Christopher C. Lord

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Objective

A strategic leadership role in information technology that combines the attributes of a visionary, a pioneer, an evangelist, and an architect with entrepreneurial pace and passion.

Education

M.S., Information Networking, May 2003
Carnegie Mellon University, Pittsburgh, PA

August 2001-
May 2003

An interdisciplinary program within Electrical and Computer Engineering that combines network engineering and computer science with business administration, strategy, and policy.
Thesis: An Emergent Model of Immune Cognition GPA: 3.99

B.S., Computer Science, May 1988, Magna Cum Laude
Fitchburg State College, Fitchburg, MA

Experience

July 2000-
July 2001

Technical Lead and Project Leader, Internet Storage Content Delivery
Cereva Networks, Marlborough, MA

- Jointly architected content delivery product. Developed strategy examining opportunity, competition, requirements, services, and development priorities; designed remote content mirroring architecture and IP-based distribution and synchronization protocol. Evaluated code vendors and products. Negotiated and supported resultant development partnership.
- Led team of five in design and development of content delivery services (HTTP, NFS, FTP) and system services (caching, metadata, management, security, resilience) for an embedded network module in carrier-class networked storage appliance. Mentored junior team members. Coordinated efforts with product management and other development teams.

Nov 1997-
July 2000

Network Software Architect, Windows NT Fault-Tolerant Computing
Marathon Technologies Corporation, Boxborough, MA

- Architected a media-independent fault-tolerant solution for clusters that used IP routing (RIP and OSPF) to provide transparent and rapid recovery from failures. Conducted competitive survey and described market opportunity. Prepared and presented business case for new product to senior management. Produced initial development plan for Windows NT and 2000.
- Wrote a comprehensive technology guide for support specialists that covered many networking technologies, devices, and protocols. Analyzed maximum survivable failure times for TCP/IP and NetBEUI. Presented tuning strategies for surviving network reconfiguration and failures.
- Designed and developed a fault-resilient network subsystem with patented link integrity detection and cross-system failover for Ethernet devices that provided uninterrupted connectivity (detection and failover in under 5 seconds) through two physically distinct paths. Implemented as quartet of NDIS provider and consumer kernel-mode drivers in C/C++.
- Designed solutions that delivered resilient ATM and FDDI networking for Endurance product. Consulted with customers, evaluated requirements, identified risks, and wrote development plan. Collaborated with external vendors on research, design, and implementation.

Aug 1996-
Nov 1997

Principal Engineer and Project Leader, Windows NT Fault-Tolerant Computing
Marathon Technologies Corporation, Boxborough, MA

- Led a team of five engineers in the design and development of a high-speed PCI cluster interconnect, associated firmware, and Windows NT transport and control software for fault-tolerant platform. Instituted requirements management and formal code inspection. Delivered alpha-quality release that became the basis for the next product release.
- Designed and developed a PCI interconnect BIOS that performed multiprocessor initialization, Windows NT redirected boot, memory and state synchronization with a separate system, module loads, and firmware upgrades. Customized HAL/NTDetect. Implemented in IA32 assembly and C. Debugged with Windbg and ICEs. Prepared and delivered product training.

- Instituted modular design. Developed adapter interface kernel-mode library and intersystem transport services that isolated kernel-mode drivers from DMA implementation, interrupt management, and command interface. Included code tracing and programmable fault-points.
- Led effort in performance analysis and subsequent delivery of improvements. Employed benchmarks, custom tools. Instrumented kernel-mode components. Wrote comprehensive report. Identified contributors to transaction latency and implemented optimizations.

May 1996-
Aug 1996

Technical Lead and Developer, AltaVista Search for Windows NT
AltaVista Software, Digital Equipment Corporation, Littleton, MA

- Led two engineers in the design and development of AltaVista Search for Windows NT, based on the research project that powered the Internet site. Implementation used three cooperating processes: a multithreaded crawler to locate, fetch, process, and index documents; a custom HTTP server for queries and management; and the search engine kernel. Mentored intern.

Nov 1995-
May 1996

Research Engineer, Collaboration Advanced Development
Internet Software Business Group, Digital Equipment Corporation, Littleton, MA

- Conducted contextual inquiry and research into group dynamics. Contributed design to unite Web-hosted collaboration features (discussion forums, information filters, shared workspaces, and conferencing) with the Windows 95 and NT desktops. Developed a functional prototype using shell extensions, standard OLE COM objects, and Wizards in which Web services appear within virtual folders on the desktop and are manipulated using Windows Explorer and local applications. Evangelist for integrating collaboration features with PATHWORKS.

Sep 1994-
Nov 1995

Project Manager and Technical Lead, PATHWORKS V1.0 for Windows 95
Network Operating Systems Group, Digital Equipment Corporation, Littleton, MA

- Led 15 engineers in developing first release of PATHWORKS for Windows 95. Met project goals to develop a portable transport architecture, exploit new Windows 95 features, and release simultaneously with Microsoft. Recognized by company for outstanding achievement in "day 1" delivery, an organization first. Implemented LAST transport protocol as VxD.
- Jointly developed long-range software product strategy for PATHWORKS with small team of consulting engineers. Created system design and delivery specification for next eighteen months covering transport services (DECnet, TCP/IP and IPV6), directory services (LDAP), applications (NFS, FTP, terminal emulation, Web browsers), and standards compliance.
- Prepared and presented technical seminars and papers at national and international symposia on topics including MS-DOS and Windows Internals, PATHWORKS Architecture, DECnet, and Network Tuning and Troubleshooting. (Ongoing activity from 1990 to 1995.)

Dec 1993-
Sep 1994

Project Manager, PATHWORKS V5.1 for DOS and Windows
Network Operating Systems Group, Digital Equipment Corporation, Littleton, MA

- Managed PATHWORKS client product development from initial planning to final release. Led group of 35 people. Managed schedule, dependencies, engineering tasks, resources, documentation, and field training. Successfully initiated and implemented process changes to reduce engineering and production costs and improve time to market including concurrent localization, CD-ROM distribution, automated building, and platform retirement.
- Conducted advanced development explorations in mobile computing. Designed transparent disconnected file access. Co-authored specification describing file system integration, briefcase behavior, and synchronization manager. Prototyped disconnected services.

Jun 1986-
Dec 1993

Principal Software Engineer, PATHWORKS for DOS, Windows and OS/2
Personal Computing Systems Group, Digital Equipment Corporation, Littleton, MA

- Designed remote boot architecture and led eight engineers in implementation. Mentored junior team members in software development and presentation skills. Guided adaptation and source integration of Microsoft LAN Manager, developed enhancements, and negotiated changes with Microsoft. Researched security and scalability problems. Advised X/Open SMB committee.

- Designed and developed protocol drivers, device drivers, and utilities for DOS, Windows, and OS/2 that provided disk, file, and CD-ROM services using SMB/CIFS and LAST. Developed remote diagnostic tool to analyze system internals, trace interrupts, and provide remote console support. Developed software-only protocol analyzer with support for TCP/IP and DECnet.

Competencies

Developing embedded software, distributed systems, network drivers, and kernel services. Conducting requirements analysis, modeling, project planning and management. Knowledge of networking technologies (Ethernet, Token Ring, ATM) and protocols (TCP/IP, NetBEUI, SMB/CIFS, NFS, HTTP, RIP, OSPF). Fluency in C/C++ and IA32 Assembly. Experienced with Visual C++, Windows SDK/DDK, VxWorks, Clearcase, ICEs, Soft-ICE, and protocol analyzers.

Patents

Active Failure Detection for a Fault-Tolerant System, U.S. Patent 5,983,371
Background Synchronization for Fault-Tolerant Systems, Applied May 2000, Pending

Professional

IEEE Computer Society and Communications Society; ACM Networking SIG; Seminars include Six Sigma, Credibility and Presentation Skills, Human Dynamics, and Contextual Inquiry.

Awards

Kennametal Fellowship, April 2003. Conference Grant to attend ACM SIGCOMM 2002, August 2002. Carnegie Mellon Merit scholarship, August 2001.

Personal

Jan 2003-
May 2003

Teaching Assistant, Advanced Topics in Information Security
Professors David Fisher and David Mundie, Carnegie Mellon University

Developed supplementary coursework. Researched and selected readings. Assisted students with projects. Lectured on topics including emergent systems, modeling, and computer immunology.

Sep 2001-
May 2003

Graduate Representative for Information Networking Institute
Graduate Student Assembly, Carnegie Mellon University

Served on Office of Technology in Education Council and Vice President's Advisory Council.

Sep 2000-
July 2001

Board of Directors, Program Development Chair
Literacy Volunteers of America, Montachusett Region

Reviewed budgets. Identified opportunities to improve delivery of services to tutors and students. Implemented improvements with Program Coordinator. Established and evaluated progress against annual delivery of services goals. Prepared for accreditation review. Managed web site.

Jan1998-
July 2001

English as a Second Language and Adult Basic Literacy Tutor
Literacy Volunteers of America, Montachusett Region

Prepared lesson plans and taught weekly ESL classes. Conducted assessments and prepared development plans to support individual goals (such as obtaining naturalization). Participated in conferences and in-service training seminars (such as the Wilson Reading System).

June 1999-
July 2001

Advisory Board (Finance Committee)
Town of Princeton, MA

Studied and reviewed issues with fiscal consequence. Assessed, forecasted, set budget guidelines, and monitored impact. Collaborated with departments on budgets and capital plans. Conducted departmental audits. Led committee to develop an equitable compensation plan for town employees. Determined requirements and goals and developed a two-year implementation plan and new performance appraisal system. Wrote report and delivered presentation to Select Board.

1997-1999 **Mentor, National Mentoring Network for Women in Engineering and Science**

1990-1994 **Assistant Scoutmaster, Eagle Scout, Troop 1, Princeton, MA**