Website content

CV

* Programming
* CG/3Dart and movie
* Web n Flash
* misc

key

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Cointents:

Solechat:

A short about society’s alienation and modern media

The movie was a realised with the unted efforts and passion of about 20 students of the Pompeu Fabra university for a voluntary workshop. Responibilities were split according to preferences and skills. Being the only one in the faculty with present experience in image post production and CG, everyone I found myself in charge of the editing and the CG credit animation.

Inspired by a real event that occured in germany shortly before the script was written, the plot treats the preparation and application of the main character physically consuming a man, while leaving open any intentions for the subjects’ behaviours.  
Due to a highly motivated casting and production team, we were able to win Toni Cantó, a successful spanish actor(<http://www.imdb.com/name/nm0134786/> ) for the role of the victim.

The university Pompeu Fabra offers a well equipped studio which was decorated with passion and effort to resemble the bright, urban flat of the murderer. We were so able to work in a well predictable environment regarding sound and illumination.   
As one of the major viusal impacts to highlight the cruelness and make the plot work, the make up was performed by a couple of professionals, Eme G. and her assistent, who we worked together with on earlier occasions. They made an incredibly realistic piece of art with modelling wide open wounds on the limbs of the actor. The director was forced to cut down the appearance time due to objections on ethetics inside the team and to the length of the short exceeding planned length anyway.

The movie was shot on 16mm with mostly in-house material. The editing happened with an online workflow on the university’s AVID work stations, going straight to the target media mpeg2 for DVD.  
The animation consists entirely of comoputer graphics showing the stylised location of the fictional event. Overlaying artifial distortion is played with to show the credits’ information.

Complicity:

An abstract 3D animation about complexity.

This purely abstract rendering shows transitions between more or less recognisable life patterns. It wants to ask for how much we are led by these. Evident visual factors are a green/yellow tint which gives a mystycal touch to its elements and a good amount of transparency used. The abstraction becomes clear and the spectator is provocated to think about wider association with what he perceives.

A big part of the inspiration sprung from listening to the soundtrack I chose from Katatonia, although the track itself is not directly related to the subject. I received an informal personal agreement from Katatonia and experienced a very friendly suppport from them with even a suggestion fdrom their side to put the video on their DVD if it suits the liking of responsible people.  
I was not completely suprised and hence neither overly disappointed when the reaction on the finished work did obviously not fulfil expectations from Katatonia’s part. Despite the rather not publically marketable output, the piece itself received high marks from my tutors.

The modelling, texturing and rendering of elements and required postproduction channels were created in 3D Studio Max and composed with Combustion which allowed to use the high quality Autodesk proprietary format rpf as an intermediate format.

Kummernuss

A pop-musicvideo

Andrea Kummernuss is hamburg based singer whose album got produced by Matthias Binder in his studio. The genre is a rather light approach to pop music, with some nordic melancholy. My part of the project got initiated by Ralf-Ingo Koch who helps to market the artist and is also a tutor at the university where I studied. The idea was to produce a music video for the song “Your queen”.

A website got created to keep the involved people up to date. It was supposed to hold scheduling information and creative approaches as well as links to participants and used equipment. Due to low interest of all participants, the effort was kept minimal in the end.

Following common conceptional patterns, mood charts and a drawn story board got rendered.   
The production started with the recording of the artist in a green screen environment. The data flow was of a pure digital nature which was possible with the HD recording material which at that point was recently purchased for our faculty. Through the technology involved with the complete HD workflow, professional AVID editing machines and multiple render clients for effects in 3D Studio Max and Adobe After FX let me gain interwsting end educational insights in production pipeines, although it was completely autodidactic.

Harmonically, to reflect the melancholic sound of the music, I chose calm green and yellow, slightly desaturated colours with red as a contrast in the singers hair and other key elements. The video got overlayed by melodically moving organic elemnts of more or less abstract nature, whereas the overall result does purely rely on abstract associations. Neither is there a plot, nor is the artist shown in a particluarly marketable manner which ruled out further efforts of the producers to incorporate the video accordingly.

Los Buenos

A short about immigrant lifestyle and prejudices.

During the later months of the studies at the university Pompeu Fabra in Barcelona, the idea arose to produce a short independently of the university’s dogmas and support. Christopher Haug, a director from Berlin wrote a story around which we created the the visual media beginning with the usual casting, storyboarding, character creation and location searches. The creative team was completely made up from university friends.

Since we had no budget were happy to be able to convince a professional actor and a model for the lead roles. Just as glad we found ourselves seeing the other volunteers performing with high motivation and professionality. With no pressure from investors, we had the time to find very suitable and authentic recording places.

Christopher Haug led the miniDV camera himself with self-constructed illumination apparatus being used to give half descent results in the image. We made an effort to not let the recording slip away during budy studies and captured everything we needed in two weeks time with a huge time investment of all people involved.

Unfortunately the postproduction fell in times of exams and eventually exceeded the stay in Barcelona, which led to an interruptive workflow.

My parts were mainly defined as visual effects, editing and graphical work.

Mental Ray stuff

Work examples of experimental nature

Mental ray is a highly sophisticated offline rendering solution. It’s mainly used for CG in movies and animations, but aims towards real time usage as well and got acknowledgement for that when NVidia bought the Berlin based company a few years back. The scene evaluation allows physical accurate lighting, raytracing and surface subdivision for highly detailed and realistic results.

The renderer is controlled via certain meta data like scene discriptions which can be hand-written, but leading 3D applications all contain functionalitz to build this meta data automaticallz out of their standard workflows or even use it as the main renderer in the case of Softimage. 3D Studio Max incorporates Mental Ray as a secondary renderer, but supports manipulation with several extras like mental ray materials and shader integrations.

My interest in Mental ray is that of an technical artist. While I was aiming for some concrete results, my work with it is more of a journey to understand the underlying techniques and solutions.

Website Cristina

A portfolio website

Cristina Broquetta is a writer from Barcelona. We studied together at the University Pompeu Fabra. She needed a portfolio website with the minimal information shown and asked me to have a quick shot.

The underlying subject for the design is obviously film. I aimed for an elegant style with an interesting approach to navigation to make a difference.

The 3D Effects are done with Adobe Flash manipulating the content of an iFrame.

FH-Luebeck

A redesign of the internet and intranet presence of the university of applied sciences in Luebeck.

When studying at the university of applied sciences in Luebeck the former website was a constant subject of annoyance to all people who had to work with it apart from being visually non-pleasant. The implementation of a new one was a feared task from all concerned parties as well, since the website is a highly used platform for information, needs to reliable at any time, understood by the people working on it, people using it and needs to suit all their different visual and structural ideas, opinions and dreams. Accordingly the politics involved in getting a new website online were predicted to be major with consulting website’s users, content creators and lastly the university’s senat.

Being challenged by this task AND the website at that time my study-fellow and friend David Huebner, four other study-collegues and me decided give it a shot splitting up the responsibilities amongst us. My part was design and ergonomics. As such I designed the global style and navigation aids inside the website’s structure. The design and creation of the templates, concrete different content page types and the assets was again spread over the design team.

The final result which is contemporarily online is obviously the end of a process cutting down the innovation to a minimum level to satisfy implementation costs and conservative mindsets of people in responsibility. Also the design got only implemented in a rough approximation compared to the detail it was thought of.

New features that were thought of was a two way optional navigation for content or user oriented structuring, clearly colour wise destinguishing of faculty pages and wizards for predictable user requests like new student applications.

As an example of the many issues our innovations were standing up against was the fact that there were literally millions of Euros for hardware from public funds, but it took a year to fight for a half-day contract for a webdeveloper.

Wiebo

A DHTML implementation of a documentation for a styleguide

Wiebke Kudernatsch is a conceptor working in Hamburg. We studied together at the University of Applied Sciences in Luebeck. When writing her end project she asked me to develop a DHTML version of the product, a styleguide for the e-learnung platform „OnCampus“, for the deployment on CD.

DHTML is HTML with Javascript being used for manipulation. [link to definition]

The style is based on the styleguide itself using a greenish tint with according asset styles for pictograms etc.

RocknRoll

The website for the Editorial of the “Rock’n’Roll Musikmagazin”

The editorial based in Oldenburg, Niedersachsen, Germany is run by my parents. The website is used for advertising, selling, news and events. My part is maintanance and programming. I wrote a little framework in php for easily managing the link collection and the online shop. I still plan to revamp the whole site one day from its current state of table layouts which was originally done by Lars Wilhelmer, a friend of mine, long before I got into this kind of thing.

Inema

Website for the “Institute for Network Management”

The company is not existent these days anymore which I claim to have nothing to do with although I admit the olution is an early, rather naive design attempt. The mainly flash based website was though as a company portfolio showroom and advertisment. Whereas the name might call on associations of electronical engineering, the networking nature of the comapny was puely one of project management and mostly aimed towards peoples’ networks.

The style of the website tries to combine elegant lines with innovative navigation. A good amount of work went into the loading display and other parts which are not actually visible anymore due to today’s bandwidth.

Fur and Grass

My end-course project for Rockstar Games

Correctly named “Optimisation of hair rendering techniques for the

Wii graphics engine and Shaders up to model 4” the work involved a mix of conception, programming and scripting to have a toolset for creating and exporting hairy surfaces of a certain style from "Autodesk 3D Studio Max” into a demonstration game environment.

The work exclusively treated hair as short strands forming a 3 dimensional dynamic effect over a surface taking advantage of the “shells and fins” technique used in many of today’s games. The innovation created consists in a real-time evaluation of intersecting strands. This calculation can be used in real-time in game, or at creation time in 3D Studio Max and then be baked out as static images for less powerful target environments, hence the mentioning of the wide scope of target platforms in the title.

The products resulting out of this work are

* Creation tools - 3D Studio Max plugins
  + Modifier to create the mesh over the surface  
    The mesh consists of multiple layers of the surface offset in equal steps to a fixed amount being perpendicularly crossed by polygons to create a 3 dimensional effect.
  + Utility to bake a shader onto a 2 dimensional surface  
    Used to bake out the shader surfaces for fixed-pipeline graphics processors it can be globally used for any shader with certain limitations.
  + Exporter   
    Exports an extended Alias Wavefront format with extra paramaters for shader on the target platform.
* Demonstration game environment  
  Simple 3D World programm loading scenes from my pripriotary object format.

Being employed for Rockstar Games I’m endlessly grateful to my employers for having been able to spend a huge part of my work time for writing this thesis and all the personal support I got from my leads, friends, collegues and tutors. The technology developed never got used in any production environments yet, apart from some screenshots for skin development during production of “Beatarator”. The magazine “Oeffnungszeiten” of the design labs of my university published a short article about my thesis.

The content is split in visual definition of the effect, description of historical and technological circumstances and environments and the problems descriptions and how I solved them. Evidently Rockstar would not let me publish the contents entirely, so you’ll only find screenshots, the already published article and the TOC.

The innovation consisted in an algorithm that allowed control of hair on a single hair strand base and the possibility of intersecting hairs. The appearance is less rigid and allows effects like waving movements or simply a more natural random sub-movement where the geometry can be additionally manipulated physically to add model based momentum. Whereas the effect is generally defined as a hair aimed effect, it can be applied to many other use cases like grass and other strand based 3-dimensional effects. It’s a stylised approach and approximation and breaks at when the spectator comes too close and is able to realise the projection of the shader on the simplified mesh.

CampusMap

A 3D guide over the campus

When studying at the University of Applied Sciences in Luebeck, David Huebner and me could not help but experience the difficulties of finding rooms or persons you needed to go next. Inspired by the new technologies of google maps, other more interactive campus maps and the new availability of the processing libraries, we went out to explore new ways of experiencing our campus. We wanted to create a 3dimensional tour which would allow searching for information and visualising the different functions of laboratories effectively.

From being involved in the design and programming of the website we knew the responsible people for the data mining or were able to find sources for interesting material. Attracting our excitement was the fact that the faculty for architecture already had plans and partially even 3D models of university buildings at hand which we could use for our plans. The database with according occupying persons and email addresses was supposed to go online soon and we hoped to get our project online at the same time.

A project homework gave us the frame for a realisation of this of the world and its logic. I managed to get another course’s highest mark by coding a php application that manages the database binding without weighty JDBC divers and the “faculty tour” logic.

The design is kept minimalistic. Processing didn’t allow any texture mapping and the web world was rather vector based, so we decided to settle for abstraction. The realism we allowed us for the human touch was a day night cycle, pedestrians and running buses according to real time tables.The buildings were drawn using levels of detail for drawing speed. The processing OpenGL part was not yet completely supported in the web interface.

In the background real-time calculated Bezier splines define the camera movement for tours and smooth into the detail views of the detail model approached. Self-written vector and matrix math libraries allowed flexibility in coding. The model data format used is the infamous Alias obj format.

The project never went online for reasons of the database not getting anywhere near completion after a year and concerns against Java performance. Another chance missed with this project that would have let the university stand out.

KickerLicker

In the early stages of our studies, David Huebner and me had a compulsory software project course. We decided to try to make a “Kicker” game. Since the course was coupled to a programming course, the compulsory programming language was Java.

The project is certainly proving a lot of the immatureness we possessed back in those stages, but was fun and worked and hence an important experience considering how my professional career developed.

1 to 8 players could connect to a server and choose an arbitrary number of handles they want to control on one side of the table. Once the game has begun, all clients are shown a 2 dimensional topview of the foosball table. Holding the keys a,s,d and f control the handles being choosen to move, the mouse then controls the movement itself. A chat program allows communication between the clients.

The user interface is made of Java Swing GUI elements. Only the canvas of the game shows exclusively custom render code. The rendering of the game is entirely 2-dimensional apart from some few discussable cases. Swapped pre-rendered images simulate the rotating player-figures.

We got the highest mark possible and had a lot of fun.