Abstract

Graphic rendering is expensive in terms of computation. We investigate distributing it by applying the powerful computing technique called grid computing, and showing how this technology has a great effectiveness and high performance. The paper shows how to develop a java drawing framework for drawing in the distributed environment by dividing the work upon nodes in grid computing and selecting the best nodes for job assignments to have the jobs executed in the least amount of time. Schedulers are limited in individual capability, but when deployed in large numbers can represent a strong force similar to a colony of ants or swarm of bees. The paper also presents a mechanism for load balancing based on swarm intelligence such as Ant colony optimization and Particle swarm Optimization.

References

Distributing Graphic Rendering using Grid Computing with Load Balancing

- Karaboga, Dervis, 2010, Artificial bee colony algorithm Scholarpedia, , volume 5. Pages 6915
- Spirograph http://www.wordsmith.org/~anu/java/spirograph.html

Index Terms
- Computer Science
- Grid Computing
Keywords
Rendering  Grid Computing  Swarm Intelligence  Ant Colony Optimization  Particle Swarm Optimization