

Michél Dalal

[mdalal97 @ yahoo . com](mailto:mdalal97@yahoo.com)
<http://www.micheldalal.com/>

Lakeville (Twin Cities Area), MN
 (m)952 221-0210

Experience

Nevelex Corporation

Senior Architect, Project Manager, and Lead Developer

Lakeville, MN

Sep 2002 to Present

Relevant Projects & Clients Summary

DirecTV (Apr 2006 to Present)

Working on components within the [DirecTV Plus® HD DVR \(HR20\)](#), a high-definition Set-Top-Box (STB), and related projects.

- Java/C/C++ coding for various components within the system.
- Worked on the ATSC processing of the STB. (PSIP processing, channel tuning, recording, etc...)
- Architected and developed the lower layer of the IP management code.
- Developed web applications for internal testing and prototypes using Struts and web services.
- Architected and developed new software components that enhanced and extended the STB's functionality (confidential).

Ultralingua (Mar 2005 to Present)

Ultralingua is a leading provider of dictionary software supporting French, English, Spanish, German, and More.

- Developed the Symbian OS version of their application for HarperCollins UK. C++ coding for 2nd and 3rd edition Symbian OS phones.
- Worked on the Windows OS version of their dictionary. Added skinning support and fixed/enhanced the hot-key component in the application.
- Developed a C/C++ web service application used for remote dictionary lookups.

Wells Fargo (Jan 2004 to Jun 2006)

- Fixed, extended, and deployed an internal web application to comply with the US Department of the Treasury's Office of Foreign Assets Control (OFAC) regulations. Improved the performance of the OFAC system 500 fold.
- Primary developer and component architect working on the [Retirement Plan Payments \(RPP\)](#), part of the Wells Fargo Commercial Electronic Office® (CEO) business portal.
- J2EE work (Servlets, JSP, and EJBs) deployed to IBM's WebSphere Application Server.
- Implemented the RPP Ad Hoc Reporting engine.

Specialized Active Networking for Distributed Simulation ([SANDS](#)) (Sep 2002 to Dec 2003)

The end goal of this project is to solve the dynamic information dissemination problem through the use of active filtering and adaptive network nodes.

- Designed architecture of system using UML CASE tools and applied design patterns to the solution.
- Developed highly portable solution that runs on Linux (2.4.X) and Mac OS X. Currently porting to Solaris 8 and Win32 platforms.
- Developed Linux 2.4.X Loadable Kernel Modules (LKMs) and Mac OS X Network Kernel

- Extensions (KEXTs; NKEs) that perform the active filtering and topology discovery.
- Successfully managed aggressive project schedule.
- Created a C/C++ implementation of the Active Filter Signaling Protocol Version 2 ([AFSPv2](#)).
- Created a C/C++ implementation of the Active Topology Discovery Protocol ([ATDP](#)) to support the requirements of the AFSPv2.

LiveNet Information Solutions, Inc.

Architect, Project Manager, and Lead Developer

Milwaukee, WI

Sep 1996 to Sep 2002

Relevant Projects & Clients Summary

Hewlett-Packard Company (Jun 2001 to Sep 2002) Palo Alto, CA

- Designed and developed software used in a home networking gateway product whose objective is to simplify setup and maintenance of a computer network. Model numbers are hn200e (Ethernet), hn200p (HPNA) and hn200w (Wireless 802.11b).
 - Client-side Java application development and server-side Java API development.
 - C networking DLL and C++ gateway communications API creation.
 - Designed and implemented an automated build-chain process in Perl.
 - During the second-generation product development, managed the software development team.
- Web Services development using both Java and .NET technologies for Smart Spaces technologies (e.g. a wireless conference room solution).

Mentisys, Inc (Dec 2000 to May 2001) Atlanta, GA

Mentisys develops advanced distributed software components, engines, and products.

- Architect and lead developer of a reliable HTTP callback (two-way) tunnel for Applet to Servlet communication over a firewall for use within their product line.
- Designed and implemented a dynamic report generation engine that converts data in an Oracle database into PDFs, MS Excel spreadsheets and MS Word 97 documents. Project involved using numerous Java technologies including EJBs, JSPs, XML/XSLT, DHTML, Applets, Servlets and JDBC.

MyWorkTools.com (Oct 2000 to Jan 2001) Discovery Bay, CA

MyWorkTools.com is a knowledge exchange web site focused exclusively on digital business tools.

Implemented the affiliate program, the affiliate report generation system and the system logging mechanisms in Perl.

ClearBand, LLC (Aug 1999 to May 2001) Schaumburg, IL

ClearBand provides branded TV and video programming to broadband connected PCs.

- Architect and lead developer of a distributed broadcast management system using Java technologies (JDBC, RMI, Security, JFC (Swing), XML/XSLT, Applets and localization). The system performs many tasks including content scheduling, end-user broadcast guide generation, and meta-data management all within a distributed environment.
- Programmed C applications for managing digital content within a PostgreSQL (RDBMS) database.

GolfSuite (Apr 1999 to Sep 2000) Cincinnati, OH

GolfSuite provides online tools and search services for golfers.

- Implemented the back end of the GolfSuite site using Oracle/Jakarta-Tomcat/Apache.
- Created Servlets and Java Server Pages (JSPs) to facilitate user management, golf course management and golfer report generation.

MCI Worldcom (Apr 1997 to Jun 1998 & Sep 1998 to Aug 1999) Richardson, TX

- Created an intranet-based project management system using Oracle/JServ/Apache that is still used by the development team.
- Developed Oracle PRO*C applications to do complete database compares based on the NetExpert database schema. Tool was used to find coding bugs by dynamically tracking changes made to the database.
- Programmed a number of version control applications for the NetExpert system (Network Management System) to track loaded modules (rule sets) in the database.
- Developed a custom SNMP MIB used for network management of internal devices.
- Extended the UCD-SNMP distribution for internal use.

Rijndael Block Cipher (Advanced Encryption Standard (AES))

Created an implementation of the [Rijndael Block Cipher \(Advanced Encryption Standard \(AES\)\)](#) in Java and developed a Provider for the Java Cryptography Extension (JCE 1.2.1).

Ameritech Cellular (Ameritech Cellular is now part of AT&T.)
Developer

Schaumburg, IL
Feb 1996 to Mar 1997

Relevant Projects Summary

- Designed a trouble ticketing system that interfaces to a number of Informix databases. The system is deployed in Ameritech's midwestern market for tracking cell site issues.
- Deployed an intranet portal using a MySQL back-end used by the network operations center and field agents for sharing information.
- Developed a complex data file browser that allows for ticket generation, regular expression data filters and report generation.

Computer Knowledge

Methodologies	Actively apply UML techniques and design patterns in the architecture, design and development process.
Operating Systems	Linux, Solaris, AIX, HP-UX, Windows 9X/Me/NT/2000/XP/Vista, Symbian OS, Palm OS, and Mac OS X.
Languages	<ul style="list-style-type: none"> • Primary: Java, C/C++, Objective-C and Assembly. • Secondary: Extensible Stylesheet Language (XSL), JavaScript (EMCAScript/AJAX), PRO*C, SQL, Perl, TCL/TK, Common Lisp.
	<ul style="list-style-type: none"> • Java: Java 2 Enterprise Edition (J2EE), Enterprise JavaBeans (EJB), Java Server Pages (JSP), Servlets, Java Database Connectivity (JDBC), Java Foundation Classes (JFC/Swing), JavaBeans, Java Security API, Infobus,

Technologies and APIs	<p>Applets (including code signing), Remote Method Invocation (RMI), LiveConnect, Java Native Interface (JNI), localization, Struts, JSF, etc...</p> <ul style="list-style-type: none"> • C/C++: Standard Template Library (STL), ADAPTIVE Communication Environment (ACE), pthreads, sockets, ucd-snmp (a.k.a. net-snmp), Motif widget set and Athena widget set • Cocoa • Misc.: Web Services, Extensible Markup Language (XML), HTML and LDAP
CASE, Development and IDE Tools	<ul style="list-style-type: none"> • CASE / UML: MagicDraw, Together ControlCenter, Visio 2000, Dia, and ArgoUML • Java: Sun JDKs, Borland JBuilder, IBM VisualAge for Java, IBM WSAD, IBM Rational Application Developer, and Eclipse • C/C++: GNU gcc/g++, Xcode, Microsoft Visual C++.NET, KDevelop, ddd, and gdb • Embedded: Symbian OS (Carbide.vs), POSE (Palm OS Emulator), and Microsoft eMbedded Visual C++ • Source Control: Concurrent Versions System (CVS), IBM Rational ClearCase, and Microsoft Visual SourceSafe
Applications and Tools	<ul style="list-style-type: none"> • Databases: Oracle, Informix, PostgreSQL, and MySQL • Servers: WebLogic Server, IBM WebSphere, Apache, and Jakarta-Tomcat • Web Browsers: Netscape Navigator, Microsoft Internet Explorer, and Mozilla Firefox • Misc.: GLUE (web services platform)

Education

<p>Northwestern University <i>M.S., Electrical Engineering</i></p> <p>Thesis: "Automated Analysis and Classification of Glottographic Signals" Concentration: robotics, computer architecture, computer vision, and computer graphics.</p>	<p>Evanston, IL Jun 1995 GPA: 4.0/4.0</p>
<p>Milwaukee School of Engineering (MSOE) <i>B.S., Electrical Engineering</i> <i>Minor, Management</i></p>	<p>Milwaukee, WI Feb 1993 GPA: 3.7/4.0</p>

Awards and Publications

<ul style="list-style-type: none"> • Gowri Rajappan, Michél Dalal, Thomas Kostas, "Reliable Multicast With Active Filtering for Distributed simulations," in <i>Proc Military Communications Conference (MILCOM 2003)</i>, Boston, MA, October 2003. • Thomas Kostas, Diane Kiwior, Gowri Rajappan, Michél Dalal, "Key Management for Secure Multicast Group Communication in Mobile Networks," in <i>3rd DARPA Information Survivability Conference and Exposition (DISCEX-III 2003)</i>, Washington, DC, April 2003. • Jack J. Jiang, Shuangyi Tang, Michél Dalal, Chi-haur Wu, David G. Hanson, "Integrated
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Analyzer and Classifier of Glottographic Signals," in *IEEE Transactions on Rehabilitation Engineering*, vol. 6, no. 2, June 1998.

- Walter P. Murphy Fellowship (1993-1994), Northwestern University
- Alumni Achievement Award (1993), Milwaukee School of Engineering
- Tau Beta Pi

Professional Training

- Software Architecture, 2002
- UML, 2002