

**Hands-On Enterprise J2EE Architect. Canadian and EU citizen. SC Clearance.**

Enterprise Architecture for large projects in Java/J2EE/EJB/XML/JMS or C#, C++, .NET/WS, SOA in Weblogic, Websphere, Coherence, Stellent; JRules/Aion//PROLOG/AI Rule-based systems; RUP/TOGAF/ZACHMAN/DODAF

**Recognitions** COMDEX Best Application in the World Trophy, with the Merrill Lynch team;  
 RON technology candidate of the year list, with over 500 member companies;  
 Individual Liberty Mutual Award for critical project contributions, with IBM;.....

**Skills** Distributed Multi-tier Architectures; SOA, CORBA/COM/DCOM; C++; C#, JAVA; Rule-Based Systems, AI, Aion, ILOG, JRules, PROLOG, Smaltalk; Grids – Coherence and Gemfire; Servlets, EJB, JNDS/RMI, JMS/JTS, XML; WebLogic, JMS, UML – RSA, TogetherJ.

<b>Certifications</b>	C# - .NET Proficiency Certification by TeckChek	May 2009
	Project Management Certification by Brainbench,	Aug. 2006
	Enterprise J2EE Architect Authorization by Derrico Computers,	Jan. 2004
	EJB/J2EE Certification by Brainbench, Cert. ID3289262	Oct. 2001
	SUN Java 2 Platform Certification, Cert. FA4DTT19C2	Dec. 2000

<b>Author of</b>	“Visitor and Chain-of-Responsibilities Patterns in Oracle Coherence Grid”	- 2009
	“The 30 Performance Checks for Oracle Coherence Cache Data Grid”	- 2009
	“The 25 Steps for Developing an ILOG JRules Enterprise Web Service”	- 2008
	“The 18 Enterprise Architecture deliverables”	- 2007
	“The 60 Best Practices of Development with Weblogic Integration (WLI)”	- 2005
	“ILOG JRules vs. PROLOG – forward with Rete or backward with Backtracking”	- 2005
	“The 85 Oracle Performance Bottleneck Checks”,	- 2004
	“The 28 RUP Templates for Medium Projects – reducing the 43 RUP Templates”	- 2003

<b>Training</b>	Scottsdale, AZ	Oracle Coherence (Tangosol) Performance Optimizations	- 2009
	Toronto, CA	Oracle UCM (Stellent) Content Management Best Practices	- 2008
	Singapore, SG	JSF/Ajax development for Weblogic Portal 9.2 (Ajax4Jsf)	- 2006
	Singapore, SG	Integrateing Weblogic Components with Aqualogic ESB	- 2007
	New York, NY	Clearcase Best Practices for Weblogic 8.1 projects	- 2004
	Toronto, CA	J2EE 1.4 Application Development with WebLogic 8.1	- 2003
	Toronto, CA	Developing Microsoft Visual Studio .NET (C#, XML, SOAP) apps	- 2002
	London, UK	Developing Web Applications with Vignette 6.0 and WebLogic 6.0	- 2001
	Helsinki, Fin	Developing Enterprise Applications with Vignette StoryServer	- 2000

**Education** Ph.D. Thesis "CONTEXT Expert Systems Development Tool", 1987 - 1990  
 Thesis published in Japan, Germany, France, Greece, and Hungary by IEEE, ACM.  
 MSc. Mathematical Modeling in Computer Science, from Sofia University

**FINANCIALS** Bear Stearns, Merrill Lynch, Fidelity Investments, CIBC Wood Gundy, Toronto Stock Exchange, Capital One, Liberty Mutual, CIBC Mellon Trust, Aetna Life and Casualty, Intuit, HR Block, Option One.

**TELECOMS** British Telecom, Vodafone, Nokia, MTN Telecom, AT&T, Cingular Wireless, Telus Comm.

**FORTUNE500** Nokia, Vodafone, BEA Systems, IBM Global Solutions, IBM Corporation and Labs, Liberty Mutual, Accenture, Intuit, Toronto Stock Exchange, Telus Communications and Edmonton Telephone, Canadian Imperial Bank of Commerce (CIBC) Trust, CIBC Investments - Wood Gundy, Liberty Mutual, Fidelity Investments, General Electric, Merrill Lynch, Capital One.

## Projects History

~~~~ FOR: **Oracle Corp.**  
Phoenix, AZ  
March'09 – current

~~~~~ INDUSTRY: **Education**~~~~~  
Project: "Oracle Coherence Architecture Review"  
Tools: Coherence, Weblogic App Grid, Resin Server, Jive LiveLink

Architecture Review, again with Oracle, but this time with Coherence Distributed Grid implementation rather than Stellent (after training in March, see the front page). Architecture Review of the online education for Phoenix University system with terabytes of data flowing monthly and up to 50 message per second in peak periods. The system is based on Coherence cache, OS Cache, and Resin – the so called Jive Discussion Forums COTS product. A severe deadlock situation due to running all the above 3 systems in a single JVM with auto-restart based on memory-thresholds. Analyzed the thread-dumps, the stderr logs, the coherence logs etc. both with TDA and Samurai. Designed the extended Coherence Logging in the Pre-shutdown routine of Resin to collect detailed information for both Front and Back cache of the Near Cache, and then implement a graceful Coherence shutdown before the Resin restart. Prepared a 30-point list of Coherence Performance Bottleneck Checks and a series of test based on smothering the TcpRing heartbeat communication. Optimized the topology of the Coherence network based on the CPU cores and the granularity of cache for Vertical scalability. Functional comparison between Oracle Management Console and the ClearStone from Evident Software – selecting the Monitoring tool for RT-reports. Upgrade the version to redesign and take advantage of Collocation of related entries (Afinity), faster POF serialization and POF Extractor updates with no deserialization, as well as custom-eviction and auto-invalidation synch with the Back Caches. Spring-based assignment of BM Listeners via a set of Inversion-of-control XML files. Used the Coherence Command Pattern to implement Chain of Responsibilities (multiple Command Objects hitting single Context), Visitor Pattern (single Command Object hitting multiple Context Objects), as well as a Command Pattern returning values from the "execute" method (distributed version of the Functor pattern via external HashMap). Reimplemented the Visitor and the Chain-of-responsibilities in a Synchronous way via EntryProcessors. Used the Command as a Façade for dynamic 3-way communication with a JRules Engine component (via JMS, Web Service, and plain Coherence Object), controlled by an incoming parameter reflecting the current system load.

~~~~ FOR: **Abilon Corp.**  
LA, CA  
Nov'08 – Feb'09

~~~~~ INDUSTRY: **Marketing**~~~~~  
Project: "Sales Force Communication Management Reengineering"  
Tools: Oracle (Stellent) CMS, Oracle, WebLogic 10, SOA, Site Studio

Architecture Review of the reengineering project for handling Salesforce Communications from VB / MS Access prototype to Weblogic WLI / Oracle / Stellent SOA environment (similar to the Partnership Communication Management in the MTN Project in Cape Town). Stress-tested the WLI Process-in-Process nodes which fork sub-processes for Batch Load of new salesforce documents in Stellent to set the optimal number of forked processes under specific threshold load boundaries. Provided a Stellent Bulk Loader generator for both Oracle Data (via JDBC) as feeds for the JPDs and straight directory structure with automatic Metadata extraction for the cron-jobs. Revised the entire Site Hierarchy and the underlying Sections, as well as the presentation HCSPs and Fragment Libraries. Reviewed the IDOC Scripts on the presentation layer (Stellent Site Studio) and their reusability in the HCST and HCSF dynamic Server Pages. Factored-out some of the scripts and moved some of the IDOCs to specific event-handlers. Changed some of the steps in the contributors workflow, the ratio of the primary / secondary pages, and the validation scripts for the Contributors in the contributors IDOC. Checked the WLI JPD-files against "The SOA 60 Best Practices" for points of improvement and the SOA communications via the Aqualogic ESB with the services layer (System and Stellent components). Checked the Oracle Settings and Pro-cedures against "The 85 Oracle Performance Bottleneck Checks" for performance optimization of the Back End.

~~~~ FOR: **Ministry TCU**  
Toronto, Canada  
Sept.'07 – Oct. '08

~~~~~ INDUSTRY: **Education, Financial** ~~~~~  
Project: "Loan Management System"  
Tools: WebSphere 6, RSA 7.0, SOA, WSRP, WS Portal, JSF, Stellent

Lead Architect for a large Government Loan Management system with over 8,000 requirements in RequisitPRO, over 2,000 JRules business rules, cooperating with 300 business partners. Prepared the Detailed Operation Plan for the entire WebSphere development, extending Zackman/Togaf Framework for all the 78 Nodes. Designed 3

integration alternatives between ILOG JRules and BPEL (Web Services, Session Façade, and POJO façade) and implemented prototypes. Prepared two JRules Component testing Java programs, one of them via a wrapper of “executeRules()” call to fit the BPEL nodes. Proxy-filters for pre-processing of the ILOG JRules XML parameters with configurable components (via Spring IC). JRules design according to the Agile ABRD/ISIS Rule standard of ILOG. Designed and developed a JDBC-based PROLOG code-generation for the entire AS400 database metadata to run against the PROLOG Schema-assessment AI-facilities – with Java and DDL generation. Reversed engineered the Java code in RSA to facilitate easy Data Migration process. Prepared a Oracle-TCA based sample schema to be used by the assessment programs. Designed a flexible Loan Rollover facility, based on XML-config file. Designed the centralized Global Corporate Security Hub to be used by all satellite portals and implemented a POC for the Interfaces. Transferred the Visual Architect BPEL Models in RSA 7; build a pre-processor for RSA to allow reverse-engineering of JSP/JSF/HTML for Screen-Flow generation. Lead the development of the main POCs of both the Middle Tier and the Portal skeleton, all in IBM RSA 7. Reengineered the Static Content in Stellent Content Management (Oracle ECM) with full-text pattern search in Site Studio, utilizing Portal Templates and Fragments in the process. Developed a Bulk-Loader Generator for Stellent.

~~~~ FOR: **MTN Telecom** ~~~~~ INDUSTRY: **Telecom** ~~~~~

Cape Town, Joburg, SA  
Jan’07 – Sept.’07

Project: ” PowerBill Unified Telecom Billing System”

Tools: Weblogic 10, Ajax, ADF, JSF, SOA, ESB, WS, WSRP, DHTML

Lead Architect of the new Telecom Billing System in MTN, consolidating all the current resources via an ESB implementation across the MTN internal systems. Customized some of the eTOM Telecommunication Standard Processes and the SID Telecom Object Model (in Rational Architect) in DDD-architecture (Domain-Driven-Design) to fit some the MTN current resources, wrapping other in Facades in the process. Merging Requirements and Use Cases in IBM Rational Prerequisite PRO Composite project.. Stress-tested several ESB approaches (plain Web Services in a Centralized Hub, Open-source Mule, WLI-proprietary Weblogic implementation) via JMeter and identified certain bottlenecks in a couple of the current systems. Prototyped and re-measured with Weblogic 10.0 / WSRP and AquaLogic. Implemented the first JSF Prototype of the Trading Partner Portal (TCP) using Oracle ADF Ajax-aware JSF components and JDeveloper for both Partner-billing and Revenue-sharing using the new SingleView interfaces and the Service-Object-Request-Broker. Oracle-oriented TCP approach to fit the move to Siebel on the CRM-side using the Siebel eService configurations, Siebel WebUI 8.0 and Oracle COREid Single Signon and Oracle SOA Suit. Parallel JRules and Oracle Rules (JESS) prototypes of Rule-Based User Profiling. Cleaned-up the 40+ ESB Interfaces and consolidated them in different segments to facilitate Proxy-based isolation on the Client Side. Designed the Wireless (PDA) client optional billing interface. Designed and implemented Java Product Catalogue via XMLBeans and SAXON-XQuery and via XML DOM .

~~~~ FOR: **Mansion.com** ~~~~~ INDUSTRY: **Gambling** ~~~~~

Singapore  
Jan’06 – Jan’07

Project: ”J2EE Version 2 Re-architecture in Weblogic 9.2”

Tools: C++, CORBA,WSL, Ajax, JSF, JRules, SOA, WS, Spring, Hibernate

Lead Architect of the Poker Component and the J2EE re-architecture of the entire Mansion Enterprise system. Transferred the CRM / Customer Care MySQL and MS-SQL databases to Oracle and checked the existing Oracle Functional DB against “The 85 Oracle Performance Bottleneck Checks”, transforming some trigger-based relationships into declarative-integrity constraints. Reverse-engineered the C++ Poker code base and generated JavaDoc-type of documentation to prepare it for the J2EE transfer. Isolated and optimized the SQL Statements (SQL Optimizer for Oracle 10g and TOAD 9.0). Reviewed the existing CORBA Architecture of the Poker Site and designed 3 prototypes for Resource-Contention and Synchronization performance issues of the contention point in the so-called “Poker Lobby” - via CORBA Event Service, via STL Queue, and via Observer Pattern, geared towards elimination of both the resource-locking and synchronized call-waiting in order to ease the performance pressure during the transition to J2EE.

Prepared prototypes (cornerstone apps) in the new Weblogic 9.2 environment (both Eclipse-based and Studio-based). Tangosol Coherence prototype using the Cache and Session-replication facilities with alternative caching using the

OSCache for the JSPs. Lead the Architecture Prototypes and the Best Practices documents for Weblogic development. Using the DAL and SAL layers of DevCode, lead alternative prototypes for DB and Service isolation layers. Prototyped an out-of-portal portal, based on JSF/Ajax/Spring with native Struts (rather than the one built-in the Weblogic environment) as well as Jsf/Facelets/Struts approach (using the new Exadel Studio 3.6). Researched the possibilities for using Ajax-aware JSF components in the WL Portal 9.2 (via the open-source Ajax4Jsf tags) and the new Weblogic 9.2 Studio. Prepared a Java Robot in Swing with Substance Look-and-feel capturing all activities from all the clients and researched the possibilities for (and prototyped) the Rule-based AI-modules involved (both in Prolog and JRules).

Executed sample performance testing of the Java prototypes with JProbe 6.0 and VTune 8.0 to prepare for using the Linux/C++ version of Intel's VTune for the C++ performance and profiling, pinpointing further pressure-points for releasing the pressure in the current C++ version. Found and fixed the erroneous RNG-code in the generators. Code-reviewed the main 2 applications via the PMD and CheckStyle source-code plug-ins, and the cross-component JLint and Lint4j. Ran the performance analysis with VTune and the JUnit tests. Researched alternative methods for fraud-detection, including screen-scraping and socket-sniffing, and created modules, blocking both fraudulent methods, involving persistent objects in the new EJB 3.0 (KODO) implementation in Weblogic 9.2 in order to test the new persistence mechanisms. Alternative Java Persistence API app over Hibernate. Prototyped Remote Rule-Based control module with an MDB object of JRules 6.0 for Weblogic, sending the results in a dedicated Pub/Sub topic to replace the Observer Design Patter coming from the old C++ modules.

~~~~ FOR: **SUN Microsystems** ~~~~~INDUSTRY: **Financial / Telecom** ~~~~  
San Jose, CA                      Project: "Medicaid/Medicare System – J2EE Redesign"  
July'05 – Jan'06                      Tools: WebLogic Integration, SOA, JRules, JSF, Ajax, SUN Portal

**SUN Architecture Review consultant** for various clients of SUN Microsystems, East and West coast:

- Architecture Review for a critical ILOG JRules in WebLogic Integration (WLI) project for a major Mortgage Company. Introduced a new set of more than 40 new business rules in BAL for the next release of the system; checked the ILR translation to match against the XML Test Dataset and pinpointed some data inconsistencies leading to some bad regression-testing results; prepared several utility functions used by the TRL rules; considered alternative approached of using ILOG JRules in WLI (the ILOG Control requiring a new version 5.1 only; a Web Service control, a plain Web Service, and a plain Java Class running in a Session Bean) and prepared a pool of IrlContexts for efficient rule-engine connection establishment.

- Deployment Review for a major Document Management company – a WebLogic Server (WLS) project; tuned up all the JVM starting parameters of Itanium to maximize performance; checked all the Clustering and Load Balancing decisions, introduced a middle-tier Load Balancer; reviewed the performance implication of using the JSession Ids; prepared a plan for the Code Review, Class Review, and HP JMeter utilization for heap analysis, object creation, call-tree, thread-based metrics etc. Prepared a parallel-comparison with JProbe, OptgimizeIt, PMD etc. Prepared a prototype with Safe JDBC operations avoiding the resource-leaking problems the project exhibited during tests. Prepared a Daly routine for the WLS Admin.

- Lead Architect on the re-engineering effort from CORBA (Visibroker) to J2EE (Session EJB and WS) of a leading Legislations Systems company. Analyzed all current Journal Handling and REF Systems for monitoring the House and the Senate meetings, the Bill Introduction sessions etc. Made the Object Model for the current systems and the Use Case diagrams for the top 5 applications. Factored-out the functions from the previous CORBA interfaces and prepared 5 Application Facades to be used to communicate with the Service Locator and then the mid-tier (session EJBs or WS). Prepared a Rule-based prototype to control the process based on Business Rules on top of the SML Schemas, with cross-Elements and cross-Attributes Business Rules. Implemented the Rules in PROLOG invoked from Java and then in plan Java for comparison. Documented the code and artifacts. An XMLHttpRequest-based client (Ajax) and a corresponding XMLEncoder / XMLDecoder-based Swing clients.



- For a major Fortune 500 **Satellite Networks** corporation, **Maryland** – Designed and developed the prototypes of **WLI / WLS** Process Edition 3 of the typical business processes for the company with both synch and a-synch processes initiation, inter-process communication via **JMS** Controls, transaction control over non-transactional resources via Exception Loops, Multi-level AND/OR splits-process logic and parallel forks etc. Prototyped an event-based and Client-triggered co-starting nodes with synchronization points and checked the prototype against the list of Best Integration SOA Practices with the client team. Reviewed the performance implications of design alternatives and the Session/Entity/Message EJBs and JMS-cooperation under the hood.
- For a major Fortune 500 **Retail Chain** corporation, **Virginia** – Reviewed the entire multi-clustered deployment a heavy-transactional **WLI/WLP** system (6 clusters with 4 and 8 Managed Servers). Identified and tuned the parameters in the Connection Pools, the JMS resources (queues and topics), Session-kept resources, SOA fundamentals etc. Created additional thread pools in dedicated exec-queues and adjusted EJB deployment parameters like initial beans in cache, sizes of cache and queues, pre-compiled procedures, reviewed the security handling via external LDAP and built a prototype based on the Sample Role Mapper in WLS 8.1 from the embedded LDAP into an external an SUN One LDAP system.
- For a major Fortune 500 **CRM** company, **Illinois** – Reviewed both **Order Management** and **Billing** clustered **WLS** applications for bottleneck transactions (steeply decreasing performance under load). Changed the two heaviest finders to DAO-pattern (strait JDBC). Reviewed the deployment-descriptor settings and changed the allocations of the Connection pools and Cached Statements, allocated two more thread pools dedicated to the Entity-EJB tier, and pinned the threads in the dedicated pool to the JSBC connections for improved performance. Adjusted the EJB pools and the boundaries (initial and max values for the cache and the free pool). Implemented a dynamic JMS resource allocation in MDBs. Fixed the Clustering setting and timeouts to avoid “EJB-not-found” exceptions. Participated in a set of regression testing and acceptance tests.
- For a major Fortune 500 **POS** Corporation, **North Carolina** – Reviewed the entire Portal while transitioning from **WLPortal** 8.1 SP2 to **SP3**. Security System Transfer from Embedded LDAP to the new Active Directory LDAP, resolving several issues in the process, including proving a bug in the SP3. Transferred both the Clustered Application and the single-server application. Tuned the parameters in the Connection Pools, the JMS custom resources (queues and topics for the future extension), etc. Suggested dedicated exec-queues for the most heavy DB-oriented app and adjusted EJB deployment parameters for the stand-alone app initial beans in cache, sizes of cache and queues, pre-compiled procedures, etc. Knowledge-transfer to the portal, database, and server administrators for the day-to-day monitoring and maintenance of the Portal.
- For a major Nationwide **Computer Distribution Network** corporation, **Texas** – Reviewed the entire multi-clustered deployment of a **WL Portal** system (2 clusters with 4 Managed Servers each). Identified and tuned the parameters in the Connection Pools, the JMS resources (queues and topics), Session-kept resources etc. Resolved several exceptions thrown after the deployment in the SP3 Clustered environment, clarified the strategy of hot vs. automated deployment options, created a MS SQL-based authentication provider and tested the main applications in the new environment. Eliminated the problems with the Connection Pools manual restart and transferred the custom credentials from Embedded LDAP into Active Directory. Moved the Portal from SP2 in SP3 and ran the regression tests to ensure smooth transition. Prepared a reference document to address the potential adjustment needed as the load of the systems increases in the future.

~~~~ FOR: **Vodafone** ~~~~~INDUSTRY: **Telecom** ~~~~~  
 Amsterdam, Holland Project: "WEB/WAP Portal Integration (MyVodafone)"  
 Aug'04 – Oct'04 Tools: WebLogic, TogetherJ, XSLT, XSL, Portlets, VCML, PML, XML.

Back to Vodafone to integrate the Web and Wap functionality through the same incoming XML from the Partners (PML pre-processed in a Portlet to an enriched VCML and then handled via over 40 different cooperating XSLs). Built the entire Portal Object Model and the corresponding documentations via JavaDoc, using the model in the process of building the WAP integration into the MyVodafone Website. Cooperated with the partner XML-providers to reach the appropriate format of the incoming PML to serve both the WAP and the WEB needs, through the pre-

processing Portlet of the Weblogic-based Portal. Experimental builds with incorporation of JMX to monitor the performance (via JConsole) for the future transition to Java 5 with MMBase content management. Acceptance testing with partners and pre-production delivery of the Portal, integrated with VodafoneLive (prod). One of the big Vodafone recent success stories, attracting a chained new client base - covered on National TV and the National Press in Holland.

~~~~ FOR: **HK World Terminals** ~~~~~ INDUSTRY: **Logistics** ~~~~~  
Hong Kong / Princeton Project: "Container Terminal Management Performance Reengineering"  
May'04 – Aug'04 Tools: WebLogic, JProbe, Oracle, OptimizeIt, Stress Testing, DAO.

Architect for the Performance Reengineering and tuning of a large WebLogic/Oracle Logistics Application with over 3,300 Java classes in a Struts/Swing WebLogic environment. Profiled the main usecases with JProbe and OptimizeIt and developed a custom stress-testing harness to identify the bottlenecks in the system. Changed some of the heaviest Entity EJBs to DAO / JDBC with JNDI-controlled switching, tuned the WebLogic settings, startup parameters, the deployment descriptors, connection pools, JVM parameters, provided a separate dedicated thread pool for the heaviest J2EE components, identified the potential memory leaks (Java Collections, singletons, PK classes), incorrect release of system resources, etc. Provided a reverse-engineered model and sequence diagrams based on the TogetherJ model and the Call-Graphs for the JMS, EJB, Java-reflection and Command-pattern indirection to link the components together. Generated the necessary system documentation resulting from the model and the JProbe sessions on the usecases. Identified the sets of Oracle tables to be de-normalized for faster performance of functionality unsuitable for direct transfer to the JDBC / DAO pattern. Tuned the JMS resources and queues/topics. Performance increased up to 20 times in some of the use cases.

~~~~ FOR: **British Telecom**, ~~~~~ INDUSTRY: **Telecom** ~~~~~  
London, UK Project: "Business Portal Re-engineering"  
Feb'04 – May'04 Tools: Weblogic, Interwoven, WLI/WLPortal, WSDL/WebServices.

Architect for the Web Portal re-engineering project in J2EE/Weblogic using the BEA Portal for the front tier and WLI/WLS on the mid-tier. Streamlined the business requirements in the light of the available WSDL interfaces exposed by the middle-tier for the billing and fault-detection applications. Developed the Use Cases and the Sequence Diagrams for the communication and the Class Diagrams for the two sides of the communication between the BEA Portal and the Business tier, both in lightweight WSDL and Session-Façade interfaces. Designed a "back-up" solution to provide delivery in the case the Business Tier team is not ready in scheduled time. Filtered the requirements from initial assumptions and to-be-determined issues in the light of the available interfaces. Implemented the models both in Enterprise Architect and Together/J to take advantage of the tools code generation and reverse-engineering facilities. Provided a high level design for the Portletes comprising the wireframes provided by the Business Analysts, including the PortletSession communication, the linking Intro Portlets, and the SOA-based BD-layer. Analyzed 5 sets of a total of 120 Design Patterns against the High Level Design documents and identified the subset of 20 Design Patterns to be used on the BT.com Portal for the LLD.

~~~~ FOR: **Velocitas Corp.** ~~~~~ INDUSTRY: **Software** ~~~~~  
Düsseldorf / Toronto Project: "Operational Intelligence Infrastructure"  
May'03 – October'03 Tools: J2EE, Weblogic, JDBC/JCA, C#/.NET, JMS, Metadata, OLAP.

Lead Architect for the Infrastructure project in Weblogic/VS.NET environment. Designed and implemented the first prototype of a dynamic automated-reengineering system for the "do-not-disturb" reengineering of SQL/Java/C++/C# resources (metadata-based discovery) and ERP/CRM systems (both API and SQL-based). Implemented a prototype for a rule-based Workflow definition in ILOG JRules, using the XML-rule definitions against XML-bound objects (based on the ILOG JViews Workflow model). Designed the JMS communication between the Server and the Stations via Quattro-queue channels and implemented it in the Weblogic JMS facilities, and a Tibco Rendezvous alternative communication layer. Re-implemented the JDBC communication to the SQL resources through the JCA implementation of BEA Weblogic 8.1 (including the JCA Mainframe Integration Control shipped with WL Workshop 8.1 for communication with Legacy Assets and the bi-directional JCA), resulting in a common JCA approach to communication, based on the ADK of Weblogic Application Integration facilities.

Business-process monitoring of Workflow components via the Weblogic Integration Studio, and data XML-ing via Data Integration of WLI. Re-implemented the Java/JMS backbone into stand-alone SonicMQ, as well as C#/MQ/.NET in Visual Studio .NET for usage (using the Octopus Java-to-C# translator) and Tibco Rendezvous. Designed Monitor clustering within a single machine, and the Quattro-links for 99.9% reliability.

~~~~ FOR: **Vodafone**

Prague, Czech Rep.  
Jan'03 – March'03

~~~~~INDUSTRY: **Telecom** ~~~~~

Project: "J2EE Re-architecture of the CRM/Billing/OM Business Systems"  
Tools: Arbor BP/OM, Oracle Bottleneck check, RRose, Sybase, C++.

Lead Architect for the re-architecture project of the Oskar internal systems. Built the Logical Models for the 4 main systems – Arbor (billing and rating), GeneriX (sales), PDR (payments and deposits), and UDS (CRM-type of internal app). Arbor alone is a system with some 1,300 tables (BP and OM), some of them with over 100 columns, and all of them with millions of records. Built the model for Arbor OM C++ interface as a guide to the functionality via generating the main Sequence diagrams. Prepared a set of 43 RUP-based large-project OO-Development document templates, and a set of 29 RUP-based document templates for small OO-development projects, along with a RUP-based project-template to be used a framework for Rational-Rose based development in C++ and Java respectively. Prepared an 85 Bottleneck checkpoints list, grouped in 9 database-related portions (Relations, Indexes, Triggers, Tables etc.). Performed an Oracle Health Check reports as a preliminary step before going through the 85-step Bottleneck checklist. Designed 4 different approaches towards building a Common Customer, including CMP-based EJB design persisting on Arbor BP.

~~~~FOR: **Computer Associates**

Quebec City, QC  
Nov'02 – Jan'03

~~~~~INDUSTRY: **Health** ~~~~~

Project: "Intelligent Healthcare Risk Management System - Maci"  
Tools: Aion Business Rule Expert 9, Paradigm+, UML, C++, XP.

Lead Architect of the Intelligent Risk Management system built in Aion Rule Based Environment, and VC++. Reviewed the Knowledge Base, detected contradicting rules leading to incorrect Insurance Premium Assignments and proposed two alternative ways to fix it. Implemented the changes necessary to adapt the Aion modules to XP environment and back-changed the Win2000 Aion application to match the user experience under both operating systems. Made the necessary changes in the C++ modules to use the new resources under XP. Prepared the "Advanced Aion Programming Course" (a 10-page table of contents available upon request). Developed sample Aion applications to address the specifications for the future releases of the system (rule editor and dynamic multi-GUI components with variable controls and context-sensitive presentation).

~~~~ FOR: **Architectori**

London, UK  
July'02 – Nov'02

~~~~~INDUSTRY: **Software** ~~~

Project: "Intelligent Enterprise Architecture Generator"  
Tools: WebLogic, Aion8, Together, JRules, Prolog, Oracle, JDBC.

Lead Architect of the Intelligent Design Patterns Suit – a rule-based Design Patterns generator under customer specified sets of goals and restrictions (presented in the OO Model as stereotypes). Designed and developed, (partly via telecommute from Toronto), the system prototypes in JRules (ILOG), Aion8, and Amzi Prolog. Co-designed the Oracle DB on the back end, with a proprietary CRM/Session management facility. Participated in the development of the code generation modules for C#, C++, Java, SOAP, and CORBA IDL classes. Deployed initially in Apache Tomcat with java bean rule engine (several rule-based inference engines mentioned above have been experimented with), then redeployed in Websphere 5.0 and Weblogic 8.1. System currently running as a Session Bean accessible by remote clients, and the intranet site (Struts/tiles based forest-menu JSP interface, utilizing 4 frames for smooth control of the environment – clean and predominantly simple). Cross-checked the Knowledge Base against all Design Patterns publications and modified the system behavior accordingly (forked and contradicting rules in particular).

~~~~ FOR: **VODAFONE/ VZV**

London, UK  
Oct'01 – May'02

~~~~~ INDUSTRY: **Telecom** ~~~~

Project: "Vizzavi Web/WAP Portal 2.0 – SMS Alerts Engine"  
Tools: WebLogic, Vignette, Sybase, EJB, JSP, XML, WML, OLAP

Lead Architect for Vizzavi – the Web/WAP Portal of Vodafone and Vivendi Universal (France). Re-designed the Java Bean – EJB communication layer, increasing the delivery rate from 55% to 75%. Identified and fixed a set of conflicting processes improving the delivery rate from 75% to 95%. Fixed the Monitoring Facility Database problems to increase the delivery rate to 100%. Designed and developed a Dynamic real-time Scheduler with RMI monitoring of the load of all servers, resulting in 30% average decrease of the load. Debugged the 2 STRUTS based UI components (menus) of the Portal. Designed and developed the QUEUE Monitoring tool for the SMS Queuing with alarm threshold. Designed and developed the Alerts Monitoring tool for Automatic Recovery of SMS Alerts with 'No Content' logs. Balanced all the CRON jobs related to SMS Operation for load distribution. Developed the UML OO Model for PMA Vignette 6.0 modules. Bypassed the Session Managements for the HOME WAP page for fast home-page delivery (Session management "on-demand"). Designed the Global Traffic Monitor for eBrands (FR provider) in Business Objects (DW). Prototyped a Business Process Monitoring with the new Weblogic Integration (BPM facility of WLI). Redesigned the EJB layer (porting from Jaguar to WebLogic) resulting in up to an order of magnitude improvement of performance – utilizing the EJB 2.0 Local Interfaces, Home Methods for the SMS subscribers collection and EJB QL select methods for filling the collection of the Home Method. Developed the EJBgen-based process for building the new EJB Layer and the EJBgen prototype. Prepared a 35-item Failure-Proof list for keeping the portal at the 100% SMS delivery rate.

~~~~ FOR: **NOKIA / IBM-UK**

Helsinki, Finland  
March'01- Sept'01

~~~~~ INDUSTRY: **Telecom** ~~~~

Project: "NOL 2.0 – NOKIA On Line"  
Tools: WebLogic, Vignette, Aion8, EJB, JMS, JSP, OLAP, XML, UML

Lead Architect for IBM in the "NOL 2.0 - Nokia On Line" project. Designed and implemented the Translation Services for automatic generation of the JSPs for up to 80 Language/Country Locales. EmailService hooked to the Translation Service for dynamic email generation and distribution. JSP-based Admin Console for NOL monitoring the Data Migration, local and remote LOG-files, Aion8 rule-based data-filtering, etc. Designed the Integration Services backbone for SAP, Siebel, GetAccess (enTrust), Collaborative Planning (CP), and Story Server (Vignette) data synchronization in BEA Tuxedo (JOLT). JDBC adapters for backing the JOLT (Tuxedo) for the above-mentioned servers and switchable routing for GetAccess - orders of magnitude faster than Tuxedo. Stateless Session and CMP Entity Beans for distributed access from the remote Services. Dynamic Cache module for the non-EJB components (DAL) with time-based content-management (via a pair of HashMaps). Bulk-data generation module for stress-test-data generation with cross-table dependencies (Oracle) and stress tests for the main modules. JUnit test harness for the Integration Services components. Configurable Gateways architecture for JOLT, JMS, JDBC, HTTP. Reengineering in SonicMQ JMS (no Weblogic). Tuning the Tuxedo and JDBC Gateways with flexible DB and JOLT-Session Weblogic pools and template-generated Weblogic and NOL property files. Ant-based Weblogic deployment and Websphere 3.0 and Linux re-deployment by request of IBM UK (the vendor at NOKIA).

~~~~ FOR: **The Middleware Comp.**

Chicago, IL  
Till February'01

~~~~~ INDUSTRY: **Software** ~~~~

Project: "EJB/JMS reengineering of Message Board Component"  
Tools: Jbuilder4, WebLogic, TogetherJ, EJB, JMS, JSP, JDBC.

Architecture Review for re-implementation of a JSP/Servlets/JDBC Message Board application of the Participate.COM in Chicago on behalf of The Middleware Company in Dallas, TX. Designed the main 4 EJBs persisting on Oracle 8i DB, along with 2 Stateless Helper EJBs and a Stateless Façade for the entire app. Modeled the System in Together/J, generated the EJB stubs both from TogetherJ and Jbuilder for comparison. Prototyped the implementation in JBuilder and examined alternative approaches of the architecture with TemplatedSearch Session Beans hitting Oracle with strait JDBC, as well as a pool of MessageDrivenBeans (WebLogic 6.0 with the EJB 2.0 extension) listening to JMS Pub/Sub component. Implemented a complete prototype of JMS Board in SonicMQ JMS.