

# Fred Weigel

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## SKILLS

### PROGRAMMING SKILLS

Assembler and Optimization  
Multi-threading and concurrency issues  
C, C++ portability issues  
Driver design, implementation, debugging  
Multi-platform and large scale systems

### MANAGEMENT

Founded and ran successful company for 8 years, developing product in a new market.  
Staffed and managed team of 10 members for fabless semi.  
Schedule and track project taking 10 man-years.

### LANGUAGES

C, C++, Assembler  
JAVA (J2ME), Shell, CGI  
HTML and TROFF markup  
Postscript PDL, Pascal, Fortran  
Smalltalk, BASIC, REXX, SQL

### ARCHITECTURES

x86, 68000, AMD64  
Z80, 1802, 6502, 6800  
Sparc, UltraSparc, MIPS, Alpha, PowerPC

### OS

Embedded Linux  
Linux 2.0-2.6  
Solaris 7, 8, 9, 10  
AIX, HP/UX  
Windows 3.x, 9x, NT, XP, 2K, CE  
OS/2 1.x, 2.x

### TOOLS

GCC, VIM, CSCOPE  
Redhat Source Navigator  
Sun Workshop  
MS Visual C++  
Perforce, SUN Source Manager  
DBX, GDB, DDD  
Microsoft Project

### HARDWARE

Design simple interfaces (SCSI, Floppy, Parallel typesetter driver, custom serial)  
ATI Mach8, Mach32, Mach64, Xilleon (X226B11/B12)  
3DFX Banshee, Intergraph TD100, Permedia II, S3 Virge  
PCMCIA (cardbus), ViXS Boxster  
Kasten Chase ACA2400 (2 FPGA, PowerPC crypto solution)  
Humphrey Ultrasound Biometer

Seeking senior individual contributor role in software engineering environment; designing, implementing software stacks from drivers through to applications and user interfaces.

Experience with full product cycle from developing proposals through implementing support infrastructure. Thrive in large team projects and mentoring environments. 10+ years working with C and Assembler. Embedded Linux on an HDTV device. Focus on customer needs, including setting up on-line support forum. Over 10 years experience scheduling and tracking projects consistently delivering on-time and on-budget results.

Designing and implementing re-entrant ROMable preemptive core for x86 in 4K of memory; embedded MIPS code on Linux; Solaris, Windows and Linux driver work; and small 68HC11 (and other) micro-controllers provides an excellent technical base for embedded development.

Valuable corporate environment experience gained working on large scale SUN systems, including TCO datacenter reduction (architecture), and performance problem resolution in the telcom area.

Lectured at SUN on OOP methodologies, and proper OOP design; as well as winning best roll-out presentation for Solaris 8 adoption.

### PATENTS

**USPTO 6,344,856** Text Optimization  
**USPTO 5,946,715** Page address space with varying page size and boundaries  
**USPTO 5,812,143** General pattern blit source type

### AWARDS

**Mach32** Best Product, PC/World; Runner-up, Ziff-Davis  
**ALL ChargeCard** Best Upgrade Product of the Year, Ziff-Davis  
**Chameleon Proofer** Favourable Mention, Seybold

## RECENT EMPLOYMENT EXPERIENCE

### Kasten Chase

2004-2005

Senior Developer

Designed software stack to allow encryption on Solaris, Linux, AIX and HP/UX platforms, utilizing ACA2400 FPGA based FIPS certified cryptographic engine. Implemented prototypes for concept validation. Implemented lock-free Solaris driver, and user level software stack, to enterprise production quality. Linux and AIX drivers based directly on Solaris driver model.

### Contractor

2003-2004

Working with clients (Oasis Semiconductor, Kasten Chase, ATI, SUN) implementing and optimizing systems. Designed, implemented and tested key product requirements for the next generation HDTV products. Analyze and optimize ISO J-BIG bi-level compression yielding a 10x improvement. J2ME based picture transmission application (cell phone). Detailed system analysis of telecom billing system resulting in proposal for targeted performance improvements for application scalability. Major Data Center Architecture plan developed for Charles Schwab (for SUN), detailing multi-year migration of 7000 servers.

### ViXS

2002-2003

Network Architect

Design and implement a network transport to support emerging video wireless market. Support multiple OS types – Windows 2K, XP, 98, CE and Linux.

### SUN Microsystems

1998-2002

Staff Engineer

Solaris support and kernel modifications including device drivers and kernel modules for specific custom needs. Drive several projects: A new approach to performance analysis using sinusoidal (FFT) methods, and a novel code documentation tool. PACP (Performance Analysis and Capacity Planning) service becomes #1 requested internal SUN training for field engineers. Custom engineering as a driver to enable new business, and overcome sales issues (Kodak, MasterCard PACRIM). Isolate Solaris kernel bug blocking scalability in massively threaded application allowing 2 orders magnitude improvement.

### Intelligraphics

1997-1998

Contractor

Develop and optimize graphics drivers. (for Chromatic Research, Creative Labs, Intergraph, 3DFX). Designed and implemented a general Windows DLL monitoring tool that allowed transparent measuring of arbitrary routines in the OS itself. Product sold as Intellibench; allowing customers to analyze competitive hardware and drivers.

### Hummingbird Communications

1994-1997

Senior Developer

Performance tuning of the companies flagship eXceed X-Server; porting the server to RISC platforms (MIPS, Alpha, PowerPC). Port Hummingbird integration and scripting tool. Headed the release of the Postscript to DigitalPaper documentation conversion utility.

### ATI Technologies

1990-1994

Group Lead, Graphics Drivers

Staffed and managed a team of 10 developers for core Windows driver development. Split out various sub-teams for additional work. Started and managed first relationships with outside software suppliers, reducing total development cost. Championed generic frame buffer drivers. Initiated on-line beta programme for drivers.

### Chameleon Laser Proofing Systems

1982-1990

Founder

Founded and ran successful startup company, serving 300 clients in the Fortune 500. Developed product for a new market. Became the benchmark in that market.

## EDUCATION

SUN Java Programming

SUN Solaris Internals

SUN Solaris Systems Administration

SUN Presentations Training

SUN Sigma 6 Quality Training

Seneca College – certificate programme in computer programming

## REFERENCES

Cyril Fernandez, Senior VP, Kasten Chase  
Rob Ewan, Technology Officer, Kasten Chase  
David Collier-Brown, Staff Engineer, SUN  
Andrew Wilson, Oasis Semiconductor  
Josh Grossman, SGI  
Ron Lipsius, DataCenter Works