

## 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++, Assembly, Fortran, Basic, SQL (plus French & Italian)  
*Operating Systems* Unix, VxWorks, VRTX, MSDOS, Windows CE, CP/M, Linux  
*Processors* 80x86, 8051, 680x0, M823, 6811, HP-PA, Z80, 6502, VAX, 3B2, Tahoe, SPARC, PIC, PowerPC, MicroBlaze, Zynq  
*Buses* VME, PCI, I2C, 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  
*software* C, C++, ASM, Linux, python  
*standards* ISO-9001, IEC-61511, IPv6, 1553, Spacewire

*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>	<b>Electronic Retail Systems International</b> - 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>	<b>Harvard Apparatus</b> - 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>	<b>Hewlett Packard</b> - 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-UJX, C++, OODB, Oracle, DBMS, distributed database control	
<i>client</i>	<b>KSA</b> - 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>	<b>Bay Networks</b> - 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>	<b>GTE</b> - 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>	<b>Bell Labs</b> -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>	<b>UNISYS</b> -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>	<b>The Foxboro Company</b> - 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>	<b>SynchroSystems</b> - Cambridge, MA	(7/98 - present)
<i>position</i>	Vice President, Engineering	
<i>project</i>	Embedded computer system development & consulting	
<i>employer</i>	<b>Computing Tools</b> - Wrentham, MA	(5/81 - present)
<i>position</i>	CEO	
<i>project</i>	Computerized analysis tools & video games development	
<i>employer</i>	<b>Computer Consoles, Inc.</b> – 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>	<b>Data Concepts, Inc.</b> – 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>	<b>Charles T. MAIN, Inc.</b> – 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 STRUDL, DYNAL, ADLPIPE	
<i>hardware</i>	VAX, PDP, HP1000, HP3000, IBM 370, 4341, Prime 300	
<i>employer</i>	<b>AndroTek, Inc.</b> – 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>	<b>MIT Artificial Intelligence Lab.</b> – 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>	<b>MIT Remote Sensing Lab.</b> – 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