Josh Seba | Software Engineer

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Experience

Microsoft **Redmond, WA**

Software Development Engineer *2017–Present*

Developer for Windows on Wireless Networking and Miracast

- Designed and implemented protocol changes to both Miracast and Miracast over Infrastructure protocols to allow the projecting device to initiate the RTSP connection
- Implemented a backward-compatible upgrade to the Miracast over Infrastructure protocol to allow for stream encryption and PIN authentication
- Worked with hardware vendors to improve the quality of the Miracast ecosystem by diagnosing customer issues and implementing fixes
- Ensured that Windows 10X can be WiFi Certified by updating the Microsoft certification toolkit
- Created a tool to compare latencies across multiple network interfaces using standard Windows sockets

Cboe Global Markets (Bats Global Markets) **Lenexa, KS**

Software Engineer *2015–2017*

Developer on core trading platform

- Lead developer on order entry gateway responsible for processing customer messages
- Primary maintainer for both the standard FIX and Cboe's proprietary BOE protocols used by customers to enter billions of orders per day
- Gained experience writing high performance, low latency C++ code on distributed Linux systems
- Designed and implemented order entry protocol changes to support the migration of the Cboe Futures Exchange to a new technology platform, including adding support for 24/7 exchange operation to the platform's order entry gateways
- Designed and implemented order entry protocol changes to support the introduction of complex options orders on the BZX and EDGX options exchanges
- Migrated order routing between the Cboe markets from standard FIX to the BOE protocol. This resulted in a reduction of the average messaging latency by 35%.
- Mitigated and resolved production system issues in a heavily regulated environment where latency is measured at the microsecond granularity
- Ensured that new and existing features functioned properly via unit and integration test suites using Boost Unit Test and Jenkins
- Guarded against performance regressions through the use of regular load tests to analyze system operation under high stress

Education

Missouri University of Science & Technology **Rolla, MO**

B. Sc. Computer Science *2011–2015*