

Ketsarin Rungraung 2014: The Development of High-Performance Security Trading Techniques Using GPU. Master of Engineering (Computer Engineering), Major Field: Computer Engineering, Department of Computer Engineering. Thesis Advisor: Assistant Professor Putchong Uthayophas, Ph.D. 45 pages.

Financial computation, especially the security trading and matching based on widely used AOM algorithm, must perform a high speed data processing. Therefore, many financial organizations need a way to accelerate this computation.

In this thesis, the use of GPU is proposed as a way to speed up the AOM stock trading algorithm. The software and algorithm developed result in a faster execution time. Nevertheless, there is still some limitation due to the need to move data from main memory to GPU system. This work presents a guideline that enable users to use cost effective GPU system to solve the AOM stock trading problem.

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Thesis Advisor's signature

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