

Education

- May 1988* **Doctor of Philosophy**, Computer Science
Tulane University, New Orleans, LA, USA
Dissertation Title: "Decimal Floating Representations"
- Aug. 1980* **Master of Science**, Computer Science
University of California at Los Angeles, Los Angeles, CA, USA
(also in part at UC Berkeley)
Emphasis on computer architecture and number systems
- Aug. 1978* **Bachelor of Science**, Computer Science
Loyola University, New Orleans, LA, USA
Magna Cum Laude, University Fellow, Sigma Nu

Full-time Employment

- Aug. 2007* **Markit Group, Ltd.**, London, UK *Director*
Present
- I am a technology lead and presently manage an outsourced development team of 6-9 developers and QA staff that develop and support an enterprise web portal called Markit Desktop for Web. It is a portlet based framework that provides a pluggable hosting environment for a diverse set of Markit products. These include the Totem pricing & volatility services, Markit BOAT (MFID) pricing and analysis, Markit Equities Dividends research, Market Share Analysis, CDS and credit index pricing, Markit Economics PMI Premium, and a variety of other Markit news and commentary.
- I am presently managing the in-sourcing and off-shoring of this project to a new Markit India office.
- I have also recently taken on the role of Markit technical lead for a new portal initiative called MarkitEco. MarkitEco is a portal providing aggregation carbon and environmental products from both within and external to Markit. These include the Markit Environmental Registry, Misys MERS and METP products, IdeaCarbon, and various Exchange and OTC pricing services including ICE, Nymex, Climex, and Bluenext. This product will launch in summer of 2010.
- Jul. 2005* **Delta Digital Design, L.L.C.**, New Orleans, LA *Principal*
Aug. 2007
- I maintained a consulting practice with 2-5 associates providing technology solutions to the market data and health care industries. Clients and projects included –
- Markit Group, Ltd.* – I was engaged by Markit from mid-2006 to act as the lead technology manager on an enterprise project to provide quote extraction services to Markit's buy side clients. This service accepts large volumes of emails from client firms and extracts quantitative price information from them. The project also provides a web interface for viewing results as well as mechanisms to provide real-time distribution to clients.
- Development of this project has included oversight and management of out-sourced groups in India and Romania as well as internal resources in London, Amsterdam, and New York.
- United Pain Care* – UPC provides biometric patient registration and prescription tracking for Louisiana physicians and hospitals. The solution is almost entirely web based and allows tracking and verification of patients across facilities dispensing controlled substances
- Sep. 2000* **Moneyline, Moneyline Telerate Inc.**, New Orleans, LA *Vice-President, Desktop Applications*
Jul. 2005
- I reported at various points to the CEO, President, CTO, and CIO and lead a team of 10 people to design and build a new thin-client solution for market data delivery called WebStation. At the time

of our departure, WebStation, became Moneyline's best selling product hosting 6000 subscribers among major banks and financial institutions world-wide generating \$16 MM/ year.

WebStation provided all of the traditional market data display functions – quotes, pages, charts, tables, level 2 data, contribution, trading system support, and a host of other features and is fully customizable and configurable by the user.

Jun. 1998
Sep. 2000

Bridge Information Systems, New Orleans, LA

Director of Systems Engineering

Bridge acquired Dow Jones Markets in June 1998. I continued in basically the same position. Specifically my duties included: management of a team of developers that provided support and upgrades for the Active1 financial workstation.

Jun 1994
Jun 1998

Dow Jones Markets, New Orleans, LA

Manager, Workstation Development

Responsibilities in this position continued previous development role along with added oversight of all Workstation related development within the local office. Workstation design has employed several heterogeneous development tools including proprietary languages and tools. My work included:

- Design and development a data warehouse for financial market data.
- Design and development of a support system for news services within an NT-based trading room integration platform.
- 'Technical Evangelist' in support of our new ActiveX-based workstation.
- Research, design, & development of compression technologies for DJT's elementized and page-based data feeds.
- C++ class library design to present DJT's core workstation API's in an object framework.
- Research, design, & development of compression technologies for DJT's elementized and page-based data feeds.
- Design, development, and management of a 'tunneling' methodology for distribution of permission data to workstations limited to broadcast data sources

Oct 1989
Jun 1994

Dow Jones Telerate, New Orleans, LA

Principal Engineer / Group Leader

This position was a result of our acquisition by Dow Jones in 1989. Responsibilities included:

- Management of a development group of eight developers focused on data management issues. These products represented the core desktop delivery platforms for DJT. These DOS-based products generated \$150MM/year in revenues in May 1992.
- Program specification and development for components of the Matrix and Teletrac products related to hardware management, communications, or data management.

Oct 1985
Jun 1994

Telerate, New Orleans, LA

Principal Engineer

In 1985 Telerate determined that it needed to update the 'look' of its products and add graphical technical analysis tools. Computrac and Delta Digital were among the leading developers in this marketplace. Additionally, the microcomputer products sold by Delta Digital were in use as platforms supporting various competitors' products. Telerate acquired both Delta Digital and Computrac in October of 1985. My responsibilities were focused on migration of our previous products to support Telerate data. These efforts included:

- Migration of the original Delta microcomputer and system software components onto a PC co-processor board. In addition to the original functionality, these systems added SMP features.
- Design of several custom ISA components to support migration of Telerate's legacy applications to PC based deployment.

Jun 1981
Oct 1985

Delta Digital Design / Computrac, New Orleans, LA

Owner

In 1979, Computrac was formed to produce technical analytic software for Apple microcomputers and, later, the IBM PC. In 1981, one of its original partners and I formed Delta Digital to build a hardware platform and system software to support new Computrac products.

Delta Digital produced a number of products for Computrac ranging from simple security devices to full blown computer systems. Our designs included: full bit-mapped RGB graphics & hardware

acceleration, local area networking, 3.5" floppy media, non-volatile memories, SCSI interface, built-in high-level language support.

These products later became part of the terminal product line of several major quote delivery companies including Market Information Inc./ Knight-Ridder, Unicom plc, the London Stock Exchange, and Telerate

Delta Digital was also author of an innovative, integrated set of programming tools used to support product development. These included: an RPN threaded functional language known as 'D', a multi-tasked networked operating system architecture based on D, full windowed GUI, an structured assembly language, & full source debugging capability of both D and assembly languages.

Aug 1980
Jun 1982

Loyola University, New Orleans, LA

Faculty

As a full time faculty member I taught a 3 course load each semester. I co-founded and managed the Loyola Computer Hardware Design Lab. Besides the laboratory, my research interests included implementation of the Kernighan and Plaughter 'Software Tools' architecture on the Loyola HP-3000

Aug 1978
Aug 1980

Hughes Aircraft Corporation, Los Angeles, CA

Member of the Technical Staff

My work consisted of short-term hardware and software projects supporting missile tests, radar digital signal processing, and computer simulation of various flight control systems. As a Hughes Fellow I was allowed to work a reduced schedule while pursuing my Masters degree at UCLA. Additionally and permitted to work in several different areas for 6-9 month periods

Part Time and Summer Employment

Fall 2000

Tulane University, New Orleans, LA

Adjunct Faculty

Computer Science survey course for non-major graduate students.

Aug 1993
Aug 1999

Tulane University, New Orleans, LA

Adjunct Faculty

Database systems course within Tulane's Professional MBA program.

Spring
1981

Tulane University, New Orleans, LA

Lecturer

Senior level Survey of Programming Languages course.

Summer
1978

Argonne National Laboratory, Chicago, IL

Summer Intern

Argonne performs research in many areas of high energy physics, biotechnology, pure and applied mathematics, and nuclear reactor design. I was appointed to work largely autonomously to satisfy a specific need to replace a site-wide radiation monitoring within a particle accelerator under very tight funding constraints. I designed and coded software to collect and normalize radiation measurements from 120 remote sensors, graphically display it, manage alarms and limiting values, and signal alerts. All of this was constructed for a very early 6502 based microcomputer called the KIM-1. Several communications components had to be designed and fabricated as were appropriate sensor digitization hardware.

Publications

P. Johnstone and F. E. Petry, Higher radix floating point representations - Architecture and Algorithms - in review, *Computers and Electrical Engineering*

P. Johnstone and F.E. Petry, Design and analysis of non-binary radix floating point systems, *Computers and Electrical Engineering*, Vol. 20, No. 1, 1994, pp 39-50.

P. Johnstone and F. E. Petry, Non-Binary floating point representations, *Computers and Math. Applications*. Vol 25, no. 6, 1993, pp. 103-108.

P. Johnstone and F. E. Petry, Higher radix floating point representations, In *Proceedings of the 9th IEEE Conference on Computer Arithmetic*, Santa Monica, CA, September, 1989, pp. 97-105, IEEE Press, NY

P. Johnstone, Decimal floating point representations, Ph.D. Dissertation, Tulane University, New Orleans, (May 1988)

P. Johnstone, Representational error in binary and decimal numbering systems, In *Proceedings of the 20th SE Regional ACM Conference*, Knoxville, TN, April 1, 1982, pp 85-88, ACM Press, New York.

P. Johnstone and F.E. Petry, Rational number approximation, In *Proceedings of the 1992 IEEE Southeastcon Conference*, Birmingham, AL, April 12, 1992, pp 501-504, IEEE, New York.

Honors, Achievements, Appointments, and Awards

Appointment to the United States Military Academy at West Point, Hughes Fellowship, Loyola University Academic Scholarship, Loyola University Fellow, Dean's List all semesters at Loyola, Control Data Corporation Scholarship

Professional Affiliations

IEEE, ACM

Personal

Hobbies include scuba diving, skiing, and sport flying. I am secretary for a local flying club and a licensed instrument rated pilot.