



## Proposal to Build a High Performance Scalable Matching Engine

# Low Latency, High Speed, Scalable Matching Engine

24-May-2011

Fifth Generation Computer Corporation  
445 Park Avenue, 9th Floor New York, NY 10022  
Tel. 1-800-707-0342  
<http://www.fifthgen.com>

1



## Proposal to Build a High Performance Scalable Matching Engine

### Problem

- How can matching systems process transactions in a manner that will keep pace with increasing volume and processing complexity? The technical challenge is to achieve near zero latency transaction processing for today's demand with scalability for tomorrow's demand.
- The latency associated with network hops is significant and more than one hop is not an option.
- Currently discussed FPGA based solutions localize the transaction processing in an FPGA that is connected directly to the network. This provides a solution to the network hop latency, but is not scalable to address future increases in transaction rate requirements or complexity of transactions.



## Proposal to Build a High Performance Scalable Matching Engine

### Solution

- One solution is to combine FPGA transaction processing speeds with a near zero latency scalable parallel processing technology.
- Fifth Generation Computer Corporation (Fifth Gen) proposes to develop a new version of its MP Series of High Performance Scalable Multiprocessor Platforms based on low power processors with FPGA co-processors.