Research Proposal Draft

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1 Background

Many data vendors and financial service suppliers extract data from authorised sources of real-time data. It is common to display this data in terms of a ticker[1], charts or figures and to navigate via symbol lookup, where mouse clicks are the primary stimuli within the system.

2 The Problem

Is this the ideal way of obtaining data or is this only a conventional preference? Is symbol lookup the ideal form of interacting with data? Are keyboards and mice the only acceptable means of interaction?

3 Research

This project attempts to:

- investigate, suggest and implement modified ways of interaction with financial data.
- divert the user's attention to more relevant figures e.g. high trade volumes and volatile share values. This may be particularly useful due to time criticality in financial trade.
- develop and experiment[2] with new approaches of presenting and interacting with the data.

Nevertheless, it **does not** attempt to generate more complex graphs or analyse trends.

4 Contribution of Research

- Providing concrete proof that some proposed interfaces:
  - can save time and effort.
  - can point users at more relevant figures.
  - are more easily and appropriately customisable to specific users.
- Proving that some interfaces and interactions are better than others in the context of financial data.
- Definition and creation of new interfaces and interactions with financial data. This should result in convenience, simplicity and higher usability.

[1] Dynamic repetitive display of figures.

[2] Experimentation will involve provisional users and will draw some constructive conclusions.

5 Examples

The following present a few preliminary suggestions:

- Ticker scroll rate is decreased when ticker is hovered over. Should any ticker scroll faster instead? Should we enable users to control the scroller? What are the implications of such changes?
- Charts are commonly static. Should users be allowed interaction with charts? Larger and wider chart image can allow the user to scroll horizontally and resolve the need for hyperbolic view of the vertical axes.

6 Enquiry Methods

Publications and literature on interfaces and alternative forms of interaction can encourage innovation and inspiration. Experimentation with newly implemented systems will later produce the wanted statistics.

7 Progression

The project will initially involve a great deal of research in conjunction with the proposal of new interfaces and interactions. At a later stage, these will be implemented and tested for correctness and reliability. The last stage will involve appraisal of different systems by multiple users and conclusion will be discussed to form a dissertation.

8 Experience and Skills

I am coming from a background of software engineering with some practical work experience in software development, retrieval and presentation of data.

My professional interests include user interfaces, computer graphics, OO programming and the global economy.