

Algo-Logic Systems Applies Gateway Defined Networking to Accelerate Real Time Bidding in Ad Tech Industry at the OpenPOWER Summit 2016

Applying the Lowest Latency Techniques from Wall Street to Benefit the Ad Tech Industry

Santa Clara, California, April 1, 2016 – Algo-Logic Systems, a recognized leader in providing hardware-accelerated, deterministic, real-time, ultra-low-latency solutions for datacenter industries, will be sharing insight on how real-time bidding in Advertising Technology (Ad Tech) systems can benefit from low latency trading technologies used in financial markets. The Real Time Bidding (RTB) protocol serves hundreds of billions of ads daily on about 100 demand-side platforms (DSPs), moving hundreds of Terabytes (TB) of data back and forth through ad exchanges to serve ad impressions. Dr. John Lockwood, CEO of Algo-Logic Systems is presenting on April 6: *“Moving Ad Exchanges from Main Street to Wall Street”* at the upcoming OpenPOWER Foundation (OPF) Summit 2016 at the GPU Technology Conference (GTC) at the San Jose Convention Center from April 5-8, 2016.

Presentation Abstract: “Moving Ad Exchanges from Main Street to Wall Street”

Today’s Advertising Technology requires time to parse a bid request, look up relevant data about a user, evaluate an opportunity, decide on the value, and then bid a price to serve an impression. Due to the overhead of RTB, advertisers only get one chance to bid their Cost Per Impression (CPI). Tremendous improvements can be achieved by applying Gateway Defined Networking® (GDN) technology to these issues in a similar way as it is applied to financial markets. Technologies already used in financial markets provide excellent transparency and price discovery that can be applied to RTB.

By monitoring live market data feeds and constructing an order book with Field Programmable Gate Array (FPGA) logic, multiple auctions can be performed with sub-microsecond latency. Algo-Logic’s Gateway Defined Networking® CAPI Enabled Order Book can be applied to Real-Time Bidding for a new and improved Ad Tech exchange. The Order Book efficiently tracks all open orders and offloads sorting to FPGA hardware in order to sustain high volumes of traffic. As a result, the market is fair, the exchange provides ample liquidity, and transactions can be profitable for all participants.

Algo-Logic has developed multiple GDN algorithms and components to support ultra-low-latency processing functions in heterogeneous computing systems. Algo-Logic’s CAPI Enabled Order Book runs in FPGA logic in an IBM POWER8 server and includes an ultra-low-latency Ethernet MAC, market data feed handler, and fast Key-Value Store (KVS) for tracking orders and transferring the results to shared memory on a standard Linux-based system.

Intended Audience:

Network engineers, hardware designers, software developers, product marketing managers, advertising and marketing managers, performance analysts, IT managers, and all senior managers are welcome to attend.

Booth Location:

Please visit Algo-Logic at the OpenPOWER Foundation booth and IBM Pavilion to get more information on the CAPI Enabled Order Book that deterministically reads market data from Ethernet, builds the book by sorting bid and ask prices, and then writes results to shared memory all with a latency of under 1.6 microseconds. Additionally, visit Algo-Logic at Nallatech’s booth #1007 demonstrating GDN technologies that accelerate database lookup for Key-Value pairs and high-speed network and flow processing at speeds up to 40 GbE rates.

About Algo-Logic Systems:

Algo-Logic provides Gateway Defined Networking® solutions with open Application Programming Interfaces (APIs) that allow software developers to easily select which instruments they wish to track and how often they want updates to be transferred to shared memory. Together, the FPGA-accelerated heterogeneous platform with compact binary protocols and multicast feed distribution provides a fast, transparent, and efficient platform that dramatically improves real time auctions.

About OpenPOWER Foundation:

The OpenPOWER Foundation is a global, open development membership organization formed to facilitate and inspire collaborative innovation on the POWER architecture. OpenPOWER members share expertise, investment and server-class intellectual property to develop solutions that serve the evolving needs of technology customers.

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