

# William Kiefer

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## Education

### A.B., PRINCETON UNIVERSITY, 2004

Computer Science, *Magna Cum Laude*  
Certificate in Musical Performance

## Employment

### FREELANCE DEVELOPER, 2009

Hired by GoBible, LLC. to design and develop an audio and text bible application for the iPhone OS. Features include full-text live filter search, 70+ hours of audio and text synchronization, stored bookmarks with notes, bible-in-a-year study plan, topic and story indexes.

- Objective-C, Cocoa Frameworks

### SOFTWARE DESIGN ENGINEER, MICROSOFT, 2004-2009

*Windows Media Player 11, Windows Vista*

Program architecture and user interface design for WMP 11 on XP and Vista. Key new feature areas: rewrote library user interface and architecture, application back/forward navigation, metadata namespace, simultaneous multi-cd ripping.

- C++, COM, ATL, Win32, Javascript.

*Zune Media Player*

Primary user interface design and implementation for Zune 1.0. Worked on managed to native interop and library design for Zune 2.0. Member of the six person Zune Gems "ninja" team organized to help develop needed projects for the Zune ecosystem.

- C#, .NET, ASP.NET, HTML/CSS, C++, COM, ATL, Win32.

*Windows 7, Windows Media Experience, Windows Media Player 12*

Owner for all of the WMP library mode UI and architecture, RAM cached query engine and top-level database architecture. Key new feature areas: playlist history, WMP's query-based jumplist integration, UI performance improvements, new treeview and listview enhancements.

- C++, COM, ATL, Win32.

## Honors

Sigma Xi, Princeton Chapter, Thesis Book Award 2004

## Research

### RESEARCH ASSISTANT TO BRIAN CURLESS PH.D., UNIVERSITY OF WASHINGTON, 2008

Optimizing an existing algorithm and improving the performance of the codebase for a multi-view stereo reconstruction comparison project. Details of the project are found located at <http://vision.middlebury.edu/mview>.

### SENIOR THESIS, PRINCETON UNIVERSITY, 2003-2004

*Intelligent Scissoring for Interactive Segmentation of 3D Meshes*. Advisor: Thomas Funkhouser Ph.D.

*Abstract:* Many algorithms and tools exist for the segmentation of 3D meshes. However, they are labor intensive and lack the simplicity of 2D image segmentation systems, limiting them to a small set of expert users. This paper introduces a new segmentation tool which aims for accurate and flexible interactive mesh segmentation, yet maintains an easy-to-use interface suitable for novices and experienced users alike. Extending the stroke based interface of 2D intelligent scissoring, 3D intelligent scissoring tackles the difficulties that arise from three dimensionality while at the same time gives the user more freedom than in previous systems. Intelligent scissoring obtains desirable segmentations easily and interactively, and presents many possibilities for future work within the field.

### JUNIOR INDEPENDENT WORK, PRINCETON UNIVERSITY, 2002-2003

*Real-Time Image Registration and Noise Reduction*. Advisor: Szymon Rusinkiewicz Ph.D.

*Acquisition of Curves from Hand Drawn Line Art*. Advisor: Adam Finkelstein Ph.D.

## Publications

Thomas Funkhouser, Michael Kazhdan, Philip Shilane, Patrick Min, William Kiefer, Ayellet Tal, Szymon Rusinkiewicz, and David Dobkin. *Modeling by Example*, *ACM Transactions on Graphics* (SIGGRAPH 2004), August 2004.