

Stefan Eilemann

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PARTICULARS	Date of Birth	9th August 1975
	Birth Place	Wittenberg, Germany
	Nationality	German, Swiss
	Languages	German (native), English (fluent), French (good)
	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	<ul style="list-style-type: none">• 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++, Python, CMake and git in various programming environments• Software development methodology during the whole lifecycle, ranging from requirements analysis, specification, design, implementation to documentation, education, debugging, profiling and support• Broad knowledge of operating systems: Mac OS X, Linux, Windows, Irix	
EXPERIENCE	<i>Visualization Team Manager</i> Lausanne, Switzerland	Blue Brain Project, EPFL May 2011 – current
	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.	
	<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>CEO and Founder</i> Neuchâtel, Switzerland	Eyescale Software GmbH January 2007 – current
	Founded Eyescale in January 2007. Lead developer of the Equalizer parallel rendering framework, the Collage network library and other related libraries. Deploying Equalizer in existing ISV applications to scale the display size, performance and visual quality. Software architecture, design and development, hardware and software consulting for multi-GPU workstations, graphics clusters and Virtual Reality.	

Senior Software Engineer, 3D Graphics
Neuchâtel, Switzerland

Tungsten Graphics
January 2007 – June 2007

Software consultant for visualization cluster software. Ported Equalizer to Windows XP, ported Chromium to Mac OS X and demonstrated various unmodified OpenGL applications on a large-scale display wall at WWDC07.

Senior Software Engineer
Neuchâtel, Switzerland

Esmertec AG
January 2004 – September 2005

Developed Java software in Esmertec's R&D group which enables user interface customization on mobile devices and desktops. Designed and implemented a fully functional 3D phone simulator for customer presentations.

Senior Software Engineer
Neuchâtel, Switzerland

Silicon Graphics, Inc.
August 2000 – December 2003

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

Software Engineer
Munich, Germany

Freelancer
April 2000 – July 2000

Software Engineer
Wessling, Germany

Intec GmbH
October 1998 – March 2000

Job position details available on demand.

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

EDUCATION *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
Lucas-Cranach-Gymnasium Wittenberg
Abitur (university entrance qualification), June 1994

SELECTED PROJECTS *Blue Brain Visualization Software* github.com/BlueBrain

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).

RTT Scale www.rtt.ag

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.

Equalizer Parallel Rendering Framework www.equalizergraphics.com

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.

REFERENCES References are available on request.