

# DAVID HAAKE

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## SENIOR SYSTEMS ENGINEER

### R&D / Clean Room / Emerging Technologies / Optical Discs / Hardware & Software Development Systems Architecture / Automation / Data Storage / Testing and Integration / Custom Applications

Known as an innovative and highly competent researcher and programmer, I am skilled at developing new products, realizing cost reductions and optimizing processes. I have designed and implemented software and hardware systems in process control, IT and data storage for companies such as 3M, Imation, Motorola and ITT.

- Researching and developing new products that meet or exceed technical requirements**
- Designing and installing creative, unique hardware and software applications**
- Creating and implementing customized programming solutions**
- Applying technical expertise to improve current and emerging media data storage systems**

My extensive technical expertise includes, but is not limited to, multiple SQL database servers, numerous web and RIA technologies, various legacy and web-based programming languages, network protocols, test procedures, and hardware design.

As a creative, efficient and self-motivated engineer, my quick grasp of in-depth technical matters and strong analytical skills enables my proven success at getting the job done. I am a recognized authority in optical media who easily relates to people at all levels, communicating in a straightforward manner with a good sense of humor. My **BSEE** was earned at Purdue University. I am resourceful, respected and enthusiastic about my work.

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## SELECTED ACCOMPLISHMENTS

**Custom Software Applications.** Web server with very small footprint had to allow for direct hardware interface using a single code base for Windows, Macintosh and Linux. Designed, coded, debugged and tested a single web server that met the requirements for all three operating systems. Developed algorithms and interfaces for dealing with hardware issues. Created user-friendly system that required minimal training.

**Human-Machine Interface/RIA Applications.** Organization required MMI/HMI that allowed customer to interact with educational simulators, download data, print reports and provide analysis using historical data. Designed system architecture based on marketing research. Developed complete software package functional across multiple product lines and operating systems. Interfaced RIA and corporate website for product support.

**Cost-Saving Process Improvements.** Optical media master production was reaching capacity. Analyzed software and equipment, choosing to update processes in-house. Rewrote operations software for laser benches, installing new real time data formatting front end. Improved productivity eight-fold, saving \$16M in capital expenditures.

**Research Operations.** Lab project needed to bring untested optical density measurement subsystem into operation with hardware that had no software or data acquisition interface. Designed all of the data acquisition interfaces and software algorithms to convert raw data into process control parameters. Developed real time process control system that greatly decreased cost of production while increasing the product yield and quality.

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## CAREER SUMMARY

**R&D Product Development Specialist,** Inspection & Technology Services, (high tech consulting group), 2004 to present. Provides general, technical and specialized consulting services for computer software and hardware systems, optical media mastering and process development for many different companies.

**Chief Engineer,** Hide & Seek Technologies, (startup optical media firm), 2001 to 2004. Directed engineering for the design, implementation, and testing of new Digital Rights Management (DRM) technologies related to content protection on optical media. Conducted research on emerging technologies.

**Senior Engineer,** Imation, (\$4B computer backup company), 1996 to 2001. Directed IT support for all equipment in optical lab. Developed front-end data encoding systems. Integrated all equipment and test functions in master production to support production of CDRW media. Worked R&D related to IP for magnetic and optical media.

**Earlier: Advanced and Senior Engineer,** 3M, (\$21B high tech corporation). Designed automation and control systems, implementing and maintaining tech service for CD mastering. Directed CD mastering engineering group. Wrote process and control standards for ISO 9000 certification. Managed production and end of line test equipment. Supported R&D as data systems and format expert.

**Previous: Engineer,** Motorola. Designed and implemented human machine interface (HMI) for cellular central office. **Engineer,** International Telephone and Telegraph. Maintained IO systems of class 4/5 central office exchange. Installed support at custom sites.