

Ben A. Laws, Jr.

CURRENT ADDRESS:

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EDUCATION:

Ph.D. in Electrical Engineering
Montana State University
Thesis topic: Error Correcting Codes, a VLSI implementation.
Thesis title: "A Parallel BCH Decoder."

B.S. in Electrical Engineering
Montana State University

PROFESSIONAL EXPERIENCE:

System and language experience.

Languages: C, C++, Fortran, APL, expect; Operating systems: UNIX v7, System V, SunOS (4) SunOS 5 (Solaris 10), SCO, Linux, pSOS, VRTX, MAC OS, Windows 3.1, 95, 98, NT, 2000, XP; Databases: Informix, Oracle; Processors: Sparc, 80*86, 68000, Z80. Forensic tools: ENCASE computer forensic analysis. Computer Security: SANS Security training: GCUX Unix System Administrator certification, GCFW Firewall and VPN certification.

President, Ben Laws and Associates, August 1984 to Present.

Providing Sun Solaris 8-10 performance analysis for a legacy application on enterprise (15K) hardware. Security analysis, hardening, some light forensic analysis. Some Solaris 10 dtrace and Sun Cluster experience. Provided architecture and design recommendations to improve high record locking contention of the legacy application.

Provided expert analysis and testimony regarding a legacy Windows 95 application regarding year 2000 (Y2K) issues. Performed Y2K expert analysis using PALM computing products.

Participated in forensic analysis and file recovery as an expert in litigation using the ENCASE package from Guidance Software.

Provided technical support and consultation to the State Bar of Texas for a Practicum seminar for over 1200 legal professionals. Provide ongoing technical support for a local law firm and the Dallas Bar Association.

Designed and presented UNIX training seminars for engineering staff of Intecom, Inc. for their Sun workstations to introduce their designers to the Unix tools and methodology.

Responsible for the system architecture, team technical coordination and design of the QL-3000 Public Access Data Terminal system for Gammon Products. The hardware, mechanical, packaging and graphical software system was taken to a functional prototype stage after only 10 months.

Designed and implemented the protocol machine and user interface for the Agile Systems AN20 Local Area Network products, approximately 20,000 lines of C and assembler, cross compiler from UNIX, using VRTX Realtime OS.

Participated in the design and development of the Flex/32 MultiComputer, the Concurrent C programming language and Multiprocessor UNIX for the Flex/32 MultiComputer.

Contributed to the design and implementation of the Lantech Distributed File System for Personal Computers and PC systems.

IEX Corporation, principal account, 1989 to Present.

Performed Enterprise level configurations with clustering and redundancy, performance improvement and analysis. Designed security modifications for a Solaris 8 ppp server to be used in the DMZ. Adapted an existing system product into the Sun Solaris 2.6, 2.7 and 2.8 environments, including writing device drivers, automating patches and installation scripts. Ported STREAMS drivers and applications written in C++ into Solaris 2.5.1. Implemented object oriented shared memory and multi-process applications. Designed and implemented locking, controls and procedures for applications to use SUN DiskSuite mirroring to perform "online" backups. Designed STREAMS modules and drivers for UNIX System V Release 4 for TCP/IP terminal server access. Implemented a SCHEMA based browser/debugger for a custom database. Converted and enhanced the Virtual Terminal Protocol (VTP) line discipline into a Streams driver including downloading of the *termio* library database into the kernel. Adapted DATAKIT and other custom device drivers for use in a DEC 6320 Symmetric Multi Processor (SMP) UNIX Kernel for IEX Corporation. Designed and debugged multiprocessor enhancements and for a UNIX System V Release 3 kernel.

Assistant Professor, Computer Science, North Texas State University, 1982-1984.

Responsible for bringing Berkeley UNIX to UNT, on VAX 11/780. Responsible for two courses and numerous seminars for NTSU staff and students on the UNIX operating system and the C programming language. Prepared and conducted UNIX Training Seminars for AT&T (Southwestern Bell), United Technologies, General Dynamics, Micro-America System Architecture consultant for Honeywell Communications Products Operation for next generation switching systems. Designed and implemented new UNIX device drivers for Unixsys in Paris, France.

Consultant to Italtel, Milan, Italy, 1981-1982.

Responsible for UNIX systems enhancements and user training in a software development environment for a large central office switch. Designed and implemented communications for developers using multiple UNIX systems in Dallas, Texas and Milan, Italy. System Architecture consultant for a large central office switch.

Vice President of Technical Development, 1979-1981, Advanced Business Communications, Inc., Dallas, Texas.

Responsible for new product invention, architecture and specification. Managed technical development of hardware and software for a UNIX based distributed processor digital central office switch. Recruited and managed a highly effective software development team of ten software engineers. Responsible for specifying, operating and maintaining two PDP-11/70 development systems running UNIX (Interactive Systems version 6 PWB).

Engineering Group Manager, 1978-1979, Zilog, Systems R & D, Cupertino, California.

Responsible for the system level design for a multi-processor Z8000 system. Coordinated the hardware and software architecture for the design of a multi-user operating system. Co-designer of a prototype coaxial cable network later called ZNET.

Senior Design Engineer, 1976-1978, Varian Associates, Palo Alto, California.

Designed and implemented character graphics display hardware and software for a light-pen controlled man-machine interface to a large vacuum deposition system. Designed and implemented hardware and software for a multi-processor communications network in the process control environment.

Member of the Research Staff, 1970-1976, Xerox Palo Alto Research Center, Palo Alto, California.

System designer for a large office automation project including specification and operation of a large multi-processor system. Contract manager for the first DanRay CBX to be used in the office automation project. Designed and implemented hardware, software and microcode for a gray-scale and color graphics processor for 1024 line high-resolution CRT. Designed and implemented hardware and software for an integrated text and graphics editing system with video capture.

PROFESSIONAL AND HONORARY ORGANIZATIONS:

I.E.E.E. and I.E.E.E. Computer Society.
Association for Computing Machinery.
Past memberships: Tau Beta Pi, Phi Kappa Phi, Pi Mu Epsilon, Usenix.

OTHER ACTIVITIES:

Singing and Guitar playing, composing.
Active in Ham Radio—Amateur Extra Class License.
Hiking, Canoeing and camping.

PUBLICATIONS:

- [1] Laws, B. A. Jr., "Enable and Disable: Aids to Managing UNIX Terminals," *Communitations*, September-October, 1986.
- [2] Laws, B. A. Jr., Rubin, P. J., "MCPOS - A Realtime Telephone OS," 1986 IEEE conference on Computers and Communications, Phoenix, Arizona.
- [3] Laws, B. A. Jr., "Microbe: a self-commenting microassembler," Tenth annual IEEE conference on Microprogramming, Niagra Falls, New York, 1977.
- [4] Laws, B. A. Jr., "A Gray-Scale Graphics Processor using run-length encoding," Proceedings of the UCLA Conference on Computer Graphics, Pattern Recognition and Data Structure, pp. 7-10, 1975.
- [5] Laws, B. A. Jr., "A ROM Decoder for the (15,13) Reed-Solomon Code," IEEE Computer Repository, No. R-72-114, 1972.
- [6] Laws, B. A. Jr. and Rushforth, C. K., "A Cellular-array multiplier for GF(2^m)," IEEE Transactions on Computers, vol. C20, no. 12, pp. 1573-1578, December, 1971.
- [7] Rushforth, C.K., and Laws, B. A. Jr., "Fault testing and parity checking in a cellular array multiplier for GF(2^m)," Proceedings of the Fourth Hawaii International Conference on System Sciences, 1971.
- [8] Rushforth, C. K. and Laws, B. A. Jr., "Parallel Addition and Multiplication in GF(2^m)," Proceedings of the Third Hawaii International Conference on System Sciences, 1970.
- [9] Laws, B. A. Jr., "A Parallel BCH Decoder," Ph.D. Thesis, Montana State University, 1970.