Abstract

The project deals with implementation of Floyd Warshall Algorithm i.e. All Pair Shortest Path. This algorithm is implemented using parallel programming concept for faster solution. This is a research based project in which the serial and parallel computations are compared. Floyd Warshall algorithm has overcome the drawbacks of Dijkstra's and Bellman Ford Algorithm. For parallel programming, the project is implemented using NVIDIA GPU (NVIDIA GeForce 820M, 410M) for which CUDA (CUDA Toolkit 6.0) is used. The purpose of developing this project is to find the shortest path between all the present nodes in a graph. This system is designed to work on a large dataset (set of 48 or 72 or 100 cities). This project can be implemented for Airline Systems, Transportation services, Courier Services, Networking.
Parallelization of Shortest Path Finder on GPU: Floyd-Warshall

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Index Terms

Computer Science

Algorithms

Keywords

Floyd Warshall Algorithm, Parallel Programming, CUDA, NVIDIA GPU.