Abstract

For general purpose high-performance computing, recently GPGPUs have emerged as powerful vehicles. Programming GPGPUs is complex when compared to programming general purpose CPUs and parallel programming models such as OpenMP. Goal of our translation is to improve programmability and make existing OpenMP applications to be able to execute on GPGPUs. OpenMP has established itself as an important method and language extension for programming shared-memory parallel computers. Our translator works well on regular applications, leading to performance improvements of up to 50X over the un-optimized translation.

Reference
OpenMP Optimization and its Translation to OpenGL

- OpenMP [online]. available: http://openmp.org/wp/

Index Terms

Computer Science  Parallel Programming

Key words

OpenMP  GPU  Brook+

Automatic translation