

User Meeting, Cairo, Egypt, 28th January, 2009.

Sponsors: The European Commission (DG-INFSO) and the Cyprus Institute - Cyl

Organizers: Dr. Mohamed Abouelhoda (NU), Dr. Moustafa Ghanem (NU), Dr. Nashwa Abdelbaki (NU), Mohamed El-Kalioby (NU), Hisham Mohamed (NU), Prof. Salwa Nassar (NARSS, ERI), Computation-based Science and Technology Research Center - CaSToRC of the Cyl

The Cairo, Egypt meeting was the 14th User Meeting for the LinkSCEEM project. The meeting took place at the campus of the Nile University (NU) Campus in Smart Village, Giza, Cairo and was hosted by Dr. Mohamed Abouelhoda of NU. Prof. Nassar of the National Authority for Remote Sensing & Space Sciences (NARSS) and the Electronics Research Institute (ERI) of Egypt as well as additional staff from NU were involved in the organization of the event. The meeting was attended by about 55 participants mostly from universities and research centers from Cairo.

The program of the meeting included 14 presentations (1 introduction to NU, 2 CaSToRC/LinkSCEEM presentations, 1 invited speaker presentation from Italy, 2 general HPC and grid computing introductions in Egypt and 8 user presentations) followed by an informal panel discussion. The first presentation of the day introduced Nile University, the host institution, to the participants. The presentations from CaSToRC representatives presented the Cyprus Institute and the CaSToRC regional partner facility development plan and elaborated on the LinkSCEEM project, its goals and activities. Ongoing CaSToRC projects with special emphasis on the Cy-Tera HPC research infrastructure were also described. The development of Cy-Tera was discussed as a regional HPC infrastructure development followed by a description of the developments in the HPC field in Europe. The latter focused mostly on the PRACE project and the upcoming PRACE implementation project. In addition, a description of the vision for the future development of the HPC infrastructure and the computational science community in the region with special emphasis to the LinkSCEEM-2 proposal, submitted for funding to an EU – FP7 program, was given. The invited speaker presentation focused on the development of e-Infrastructures in the Mediterranean and the opportunities for collaboration in this area for partners in the Eastern Mediterranean. Prof. Sherif and Prof. Nassar, among the pioneers of HPC and Grid computing in Egypt, presented a historical perspective of the field in the country and the current status of the resources available as well as an overview of their own research activities. The research areas of the user presentations covered topics from bioinformatics, scientific visualization, mathematics and numerical weather modeling among others. The presenters included representatives from Cairo University, IBM Egypt, Nile University, ERI and the Cyprus Institute.

The panel discussion initially focused on the HPC computational resources in Egypt and efforts exerted by NARSS to engage the Egyptian scientific community to computational science applications using its Blue Gene/L supercomputing facility. Prof. H. Eldeeb of ERI and NARSS described the services and support offered by NARRS which include training, support and assistance in application development as well as an online repository where contributed applications are uploaded and made available for all. Prof. Eldeeb commented on the increasing number of researchers using the Blue Gene machine. Dr. Abouelhoda offered to contribute to the development of further applications for the online repository maintained by NARSS possibly by assigning student projects related to this task. Prof. Moussa of Cairo University also indicated his willingness to contribute to the preparation of applications. Prof. Nassar welcomed the offers and commented on the potential use of engaging students to such tasks.

Considerable discussion time was devoted on the potential impact of LinkSCEEM-2, and actions foreseen in that proposal, for the integration of regional resources, the coordination of computational science training and education programs and the initiation of joint research projects involving the regional scientific community. The work foreseen for the integration of regional HPC resources was discussed and the issue of accessibility to the resources and preparation for use by researchers from a variety of scientific fields was discussed at length. The positive impact of the realization of such a project was examined noting that it could make critical contributions to the development of computational science in the region and the narrowing of the digital gap between the Eastern Mediterranean and Europe.

An additional topic initially raised by Dr. Abouelhoda, related to the problem of attracting and keeping good students to computational science educational programs in Egypt. He stated that due to the lack of widespread use of HPC in Egypt, either by industry or academia, students have doubts about the marketability of degrees focusing on computational sciences, providing them with HPC usage and maintenance related skills. Prof. Nassar agreed and commented about the slow development of the HPC field in Egypt. C. Nicolaou stated that the process has been slow also in Cyprus and that part of the success of LinkSCEEM and its foreseen implementation phase, LinkSCEEM-2, is based on the ability of the partners to develop the computational science community and explore community as well as personal growth opportunities. Panelists discussed the need for a coordinated educational effort in the form of workshops and training programs and, the need for additional opportunities for interactions among the regional computational science community. The discussion included references to attracting young talents into computational science and suggestions how to best develop a scientific computing culture. The participants concluded this part of the discussion agreeing on the need for closer cooperation in educational and scientific programs among institutions from the region.

The discussion and User Meeting ended with a pledge for continued communication and exploration of opportunities for future discussions and cooperation opportunities. The representatives from the Cyprus Institute reassured that every effort will be made to ensure that outreach activities initiated by the LinkSCEEM project will continue and that they will keep regional partners informed about the developments related to the evaluation and funding of the LinkSCEEM-2 proposal.