

# 3DArtist™ 33

Practical inspiration

for the 3D community

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Apply fur to an existing character mesh

## Game of Thrones

We talk with the team behind its incredible opening credits

### In the Workshop

- Texturing tips
- Flesh out your base meshes with GoZ
- Constraints in Maya 2012 explained

## BACK TO BASICS: HOUDINI

Simulate liquid and render it realistically with subsurface scattering

30 PAGES OF TUTORIALS INSIDE

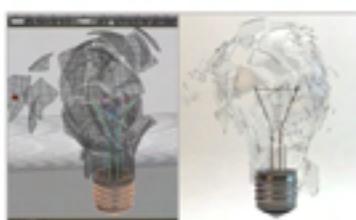
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ISSUE 33



Turn to  
page 70  
for the  
tutorial!

Artist info



**Patric Verstraete**

**Personal portfolio site**  
[www.vizcon.be](http://www.vizcon.be)

**Country** Belgium

**Software used**  
3ds Max, V-Ray, Photoshop



Patric Verstraete's K house is the fantastic structure showcased on our cover this issue. This 'grand design' is an excellent example of what can be achieved by the many talented artists working in the arch-vis industry. To brush up on your own techniques, flick to Patric's tutorial on page 70.

# Step by step: Making of K house

## K house 2011

“ Patric wanted to make a cosy but stylish family residence positioned by the ocean at twilight ”

Patric Verstraete is the founder of arch-vis studio Vizcon3d

The idea for this scene appeared when I came across some random images on the web and, from that very moment, I was charmed by the house design of the Lefevre Beach House that is presented by architectural firm Longhi Architects.

The site of this property is located at the meeting point between the Pacific Ocean and the arid Peruvian desert on Punta Misterio near Lima. This cool but cosy residence is enriched by both the sand and water environments.

On starting this project I signed up to the exteriors training course at CG WORKSHOP (<http://cgworkshop.org>). It was with the pro guidance of Pawel Podwojewski, aka 'simonhc', that I achieved the final renders.

My main application in the design process was 3ds Max 2010 for modelling and texturing. The BRUX plug-in for 3ds Max and a number of scripts such as FloorGenerator were also used, while Photoshop came in handy for postwork and V-Ray 2.0 produced the final render.

### Step by step

Easy-to-follow guides take you from concept to the final render

Artist info



Patric Verstraete

3DArtistonline  
Username: Vizcon

Company website  
[www.vizcon.be](http://www.vizcon.be)

Country Belgium

Software used  
3ds Max, V-Ray, Photoshop

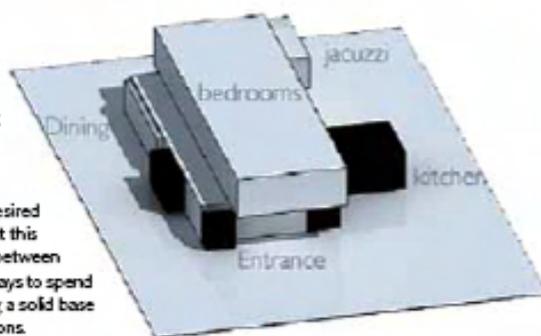
Expertise Patric is an architectural-visualisation artist located in Belgium. He started out as a freelancer in 2009 and now heads up 3D arch-vis studio Vizcon3d

## Inspiration Establishing the foundations

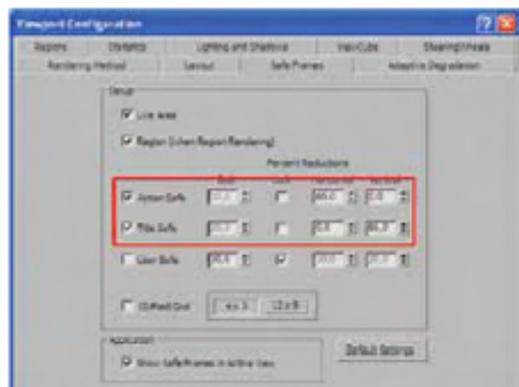
**Concept**  
In my opinion you should always gather as much reference and inspiration as possible. Before you create the first polygon you should already have at least some direction and ideas about what it is you're trying to achieve.



**01 Start modelling**  
When it came to modelling I concentrated on the main building, pool, poolhouse and deck. Everything in the scene is straightforward polygon modelling. I really tried to tweak the foundations and measurements until I had the desired look and feel of the space. In fact this stage took me several weeks - between coffee breaks! But it definitely pays to spend a good amount of time finalising a solid base for your architectural visualisations.



**02 Decking out**  
I opted to model the pool deck as opposed to using textures. I used the FloorGenerator script to do this: see [www.cg-source.com/floorgenerator.php](http://www.cg-source.com/floorgenerator.php). I work with this a lot - even for walls/facades. This script won't work on vertical faces, so you have to lay out facades horizontally to apply cladding etc; after that you can turn them back upright. This is one of those simple tools that can really take your arch vis to the next level. Take a look at the settings (right) for a guide.



**03 Rule of thirds** For the composition, I relied on the well-known rule of thirds. The basic principle behind this is to break an image into three sections - horizontally and vertically, so you get nine parts. You can make a grid in the viewport to better organise your 3D scenes. Just go to Configure>Viewport Configuration and set the values as above.

Software used in this piece

3ds Max

V-Ray

Photoshop

Modelling  
Lighting  
Rendering

**On the Disc**  
Outdoor furniture models

## Artist Showcase

### Patric Verstraete

I did my degree in interior architecture, as I was interested in computing as well as everything involved with architecture and interiors. An interest for 3D graphics arose and I started to experiment with 3ds Max. Soon after I founded my own company, Vizcon3d, as my secondary occupation.



**K house pool deck** 3ds Max, V-Ray, FloorGenerator (2011)  
Another view of the K house, this time from the pool deck



**K house stairwell** 3ds Max, V-Ray, BRIX plug-in (2011)  
My intention when starting the K house project was also to make some interior scenes of the property. The table in this shot was modelled by myself, while textures were taken from CG-Source, Arroway and CGTextures – which are all great 3D resources



**Lounge chair** 3ds Max, V-Ray (2009)  
This is one of a large set of interior images that I made for Belgian construction company Matexi

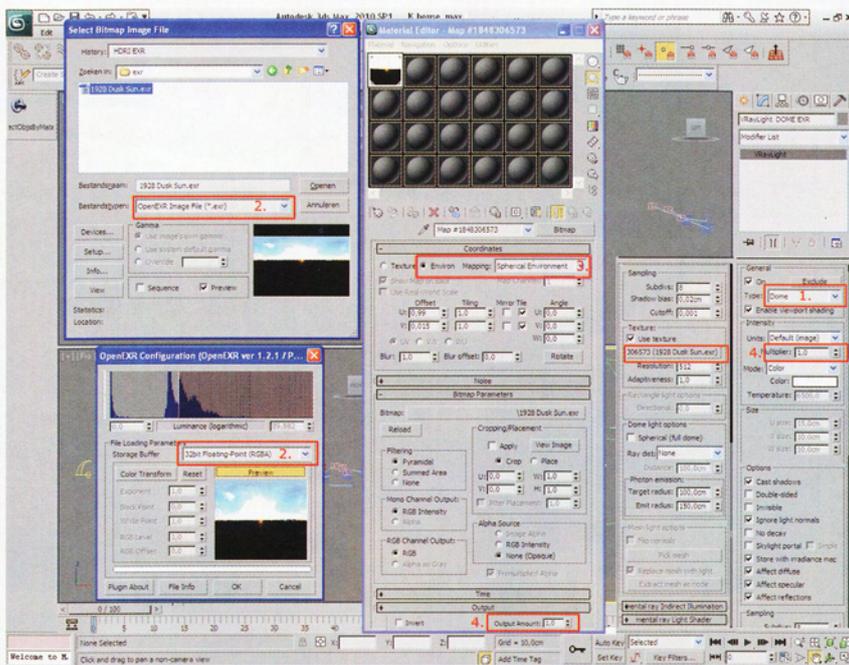


## Twilight zone

Let there be light...

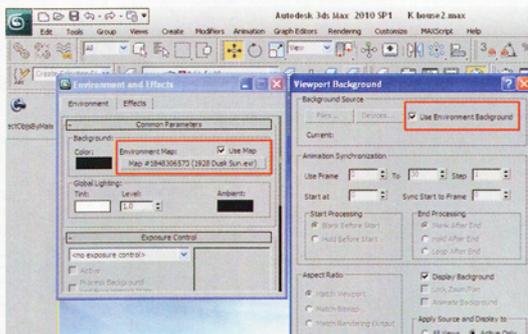


**04 Create a twilight feel** From the get-go the idea was to put the building into a twilight environment. After some experiments, I decided to use a V-RayLight Dome with an EXR image created by the very innovative artist Peter Guthrie. (Image title: 1928 Dusk Sun.)



**05 Importing EXR files** To load the EXR into 3ds Max, I created a V-RayLight Dome and assigned an instanced EXR image to the lighting texture map slot(1). When I was done importing the EXR image, I chose Real Pixel Float (32bit) from the Open EXR importer settings. Next I set the Mapping type to Spherical Environment and the Output of the EXR to 1. I also changed the V-RayLight Multiplier to 1.

**06 Rotate the EXR** To rotate the EXR I needed to enter a U Offset value between 0 and 1, so to rotate 90 degrees you'd need to enter 0.25, for 180 degrees you'd enter 0.5, and for 270 degrees, 0.75, etc. You can also set the V value at this point if you wish to establish the horizon.



**07 Wrap up the exterior lighting** Finding an appropriate horizontal position for your light can easily be done by assigning the same EXR image in your Material Editor to the viewport background just to show the desired position. If you're following this workflow exactly you must use the same EXR you used for the dome light because this new position will be automatically assigned to the light source.

**Tip**  
Before the final shot I use a small version of the EXR image to reduce memory usage and to gain fast draft results. But be sure that for the final renders you use the high-resolution image otherwise you may lose your background details!

**8 hours**  
render time  
Resolution:  
2,800 x 2,432

## 08 Interior lights

If populating the scene with many lights, you need to take care with how you organise them. Using different names is useful if you plan to have dozens of light sources. For this purpose I used Light Lister for V-Ray Advanced 1.50, developed by 3DZver; this can be found on [www.scriptsport.com](http://www.scriptsport.com). Most of the interior lights in the scene are photometric lights with custom IES files.

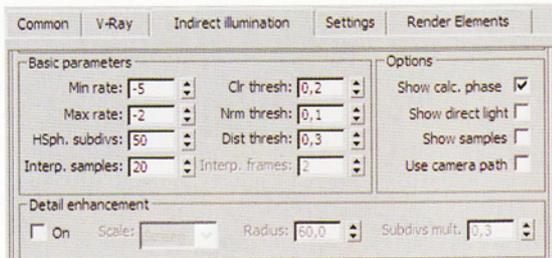
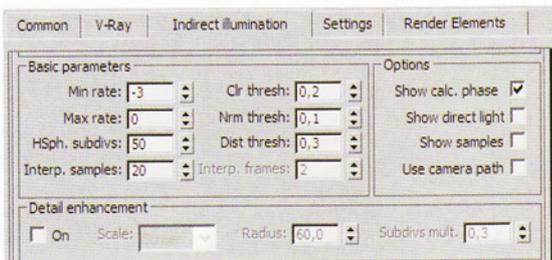


## Time to render

The end's in sight

## 09 Render settings

At this stage I had big problems with my main PC, so I decided to render on an older machine; that's why I had to be very careful with render settings to avoid crashes when producing the high-res images. It took me several tests to find a way to create a 2,800 x 2,432px image. I first rendered the images at a lower resolution (700 x 608px) and saved the Irradiance map pre-passes plus Light cache map for later. By using these maps, when you render your final image, you will skip the Irradiance and Light cache process and go straight to the render itself and, so, cut down render times.

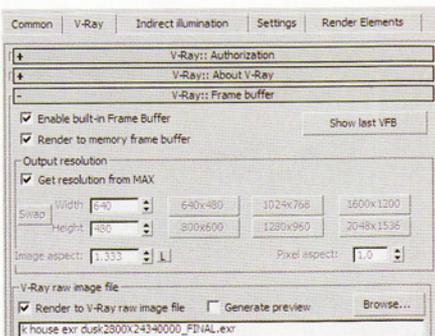
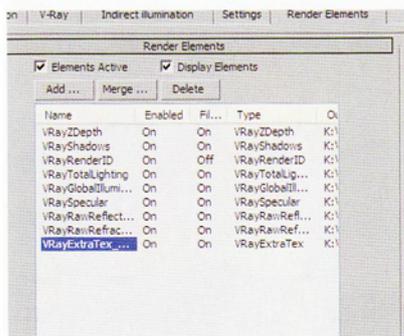


## 10 Irr map settings

I set the Min and Max rates to -3 and 0, respectively; this makes for a high-quality Irradiance map. If I were to render the final image with these settings the application would crash, but since I was rendering at a lower resolution just to save the Irr and Light cache maps it wouldn't take more than half an hour. After the Irr and Light cache maps were calculated I went back to the render settings and set the resolution to 2,800 x 2,432px.

## 11 A little light reading

I also changed Single Frame to From File, and chose the saved Irradiance (VRM) file and the Light cache (VRL) file. I reduced the Rate settings by 2 to give me a Min rate of -5 and a Max rate of -2. More information on how to calculate these tricky settings can be found in *V-Ray - The Complete Guide* by Francesco Legrenzi.



**12 Render elements** With V-Ray it's possible to save all render elements into a single OpenEXR file, which enables you to open one tidy file in Photoshop. All of the render passes will be on separate layers, ready for you to edit independently.

## In for the long haul...

If you are the type of person who wants fast results, you might be disappointed when it comes to CG imagery, since it can take many years to master it. If you are like me, it took me several years to discover what 3D is really about. The most inspiring thing for me is observing things around me in the real world. This can be anything from visiting museums, or walking around towns and the wilderness.

Of course, sometimes you need a little push, and that's why I subscribed to the training at CG WORKSHOP. In those few weeks, I learnt more than I would in a whole year just searching aimlessly around the web for answers. This project could never have been so successful without the help and advice of the staff at CG WORKSHOP - and especially Pawel Podwojewski - so my thanks go to them!



**13 Postproduction** In my opinion, this is where the 'magic' happens. I have a set of adjustments that I apply to most of my images during postprocessing. In Photoshop I first do some corrections via the Selective Color, Exposure and Curves adjustment layers. Then I start to play around with the render passes, mostly blending with the Soft Light or Screen blend modes.