

+ Product Fact Sheet

# Market Simulator

The Connamara Market Simulator simulates the behavior of an exchange matching engine by maintaining multiple limit order books, matching buy and sell orders within those books and issuing market data when the limit order books change.

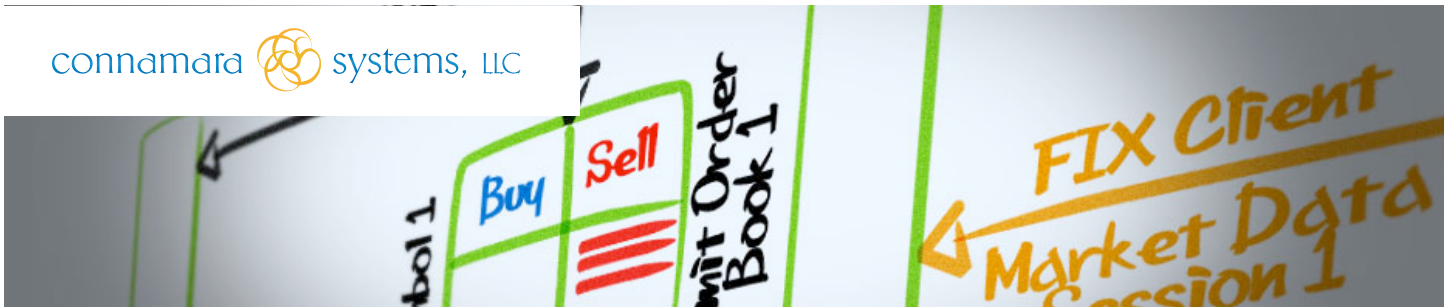
With the Connamara Market Simulator, developers and quality assurance engineers can simulate the behavior of an exchange or counter-party. This allows testing of client applications in a controlled, repeatable manner, increasing developer and QA productivity. The Market Simulator can also be used to aid training trading application users without the necessity of having a connection to the test connection of an exchange or ECN. Multiple sources of liquidity can be simulated by running multiple instances of the Market Simulator.

The Connamara Market Simulator comes with a standard FIX 4.2 API for client communications but can be easily extended to support other versions of the FIX protocol and specific exchange or ECN behaviors.

## Functionality:

The Connamara Market Simulator behaves like a simple exchange. Each limit order book within the simulated exchange is identified by a symbol. When the application is started there are no markets and consequently, no orders. A limit order book is created when a client either requests to receive market data or submits an order for a new symbol. Limit order books are destroyed when the application is shutdown. Multiple clients can access multiple limit order books. Clients can connect as a market data subscriber, an order management subscriber or both.

Functionality	Description
Logging	Logging can be set at increasing levels of verbosity to allow the tradeoff between performance and information.
FIX Connectivity	Supports FIX 4.2 but can be easily extended to other FIX versions.



Functionality	Description
<p><b>Market Data</b></p>	<p>Through the subscription request clients can specify:</p> <ul style="list-style-type: none"> <li>+ Incremental updates or full book refreshes</li> <li>+ Number of book price levels to receive</li> <li>+ Which market data information to receive (bids, offers, trades, session high trade price, etc)</li> </ul>
<p><b>Limit Order Books</b></p>	<ul style="list-style-type: none"> <li>+ New book creation                             <ul style="list-style-type: none"> <li>+ On receipt of order for new symbol</li> <li>+ On market data subscription request for new symbol</li> </ul> </li> <li>+ Supports Limit and Market orders</li> <li>+ Supports cancellation of orders</li> <li>+ Market data sent to subscribers                             <ul style="list-style-type: none"> <li>+ On trade, cancellation or insertion of orders into book</li> </ul> </li> </ul>
<p><b>Order Matching</b></p>	<p>Price-Time matching algorithm</p>

## Technology:

The Connamara Market Simulator is a C++ application with support for Microsoft Windows and Linux.



## Market Simulator Diagram:

The diagram shows the Market Simulator configuration

