

Vision and Scope Document

Project:

**Financial markets simulation with multiple competing
algorithmic trading entities.**

Client: Cortical Systems

Group:

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$\epsilon > 0$

For every problem, there exists a solution...

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Contents

1	Vision and Scope	4
1.1	Vision	4
1.2	Scope	4
1.3	Limitations/Exclusions	5
2	Glossary	7

1 Vision and Scope

1.1 Vision

The vision is to create a system that simulates the activities of a real-world financial market and the entities involved, while allowing interaction from both real-world and virtual entities.

1.2 Scope

The proposed system is a financial markets simulator system which will allow trading entities to:

- trade securities through the system as they would in a real-world financial market while adhering to free market principles,
- observe and follow trends in the market through the system by means of observing technical analysis patterns and indicators. This would furthermore provide entities with information on when best to enter or exit the market,
- compete with each other by assessing the profit and loss they make.

In particular, apart from allowing the participants to compete with each other in terms of the profits or loss

they make, the system will allow the following specific activities for participants:

- Sellers
 - make offers to sell shares.
 - sell shares to buyers.
 - negotiate over share buying price when selling shares to buyers
- Buyers
 - propose bids to buy shares.
 - search for shares on sale.
 - buy shares on sale.
 - negotiate over share buying price when buying shares from seller.
- Companies
 - Enter the market (system) and list stocks on the market (the system).

1.3 Limitations/Exclusions

The project scope explicitly excludes and/or is limited in the following manner:

- Stock-brokers will not be active in the system as individual separate independent entities. The responsibilities of the stock-broker will be handled and performed by the matching engine.

2 Glossary

- Trading entities - These are individuals, organizations participating in financial markets.