

CONTACT INFORMATION	street city Germany	mobile: on request e-mail: on request Online: http://www.ablazespace.de
PERSONAL INFORMATION	Born February 27th, 1982 German citizen	
RESEARCH INTERESTS	Realtime computer graphics, parallel computing, cross-platform development, build systems, flexible and extensible software architecture	
PROFESSIONAL EXPERIENCE	<p>Senior software developer at Promotion Software GmbH September 2012 – June 2024</p> <ul style="list-style-type: none"> • Lead in-house technology developer of the Quadriga Simulation Framework (QSF): Engine, graphics, tools and support for gameplay programming, artists and quality assurance • Part of QSF was the conception and realization of a Qt based cooperative online editor which enabled the level designers to work together on EMERGENCY 5 maps at one and the same time, shipped as part of the EMERGENCY 5 modding SDK (https://github.com/16tons/emergency5_sdk) • Technical coordination (conception, reviews, acceptance) during the EMERGENCY 5 development phase of up to 14 internal and external software developers • Concrete projects: EMERGENCY 5, EMERGENCY 2016, EMERGENCY 2017, EMERGENCY 20 (https://store.steampowered.com/app/735280/EMERGENCY_20/), TEAMWORK research project (https://www.teamworkprojekt.de/), non-public research and client projects using AR (HoloLens) and VR (Oculus Rift and HTC Vive), free-to-play EMERGENCY (https://store.steampowered.com/app/850170/EMERGENCY/) using Unreal Engine 5 and custom C++ game servers <p>benntec Systemtechnik GmbH August 2008 – August 2009</p> <ul style="list-style-type: none"> • Six months internship semester, continued afterwards as a working student • Attended meetings at Rheinmetall Defence Electronics (RDE) regarding 3D technologies • Collaborated with the team and clients, identified requirements and presented realistic solutions • Worked on the PixelLight based Compudent 3D dental patient advisory software • Created a Java 3D port of PixelLight and provided technical assistance. The developed system was used in a simulator for fire fighting on board ships. • Participated in the development of a PixelLight based tram-simulator prototype • Supported the PixelLight based interactive Oerlikon product presentation with configuration and real-time 3D scenarios <p>Happy-Grafix Gbr March 2002 – August 2003</p> <ul style="list-style-type: none"> • Worked as a programmer on the commercial game project <i>The Second Evolution</i> (cancelled) • The <i>Vulpine Vision</i> engine was used 	
PRIVATE PROJECTS	<p>Unrimp - Free open-source 3D rendering project June 2012 – January 2022</p> <ul style="list-style-type: none"> • Project for personal fun and to be able to keep my graphics programming skills up-to-date • Used to prototype a material and shader blueprint system as well as other technologies which enabled me to bring EMERGENCY 5 in the EMERGENCY 2016 edition from Direct3D 9 to Direct3D 11 while having limited development resources available to get the migration done in time <p>PixelLight - Free open-source 3D application framework September 2002 – August 2012</p> <ul style="list-style-type: none"> • One of the two lead developers • Worked on basic data structures up to the C++ based Autodesk 3ds Max exporter • Wrote documentation and supported the users of the technology <p>http://www.ablazespace.de 1995 – 2002</p> <ul style="list-style-type: none"> • Created open-source freeware games as a hobby 	

SOFTWARE DEVELOPMENT	<p>Primarily:</p> <ul style="list-style-type: none"> • C++, Unreal Engine 4 & 5, OpenGL, Direct3D 9-11, GLSL, HLSL, Windows, Qt, Visual Studio, Subversion, Git, OOP and design patterns, Sentry for crash management, Steamworks <p>Further worked with:</p> <ul style="list-style-type: none"> • C, Java, C#, Pascal, Amiga Basic, Assembler, CMake, Linux, macOS, Android (C API), C++ plugin development for Autodesk 3ds Max, Direct3D 12, Vulkan, OpenGL ES 3.0, OpenCL, Boost, Doxygen, Nintendo Switch (UE5), Sony PlayStation 5 (UE5), PlayFab, Microsoft Azure, Jenkins together with Windows batch script and PowerShell script for e.g. automatic continuous delivery and the project management tool Hansoft to create tasks etc.
	<p>During my work on the PixelLight project, I wrote plugins for:</p> <ul style="list-style-type: none"> • FMOD, FMODEx, OpenAL, OpenGL and OpenGL ES 2.0, DirectX, Qt, Lua, Python, V8 JavaScript, AngelScript, MySQL, PostgreSQL, SQLite, Newton Game Dynamics, ODE, PhysX, Assimp, libRocket and SPARK
	<p>Some of them as proof of concept. During my master thesis, I added volume rendering as a plugin.</p>
EDUCATION	<p>University of Applied Sciences, Würzburg, Germany</p> <ul style="list-style-type: none"> • Master of Science (MSc) in information systems October 2010 –June 2012 • Bachelor of Engineering (B. Eng.) in computer science October 2006 – September 2010
LANGUAGES	<ul style="list-style-type: none"> • German: Native • English: Fluent
PERSONAL INTERESTS	<ul style="list-style-type: none"> • Software development related research in general and graphics in particular • Sci-Fi/fantasy literature and video-games • Hiking and jogging as well as other sport to relax