

Rob Wentworth

Software/Systems Design Consultant

Objectives I design and create clean, efficient, reliable applications with particular attention to both functional quality and aesthetic user interface details. All development under my direction is thoroughly tested, qualified, and documented.

Because I prefer to apply my skills and abilities toward cutting-edge technology, I often encounter new ideas and complex situations which few people have encountered before. However, I desire to solve common problems with standard solutions, apply my experience toward the optimal solution of tasks in progress, and implement creative solutions for new problems.

I focus primarily on software development for:

- Computer graphics, animation, and multimedia, especially Virtual Reality
- Motion controls and robotics, event driven applications, and embedded systems
- Communications, TSRs, and device drivers, including hardware debugging

Qualifications Experienced

More than 20 years experience in systems and applications development from mainframes to microcomputers, including embedded controllers, device drivers, networks and Internet, security systems, computer graphics, and multimedia.

Fluent in FORTRAN, COBOL, Visual BASIC, C languages, low level assembly languages, operating system and network protocols, and direct hardware programming of PC-compatible interrupt controllers, graphics, and I/O chips.

High Quality

My programs and systems have robust and straight-forward user-interfaces with good error-handling and recovery, maximizing performance and reliability while minimizing risk to data or hardware. The code I develop is well organized, self-documenting, and easy to understand.

I continuously educate myself and maintain a fresh perspective on current and new technologies to simplify tasks and enhance my abilities.

Effective

I use available resources, integrate past experiences, and gather new resources as they become available to work efficiently and effectively toward goals, with no supervision required. I divide goals into tasks, which allows me to build on previous solutions while completing higher priority goals first.

Education Computer Science

University of Minnesota Institute of Technology, Minneapolis, MN

Computer Programming Technology
Control Data Institute, Minneapolis, MN

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Accomplishments More than 20 years of professional experience in application development, including 1 year of teaching as a computer programming instructor. In addition, I have pursued computer programming as a hobby since the age of 12.

Interactive Applications

Developed video digitizing and image manipulation software for an infrared photo soil analysis and computerized farm fertilizer spreading system, including the color ink jet printer driver for color-coded soil maps.

Wrote an MS-DOS compatible API and menu driven file utilities for a UNIX-compatible operating system to allow easy porting of MS-DOS applications.

Business applications include accounting packages, business reports, statistical analysis, and video tape controller and animation software for desktop video applications.

Robotics and Controllers

As Senior Software Analyst at a robotics-oriented systems design and manufacturing company, I designed graphical user interfaces for computerized kiosk vending systems with full implementation of a high-speed graphics library for state-of-the-art digitized image and graphics font support. This library also supports mouse, touch-screen, and laser printer. Kiosk applications are event-driven, using state machines and multitasking, and must contain robust error handling and recovery.

Developed an integrated hardware and software control system for an offshore oil company's supertanker pumping station.

Designed an entire robotics system for custom machine tools, including motion control, the flexible non-technical user interface, multi-level communications and control network for multiple levels of embedded computers, and a remote communications spreadsheet motion-control programming and archival system. I am experienced in DC servo and stepper motor applications.

Implemented various GM Fanuc robot programs using the Karel language for palletizing and lens-coating applications.

Operating Systems and Drivers

Developed a multitasking kernel and numerous applications for operating systems including diagnostics and utility programs.

Wrote drivers for fixed and floppy disk drives, MIDI devices, terminal emulators, and Async, Bisync, SCSI, and other serial, parallel, and network communications protocols.

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