

Resume of John R. Lupien

SPECIALTIES

Systems Embedded, Real-Time Controls, Distributed Applications
Applications Communications, VLDB, Interfaces, Electromechanical, Medical, Aerospace, Industrial, Safety
Languages C, C++, sh, Assembly, Fortran, Basic, SQL (plus French & Italian)
Operating Systems Unix, VxWorks, VRTX, MSDOS, Windows CE, CP/M, Linux, Petalinux, Integrity, seL4
Processors 80x86, 8051, 680x0, M823, 6811, HP-PA, Z80, 6502, VAX, 3B2, Tahoe, SPARC, PIC, PowerPC, MicroBlaze, Zynq, Zynq Ultrascale, RISC-V
Buses VME, PCI, PCIe, I2C, SPI, GPIB, USB
Communications Ethernet, TCP/IP, RS-232/422, SDLC, UUCP, Kermit, ODBC, SONET, SDH, BGP, IGP, OSPF, PPP, MPLS, Fibre Channel, IRDA, ISDN, DSL

CONSULTING HISTORY

client **Draper Laboratories** - Cambridge, MA (10/05 – present)
projects Mk6Mod1, CPGS, COSS, SEAL, Wisense, GPS
application embedded control & communications, aerospace, industrial
hardware PowerPC, Sun, Intel, Xilinx, ARM, Microblaze, Zynq, RISC-V
software C, C++, ASM, Linux, python
standards ISO-9001, IEC-61511, IPv6, 1553, Spacewire, ARINC-653, MISRA

client **ProvenProcess Medical Devices** - Walpole, MA (9/02 – 10/05)
projects IDS, VAD, EKDD, LCS, ICP
application medical device embedded control
hardware PIC16, Motorola 68HC908LJ, Hitachi SH2, AMD Geode
software ICE2000, MPLAB, C, C++, PIC ASM, Linux
standards ISO-9001, IEC-60601, IEC-13485, AAMI SW68, FDA SW V&V

client **Draper Laboratories** - Cambridge, MA (6/01 – 9/02)
project Saipem, CSF
application 65 MHz D/A, A/D for radar control, safety-critical software systems
hardware PowerPC, AD6644
software GCC, VxWorks, Tornado, Solaris, McCabe, PRQA

client **Access Cardio Systems** - Concord, MA (4/00 - 5/01)
project AED
application Automatic defibrillator
hardware Hitachi SH2, flash multi-media card, RTC, LCD
software C++, assembler, API, interrupt handlers, host controller

client **Ironbridge Networks** - Lexington, MA (4/00 - 5/01)
project SwiftCORE
application Optical Internet core router/switch development & diagnostics
hardware PowerPC, MPC860T, TI SerDes, JTAG, DMA control, mux/demux
software gcc, clearcase, PowerPC assembler, DDTs, CodeTap

client **Celestica** - Chelmsford, MA (6/99 - 4/00)
project Crescendo
application boot proms for PA-RISC web server
hardware dual CPU PA-RISC, I/O concentrators, memory controller
software PA-RISC assembly, C, Clearcase

client **General Scanning** - Bedford, MA (12/97 – 2/99)
project Medbase
application Instrumentation platform framework
hardware Hitachi, Intel, custom
software Windows CE, C++

<i>client</i>	Electronic Retail Systems International - Westford, MA	(2/98 – 5/98)
<i>projects</i>	ACA Manufacturing Test System	
<i>application</i>	Automated test systems for RF and digital subsystems	
<i>hardware</i>	GPIB controller, test instrument interfaces	
<i>software</i>	HP SICL, VISA, C++	
<i>protocols</i>	GPIB	
<i>client</i>	Harvard Apparatus - S. Natick, MA	(3/98 - present)
<i>projects</i>	Micro11, Serial11, PHD2000	
<i>applications</i>	Programmable syringe pump control software	
<i>hardware</i>	8051 & Pentium PC	
<i>software</i>	8051 Assembly , Windows, DOS	
<i>client</i>	Hewlett Packard - Andover, MA	(2/90 – 8/96)
<i>project</i>	CareVue 9000, CareVue 5100, ODBC/VLDB	
<i>application</i>	Medical data communications, presentation, & warehousing, OODB	
<i>hardware</i>	HP-PA, 68000, Pentium 2	
<i>software</i>	HP-UX, C++, OODB, Oracle, DBMS, distributed database control	
<i>client</i>	KSA - Newton, MA	(2/90 – 8/96)
<i>project</i>	Subcontracts, plus internal network & systems development	
<i>application</i>	Communications, database, development systems	
<i>hardware</i>	SPARC, PC, PIC, FPGA, ISDN	
<i>software</i>	SunOS, Windows, TCP-IP	
<i>client</i>	Bay Networks - Bedford, MA	(2/97 – 8/97)
<i>project</i>	SONET/SDH driver software	
<i>application</i>	Board control, system design & simulation software development	
<i>hardware</i>	SPARC, PIC, FPGA	
<i>software</i>	SunOS, C, assembly, simulator control	
<i>client</i>	GTE - Waltham, MA	(6/96 – 9-96)
<i>project</i>	SONET Driver	
<i>application</i>	Interface controller for optical communications	
<i>hardware</i>	SPARC, PIC, Pentium	
<i>software</i>	UNIX drivers, asynchronous control interface, IPC	
<i>client</i>	Bell Labs -Andover, MA	(7/86 – 1/90)
<i>project</i>	VTC, SNAS, STU3, DACS	
<i>application</i>	Network analysis, security, and control systems development	
<i>hardware</i>	6300, 8530, TMS320, VAX, 3B2	
<i>software</i>	C++, C, UNIX, Greenleaf, MESA, SABLE	
<i>protocols</i>	SDLC, asynch, ctrm, kermit	
<i>client</i>	UNISYS -Cambridge, MA	(5/86 – 6/86)
<i>project</i>	Logistics control	
<i>application</i>	Systems management & control software for logistics analysis	
<i>hardware</i>	UNISYS 5000/80	
<i>software</i>	INFORMIX 4GL, Procom	
<i>client</i>	The Foxboro Company - Foxboro, MA	(1/95 - 4/95)
<i>project</i>	Intelligent Automation	
<i>application</i>	Communications and configuration software development	
<i>hardware</i>	80186	
<i>software</i>	VRTX, VENIX, DOS	

EMPLOYMENT HISTORY

<i>employer</i>	SynchroSystems - Cambridge, MA	(7/98 - present)
<i>position</i>	Vice President, Engineering	
<i>project</i>	Embedded computer system development & consulting	
<i>employer</i>	Computing Tools - Wrentham, MA	(5/81 - present)
<i>position</i>	CEO	
<i>project</i>	Computerized analysis tools & video games development	
<i>employer</i>	Computer Consoles, Inc. – Cambridge, MA	(3/84 - 7/85)
<i>position</i>	Senior Software Engineer	
<i>project</i>	IAS, OfficePower	
<i>application</i>	Office Automation & accounting systems	
<i>hardware</i>	POWER5, POWER6, VAX	
<i>software</i>	Ingres, UNIX, C	
<i>employer</i>	Data Concepts, Inc. – Lexington, MA	(7/83 - 2/84)
<i>position</i>	Software Engineer	
<i>project</i>	TRAC/SIMPLE Port to HP-9000, NCR, WICAT	
<i>application</i>	Insurance forms processing system development	
<i>software</i>	C, UNIX, MCS, Assembler	
<i>hardware</i>	HP-9000, 68000, NCR	
<i>employer</i>	Charles T. MAIN, Inc. – Boston, MA	(7/81 - 6/83)
<i>position</i>	Staff Technical Assistant	
<i>project</i>	AESOP, Terisias	
<i>application</i>	Industrial engineering analysis software development	
<i>software</i>	C, Pascal, Fortran, JCL, Assembler, VM/CMS, OS/VS1	
<i>hardware</i>	STRUDL, DYNAL, ADLPIPE VAX, PDP, HP1000, HP3000, IBM 370, 4341, Prime 300	
<i>employer</i>	AndroTek, Inc. – Franklin, MA	(4/81 - 8/81)
<i>position</i>	Systems Programmer	
<i>project</i>	DOM	
<i>application</i>	Mobile robotic control systems engineering	
<i>software</i>	C, BASIC, Assembler	
<i>hardware</i>	6502	
<i>employer</i>	MIT Artificial Intelligence Lab. – Cambridge, MA	(7/80 - 6/81)
<i>position</i>	Research Programmer	
<i>project</i>	ME Assistant	
<i>application</i>	expert systems mechanical engineering software	
<i>software</i>	LISP, ITS	
<i>hardware</i>	DEC10	
<i>employer</i>	MIT Remote Sensing Lab. – Cambridge, MA	(7/80 - 6/81)
<i>position</i>	Computer Technician	
<i>project</i>	Remote seismology systems development	
<i>application</i>	Ocean-based and hazardous terrain seismographs	
<i>software</i>	Assembler, Basic	
<i>hardware</i>	6502, TTL	

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA, B.Sc. 1981, Interdisciplinary studies