

Method of Implementing B++ Tree Search on a Parallel Using Virtual Tree Structure

許文龍

Bioinformatics

Computer Science and Informatics

wlshu@chu.edu.tw

Abstract

Since earlier computer developing stage, many researchers had been devoted to study different search methods. Today, these methods are quite mutual. Some researchers proposed several parallel search methods. But their results are dissatisfactory. Because, it is difficult to allow all PUs involving on searching distributed data in each search step. The complexity of constructing and maintaining tree structure on parallel environment is large. The production cost for this type of hardware searcher is too high.

In 1980' s, Japanese proposed the concept of intelligent computers called fifth generation computers, since they possess the superior robotic technology. Japanese government integrated the enterprises and academic forces to promote this project. PROLOG will be utilized as major language in this project. This project is failed because the relative technology is not mutual enough. But the concept of fifth generation computers has been widely accepted. The inventor of this patent had explored object relational database machine in long time, and intended to adopt this machine for next generation computers. Hence solving the bottleneck of fifth generation computers is one of major purposes of this invention. Presently the personal computer technology has rapid development. Double core CPU becomes popular in the market. It is apparent that parallel and distributed computer architecture becomes the developing trend of computer technology. Tree structure searching methods are widely adopted in the field of database systems. There is a strong need of extra large search capability over extra large data volume in the fields of database, web and artificial intelligence. To response such demand, the inventor proposes this virtual tree search method, which can execute virtual B++ tree search in the parallel environment.

Keyword : Parallel Hardware Searcher, Algorithm, AI