Ken Heglund

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Professional Objective

To contribute to the development of great OS X applications that allow customers to focus on their own productivity instead of the software they are using, and to continuously expand my own knowledge and ability in the field of software development.

Employment History

2004 – Present   **OrderedBytes** — *Plantation, Florida / Redmond, Washington*
Independent Software Developer

Developer of "ControllerMate", an OS X application that allows users to define custom keyboard, mouse, and MIDI actions that are triggered by inputs from various HID and MIDI devices. This is an application used primarily by photographers, audio/video editors, and gamers to employ a variety input devices to control their OS X applications.

Solely responsible for all aspects of application development and testing, website maintenance, and customer support. Collaborated with P. I. Engineering and SteelSeries ApS to incorporate compatibility with non-standard features of their respective devices into ControllerMate.

Major activities include implementing, testing, and maintaining:

- User-space applications to edit and perform a user's custom actions.
- OS X kernel extensions that implement virtual input devices and allow mouse/keyboard event customization.
- Web-based backend for automated fulfillment of purchases via FastSpring.

Development tools and technologies include:

- Swift, Objective-C, C, IOKit C++, Xcode, Subversion, git, bash
- Various OS X frameworks, primarily AppKit, Foundation, CoreGraphics, CoreMIDI, Kernel, and IOKit
- PHP4, MySQL 4.0/4.1

2010 – 2011   **Flying Meat Inc.** — *Everett, Washington*
OS X Programmer

Contributed to the development of "VoodooPad", a personal wiki application for OS X and iOS. Primary responsibilities included applying incremental feature improvements according to the product roadmap, and to investigate and fix bugs reported by end users.

Development technologies unique to this experience were iOS UI frameworks and SQLite via FMDB.

2007 – 2010   **Northwest Contracting Services** — *Redmond, Washington*
Microsoft Engineering Contractor

Provided engineering services to Microsoft's Portable Entertainment Group to support the Zune Third-Party Accessories program. Primary responsibility was to ensure that non-Microsoft Zune accessories were compatible with new and existing Zune devices and firmware.

Engineering activities included:

- Working with Microsoft hardware and firmware engineers to define test parameters for third-party accessories.
- Developing a Win32 / MFC program to validate an accessory's protocol implementation.
- Writing firmware for an accessory reference design implementing wired and IR remote control functions, media controls, and Xbox security chip authentication.
- Rewriting the protocol and electrical specifications for third-party accessory licensees.
- Defining test procedures and standards for accessories.
- Providing technical support directly to third-party accessory developers.

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1998 – 2004	**Concord Camera Corp.** — *Hollywood, Florida*
	Electronics Manager

Primarily responsible for the overall electronic hardware design of several digital cameras. Worked directly with OEM customers and contractors to define and achieve project requirements. Travelled frequently to engineering and manufacturing sites in Hong Kong and China to support production engineers. Visited a number of domestic and foreign supplier sites to evaluate potential partnerships.

Managerial activities included:

- Coordinating engineering activity between design centers in Florida and Hong Kong.
- Supporting production engineers in China.
- Performing technical analyses of proposed design requirements to assist senior management in deciding product strategies.

Engineering activities included:

- Development of control firmware for motorized focus and zoom lenses.
- Integration of major digital imaging sub-systems.
- Close cooperation with mechanical and optical engineers to meet design requirements.

1992 – 1998	**Haking Development Corporation** — *Elk Grove Village, Illinois*
	Senior Electrical Engineer / Electronics Engineer

Primarily responsible for the electrical design of 35mm and Advanced Photo System cameras. Engineering activities included:

- Establishing project design concepts and specifications.
- Design of camera circuitry and microcontroller firmware.
- Provided on-site support to assembly supervisors at facilities in Hong Kong and China.
- Design of analog and digital circuitry for performing light metering, distance measurement, shutter control, lens movement and film transport in 35mm cameras.
- Designed and developed camera control firmware for use with 4-, 8-, and 16-bit microcontrollers.
- Developed PC-based testing and calibration applications for use with custom test fixtures in development and production environments.

Education

1992	**B.S. Electrical Engineering** (GPA 3.4/4.0)
	Milwaukee School of Engineering (MSOE), *Milwaukee, Wisconsin*

Accomplishments

U.S. Patent #5,401,016 — *Automatic Baseball Ball and Strike Indicator*

A self-contained baseball home plate that employs ultrasonic sensing to determine the location of a thrown baseball. Originally a senior design project while at MSOE, this device was awarded "Best of Show" among a collection of approximately 30 competing projects. Involvement in this team effort included designing a portion of the control firmware and integrating the ultrasonic sub-system.

U.S. Patent #6,330,400 — *Compact Through-The-Lens Digital Camera*

A novel, low-profile digital camera containing an internal 3X optical zoom lens and near-eye liquid-crystal display. Involvement in this team effort included design and development of the lens control firmware, implementing the user interface, and integrating the various electronic sub-systems.

Private Pilot — *PP-ASEL*