

IPRO 313
Ultra-High-Speed Market
Data Ticker System

Spring 2008



Introduction

- The 1975 Security Acts Amendment, gave the SEC the authority to create an efficient national market infrastructure
- Quantitatively, much more market data are available with lower latencies
- Current generations of systems ($2 \times 10^6/s$) are incapable of handling the impending mountains of data

Goals

- Create a high performance data ticker plant
- Optimal throughput of three million price quotes per second
- Proof-of-concept data ticker plant that processes real data by end of semester

Team Organization

- Team leader: Oluwaseun Shonubi
- Development team
 - Sub-team leader: **Konstantin Roytman**
- Research/Optimization team
 - Sub-team leader: **Tarun Anupoju**
- IPRO/Web Design team
 - Sub-team leader: **Khanh Viet Duong**

Progress

- Researched different hashing methods
- Researched Options
- Made progress in preparing sample data

Obstacles

- MAJOR OBSTACLE:
 - Decoding sample market data (from OPRA)
 - Data did not match specification
 - This is essential to later test the system

Future Challenges

- Optimizing the system

QUESTIONS?

- <http://www.iit.edu/~ipro313s08>
- OPRA - **O**ptions **P**rice **R**eporting **A**uthority
- SEC - **S**ecurities and **E**xchange **C**ommission