
SENIOR TECHNOLOGY EXECUTIVE OR MANAGEMENT CONSULTANT
CTO – SVP TECHNOLOGY – CHIEF ARCHITECT – BUSINESS ANALYST

Creative, results driven technology leader with over 15 years of proven Chief Architect/CTO experience. Problem-solver with a passion for using technology effectively to improve products; skilled in grasping the big picture, conceptualizing and implementing solutions, and partnering closely with business executives. Results-oriented, recognized for resolving mission critical issues to ensure bottom line success. Accomplished scientist and inventor – author of numerous patents and publications in the area of electronic trading. Demonstrated success in designing global Forex dealing systems. In-depth knowledge of Forex market microstructure, trading strategy development and optimization methodologies.

QUALIFICATION HIGHLIGHTS

- Executive leadership and communication
- Management consulting
- Global trading systems architecture
- Forex market microstructure
- Trading strategy development
- Technical/software development manager
- R&D and full development lifecycle
- Object oriented design, software design patterns
- Six-sigma coder
- Accomplished scientist and inventor

PROFESSIONAL EXPERIENCE

Principal – Ed Howorka Solutions – Denville, NJ 5/2012 - Present

The company provides consulting services in the areas of Forex trading strategy evaluation, development, historical back-testing and optimization to institutions, hedge funds and individuals.

Conducts original research on trading strategy optimization using the most advanced technologies to optimize a multi-parameter quasi-continuous profit function. Expert knowledge of neural networks and multi-agent systems.

Chief Technology Officer – MarketFactory, Inc. – New York, NY 6/2007 - 4/2012

MarketFactory provides trading connectivity solutions to banks, funds, brokers and ECNs. Company's products enable trading customers to connect to most Forex venues using a single universal API. Company also provides hosting and network services.

Co-founded the company with James Sinclair and Darren Jer. Responsible for all aspects of product technology vision, original research, software architecture, product and technical requirements, high-level design and specifications. Provided seminal ideas and organized the initial development team. Architected, designed, and oversaw development of the company's flagship Whisperer and Sherpa products. Authored key patents.

Chief Business Risk Officer – EBS/ICAP – New York, NY 10/2002 - 6/2007

(Note: EBS was acquired by ICAP in June 2006.)

Responsible for regulatory compliance, scrutinizing traders' activities on the EBS matching system, performance measurements, long-term trend monitoring, and crisis management. Managed a team of senior analysts, risk managers, and software engineers. Oversaw introduction and a large-scale expansion of API trading on EBS. Imparted suggestions to executive management and Board of Directors. Directed implementation of novel automated tools to monitor the behavior of Forex market participants. Collaborated with regulators and researchers at the Federal Reserve System.

Chief Technology Officer – EBS Dealing Resources – Parsippany, NJ

6/1998 - 10/2002

Responsible for all aspects of product technology vision, system architecture, product and technical requirements, high-level design and specifications, system monitoring and performance measurements, critical technology make vs. buy decisions.

Oversaw a ten-fold EBS order volume expansion while achieving 99.97% system availability and greatly improving system performance. Led Y2K certification and a multi-stage BrokerNet migration from legacy technologies to Unix, Linux, Windows and Java. Achieved the objective to make the EBS system vendor-independent and future-proof. Architected, designed, and led implementation of several profitable products, including EBS Prime, EBS Ai, and EBS Live. Authored over twenty EBS patents which serve as foundation of the company's business.

Head of Technology Planning – Citicorp/EBS Dealing Resources – Parsippany, NJ

5/1994 - 6/1998

(Note: Citicorp Dealing Resources was acquired by EBS and renamed to EBS Dealing Resources in June 1996.)

Responsible for EBS system architecture, functional requirements, high-level design and specifications, effort estimates, system monitoring and performance measurements.

Demonstrated hands-on product and technical leadership at the time that the EBS system was rapidly evolving to become the world's main interbank Forex trading platform. Regularly interacted with customers to improve the trading, administration, and reporting interfaces. Delivered timely specifications, design, and estimates for hundreds of system modifications and new product features. Evaluated internal and external technologies, enabling best-of-breed, build-vs-buy decisions. Authored several key EBS patents.

Senior Developer/Chief Architect – Citicorp Dealing Resources – Parsippany, NJ

12/1990 - 4/1994

Starting as a consultant for the "Project X" (that later became "EBS"), progressed through roles of increasing responsibility within a team of brilliant and dedicated software engineers.

Responsible for overall system architecture, design, and coding of major EBS system components. Designed and implemented the unique EBS distributed architecture comprising multiple synchronized matching engines (located in NY, London, and Tokyo), that optimizes trading performance in face of global network latencies. Designed and coded the key EBS Arbitrator component (the matching engine). Designed the pioneering EBS credit-screened price distribution system. Defined the EBS trading GUI (used to this day). Designed and implemented workstation voice capabilities used by EBS traders to ease transition from Forex voice broking to electronic trading.

TECHNICAL EXPERTISE

- Excellent knowledge of non-linear optimization methods, Artificial Neural Networks, genetic programming and evolutionary optimization, graph theory, combinatorics, statistics, probability theory.
- Extensive technical knowledge of distributed transaction-matching systems' design and architecture, Forex market, data analysis, trading strategy development and optimization.
- Programming languages: Deep experience with C, C++, STL and Boost libraries, CUDA C, Open GL. Good knowledge of Java, Delphi, LISP, Prolog, FORTRAN, and Intel processor family assembly languages.
- Good knowledge of real-time electronic control systems. A life-long hobby of robotics.

PATENTS AND PUBLICATIONS

Over 40 patents and publications. Please see www.edhoworka.com/patents and www.edhoworka.com/publications for the full list, including abstracts.

EDUCATION

Associate Professor of Computer Science, University of Virginia
Ph.D. Mathematics, University of Florida
M.A. Mathematics, University of Florida
Associate Mathematics & Physics, University Paris VII, France