Jin-Yu Guo, Chipan Hwang, and Mu-Song Chen, "Using GPU to Shorten the Match Time of Rule Reasoning Based on Rete Algorithm

ABSTRACT

Most of execution time of match-resolve-act reasoning cycle is consumed by match phase. It has prevented the practicability of rule base systems. The parallelism of α- and β-networks constructions in Rete algorithm has been realized on GPU in this paper. It is also proved to have more than 20 times speedup rate totally than the current high performance multi-core processors. The designed parallel realization of Rete algorithm on GPU should be helpful on development of intelligent agents or data mining, using the rule base system.

Keywords: Rete Algorithm, GPU, CUDA, Rule Base, Forward-Chaining.

REFERENCES

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