**Curriculum Vitae**

Alistair (Al) Parker, B.A.Sc 705-717-8833

Email: al.parker@telestream.net

faulty.knave@gmail.com

**EXPERIENCE**

My experience has exposed me to a wide variety of real-time systems and applications, languages and operating systems as well as team and solo work at the Architecture, Development and QA Level in various client environments. I have worked through the entire life-cycle on various projects, directed a team of 5 developers and dealt with clients from the proposal to the post-delivery stages.

My experience has required systems design, implementation, testing and documentation as well as supervision and review of the work of others. Projects have included highly available SCADA and plant display systems, massively scaled IPTV systems, Gigabit traffic passive monitoring systems and MySQL, Postgres, Oracle, INFORMIX and Sybase database interfacing.

September, 2009 to Present

- Director of Development, IneoQuest Technologies Inc/ Telestream LLC

- Developed passive monitoring solutions for QA analysis of HLS, DASH, MSSS and other OTT protocols

Linux systems using DPDK packet capture in C/java/SQL

- Developed AWS CDI Receiver in golang/C for analysis of uncompressed video transfer performance on AWS linux in a microservices architecture using rabbitmq and zenko object-store.

- Certified AWS Cloud Practitioner, working on Google GCP

May, 2007 to September, 2009

- Principal Software Engineer, IneoQuest Technologies Inc,

- Developed passive monitoring solutions for QA analysis of SDV, RTCP, RTSP and other protocols on   
 Solaris and Linux systems using PCAP packet capture in C/java/SQL

- Developed sendcap traffic generated to test load and specific bugs in production traffic

August, 2006 to April, 2007

- Contractor with the Telus STB Engineering group in Edmonton, Alberta

- researching and testing new equipment in support of the planned IPTV rollout

# **February 2005 to May, 2006**

- Chief Engineer with the Innovative Applications Group of Alcatel Canada Inc, for FSD/ICE in Saint John. Responsible for innovating new concepts into solutions aimed at exploiting Alcatel equipment and supporting solutions.

- Named Member of Alcatel Technical Academy (ALTA) in November 2005.

- Named as Inventor on several IPTV-related patents filed in Europe and the US.

- Lead developer on a system to manage and configure complex IPTV deployments for customers in the US. The software was written primarily in Visual Basic .NET with custom DataGrid interfaces to Oracle RDBMS.

**December 1998 to Present**

- CTO, Nonsuch Software Inc (part-time)

- Maintenance and hardware and software upgrades to a highly available SCADA/Plant Display system at a Nuclear Power Plant in Europe.

- Continuation of previous AECL work (1995-1998 below) in C on QNX

# **December 2003 to February 2005**

- Senior Research Engineer with the Strategic Innovations Lab of Alcatel Canada Inc, for FSD/ICE in Saint John. Responsible for innovating new concepts into solutions aimed at exploiting, Alcatel equipment and other solutions.

- Developed a prototype client-side DVR solution for a customer in Java.

- Developed mechanisms to optimized MPEG2TS channel sequencing.

- Developed a video library system proof-of-concept intended for surveillance systems intended to operate over IP.

- Developed an MTFTP-based content delivery mechanism intended to leverage multicast for efficient delivery of movies, music, stored TV programs, photos, etc. between peers in a customer INTRANET.

**April 2004 to Present**

**-** Part-time involvement in the maintenance and upgrade of a data acquisition system installed and running in a nuclear power plant at a customer site.

# **June 2001 to December 2003**

- Chief Solution Engineer with ImagicTV Inc, Saint John, New Brunswick. Responsible for Technical Planning and prototyping of solutions related to Scalability, Availability and Performance.

# **June 2000 to June 2001**

- Solution Engineer with ImagicTV. Testing and diagnosing digital video delivery solutions and research of scalability and availability solutions.

**June 1998 to June 2000**

- Technical Architect with ImagicTV. Designing and overseeing the development of a complete state of the art digital television delivery system in C/C++ and JAVA on Solaris, RISC-OS/OS-9 with ORACLE 8.

- Duties included specifying strategies for the design of Set-top box and server-side software with respect to scalability, security, availability and performance, approving functional and technical design documents, analysis of technical issues during testing and mentoring of less senior development, DBA and engineering personnel.

**April 1995 to June 1998**

- Self-employed on contract for Atomic Energy Canada Limited (AECL) in Fredericton, New Brunswick as System Architect, C++/O-O Mentor, Designer, Implementer and Reviewer in the development of state-of-the-art Nuclear Power Plant SCADA and real-time database systems based on QNX. This work involved using Rational Rose and WATCOM C++ on NT with feasibility work in CORBA/JAVA.

**November 1993 to April 1995**

- Technical Architect with Andersen Consulting's Technology Integration and Services (TIS) division in Toronto, Canada and subsequently in London, England.

- Performed a Technical Architecture Analysis for a client/server project involving ENCINA, DCE, ORACLE on the server and PowerBuilder on Microsoft WINDOWS as the client in a Retail environment.

- Planned and developed a Technical Prototype for the above configuration.

- Served as Technical Advisor on another project using PowerBuilder/ORACLE.

- Taught Client/Server Application Design Schools and Client/Server Technical Architect School at Andersen's worldwide training centre near Chicago.

- Helped configure TUXEDO on an HP server and helped configure the associated workstation development environment on a PC.

- Lead object-oriented design and implementation of a WINDOWS NT based customs brokerage system in C++ using INFORMIX SE.

- Worked in the online technical architecture proof-of-concept team for a large project using PowerBuilder on WINDOWS NT, C++, ODBC, TUXEDO and ORACLE on HP in London.

**July 1992 to November 1993**

- Senior Software Engineer in the Databases Group of the R & D Division of Computervision GIS in Richmond Hill.

- Design and development of high performance database interfaces and subsystems for the existing SYSTEM 9 GIS package and design of a portable database interface subsystem for the next software release involving ORACLE 7.

- The development work involved interfacing to ORACLE (5, 6 and 7), INFORMIX Online and EMPRESS RDBMS's on SUN 4 hardware running UNIX (SUN OS4.1 and SOLARIS 2.1) and IBM RS/6000 running AIX with embedded SQL and OCI in C.

**June 1986 to July 1992**

- Senior Consultant for Gellman, Hayward & Partners (now CGI) of Toronto.

- Responsibilities included design/development and management of diverse real-time application projects ranging from 3 months to 2 years in duration.

**Projects Included:**

- Project leader of a 4-man design and development team in C++ of a UNIX and X11-Motif-based digital television switching system for SONY/CBC using the INFORMIX Online RDBMS (18 months duration).

- Design and development in C of a UNIX-based radio page logging system for Motorola Ultrapage using UNIFY RDBMS.

- Design leader for development in C of a QNX-based monitoring system for Ontario Hydro's Bruce Nuclear Generating System.

- Project leader in enhancement work in C of a QNX-based reversible lane control system projects for Ferranti-Packard Electronics.

- Design and development in C of a DOS-based nuclear-reactor inspection system for Ontario Hydro using real-time image processing analysis of infrared television images.

- Development of a compiler in C for a DOS-based proprietary PLC programming language for a PLC at Ferranti-Packard Electronics.

- Development work in C of an 8088-based cash register for Pinpoint Retail Systems with a proprietary real-time operating system.

- Development in FORTRAN on TSX-11 of a Nuclear Reactor Tube Inspection System for Ontario Hydro Research.

**Summer 1985**

- Hardware and software debugging in C and assembler of an existing UNIX device-driver written in C and 8086 assembler for a microcomputer-controlled mass-spectrometer.

**February 1982 to August 1984**

- Junior Designer with a Mechanical and Electrical Consulting Engineering firm.

- Designed and implemented a Time Accounting System for the firm in C.

**INVENTIONS**

I have been listed as Inventor on several patent applications pending or currently being prepared including:

Secure Multicast Flow – EPO Application # 03300073.8 – 22.07.03,

- USP Application # 20040025013, February 5, 2004

Multiple view video feed – EPO Application # 03300120.7 – 18.09.03,

- USP Application # 20040060061 – March 25, 2004

Ratings based television guide – EPO Application # 03300184.3 – 30.10.03,

- USP Application #20040088729 – May 6, 2004

Milestone Synchronization – March 2005

3D Electronic Program Guide – April 2005

Client-Side PID Translation – July 2005

Network-based Instant Replay – August 2005

Picture-in-Picture Mosaic – February 2006

Peer2Peer Multicast File Transfer – April 2006

**EDUCATION**

1986 B.A.Sc from the Computer Science option of Engineering Science at University of Toronto.

- My undegraduate thesis involved developing a user interface for an expert system in Smalltalk and LISP on a XEROX 1108 microcomputer.

- Elected Secretary of Devonshire East House Men's Residence.

- Organized the Devonshire East House Band.

1987 to 1992

- Part-time study towards an M.Eng with the Computer Group of the Electrical Engineering Department at the University of Toronto (not completed).

Previously:

- member of the Association of Professional Engineers of New Brunswick, Canada.

- looking into getting reinstated in Ontario

**SKILLS**

- Started programming computers with FORTRAN and Z80 assembler in 1974 (high school Computer Science and as a hobby); started programming with C on XENIX in 1982; started programming with C++ in 1990 and with JAVA in 1997.

- Extensive knowledge of C and C++ on various flavors of UNIX, QNX as well as DOS and WINDOWS.

- Experience with Visual C++ and BASIC, PowerBuilder and Aspect GUI builders on Windows and with programming X11R5 with Motif on UNIX and PHOTON/PhAB on QNX.

- Experience with technical management and use of various project management tools and CASE tools including System Architect and Rational Rose C++.

- Working knowledge of entire software development life-cycle. Flexibility to handle challenging situations and to learn new skills while working on projects.

- Most recent work in golang/C and python as well as extensive performance tuning in java.

**PERSONAL DATA**

- Married with four children.

- British subject and Canadian citizen.

**REFERENCES**

Frank Bratz, Senior Software Engineer, Arctic Wolf Networks, [frank.bratz@gmail.com](mailto:frank.bratz@gmail.com), 416-303-0137

Karen L. Stephens stephenk@aecl.ca

QA Team Lead, 506-453-3284

AECL-CNER

Incutech Building, University of New Brunswick

Fredericton, NB

Rob Robson, Ph.D, robsonr@aecl.ca

Senior Software Architect, 905-823-9060x4693

Atomic Energy of Canada Limited,

2251 Speakman Drive,

Mississauga, Ontario

CANADA, L5K-1B2

Leon Blum, P.Eng leonb@interlog.com

50 Fraser St 923-2222 ext 228

Thornhill, Ontario

CANADA, L3T-5H6