

# curriculum vitae

## Christian Schafleitner, BSc



### Personal Data

Address ..... Forsthubstrasse 15, 4400 Garsten, Austria  
 E-Mail ..... christian.schafleitner@fh-hagenberg.at  
   christian@cs1.at  
 Homepage ..... <http://www.cs1.at>  
 Phone ..... +43 664 38 18 444  
 Nationality ..... Austria

### Education

since 2003 ..... **Upper Austria University of Applied Sciences Hagenberg**, Austria  
     since Oct. 2006 ..... **Digital Media** (Master Course) [[dm.fh-hagenberg.at](http://dm.fh-hagenberg.at)]  
     graduating in                focusing on Interactive Media (computer graphics & vision, digital imaging, human-  
         July 2008                                computer interaction, game development, software engineering and hypermedia).  
   **Supervisor:** Dr. Wilhelm Burger, [wilhelm.burger@fh-hagenberg.at](mailto:wilhelm.burger@fh-hagenberg.at)  
   (overall gradepoint average: 1,23 - 1st and 2nd semester only)  
  
 2003 - 2006 ..... **Mediatechnology and -design** (Bachelor Degree, graduated with distinction)  
   (overall gradepoint average: 1,29)

### Job Experience

since Oct. 2006 ..... Teaching Assistant at **University of Applied Sciences Hagenberg**, Austria  
   for Computer Graphics, Digital Imaging and Java Programming  
  
 June - Dec. 2007 ..... Freelancer at **VisYoo**, Inc., Salzburg, Austria [[www.visyoo.at](http://www.visyoo.at)]  
   (C#, OpenGL, Image/Video Processing, Shader Programming)  
  
 Oct. '06 - June 2007 .... Course Instructor (Databases, .NET & Webprogramming)  
   at **BBRZ/BFI Upper Austria**, Linz, Austria [[www.bbrz.at](http://www.bbrz.at)]  
  
 Feb. - Aug. 2006 ..... **Internship at Siemens Corporate Research**, Inc., Princeton, NJ.  
   [[www.scr.siemens.com](http://www.scr.siemens.com)] (Visualization Prototypes for Medical Image Data - C++,  
   Image Processing, OpenGL; Application-Testframework with Python),  
   **Supervisor:** Dr. Jens Guehring, [jens.guehring@siemens.com](mailto:jens.guehring@siemens.com)  
  
 July/August 2005 ..... Software Engineer Trainee at **RiS Ltd.**, Steyr, Austria [[www.ris.at](http://www.ris.at)]  
   (Video-On-Demand Platform - ASP.NET/C#)  
  
 August 2004 ..... IT Trainee at **Image Media** Digitaldruck Ltd, Oberndorf, Austria  
   [[www.image-media.at](http://www.image-media.at)], (maintaing their website & internal network)

# curriculum vitae

## Christian Schafleitner, BSc

### IT Experience

Operating Systems..... Microsoft Windows Vista / XP, Windows Mobile 5/6,  
Linux, Apple Macintosh (OS X)

Programming Lang. .... C/C++, .NET/C# (Visual Studio .NET 2005),  
Java (Eclipse); Scripting: Python, JavaScript

Technologies ..... .NET Framework 2.0/3.0 (WPF/XAML, WCF), .NET Compact Framework,  
TAO Framework, OpenGL, OpenInventor, DirectX, Cg (Shader),  
OpenCV, ARToolkit/ARTag, Java Media Framework, Qt (GUI)

Web Technologies..... HTML, CSS, PHP, SQL, JavaScript, Python, Flash (AS 2.0), ASP.net, JSP,

Media Design Skills ..... Macromedia Freehand, Adobe Photoshop, LaTeX,  
Adobe Premiere & After Effects, Avid Xpress Pro  
Microsoft Expression Blend

### Languages

German..... Mother tongue  
English ..... fluently  
Italian..... basics

### Hobbies / Personal Interests

Skiing, Hiking,  
Travelling, Movies,  
Video & Photography

### Publications

#### **An Adaptable Rear-Projection Screen Using Digital Pens and Hand Gestures**

*Peter Brandl, Michael Haller, Michael Hurnaus, Verena Lugmayr, Juergen Oberngruber, Claudia Oster, Christian Schafleitner, and Mark Billinghurst, ICAT 2007, Esbjerg, Denmark, IEEE*

### References

#### **Dr. Wilhelm Burger,**

University of Applied Sciences Hagenberg, Director of Studies, wilhelm.burger@fh-hagenberg.at

#### **Dr. Jens Guehring,**

Siemens Corporate Research, Princeton, NJ, USA, Project Leader, jens.guehring@siemens.com

### Awards

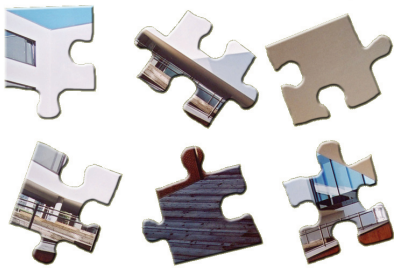
**Microsoft Imagine Cup 2007**, Seoul, Korea: **Top 6 World Finalist** in Software Design with "Intoi"  
**Media Cube Award** (best student project of the year) for "Intoi" and "Xplain"

# curriculum vitae

## Christian Schafleitner, BSc

### Bachelor Thesis

#### Puzzle Project



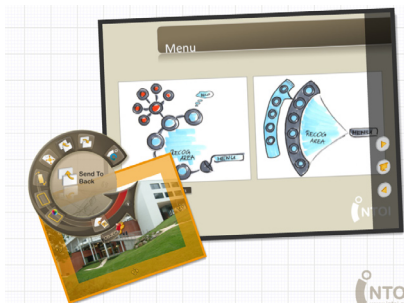
In my bachelor thesis I focused on solving jigsaw puzzles using contour matching. It discussed the development of an application which solves problems like solving puzzles in a way which can be compared with human cognition using methods of computer vision and digital imaging.

The algorithms used for analyzing the image, extracting pieces, detecting corners of puzzle pieces and finally solving a whole puzzle are described in this thesis. The prototype of this application was written in Java and implemented as an *ImageJ* plug-in.

The paper also discusses other methods and approaches to solve puzzles and illustrates problems which may occur.

### Projects (Selection)

#### INTOI - Interchange of Ideas (Digital Whiteboard)

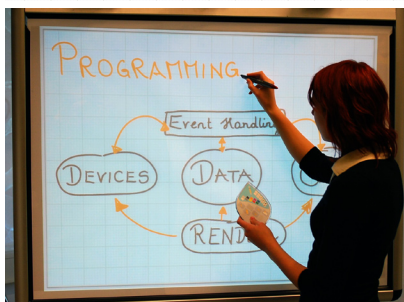


INTOI is a digital, interactive whiteboard that introduces new methods for brainstorming, content presentation and knowledge transfer.

Both the INTOI application and its unique user interface are designed to enable an innovative and intuitive user interaction paradigm for multiple users. The users can draw and write on a digital projected surface with digital Anoto pens, as well as load and create images, Microsoft PowerPoint or Adobe PDF files. Participants can upload their own files or download the current screen directly onto/from the projection surface by using a small desktop application.

A pie menu can be called tapping the pen on the display surface to change a property, tool or setting. Navigation on the page of infinite size is performed by simple hand gestures.

[www.intoi.net](http://www.intoi.net)



**Team:** 5 (4 programmers + 1 designer)

**Duration:** Oct. 2006 - June 2007

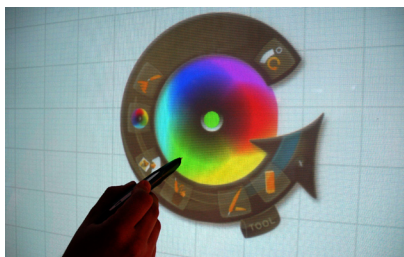
**Technology:** C#, .NET Framework, WPF, WCF, TAO Framework, OpenGL, ...

**My Responsibilities:** Core Development, Pen Connection & Logic, Page/Stroke Rendering, Network Programming (Uploader), ...

**Awards:** Imagine Cup 2007 Korea: Top 6 Finalist Software Design

Media Cube Award 2007: category "media technology",

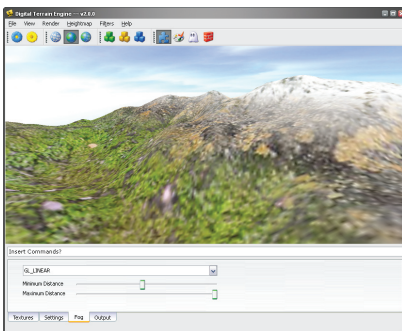
best student project of the year



# curriculum vitae

## Christian Schafleitner, BSc

### Projects (Selection)



#### Terrain Engine

We developed a terrain engine for visualizing large triangle data as well as bitmap/height maps. The GUI was built with Qt, the rendering is done in OpenGL. During this course we learnt a lot about generating virtual 3D worlds, as well as store this large data and develop fast algorithms to visualize them.

**Team:** 3 programmers

**Duration:** Nov. 2006 - January 2007

**Technology:** C++, OpenGL, Trolltech Qt

**My Responsibilities:** development and implementation of algorithms

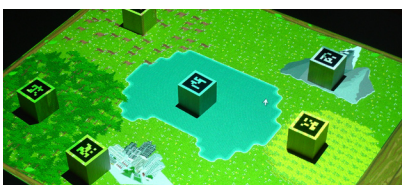


#### Genesis - Interactive Tabletop Game

Genesis is an interactive game installation, where the user is able to play god. The play table's size is approximately 1 by 1 meters housing 7 wooden cubes. These cubes, representing important basic elements such as water, stones, cereal, wood, fauna, and of course mankind, can be tracked with help of ARtag markers by a camera. The whole scenery gets projected depending on the user's positioning of the cubes. Not only the order but also the positions decide if the simulated world can survive or gets destroyed.

[www.youtube.com/watch?v=P9mrmBj74](http://www.youtube.com/watch?v=P9mrmBj74)

[www.portfolio.cs1.at/genesis](http://www.portfolio.cs1.at/genesis)



**Team:** 4 (3 programmers + 1 designer)

**Duration:** Oct. 2005 - January 2006

**Technology:** C++, OpenGL, ARtag, OpenCV

**My Responsibilities:** Core Development, Camera Tracking, Hardware Setup



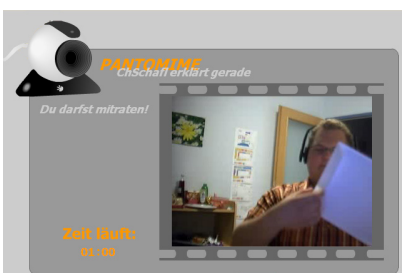
#### Xplain - Multimedia Online Game

Xplain is an online-multimedia game, based on the well-known board game "Activity".

The basic aim in this game is to "explain" your team partner as many items using one of three different ways: voice, drawing or pantomime.

Using headset, webcam and a whiteboard, we realized the game as a browser based Flash application.

[www.xplain.cs1.at](http://www.xplain.cs1.at)



**Team:** 4 (3 programmers + 1 designer)

**Duration:** March 2005 - June 2005

**Technology:** Adobe Flash, ActionScript 2.0, Flash Communication Server

**My Responsibilities:** Game Logic, Server Side development

**Awards:** Media Cube Award 2005: game category, best student project