Abstract

Cellular Automata (CA) is one of partial differential equations model that used to simulate the spread of fire in forest fire. The case studies which taken for simulation of this Final Project is in Sanggau District, West Kalimantan Province. CA is a mathematical modeling of the physical system in which space and time in-Discretization. Each cell interacts locally which results computing time is high enough. Therefore, to reduce the computing time in each cell is used parallel architecture with MPI platform. CPU time for images with The 1600×1600 grid is 226,567 seconds for the series and 131,641 for parallel. Thus the parallel architecture is 1.72 times faster with 43

Keywords: Simualation, Forest fire, Cellular Automata, Parallel MPI.