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[Code Samples \(joerohde.github.io\)](https://github.com/joerohde)

To work in a challenging, modern environment doing design, development, and analysis. To work in a close group with a strong technical background preferably in a leadership role. To work on products that target a developer audience or emerging user marketplace.

W O R K E X P E R I E N C E

HBO (Time Warner [AT&T])

12/16 – Present

Seattle, WA

Senior Staff Engineer.

Services Software: Designed and implemented an experimentation service on an AWS infrastructure. Provide edge endpoint to HBO clients to retrieve experimental features list and enrollment status. Designed and oversaw implementation of secondary back end service processing our data pipeline to drive impression (enrollment) and conversion(outcomes) of experiments to data analysis engines.

Client Software: Implement and maintain abstraction layer to custom React-like JS DOM for HBO Go/Now/Max. Includes Java V8 engine with JNI bridge for android. Swift Layer for Apple, and browser web variants for PS4, UWP Xbox, and Tizen.

Design and Lead 'bootstrapper' effort. Allows for hot swap/load of JS HBO stream apps without updating from App Stores. Allows for 'hot' updates without the overhead of full client releases.

Microsoft

Redmond, WA

Software Developer. Microsoft Office for iOS and OSX. Primarily working with the font subsystems resolving issues around GDI/Uniscribe/DWrite vs ATSUI/CoreText and bringing things up to date. Additionally working on the product licensing system.

Software Developer. Design and implementation of a sharding system for distributing databases that follow a many-read many-write pattern for the products in the Bing advertising group. The system is a slight variation of consistent hashing so as to enable resizing the sharding environment with reasonably minimal perturbation of pre-existing data.

Valve Software

7/09 – 11/12

Bellevue, WA

Software Developer. Implemented Windows 7 features in the Valve [Steam](#) Client. Owned or contributed to a significant portion of the work to bring Steam to the Apple Macintosh including DRM, Anti Cheat, performance optimizations, and retail installation. Implemented 64 bit versions of those projects. Contributor on the team involved in redesigning the client and server side of Steam's content management system.

SNAPin (purchased by Nuance Communications)
Bellevue, WA

7/06 – 6/07, 8/08 – 7/09

Director, Client Development. Design and lead development team in shifting script execution from a parse interpreter to a bytecode based engine. Allowed for multiple application execution, improved performance, reduced memory pressure and be well behaved in smaller cooperatively multitasking environments.

Redesign the mobile device abstraction layer to decrease time to market when porting product to new device environments.

Senior Software Developer. Implemented improvements and extensions of ECMAScript engine implemented in C++ targeting mobile phones. Tasks completed include:

Authored a high level remote ECMAScript debugger in Eclipse. Supports on-phone execution of script with breakpoints; step in/over/out; variable inspection and full call stack.

Replaced the script engine parser's default memory allocator with an arena-style allocator for speed and locality; Re-implementing our small block allocator to 'thread' it's free-list through the pre-allocated heap instead of using an extra look aside buffer to conserve space and locality.

Implemented many small profiler driven improvements. These include struct layout changes, replacement of multiple inheritance with template parameterization as makes sense, and elimination an extra layer of redirection for strings contained in our 'var' objects.

Microsoft
Redmond, WA

6/98 – 7/06, 6/07– 8/08

Average Rating: 3.92

6/2007-8/2008: Senior Program Manager in [VSTS Developer SKU](#). Brought in to drive, and assist in the design and development of a new code analysis infrastructure based on Microsoft's [Phoenix](#) code generation technology. Key goal was around extending the design of code generation based API to a more general code analysis framework. Secondary tasks included: Negotiating internal contracts with the Phoenix and Visual C++ teams. Partnering with external teams on improved SDK design and working towards unification of security requirements across Windows, DevDiv and Office.

1/2005-7/2006: Tech/Dev Lead in VSTS Test SKU. Owned automatic test generation product. Redesigned code generation to run against an abstracted type system supporting C#, VB and C++. Designed a robust mechanism for accessed private members of types at test runtime. Designed system that drives the synchronization of the VS Type System and the VSTS Test View of current Unit Tests. Drive VSTS Unit Testing adoption within DevDiv.

12/1999-12/2004: SDE/T Lead for various teams in Visual Studio over the consecutive product cycles. Dynamic Analysis/Code Profiler team within Visual Studio Enterprise. Technical leadership of test efforts for Visual Studio's code and performance profiler for x86, x64, and MSIL technologies. In addition, team ownership of code coverage engine technologies for the same platform architectures.

VC++ x86 Optimizer/Code-Generation back end team of the C++ compiler. Drove validation and features for SSE and SSE2 floating point code generation in x86, which had been a cut feature before I came on-board. Drove validation /GS security work. Coordination of cross team efforts on emerging x64 and Itanium efforts.

VC++ MFC & ATL Libraries. Responsible for coordinating development of new testing; coordinating service pack releases; porting to ia64; and individual reviews in the group.

3/98-11/99: SDE/T VC++ - C# Group QA. Wrote the harness for test automation of the first C# compiler. Member of initial language design team focused on retaining the best reasonable C++ features. Wrote Red/Black trees in several languages to compare/contrast performance characteristics of C#, COM and native C++.

VC++ Front End QA. Designed and Implemented test suites for attribute testing in the front end of the compiler. This included the attribute infrastructure as well as all embedded IDL attributes.

Unlimited Solutions

Columbus, OH

3/96 – 6/97

Director, Systems Infrastructure

Designed and led the implementation of a client/server infrastructure for a point of sale system. The infrastructure allows clients dynamically call functions in the server without rewriting RPC MIDL code. It also supports a variable number of parameters, and runtime parameter type checking and validation on both the input and output arguments.

Designed and led the team to implement a database abstraction layer that was focused on performance while still being robust in the face of schema changes.

Provide technical leadership and solutions to younger company members not as experienced with C++, Windows NT, network programming, and Microsoft programming techniques.

CompuServe

Columbus, OH

5/91 - 3/96

Systems Software Developer

Design and implementation of CompuServe forum messaging server in a Windows NT client/server based system using an object oriented database for data storage. Design and implementation of the communications infrastructure used for forum messaging, libraries, and membership.

Responsible for designing and implementing the core object oriented component to a new multi-threaded architecture project in C++ and Windows NT which acts as a router and information provider to high layer data applications (A proprietary redirector like PPP).

Past projects also included designing and implementing low level transport and packet accessing libraries. Ported most of CompuServe's old systems libraries to the UNIX environment. Implementation of low layer protocol libraries for proprietary remote UI system. Designed the server side UNIX and NT versions of these UI libraries.

Battelle Memorial Institute

Columbus, OH

6/89 - 3/90, 7/90 - 5/91

Research Intern - Implemented ROM software measuring external systems and provided real-time feedback for a jet fighter system. Team member on implementation of a hybrid UNIX/VMS system which provided flight planning, route calculation, and threat analysis.

Research Intern - Software: Network configuration, Apollo/Domain OS installation and administration. Developed customer tracking application for internal use.

The Ohio State University

Columbus, OH

8/88-6/89, 3/90 - 7/90

System Analyst – Lead system administrator
for the Electrical Engineering department's Sun Workstation environment.

Programmer - Wrote assembler code for an NCR dot lead scanner. Used MVS
OS and JCL for mainframe data manipulation programs.

E D U C A T I O N

The Ohio State University

1986 - 1991

Columbus, OH

BS/CIS, Computer Science, March 1991, GPA 3.6 Core in the college of
Engineering; 3.1 Overall.

A D D I T I O N A L I N F O R M A T I O N

Obtained DOD Secret level clearance while working for Battelle Memorial
Institute from 7/90 to 5/91.

Proficient in Typescript, Javascript, C++, C, and C#. Strong working knowledge
of Java and Swift. Atrophied skills: Objective C, Intel x86 and Motorola 680x0
assembler.

Extensive Programming experience with iOS/macOS/macOS, Android
Frameworks, Win32 (single and multithreaded), and UNIX. Programming
experience with React, OpenGL, Win16/Win32 GUI, DOS, Motif/X, and VMS. And
like all developers, TOPS-10 and Apollo Domain/OS.