. The Sprite node is more optimised than regular transparency and doesn't require a high refraction trace depth to render correctly.

**Greg Zdunek**

## 09 **THE REDSHIFT DISPLACEMENT NODE**

The Redshift Displacement node includes a few parameters to modify the displacement range. If you're using displacement textures with the common midpoint value of 0.5, you might notice the default values don't give correct results, so change the New Range Min to -0.5 and New Range Max to 0.5 to remap your displacement into the correct range.

**Greg Zdunek**

## 10 **RENDER REALISTIC CRYSTAL IN ARNOLD**

When rendering crystal, there are a few things to pay attention to: use the correct IOR for the material (it's 1.544 for amethyst, for example), use caustics or your object will be too dark and it will look wrong, and make sure your lighting is on point, because this can dramatically change



*Drone by Simon Williamson*



*Expedition by Victor Dufayard*





the look of your objects. You want to have nice specular hits and a backlight to emphasise transparency. **Alexia Rubod**

## 11 RENDER REFRACTIVE OBJECTS IN ARNOLD

When rendering refractive objects, you can tweak the amount of Transparency Depth in the rendering parameters to optimise rendering time a bit. Set a lower number and change the Exit Colour in the material parameters if needed. **Alexia Rubod**

## 12 BE CAREFUL WITH SIZE AND LIGHT IN ARNOLD

Keep in mind that the size of your object affects the look of your render. A lot of parameters are set to human scale in 3D. For example, lights will behave very differently with a big object compared to a tiny object, and so will some shaders like Subsurface Scattering.

**Alexia Rubod**

## 13 USE RETESSELLATE TO FINE-TUNE IMPORTS IN KEYSHOT

KeyShot 7 enables you to increase, decrease or fine-tune the mesh-density of CAD models on the fly. Those creating environments or hardsurface props in 3D software that provides NURBS data have the luxury of selectively setting mesh density on a per-part basis. This is ideal for working with large, complex models. Simply import at a low tessellation setting, then tessellate items closer to the camera as needed. This is especially helpful for creating macro shots of a larger data set without increasing file size too much. This also improves KeyShot render speeds. Fewer triangles, faster render.

**Will Gibbons**

## 14 CREATE ADVANCED KEYSHOT MATERIALS WITH MATERIAL GRAPH

KeyShot's Material Graph is a powerful-yet-simple node-based material editor. It enables

## 16 BOOST EFFICIENCY

Dylan Sisson explains how to



**01 Set up RenderMan V** scene using RenderMan V we can prepare our geometry for rendering by using features like Instancing. Additionally, Render advanced technology such as s shaders and lights developed for feature films, which we will set



**03 Light the scene** This simple light setup, but an advanced method of light tra additional lighting effects. While Path Tracer works well for many we'll use VCM, which automati specular bounce from the boxes (similar to a disco ball).

