

Crowd simulation based on flocking behaviour on parallel CUDA platform

Abstract

This research is focused on flocking behaviour algorithm to simulate the crowd on parallel GPU using CUDA technology. The analysis of frame rates is conducted to compare the crowd simulation on parallel GPU platform and on a single processor. The result shows that the crowd simulation on a parallel GPU platform is 15 frames per second for 16,384 characters. This result is equivalent with the number of frames per second for crowd simulation on a single processor with 576 characters. Thus, the results demonstrate that crowd simulation is more efficient on the parallel GPU platform especially for the large scale data.