USER'S MANUAL

Financial Market Simulator

Grape

Oct, 2014

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For every propblem, there exists a solution...

Revision Sheet

Release No.	Date	Revision Description
Rev. 0	5/30/00	User’s Manual Version 1

User's Manual
Financial Market Simulator

I have carefully assessed the User's Manual for the (Financial Market Simulator). This document has been completed in accordance with the requirements of Cortical Systems.

MANAGEMENT CERTIFICATION **-** Please check the appropriate statement.

The document is accepted.

We fully accept the changes as needed improvements and authorize initiation of work to proceed. Based on our authority and judgment, the continued operation of this system is authorized.

Moeletji Semenya, Daniel Makgonta and Madimetja Shika	**2014/10/03**
Project Leader	DATE
Cortical Systems	**2014/10/03**
Program Area/Sponsor Director	DATE

USER'S MANUAL

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1.0   GENERAL INFORMATION

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1.1 System Overview

The **Financial Market Simulator** is an application that views the trends of multiple competing trading algorithms within a Stock Market. The application has a set of predefined trading algorithms as well the ability to create custom trading algorithms.

The application has two main purposes:

Matching Engine

This function allows a user to understand how a Matching Engine works by performing Bids (Buy) and Offers (Sell) within a Stock and allowing the use to be the Market Participant.

Simulator

The simulator is more engaging and allows the user to add their own Stocks as well as Market Participants to the simulator. The Market Participants all can have their own predefined or custom built trading strategies, which are simply trading algorithms that use Technical Indicators to generate Bid or Buy signals.

The user can then run, pause and stop the simulator and will be able to view Market Data for both the stock as well as the Market Participant. The simulator will also show two graphs for trading price movement per stock as well as Technical Indicators.

The system is built using Java SE and can be run on any platform that has JDK installed. The application is lightweight and required minimal resources.

The application is currently under development.

1.2 Project References

https://code.google.com/p/webcurvesim/

1.3 Authorized Use Permission

This project is open-source is completely free to be used and modified by any user.

1.4 Points of Contact

1.4.1 Information

Troubleshooting contact:
cos301.mainproject.grape@gmail.com

1.4.2 Coordination

cos301.mainproject.grape@gmail.com

1.4.3 Help Desk

cos301.mainproject.grape@gmail.com

1.5 Organization of the Manual

1.0, 2.0, 3.0

1.6 Acronyms and Abbreviations

FMS – Financial Market Simulator
JVM – Java Virtual Machine
Java SE – Java Standard Edition

2.0 SYSTEM SUMMARY

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The application helps users in understanding how trading algorithms can help a user make a profit.

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2.1 System Configuration

System runs on one machine and requires only Java SE to be installed to work

2.2 User Access Levels

Any user may use the system. The system may have more value for users with a background in trading and investing.

3.0 GETTING STARTED

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3.1 Logging On

No user authentication is required to use the system.

3.2 System Menu

3.2.1 Matching Engine

The User is able trade directly with the Matching Engine

3.2.2 Simulator

The user can run a simulator for multiple trading algorithms competing against each other

3.3 Exit System

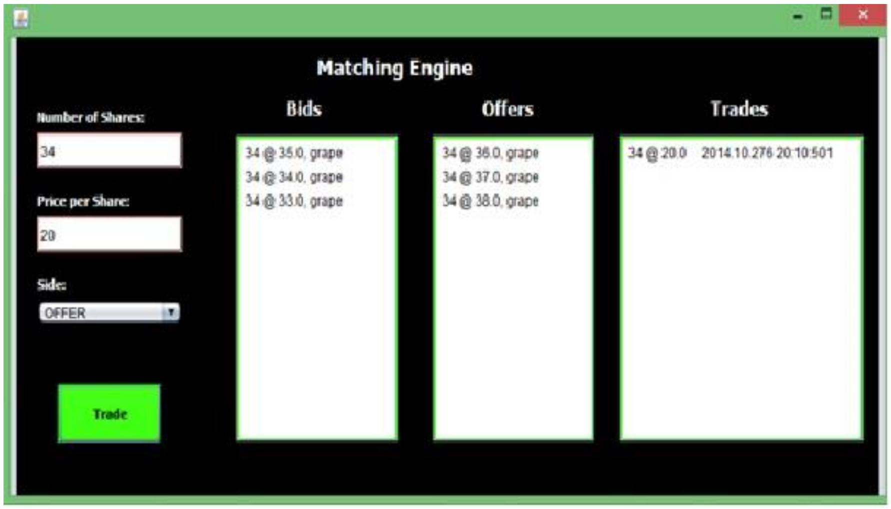
The user uses the operating system’s close button to exit the program

4.0 USING THE SYSTEM (BATCH)

4.0 USING THE SYSTEM (BATCH)

4.1 Matching Engine

This function allows a user to interact direct with the trade Matching Engine and see how trades occur. This functionality to help novice traders understand a little more about trading.



Number of Shares: 34

Price per Share: 20

Side: OFFER

Bids
34 @ 35.0, grape
34 @ 34.0, grape
34 @ 33.0, grape

Offers
34 @ 36.0, grape
34 @ 37.0, grape
34 @ 38.0, grape

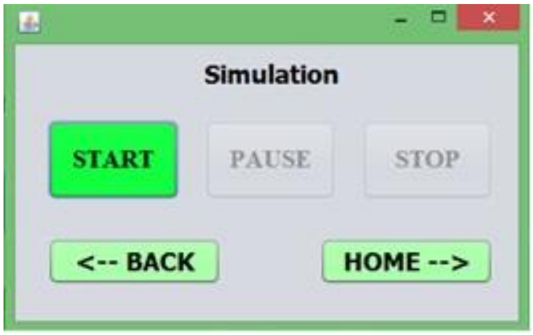
Trades
34 @ 20.0 2014.10.276 20:10:501

4.1.1 Trade

A user selects whether to make a bid or offer and see whether a trade will occur.

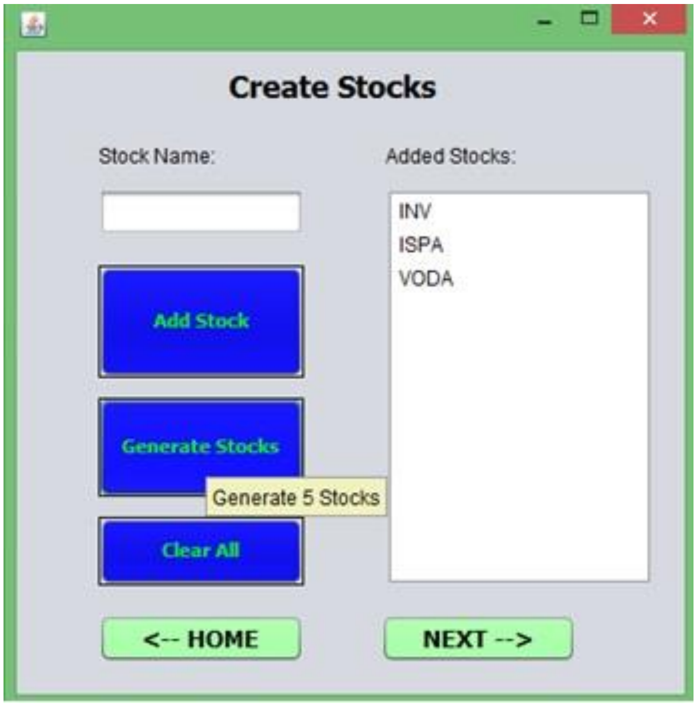
4.2 Simulator

This functions allows a user to select the Stocks and Market Participants to start trading.



4.2.1 Start

A user adds the Stock Markets and Market Participants that will start trading.

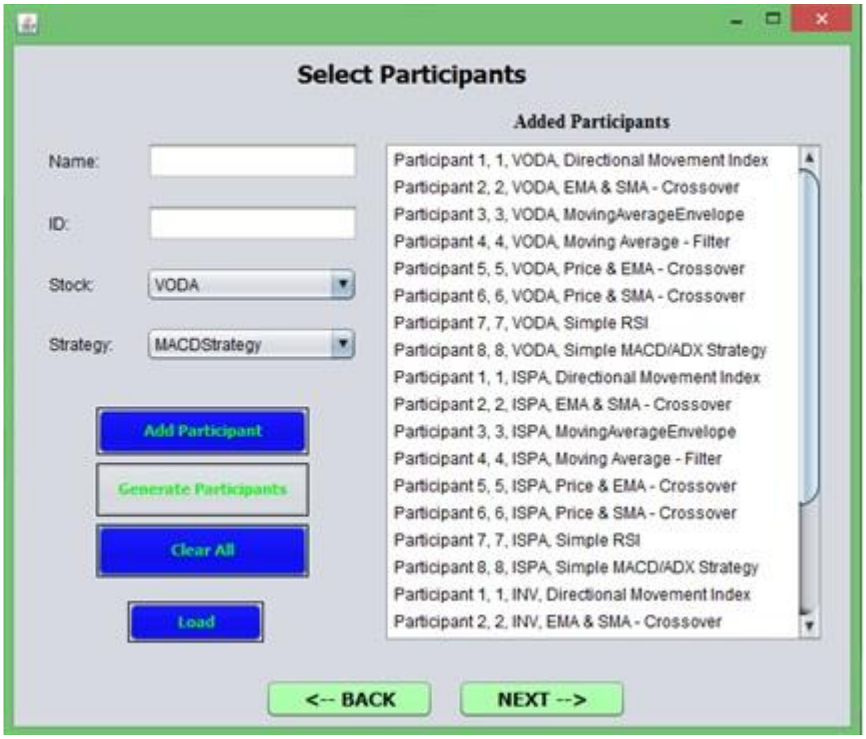


Create Stocks

Stock Name:

Added Stocks:

INV
ISPA
VODA



Select Participants

Name:

ID:

Stock: VODA

Strategy: MACDStrategy

Added Participants

Participant 1, 1, VODA, Directional Movement Index
Participant 2, 2, VODA, EMA & SMA - Crossover
Participant 3, 3, VODA, MovingAverageEnvelope
Participant 4, 4, VODA, Moving Average - Filter
Participant 5, 5, VODA, Price & EMA - Crossover
Participant 6, 6, VODA, Price & SMA - Crossover
Participant 7, 7, VODA, Simple RSI
Participant 8, 8, VODA, Simple MACD/ADX Strategy
Participant 1, 1, ISPA, Directional Movement Index
Participant 2, 2, ISPA, EMA & SMA - Crossover
Participant 3, 3, ISPA, MovingAverageEnvelope
Participant 4, 4, ISPA, Moving Average - Filter
Participant 5, 5, ISPA, Price & EMA - Crossover
Participant 6, 6, ISPA, Price & SMA - Crossover
Participant 7, 7, ISPA, Simple RSI
Participant 8, 8, ISPA, Simple MACD/ADX Strategy
Participant 1, 1, INV, Directional Movement Index
Participant 2, 2, INV, EMA & SMA - Crossover

4.2.1 Pause

The simulator will pause

4.2.3 Stop

The simulator will stop and cannot be restarted.

4.2 Rules

- Shares can only be integers
- Prices can only decimal numbers
- 2 or more participants are required to trade
- A participant with the same ID may trade in different stocks but not the same stock