Bruce A. Fogelsong

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Competencies

- **Technical** Object Oriented Analysis and Design, .Net Development (C#), XML/XSL, JavaScript, Web Development, Web Services, C++, Visual Basic, Real-time systems, WITSML
- **Managerial** Team leading, Group discussion facilitation, Speaking/Presenting, International Project Coordination, Writing

Experience

- 7/15 - Present, *CTO of **Fogelsoft, Sugar Land, TX**, http://fogelsoft.com*
    - Currently working on a web-based video education system for the Medical Industry

- 1/10 - 6/15, *Project Manager, Real Time Connect,* **Schlumberger Global Real Time**, **Houston**
    - Project Manager for Real Time Connect (RTC, previously named Osprey Connect) software. Took *early retirement packag*e on 6/30/2015.
    - RTC is a reusable RT data communications component which is utilized in over 35 SLB software products, including Petrel (+ Studio and several plugins), TechLog, Avocet (under dev), Perform ToolKit, Drilling Office, InSitu Pro, MaxWell, Omniview, DART, GeoServices Bridge and Rapid, FracCAT (and other CATs), HSPM, PathFinder, ProSource Front Office, and the SIS Data Aggregator.

- 8/06 - 12/09, *Principal Engineer II,*
  Schlumberger SIS Digital Infrastructure & Drilling, Houston, TX
    - Realtime architect for SIS DI & Drilling: looking for ways to enhance and improve the RT capabilities of the DI & Drilling apps. Also the Project Architect for the Osprey Connect (OC) project. Main emphasis was designing and writing software to support WITSML Reading/Writing/Serving.

- 4/05 - 7/06, *Principal Engineer II*, **Schlumberger, Grenoble, France**, *DataHub*:
    - co-architect and co-team lead in an effort to enhance InterACT's WITSML API capabilities. We implemented a dual 1.2/1.311 WITSML API Web Service, expanded the commands to include Add, Update and Delete in addition to Get, and supported all of the new Witsml API objects. Our approach involved developing new C# business objects, databases, pages and services and layering them into the current InterACT architectural substrate.

- 8/03 - 3/05, *Principal Engineer II*, **Schlumberger, Grenoble, France**,
    - Basically the same job as in Austin (see below) ... but with mountains outside my window! Designed and implemented a *Service Pack* mechanism allowing the easy packaging, distribution and installation of software changes to InterACT. Previously we always had to deploy complete baselines, which would involve hours of downtime. InterACT Service Packs can be installed in minutes.

Experience (cont.)

- 7/01 - 8/03, *Principal Engineer II*,
  Schlumberger, Communication Systems and Services, Austin TX
  - *Software Architect* for the InterACT team. Presented and explained InterACT architecture to various SLB software development groups. Organized and presented two software architecture reviews (Q2, 2002). Developed early solutions for facilitating data exchange between Well Production data servers (e.g. WRX FD Exec, and RTAC) and InterACT prior to PRTI.

- 7/97 - 6/01, *Senior Engineer*,
  Schlumberger, Communication Systems and Services, Austin TX
  - Developed software for InterACT, in particular the publishing interface. Co-architected InterACT (w/ Juan Alvarado and Sanjay Kanvinde). Previously worked on *InterACT Remote Witness*, including the successful design, development and deployment of version 2.95. Developed *CLASP* (CryptoFlex Licensing Authentication of Software Products) a component regulating the authorized use of software products via X.509v3 certificates stored on CrytoFlex Smart Cards. Made 5 trips to Microsoft (97/98) to aid in integrating the CryptoFlex *Cryptogrphic Service Provider* (CSP) into Windows 2000.

- 3/93 - 6/97, *Senior Development Engineer*, **Dowell Schlumberger, Tulsa OK**
  - Project Lead for CFW Kernel software. Technical areas of responsibility included: Data management (in memory, w/ Files and Databases), Data Transmission (over serial, over sockets), DDE, Graphics, Visio-based diagramming using VB, and Alarms. Designed and developed a substantial portion of a 1-week, technical training course (*Guerrilla CFW*) used in 3 different "Kernel" schools, where I also lectured. Gave frequent presentations to senior management, and managed employees and contractors. Created and maintained the Kernel's web page.
  - System architect for CoilCAT, a real-time, C++, MFC-based, data acquisition product for monitoring coiled tubing treatments at the well site. Developed data management and diagramming services for CoilCAT.

- 1/89 - 2/93, *Development Engineer*, **Dowell Schlumberger, Tulsa OK**
  - Architected and designed *FracCAT VMS*, a new VAX/VMS, object-oriented, C-based, real-time, data acquisition system for monitoring fracturing treatments at the well site. Involved reuse of a large software library (*DPS Common System*) from Schlumberger ATC.

- 1/88 - 12/88, *Senior Software Engineer*, **Titan Technologies, Tulsa OK**
  - At Amoco's Tulsa Research Center, Developed GUI software in Lisp and C on SUN workstations to control and monitor Fortran-based simulations running on a networked, parallel computer (an Alliant). This client/server combination, which was a "total drilling simulator", was called the *Expert System Simulator* (ESS). Responsibilities included frequent customer interaction and technical management of the developer team. Benchmarked the Alliant prior to its selection for the system.

Experience (cont.)

- 9/85 - 12/87, *Computer Scientist I*, **Logicon, Tulsa OK**
    - Developed Fortran software for 2 highly interactive systems hosted on Gould Mini Computers: a real-time Well Monitoring system (DCC), and a multi-computer Drilling Simulator (ESD). The DCC received real-time satellite data, which was displayed on a "command console" with 4 touch-sensitive, color monitors. Developed GUI, Database and memory management software for the ESD, which was comprised of two Goulds communicating over shared memory.

- 5/84 - 8/85, *Software Design Engineer*, **Texas Instruments, Lewisville TX**
    - Was responsible for developing and maintaining a Fortran-based real-time simulation control system on a VAX. This system handled interactive i/o, timing, synchronization, model scheduling, DMA, and interfaced to an Ingres DB. Its purpose was to validate embedded software systems and generate data for engineering analysis.

Education

- 1992**, Masters of Science**, Computer Science, University of Tulsa, Tulsa, OK. Thesis: Thesis: GRAPHICS CLASS LIBRARY FOR PLOTTING (GCLP), AN OBJECT-ORIENTED TOOL KIT FOR INTERACTIVE GRAPHICS
- 1984 **Bachelors of Science**, Computer Science, University of Arkansas, Fayetteville, AR.
- 1977 **Bachelors of Arts**, Social Work, Oral Roberts University, Tulsa, OK

Patents and Patent Applications (with Schlumberger)

- US Patent Granted, Harvey; Diane M., Pandya; Yogendra C., Anigbogu; Julian C., Provost; J. Thomas., Alvarado; Juan C., Scheibner; David J., Kanvinde; Sanjay S., Fogelsong; Bruce A., Kaan; Keith G.: **System and Method for Electronic Data Delivery**, United States Patent No. 6,519,568, Granted February 11, **2003**.
- US Patent Granted, Matthew Brown, Bruce Fogelsong, Juan Alvarado, Mikhail Iakimov,**Web-Based System and Method for Electronic Data Delivery**, United States Patent No. 7,711,772, Granted May 4, **2010**.
- US Patent Granted, Vivek Singh, Bruce Fogelsong, Sam Marcuccio, Clinton Chapman, Paul Thow, Jim Brannigan,**METHOD AND SYSTEM FOR OILFIELD DRILLING OPERATIONS**, United States Patent No. 8,135,862, Granted March 13, **2012**.
- US Patent Memo filed, Bruce Fogelsong, Simon Yam, Vivek Singh, Clint Chapman, Jim Gergen, Joe Wald, **A method of achieving drilling application interoperability using an intermediate object broker to validate objects in order to remove interdependence between applications**, August 20, **2008**

Selected Publications and Presentations

- Bruce Fogelsong, **The Care and Killing of Dinosaurs: WITSML, RTC and the Future of Real Time**, Eureka Application of Real-Time Data Webinar, April 29, 2013
- Bruce Fogelsong, **No Software For Old Men**, HTC SIS Software Newsletter, April 1, 2009 (also selected as a feature article for Global Software Metier newsletter)
- Bruce Fogelsong, **Osprey Connect - from Desperado to Esperanto**, HTC SIS Software Newsletter, June 16, 2008 (also selected as a feature article for Global Software Metier newsletter)
- Bruce Fogelsong, **Real-Time Data Link - from Desperado to Esperanto**, WITSML Public Seminar and Vendor Exhibition, The Woodlands, TX, Oct 18,2007. I gave the presentation for Schlumberger.
- Bruce Fogelsong, Pierre Moubarak, **The New WITSML API Web Service on InterACT - Extending Real-Time Interoperability between Applications**, Schlumberger Software & IT Conference, Beijing, China, 2006
- Bruce Fogelsong, Matthew Brown, **PCAD, a secure web-based mechanism for distributed, B2B data management using InterACT Web Witness**, Eureka Software & Systems Summit, Austin, TX, 2001
- Bruce Fogelsong, Dr. Dale Schoenefeld, **Graphics Class Library for Plotting (GCLIP), An Extensible, Reusable Graphics Framework**, Proceedings of the 1994 ACM Symposium on Applied Computing Applied Computing 1994, Phoenix, AZ