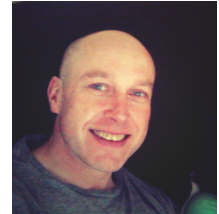


Lindsay Kay - 3D Web Developer

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.

Recent Work Experience

- 2017–2018 **WebGL Developer** *Move to BIM*, Lyon, France. Built the WebGL-based 3D viewer within the BIMData BIM visualization platform.
 - o Features include cross-sections, annotations, measurements, ViewCube, BCF and a glTF-based geometry pipeline
 - o Powered by xeogl
 - o 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.
 - o 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 Delivering high-detail, web-based anatomical visualizations
 - 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

- 2016–2016 **WebGL Developer** *zSpace*, Sunnyville, CA. Commissioned by zSpace to build xeogl-based demos for the zSpace 300 mixed-reality 3D display.
- o Demonstrated in the zSpace booth at GDC 2017
 - o Case study: xeolabs.com/portfolio/xeogl-and-zspace

Selected Open Source Projects

- 2015–present **xeogl** - open source WebGL-based 3D visualization library for STEM
- o Powers the BIMSurfer, BIMData and SolidComponents 3D viewers
 - o Physically-based rendering
 - o Interactively renders millions of objects
 - o Imports glTF, OBJ, 3DXML, STL
 - o 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)
- o Powered by xeogl
 - o bimsurfer.org
- 2007–2016 **SceneJS** - one of the first widely-used open source WebGL 3D engines (now retired)
- o Private optimized fork powers the BioDigital Human
 - o scenejs.org

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*

Education

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

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