

Brian E. Hall
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(Currently on sabbatical, May 2006)

SUMMARY

Senior Software Engineer with extensive experience with Java, C, C++, and Unix. Participated in award-winning team environments designing and developing small to large-scale projects. Worked on multiplayer networked and console games, developing strong skills with efficient code and in-depth working knowledge of network programming techniques.

Experience in:

- C, C++, Java, Python, Assembly, and various other programming languages
- Linux and other Unix derivatives
- Network software and protocol design
- 3D vector math and 3D algorithms
- Console game development
- Palm OS development and Palm hardware-level programming
- Threaded applications with pthreads
- Database programming
- Web interface implementation with dynamic HTML/PHP
- Optimized lightweight code and fast graphics rendering
- OpenGL programming

WORK EXPERIENCE

Z-AXIS/Activision, Senior Software Engineer, March 2002–April 2006

Modified particle system exporter in tools chain, implemented basic physics collision resolution, authored various camera behaviors, developed character control and melee combat systems, managed player physics substates, assisted with Havok physics engine integration, worked extensively with 3D math. Shipped games: BMX XXX, X-Men III.

Freestyle Interactive, Senior Software Engineer, December 1998–March 2002

Created interactive Java advertising and multiplayer games for award-winning agency. Emphasis on high-speed lightweight code, producing efficient real-time rendered graphics. Implemented the online multiplayer Java games Chain Reaction and Chain Letters for Sony's Station.com. Co-designed and authored a massively-multiplayer infrastructure in C and Java. Developed Palm OS games and applications, as well as custom libraries for fast blitting and infrared communication. Clients included Microsoft, Sun, Intel, New Line Cinema, CBS MarketWatch, Showtime, and CocaCola.

Hewlett-Packard, Intern, 1995–1997; Software Engineer, January 1998–December 1998

Created software for application response analysis in C for HP's OpenView division. Investigated and implemented techniques for non-invasive user application monitoring. Updated and improved APIs for accessing HP's employee database. Reengineered 4GL UIs that access calling card, cellular, and modem usage databases. Developed software to track ISDN usage for user billing. Designed web interfaces for accessing report data online.

Node-8 Web Services, Software Engineer, May 1995–May 1996

Designed and co-implemented a web-based ordering system for an online CD store, including customer front-end and database integration. Also developed administrative tools for managing music and sales databases.

Castle Rock Computing, Inc., Software Engineer, June 1994–January 1995

Implemented several TCP/IP Windows utilities using WINSOCK, including telnet, TFTP, and BOOTP. Developed a WINSOCK library using a lower-level network API.

EDUCATION

California State University, Chico

Bachelor of Science in Computer Science, Minor in Mathematics. Graduated Spring 1996.

Master of Science in Computer Science. Graduated with Distinction, Fall 1997. GPA: 4.0.

Projects and Interests:

- Beej's Guides: Authored an ongoing series of informational documents and popular tutorials dealing primarily with Unix network and system programming, and C programming.
- Teaching: Instructed a course in advanced Unix programming at Chico State, covering most Unix system and network APIs and development techniques.
- Cryptography: Implemented several cryptographic algorithms, including RC4, RC5, MD5, SHA, and the Blum, Blum, and Shub random sequence generator.