Historical Simulation of Option Trading Strategies (Fishback Management & Research, Inc.)

FMR is a leading developer of options analysis software using one of the world’s most advanced databases (provided by Hanweck Associates and Interactive Data Corporation). FMR is located right here in Lexington. The database contains options records back to January 1, 1998. There are over 70 billion datapoints in the database.

The company has an options analysis software program (optionapps.com) called ODDS OptionApps. It allows users to find potential trades and analyze them on a *current* basis.

Our objective with this project is to allow users to develop a strategy and then run an historical simulation to see how the strategy would have performed over the period in which data is available.

There are three aspects to this project:

1. Creating the engine to generate the strategy and the trades.
2. Creating the ability to track the performance of the trades selected.
3. Creating a user interface (optional).

The servers to be used is co-located in Lexington and is based on the following:

* nVidia Kepler-based GPUs (2,304 cores; 3.977 TeraFLOPs; CUDA)
* DUAL Intel XEON E5 v2 Ivy Bridge-EP Six-Core Processors
* 64 GB DDR3 Registered ECC Ram 1333 MT/s, CL9 Latency.
* 2 Terabytes Solid State Storage, 98,000 iOPS Read, 90,000 iOPS Write
* RAID 0: 1GB per second read, 995MB per second write.
* Supercomputer Cluster Technology running TORQUE with Maui scheduler
* Multithreading using MPI running Island Algos
* Data center with multiple OC48s provided by different upstream providers

James Hughbanks is the Lead Development Engineer and will be the contact person for the team.