Capital K Partners B.V.

About System K

What is System K

System K is a high performance framework for building trading strategies or trading systems. It allows you to perform the basic functionality required to get a trading system running or build a fully automated strategy. Users can easily add GUIs, analysis tools, charts and graphs, monitoring tools as needed, in any language on any system.

Out of the box System K can:

- Connect to a FIX or ITCH market and receive market data
- Collect market data into a an order book (either our implementation or yours)
- Aggregate multiple market BBO data into a single book
- Distribute market data from any single market or from the aggregated book over a local network using TCP/UDP or PGM
- Add, modify, cancel orders on FIX markets
- Serialize orders to database
- Use multiple languages to develop strategies, data analysis tools, store tick data, or smart route orders.

We deliver the core of the system and you can extend it in any language you like. System K provides the plumbing infrastructure so you can focus on your strategy.

System K has passed compliance tests for several trading venues including Baxter, FXCM Pro, ADS Securities, and FastMatch. Additional venues can be conformance tested as needed.

Components

The system consists of the following components:

1) Market data listeners – with implementations for FIX 4.2 – 5.0SP2, ITCH and soon Interactive Brokers.
2) A basic orderbook implementation – an orderbook that can handle input from each exchange and maintain the orderbook using updates from the exchange.
3) Market data broadcast – ZeroMQ is used as the transport layer to broadcast market data messages and synchronize communications.
4) Aggregated order book – all market data may be optionally fed into a single orderbook where only the best prices are retained from all exchanges and broadcast as a separate market data message.
5) Order entry – including implementations for FIX 4.2 – 5.0SP2

Capital K Partners B.V.

Technology

System K is built entirely on open source software meaning you have access to every piece of the system and can modify it as you like. The system is built on the following trusted and proven high-performance components:

- Zero MQ messaging
- Quickfix FIX Engine
- Boost C++ libraries
- Google protocol buffers, perftools, and gtest

We're always looking for ways to push the boundaries of the system with new tools and techniques. We have three primary goals when considering system architecture:

1) Performance
2) Stability
3) Scalability

System K was developed purely from open source products and is distributed under the GNU LGPL license.

Future Directions

System K was designed and built to trade and manage spot FX trading across multiple exchanges with extremely low touch execution. We're actively expanding to other delta 1 asset classes out of the box.

Since we're always trying to improve performance, stability, and scalability we're currently evaluating NoSQL databases for reporting, a new open source FIX engine which promises to be 50% faster than the current QuickFIX/C++ release.

More Information

For further information please get in touch any way you like.

Email: info@capitalkpartners.com
Phone: +31655836711
Twitter: @capkpartners