

# Andrew Cripps

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## Summary of Experience

### Summary

Andrew Cripps has over seventeen years of experience in the computing industry. He holds a Masters degree in Computing Science from the University of Victoria, and a Masters degree in Philosophy from Simon Fraser University. His computing career has taken him from delivering large commercial computer systems in Europe and in Canada to his current position as a technical director at Sierra Systems. He managed and developed web-based applications at MDA, applying his skills to improving company profitability through knowledge management and effective IT strategy. He has experience from large e-commerce projects, providing project management, project engineering, technical guidance, leadership and development skills. He led the development of a customer relationship management product at EvolutionB Corporation, and managed development of web software products at Macromedia Inc. His current focus is healthcare at Sierra Systems, where he bridges business and technology as a healthcare architect. He continues to speak at conferences and contribute to national standards efforts such as Canadian use of HL7 version 3, and he has had extensive experience with health registries, helping to shape the pan-Canadian healthcare provider registry used across Canada.

## Sierra Systems

[www.sierrasystems.com](http://www.sierrasystems.com)

### Technical Director Sept 2002 - present

**Ministry of Human Resources.** Delivered a report for the Ministry that laid the foundation for an enterprise architecture. The Ministry was seeking to replace its old portfolio of systems with a combination of commercial packages and custom solutions. Enterprise architecture information was captured using the **Zachman Framework**.

**WHIC Provider Registry System.** The Provider Registry System (PRS) was developed by Sierra Systems on behalf of the Western Health Information Collaborative (WHIC) to maintain healthcare provider data. My responsibilities on this project were to lead the technical development of the PRS, and the development of an HL7 version 3 interface. Sierra Systems proposed and built a code generator for the HL7 interface to ensure that changes to message definitions could quickly and easily be reflected in the HL7 interface software.

I provided technical management of an offshore development team and a local development team, and worked closely with the client to deliver several releases on time and within budget.

**Canada Health Infoway Canadian Provider Registry Standards Working Group.** I represented the Canadian Healthcare Information Technology Trade Association (CHITTA) on Infoway's Canadian Provider Registry Standards Working Group to create a national standard for provider registries.

**Standards Collaborative Technical Sub-Committee.** Currently acting as the co-chair for the Canada Health Infoway Standard Collaborative's Technical Sub-Committee.

**Telepathology Conceptual Architecture for BC (5 months).** Developed for the Provincial Lab Coordinating Office (PLCO) a conceptual architecture for telepathology in BC through interviews with health authorities and pathologists. The conceptual architecture needed to address the diverse starting points of the health authorities.

**Architecture and Standards Group, Ministry of Health (12 months).** I Responsible for contributing to the eHealth architecture in British Columbia through reviews and active participation on eHealth projects as a technical architect. I provide HL7 v3 standard and messaging expertise to eHealth projects as required.

**OMNI Project, Washington State (7 months).** TContributed as part of a small team to the pursuit of the contract, and was responsible for the System Architecture of an offender tracking system in Washington State.

### *Macromedia*

[www.macromedia.com](http://www.macromedia.com)

Senior Software Engineer  
Jan 2001 - June 2002

**Flash Gateway.** I am currently the software engineering manager for a team whose mandate is to design and deliver Flash client/server communications software in a very short time. I am responsible for all engineering tasks, the schedule and deliverables. Key Technologies: Java and J2EE, the **Microsoft .Net** framework, rich clients for the web, and ColdFusion.

**Neo (ColdFusion Server) (6 months).** The M39 team and product (see EvolutionB below) were acquired by Macromedia in January 2001. Current responsibilities include managing development of the next version of ColdFusion, and scoping and defining technical issues. There are currently nine developers reporting to me. The next version of ColdFusion is based on java and runs on J2EE application servers, with support for CORBA, COM/DCOM, LDAP, Web Services (SOAP support) and the Microsoft .Net framework.

Specific feature responsibilities: components framework and persistence mechanism, tracing and debugging, exception reporting and rendering, and integration with Macromedia's Integrated Development Environment, UltraDev.

**Spectra Maintenance Project (5 months).** Successfully delivered a maintenance release of the Spectra object-based web application framework. There were twelve developers reporting to me.

### *EvolutionB*

[www.evolutionb.com](http://www.evolutionb.com)

Project Lead Engineer,  
Jan 2000 - Jan 2001

**Lead engineer on M39 project.** Helped to generate millions of dollars of revenue for the company by leading a team that created a customer marketing and customer relationship management product (using Allaire's object-based web development platform *Spectra*). Responsibilities include managing budget and schedule, technical architecture, system requirements and design, and implementation of core sections of the system.

Organised the Western Canada ColdFusion User Group (CFUG) ([www.cfug-vancouver.com](http://www.cfug-vancouver.com))

*For an informative story about EvolutionB, see the Canadian Business Magazine ([http://www.canadianbusiness.com/magazine\\_items/2000/june26\\_00\\_kaihla.shtml](http://www.canadianbusiness.com/magazine_items/2000/june26_00_kaihla.shtml))*

*MacDonald-Dettwiler and Associates*

www.mda.ca

In addition to my responsibilities on projects (ranging from management to software development as part of a team), I was the recognised expert in the company for internet and world wide web technologies.

**Technical Lead**  
Nov. 1999 - Dec 1999

**OLMaps e-Commerce Project (2 months).** On a very short development timeline, I was part of a team that delivered an e-Commerce site for purchasing maps online. Personal responsibilities included user interface consulting, data model design, data ingest, system integration and test (www.cartica.com). **Key technologies: Microsoft SiteServer, ASP**

**Project Engineer,**  
July 1999-Dec 1999

**BC OnLine e-Commerce Project (6 months).** MDA purchased the rights to operate the BC Government's online service that provides information on land titles and corporate registrations through to vital statistics and lien searches. Acting as project engineer on this project, I coordinated and helped to build e-commerce websites (see www.keyinfobc.com) that allow users to purchase searches by credit card, improved a web-based interface to the existing system, and delivered a website for the Government providing information on BC OnLine (www.bconline.gov.bc.ca; www.keyinfobc.com). **Key technologies: cgi, C, ColdFusion, javascript**

Acted as chairperson for MDA's biweekly Technology Forum that provides strategic direction to the company on IT investment and development.

Represented MDA on the Real Estate Transaction Standard Working Group (www.rets-wg.org) seeking to define XML-based standards for the real estate sector.

Developed and offered internal courses on Web Development.

**Web Group Manager**  
April,1998 - Oct 1999

**Web Services Group.** Acting as MDA's **internet and intranet specialist**, my responsibilities include managing the corporate intranet; building data-driven web systems; managing internal web projects; providing consulting expertise on a wide range of MDA projects; developing a corporate IT strategy; creation of an enterprise information portal and knowledge management system; acting as project engineer and architecting web systems; developing web systems, developing e-commerce websites. Extensive experience with Allaire's **ColdFusion** Web Application Server product. (ColdFusion application examples: web-based timesheet system, course registration application, interface to legacy systems, document library, employee look-up, project issues tool, project review form, collaboration websites, research talks schedules, employee profile system, job posting system, resume tracking system, forms and templates online, email client, project implementation profile.)

**Project Engineer,**  
Nov,1997 - March 1998

**Canadian Earth Observation (CEONet) Conversion.** Supplied an internet-based search and request brokerage system for digital imagery to the Alberta Government. Responsible for proposal phase, planning and implementation of the system. **Key technologies: Perl, javascript.**

**Software Engineer**  
Jan, 1993 - June 1997

**Canadian Earth Observation Network (CEONet) (1 month).** For the Canadian Centre for Remote Sensing, MDA implemented an online shopping mall to allow customers to search and find suppliers of geo-spatial data. My responsibilities were to develop a suite of presentations and technical material to interview prospective data suppliers and help them implement the CEONet search capability for their data products and services.

**Team Leader**

**Norwegian Aeronautical Information System (6 months).** As Integration and Test Team Leader, responsibilities included:

- Leading six-member development, integration and test team,

- Managing software releases and versions,
- Managing detection, review, solution, integration, test and sell-off of defects.

**Pegasus Aeronautical Information Services Porting Project (2 months).** This product from MDA is a complete aeronautical information system for civil aviation. Originally developed in C under OS/2, the goal of the project was to port the C code from OS/2 to Unix. Responsibilities included:

- **researching** and writing an **evaluation study** of static C source code analysis tools;
- **analysis** of the Pegasus source code using three products: Centerline's ObjectCenter, Hewlett-Packard's Softbench, and Mortice-Kern's Code Integrity; and
- **documenting** potential porting problems, such as where the C code is dependent on OS/2 and recommending a strategy for creating a Unix-based version of the Pegasus product.

**Mission Management Office/Database Management (14 months).** This project for the Canadian Space Agency supports the Radarsat programme by providing object-oriented planning and scheduling software, an Order Desk System (ODSys), and a Calibration Analysis System (CAS). Responsibilities included:

- Supporting satellite commissioning by
  - Implementing security requirements for the ODSys and the CAS in C++;
  - Enhancing existing user queries and developing new user queries using C++ with **embedded SQL**;
  - Developing a parser using **awk** and C++ which produces an ISQL script to modify Sybase database;
- Requirements analysis, documentation and design for two major systems interfaces;
- Working with **Rumbaugh's** Object-oriented methodology, Object Modelling Technique (OMT);
- Requirements analysis and documentation, and high-level design for an Order Desk System and its interface to the MMO/DBM;
- Co-authoring a proposal for the Order Desk System;
- Participating in technical issues review team.

**Canadian Forces Supply System Upgrade Project (18 months).** Project to upgrade the existing supply system with a distributed, real-time, client-server based solution for the Canadian Forces. As Software Engineer and Support Manager, my responsibilities included:

- Problem report management and end-user support;
- Establishing and enhancing a **Software Development Environment** consisting of **Sybase**, Uniface and GraphTalk (a meta-CASE tool from Parallax Technologies) to support 150 analysts and developers using Sun workstations and Unix;
- Developing a suite of importation tools that parse text files describing data and process models, and produce graphical representations at the conceptual level using the NIAM methodology (C, Unix, Unix tools);
- Requirements analysis and documentation in a Software Requirements Specification for custom extensions to the CASE tool-set;
- Receiving, integrating, testing and releasing to production environment the software upgrades of GraphTalk supplied by Parallax Technologies;

- Developing a suite of parsers for automatic conversion of constraints expressed in precise natural language to SQL (C, Lex, Yacc, SQL and SQR);
- Developing a suite of reports for the conceptual models using GraphTalk Query Language

**Artillery Regimental Data System (8 months).** The objective of this system is to replace existing voice communications over radio with an automated, real-time distributed system solution to communications for the Close Support Artillery Regiment. Responsibilities included:

- Requirements analysis and documentation for system communications interfaces;
- Gathering domain knowledge from Artillery personnel and documenting a series of scenarios for concept-validation and testing;
- Producing a performance analysis model based on these scenarios;
- Product evaluation of current modelling and simulation tools;
- Producing work conforming to **MIL STD 2167A**.

*Logica BV, Netherlands*

[www.logica.com](http://www.logica.com)

Analyst Programmer  
1988-1990

**PostBank On-line Transaction Processing System.** Logica implemented and delivered a national automated teller network for the PostBank using fault-tolerant hardware. Responsibilities included:

- Porting custom extensions in old system (ON/2) to a new, upgraded baseline system (PL/1; Stratus);
- Designing and developing an Automated Teller emulator, and conducting system tests (PL/1);
- On-site customer support and problem report management.

**Automated Auction Control System.** The objective of this project was to provide an automated real-time, fault-tolerant tracking, labelling and delivery system for the largest of the Dutch flower auctions. Responsibilities included:

- Implementation and testing of core software on a very short development schedule (PL/1, Stratus);
- SNA Connectivity Testing between Tandem and Stratus computing environments of two major banks.
- Designing and conducting tests at one client site, and diagnosing connection failures.

**Swiss Stock Exchange Automation.** The aim of this project was to automate the exchanges in Geneva, Basel and Zurich. Responsibilities included:

- Requirements analysis and documentation of X.25 communications subsystem

*Acorn Computers plc, Cambridge, England*

[www.acorn.com](http://www.acorn.com)

Programmer/Analyst  
July 1981-August 1983

Responsibilities included developing a suite of utilities for management of an in-house network fileserver; product development of the cross-referencer component of a 6502 Assembler; testing Acorn's Pascal Language product; testing Acorn's teletext system product.

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*Paranoid Software Ltd., Dover, England*

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**Founder**  
**Jan 1981 - June 1981**

Established a games software company with two colleagues from High School to develop and market software for the Acorn Atom and Sinclair ZX81 personal computers.

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*Education*

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**University of Reading**  
**1983 - 1986**

**University of Reading**, Reading, Berkshire, England, BSc (Hons) Computer Science.

**University of Victoria**  
**1986 - 1987**

**University of Victoria**, Victoria, British Columbia, MSc Computer Science.

**Simon Fraser University**  
**1990 - 1992**

- Thesis Topic: Knowledge representation.
- **Simon Fraser University**, Vancouver, British Columbia, MA Philosophy.
- Thesis Topic: Philosophy of Religion.
- Graduate Student Representative elected to the Senate Graduate Studies Committee (one year appointment)
- Teaching Assistant in departments of Philosophy and Computing Science.

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*Awards, Presentations, Publications*

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- **Speaker, eHealth, 2007**, Health Authority Uptake of the Registries
- **Speaker, HL7 Canada Conference, November 2005**, Development of an HL7 version 3 Interface to the WHIC Provider Registry
- **Speaker, "Security and Privacy: Friends, Foes or Partners" conference, February 2004**
- **Speaker** at Web Enthusiasts Association of Victoria (April 2002)
- **Speaker** at Vancouver Island ColdFusion User Group (April 2002)
- **Speaker** at Vancouver Java User Group (April 2002)
- **Speaker** at Java 1 Conference, (March 2002), on Rich Clients for the Web.
- "Smart Tags", ColdFusion Developer's Journal, February 2002
- "The Flexibility of Nested Custom Tags," ColdFusion Developer's Journal, Volume 3, Issue 4.
- "Cold Fusion and Java," ColdFusion Developer's Journal, Volume 3, Issue 3.
- "Allaire Technology Roadmap," ColdFusion Developer's Journal, Volume 3, Issue 2, February 2001
- "CF Future 2001," ColdFusion Developer's Journal, Volume 3, Issue 1, January 2001
- **Lecturer**, eCommerce course, University of Victoria, Fall 2000
- **Speaker** at the Allaire Developers Conference, Washington DC, Nov. 2000, "Building CRM solutions with Allaire Spectra"
- **Speaker** at the Innovation Management Association of Canada Conference, September 1999, "Internet Solutions for Innovation Management"
- Post-graduate Scholarship, MacDonald-Dettwiler, 1996, \$1000
- Travel Assistance Award, Simon Fraser University, 1992, \$250
- Graduate Fellowship, Simon Fraser University, 1991, \$4000
- Faculty Award, University of Victoria, 1986, \$1000

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*Training and Conferences*

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- **Online Modelling Courses**, Rational online training ([www.rational.net](http://www.rational.net))
- **Java One 2002**, San Francisco (March 2002) ([java.sun.com/javaone](http://java.sun.com/javaone))
- **Microsoft .Net and C#**, one week, Developmentor, Boston (March 2002)
- **Application Security Principles**, @Stake Corporation (Sept. 2001)
- **Oracle Overview**, internal course at Macromedia (August 2001)
- **Macromedia UltraDev Integrated Development Environment**, internal course, (Aug. 2001)
- **Enterprise Java Beans, Java 2 Enterprise Edition**, one week of training (Sept. 2000) given by the Middleware Company ([www.middleware-company.com](http://www.middleware-company.com))
- **Ninth World Wide Web Conference**, Amsterdam (May 2000) ([www.www9.org](http://www.www9.org))
- **E-Commerce**, six week course given by the Technical University of BC ([www.tu.bc.ca](http://www.tu.bc.ca))
- **Eighth World Wide Web Conference**, Toronto (May 1999) ([www.www8.org](http://www.www8.org))
- **Multimedia courses** taken in 1996 for the Certificate of Multimedia Studies through the University of British Columbia's Continuing Studies department ([www.cstudies.ubc.ca/multimedia/](http://www.cstudies.ubc.ca/multimedia/))
- **Internet publishing**, internal course at MDA (1996)
- Various **team-building** courses internal to MDA
- **C++ Programming**, internal MDA course (1994)
- **Object-Oriented Design** (1993) offered by the Advanced Concepts Center, General Electric. ([www.acc-lmco.com](http://www.acc-lmco.com))

**TABLE 1. Web Skill Summary**

<b>Skill</b>	<b>Years</b>	<b>Last Used</b>
JavaScript	3	current
HTML	5	current
CSS	2	current
XML	2	current
XSL / XSLT	2	current
Microsoft IIS	3	current
Customer Relationship Management	1	2001
Application Server Architectures	4	current
Personalization	1	2001
Microsoft Site Server	.5	1999
Active Server Pages	.5	1999
Web Distributed Data Exchange (WDDX)	1	current
BEA Weblogic Server	1 month	2000
ColdFusion Studio IDE	5	current
JRun J2EE web server	1	current
Macromedia Flash	< 1 year	current
Allaire Spectra	18 months	2001
ColdFusion App server	Since 1996	current

**TABLE 2. Languages Summary**

<b>Skill</b>	<b>Years</b>	<b>Last Used</b>
SQL	11	current
Java	1	current
CFML	5	current
ActionScript	< 1	current
Javascript	3	current
C++	5	1997
SQR	3	1996
Lex	3	1996
Yacc	3	1996
C	6	1996
Pascal	5	1989
PL/1	2	1989
Lisp	2	1987
Prolog	1	1987
Modula-2	3	1986
Assembler	3	1982

**TABLE 3. Operating Systems Summary**

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<b>Skill</b>	<b>Years</b>	<b>Last Used</b>
Unix (user and developer)	10+	1999
Windows NT, 2000 (user)	4	current
MacOS (user)	3	2000
OS/2 (user and developer)	1	1997
Stratus VOS	2	1989
DEC VAX (user and developer)	3	1985

**TABLE 4. Database Skill Summary**

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<b>Skill</b>	<b>Years</b>	<b>Last Used</b>
Microsoft SQL Server	3	current
Microsoft Access	4	current
Sybase	3	1996
Oracle	<1	2000

**TABLE 5. Tools Summary**

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<b>Skill</b>	<b>Years</b>	<b>Last Used</b>
Oracle Designer 6i	<1	current