David MacMahon

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Objective – To help companies successfully design/develop/deliver emerging technology products.

Skill Set

PROGRAMMING LANGUAGES	OPERATING SYSTEMS	NETWORKING	OBJECT ORIENTED	DATABASE
Java/Swing	MS-Windows	TCP/IP	OOA/D	Oracle
C/C++	Linux	HTTP	UML	SQL
JavaScript	SunOS/Solaris	Security	RMI	JDBC
HTML/XML	HPUX	Servlets/J2EE	CORBA	PL/SQL
Perl	AIX	Jini	EJB	ODBC
MSVC/MFC		CAN		

Experience – Founded D. MacMahon, Inc. (dba Smart Software Consulting) in 1995. D. MacMahon, Inc. is a software consulting firm specializing in the development of distributed object-oriented applications in heterogeneous environments ranging from embedded systems to enterprise systems.

PACIFIC BELL INFORMATION SERVICES – http://www.pacbell.com

Distributed Voice Mail Management System

- Led the design and implementation of several generations of Mailbox Administrator (MA), a system used by PBIS agents and larger business customers to manage more than 2.5 million voice mailboxes on approximately 200 voice mail machines located throughout California and parts of Nevada. SBC plans to expand their use of this system throughout the Midwest and Southwest.

- Rewrote Windows-based client/server application as a multi-tier web-based application (Web MA), consisting of an HTML/Javascript based user interface, Java servlet based middle tier, Oracle database, and a Unix based back end. This, PBIS's first web-based application, was so successful that PBIS started a mass conversion of their other applications to the web.

- Collaborated with the PBIS security team to establish a secure connection between the Internet and the PBIS networks. For the first time, PBIS customers were able to access the MA system using the Internet instead of costly dial-up connections.

- Redesigned the MA data model to support multiple platforms. This also led to more efficient storage and access of data, better support of voice mail platform features, and integration with other PBIS databases.

- Designed and implemented an API to encapsulate the database structure, minimizing the impact of changes to the data model.

- Created a program that validates over two million mailbox records from the voice mail machines and loads them into the database. Entire process runs in 30 minutes.

Provisioning Automation System

- Designed and implemented a portable object model to represent orders sent from Pacific Bell mainframe system (SORD), a portable parser that transforms orders into the object model, and a portable formatting model that transforms orders from the object model to various external formats.

- Replaced three programs running on two dedicated servers with one program utilizing the parser, object model, and formatting model. Program was written in MSVC 5.0 using MFC and STL.

- Enhanced the existing data model for increased flexibility, which allowed for features and services not previously possible. These new services allowed the company to manage the work load more efficiently and comply with regulatory mandates.

AJILE SYSTEMS – http://www.ajile.com

Developer Tools for Embedded Java

- Designed and wrote a Java Native Interface wrapper class for aJile's native JTAG drivers. This allows Java programs on a PC to control aJile's embedded Java CPUs via their JTAG ports.

- Implemented portions of the Java Platform Debugger Architecture to allow in-circuit debugging of embedded Java programs from within a Java IDE's built-in debugger via the JTAG interface.

DALLAS SEMICONDUCTOR – http://www.dalsemi.com, http://www.ibutton.com/TINI

TINI Software

- Created and maintain TiniHttpServer, an open-source pure Java web server and servlet engine designed for embedded applications, specifically TINI. TiniHttpServer is, to my knowledge, the world's first web server and servlet engine that runs on a SIMM-sized computer. http://www.smartsc.com/tini/TiniHttpServer

- Created a serial-to-Ethernet program for TINI that allows serial devices to be accessed and controlled over the Internet. http://www.ibutton.com/TINI/applications/sertoeth/index.html

XILINX CORPORATION – http://www.xilinx.com

Xilinx IRL Demo

- Developed a system that allows programming of the Xilinx CoolRunner CPLD remotely via the Internet. This "Internet Reconfigurable Logic" demonstration was shown in the Xilinx booth at the Design Automation Conference in Los Angeles in June 2000. Online video available.

BANK OF AMERICA INVESTMENT SERVICES

Desktop Consolidation

- Created CORBA wrapper objects that transformed stand-alone information sources into a cohesive system of information services. This consolidated several diverse systems into one unified desktop.

Education – Bachelor of Science, Electrical Engineering, 1988
Worcester Polytechnic Institute, Worcester MA

References – Available upon request.

D. MacMahon, Inc., a California Corporation, carries General Liability and E&O insurance.