Grid Scheduling and Multithreading

Jin Suk Kim

University of Seoul

서울시립대학교
UNIVERSITY OF SEOUL

Computing: Past, Present, and Future

- **Mainframe**
- **Personal Computer(IBM PC, Apple II)**
- **NoW: Network Computer(Berkeley)**
- **Distributed Computer**
- **Parallel Computer**
- **Cluster Computing System**
- **Grid Computing System(Globus)**
- **Pervasive Computing System**
- **Ubiquitous Computing System**
- **Smart Phone, Smart TV(Galaxy, iPad)**

History of Computing

- **1800년전 맥가이버칼**

- 과거의 참신한 개념
  -> 현재의 첨단 제품 접목

History of Computing

- **Video (Steve Jobs)**

- **Youtube(steve jobs, 1984)**

History of Computing

- **The World is Flat(Thomas L. Friedman)**

- **Clusters**

- **Centralized Control(Middleware)**

- **Orchestration**

Grid Computing[wikipedia]

- **a collection of computer nodes(resources) from multiple locations to get a goal**

- **Grid computers tend to be heterogeneous and geographically dispersed**

- **a super virtual computer is composed of many networked loosely coupled computers**

Grid Computing[wikipedia]

- **Middleware**
  - ❖ **Globus Toolkit(storage management, security provisioning, data movement, monitoring, …)**

- **computing power vs. electric power grid**

- **Ian Foster and Carl Kesselman, The Grid: Blueprint for a new computing infrastructure, 1999.**