



CARRARA 3D EXPO MAGAZINE

ISSUE 03 - January 2010

Interview with :

Dennis Richter

Eva Vomhoff

Frederic Rible

Tuuba - Making of The Bear

Tutorials by:

Nik Valencia

Tim Payne

Tips and Tricks Tracker by David

Brandy

Art Gallery

Includes
Shader pack
and
scenes
by Tim Payne



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Welcome to the



As artists using Carrara as a main tool, we know just how versatile, powerful and easy to use this software is and we would like to share with you just what Carrara can be capable of. Since Daz 3d purchased the application and began to develop it, Carrara has continued to evolve and expand. It is now fully compatible with Daz and Poser Pre made content which is a huge advantage.

„Best of Carrara“

However , Carrara is more than capable of creating all content internally, so the work shown here is artwork created by Carrara alone or in cooperation with other tools, showing the opportunities brought by Carrara. Everything you see is the effort of the artists resulting in amazing art. We hope to show you a diverse range of applications for the program from illustration, animation, graphics and fine art.

Enjoy the wonderful world of Carrara.

Sincerely,
Carrara 3D Expo Team

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Contributors:

Welcome Letter.....Thomas Mac Callum

Interview With Dennis Richter.....Carrara Lounge

Interview With Eva Momhoff.....Micheal Mathews

„PyCarrara“ Project.....Frederic Rible

Carrara Tips And Trick Tracker.....David Brandy

Makig Of The Bear.....Tuuba

Workshop.....Nik Valencia

Tutorial.....Tim Payne

Spacial Thanks:

KarmaComposer, Carrara Lounge (www.carraralounge.com), The fine folks at DAZ, Charles Brissart, Pierre-Sylvain Desse, Eric Kwong, Ronen Lev, Pallavi Mangalvedkar, Steve Kondris, Chad Smith, Rob Whisenant, Craig Randal, Denise Tyler, everyone who supported the e-zine and everyone else who helps to keep Carrara alive!

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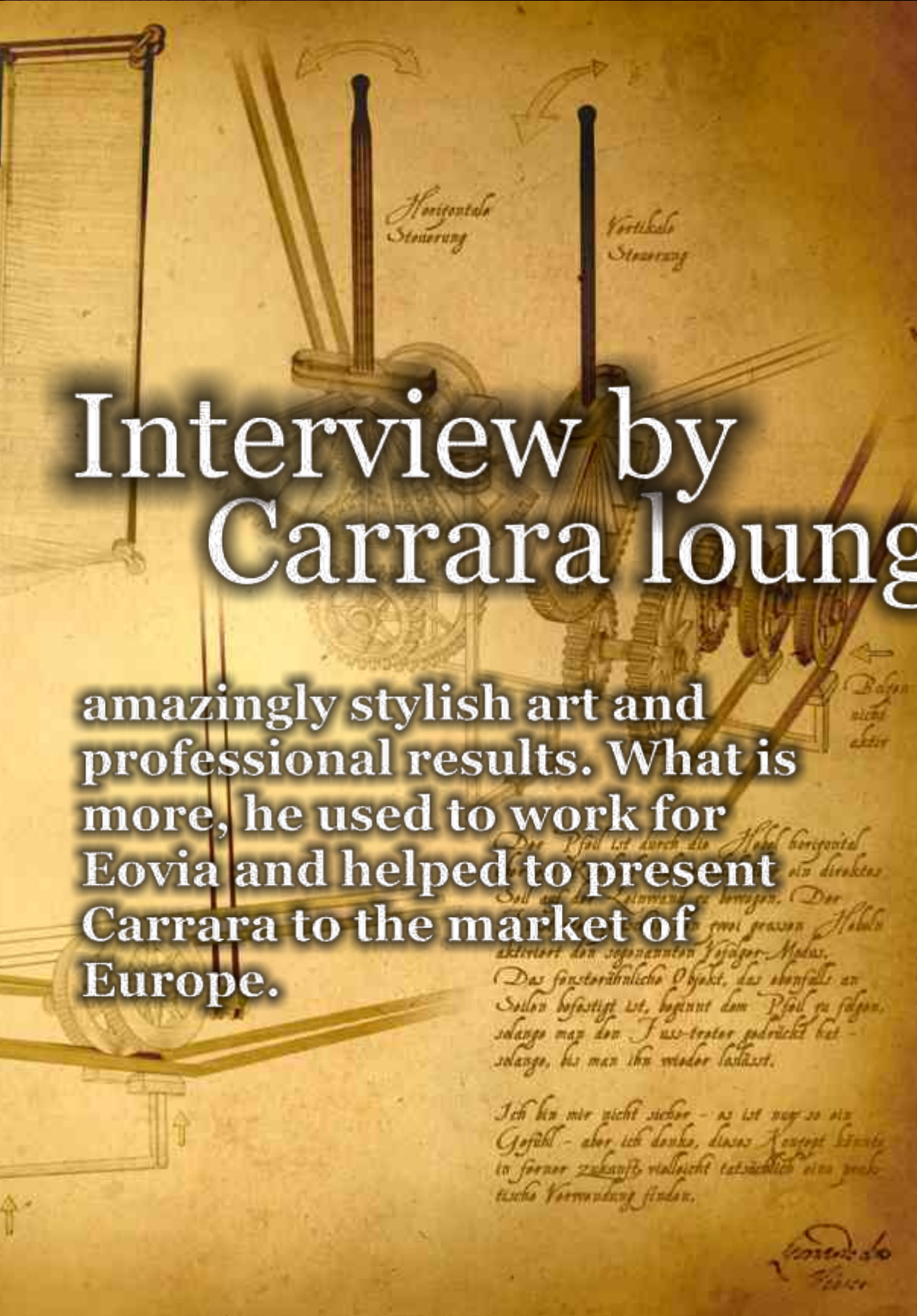
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Dennis Richter

Dennis Richter is 30 years old designer from Germany who uses Carrara for his private and commercial projects and combines Carrara made results with Flash projects. Dennis is well known for his

*Testor aktiviert
Bogen und gibt
den Fenster-
vorführer frei*



Interview by Carrara lounge

amazingly stylish art and professional results. What is more, he used to work for Eovia and helped to present Carrara to the market of Europe.

Der Pfeil ist durch die Hebel horizontal
ein direkter
Soll auf die Leinwand zu bewegen. Der
aktiviert den sogenannten Jäger-Mechanismus.
Das funktionierende Objekt, das ebenfalls an
Sollen befestigt ist, beginnt dem Pfeil zu folgen,
solange man den Fuß-Hebel gedrückt hat -
solange, bis man ihn wieder löst.

Ich bin mir nicht sicher - es ist nur ein
Gefühl - aber ich denke, dieses Konzept könnte
in seiner Zukunft vielleicht tatsächlich eine prak-
tische Verwendung finden.

Leonardo da Vinci



www.myspace.com/gregortresher

CL - Hello dear Dennis! First of all could you introduce your self to the C3DE readers?

Dennis - Hi, my name is Dennis, I am 30 years old - currently living in Mainz / Germany (near Frankfurt) and I study graphic design by now. I have been a webdesigner and flash animator / coder for over 10 years. Besides my studies I work for clients within the music industry. My hobbies are photography, mountainbike, bmx and cooking. And of course I'm passionate about 3d and try to involve it into as much projects I can.

CL- How long are you in digital arts?

Dennis -I started as a kid experimenting with C64 basic and instead of coding programs I tried to make some ascii art with it. It evolved

through Amiga Deluxe paint and finally Photoshop. 1997 I did an internship at a print agency and some of the time they had nothing to do for me – so I grabbed all Photoshop books they had and got more into this substance. I would describe this as the starting point of my career in computer graphics. I started making html-websites and ended up as a flash animator and coder graduating as SAE multimedia producer (private study besides my job). Then I tried to integrate my 3d know how within my flash-projects. Flash developped into a very complex authoring tool and in 2007 I recognized that my job is getting very technical, and I felt that I will have to decide if I want to be a technician or a graphic designer. I was chosing design and started to study at German University Fh Mainz in communication design. That was one and a half years ago.

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PÜPPCHEN

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Graphical Objects Research

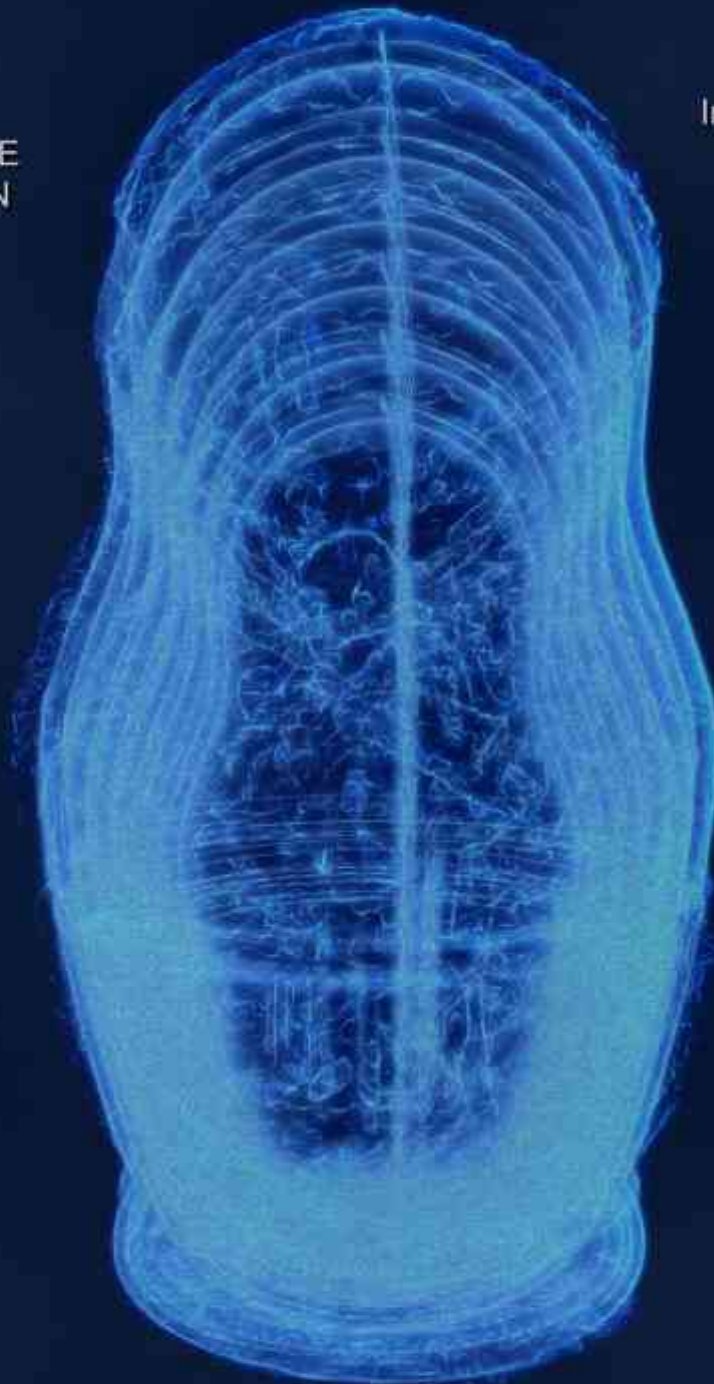
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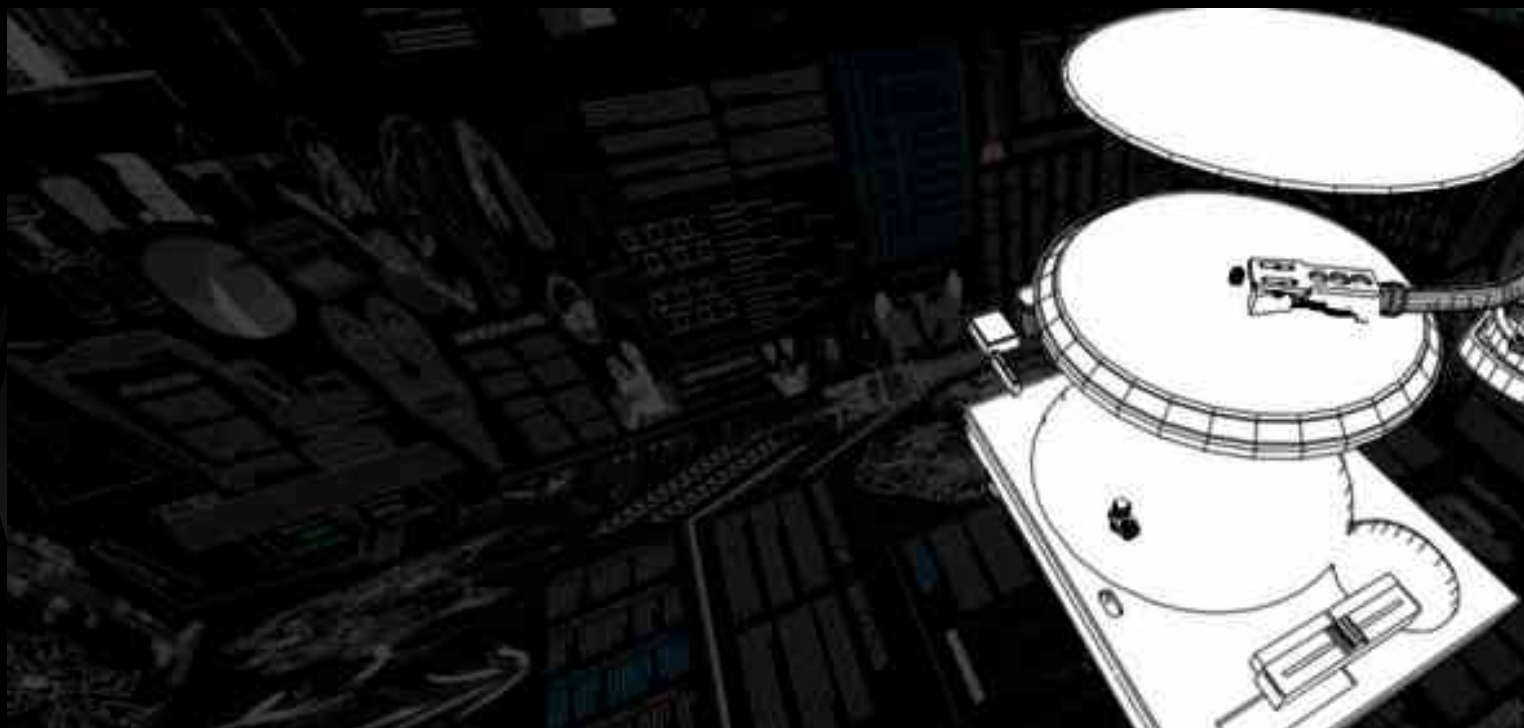
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Russiandolls xray



CL - What are your favorite style of art?

Dennis - Within traditional art I like surrealism a lot. But my most important influence has been the graphic design scene - especially of the music industry. I love studios like Bionic Systems, Stardust and designers like Jens Karlsson (chapter3.net) plus Joshua Davis. Also the design scene in England is one of the best out there in my opinion when you look at their record covers, posters and packagings. Innovation is a must in England and over here in Germany, clients mostly tend to very safe ideas that have been approved on other projects or countries - many of them don't seem to want to take a risk. But a risk is a great chance to really win in my opinion.

CL - What made you be interested in 3D art?

Well - I think at the beginning it was simply a cool experience to play around with special effects. Who wasn't stunned when he rendered his first chrome sphere? I mean





www.myspace.com/gregortresher

that's crappy, but it was a hell of a fun. Later I discovered artists like Gilles Trans (oyonale.com) from France and the way he used 3d in a really artistic, original and sophisticated way. So I began to concentrate on ideas. Also the wish to stylize 3d objects and renderings was getting stronger. I didn't want to imitate reality anymore - and if I still wanted that, I tried to use it to create something that wouldn't be possible in reality at all.

**CL - How did you begin your journey in 3D world?
Did you try many software for 3D graphics?**

Dennis - I did. I tried very early versions of 3D Studio Max, Cinema 4D, Truespace and Blender, but somehow didn't get much successes out of those back then. It seemed very complicated for me - being a very visual orientated person that want to play around and experiment freely without having to be too precise, patient and being confronted with very technical and numerical interfaces.



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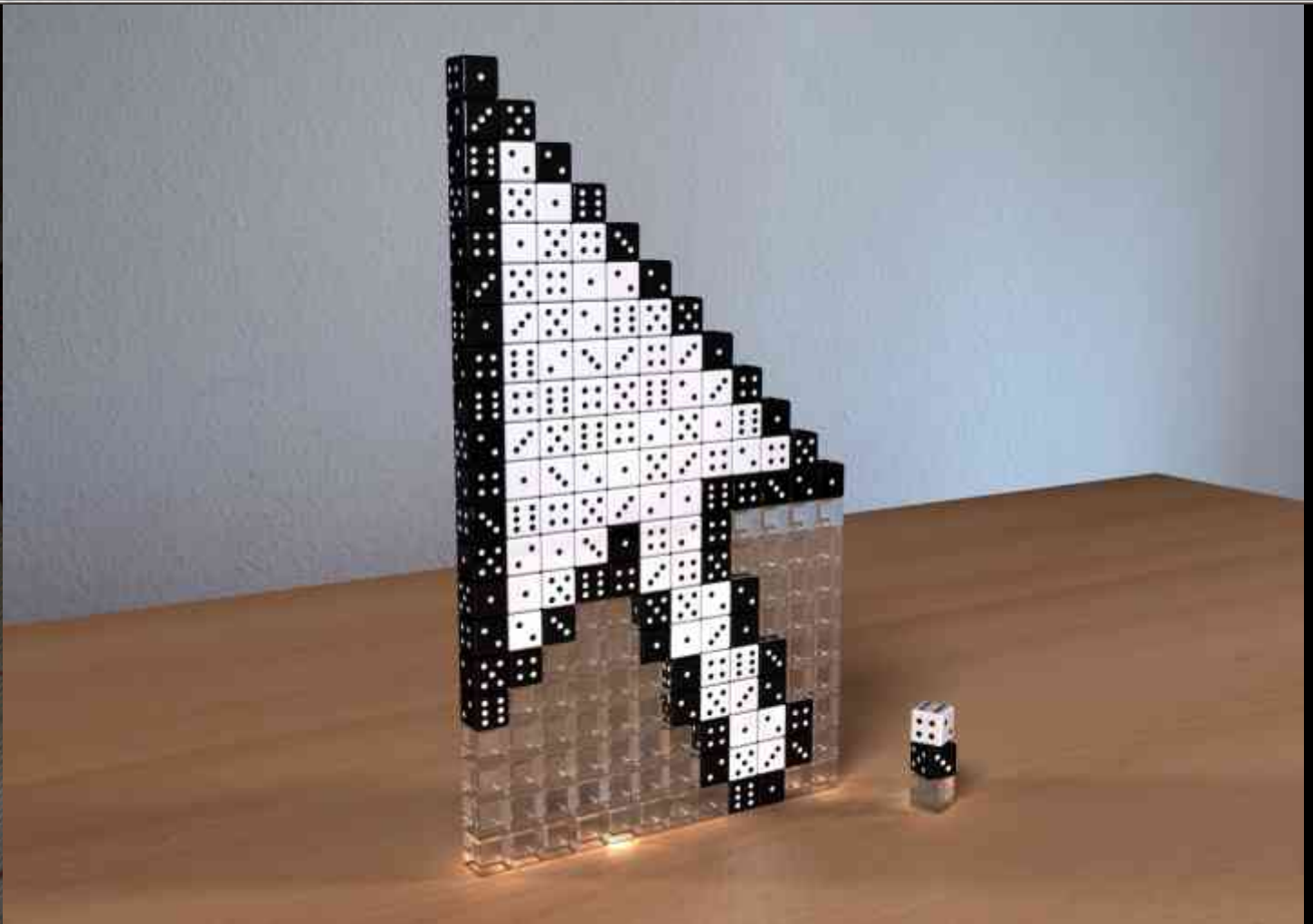
Cocoon Club Banner 01

CL - How did you find out about Carrara and what made you choose it?

Dennis - I tried Ray Dream Designer once which is the grandfather of Carrara and was surprised how easy and intuitive this piece of software was. I didn't read the manual first and anyhow got some results very fast. That encouraged me to get deeper into 3d world. Bryce and Poser also had this kind of graphical approach, but I thought Ray Dream did the best job. Ray Dream got Carrara and evolved as I did. Every new version brought features I discovered then. I am very picky with the look of a render engine and I like the one of Carrara very much. Today I use Carrara often for projects that have to be quickly done - straight forward. A few years ago I got the chance to work for Eovia, who runned Carrara Studio before DAZ3d took over. sphere? I mean that's crappy, but it was a hell of a fun. Later I discovered artists like Gilles Trans (oyonale.com) from France and the way he used 3d in a really artistic, original and sophisticated



Dices



Dices

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CL - Could you tell us more about your time with Eovia?

Dennis - It was an interesting story: I just wanted to see the new functionalities of Carrara's latest version at a small trade show in Frankfurt/Germany in 2004 and it was really disappointing. The presenter talked about Carrara if it was a tool for total 3d dummies, but I knew about the new advanced modeling and rendering abilities. This guy didn't seem to know a

lot about Carrara at all. So I wrote a short mail to Eovia Europe just to express my disappointment, expecting no answer at all. But guess - the answer did come: The corporate marketing manager told me, that those problems with presenters in Germany are known. He asked me, what I was doing with Carrara - he wanted to see some renderings. I sent my work over and he asked if I want to come to Strasbourg/France the next week to get a training for the software



Russiandolls Earth



Russiandolls Legerdemain

and then begin to give some lessons for clients and universities, present at trade shows and write some articles for German magazines. So I had to decide really quick - I only had 2 or 3 days. I said yes and it was a great time where I got to know a lot of interesting people and had a lot of fun. Unfortunately the european office has been closed about 2 years later and there is no more activity in Germany as far as I know.

CL - For how long are you using Carrara?

Dennis - I discovered Ray Dream Designer back in 1996 and updated every version from there on.

CL - Talking about workflow, what is your work flow? Do you begin with sketches or do you produce a final result during the first minutes of inspiration?

As the years passed I got conceptual more and more. If I get a new job I open up my text editor and really spend a lot of time just thinking about the essence of a project and what could be a creative solution writing down all possible associations - even very crazy ones. Don't delete any idea - protocol everything that starts to develop inside your head. Even ideas that seem to be goofy can get a completely other ball rolling later. I work out many alternatives to have a range of ideas that I can finally chose the strongest concept. Most of the time I am in a hurry after that, because a lot of time passed, but I got an idea that convinces me (and often also the client). And if not, I will have dozens of alternatives written down.

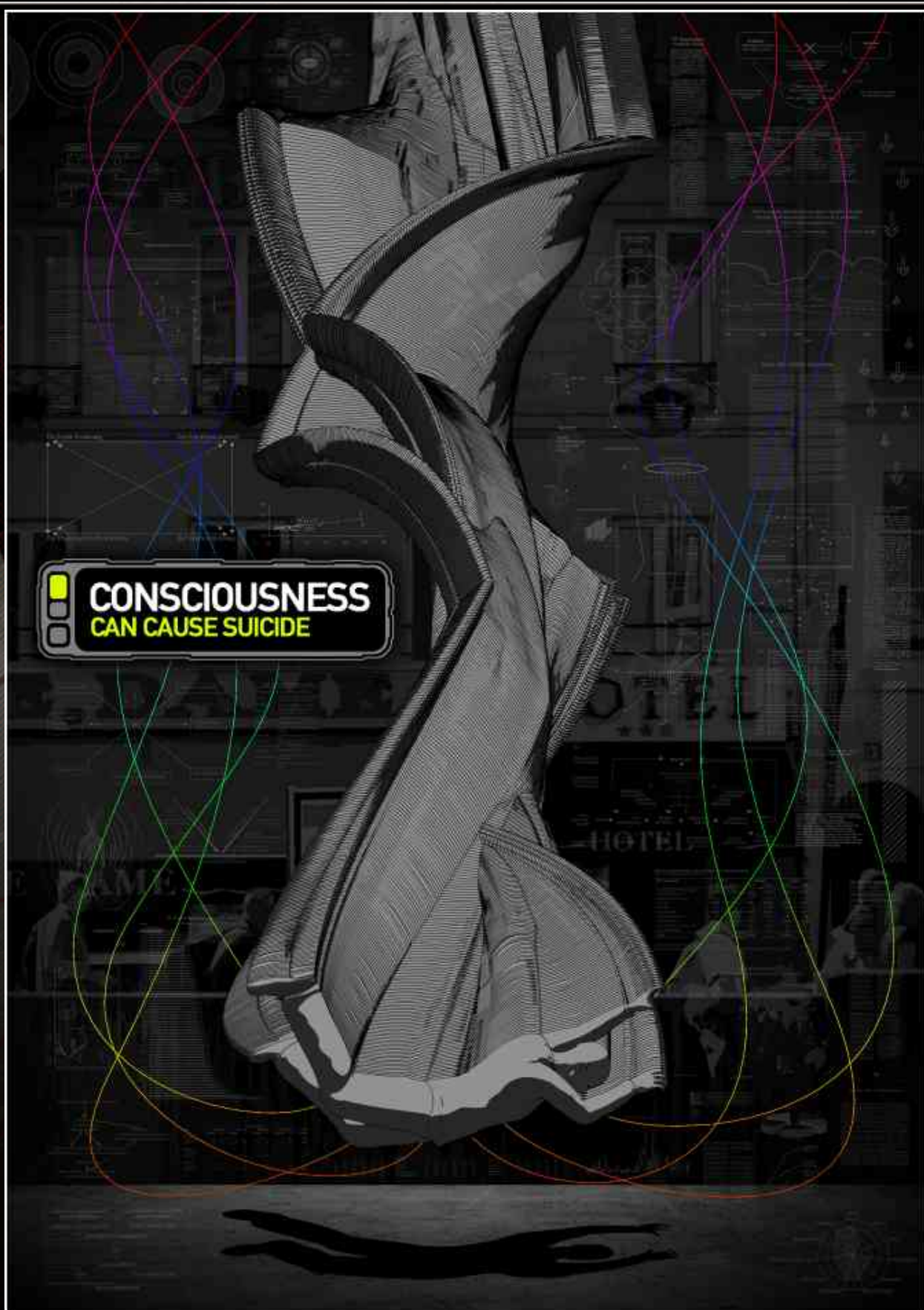
As most of my artwork is kind of emotional and contains some spontaneity, usually I open Carrara directly instead of drawing on paper and start playing around with very rough objects to get a quick, allround impression of colors and perspective. After that I work from rough into detail and most of the time I'll get to a state when the scene looks already finished fast. But then I will have to spend a lot of time again into details ending up pushing objects milimeter-wise to

the left or right.

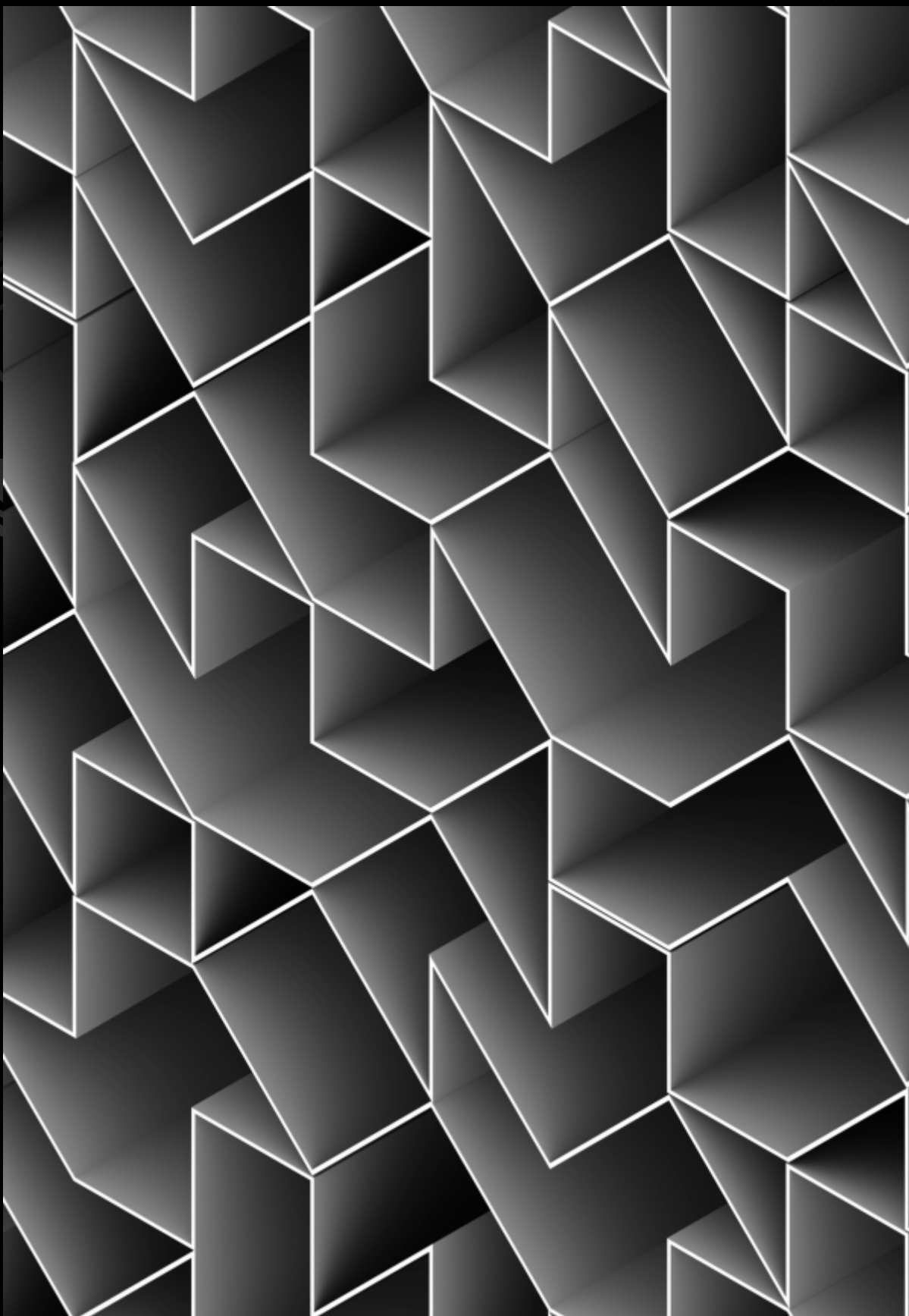
The final composition is very important to me - I want a balanced result and the best image section. Be aware that every object you put into your scene has a weight and where you going to put it on screen decides how the scene will be perceived by the viewer. While studying design you experiment putting just flat circles or rectangles on a white sheet of paper and will be sensitized how it will affect relations between other elements and also the format itself. A scene can tip over to one side when you don't put balance weights on the opposite side. You can also learn a lot of things from traditional photography if you want to create suspenseful 3d-renderings. Today you have a very powerful toolset and a lot of possibilities to work with like depth of field, studio lightning and so much more. So my recommendation would be to not just read books about 3D but also other fields, that traditional artists study.

CL - You make amazing art, did you graduate university of arts? Where do you get your inspiration from?

Thanks. I started my career with a SAE multimedia producer diploma, which was a good technical starting point of my career and now want to get deeper into graphical design studying at university Fh Mainz.



Suicide



Isometric

I think it's a good idea to study because you get a feeling of design history and start to use things not only because they are hip and cool, but also because you understand where trends come from and what the original motivation was to use that kind of elements in history. Of course you can also get that knowledge without an university and call yourself designer anytime you want, but for me as a sometimes lazy person it's great to sit essential lectures where you get an overview of the stuff that is important for a designer.

CL - How well does Carrara perform for your commercial projects? Does it have something that makes it special in your projects?

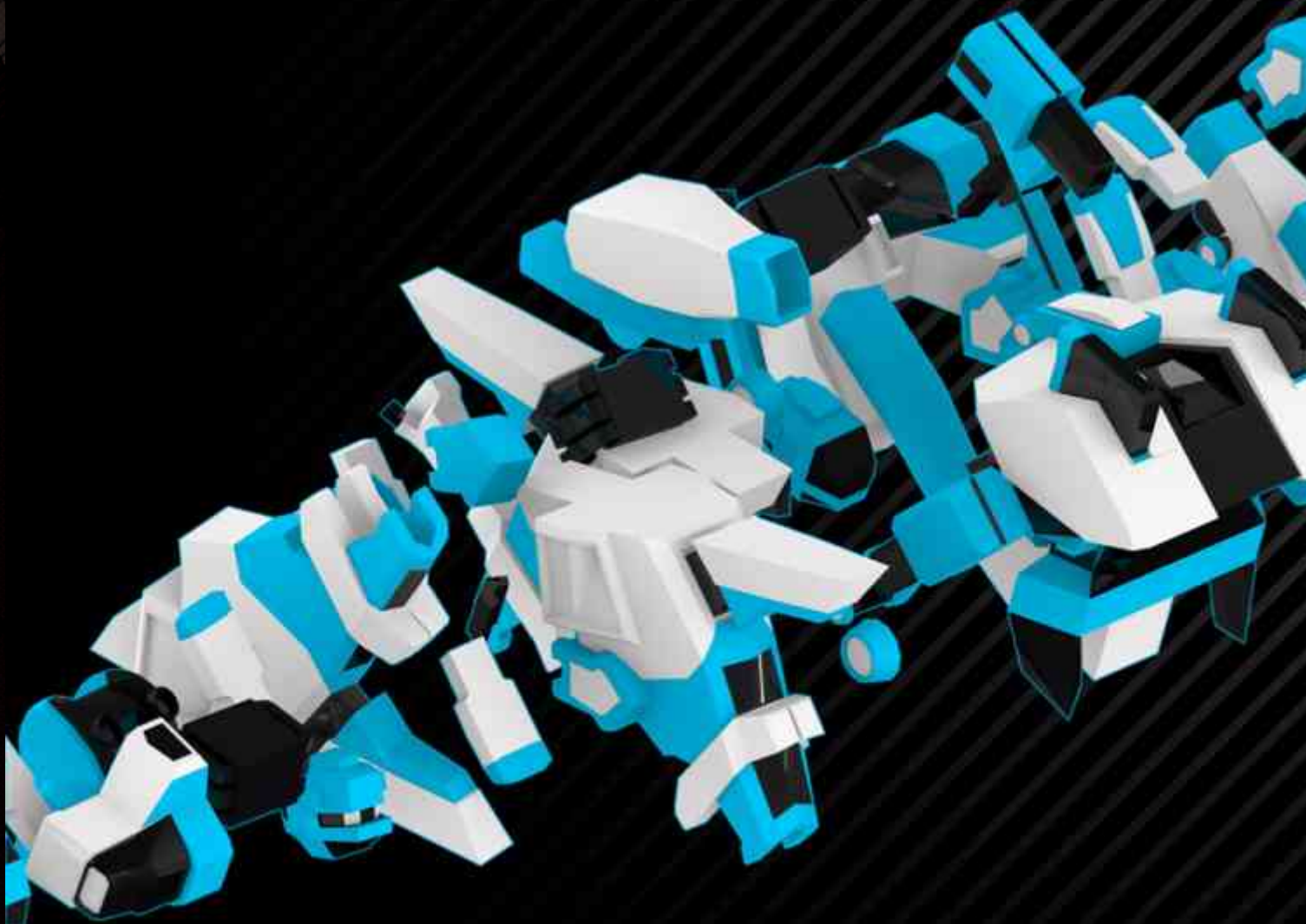
Dennis - Today Carrara fits my workflow very much, but sometimes I miss some more precision, when you have to work very exactly. There are still some problematic bugs and modules that are not developed very far which sometimes makes it hard to use the software for a complete project. Sometimes I get to a point where I want to switch to another app, but then I take a rest and remember how intuitive and fast Carrara is to work with and I end up putting more patience into the software and develop some work-arounds and go

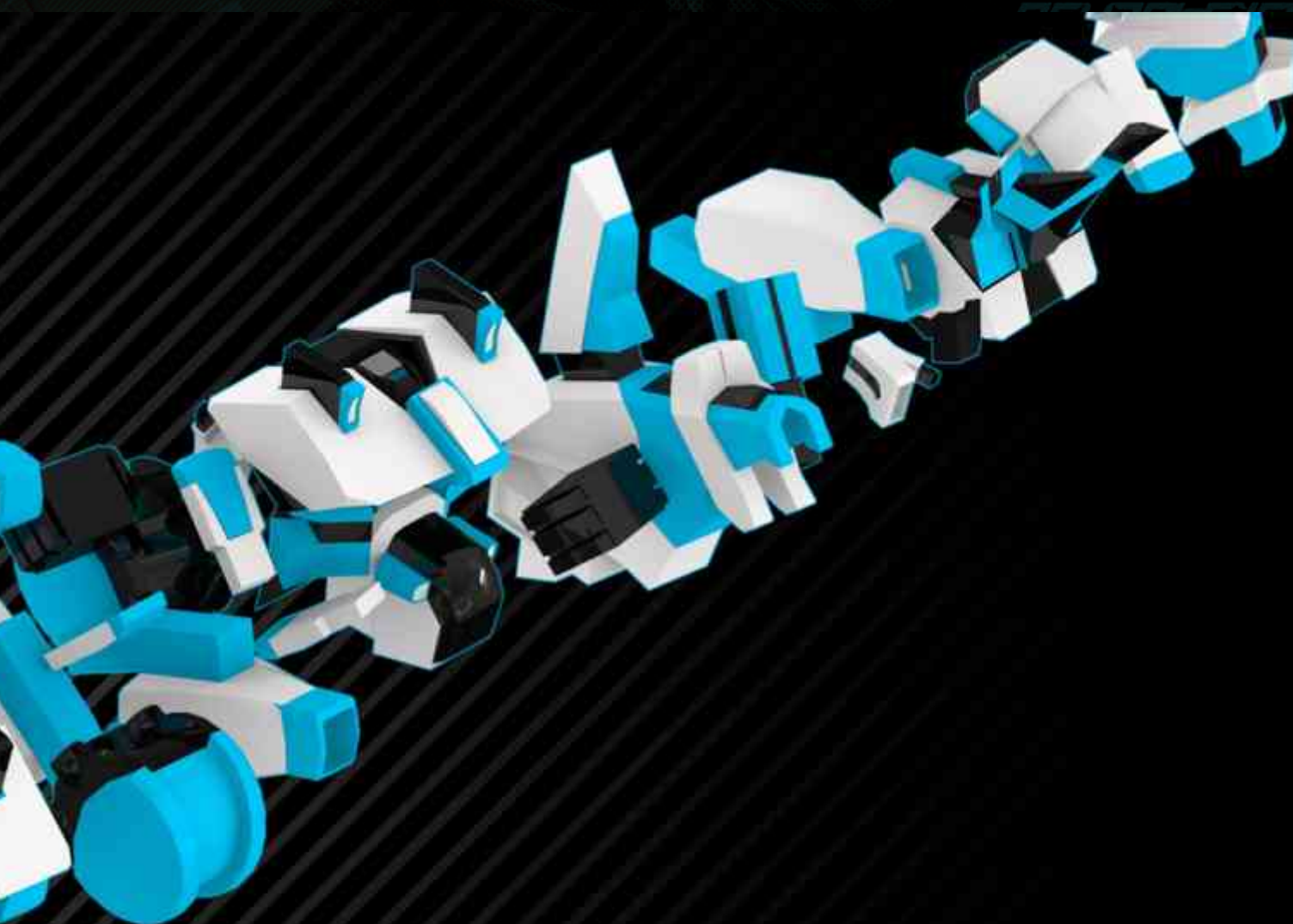
the long road to get the results I want.

CL - Is Carrara good tool for design and abstract arts?

Dennis - Absolutely. I remember an article of the English design magazine „Computer Arts“, that recommended it as a tool for designers. Visually thinking people respond to intuitive tools and straight forward interfaces, hierarchies and structures. Carrara in my opinion has all of that. I also like that only the most important parameters show up at first and you can click deeper if you want to get even more control later. Also the wizards and lightning scenes are great when you want to create a specific setting. You can also save your own settings for almost everything (animation, shaders, plug-ins). Also the standard settings for things like HDRI Lightning are great, so that you can get great results within 2 or 3 clicks. I found myself tweaking around for half an hour using other 3d-software to get similar results. So I think Carrara has genius approaches how to handle a complex thing like 3d naturally is, but sometimes doesn't offer the conciseness to finish a comprehensive job..

cocoonclub





Cocoon Club Banner 02





Global Consciousness

CL - What features of Carrara do you use the most?

Dennis - It really depends of what I want to create. Often I experiment with the great and exemplary shader tree. Putting mixers and patterns together – shift it into the alpha channel and see what complexity develops from even simplest shapes and objects. I also like the possibilities to paint geometry or shaders directly on polygons – that's very straight forward and people that use more expensive 3d-software are always impressed how fast you can create complex objects with this. I also like the Spline Modeler that seems to blend just every shape into another with ease – even if it should get really complicated for the software. Everything else I realize with plugins that I will talk about later.

CL - Do you have some special tools that you find to be complementing your workflow to make stunning art?

Dennis - Sometimes I use Cinema 4D RD 11.5 with Mograph 2 and xFrog to do some things you can't do with Carrara – but mostly just if I want to go for an animation. I think Carrara has some great animation features right now, but it's not developed far enough to realize professional motion design you see on tv. Other tools that I have an eye on are zBrush and Lightwave.

A: UNFOLD (9:29)
AA: THE HEARTBEAT
ORCHESTRA (9:00)

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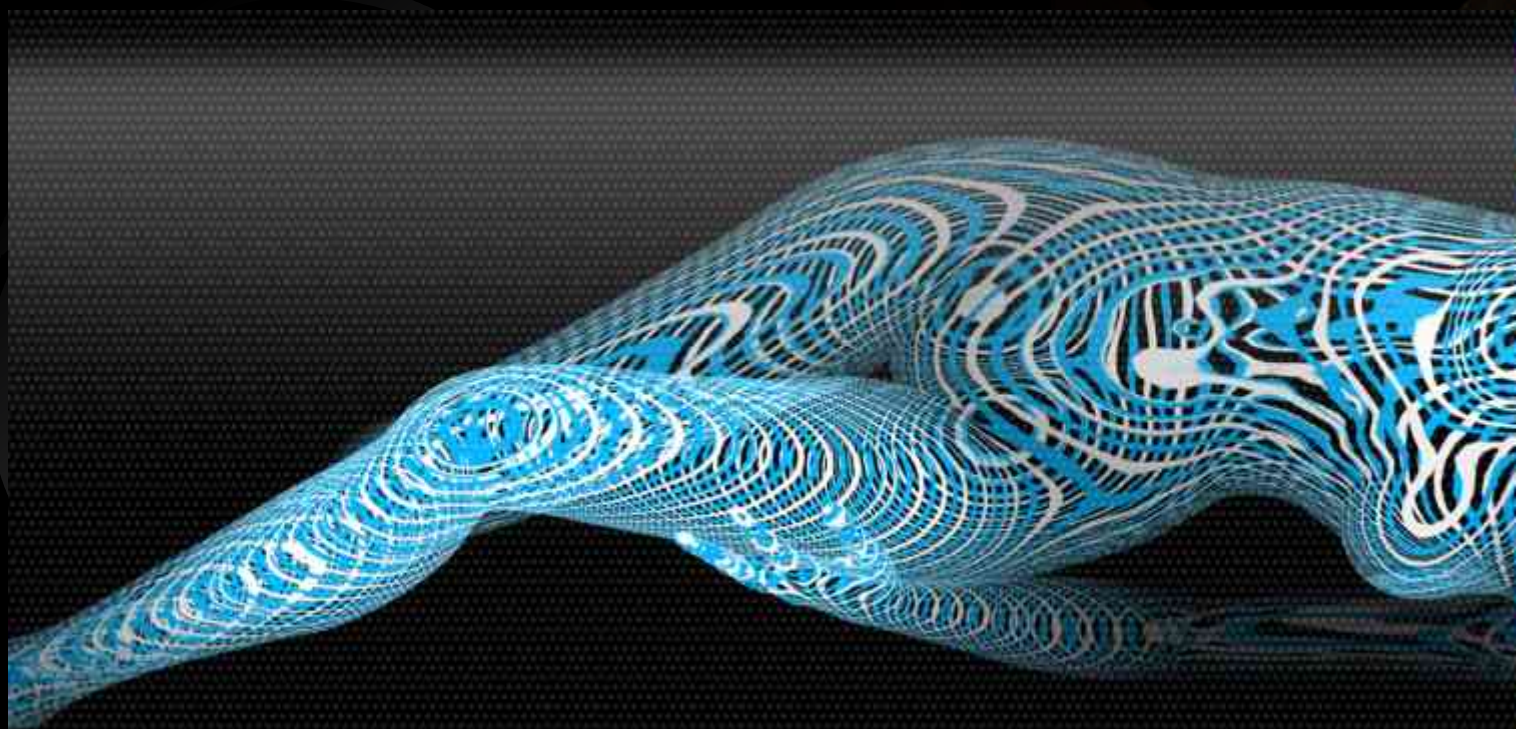


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GREGOR TRESHER
THE HEARTBEAT ORCHESTRA



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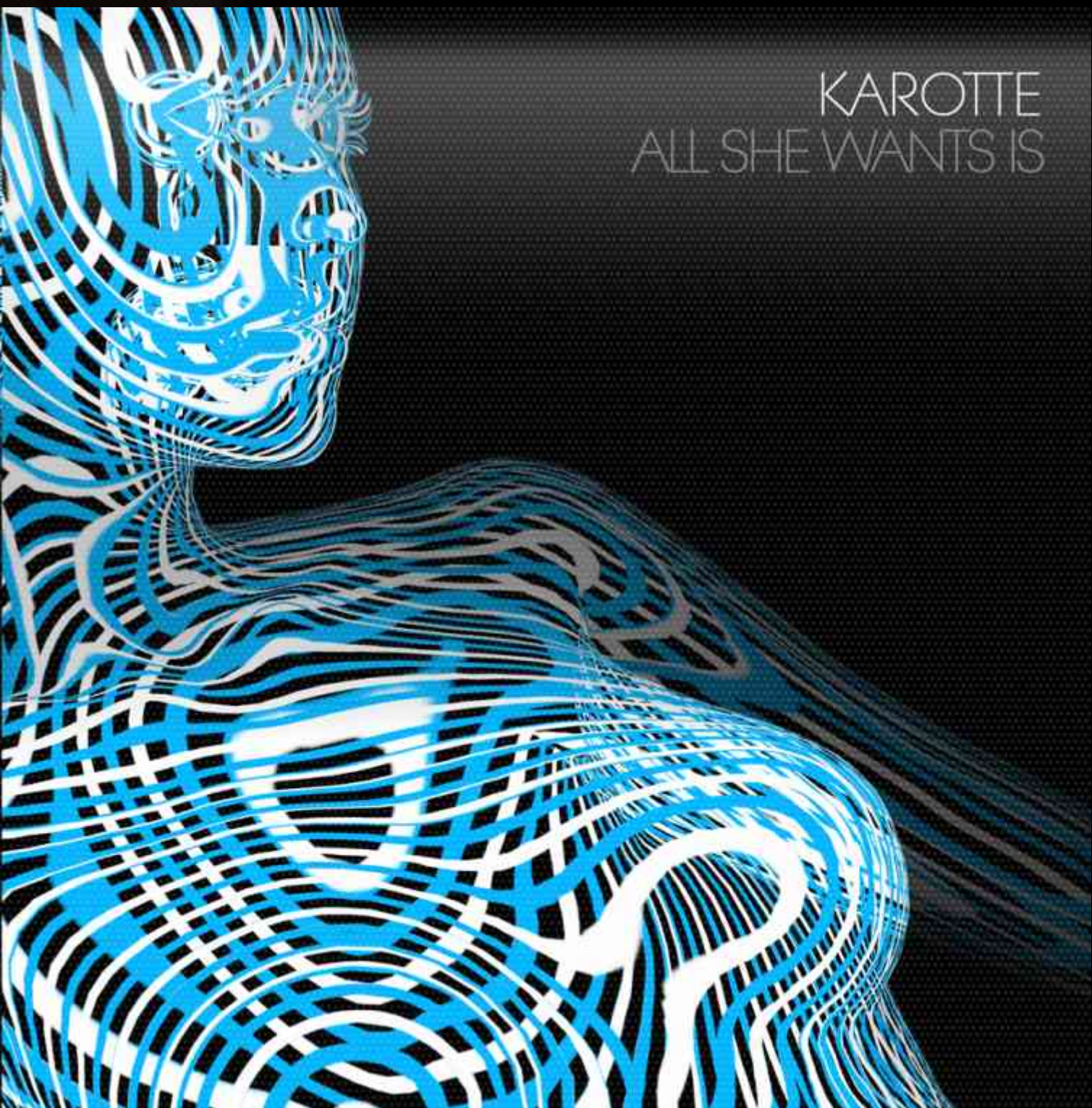


A1: ALL SHE WANTS IS (06:58)
 A2: ALL SHE WANTS IS (MARKUS FIX REMIX) (07:29)
 B1: ALL SHE WANTS IS (MICRODINAMIC REMIX) (07:49)
 B2: ALL SHE WANTS IS (ROBERT DIETZ REMIX) (06:56)

ALL TRACKS WRITTEN BY PETER "KAROTTE" CORNELI AND GREGOR TRESHER, PRODUCED BY GREGOR TRESHER
 ADDITIONAL REMIX PRODUCTION ON A2 BY MARKUS FIX FOR MYSPACE.COM/MARKUSFIX, B1 BY LUCA MORRIS &
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KAROTTE
ALL SHE WANTS IS

Recordcover All She Wants Is



A: HIDDEN SOURCE (07:52) B: NO HASTE (07:39)

WRITTEN & PRODUCED BY DANIELE PAPINI AT PAUSENRAUM STUDIO
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DANIELE PAPINI
HIDDEN SOURCE



Recordcover Hidden Source



Camouflage

CL - Maybe you can give an advice what tools you find to be the best ones to be used together with Carrara?

Dennis - For everyone that wants to do illustrative 3d, the plugins from Digital Carvers Guild are a must have. I use Toon Pro, Wireframe Pro, Shaders Plus (especially flat shading), Anything Grooves, Anything Grows, Anything Goos and Shader Ops a lot. Without them I couldn't get the graphical feel out of most of my work at all and combine

different render styles within one image. Also Inagoni is a great manufacturer of plug-ins. Baker and Veloute tools are also very powerful. They are really cheap - especially if you compare them with Cinema 4D modules like sketch and toon.

CL - Are your colleagues surprised to know that you create these amazing images using Carrara?

Dennis - They are surprised because of

rendering quality and most of all when you tell them how fast a project could be finished with Carrara. Most of the professionals in 3d I know use 3d only within big budgets and it takes them really long to get stylized looks that are really easy to do with Carrara. Most of my time I worked as a flash designer and coder and it's just great to get impressing results in short time and within budgets, clients didn't think 3d is possible at all. A very cool thing is that you can export your animation as flash-vector animation with VectorStyle 2 plugin, which is very powerful. You can zoom into rendered vector animations as far as you want and the resulting files are really small - ideal

for web use. Also impressing that you can export collada files, which makes it easy to load them into papervision 3d and have completely interactive 3d-models available within flash. Use the Baker plugin from Inagoni to burn ambient occlusion directly onto textures and papervision-objects will look amazingly real.

CL - Which image is your favorite from your gallery? :)

Dennis - I think Candy Space Babe is a good example of what direction I want to go within 3d. A graphical feel, like you have in a 2D-illustration, that combines different rendering techniques.



The Sneaker



Candy Space Babe

You don't need no post work for this at all - so it could be animated with ease. When I look at 2D-artworks from other graphic designers I instantly begin to think if this would be possible in 3D too. German sculptor Norbert Kricke also has some influences on me, because he experimented with similar efforts to transfer 2 dimensional things like simple lines into real 3d sculptures back in the 50's.

CL - What is your opinion about Carrara for professional use?

Dennis - I think it has some potential but it won't conquer high-end fields, because large agencies are hard to convince to use a tool that is not an industry standard. I think they have good reasons for that because you have to exchange files and other agencies and freelancers have to work on the same source-files.

Exporting is only the last option. As I am a freelancer mostly working for clients directly, it's not that important what tools I use. That's because I am the only one working on my 3d files and don't have to hand out my source files

in the end. Even if Carrara 7 pro is relatively stable, but it can't keep up with applications like Cinema 4D, which are much more solid. I think the only way to establish Carrara as a tool for high end users would be to put the best functions of modeling tools and great shader tree into a plug-in, that seamlessly integrates into applications like Cinema 4D. Vue Infinite and xFrog already does that. You can use it inside other 3d-apps then without opening it as a separate program and use the functionality by using the common user interface of the application then.

CL - You used Carrara for a project of Olympus, is this correct?

Could you tell us more about this?

Dennis - Yes, I did this flash and 3d-animation job for Neue Digitale / Razorfish - a creative interactive agency from Frankfurt/Germany and it was an interesting project for a Olympus microsite of a laser microscope used Carrara because of the powerful vector style export to flash - so we could scale it up as big as we want, because there are no pixels included then.



Russiandolls Daltons

It worked out great to match the illustrated look that was used in the manual of the microscope and simply animated it in 3d space to demonstrate the functionality of the microscope.

CL - What features you wished Carrara to have in order to accomplish your project?

Dennis - A lot of functions and animatable parameters particular for motion design. Also camera projection mapping would be great to see. Some old effects like aura have to be

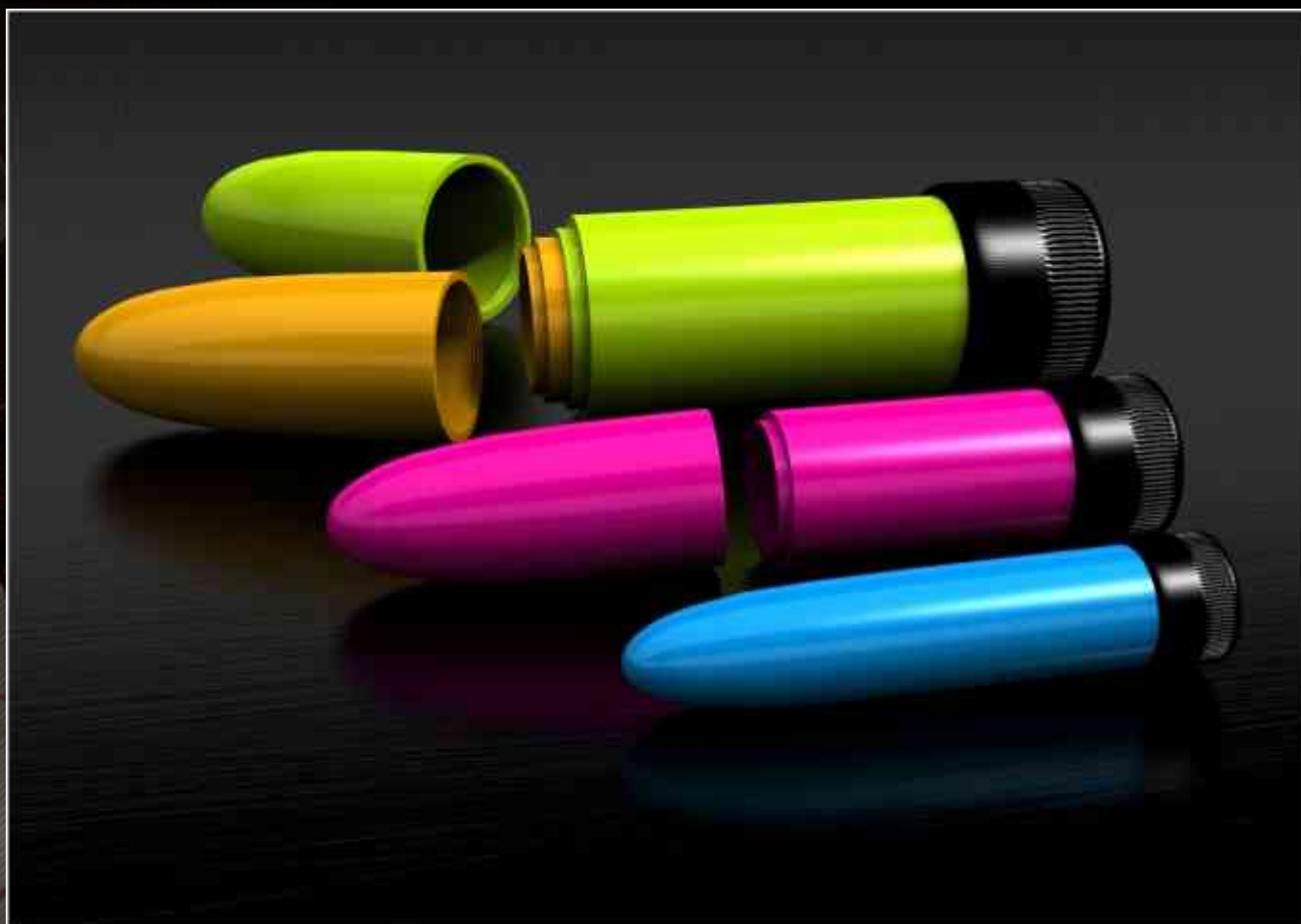
rewritten, so that it will support clean anti-alias renderings. Also many bugs have to be eliminated, because they handicap an efficient use. I think editing parameters of multiple objects should be self-evident but some are still not available when you have complex situations.

CL - What vision do you see for Carrara?

Dennis - As the software is taken over from DAZ3D I think it will take it's chance to be a



CAT Harvester



Russiandolls Dildoset

great tool for character posing and animation that also makes possible to create complex surroundings like landscapes with ease and offers a beautiful and realistic render engine that can keep up with much more expensive software. I think things like cloth and soft body dynamics will be available soon. For me personally I hope the possibilities for stylizing and abstract 3d will be extended - even it has a lot of them already.

CL - You are a musician as well, can Carrara be used in music industry?

Dennis - Well – if you want to use it together with music, the main functionality you will need is a frequency analyzer that will allow you to take influence to specific parameters of your objects based on what the music does. Another way would be to integrate a beat detection so that you can cut your scenes based on the beat time of your rhythms. I did a music video for one of my own tracks with Carrara, but it was a lot of work to cut the scenes together synchronized to my beats within After Effects / Premiere. It would have been a lot easier if you would have a grid based on beat detection that music production tools like Ableton Live have.

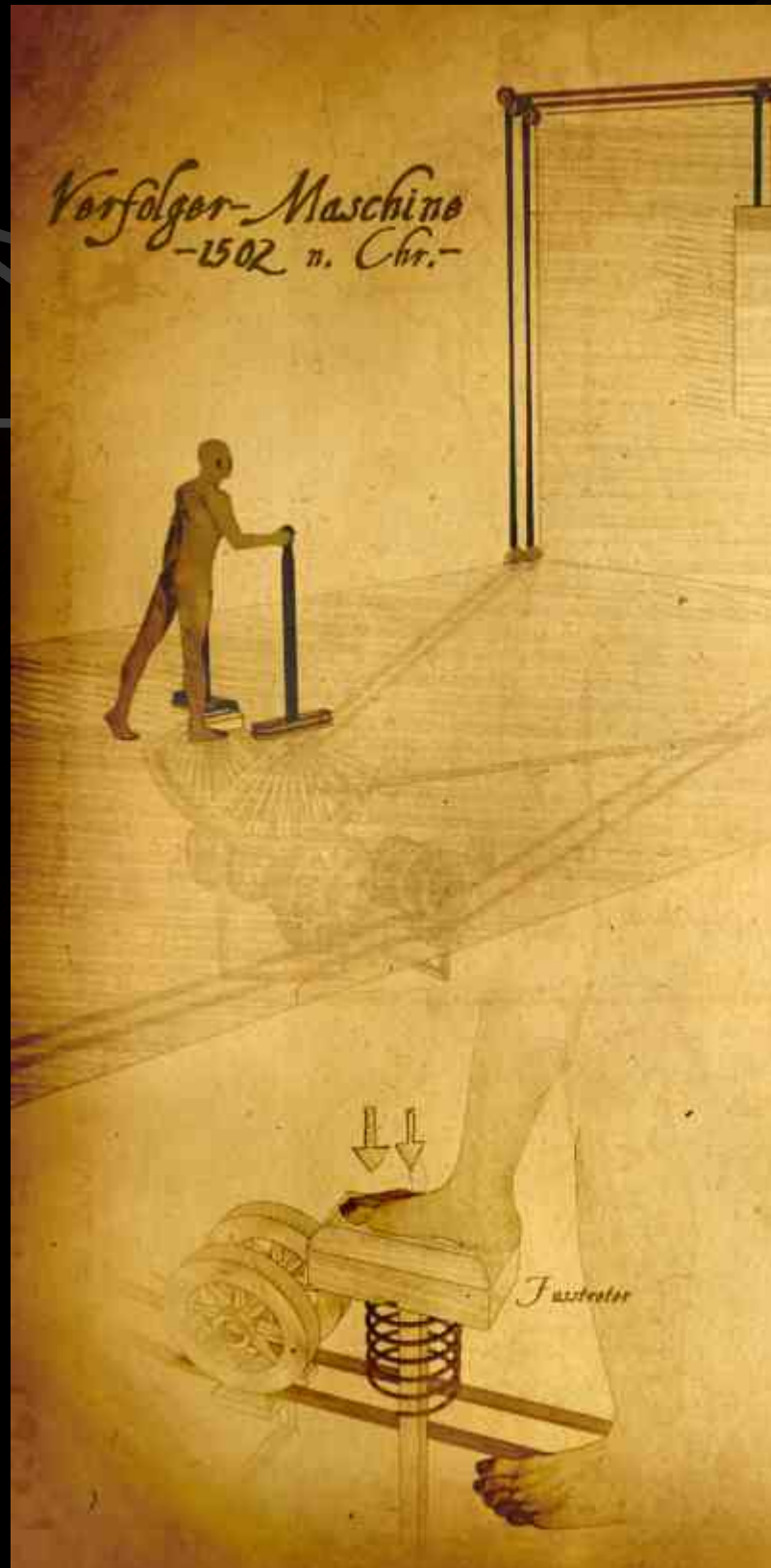
CL - Other considerations you would like to tell?

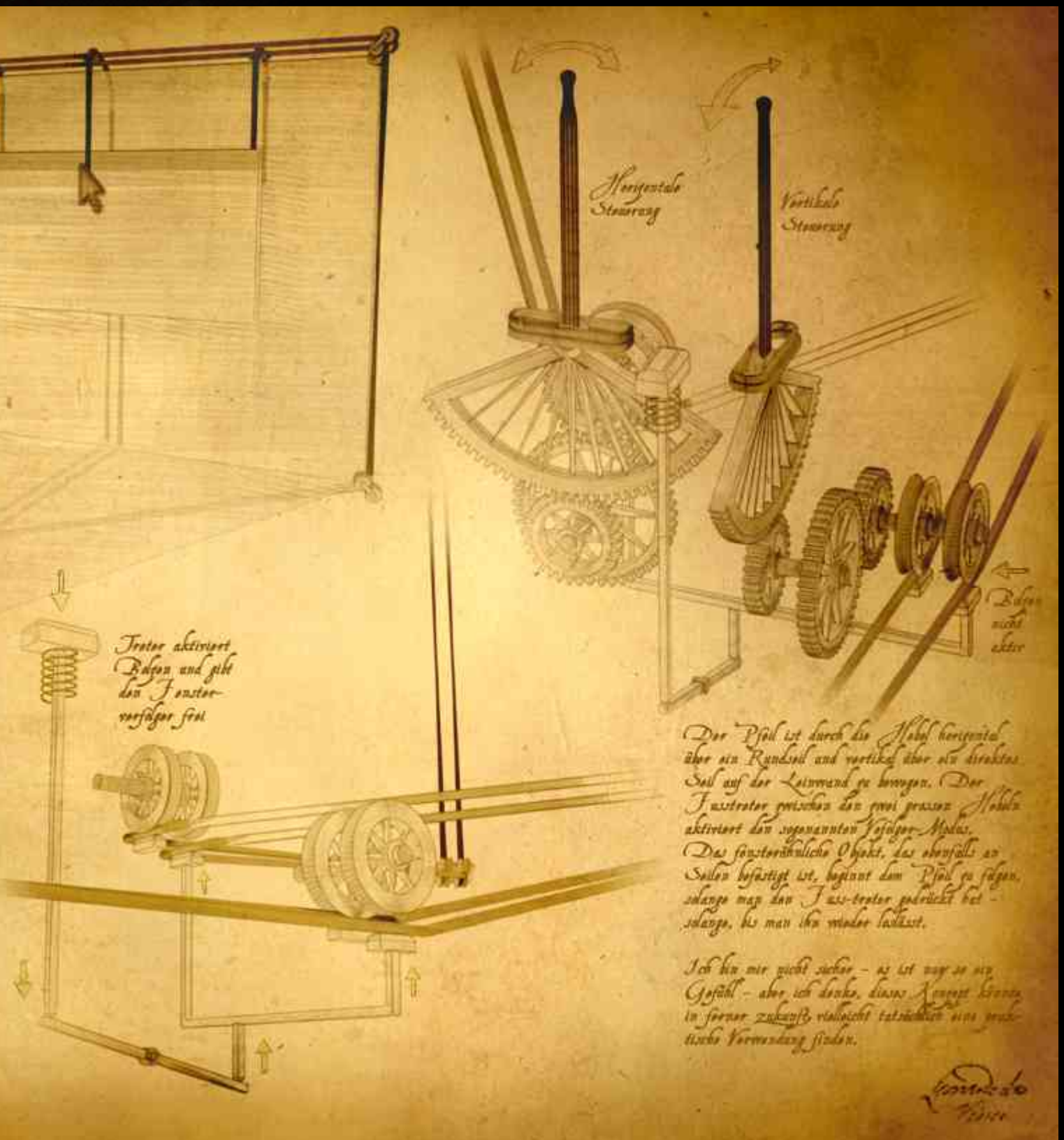
Dennis - I can consider the Carrara 7 video tutorial training DVD from Marc Bremmer. In my opinion it can almost replace the PDF manual, that hasn't been changed since years at some passages.

Thank you for your time and for sharing your art with everyone. It's a great inspiration for beginners and experienced users alike. We can't wait to see more from you in the future!

More information about Dennis Richter can be found at:

<http://www.dennis-richter.com>



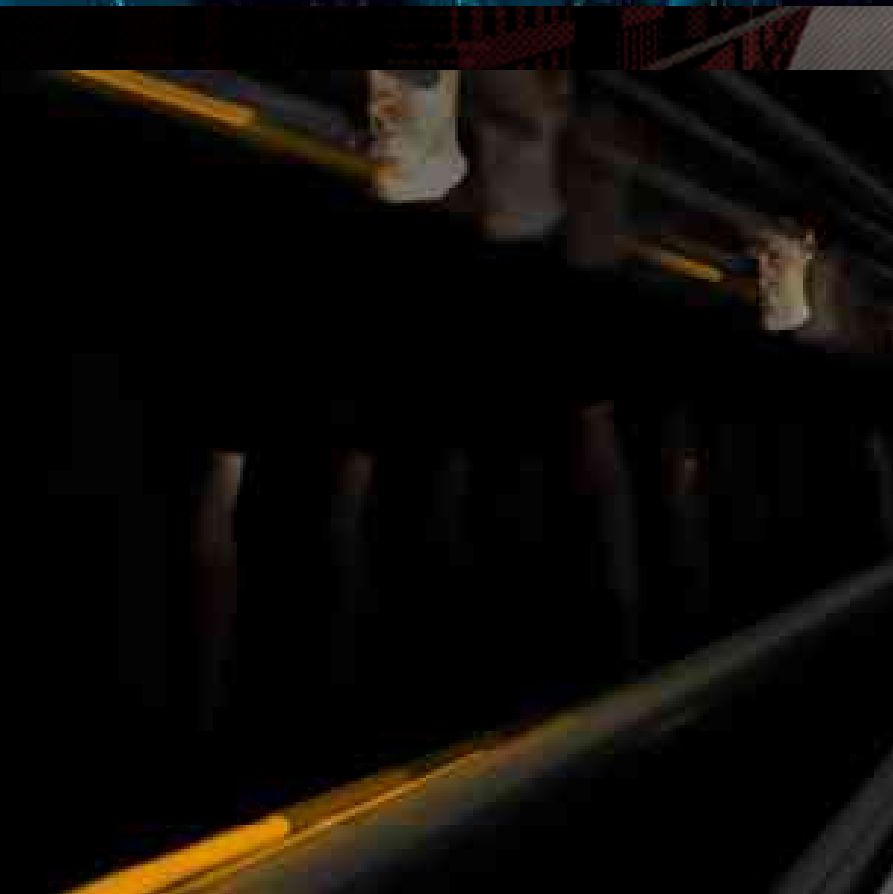
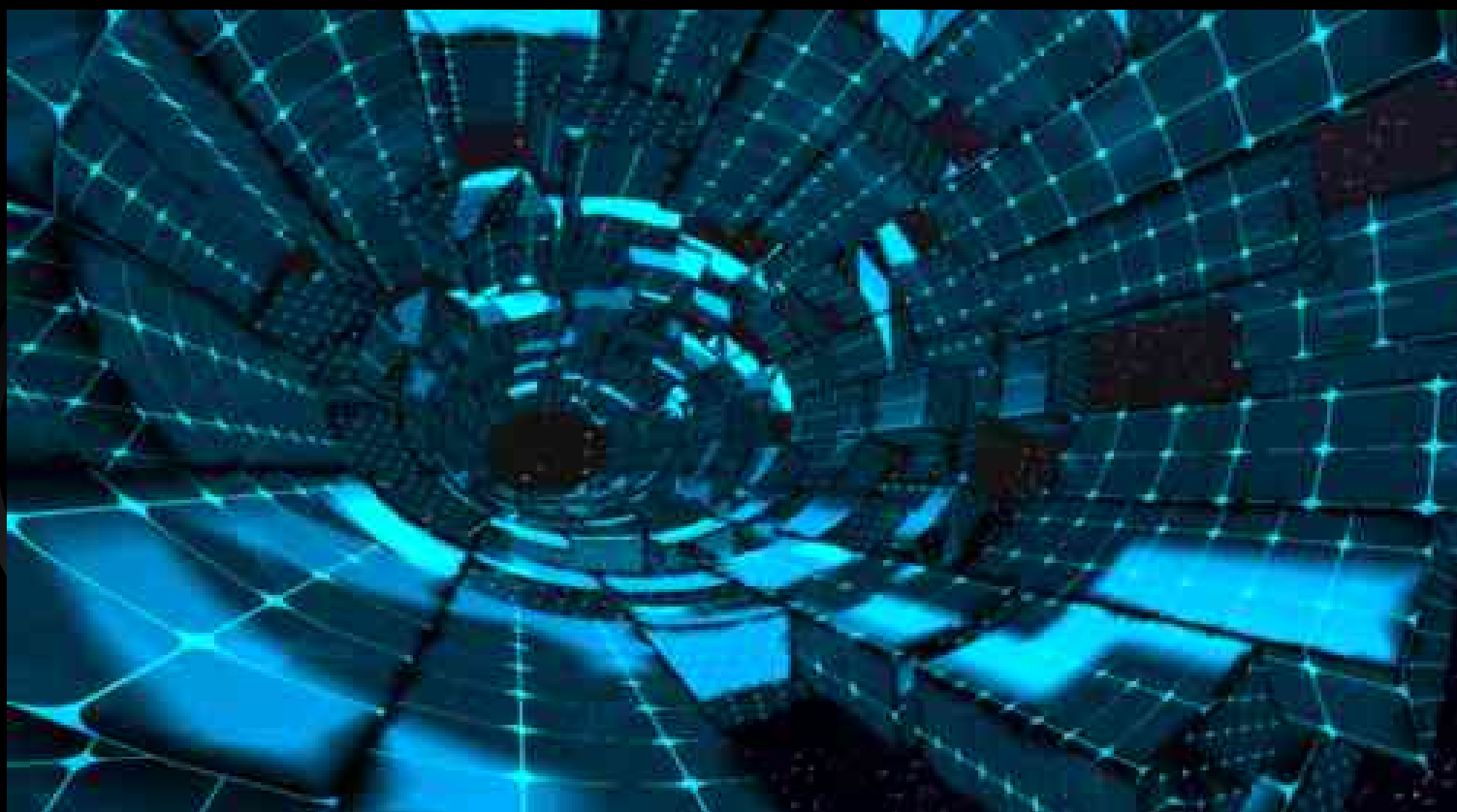


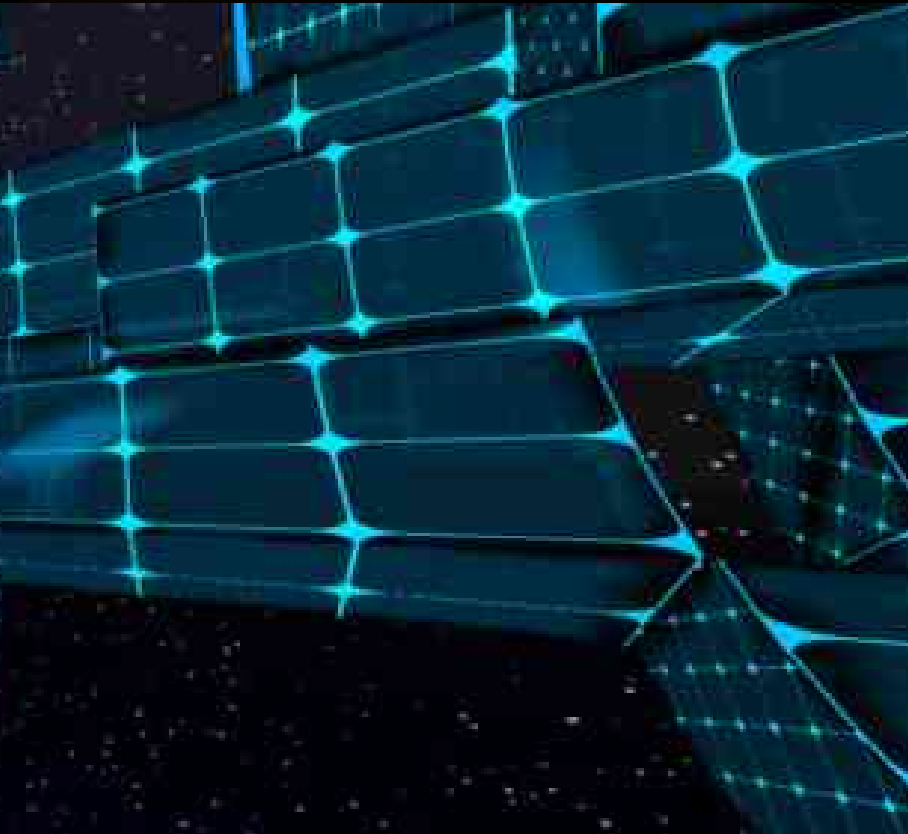
Da Vincis Last Secret





Little Present





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„PyCarrara“ project

A Python plug-in for Carrara
By Frederick Rible

Origin of the project:

One year ago, I discovered Animusic (<http://www.animusic.com/>) and started to think that procedural animation may be a solution to compensate my poor skills for hand made character motions: with a software engineer background, I am more comfortable with mathematics and source code than with key frames, curves and other CG tools!

My first try with MIDI driven animation has been done under Houdini with the help of the excellent e-book "Simultaneous Music, Animation and Sound Techniques with Houdini" by Andrew Lowell: my Houdini animation "Thermal Pipe Organ" can be found on Youtube. Rapidly I began to think about a Python scripting solution to do the same thing under any other CG application.

Python is a general purpose scripting language already available in many CG applications. But its usage does not limit to CG: many applications such as music production, dynamic web pages, scientific software use it. Lots of Python software libraries are available:

MIDI file parser is one example.

Carrara embedded Python scripting can open many new opportunities for automatic complex animation and procedural scene construction. Python scripting can be seen as tool which can automate almost anything that can be done by hand with the GUI: objects, lights or shader parameters modification, geometry construction, objects replication, etc ... This technique is very powerful for repeated operations that can be described with mathematic formulas and software algorithms. For example, it is possible to parse a MIDI file and move the piano keys according to notes. Another possible usage is the automatic creation of 3D models of building at positions read from a geographical map file.

Carrara procedural animation:

My first idea was to generate key frames in a ".car" file with a small external software which parses a MIDI file and computes objects motions. After studying the file format and doing some simple tries my conclusion was it



will be very difficult to achieve something easy to use with this technique. The major problem was the binding between the objects to be moved and the associated MIDI events : GUI interaction is mandatory to do that job.

So, I decided to study the Carrara SDK and the embedded Python techniques. After a few hours I was convinced that a Python plug-in should be feasible. I started a first implementation called "PyTweener". I got the original tweener example available in the SDK and started to link the C++ "SimpleTween()" function with an embedded Python interpreter. As I was totally new to SDK and Python, I have been very surprised to achieve something running in only two days ! This early release was not clean and had many problems such as

memory leaks, but it was enough for my first boomer animation driven by an audio file. For sure, this has been possible thanks to the quality of the SDK: the API is incredible and gives access to almost every parameters and features of Carrara.

The PyCarrara plugin:

The great feedbacks I received after publishing this first success on the DAZ Carrara forum encouraged me to continue in this promising direction. Next steps was something running with a MIDI file. I studied some source code by "Sparrowhawke3D" to learn about advanced features of the SDK. This helps me to understand how to get access to object attributes such as position and rotation.

My second implementation called "PyCarrara" was harder to develop and took few weeks. This new plug-in keeps the original Python driven tweener and adds some new amazing features: a modifier able to drive the (x,y,z) position of any object and some Python functions to get access to the sound tracks embedded in the scene.

The Python tweener feature is by itself very powerful because it can be used to drive any animatable parameter. But it requires you to create a tweener for each object of shader attribute you want to drive by script. This is painful if you have many objects to animate. The new modifier feature gives access to attributes of any object in an easier way: you only have to specify the name of an object in the script to get access to its attributes. This is

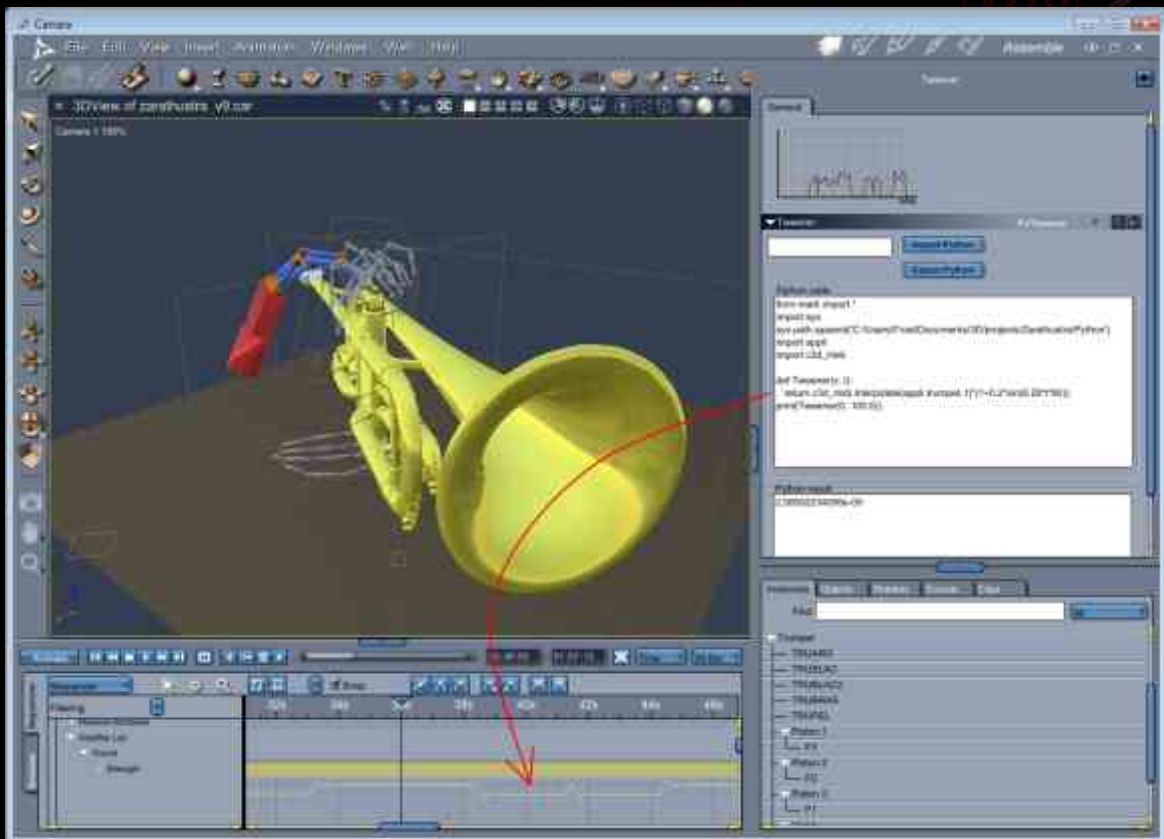
particularly helpful for MIDI driven animations: a piano keyboard can be built by object replication and it is very easy to access each key with a function calculating the name of the object to be moved depending on the MIDI notes.

Currently, only offset attribute is supported, but access to other attributes such as rotation could be added quite easily in the next PyCarrara releases.

The following screenshot shows the PyCarrara plugin in action for driving the trumpet deformation in my "Zarathustra" demo animation

(<http://www.youtube.com/user/f1oat3d>).

The velocity (power) of MIDI notes is used to drive the "Strength" parameter of a "Punch" modifier applied to the geometry.



PyCarrara plugin usage example :

To use the modifier feature of this plugin, you have to provide a Python function called "Modifier()". The following piece of code is taken from my "Zarathustra" demo scene :

```
Def Modifier(obj, t):  
    for i in range(3):  
        piston = obj + ("/Piston %d" %  
(i+1))  
        s = c3d.object_get_offset(piston);  
        s.z = 21.5 +  
4*c3d_midi.Interpolate(appli.pistons[i], t)  
        c3d.object_set_offset(piston, s)
```

The "Modifier()" function is called with two parameters :

- obj: a string with the path of the object for which the modified is setup. This is a text string similar to a Windows or Linux file pathname which describes how to access an object, considering the scene as the root. In the "Zarathustra" scene, "Trumpet/Piston 1" path gives access to the first valve.

- t: a float variable containing the frame time in seconds

The "modifier()" function is called automatically by Carrara for each frame. This function gets the time and calculates the position of any relevant object as described by the user's Python code. In the "Zarathustra" scene, the trumpet valves are driven by the Python script. Each valve has a target helper child used as

target for the last bone of the robotic hand fingers.

Here is step by step what is done by the Python code :

1. When "modifier()" is called, the "obj" variable contains "Trumpet" because the modifier is setup for the trumpet group.
 2. A loop is started for the 3 valves of the trumpet.
 3. The line "piston=..." loads the "piston" variable with the full path name of each valve.
 4. The "c3d.object_get_offset()" returns the position of the valve in the variable ""
 5. The "" component of "" is set to a value computed by "c3d_midi.Interpolate()" function (this function reads the MIDI file and returns the velocity of each valve).
 6. "c3d.object_set_offset()" is called to move the valve to the new position (only "" is modified for vertical animation).
- The MIDI file parser is based on some Python code I have found on the Net. I have added some features such as automatic note mapping to musician fingers: this is required because the MIDI scores describes only notes and not fingers usage ! Of course, fingers mapping depends on the instrument: trumpet is not the same as piano. The fingers animation is smoothed with a filtering function containing an overshoot effect for more realistic motions.
- Next step:



I plan is to release this plugin to the Carrara community within a few weeks. Unfortunately, this first release will support only Windows because I do not own a Mac.

For the next steps, giving access to more Carrara features is the main target. The dream is to map the whole SDK API to Python, but this is a quite a big job because of the richness of the SDK !

If we can find some volunteers with C++ coding skills, this project could be continued as a collaborative effort: this is a solution to speedup the development and to provide multi-platform support. Please, leave me a message on the DAZ3D board if you want to contribute to this exciting project !

Frederic's background:

I am a hobbyist user of CG applications for several years, mostly because I am fascinated by Pixar's films ! After seeing several films I wanted to understand what was under the hood. As I love to learn by the practice, I started to use Blender and some other CG applications. After a few months devoted to static images, I wanted to make some animations and discovered Carrara which is great in this area. By spending many weeks on Carrara NLA, I discovered that making CG animations is very hard, even with good tools ! Now, I did not watch the films made by great CG artists with the same eyes, and my wonder is growing.

„PyCarrara“ project call for participation

To join this project please contact Frederick Rible via DAZ3D forums.

Nickname: float

Newly redesigned Carrara Lounge A place for Carrara Artists



www.carraralounge.com

Carrara Tips and Tricks Tracker

Provided by
David Brandy

Did you think that tips and trick shared in forums are forgotten after some time? Think again! David Brandy collected valuable resources shared in many forums dedicated for Carrara users. Tips and Tricks Tracker provides you with knowledge by experienced Carrara users which is really usefull.



Holly wetcircuit - Creating Rusty Textures

Holly wetcircuit explains how should the shader hierarshy be organized to achieve good looking rusty shaders.

Art images by MisterMi

Ttnn - Procedural Boat Wake

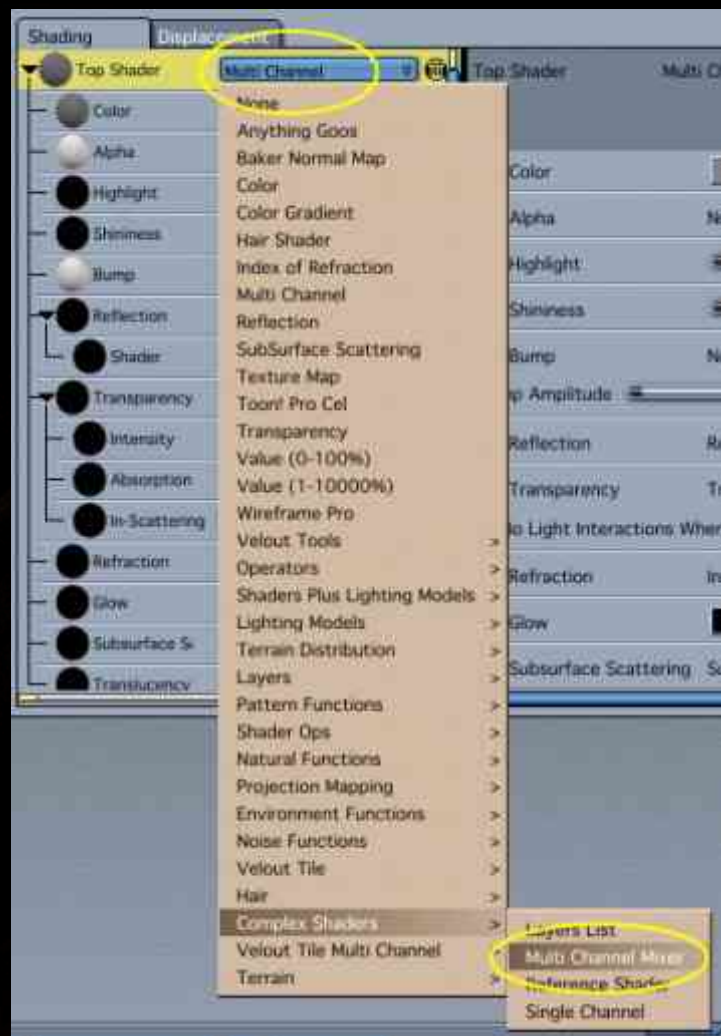
Ttnn explains what formula he used to make a procedural boat wake.

Creating Rusty Textures

Holly Wetcircuit

...Create a new shader. Click the **MULTI CHANNEL** and change it to **MULTI CHANNEL MIXER**.

Then change the two source channels to **REFERENCE SHADERS**. Set the references to your rust and paint shaders. Add your map to the **MIXER** channel.



Final shader looks something like this.



Result



Procedural Boat Wake

Ttnn

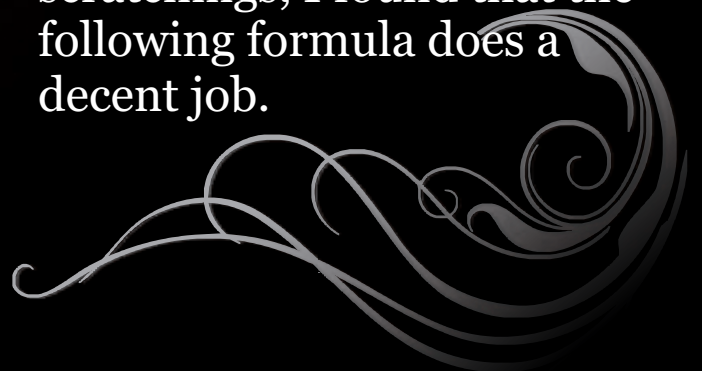
I am working toward a scene with three figures in a canoe. It will not require cresting waves, but the canoe should give a wake, so I tried deforming by formula. [C6 Ref. Guide p577-580.]

Such formulas present to the user the coordinates of a generic vertex, and iterate over all vertices. Said coordinates are presented as x,y,z and their origin is the center of the bounding box. They are mapped in such a way that they always go from -1 to $+1$, representing the edges of the bounding box. The user is expected to calculate updated coordinates as dx,dy,dz . My

first attempt was to deform a horizontal flat sheet. I could not get any deformation in the vertical direction because the object had zero thickness to begin with.

So I tried on a cube $12*16*2$, and that worked, even though the cube appears to have insufficient vertices. Not to worry: as long as you leave the cube as a primitive, it automatically (and reversibly) spawns as many vertices as it needs.

After several head-scratchings, I found that the following formula does a decent job.



```

y2=(y-0.75)*(y-0.75);
ax=(y2+0.125)/(y2+0.125/
16);
x=x*ax;
x2= x*x;
R2=x2+y2;
h=4*(x2-0.0625*y2); h=(h-
r2)*(h-r2);
dz=(1-exp(-
8*y2))*(PI/2+atan(-16*(y-
0.75)))*exp(-h)/PI;

```

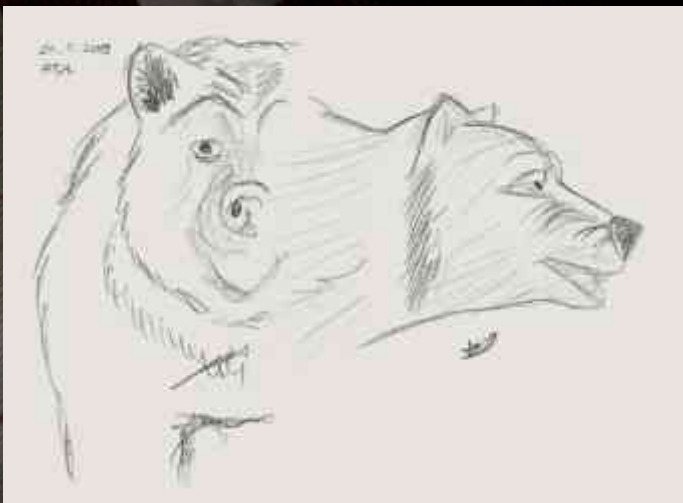
To give an idea of the shape that this engenders, I did a pair of non-photorealistic renders. First, from ab:



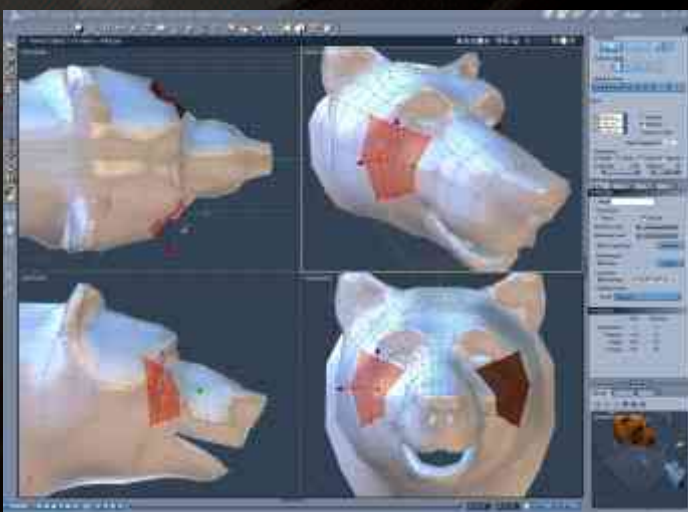
MAKING OF THE BEAR

© Tuuba 2009

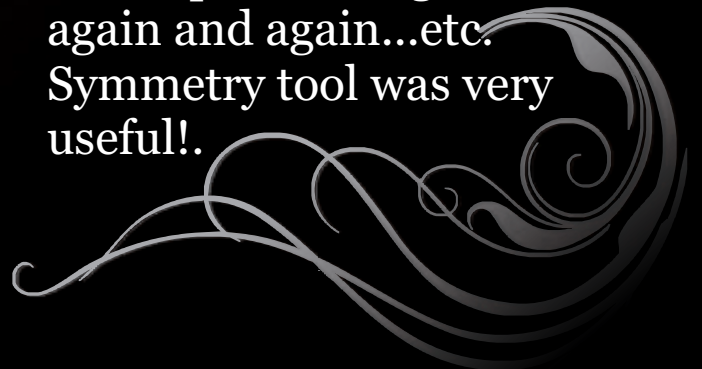
Hello, I would like to show you how I made an animal to my fourth short animation. This bear and whole animation was created all along with Carrara 7 Pro.



First I looked at the pictures of bears in books of wild animals. Then I drew sketches of them.

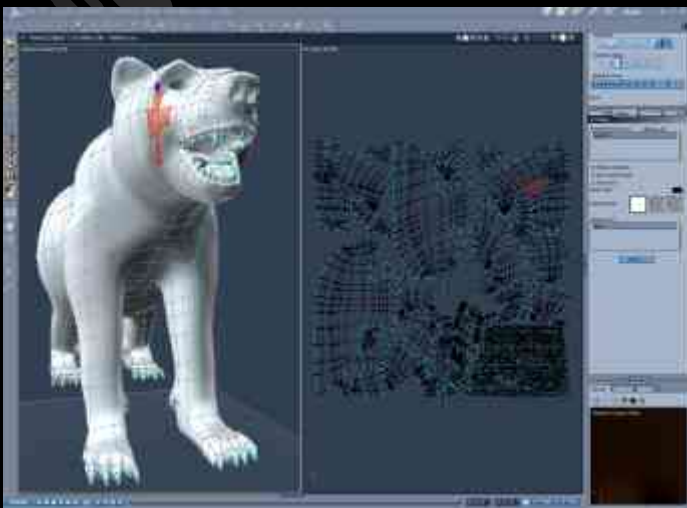


I imported the sketches into Carrara. I made a polygon and then I extruded new ones from it. And repeated it again and again and again...etc. Symmetry tool was very useful!.

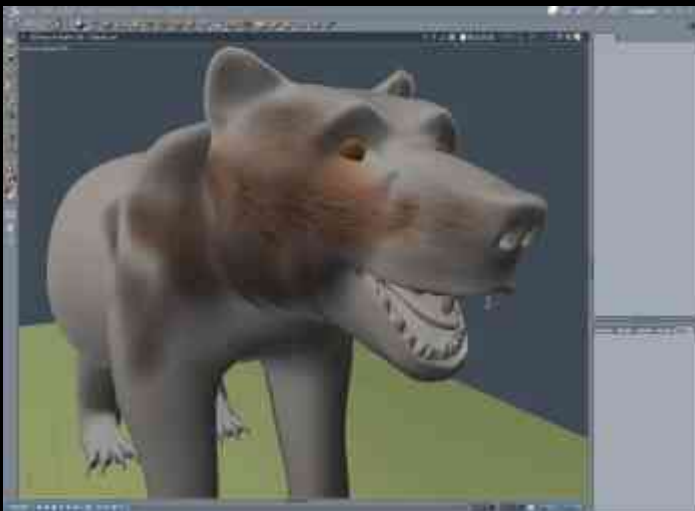




I went on with modeling and suddenly I had a ready model of a bear!

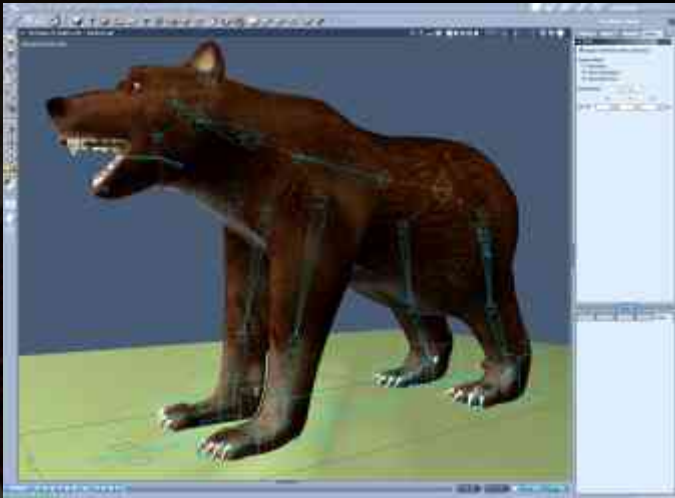


I made for that bear only one UV map, which had all the polygons side by side.

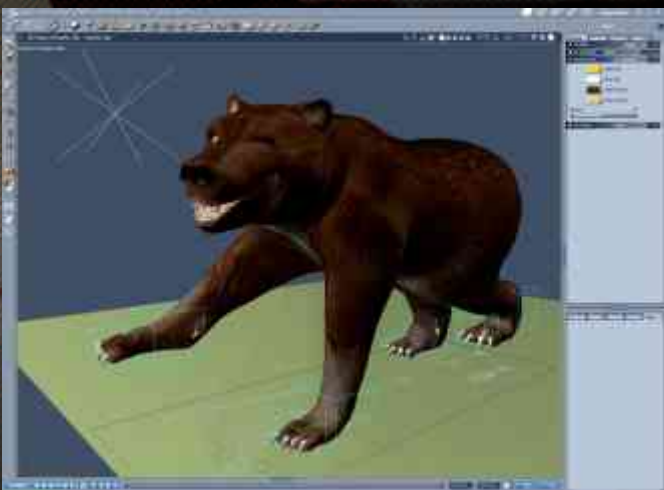


The new 3D Brush in Carrara seems to be an excellent tool. I brushed texture straight onto the model of the bear. Only the inside of the mouth and the teeth was brushed with an external image editor.

MAKING OF THE BEAR



I researched the anatomy of bears in biology books of comprehensive school. So I could make the rigging inside to the bear. I set up constraints and inverse kinematics. Bear's structure was robust. Therefore bones weighting was easy to do.



After adding morphs to the bear it was ready to go. Notice the target helper in the left upper corner. It's the point where the bear is looking at.



The bear in the screenshot of the finished animation with his friend, the Dog.

Little Bear

Animated short by
Eva Vomhoff

**First and foremost
congratulations on
completeing your first
animated short!**

Eva - Thank you!

Roughly how long did it

take you to put it together?

Eva - About 9 months' evenings and weekends. I've never done such a thing before. There are many things I learned while doing them, so it was a lot try and error.



MAKING OF „THE LITTLE BEAR“



So, lets talk about the process, did you start with a story board and work your way from there or did the idea just evolve as you worked on it?

Eva - A bit of both. I had a general idea what I wanted to get:

I wanted to study modeling, rigging and animation and pack all these into a little story with a simple toon figure.

I also had a few sequences in

mind which I wanted to include in any case, like the alarm clock, the draping of the table cloth or the growth of the tree. But the rest evolved while working on it

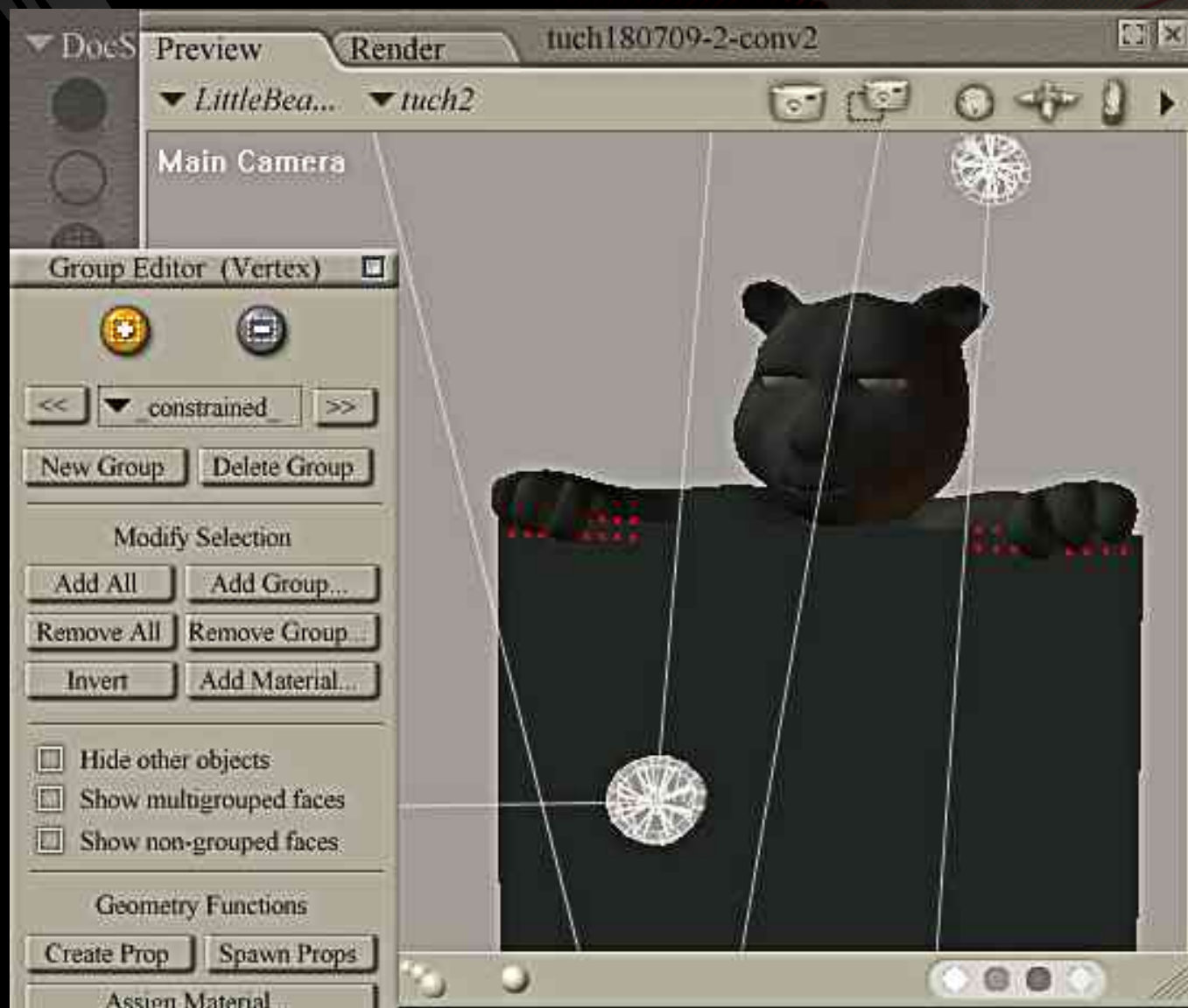
A lot of people are wondering how you got the great looking cloth dynamics into Carrara since Carrara does not have soft bodies or any cloth dynamics of it's own. Can you share a bit of the process with us?

Since Carrara doesn't have soft body or cloth dynamics I use Poser for that purpose. I rig my models in Poser/ DAZ Studio to make the characters able to interact with the cloth.

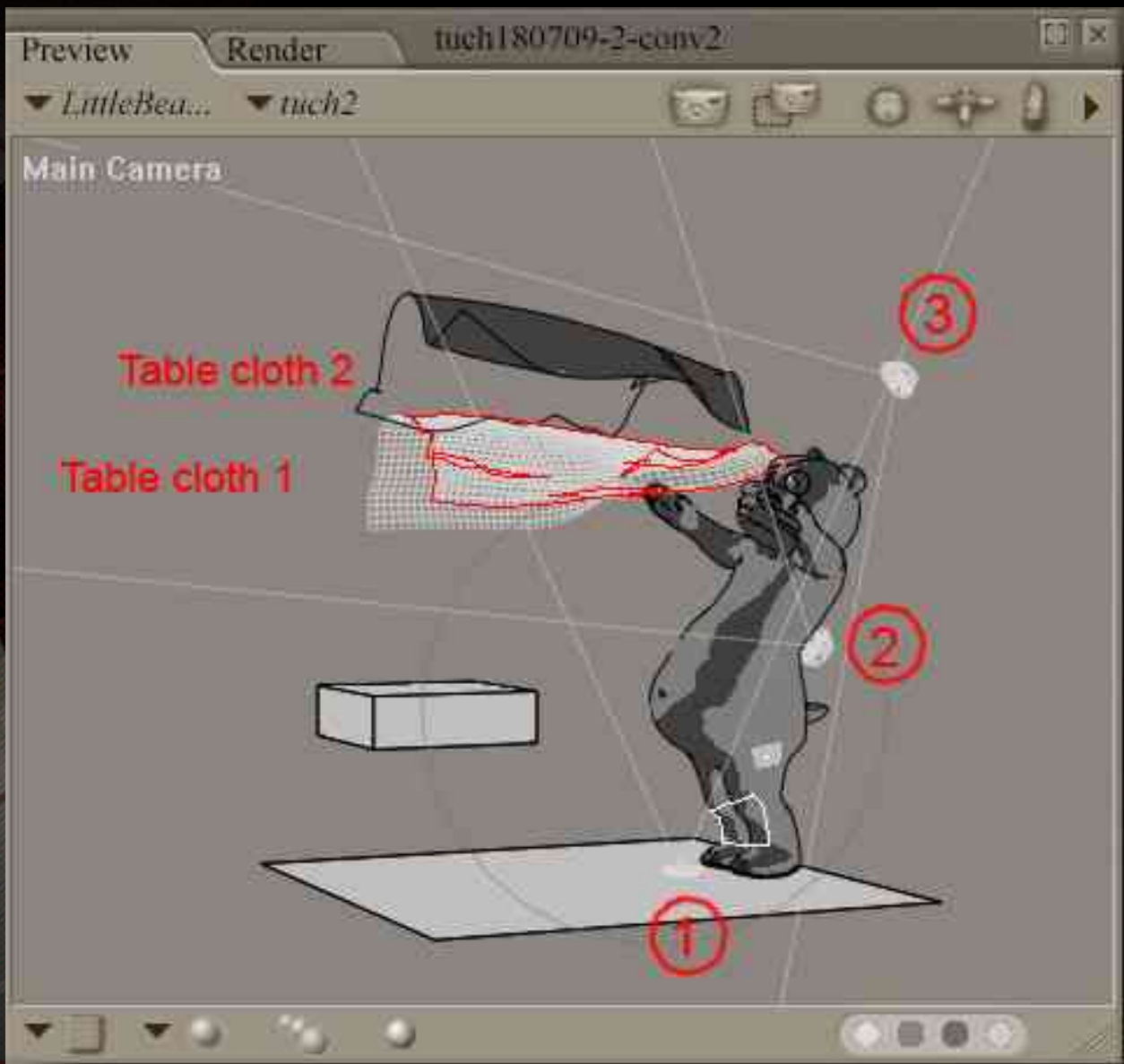
In general I try to create objects as low poly as possible. This speeds the cloth simulation.

Carrara can subdivide and smooth the objects later. At first I created the character animation in Poser without cloth.

The cloth animation itself is separated in 2 parts. The first part is how Mr. Bear lowers his arms and then pulls



MAKING OF „THE LITTLE BEAR“



the cloth up very fast.
The second part is how the cloth drapes itself over the table.

For the first part I created a 40 x 40 vertices table cloth with a simple planar mapping in Carrara.
I exported the object to Poser

and turned it into a cloth object. I created a constrained group which attached the cloth to the hands.

Then I just let the animation run until Mr. Bear was at the point of the animation when he releases the cloth.

I exported the cloth object at that frame and re-imported it. I turned the visibility off for the first table cloth object in that frame and turned the second cloth in that frame from invisible to visible.

Then I started another simulation with the second cloth object, this time without any constraint groups. To make the

second table cloth fall with a nice shape I added 3 animated wind forces., at first blowing it up, then letting it drape over the table.

It took several tries and modifications until the result was satisfying, but fortunately each of the cloth calculations ran very fast due to the cloth's low resolution.



MAKING OF „THE LITTLE BEAR“

After I was done with both cloth animations I used the Dyn_to_morph-script to "bake" the cloth animations available in Carrara.

I also had to bake the character animation because Carrara doesn't import the different curve settings between the key frames.

In terms of workflow were there any post render

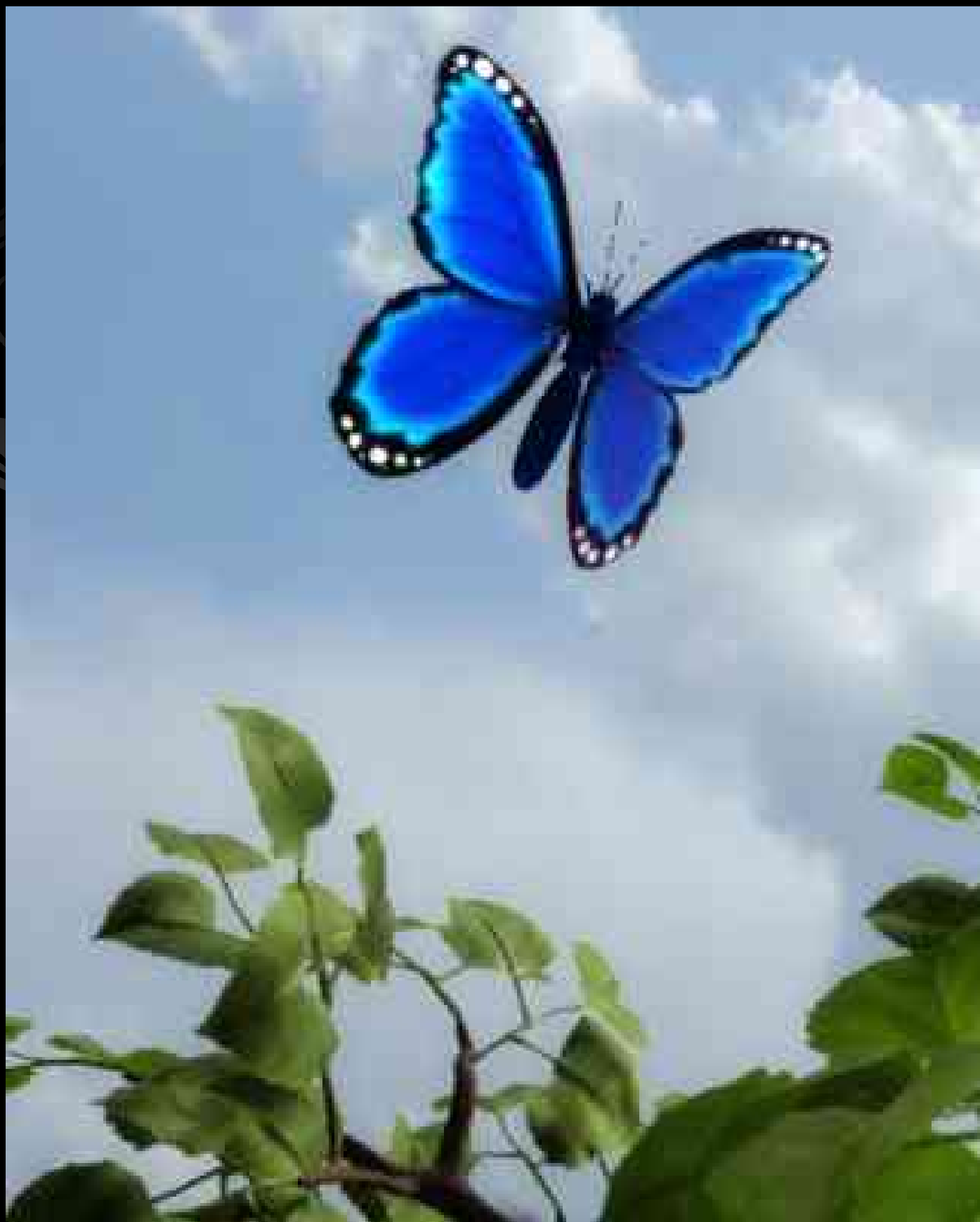
techniques used like compositing or filters?

Eva - The animations were rendered to image sequence and color corrected using Photoshop's batch mode. I also used the Depth channel to get a slight depth of field-effect in post.









MAKING OF „THE LITTLE BEAR“





All of the models and even the trees were made by you. Was it harder than you expected or were you aware of what you were getting into?

Eva - It's just almost all models – the butterfly was originally created by Age of Armor, one of the shrubs is Lisa Buckalew's model and the mushrooms are a freebie by Morpheusunderworld.

I just loved these so much I decided to use them and have a bit more time to focus on the rest of the scene.

The modeling of the objects took some time because I don't have much experience in modeling yet, but it was fun. Turning the objects into animated characters was much harder.

The hardest part was to get control over my chaotic work flow. I think I could have saved much time if I would have

MAKING OF „THE LITTLE BEAR“

started in a more coordinated way.

You used Carrara 7 for the entire animation, were there any features you wished you had during the process? Anything you'd like to see in the next version?

Eva - For animation purpose I

would really love to see something like drivers or remote controls in Carrara and the ability to edit more than one tweener at once.

I also would love to see a real time animation preview of my animation, or at least a fast preview renderer.

In addition Poser as tool for Carrara is nice, but I'd rather have a native cloth simulator in Carrara.





At the end of your credits you wrote "wait, but it's not done yet..." Can we expect a sequel?

Eva - There were several things in the animation that could be improved. But at a point I decided that instead of fixing and re-rendering again and again I just let it be that way and take what I learned to the next project.

So far I don't have any further plans for Mr. Bear, but who knows? Maybe soon you will see him out in the woods chasing bees for honey!

Finally, can you tell us a little bit about yourself?

Eva- I'm a 3D hobbyist since several years now. My interest for 3D graphics started when I saw the first Diablo I (game) trailer, I wanted to do such things on my own!

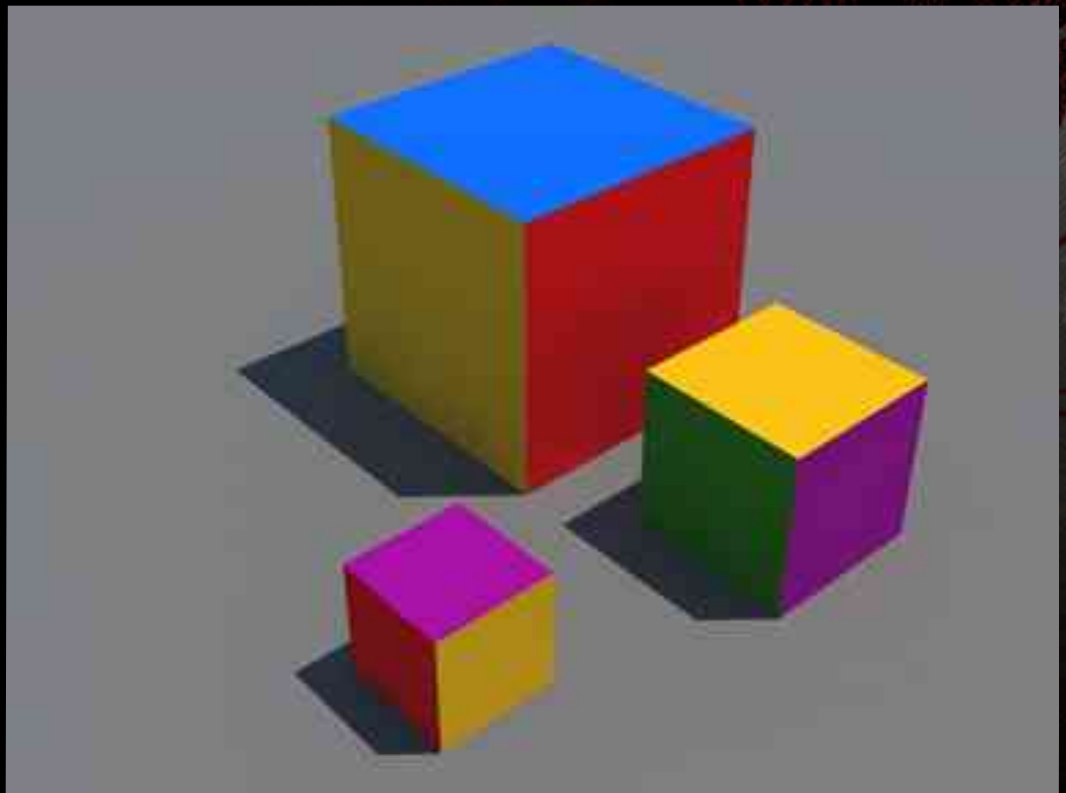
MAKING OF „THE LITTLE BEAR“

**Thank you for your time and for sharing your animation with everyone. It's a great inspiration for beginners and experienced users alike.
We can't wait to see more from you in the future!**



Workshop By Nik Valencia Creating Textures In Carrara 5

Creating a basic texture map for a polygonal cube and an introduction to the Carrara 5 texture editor requirements: a 2D drawing/painting software (Photoshop, PaintshopPro or Gimp, etc.) and Carrara 3D *)



(* note: this workshop focuses on the build-in Carrara 5 Pro texture editor, but using any other 3D software with a texture editor the principle is equal)

I assume that you have no or very little knowledge of textures and how to apply textures with the Texture Editor in Carrara 5.

First, why do we have textures anyway?

Well, textures can give a 3d model a more realistic look when rendered in 3D.

You can apply your own 2D drawings and even photos to your 3D models.

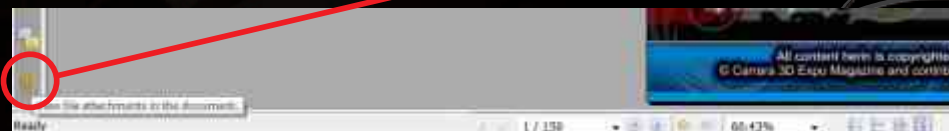
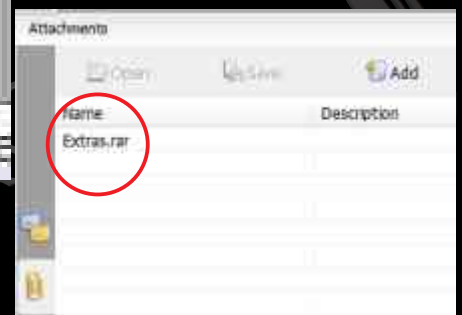
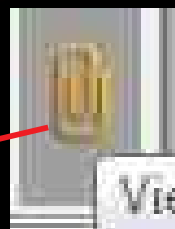
This workshop will teach you the basics of texturing, but there is certainly much much more to the Subject.

For now we will focus on creating our own texture in a 2D drawing/painting software and then texturing a polygonal cube using the Texture Editor inside Carrara 5.

So, hang in and let's get started.....

Hop for this.

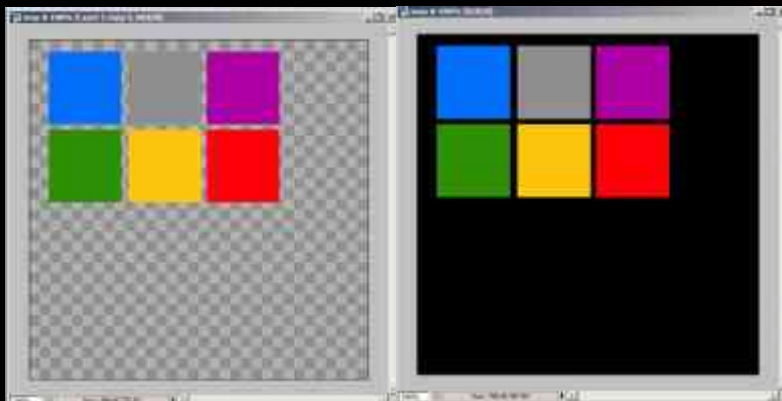
(* note: Scene files and additional data available in the „Extras“ attachment)





Open your 2D software (Photoshop, Gimp or whatever you like to use) I will use Photos.

Create a New document. like so and click on OK You can use the same values as I did (though, not necessary for this tutorial).



Then create 6 quadratic selections and fill each with a different color.

When done fill the background with black.

And now save your texture in your project folder as a Windows Bitmap (BMP) or JPEG either one will do

Until now, you may have asked yourself why I did 6 different colors in one image and not 6 different images with their equal corresponding colors. The answer is easy.

Efficiency

Performance

Workflow

Management

For example, imagine your 3D project consists of more than a cube (lets say 3 cubes) and you would have to apply for each cube and its sides different color combinations of predefined colors.

Or you need to create 6 cubes, each with a different color of predefined colors of your texture.

So, having one texture (also sometimes you may hear the word Texture-Map – the same thing)

you can do the following:

1. use one texture map on one 3D object

2. share one texture map on a single object and its faces (or polygons)

3. share the same texture across multiple objects in your scene

4. share the same texture across individual polygons of different objects in your scene

5. share the same texture across multiple objects in multiple project scenes

6. you don't necessarily need to create the texture all over and over again (depending on your project, however...)

An important aspect to mention is this:

Remember to create texture maps in square format like 512 pixels by 512 pixels in a 1:1 aspect ratio

this is important as texture editors and game engines rely on this aspect ratio.

However you are not restricted to 512 by 512 pixels. You also can use a higher resolution like 1024

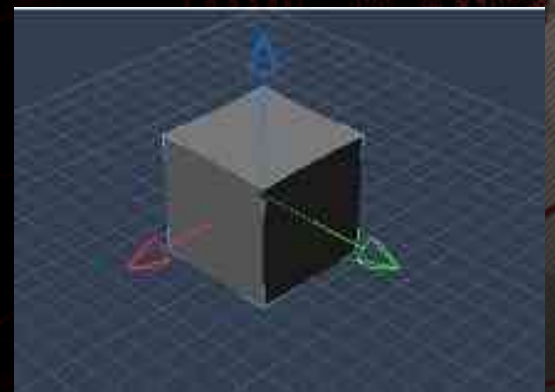
by 1024 pixels, but make sure you keep a 1:1 aspect ratio for your texture maps.

For those of you who like to start out as a game developer it is to mention the higher the resolution the lower the performance in a realtime simulation environment.

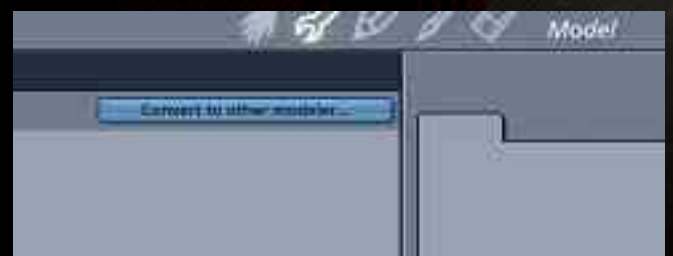
A common resolution of a games texture map is 512 by 512 pixels 1:1 aspect ratio.

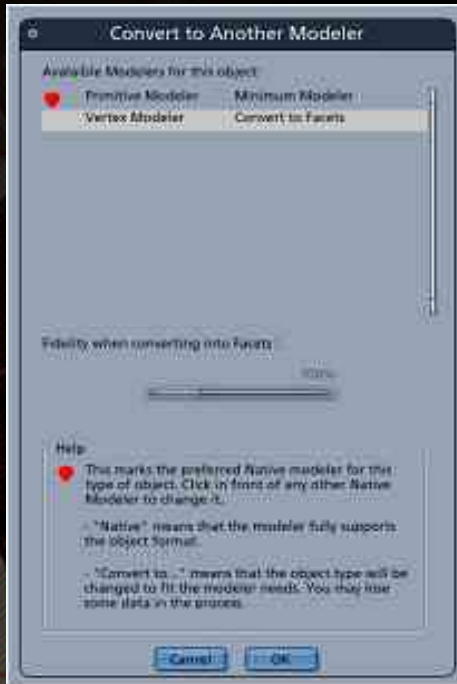
So, keep this in mind when creating your games textures.

Now it's time to create our cube from the standard primitives in Carrara . To do that go to main menu > Insert > Cube Like shown below



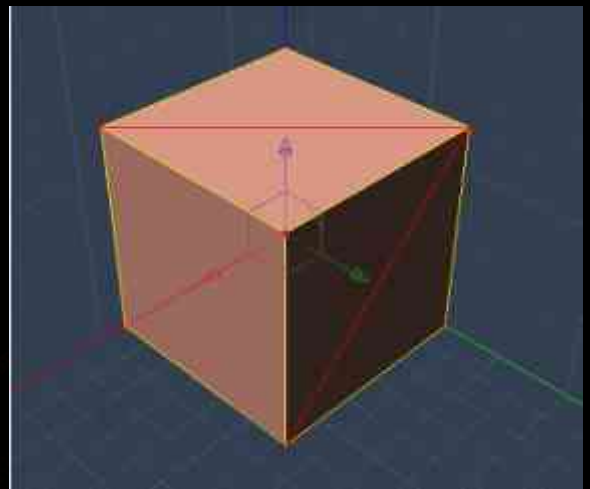
and double click the cube inside the 3D view-port to change its parameters from a standard Primitive to an editable mesh clicking on the button that says Convert to other modeler...





You then will be presented with this dialog box.
I want you to select Vertex Modeler and click OK.

After you have clicked OK, you will then be automatically forwarded to the Vertex Modeler.



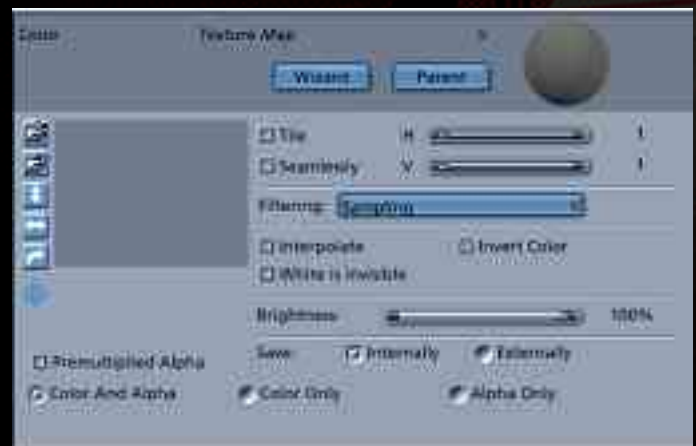
For this workshop and overall easiness we will untriangulate our cube by selecting all its faces (Ctrl + A on your keyboard or Command key on the Mac respectively) and go to the main menu
Then select Model > Untriangulate Polygon

So far, let's do our next important step for our cube
Apply a new Master Shader to the cube.
Go back in the Assembly Room of Carrara, select the cube in the scene tree and under the general
Tab click the drop-down arrow next to Shader and click New Master Shader. go in the Texture Room and by color click as shown below Texture Map.



You now will notice that the right panel has changed to this.

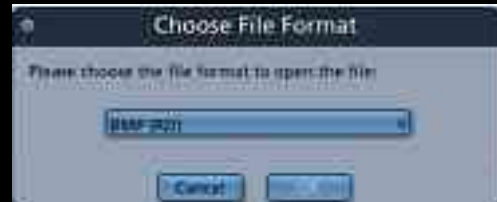
Click the Open/Browse Icon on the top left to open your texture map you created earlier.



a little message box will pop up asking you as what file-format it should be read (you can click OK)

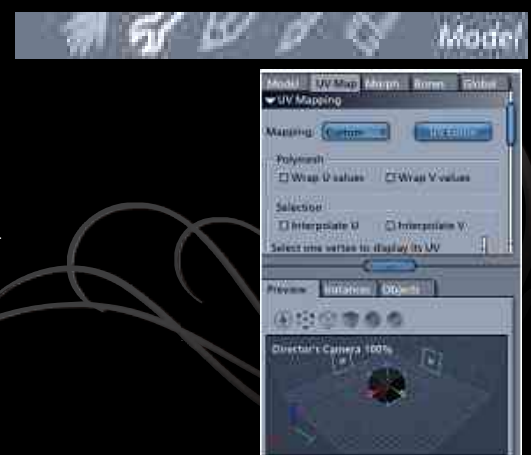
and ignore sequenced BMP, JPEG etc as we don't apply an animated image sequence to our cube

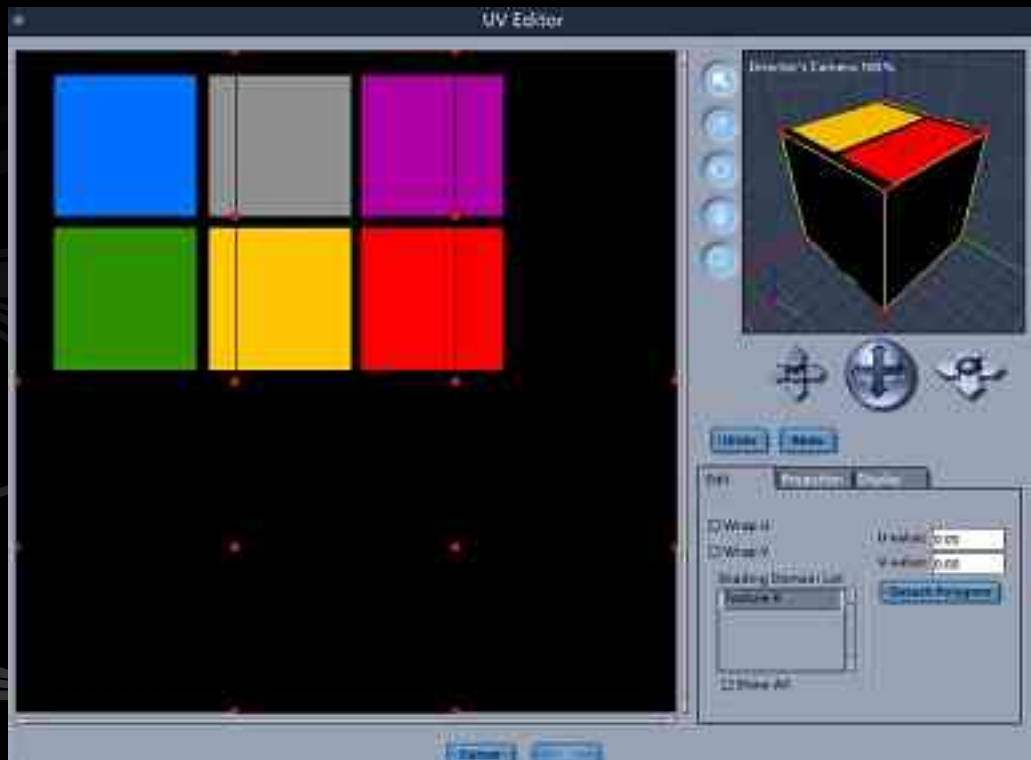
And just click OK for now.



When you have completed this step, go back in the Modeler Room

On the right panel click the UV Map tab and click the UV Editor button (this will open the Texture Editor referred to in Carrara as the UV Editor)





Now we can start the main part of texturing.

The goal is to apply these 6 colors individually to the 6 faces on the cube.

What you see on the left side inside the UV Editor is a visual representation of our texture we made

in Photoshop and on the right hand side you get a little realtime texture preview of the cube.

In order to apply the 6 colors on the cubes individual faces we need to understand what's

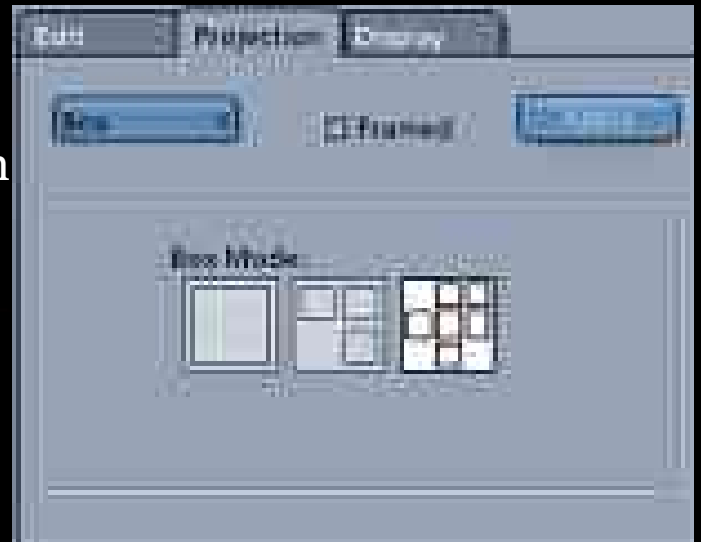
going on

here in the UV Editor. What is what? What are these red little squares and black lines? Etc... The red little squares represent the cubes vertices, the black lines represent the cubes edges and respectively the cubes faces or polygons.

As the UV Editor is a 2D approach the cube has been unfolded and it's mesh layered out for you.

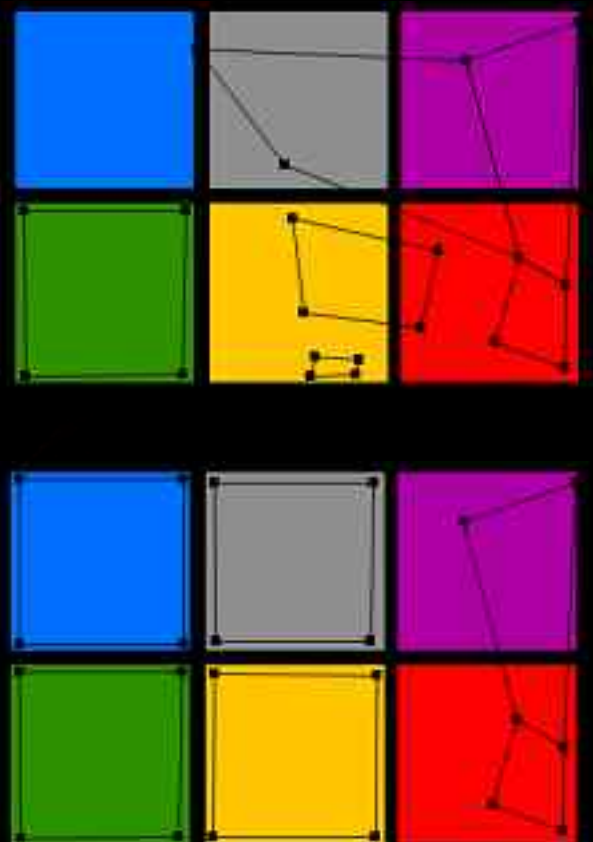
As we want to give each face of the cube a different color we

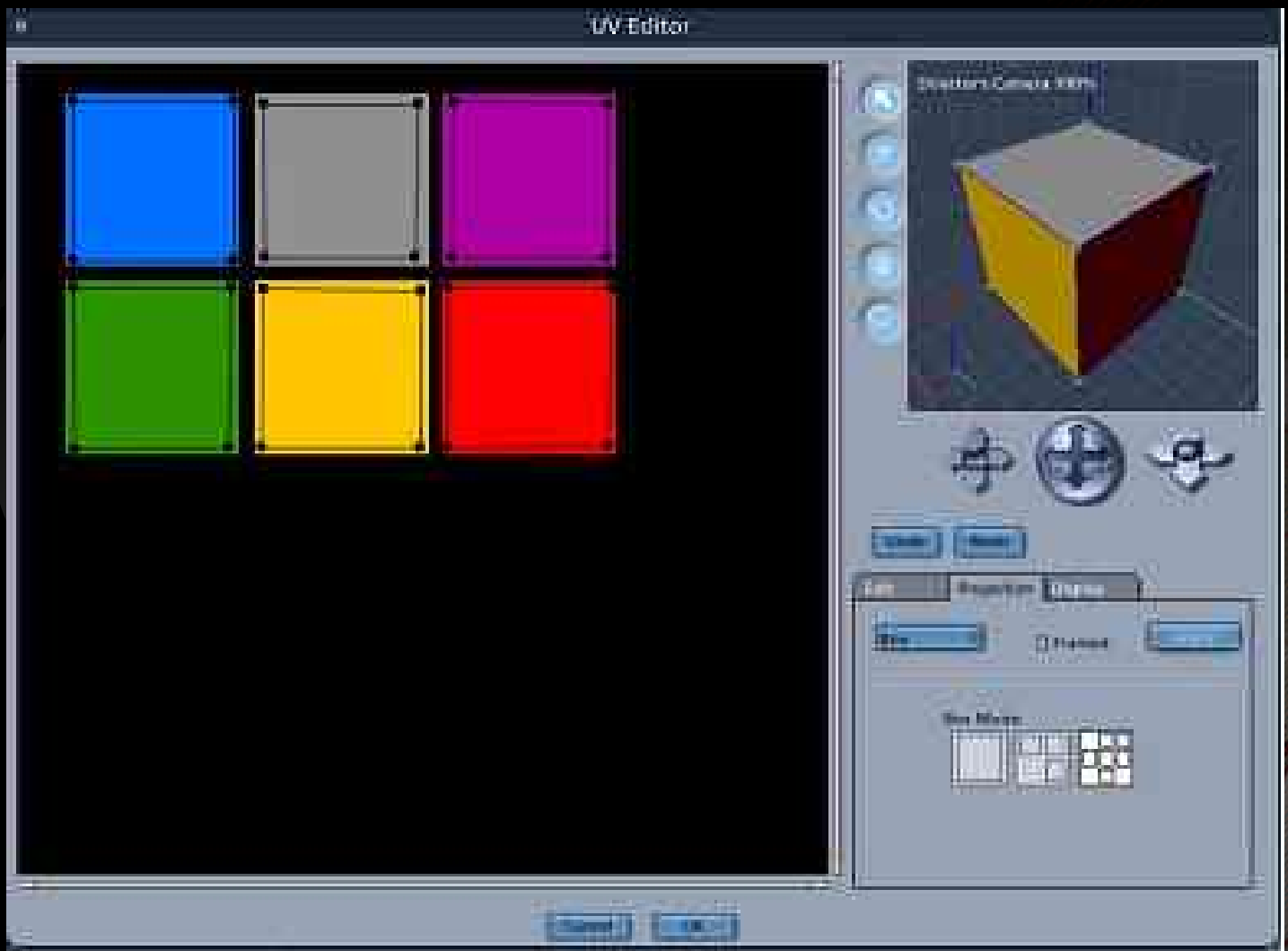
need to detach the Uvs so that we can position them so that they match the cubes individual face boundaries >>> click the button on the right hand side [Detach Polygons] This will do the following: it will separate all 6 faces so that we can move them around and position Them to the colors we want



Next click on the tab Projection.

Use the one on the right and click Apply, as this will make things easier for you to find your corresponding faces. Now you can by mouse selection move the vertices or faces into position like Shown below





In this workshop we don't need to shoot for extreme accuracy, so, moving the Uvs inside each color is OK for this. When done your Uvs should look similar like the picture shown below and you can click OK on the UV Editor.

On the right hand side of your realtime texture preview, you can see how all 6 colors have been placed on the cubes corresponding faces. Now you have completed your first step on UV mapping, but let me say, please try this again several times until you get better acquainted to this

principle.

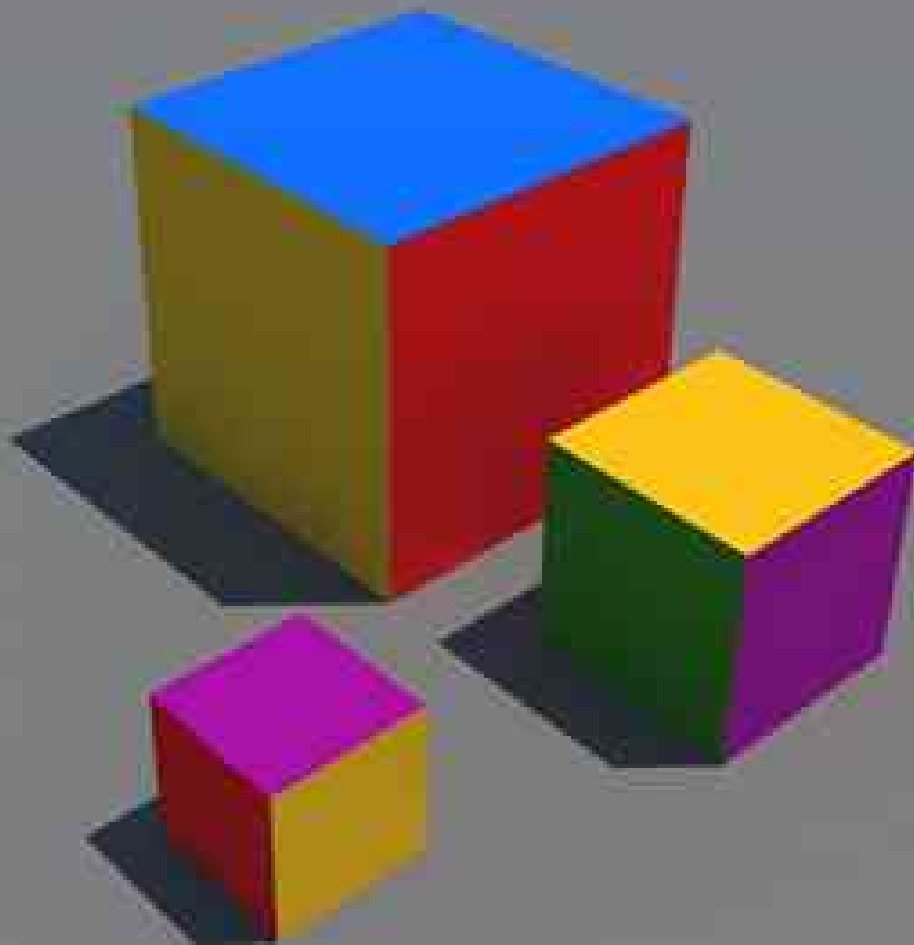
UV mapping is a big subject and not restricted to basic primitives as a cube like in this example.

For instance, you can have a cube with hundreds of faces that need individually different textures or

plain colors >>> respectively >>>> things can get very complex..... so, keep on practicing

I hope you enjoyed this little workshop on texturing a cube and look out for the next C3DE issue....

... (Nik for C3DE) ...



Tutorial

By Tim Payne





Simple Masks

By Tim Payne

Tutorial
By Tim Payne

Simple Masks

Simple Masks: The Easy
Way to Correct and Optimize
Your Renders
by Tim Payne

For personal art it's downright
aggravating. For a professional
it can be quite a bit more
serious.

Introduction

After days of work and dozens of low-resolution test renders, your scene is ready for the final render. You carefully check and re-check the final render settings, take a deep breath, and click the render button. An hour later you check the progress of the render and realize you forgot to enable something, or perhaps something doesn't look quite as good as it did in the earlier tests.

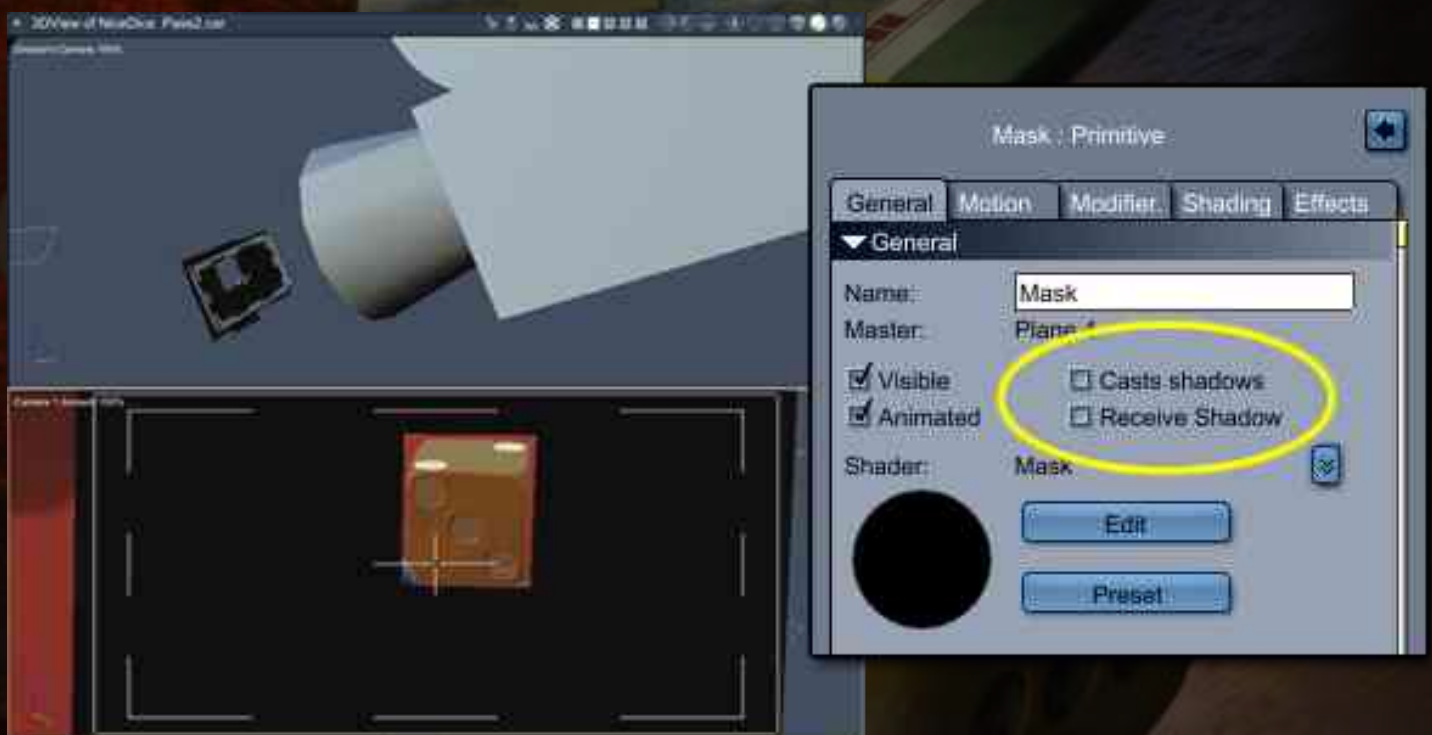
In this article we'll look at how to set up simple render masks in Carrara, and how to use these masks to make quick corrections to renders that aren't quite perfect. We'll also see how masks can be used to reduce render times significantly by targeting the time-consuming high-quality render settings where they're needed most.

This happens to everyone.

Simple Masks Tutorial

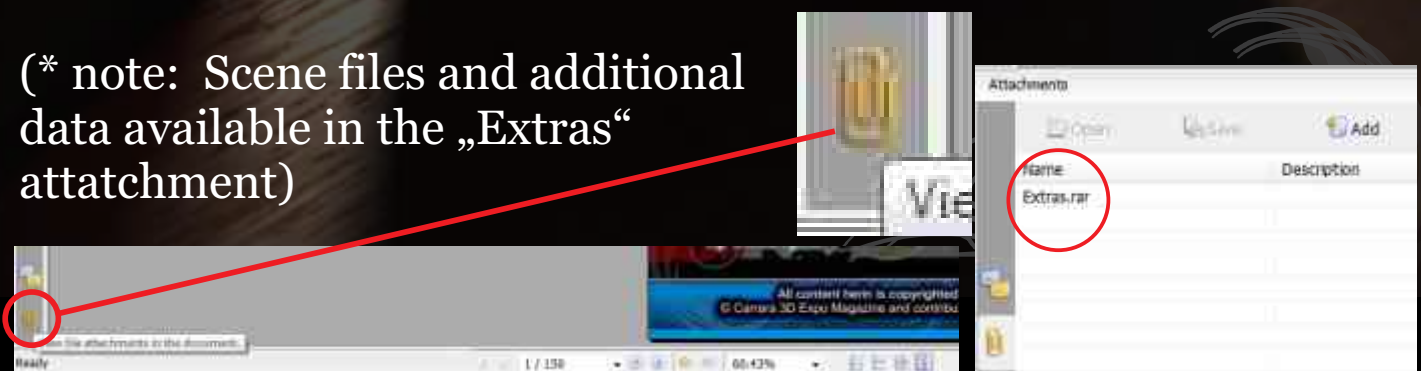
Masks

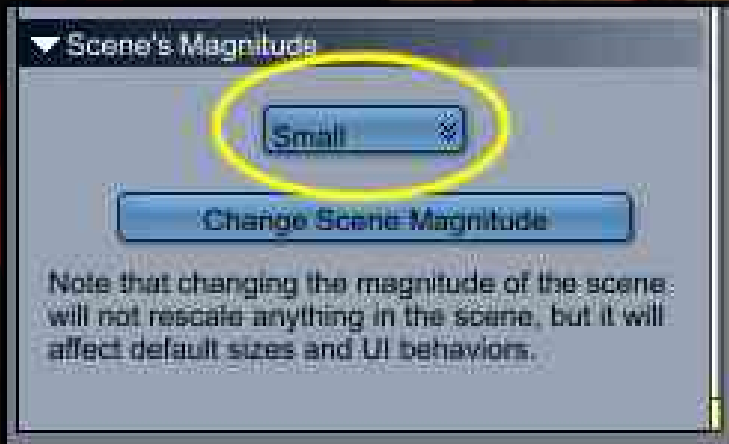
In Carrara the easiest way to mask off sections of a scene is simply to place polygon planes in front of the rendering camera. The planes should be set so they don't receive or cast shadows. They should be very small and positioned as closely as possible to the rendering camera to minimize their effect on any reflective shaders in the scene.



A simple black shader with all its channels set to "none" will ensure that the mask renders as quickly as possible.

(* note: Scene files and additional data available in the „Extras“ attachment)





Use the move and rotate tools to position the mask. If your scene is medium or large scale it's a good idea to temporarily change the scene magnitude to small. This reduces the nudge size and makes it much easier to make fine adjustments to the mask's position..



If you need a more complex mask shape, you can use a single plane with a black and white bitmap in the shader's alpha channel. This image can be created in any paint program, or even by using the 3D Paint feature of Carrara 7 Pro.

You can quickly orient the mask so it's perpendicular to the camera by applying a "point at" modifier to the plane and setting the camera as its target.

Render Corrections

Masks are especially useful for correcting minor mistakes or updating portions of a finished render. They also make it possible to salvage renders that stop because of memory errors.



This spaceport scene made full use of these capabilities. Indirect light, combined with the complex geometry and shaders of the lower third, made it impossible to render the entire image without running out of memory. I simply saved the unfinished top portion and used masks to render the remainder in two parts.





When I assembled the pieces in Photoshop, I decided that I didn't like the shader I had used for the boy's shirt. I also noticed, when the image was viewed on a bright monitor, that the mechanic's shirt was obviously poking into his leg. It only took a few minutes to set up masks to correct these issues. For the boy's shirt, I rendered a few versions with different shaders.

Simple Masks Tutorial



Without masks, these edits could have taken a day of rendering and re-rendering. With masks they were accomplished in about an hour.

Optimizing Renders

Rarely does an entire scene benefit from high-quality—and very time consuming—render settings. Often these settings are only required for one small portion, and many times the other parts of the image would really work better with slightly different settings.

Masks can be very useful here. By masking the scene into different sections, and then tailoring the render settings specifically for each part, it's possible to significantly reduce render time and simultaneously maximize render quality.

This technique isn't applicable to every type of scene, but sometimes it can be invaluable, especially when high-quality raytracing and true global illumination are required.

Let's look at an example.

Nice Dice

This seemingly simple arrangement of dice has some very complex light and shader interactions—complex transparency, blurry reflections, refraction, subsurface scattering, displacement, caustics, indirect lighting, soft raytraced shadows—and all of these things are affecting the others to some degree. If rendered as a single, high-quality image, it would take days to complete.

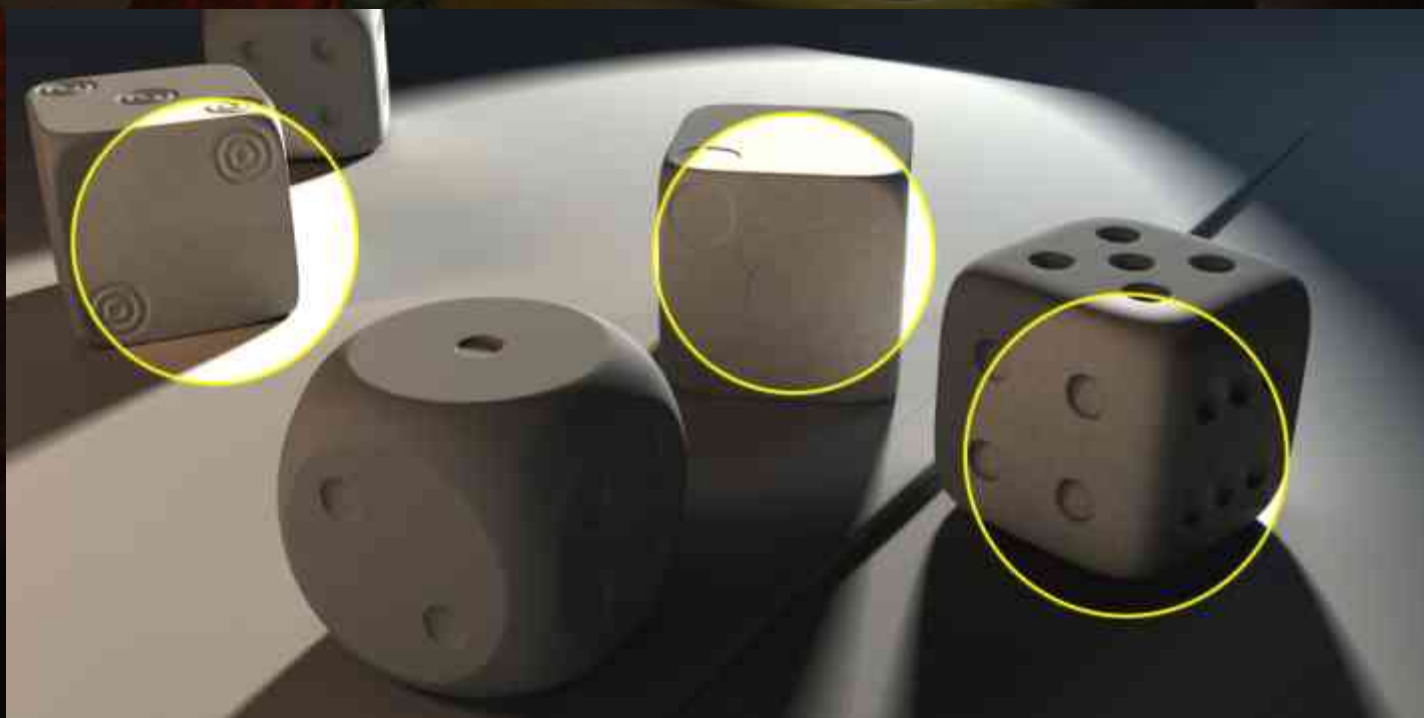


Instead, I broke it down into four separate passes, optimized the render settings for each one, and rendered them all in about three hours.

Global Render Settings

There are several render settings that strongly affect everything in a scene. These can include skylight, indirect light, caustics, antialiasing, and object accuracy. Most of the time these will need to use the same values for each section to ensure that the final scene can be composited seamlessly.

For this particular scene I used the default Indirect Light settings but turned off Interpolation. As seen in this gray shaded test render, there are still some minor splotchy shadow artifacts, but the detailed shaders of the final scene completely hide these imperfections.



Remember, there's no reason to increase the quality of any setting above what can be seen in the final render. Doing so only results in a longer render.

Pass Breakdowns

I did a lot of low quality test renders as I was building the scene, and by the time the scene was complete, I had a pretty good idea of which portions were going to be intolerably slow in the final render and how I would need to change the settings for each pass.

Here's how I set up the final passes. For clarity, the masked sections have been colored gray.

Pass 1: Gameboard and Dice

The orange dice is masked out because its shader takes an incredibly long time to render with soft shadows. Its cast shadow, however, is not masked out. This is important.

The blurry reflections of the tabletop shader are disabled to keep them from slowing the rendering of the red dice, which is slightly reflective.



Simple Masks Tutorial

Pass 2: Orange Dice

All the lights are set to cast hard shadows for this image. As mentioned before, soft shadows passing through the complex transparent shader are terribly slow. Fortunately, there's almost no visible difference when this section is rendered with hard shadows, so a lot of time can be saved here.



Again, the blurry reflections of the tabletop shader are disabled to keep them from appearing in the dice's reflection and refraction.

Pass 3: Background Tabletop

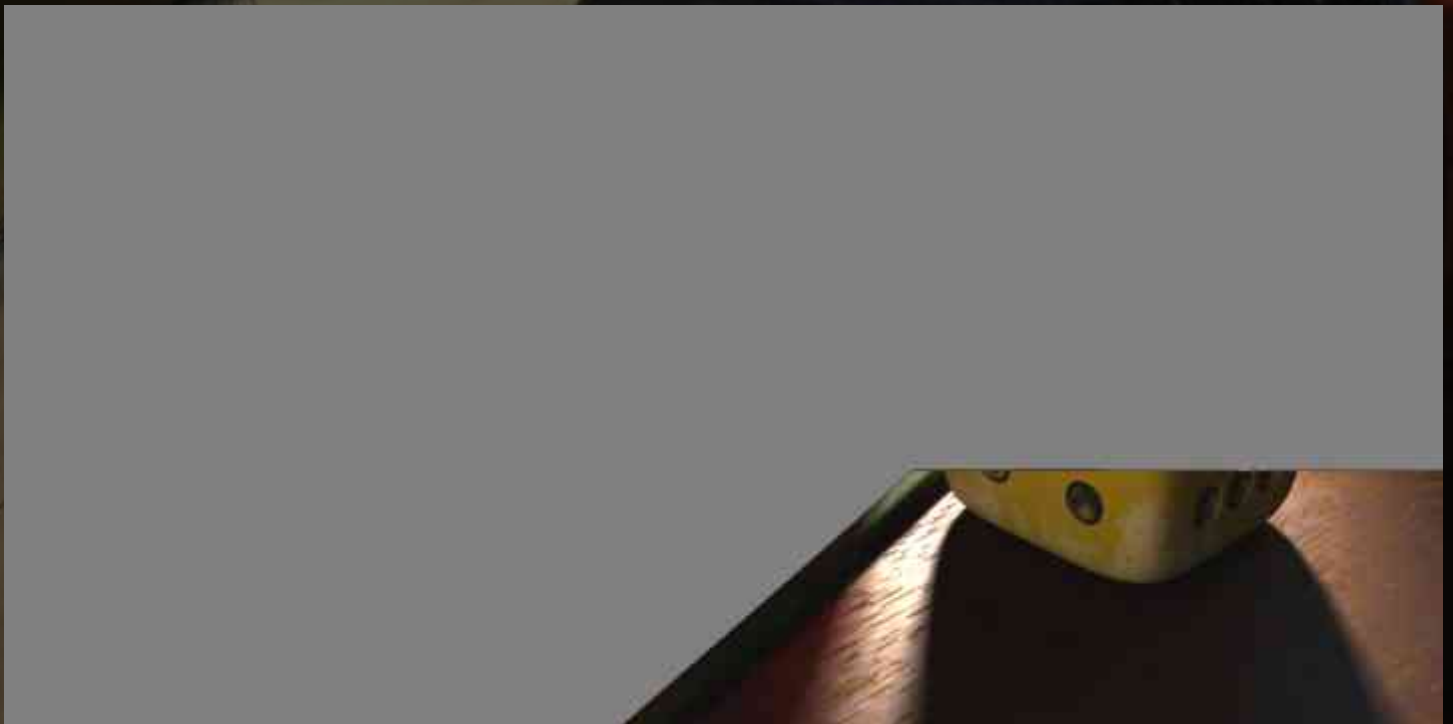
For this image the tabletop's blurry reflections are set to "best." There are very few things reflecting in this portion of the image, so it actually renders fairly quickly.



Pass 4: Foreground Tabletop

The soft shadow quality of the main spotlight is increased from "fast" to "good" to avoid shadow banding on the tabletop in the foreground of the image. The other parts of the scene don't benefit from this higher shadow quality. The edge of the game board provides a natural place to hide the transition.

The blurry reflections of the tabletop shader are once again disabled. This shader's Fresnel Term makes reflections almost invisible in this part of the image, so a lot of time is saved by turning off blurriness for this render.



Compositing

Compositing the separate renders requires a multilayer image editor such as Photoshop or GIMP. Simply load each render as a separate layer and then cut away the masked portions. It's a good idea to feather the edges slightly to avoid visible seams.

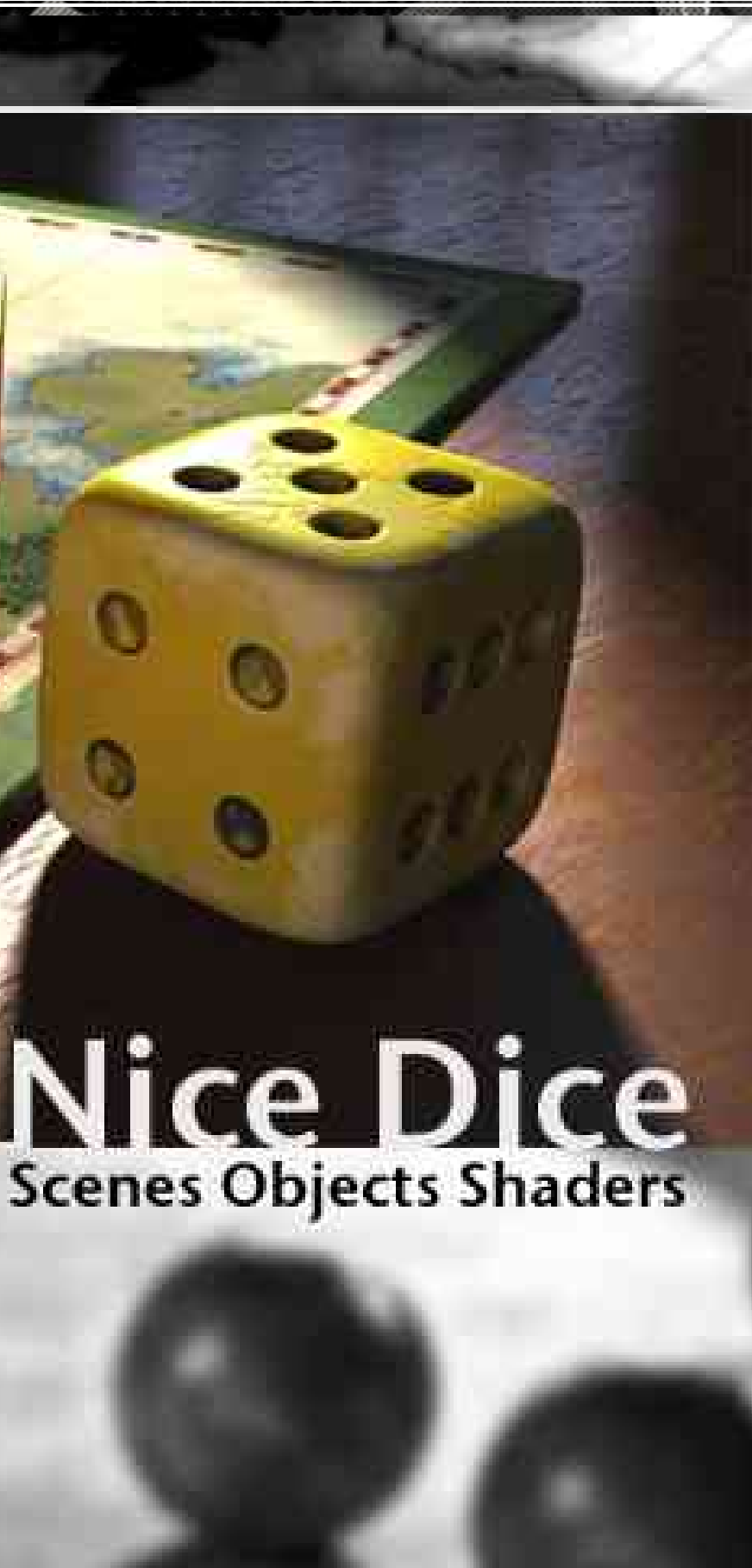


Masks are a very powerful tool. They make it possible to maximize quality while minimizing render time, salvage unfinished renders, avoid memory errors, correct stupid mistakes, and replace imperfect sections of the image. And, best of all, they make it very easy to do these things.



Tim Payne shares his scene files with C3DE readers!

You will also find free objects and amazing shaders! Enjoy this magnificent treasure!



Nice Dice

Scenes Objects Shaders

Complex



Swirled Plastic



Smudgy Plastic SSS



Smudgy Plastic



Scuffed Acrylic



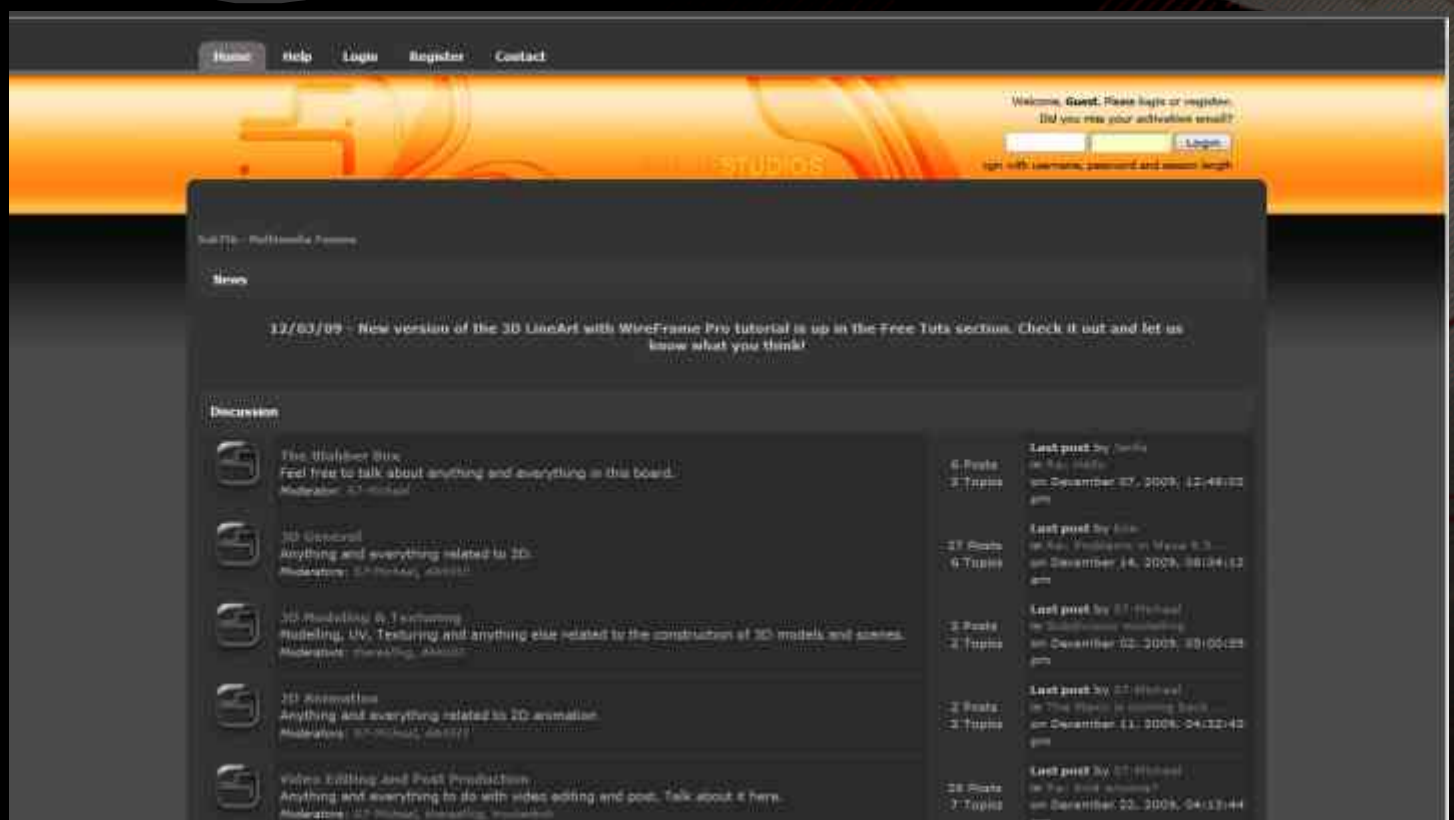
Stained Wood





New community
For digital arts artists

Sub7th Studios Multimedia Talk



www.sub7th.com/community

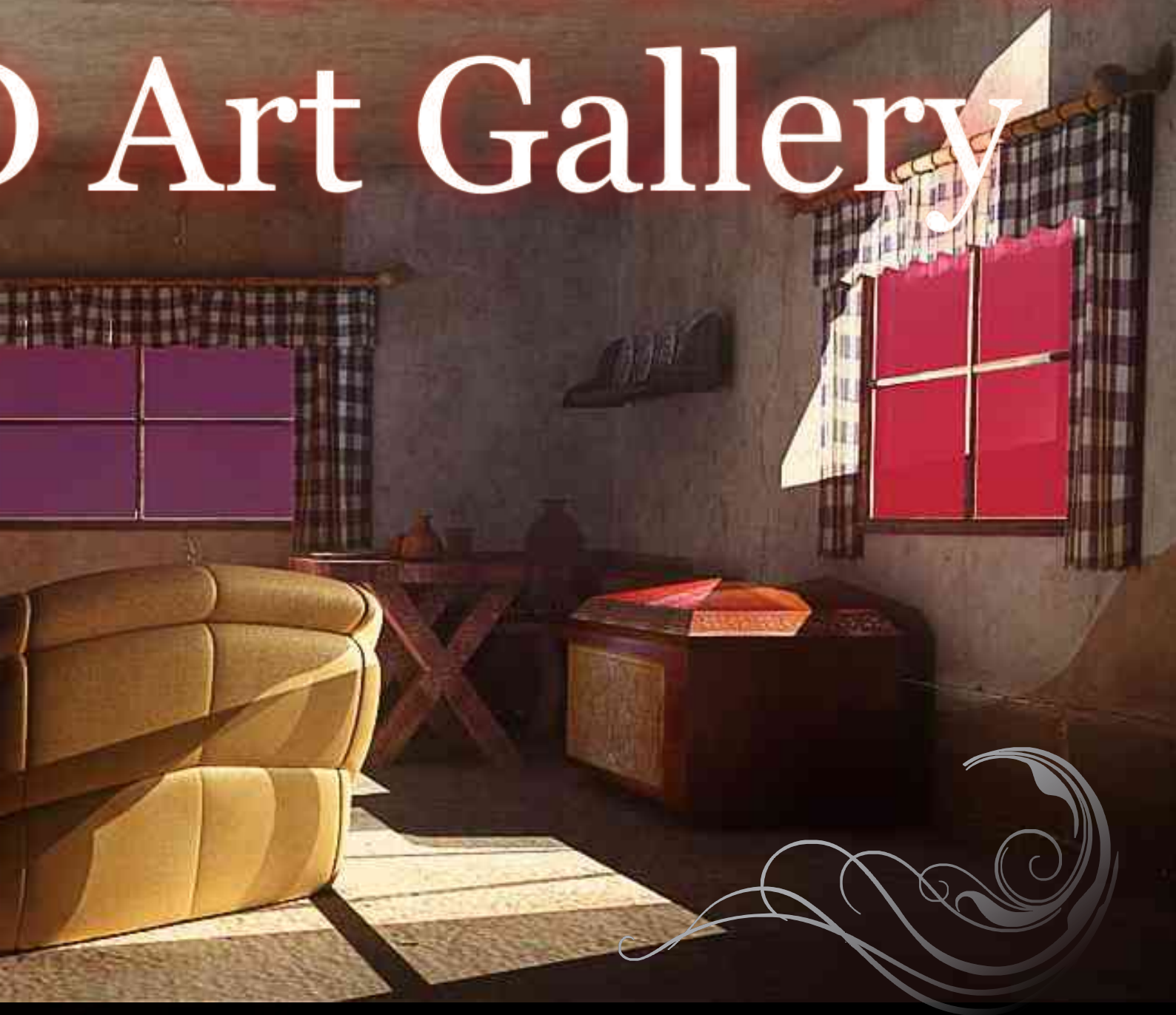


C3DE congratulates
a member of C3DE team
Micheal Mathews and his
Wife Crystal with a birth of
baby girl Mia!



3D

Carrara Art Gallery



Alain Longpre



Holyforest



Sculpting



Paint it Orange

Jefrey Felt (Dimension Theory)



AbstractParticles



Caddie Pillar



Leap Of Faith



Daydreams



Fredrick



The Walk Among Us





GoodGrassWithDepth

Mark Hossack



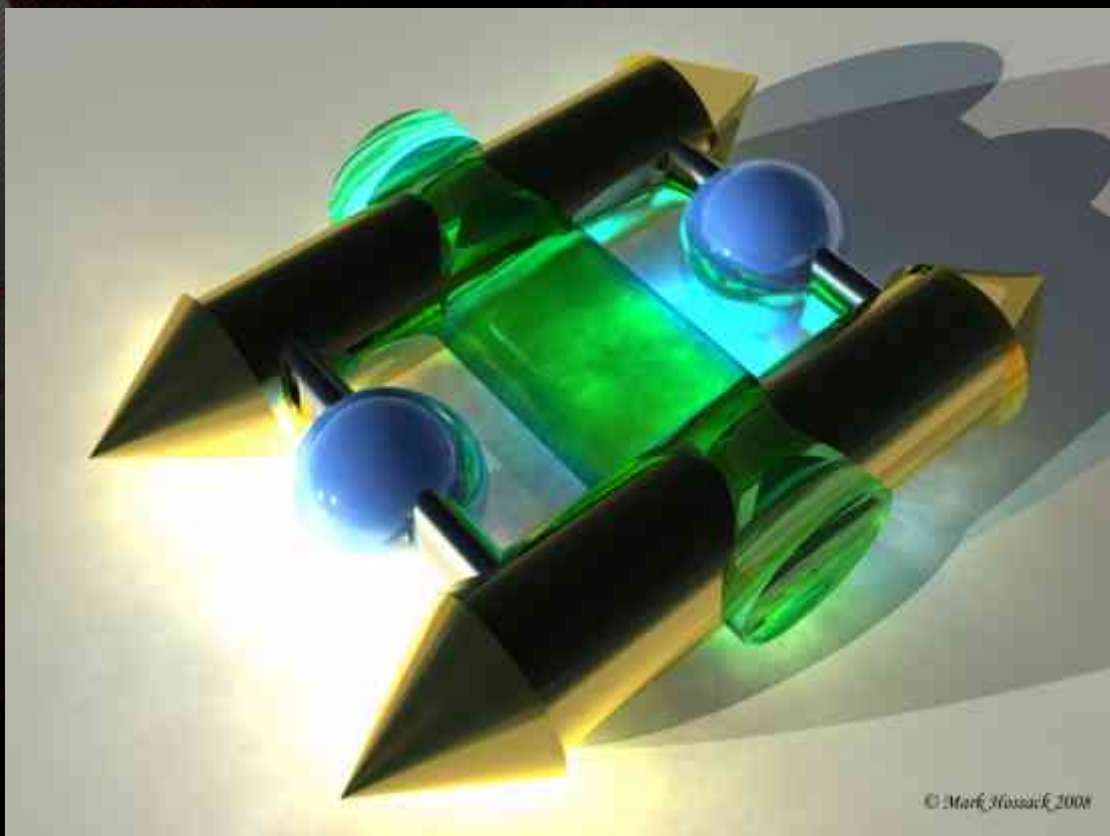
Glass Bowl



Reflections



Shape 1



Shape 2

Miroslav Conkic



Mire-S42

All models herein are modeled by me using MOI and Hexagon.
Textures made using Carrara.
Smoke was made using Carrara particles with my created textures,
dust are made using fog primitive.

Mo-fahmi



Buildingz



Bathroom



21545264

Popgriffon



(c) Poplowicki

Sibuyan2

PhilW



Jane



Greeble Planet



DeathCreek 10



Forest





WireGirl3



Leopard



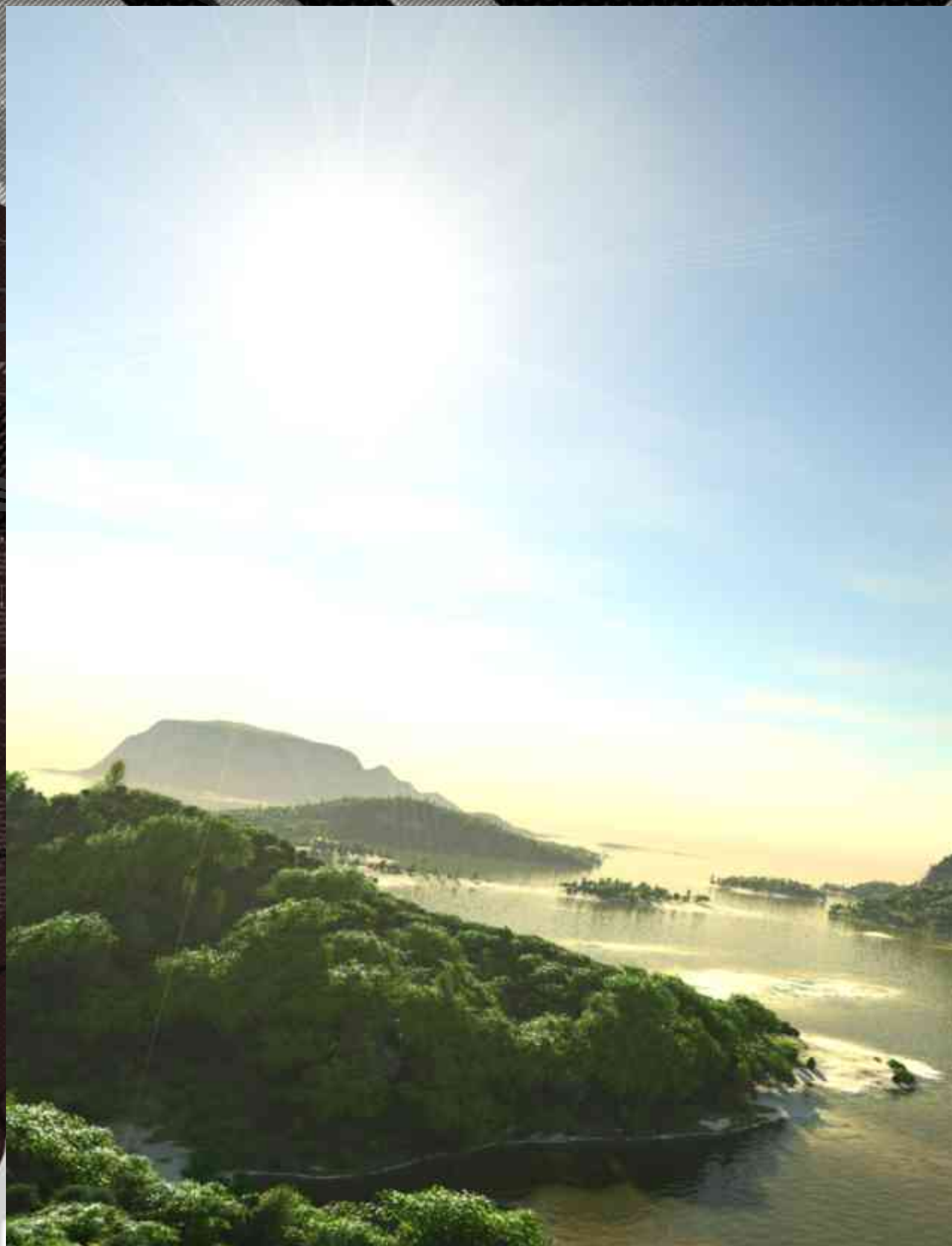
Mall Scene



Soldiers7



Soldiers



Tim Payne



Gets the
Cheese On
Fire!
award

Muddy River Delta





2009 Timothy Payne

Epic Dawn





2009 Timothy Payne

Pteranodons



Jars



Deep Space

Thomas Mac Callum



Opium



The Old General



Sonics Lair





Early risers





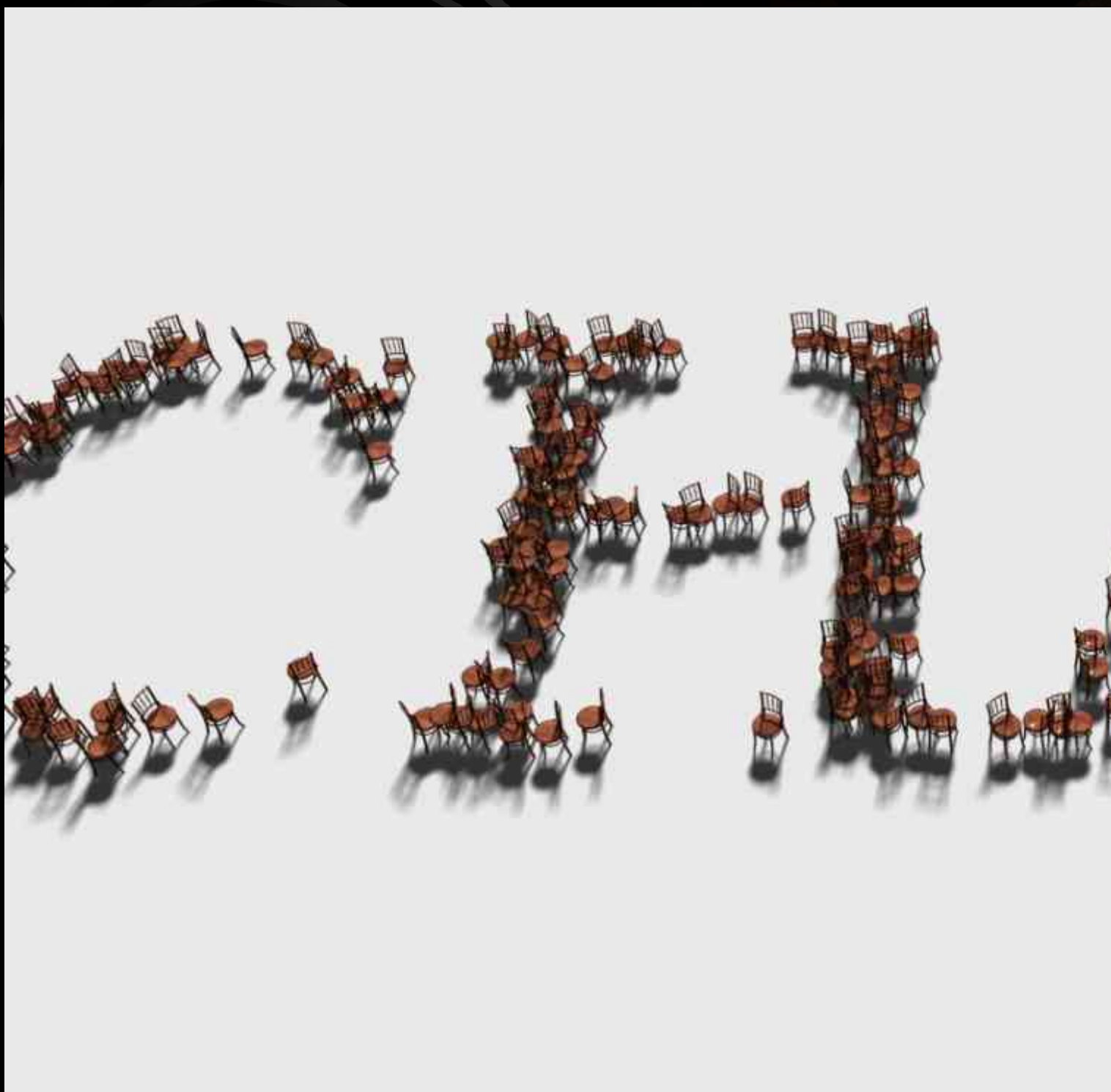
Tactical Retreat



Rob the Rocker



The pit of Tartarus



Tuuba



Chairs





The Old One



Easel



Stove



Model



A Chair



There is fire on the mountain



Quiet room



The Man



Eva Vomhoff



Estera
Modeled in Hexagon, finished in Carrara



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