GRID COMPUTING IN THE PHILIPPINES: Focus on Applications to and Training

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Outline

- About Ateneo de Manila University (AdMU)
- EUAsiaGrid Project
- Grid Computing Applications
- Training
- Summary
- Acknowledgment
Ateneo de Manila University

- Website: www.ateneo.edu
- Celebrating its 150th year anniversary (sesquicentennial)
- School of Science and Engineering (http://sose.ateneo.edu)
- Affiliated Units
  Ateneo School of Medicine and Public Health
  Manila Observatory (Earth monitoring station, Climate Change Center)
EUAsiaGrid Project

- A European Commission funded project
- Website: http://www.euasiagrid.org
- Ateneo (AdMU) is one of the partners
- AdMU’s contribution:
  - Workpackage 3: Applications
  - Workpackage 5: Training
The Philippines is rich not only in natural resources, but it is also rich in NATURAL DISASTERS!
Earthquakes

Risk to Earthquakes

Legend
- Provincial Boundaries
- Risk to Earthquakes
  - High
  - Medium
  - Low

Source:
- National Geospatial Data Center (NGDC)
- Philippine Statistical Research Population Survey
- UNDP Human Development Index 2002

Manila Observatory
Department of Environment and Natural Resources
Landslides

Connecting rainfall and landslides

Risk to Earthquake-Induced Shallow Landslides

Legend
- Provincial Boundary
- Risk to Earthquake-Induced Shallow Landslides
  - High
  - Medium
  - Low
  - No Risk

Source:
- National Disaster Risk Reduction and Management Council
- Philippine Disaster Risk Reduction and Management Council
- Philippine Agency for Natural Disasters Management
- National Geophysical Data Center
- GIS and Remote Sensing Services

Geographic Coordinate System Projection

Scale: 1:5,000,000

Kilometers
Volcano Eruptions
Tsunamis
Climate Disasters

Combined Risk to Climate Disasters

Legend:
- Provincial Boundary
- Combined Risk to Climate Disasters
  - Very High
  - High
  - Medium
  - Low
  - Very Low

Scale: 1:5,000,000
Geographic Coordinate System
Projection:

MANILA OBSERVATORY
DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
Rainfall
Risk to Projected Temperature Increase

Legend:
- Very High
- High
- Medium
- Low
- Very Low

Source:
Australia Commonwealth
Department of Environment and Natural Resources
Climate Change Science Program
Temperature Data
Manila Observatory
Department of Environment and Natural Resources

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MANILA OBSERVATORY
El Niño
Role of Grid Computing

- Data Grids
- Computational Grids

**DISASTER MITIGATION:**

Correct and Timely INFORMATION leads to lesser risks and vulnerability to Natural Disasters.

> EUAsiaGrid Collaboration Project on Earthquake Monitoring and Simulation
Development of Philippine Cancer Data Grid

Involves several universities and hospitals in the Philippines
Dengue Fever Epidemic

- Dengue is a flu-like viral disease spread by the bite of infected mosquitoes.
- Dengue hemorrhagic fever is a severe, often fatal, complication of dengue.
- Dengue occurs in most tropical areas of the world.
- Common in Africa, Asia, the Pacific, Australia, and the Americas.
- PLAN: Explore Grid computing technology as an aid in dengue fever research and in search for a dengue fever vaccine IN COLLABORATION WITH EUAsiaGrid PARTNERS.
Grid Computing know-how and expertise

Enter -> EUAsiaGrid Project (April 2008 – March 2010)

- Philippine Grid Computing Forums and Workshops (Dec. 2008)
- Grid Computing and ICT For Health (Feb. 2009)
- Workshop on Grid Computing Applied to Disaster Mitigation (Nov. 2009)
- Grid Computing School (Feb. 2010)
MODEL 2009

International Workshop on Modeling, Simulation and Grid Computing
May 4 – 6, 2009
Tagbilaran City, Bohol, Philippines
Website: http://www.math.admu.edu.ph/MODEL2009

Includes tutorials on Grid Computing Basics and Applications and gLite Installation

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Thank you!

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