Peter G. Sibley

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Technical Skills   *General:* 3D Computer Graphics, Gestural UI, Vision, Numerical Algorithms

Languages: C++ , Objective-C, Javascript, C# , Matlab

Frameworks: Cocoa Touch, C++ BOOST & STL, .NET, jQuery

Graphics APIs: UIKit, OpenGL ES, WebGL, Silverlight, XAML, DirectX

Tools: XCode, Visual Studio, Linux GCC Tool-chain, Git, Perforce

Professional Experience

Senior Software Engineer   May 2012 – present
FiftyThree, Inc (New York, NY)
I joined FiftyThree as their first full time iOS engineer and developed large parts of FiftyThree's core product: Paper by FiftyThree. I also worked on all phases of FiftyThree's hardware development of FiftyThree Pencil; an iPad stylus. Paper by FiftyThree has received a Apple design award and Apple's App of the year. Paper by FiftyThree has been installed on more than 17M iOS devices. Pencil by FiftyThree is the 2014 winner of "Best Design Crunchie" and IDEA silver for Computer Equipment.

- Developed UI for collaboration related features in Paper by FiftyThree and real time sync related features.

- Architected FiftyThree's ThinkKit features , our geometric shape recognition features and managed our release. Contributed to algorithmic aspects as well.

- Developed the FiftyThree Pencil SDK for iOS and supported integrations with Adobe Draw & Illustrator, Microsoft OneNote, ProCreate, and other high profile iOS apps.

- Managed the development and integration of the FiftyThree Pencil Palm rejection technology and gesture technology in Paper and our SDK.

- Supported new hardware & interaction prototypes on iOS, android and other platforms.

- Lead efforts for improving our engineering teams tooling with linters, clang-format, and clang modernizer.

- Lead the development of the OpenGL based ink rendering - a core part of Paper by FiftyThree. I also migrated the rendering architecture from a software based CoreGraphics rendering system to a GPU/OpenGL based system.

- Mentored and on-boarded new iOS engineers, helped scale out the team and conduct interviews; and worked to ensure good software engineering practices and patterns.

- Developed the first localized version of Paper and automated our localization processes.

- Developed UI updates for iPhone expansion of Paper.

Senior Software Development Engineer   April 2008 – March 2012
Microsoft: Live Labs & Bing Maps & Bing Mobile (Seattle, WA)
I joined Microsoft after graduate school. Most of the projects I worked on were in the geo, mobile, and photo related space; where my background in computer graphics aligned well with the technical challenges of the projects.

- Architected and prototyped a graphics engine that abstracts HTML5 and WebGL, which will be used for future bing maps and augmented reality applications.
- Developed the Bing Streetside AJAX control which appeared on Bing Maps.
- Developed reusable UI components for the streetside feature in the Bing 2.0 iOS app and the Photosynth iOS App.
- Developed the Photosynth Panorama Feature in the silverlight client.
- Shipped the Photosynth and map integration in the silverlight-based Bing maps explore website
- Lead developer on an editing and highlighting feature which enabled user annotations in photosynth. This increased the quality of photosynth content and engagement.
- Worked on the small team of engineers,researchers, and designers that shipped the first version of Microsoft Photosynth. My role was developing UI, rendering clients, and maintaining some of the computer vision code.

Software Engineer - Intern   Summer 2007
The MathWorks (Natick, MA)

- Implemented in C++ on top of a new scene-graph library various built-in plotting commands in Matlab. This work, finally, shipped as part of the HG2 updates to MATLAB in 2014.
- Developed characterization and unit tests while working with the legacy code-base to ensure backwards compatibility.

Research and Teaching Assistant   Sept 2003 – Jan 2007
Brown University, Department of Computer Science (Providence, RI)

- Developed various algorithms for geometry processing and surface reconstruction.
- Developed terrain rendering software from DEM and satellite imagery.
- Served as a teaching assistant for the graduate-level graphics (CS224) course.
- Implemented an interactive 3D MRI sketch based visualization application .
- Took courses in computer graphics, machine learning, computer vision, and applied mathematics.

Software Engineer - Intern   Summer 2006
NVIDIA (Santa Clara, CA)

- Developed image processing demos using OpenGL-ES running on an NVIDIA GoForce 5500 GPU and linux ARM handset.
- Analyzed and optimized GPU shader assembly and ARM assembly to resolve performance and driver issues.

Education
Brown University, Providence, RI
Sc. M. Computer Science
August 2003 – May 2005

Clark University, Worcester, MA
Bachelor of Arts double major Mathematics and Computer Science
August 1999 – May 2003

References
Available on request.