

Grid Activities in the Philippines through the Philippine e-Science Grid Program

Rey Vincent

Advanced Science and Technology Institute, Philippines

rincent@asti.dost.gov.ph

The Philippine e-Science Grid program will focus on the establishment of the grid infrastructure in the Philippines for use in collaborative research activities among educational and research institutions as well as provide distributed services to general users such as national institutions that will use the grid to deliver advanced services.

There will be three projects under the PSiGrid umbrella. Two of these projects, FedGIS and PBS, target a specific application of grid technology in their respective fields while the third project (HPRC) will provide the basic infrastructure and services to these two projects.

Partner institutions and independent researchers will also be able to use resources from the HPRC project for high performance tasks such as numerical modeling, protein folding, DNA sequence assembly and alignment, computer animation rendering and the like as well as mundane but complex tasks such as cross-institutional federated identity authentication and authorization and grid management. This federated capability will be extensively used in the FedGIS project to authenticate personnel accessing data from different data providers. Ready access to entire biological databases for bioinformatics applications will also be provided by the PBS project.

The establishment of a national computing grid will foster collaboration among local research groups as well as allow them to work with international collaborators as they share knowledge, data and computing resources through the grid to advance their research efforts. This is also expected to enable efficient utilization of local computing resources.

The program involves the establishment of the core grid infrastructure and services. The applications of the said grid will be demonstrated by the federated GIS system and the bioinformatics applications that will run on the grid infrastructure.

The main objective of the Philippine e-Science Grid Program is to become a focal point for national efforts to provide stable grid services to nationwide research communities and government institutions by supplying the necessary technical training and support for their applications and by contributing new innovations in grid technology.