

Stefan Eilemann

Zürich · Switzerland · +41 76 33 77 247 · eile@mailbox.org

PARTICULARS	Date of Birth	9th August 1975, Wittenberg, Germany
	Nationality	German, Swiss
	Languages	German (native), English (fluent), French (fluent)
	Open Source Profile	github.com/eile
PROFILE	Senior software engineer and technical team lead, with a specialization in interactive large data visualization, C++, parallel and distributed programming. Successful track record of building and leading engineering teams to success.	
EXPERTISE	Technical leadership for high performance C++ applications, parallel programming, distributed systems, Virtual Reality and collaborative visualization	
	Software and library design, test driven development and maintenance using C++, Typescript, Python, CMake and git	
	Software development methodology during the whole lifecycle, ranging from requirements analysis, specification, design, implementation to documentation, education, debugging, optimization and support	
	Broad knowledge of operating systems: Mac OS X, Linux, Windows, Irix	
EXPERIENCE	<i>Frontend Software Engineer</i> Zürich, Switzerland	ESRI R&D Center Nov 2017 – current
	Development of frontend APIs and rendering algorithms for 3D mapping.	
	<i>Researcher, Parallel Rendering</i> Zürich, Switzerland	University of Zürich 2005 – 2007, October 2015 – current
	Research new algorithms for large data visualization, in particular the parallelization, load-balancing and data distribution of parallel OpenGL applications on graphics clusters. Invented and developed Equalizer, a framework for scalable, distributed OpenGL applications.	
	<i>Visualization Team Manager</i> Lausanne, Switzerland	Blue Brain Project, EPFL May 2011 – Sep 2017
	Built a team of seven software engineers, one post-doc, one PhD student and one media designer to deliver innovative visualization software as well as media for communication and scientific publications. Developed the long-term interactive supercomputing vision and the corresponding medium-term roadmap with the team, motivated and lead the implementation based on modular software components. Drove the implementation of software engineering best practices for the whole project.	

CEO and Founder **Eyescale Software GmbH**
Neuchâtel, Switzerland **January 2007 – current**

Co-founder of Eyescale and lead developer of the Equalizer parallel rendering framework and related libraries. Deploying Equalizer in existing ISV applications to scale display size, performance and visual quality. Software architecture, design and development, hardware and software consulting for multi-GPU workstations, visualization clusters and Virtual Reality.

Senior Software Engineer, 3D Graphics **Tungsten Graphics**
Neuchâtel, Switzerland **January 2007 – June 2007**

Senior Software Engineer **Esmertec AG**
Neuchâtel, Switzerland **January 2004 – September 2005**

Job position details available on demand.

Senior Software Engineer **Silicon Graphics, Inc.**
Neuchâtel, Switzerland **August 2000 – December 2003**

Worked in SGI's advanced graphics division as technical lead for OpenGL Multi-pipe SDK (MPK), a framework to develop high performance, scalable visualization software. Worked on DataSync, a distributed shared memory API for clusters.

Software Engineer **Freelancer**
Munich, Germany **April 2000 – July 2000**

Software Engineer **Intec GmbH**
Wessling, Germany **October 1998 – March 2000**

Job position details available on demand.

EDUCATION

University of Zurich
PhD in Computer Science, in progress
École Polytechnique Fédérale de Lausanne
Master in Computer Science, October 2015, Grade 5.6/6.0
Berufsakademie Heidenheim
Dipl.-Ing. (eq BS) in Computer Science, September 1998

PUBLICATIONS

Equalizer: A Scalable Parallel Rendering Framework, Stefan Eilemann, Maxim Makhinya, Renato Pajarola, IEEE Transactions on Visualization and Computer Graphics, vol. 15, no. 3, pp. 436-452, May/June 2009
Direct Send Compositing for Parallel Sort-Last Rendering, Stefan Eilemann, Renato Pajarola, In Proceedings Eurographics Symposium on Parallel Graphics and Visualization, May 2007
Cross-Segment Load Balancing in Parallel Rendering Fatih Erol, Stefan Eilemann, Renato Pajarola, In Proceedings Eurographics Symposium on Parallel Graphics and Visualization, April 2011
Fast Compositing for Cluster-Parallel Rendering, Maxim Makhinya, Stefan Eilemann, Renato Pajarola, In Proceedings Eurographics Symposium on Parallel Graphics and Visualization, pp. 111-120, May 2010

SELECTED PROJECTS	<p><i>Blue Brain Visualization Software</i> github.com/BlueBrain</p> <p>Leading the development of various visualization applications and related libraries: Tide, a software for collaborative tiled display environments, Livre, a large-scale interactive volume rendering engine, Brayns, an interactive raytracer, and RTNeuron, an OpenGL-based renderer for brain simulation data (not open source).</p>
	<p><i>RTT Scale</i> www.rtt.ag</p> <p>Lead the RTT Scale project from 2007-2011, from prototype to productization and customer roll-out, creating a distributed rendering module for RTT Deltagen. Extended the initial product over multiple release cycles to support a wide set of features, e.g., interactive CPU and GPU based raytracing, multi-view rendering, cutting-edge immersive scenarios and advanced networking support such as InfiniBand and reliable multicast.</p>
	<p><i>Equalizer Parallel Rendering Framework</i> www.equalizergraphics.com</p> <p>Initiated the Equalizer project in 2005, creating the standard framework for parallel OpenGL applications. Leading the research and development of an industrial quality open source project. Managing a variety of software developers, driving the open source community and providing services to commercial users of Equalizer.</p>
REFERENCES	References are available on request.