Contribution ID: **144**   Type: **Oral Presentation**

e-Social Science development in Taiwan: Scalable social simulation using commodity computing

Tuesday, 12 April 2011 12:00 (30 minutes)

Overview

This talk describes the overview of the process of developing the agent-based modeling of simulation and the current development of model construction and how to utilises multiple CPU cores and an investigation of the scalability of the resulting code using grid/commodity computing.

Impact

Within EUASiaGrid project, the e-Social Science community in Taiwan has been built up. The population-scale social simulation model using commodity computing power can be tractable under current simulation framework and the agent-based simulation has been encouraged to apply as a complement social science research method to the social scientists in Taiwan.

Description of the work

This project aims to build up social simulation models on several application domains, including models of demographics and migration in Taiwan, and the electorate voting model for political science. In this project, we describes experiences made in the development of an example model that utilises multiple CPU cores and investigate the scalability of the resulting code. The feasibility study and stability analysis of the model has been. We argue that commodity compute resources and commoditised simulation frameworks can now be used to simulate real-world populations and to use these simulations to investigate social phenomena such as migration.

Conclusions

The fruitful International collaborations of e-Social Science has been established between Europe and Asia. This project also shows the promising result for feasiblity study of a scalable social simulation.

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Session Classification: User Environments

Track Classification: User Environments - Applications