

# Benjamin Eugene Key's Resume

**Benjamin Eugene Key**

**12343 Hunters Chase Dr. Apt 826**

**Austin, Texas 78729-7217**

**Home: (512) 250-2239**

**Mobile: (512) 773-0652**

**E-Mail: Ben.Key@YekNeb.com**

## Summary

A dedicated, self-motivated, and self-taught Software Engineer with demonstrated success in the design and development of Assistive Technology applications for Microsoft Windows operating systems. Sixteen years of experience in developing software using C++ and a deep understanding of using object-oriented design principles. Proven problem-solving skills. Proven ability to acquire knowledge about new concepts independently in a short amount of time.

## Qualifications

### Programming Languages

- C++17
- C++14
- C++11
- C++
- C#
- Python
- JAWS Scripting Language

### Markup Languages

- HTML 5
- HTML 4

- CSS
- Markdown

## APIs, Frameworks, and Libraries

- Win32 API (Windows Application Programming Interface)
- STL (Standard Template Library)
- MFC (Microsoft Foundation Class Library)
- ATL (Active Template Library)
- WTL (Windows Template Library)
- Boost C++ Libraries
- COM (Component Object Model)
- MSAA (Microsoft Active Accessibility)
- Microsoft SAPI (Speech Application Programming Interface) 4
- Microsoft SAPI 5
- Microsoft Speech Platform 11
- Vocalizer Expressive by Nuance

## Applications

- Microsoft Visual Studio 2017
- Microsoft Visual Studio 2015
- Microsoft Visual Studio 2013
- Microsoft Visual Studio 2010
- Microsoft Visual Studio 2005
- Microsoft Visual Studio 2003
- Microsoft Visual C++ 6
- Microsoft Embedded Visual C++ 4.0
- Perforce
- BugZilla
- Defect tracking application Track32 by Soffront
- Subversion
- GNU Make
- Internet Explorer
- Mozilla Firefox
- Google Chrome

## Operating Systems

- Microsoft Windows 10
- Microsoft Windows 8.1
- Microsoft Windows 7
- Microsoft Windows Vista
- Microsoft Windows XP
- Microsoft Windows 2000
- Microsoft Windows NT 4.0
- Microsoft Windows ME
- Microsoft Windows 98
- Microsoft Windows 95
- Microsoft Pocket PC 2003
- Microsoft Windows Mobile 6
- GNU/Linux
- Solaris
- iOS
- Android

## Other Skills

- WiX Toolset
- MSBuild
- Debugging and trouble shooting
- Remote debugging using the Visual Studio remote debugger
- Windows Hooks via Win32 API function SetWindowsHookEx
- MSAA Event Hooks via SetWinEventHook

## Experience

### Software Engineer

**May 2017 – Present**  
**TPG, a Vispero company**  
**Clearwater, FL**

<https://www.paciellogroup.com/>

- Continued to contribute to the development of JAWS and other Vispero products, with a focus on implementing features requested by and fixing bugs reported by enterprise customers of Vispero including Cerner, Morgan Stanley, and Nuance.
- JAWS Scripting for enterprise customers of Vispero.
- Provided guidance on adding accessibility features to products.
  - Foxit Software PhantomPDF
  - Nuance Power PDF
- WCAG Testing

## Software Engineer

**January 2000 – May 2017**

**Vispero**

**Saint Petersburg, FL**

<https://vispero.com/>

Used my knowledge of C++, Object Oriented Programming techniques, Microsoft Windows Internals, Win32 API, STL, MFC, ATL, WTL, COM, MSAA, Microsoft SAPI 4, Microsoft SAPI 5, Microsoft Visual Studio versions 6 through 2017, and debugging and troubleshooting in carrying out the following responsibilities. These responsibilities included the implementation of new product features, refactoring of old code, and fixing bugs.

- Played a major role on the Infrastructure team, which is responsible for the development of shared components that are used by two or more of the products developed by Freedom Scientific.
- Played a major role on the teams responsible for the development of several of the Assistive Technology applications developed by Freedom Scientific including JAWS, a screen reader, and MAGic, a screen magnifier.
- Played a lesser role on the teams responsible for the development of the PAC Mate, an accessible Pocket PC device, OpenBook, a scanning and reading application for the blind, and FS Reader, an accessible DAISY book reader.
- Major Accomplishments
  - Worked on a project to produce a light weight version of JAWS for use on Kiosk systems and restricted security environments.
  - Implemented a Windows kernel driver that plays a vital role in the authorization system used by Freedom Scientific. Prior to being assigned this task I

had no knowledge of how to write kernel mode drivers. In less than one week I had taught myself the skills required to write a Windows kernel driver and completed the first version of the driver.

- Worked on a joint project with Freedom Scientific and IBM to make the IBM Host-On-Demand software accessible via JAWS.
- Worked on a joint project with Freedom Scientific and Sun Microsystems to make Java Swing applications accessible to the JAWS and MAGic user.
- Worked on a joint project with IBM Japan and Freedom Scientific to convert JAWS to a Unicode application and to develop the first Japanese version of JAWS.
- Served as the lead developer in the development of the following JAWS and MAGic features that are noted on the Freedom Scientific What's New web pages:
  - ★ JAWS - Say All Command and SAPI 5 Voices  
[http://www.freedomscientific.com/fs\\_products/software\\_jaws8ofea.asp#SayAll](http://www.freedomscientific.com/fs_products/software_jaws8ofea.asp#SayAll)
  - ★ JAWS - Alternate Say All Command  
[http://www.freedomscientific.com/fs\\_products/software\\_jaws8ofea.asp#AltSayAll](http://www.freedomscientific.com/fs_products/software_jaws8ofea.asp#AltSayAll)
  - ★ MAGic - New Speech Engine  
[http://www.freedomscientific.com/fs\\_products/software\\_MAG100.asp#features](http://www.freedomscientific.com/fs_products/software_MAG100.asp#features)  
Section "New Speech Engine"
  - ★ MAGic - Individual Voice Settings  
[http://www.freedomscientific.com/fs\\_products/software\\_MAG100.asp#features](http://www.freedomscientific.com/fs_products/software_MAG100.asp#features)  
Section "Individual Voice Settings"
  - ★ MAGic - Voice Profiles  
[http://www.freedomscientific.com/fs\\_products/software\\_MAG100.asp#features](http://www.freedomscientific.com/fs_products/software_MAG100.asp#features)  
Section "Voice Profiles"
  - ★ MAGic - JAWS and MAGic Handshaking  
[http://www.freedomscientific.com/fs\\_products/software\\_MAG100.asp#features](http://www.freedomscientific.com/fs_products/software_MAG100.asp#features)  
Section "JAWS and MAGic Handshaking"

## Associate Software Engineer

**January 1999 - January 2000**

**Henter-Joyce**

**Saint Petersburg, FL**

- Responsible for customizing JAWS and MAGic using a proprietary scripting language developed by Henter-Joyce for better interoperability with various applications that run under Microsoft Windows.
- Major Accomplishments
  - Took the initiative to write a much-needed system diagnostic application for the technical support team of Henter-Joyce. This application could be run by users who needed technical support for one reason or another to supply the technical support team with vital information about their computer system. This application was developed during my spare time and served as a project in which I could apply my knowledge as I taught myself C++. This application was distributed by Henter-Joyce for several years with JAWS and MAGic and was used during technical support calls as an essential part of resolving the user's problems.

## Education

### University of South Carolina

**August 1997 - September 1998**

**Columbia, South Carolina**

Pursued an undergraduate degree in Mechanical Engineering. No degree was obtained.

### Midlands Technical College

**August 1994 - May 1997**

**Columbia, South Carolina**

General studies with a focus on Biology. No degree was obtained.