

Apisak Vittayaprapakorn 2012: A Development of Parallel Simulation Control Library for General Programming Language. Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering, Department of Industrial Engineering. Thesis Advisor: Mr. Pornthep Anussornnitisarn, Ph.D. 116 pages.

Nowadays, Simulation is one of the effective methods to analyze performance of the complex system. However, using simulation to find an optimal setting sequence of simulation. It needs long operation time due to number of parameters of the system. As the mentioned problem, researcher proposed an alternative method which is called parallel computing to reduce time. In this research, we proposed a parallel simulation on a way to reduce time by create the tools for researchers who need parallel and distributed computing method. The developed tools of this research are separated into two types.

1. Parallel simulation application for Arena software. It is used to distribute number of replication and control parameters value change as per the simulated model in case of different parameter value

2. Parallel simulation control library for Visual Basic Language. It is used as tool for the researchers who are interested parallel algorithm development.

---

Student's signature

Thesis Advisor's signature