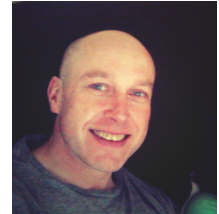


Lindsay Kay - 3D Web Developer

Personal Information

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Summary

Freelance 3D software engineer providing Web-based solutions for visualization in BIM, CAD, medicine and architecture; open source contributor; living in Berlin, Germany since 2011, originally from Christchurch, New Zealand.

Education

2000–2004 **BSc, Computer Science**, University of Canterbury, Christchurch, New Zealand
◦ Course tutor for papers on software engineering and algorithms

Selected Open Source Projects

- 2015–present **xeogl** - open source WebGL-based 3D visualization library for STEM
◦ Powers the BIMSURFER, BIMData and SolidComponents 3D viewers
◦ xeogl.org
- 2015–2017 **BIMSURFER** (V2) - WebGL-based 3D viewer for BIMServer - the first open source tool for Web-based visualization and evaluation of Building Information Models (BIM)
◦ Powered by xeogl
◦ bimsurfer.org
- 2007–2016 **SceneJS** - one of the first widely-used open source WebGL 3D engines (now retired)
◦ Private optimized fork powers the BioDigital Human
◦ scenejs.org

Work Experience

- 2017–2018 **WebGL Developer** *Move to BIM*, Lyon, France. Built the WebGL-based 3D viewer within the BIMData BIM visualization platform.
◦ Powered by xeogl
◦ Case study: xeolabs.com/portfolio/bimdata
- 2018–2018 **WebGL Developer** *SolidComponents*, Halmstad, Sweden. Built the WebGL-based 3D CAD (3DXML) viewer within the SolidComponents™ online product catalog.
◦ Powered by xeogl
- 2010–2018 **WebGL Developer** *BioDigital Systems*, New York, New York. Built the core WebGL-based rendering technology within the BioDigital Human, the leading online 3D platform for the exploration of anatomy, medical conditions and treatments.

- o Lead 3D development (2010-2015)
- o Over three million subscribed users
- o Won the 2015 Webby Award for best Healthcare Website
- o Won the 2013 SXSW Classic Interactive Award
- o Based on private optimized fork of SceneJS
- o Case study: xeolabs.com/portfolio/biodigital-human
- 2018–2018 **WebGL Developer** *TNO*, Amsterdam, Netherlands. Contributed to BIMSURFER V3, a cutting-edge WebGL2-based 3D viewer that renders massive tiled models streamed from BIMServer.
- 2015–2017 **WebGL Developer** *TNO*, Amsterdam, Netherlands. Built the WebGL-based 3D viewer within BIMSURFER, the first open source tool for Web-based visualization and evaluation of Building Information Models (BIM).
 - o Powered by xeogl
- 2008–2010 **Java/JavaScript Developer** *SMX*, Auckland, New Zealand. Worked in an agile team developing and maintaining the management dashboard for New Zealand's leading cloud-based email security service.
- 2005–2008 **Test Engineer** *AIOtec*, Christchurch, New Zealand. Helped verify the power efficiency and structural safety of WindFlow Technology's 500kW turbines.
- 2001–2003 **Java Developer** *R.A. Ward Ltd.*, Developed a Java-based time-tracking tool used by agricultural inspectors throughout New Zealand, part-time while studying.
- 1997-2001 **Web Developer** *Online-World Ltd.*, New Zealand & San Diego. Web development and operations support.

Talks & Publications

- 2015 **The xeogl & SceneJS WebGL Libraries**, *Berlin WebGL Meetup 2015*
- 2012 **SceneJS - A WebGL-Based Scene Graph Engine**, *OpenGL Insights 2012*
 - o xeolabs.com/pdfs/OpenGLInsights.pdf
- 2010 **SceneJS WebGL Library**, *WebGL Camp #1, Stanford University, 2010*

Skills & Background Knowledge

Technical skills (*recent*)

3D graphics algorithms
 3D application and engine architecture, API design
 WebGL, WebGL2, OpenGL, glTF, xeogl
 MedViz, IFC, BIM, BIMServer, BIMSURFER
 C, C++, Java, JavaScript/ECMA6, HTML, CSS, Git, Linux, Open Source
 Remote working, freelancing, technical writing

Interests

- Skateboarding (oldschool!)