

CRAIG EICHELKRAUT

215 Sherrylynn Place, Harvest AL, 35749, phone: 256-313-3729,
e-mail: eichelkrautc@saic.com

Education

B.S., Computer Engineering, University of Illinois, 1984
M.S., Computer Information Systems, Southwest Missouri State University, 2000
M.S., Computer Science, University of Alabama in Huntsville, 2002
MCSE+I, Microsoft Certified Systems Engineer + Internet, 1999
SAIC - Fixed Price Project Management, 1997
SAIC - SEI Capability Maturity Model Level 3, 1998

Publications

“An Architecture of Real Time Mobile Agents”, Conference on Life Cycle Software Engineering Technologies Avionics, Missiles, and Smart Weapon System, October 10, 2002.

“Applying Modern Gaming Technology to Army Weapons System Simulations”, Conference on Life Cycle Software Engineering Technologies Avionics, Missiles, and Smart Weapon System, August 16, 2000.

Work Summary

Mr. Eichelkraut has over eighteen years of computer systems engineering experience. He performed as project manager on all Oil and Gas SCADA projects for SAIC over a 4 years period. This resulted in the successful execution of 10 Million Dollars in Firm Fixed Price contracts. Mr. Eichelkraut has also led an R&D effort to develop the next generation real-time control system for SAIC. Recently Mr. Eichelkraut has stepped down from management responsibilities so that he can concentrate on completing his PhD degree. He is currently involved in designing weapon systems simulators for the U.S. Army.

Professional Experience

Science Applications International Corporation, Huntsville, AL, 2000 – Present

Senior System Engineer -

Currently supporting the U.S. Army in developing virtual reality training simulators for Stinger, Javelin and TOW missile systems. Each system uses a DirectX 3D battlefield with VRML modeled targets. The result is a photo realistic environment that responds to gunner commands in real-time. Tasks also include providing the U.S. Army with support maintaining the internal Javelin missile

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code. The Javelin missile is a self-guided, “fire and forget” weapon designed to destroy armored vehicles.

Science Applications International Corporation, Huntsville, AL, 1995 – 2000

Assistant Vice President -

Won and managed a large liquids SCADA project for CONOCO pipeline. The system controls and operates Oil and Refined Product movements throughout North America for CONOCO. The system uses satellite communications for distributed computing on 5,000 miles of pipeline. Besides managing this project, work assignments include developing the real-time data acquisition / communications functions. This involved satellite communications using X.25, dial-backup strategies, and protocol marshalling.

Led an effort to produce the next generation real-time control system for SAIC. This new product is based on Windows NT and is completely distributed and object oriented. The product has been sold to the first customer (PPGU Nuclear). Responsibilities included Requirements Analysis, Detailed Design, and initial coding of core data acquisition function. Software was developed using Objectstore object oriented database, Microsoft Visual C++, and Dataviews graphics toolkit.

Science Applications International Corporation, Huntsville, AL, 1992 - 1995

Project Manager -

Won, managed and completed several smaller SCADA projects for Howell Pipeline in Houston, Texas, LOCAP pipeline in Louisiana and ONGC pipeline in India. Also performed upgrades for several existing customers including LOOP, PSE&G and Saudi Aramco. All projects involved the HABITAT real-time database management system, with software developed using the ‘C’ programming language.

Led the development team on a large multi-site Oil Pipeline SCADA computer system for LOOP, Inc. The system uses distributed processing, client-server architecture and has fourteen host computers, four networks, and sixteen workstations. Responsibilities included system design, programming, scheduling, cost estimating, interfacing with the customer, and overall project management. Developed all of the data communications software for these projects as well as the real-time network communications routines.

Managed the completion of the PSE&G Gas Distribution SCADA computer system project. This system uses large numerical models, relational databases, and X-Window Graphical User Interfaces.

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Science Applications International Corporation, Huntsville, AL, 1988 - 1992

Senior System Engineer -

Led the development of a large fault tolerant electronic security system installed at the U.S. Bureau of Engraving and Printing. This effort involved following the project from initial procurement, through design, integration and testing, and ended with installation and training. I developed all of the real-time communications software for the project. All software was written in FORTRAN using a fault-tolerant DEC VAX.

Led the development of a very high security, access control and intrusion detection computer system installed at Cape Canaveral Air Force Base.

Led the development of a large multi-site Access Control computer system installed at Lockheed Missiles and Space Co. The system networks sixteen DEC VAX computers and supported a user database of 64,000 cards and 1,000 card readers. The system additionally scans 10,000 alarm points and posts alarms in two seconds or less. Responsibilities for the project included designing the hardware and software for a real-time communications interface. All software for the interface was written in Assembly language for the Zilog Z8 processor.

Participated in the team that developed a front-end real-time data acquisition system used for Petroleum Operations in Saudi Arabia. All software was programmed in the 'C' language on the VMS operating system.

Illinois Power Company, Clinton Nuclear Power Station, 1984 - 1988

Staff Engineer –

Designed, coded, tested, and installed a datalink server to pass real-time plant data to state agencies and corporate headquarters. The system was implemented in 'C' on the UNIX operating system.

Responsible engineer for the plant electronic security system. Maintained the software and added new features to meet NRC regulations. The system was written in Assembler for the MODCOMP Classic Computer.

Participated in a team effort to rewrite the Emergency Dose Calculations for the plant. This involved large mathematical models as well as real-time data and graphical output.

Maintained the plant computers database using the corporate IBM mainframe during plant startup testing.

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University of Illinois – Champaign / Urbana, 1983 - 1984

Programmer –

Assisted several agriculture department professors in research requiring computer design and programming during my senior year. One project involved controlling a diesel engine test stand to measure the effectiveness of soybean-derived fuels. Another project controlled an automated tractor implement to measure soil compaction in test plots.

Computer Proficiency

Computer: Intel x86, Digital VAX, Digital Alpha, MODCOMP Classic, HP 1000, Z8, 1750.

Software: Windows 95 / 98 / ME, Windows NT / 2000 / XP, OpenVMS, UNIX, C++, 'C', JAVA, Visual Basic, FORTRAN, PASCAL, ADA, SQL, HTML, MS-DOS, Assembly Language and Micro-code.

Networks: Microsoft IIS, Ethernet, FDDI, DECnet, TCP/IP, OSI, X.25, SNMP, UUCP, BISYNC, Serial

Database: ESCA HABITAT, ODI Objectstore, Microsoft SQL Server, MS Access, Rdb