

CHRISTOPHER H. THOMAS

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EXPERIENCE:

PRIMAL QUANT LLC Chicago, IL (May 2016 – Present)

Founder and Partner. Primal Quant LLC is a technology startup company that will provide Web Browser based trading strategy development and testing applications to global retail traders. Responsible for all GUI designs, overall application requirements, project and developer management.

THOMAS CONSULTING SERVICES, Chicago IL (Feb 2007 to Present)

Sole Proprietor. Provide Expert Witness Services in Federal Patent Infringement and Validity cases in the field of Financial Trading Software.

Provided Expert Witness report, consulting services and testimony at trial in *Trading Technologies, International Inc. v. eSpeed, et al.* Northern District of Illinois Case No. 04-CV- 5312.

Provided Expert Witness report, consulting services and testimony at trial in *Trading Technologies, International Inc. v. CQG et al.* Northern District of Illinois Case No. 05-C-4811.

Retained as an expert witness and consultant in *Trading Technologies, International Inc. v. GL Consultants, Inc., et al.* Northern District of Illinois Case No. 05-C-4120.

Retained as Expert consultant for Trading Technologies' United States Patent and Trademark Office covered business method patent reviews, each captioned TD Ameritrade Holding Corp. et al., Petitioners, v. Trading Technologies International, Inc., Patent Owner, having the case numbers CBM2014-00131, CBM2014-00133, CBM2014-00135, CBM2014-00136, and CBM2014-00137.

Retained as Expert consultant for Trading Technologies' United States Patent and Trademark Office Reexamination Control Numbers 90/013,558, 90/013,540, 90/013,597, 90/013,578.

MARIDUNUM CAPITAL LLC, Chicago IL (May 2011 to May 2016)

Founder and Partner. Maridunum Capital LLC is a Proprietary Trading Firm specializing in Automated Algorithmic trading strategies in the Regulated Futures markets. Designed and Developed all algorithms, strategies and software used by the company.

PEMBROKE TRADING LLC Chicago IL (October 2008 to May 2011)

Partner. Pembroke Trading LLC is a Proprietary Trading Firm specializing in the Regulated Futures markets. Designed the proprietary trading and backtesting platform, database and order management server applications used by the company. The name of the company was changed to FT Trading LLC in May 2011.

TD SECURITIES (TD OPTIONS LLC), Chicago, IL (March 2002 to October 2008)

Positions Held:

January 2007 to October 2008 - Managing Director, ERF Trading Group. Responsible for a \$50 million Long/Short Equity / Index Futures trading portfolio. Developed the trading model for the portfolio, worked with developers to implement the trading model, performed backtests of the trading model with historical data, obtained internal Bank approvals for this new business initiative, managed a small operational staff to run the trading book.

August 2003 to December 2006 - Managing Director. Responsible for business development for TD Options and Global Equity Derivatives at TD Securities.

Position included gaining internal approvals for new business initiatives, reviewing individual business unit efficiencies, acting as liaison between the business units and IT, representing IT for TD Securities Internal audits, responsibility for the TD Options Business Resumption Plan in Chicago.

October 2002 to August 2003 - Managing Director & Chief Technology Officer. Responsible for Technology Strategy and Key Project Management liaison with TD Securities Global Technology in Toronto. Scope of work not limited to TD Options and included other TD Securities business units in other parts of the world.

February 2002 to October 2002 - Managing Director & Chief Technology Officer. Responsible for leading an IT staff of approximately 80 people at TD Options in Chicago, New York, San Francisco and Philadelphia. This included day to day management responsibilities as well as strategic planning, budget planning, and the integration of the Stafford Trading and Letco technologies with those of TD Securities.

STAFFORD TRADING, Chicago, IL (December 1999-February 2002)

Chief Technology Officer

Responsible for all aspects of technology management, including software development, IT operations, network and system engineering, administration, and IT budgets and financing for Stafford Trading, at the time one of the world's largest proprietary trading and options market-making firms. Managed a staff of approximately 100 IT employees.

Accomplishments included:

Conducted several months of technology presentations, due diligence work and contract negotiations in 2001 for the sale of the technology and exchange floor operations of Stafford Trading and Ragnarok Systems Inc. to TD Securities, a subsidiary of TD Bank Financial Group.

Co-founder and CTO of Ragnarok Systems, Inc. a company majority owned by John Stafford which developed and supported Financial Instrument Transaction Systems. Ragnarok was featured on Microsoft's web site as a case study for Windows 2000 Data Center Edition and for SQL Server 2000. Ragnarok Systems, Inc. was sold to TD Securities in February 2002.

Designed a desktop trade execution application named "OptionMan" to replace existing Stafford desktop trade execution systems. OptionMan was designed for traders to

Established formal IT Service Management processes for Incident Management, Problem Management, Change Management, and Release to Production based on ITIL (IT Infrastructure Library) best practices, and established ITIL training programs for all Stafford Trading IT employees.

Managed approximately 100 IT employees in the US and Europe and an IT budget in excess of \$20 Million per year. Implemented budget and cost saving initiatives in IT staffing, communications, consulting and market data subscriptions in 2001 that resulted in substantial savings to the business.

Completed the construction of an additional 2300 sq ft state of the art data center.

Established a Corporate Intranet to replace over a dozen client software applications that performed trader P&L, difference sheets, edge reports, historical volatilities and correlations, HR and several other functions with a fully web based solution.

Established a Management Information Systems (MIS) group to perform IT project and process management and to administer the corporate Intranet.

Replaced the existing IT management team with higher quality staff in the networking, IT Operations, hardware and systems administration groups. This resulted in a much higher quality of work and greater reliability of the IT Infrastructure to the business.

LFG, LLC, Chicago, IL (January 1998 - November 1999)

Chief Technologist- FuturesOnline Division

Designed, developed and implemented the first US web browser based commodity order entry and risk management trading platform "Futuresonline" that allowed retail and institutional clients of LFG, a Chicago based Futures Commission Merchant, to execute orders, view quotes and account balances for US commodity futures on the Internet.

Accomplishments included:

Conducted extensive market research on various non-browser based online trading systems to differentiate the application functionality. This process allowed the firm to maintain its profit margins in an environment of lower commissions industry-wide.

Created a process to private label the FuturesOnline trading platform for Introducing Brokers of LFG LLC and two other Futures Commission Merchants.

Integration of the Futuresonline web application with the back office IBM AS400 based Clearing System and real time market data feeds.

Oversaw the integration efforts for all Introducing Broker and Futures Commission Merchants Private Label initiatives from the requirements gathering stage to production rollout.

FuturesOnline was featured on Microsoft's web site as a case study for the use of Microsoft DNA technology.

EMERALD MARKET SYSTEMS, INC. Chicago, IL (*July 1997 - December 1997*)

Chief Technologist

Designed and implemented a web browser based streaming market quotes product for The Chicago Mercantile Exchange for distribution of real time quotes on selected markets to the general public over the Internet.

COMMODITY TRADING ADVISOR AND SOFTWARE DEVELOPER, Chicago, IL
(May 1993 to June 1997)

Conducted further research and refinement on a proprietary automated trading model. Registered Commodity Trading Advisor with the National Futures Association. Actively traded accounts in the currency futures market specifically from the signals generated from the automated trading models. Performed development services for selected clients on a consulting basis. Was featured and interviewed in the Chicago Mercantile Exchange Educational Video entitled "The Currency Opportunity" in February 1995.

FX ASSET MANAGEMENT, INC. Chicago, IL (April 1991 to April 1993)

Vice President

Responsible for starting the corporation in Chicago for the parent company in England. Performed all NFA and CFTC registration requirements, and acquired suitable computer systems. The corporation was set up to market the services of a Foreign Exchange trading advisory firm in England. At a later date traded for customer accounts, as the relationship with the UK Advisory firm was terminated. In this capacity, initiated relationships with banks, Commodity Pool Operators, Fund Managers and Brokerage Houses as well as being responsible for overall customer trading strategies.

INDEPENDENT RESEARCH Bristol, England (May 1990 to March 1991)

Conducted full time, self-funded research on Interbank Foreign Exchange Trading and computer based trading system development.

NATIONAL WESTMINSTER BANK Bristol, England (October 1989 to May 1990)

Registrars Data Management Department - Worked on a contract basis on the administration of the privatization of the Water Utility Companies by the UK Government, and on administration of UK public corporations employee stock incentive plans. All work was undertaken on an IBM mainframe computer and an IBM AS400 minicomputer.

NATIONAL FINANCIAL MANAGEMENT Bristol, England (July 1987 to September 1989)

Account Executive

Advised individual clients on various insurance, pension, tax planning and investment plans. Built up a client base of over 200 clients in a two-year period.

EDUCATION:

UNIVERSITY OF THE WEST OF ENGLAND. Bristol, England (1983 - 1987)

Bachelor of Science in Applied Biological Sciences - June 1987 Concentrations in Molecular Biology and Plant Production Biology.

CONTROL TRAINING LIMITED Bristol, England (1990)

Structured Systems Analysis and Design Methodology (SSADM) and COBOL programming.

INTERESTS:

Competitive Sailing, rugby, biking, music, fitness.