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FOCUS

Web Enterprise Architecture, Service-Oriented Architecture, Telephony.

EXPERTISE

Architecture:	Rational Unified Process, SOA, Java Certified Architect, Agile Programming, CSLA
Web:	Java, J2EE, C#, VB.NET, ASP.NET, Spring, SQL, AJAX, Web Services, XML, Javascript
EDI:	AS2, XML, VANS, XSLT, Edifact, RosettaNet
Telephony:	VoIP, SIP, Asterisk, JTAPI, JAIN JCC, JAIN JCAT, JAIN SLEE, Midlets, CLDC, Mitel PBXes
Patents:	4 filed. 2 awarded by the U.S. Patent Office.
Open Source:	Project lead on Sourceforge project “Generic JTAPI and JAIN JCC”
Standards Bodies:	Java Community Process JSR 22 Member (JAIN Telephony Service Logic Execution Environment API)
Security Clearance:	Level II (Secret) – expiry: September 15, 2019

MAJOR CLIENTS

Indian and Northern Affairs — Ottawa, Ontario

October 14, 2010 - Present

- Technical Designer for Education Information System
- Provided Business System Analyst work in conjunction with the business owners
- Led a technical team in the development of a .NET intranet application comprised of multiple systems interaction through a Service-Oriented Architecture
- Worked with third party tools to develop fillable PDF forms backed by an XML data store. Architected a round-trip solution that allowed for PDF data instruments to be uploaded and downloaded at any point in the workflow to enable low-bandwidth First Nation clients off-line access.
- Directed and guided the development of complex XSD (XML Schema) definitions, including data-validation through keyrefs, for distribution to third-party application vendors to enable them to feed First Nation data into the system.
- Initiated and drafted a “Use Case Guidelines” document for use within INAC and by INAC's “Directorate of Application Development / Database and Data Administration (*ADDDA*)”
- Followed RUP methodology, starting at Inception, and generated and orchestrated the delivery of Use Cases, Activity Diagrams, Class Models, Sequence Diagrams and Deployment models.
- Took ownership for the delivery of the Use Case Model Survey, Software Requirement Specifications and Technical Design documents.
- Worked with Business team and clients in “Joint Application Development” sessions to brainstorm issues, capture business rules and validate requirements.
- Use Sparx Enterprise Architect to do Object Modeling and generate system documentation. Performed round trip engineering on .NET code.
- Spear-headed proof-of-concept development to mitigate technical risks
- Developed project plans and implemented strategies to mitigate critical paths
- Provided guidance on the implementation of Teat-Drive Development, Unit Tests, Continuous Integration, Code Reviews, Agile-like development.
- Part of management team that oversaw the development of the .NET solution based on:
    - .NET
    - Oracle Database
    - MVC.NET
    - CSLA

- iText (PDF ↔ XML)
- Adobe tools (Live Cycle, Acrobat)
- Altova tools (XML Spy, Schema Agent)
- TFS

Public Works and Government Services, Canada — Ottawa, Ontario
July , 2010

- Provided architectural consultation for a Spend Cube enhancements for the Electronic Acquisitions Business Directorate.
- Provided strategic analysis a the senior consultant in a small focused team reviewing the system architecture and implementation plans.
- Review and provided guidance on Data Cube construction and resources.
- System consisted of a J2EE / Oracle web application based on Hibernate, Spring, JSP, and Web Services.

Health Canada — Ottawa, Ontario
March 9 – 31, 2010

- Provided training for the Regulatory Application and Systems team
- Analyzed existing National Health Products web application (build on top of Alfresco) for its suitability for reuse in the Consumer Products Incident Reporting system.
- Provided specific training on:
  - Object Orient Programming
  - Java
  - Patterns
  - Object Modeling, UML and Rational Unified Process (RAD)
  - Eclipse and Rational Application Developer platforms
  - Hibernate object-relational mapping tool
  - Model-View-Controller
  - Spring web application framework
  - JSPs
  - Java Server Faces (JSF)
  - Struts
  - Validation
  - Internationalization
  - Unit testing (JUnit)
  - Performance testing (using *Eclipse Test* and *Performance* Tools Platform). Including both memory and performance testing
  - Spring-JSF integration
  - Web Services (JAX_RPCX, JAX-WS, XML-RPC, XML-WS, JAXB, SAAJ, JSON, REST). Built sample web service with client using Spring-WS and XML-WS.
  - AJAX
  - XML
- Worked with team to develop boot-camp code hooking database through Hibernate to POJO beans. Used Spring and Spring MVC to create a wizard page that implemented validation and provided unit tests around the validator.

Moov Solutions — Monterrray, Mexico
August 2009 – July 2010

- Architect for call-centre telephony solution.
  Provided detailed architecture for a agent-based multi-tier call-distribution system comprised of a Panasonic PBX, a database server, web services server and a Java clients. This system extends the Panasonic ACD functionality to a team of several

hundred call centre agents and allows them to log in, handle calls, transfer and conference.

- Provided Requirements, RUP and UML modelling mentoring and leadership. Developed Use Cases, UML diagrams and interaction diagrams using RUP tools and processes. Introduced RUP methodologies, techniques and tools to the team.
- Debugged Java and native C++ code. Montored team in use of debugging tools, Eclipse and Visual Studio IDEs and profiling tools including “YourKit Java Profiler” and Software Verification's C++ “Memory Validator”. Found and fixed memory leaks in C++ + DLL.
- Designed dual-layer TAPI2 and TAPI3 DLL to deal with defect in Panasonic software. The transfer and conference functionality using TAPI3 initially did not work. This was isolated and confirmed with Panasonic to be a bug in their TSP software layer.
- Implemented source control system.
- Worked remotely with Mexican team to develop specifications and project plans.

Canadian Medical Association Holdings — Ottawa, Ontario

January 2008 - June 2009

- Architect for a financial reporting system for 150,000 clients.
  The CMA has a subsidiary, MD Management, that provides brokerage and mutual fund services to Canadian doctors and their families. A new broker-dealer system was being installed and a solution was required for producing monthly statements, occasional letters and year-end tax slips. The system architecture that was developed was a SOA architecture comprised of off-the shelf components and custom integration modules that provided data mapping, business rules and auditing. XML was used as the common data format.
- Documented current “as-is” data and system architecture.
- Documented, prioritized and developed new architecture for the client reporting system, including data mapping, data flows, business rules, system components and physical architecture, including the network architecture and operating processes. Developed a persistence architecture based on network storage and a distributed application topology.
- Met with senior management to present architecture options and discuss risks and their mitigation strategies.
- Recommended, introduced and mentored in-house team in RUP processes and Use Case development. Championed up strong unit test regimen and pushed for performance testing early in the development process.
  The team largely consisted of in-house analysts and developers with little or no experience with RUP, object-oriented development or use cases.
- Introduced Agile programming techniques such as daily scrums, pair programming, iterative development, code reviews and continuous integration. Worked to ensure that analysts and quality assurance personnel were first-class members of the team and involved in the daily stand-up scrums.
- Performed proof-of-concept technical analysis.
  In particular, it was identified that business rules around statement reporting and tax slips need to be actively maintained due to financial regulation compliance issues and government legislative requirements. To support these dynamic business rules, various business rules frameworks were evaluated, including Microsoft Workflow Foundation. I developed a proof of concept application to compare the speed and simplicity of using MWF versus raw C# code for grouping the accounts onto statements. The performance of MWF was insufficient to meet the non-functional time requirements for the monthly statement run. In the end, I modified the architecture to use partial classes and lookup tables to manage and maintain the business rules.
- Developed and deployed COTS and custom components into a high-availability, secure hosted environment running Microsoft Windows Server and Linux server environments.
- Integrated legacy, off-the-shelf and custom components using XML data exchange. The CMA had already committed to certain off-the-shelf products. I worked with these

vendors to develop XML schemas that allowed for the products to be integrated and orchestrated using a distributed scheduler and a file transfer service. Custom SQL (SSIS) and C# middleware provided data mapping and business rules in the central translation module.

- Team Leader.
  Lead a team of developers, analysts and DBAs in the iterative development of requirements, development of code, functional and integration testing and deployment to production facilities in Toronto and Calgary. Over the 17 months of the project, there were close to 30 members of the team. The team also worked closely with the QA team to ensure that defects were resolved quickly and the QA team's priorities were met.
- Performance Optimization.
  The final system was composed of over a dozen components orchestrated together by a networked scheduler to take financial extracts from the production broker-dealer system and produce printed statements, letters and tax slips for over 150,000 clients within four days. I oversaw performance analysis and designed system pipe-lining, code optimizations and table indexing to bring the end-to-end time down from 175 hours to 4 hours.
- Developed system-level security plan to safeguard client financial data.
  At every stage of the process, the architecture had to ensure that data security was maintained and the full system auditing was in place to ensure that no data was lost or not reported.
- Developed and lead Code Coverage and Unit Testing plan.
  Code coverage and unit testing employing NUnit and NCover were employed to ensure code quality and stability. Initial goal for code coverage was 80%, which was exceeded. One system component's code coverage that I worked on reached 100% and subsequently received the fewest defects reported against it.

Stilo Corporation — Ottawa, Ontario (20%)
September 2008 – March 2009

- Migrated mature OmniMark editing environment to latest version of Eclipse platform.
  Omnimark is a XML data manipulation language with a runtime engine and Eclipse plugin available that turns Eclipse into an Omnimark IDE (Integrated Development Environment). With each version change of Eclipse, the Omnimark plugin has to be verified and possibly updated. The Omnimark plugin was three versions behind the latest Eclipse release and was no longer behaving properly. Stilo hired Deadman Consulting to identify and fix the version incompatibility issues.
- Worked on Eclipse plugin framework.
  The Omnimark work required in-depth understanding of the Eclipse plugin framework in order to understand how the plugin was built and why it was not behaving correctly. Previous consulting work at Rational Software on their Eclipse plugin for Rational XDE was leveraged for this work.
- Worked with Stilo development team to prioritize and fix defects.
  After the version migration work was successfully completed, Stilo contracted with Deadman Consulting to investigate and fix several of their high-profile and troublesome bugs. This involved tracing into the loading of the plugin using the Eclipse debugging environment and the RCF (Rich Client Framework).

Treasury Board Secretariat — Ottawa, Ontario
March 2004 – December 2007

- Architect, under a joint Deloitte/IBM contract with the Treasury Board Secretariat of the Government of Canada, for the Government of Canada "Expenditure Management Information System" suite of on-line applications.
  The EMIS system is responsible for gathering estimates from each department on their spending for the next fiscal year. These Estimates are then compiled into a “Blue Book” and subsequent “Supplemental Estimates” and “Warrants” that are delivered to the House of Commons to authorize government spending. As money bills, they are

confidence motions for the government.
The new system was designed to replace a haphazard system of emailing spreadsheets between departments. The project involved the development of a secure web site using ASP.NET, C# and MS-SQL that allowed137 government departments to log into their department area of the site, create and update vote and statutory items, preview spending categories and compare the data to historical data. Each web page was designed to meet the government's common look and feel as well as to mimic the layout and structure of the final resulting pages in the Estimates “Blue Book”.
I acted as architect and team lead on this project from just after its inception phase to full production roll-out.

- Documented current business processes
- Prioritized architecture requirements, developed and document new architecture, including data sources, third-party interfaces, logical and physical views, data model, three tier web framework and object model. This included network management, security and operating processes. The physical architecture included analysis of network, persistence (storage) and application topology views.
- Worked with senior management and senior clients to communicate the architectural vision and discuss project goals and issues.
- Introduced and championed the Rational Unified Process.
  Using RUP, the requirements were identified and then document in use cases and non-functional requirements in a Requirements document. Other RUP stages involved the development of class diagrams, interaction diagrams and deployment diagrams. My work on object-oriented modeling and development over the years with Mitel and Rational was key in ensuring that RUP was employed in a way that was both thorough and efficient.
- Recommended and implemented strategy for unit testing to ensure continuous quality tracking.
- Worked with government departments to verify analysis and requirements.
  A close working relationship was formed with weekly meetings to review requirements, development and prototypes. This included both the technical Treasury Board team as well as the Treasury Board team responsible for the annual production of the Estimates, Supplementals and Warrants.
- Implemented Service-Oriented Architecture to integrate separate systems.
  The web architecture consisted of three different modules for tracking the government structure, the Main Estimates and “Reference Levels” (ARLU). Since both the Main Estimates and ARLU depend on the government structure, I architected and developed a C# web service which was deployed to ensure that the three sub-systems were synchronized to the latest version of the government structure, using the Program Activity Architecture sub-system as the “book of record”.
- Deployed solution into secure high-availability server environment running Windows Server 2005.
- Team Lead.
  During the development process, I took on the role of team-lead, using daily stand-up scrum meetings, blackboard Gannt charts and pair programming (modified use of Agile or Extreme Programming) and code reviews to manage and co-ordinate a team of up to 30 developers. While generally favouring a meritocracy approach and consensual decision making, sometimes dissenting ideas had to be dealt with by making firm decisions, based on consistency of architecture, minimization of code and system maintainability.
- Developed navigation and fine-grained MVC framework for ASP.NET C# system.
  A web page navigation and authorization system was required that was more robust than that supplied by default by ASP.NET. In addition, ASP.NET web forms allow you to map controls to data-tables, but this did not fit in with the architecture's use of data cubes, and I developed a finer grained Model-View-Controller framework that allowed individual C# properties to be bound to checkboxes and input fields.
- Developed real-time web-base spell-checker.
  In response to client feedback and prioritization, I integrated a spell-checker for the web pages (which involve large chunks of explanatory text) that employed AJAX and

javascript and a COTS spell-checking product to provide MS-Word style real-time spell-checking.

- Development of a comparison engine that allowed all “web pages” for each department to be compared to their state at any earlier date.
  A pattern-based state machine was designed and built to track the different states, owners and permissions as each page was edited, reviewed, updated and approved. Some reviewers did not have edit rights, but did need to see what had changed in the last edit phase. These changes were displayed using the standard notation of strike-out for deletion, red for change and green for addition.
- Bi-lingual work and support required.
  As a government web site, and the source of data for a bilingual bill for the House of Commons, the application was built using full internationalization support. The state machine that tracked the progress of each department's submission had to ensure that contents had been verified in both English and French.
- Financial auditing and security.
  The application tracked all government spending, to 11 decimal places. Each change in number of text was maintained in a audit trail and all amounts were verified against supplied control totals before any page could be submitted to the next stage in the process.
- Employed business patterns (leveraging Fowler's work) to develop an extensible data cube that could be easily queried and extended. This data cube also provided for full data history and retention allowing for all changes to be logged and compared.
- Used Redgate software for performance and memory optimization.
  Initially there were some problems with the memory growing too large on the server as multiple departments logged onto the system. I lead the team that used Redgate ANTS software to identify bottlenecks and we fixed these by using selective data loading based on the department being loaded.
- Developed Unit Testing framework code coverage.
  Lead team in determining which parts of the architecture benefited from Unit Testing. Initially some work had been done to provide stubs to enable the unit testing of GUI components, but these stubs were too problematic in that they did not actually test real-world GUI issues and they complicated the code base. I initiated the removal of these unit testing stubs and the simplification and maintainability of the unit testing code base.

CRL Network Inc. Burlington, Ontario (10%)
April 2007 - Present

- Architect for J2EE/Spring Enterprise Commercial Real Estate listing site.
  Commercial Realty Listing is a four-year old web company specializing in the listing and searching for commercial real estate sales and leasing opportunities. It allows for advertisers to list properties and identify their characteristics as well as pay for properties to be featured. Individual and large corporate advertisers are both supported.
  The architecture for the application is built on Java using the Spring framework and MySQL.
- Documented existing architecture and developed and architected target architecture, including data model, logical and physical views, object model and user interface mapping.
- Integrated clients’ commercial listing data into on-line real estate listings.
  To support larger clients, a bulk upload facility was developed that allows their IT departments to create spreadsheets and bundle this with images and PDF documents into a “zip” document that can then be uploaded to the CRL site. The site then unbundles the files, reads the spreadsheet and creates/updates the listings as required.
- Analyzed and recommended search engine optimizations.
  Web sites rely on traffic to drive their utility and value. Using analytic software to track web traffic, it was discovered that the web site was not sufficiently optimized for

inclusion in search engines. In particular, individual listings were not provided easily indexable URLs and were most easily found using site search facilities unavailable to search engines. Additional navigation structures were developed, proposed and implemented.

- Worked with Mapping software to provide Google Map locations for properties.
  Using the Googe Maps API and AJAX, real-time map identification of properties was implemented that allowed advertisers to accurately pinpoint property locations so that maps could be provided with property details.
- Security and Credit Card integration implemented.
  For secure data entry, part of the site was implemented using SSL. In addition, for payment, integration with a third-party credit-card clearance company was implemented that allows clients to pay for membership or individual advertisements and for the web site to verify and charge their credit cards appropriately.

Intertrade Systems Corporation — Montreal, Quebec
April 2003 - February 2004

- Refactored the in-production business-to-business "EDI" framework as J2EE containers.
  The original “EDI” framework did no properly comply to the J2EE standard. By migrating it over, the application could be deployed onto any J2EE container.
- Documented existing architecture. Developed and documented new data mapping logical and network architecture and framework for connecting different EDI protocols together, based on prioritization of architecture requirements. Data persistence was supported through a XML-based database storage architecture.
  EDI provides many different data interchange protocols, from early EDIFACT to the more recent AS2 standards. The software was designed as a universal translator that supported many different communication protocols and allowed orders and invoices to flow out of one client using one protocol and into another using a different protocol. This work involved understanding the different EDI protocols in depth as well as data mapping.
- Employed and championed Object Oriented modeling and design standards and methodologies into the team and with management, based on Booch and Rumbaugh techniques and Jacobsen Use Cases.
- Worked with senior management to outline architectural options and recommend project plans and operating processes.
- Worked on deployment of components into multiple high-availability and secure environments, including SUSE Linux and Windows Server.
- Spearheaded the design and development of SOAP web services as a communication protocol.
  At this time, SOAP and XML RPC were emerging as new standards in data interchange. Previous work with SOAP and XML and a talk prepared for XML World '99 lead to the development of an XML SOAP protocol to meet the emerging needs of clients.
- Developed AS2 servlet for J2EE container.
  This container was then embedded in a small J2EE web server on a client's site and acted as a proxy to relay EDI instructions from the Intertrade server on to another partner. While the Intertrade server was designed as a data and communication intermediary so that clients could off-load to Intertrade the mapping of their order and invoice information to those of their clients, some clients of Intertrade were required by their partners to communicate directly. In particular, Walmart requires this. Through the development of this AS2 servlet, as well as client-side provisioning software, clients could relay their EDI information to Intertrade, where it was formatted for Walmart and then sent back through the AS2 relay servlet and on to Walmart.

Rational Software Corporation — Kanata, Ontario
May 2000 – April 2003

- Collected and prioritized architecture requirements, based on vision scenarios

provided by marketing team.

- Developed and documented the logical, component and physical architecture for data grid widget toolset for the Rational XDE project and HTML visualization plugin, utilizing Rational's industry standard software development processes (RUP).
- Worked with senior management to outline architectural options and recommend project plans.
- This work started as part-time (10%) work on proof-of-concept ideas as Rational was considering their next IDE framework in 2000. In October of 2001 it moved to full-time work as the Rational XDE work (based on Eclipse) was initiated.
- Technical consultant on Rational Strategic Policy
  As Rational was considering its next software roadmap to replace its successful Rational Rose stand-alone product line, it required help in identifying how to integrate into a Java IDE and how to display HTML views inside a Java application. Proof-of-concept development and mentoring was provided to demonstrate various possibilities for HTML rendering and Java integration.
- Working with core product group on Java Eclipse platform support (RUP tools).
  As the development of the Rational XDE suite of integrated tools (inside the Eclipse Java IDE) was undertaken, I was brought in to help with the development of custom Java widgets required in the final XDE development plugin. This required an indepth understanding of the Eclipse plugin architecture, SWT and the JNI.
- Architected cross-platform Java "SWT" widgets for the Rational Suite of Products. Worked with Rational team members to implement the required components and provide Unit Testing support for them.

8x8 Inc. Santa Clara, California
March 2001 – October 2001

- Worked as part of their core "SLEE" telephony service group to develop a Java telephony services "IDE".
  This work was an extension of the work done for U|Force, which 8x8 had acquired. Based on the JAIN SLEE standard that I had been part of the expert working group on behalf of U|Force and 8x8, 8x8 moved to shift their system over to support the SLEE standard.
- Developed operating processes for the SLEE environment, based on standards being developed by the Java Community Process.
- Developed light-weight service simulator.
  The U|Force architecture did not easily support emulation and debugging to allow a user to test an IVR scenario outside of a real telephony system. I developed an emulation/debugging architecture that could be implemented as a delegate inside the existing system components. This expanded system functionality while minimizing code disruption and instability.
- Designed and implemented XML-based persistence engine.
  The existing persistence framework for the 8x8 product involved a proprietary file format. To support standards, reduce code size and allow for interoperability with other tools, 8x8 moved to an XML-based file format for application persistence. Concerns about performance and file size were addressed with the XML format was combined with ZIP compression, which resulted in faster saves and loads, smaller files sizes and a smaller code base.
- Technical lead on Java Community Process Expert Group
  I became U|Force's representative on the Java JSR #22 (JAIN SLEE) working group for telephony service logic execution environments. This involved working with representitives from several other companies from Europe, North America, New Zealand and Australia to develop core requirements and technical standards for the SLEE standard, as authorized by the Java Community Process, sponsored by Sun Microsystems.

U|Force Inc. Montreal, Quebec
September 1999 – March 2001

- Designed re-usable Java Telephony API implementation.
  U|Force developed a graphical interactive voice response (IVR) development tool that allowed a user to hook boxes together in order to configure a call workflow. This supported playing messages, receiving tone entries, recording audio, accessing databases, sending email. The tool was developed in Java and leveraged the JTAPI standard, which I had been involved in with Sun during its development.
  One problem with JTAPI was that there were not very many implementations for different telephony platforms, and so U|Force was unnecessarily tied to Diaglogic telephony cards. I pitched a plan to develop a generic JTAPI platform that could be plugged easily into multiple telephony systems, and was given the go-ahead to develop this. The GJTAPI framework was successful, leveraging multiple classic patters such as delegation and proxies, and lives on independently as an Sourceforge hosted open-source project.
- Recommended and employed OO architecture, design and development methodologies to support the development efforts. Developed operating processes based on these methodologies.
- Developed second generation application framework based on J2EE.
  The initial U|Force architecture was a custom design that did not leverage the emerging J2EE standard. Working with one of the founders, I developed a second-generation architecture that built the U|Force application on top of the J2EE stack and allowed for it to be deployed on different J2EE implementation, leveraging their support for provisioning, messaging and database access.
- Built Java Speech implementation based on JSAPI and Festival.
  Again, leveraging existing Java standards and open-source projects, I worked to integrate JSAPI and Festival into the U|Force codebase so that it could be leveraged as a new text-to-speech component in the U|Force toolset.

XIA Information Architects — Ottawa, Ontario
January 1999 – August 1999

- Chief Architect in a XML consulting firm
  XIA was a data management solutions company focused on using XML to organize and structure company information management issues. Most of the XIA remained as data analysts. I was brought in as a technical architect to provide technical solutions to meet the data analysts requirements. This involved working with a number of companies, such as Agra Monenco, Department of National Defence and Department of Health and Welfare to understand their data management issues and proposed technical solutions on how to implement the XML implementations envisioned by XIA's analysts.
- Built web-based structured information systems.
  Even in 1999, the interaction between the web and XML was becoming clear. One application for PMRC inside Health and Welfare was how to manage the pesticide industry by using a structured web-base solution. I developed a Java applet solution that allowed for web deployment, heterogeneous clients and real-time updates (pre AJAX), based on XML and a pre-SOAP distributed framework.
- Performed systems analysis and integration.
  Different clients required analysis on how their data should be structured, how it should be transmitted and how the transmission should be audited and verified. I implemented various security and structured data frameworks to support this, based on both XML and security concepts of auditing, authentication, non-repudiation and authorization.

OTHER CLIENTS

Mitel
Department of Health and Welfare
Finnegan, Henderson, Farabow, Garrett & Dunner. L.L.P.
CMPA
Telogy
The Object People
Gallium
Canada Post Corporation
First National Bank of America
WebGain
Tier-Fore
IGN
BeVocal
Department of Defence
Ottawa Carleton District School Board
Talafone
Agra Monenco

PROFESSIONAL EXPERIENCE

Framework Architect, Technology Lead

Sanga Research Canada — Ottawa, Ontario

March 1997 – December 1998

- Lead architect in a 400 person, global enterprise Java company.
  Sanga had its main development office in downtown Ottawa with other development offices in Montreal, Halifax, Boston, New Zealand and Barbados. As chief architect, I worked with developers in these other offices to co-ordinate solution provisioning for our various clients. I made frequent trips to Montreal, Toronto (the main business office) and Wellington, New Zealand.
- Spearheaded the design and development of a Java Application Server for the management and deployment of Sanga Vertical Solutions.
  Sanga pioneered Java Enterprise solutions before EJB and J2EE were envisioned. I spearheaded the development of “Sanga Enterprise Solutions”, a framework of enterprise services for distributed applications based on the CORBA model but leveraging Java's remote Method Invocation (RMI) standard for distributed method calls.
- Envisioned, designed and built Sanga's key Business Rules framework and repository.
  Business Rules were a new concept at the time and I envisioned that corporations would need centralized control over the portions of their applications that were subject to frequent change. Using distributed protocols, proxy class containers, an in-house BASIC-to-Java bytecode compiler and a database, I architected and assembles a unique business rule repository that allowed businesses to code business rules in BASIC and instantly deploy them out to their remote applications. This technology was key in Sanga winning a contract with the Department of Social Welfare in New Zealand.
- Built a core team of 45 developers at the prime Sanga development office in Ottawa: QA, training, support, technical writing and project management.
  The team was based on pods associated with various projects, but I initiated weekly stand-up meetings (Agile programming scrums) to keep the development organization in touch with each other and integrated. Also employed iterative development and pair programming.
- Set-up a matrix-driven organization.
  This organization was non-hierarchical with different people's skills driving different parts of the team and all disciplines valued. This is important in developing trust and comradeship required for a team to give its all and exceed its deadlines.
- Initiated Extreme Programming ‘boot camps”.
  As Sanga grew at a rapid pace, some structure was needed to ensure that new hires were brought up to speed quickly on Sanga technologies and working philosophies. The boot camps provided a sample project that the new team members could be thrown into and guided through as an effective and spirited way of learning the technologies. They were highly successful and resulted in a rapid developer ramp-up and high team morale.

Team Leader, Internet Applications

Mitel Corporation — Kanata, Ontario

March 1991- March 1997

- Telephony Internet Architect.
  Developed architecture for a variety of new research initiatives, including internet telephony application and mobile agents, using OO architecture and design methodologies, UML and interaction diagrams. Part of team that introduced and championed OO methodologies and tools (Rational Rose) in Mitel's development environment.
- Instigated team focused on the development of Internet applications
  In 1995 Java was released to the world and, as part of a research group, I started to explore its opportunities for Mitel. This resulted in a white paper on the Internet and Mitel and lead to meetings with upper management and the eventual setting up of an Internet Applications Group with myself as the leader.
- Chosen as management candidate.
  Mitel recognized my leadership abilities and enrolled me in a Manager Training session. The session worked, over a period of time, in development management skills and concepts, both technical and social.
- Built distributed telephony applets with CORBA distributed communication.
  Lead the development of a distributed web applet that used CORBA to communicate with a central telephony server that could manage your telephone through the web interface.
- Participated in review of Java Telephony API.
  Prior to the Java Community Process, Sun Microsystems used an ad hoc method for developing new APIs. I was selected as Mitel's representative on the JTAPI API working group and reviewed the API's development and provided guidance and feedback.
- Worked on skunk works team developing communicating agents based on Smalltalk, KQML and CORBA.
  Prior to my work on Internet Applications, I worked in the research group looking at new technologies to assist in telephony provisioning and feature interaction avoidance.
- Worked on development team for small office – home office (SOHO) telephony product.
  Worked on the software design for a small switch for the SOHO market with four lines, computer connection and cut-over in case of power failure. This included computer client software that provided an electronic address book and call logging.
- Support PCB design and layout teams.
  Mapped data migrations between disparate COTS components. Identified stream-lining opportunities. Supported Unix HP-UX clusters. Evaluated next-generation CAD tools as part of a major software tools purchase project.

Researcher, VLSI Group

University of Guelph — Guelph, Ontario — 1991

- Developed Linear Programming and Heuristic techniques for Multiplexer optimization in Design Synthesis.
  Using heuristics, linear programming and fuzzy logic/genetic programming, worked to identify register grouping optimizations to reduce interconnect paths and required data channel layers for VLSI integrated circuits.

EDUCATION

M. Sc. (Computer and Information Science)

University of Guelph — Guelph, Ontario — 1991

B. Sc. (Computer and Information Science)

University of Guelph — Guelph, Ontario — 1989

B. Sc. (Honours Physics)

McMaster University Hamilton, Ontario 1986

CONFERENCE TALKS

R. Deadman **IEEE Women in Engineering** Ottawa, Ontario March 2007
When Good Enough is Perfect

R. Deadman **XML World** Ottawa, Ontario September 1999
XML as a Distributed Application Protocol: the Technology and the Politics

PAPERS AND PUBLICATIONS

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R. Deadman **CIO Government Review** August 11, 2004
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T.C, Wilson, B. Halley, R. Deadman, D.K. Banerji
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SCHOLARSHIPS AND AWARDS

Certified Java Architect **1999**
National Sciences and Engineering Research Council Postgraduate Scholarship **1990-91**
Ontario Graduate Scholarship (Declined) **1990-91**
University of Guelph Graduate Scholarship **1989-90**