

CENTRE FOR PARALLEL COMPUTING RESEARCH PROJECTS

EDGES: ENABLING DESKTOP GRIDS FOR E-SCIENCE

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Partners

- Laboratory of the Parallel and Distributed Systems in the Computer and Automation Research Institute of the Hungarian Academy of Sciences (MTA-SZTAKI), Hungary (Coordinator)
- Centro de Investigaciones Energéticas Medio Ambientales y Tecnológicas (CIEMAT), Spain
- The Foundation for the Development of Science and Technology in Extremadura (Fundecyt), Spain
- Institut National de Recherche en Informatique et en Automatique (INRIA), France
- Centre for Parallel Computing, University of Westminster, UK
- Cardiff University, United Kingdom
- University of Coimbra, Portugal
- Stichting AlmereGrid, The Netherlands
- Centre National de la Recherche Scientifique – l'Institut National de Physique Nucléaire et de Physique des Particules (CNRS IN2P3), France.

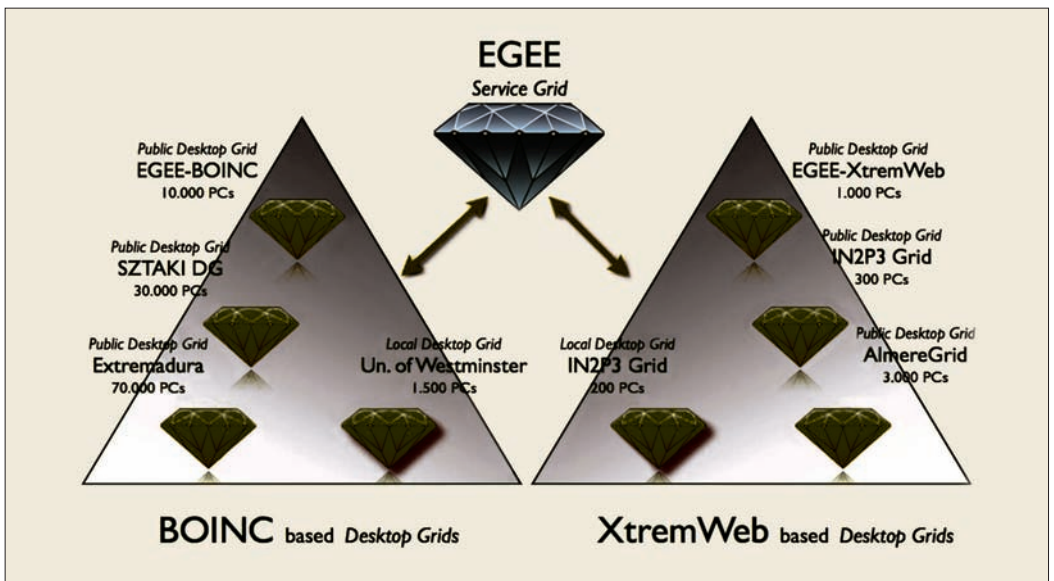
Website

<http://www.edges-grid.eu/>



Synopsis

The targets of the project are user communities that require large computing power not available or accessible in current scientific e-Infrastructures. In order to support the specific needs of these scientific and other communities The consortium will interconnect the largest European Service Grid infrastructure (EGEE) with existing Desktop Grid (DG) systems in a strong partnership with the EGEE consortium. Service Grids (SG) are more flexible and can accommodate a broader variety of applications than Desktop Grids, however, their setup and maintenance require more efforts, highly skilled IT specialist, and dedicated resources. On the other hand, Desktop Grids are currently restricted solely to a subclass of compute-intensive applications but these easy-to-scale systems are able to



collect 1-2 orders of magnitude more compute power by utilizing the involved spare and volunteer IT resources at a fraction of the cost. Making a bridge between these two types of Grid systems will enable the users to transparently execute applications on any arbitrary platform involved in the new infrastructure. Taking the advantages of both approaches the EDGeS infrastructure will represent a major step towards a European wide scientific grid where extremely large number of resources could be integrated to support grand-challenge scientific and other applications. The involvement of low-cost volunteer Desktop Grids into the European scientific grid infrastructure will contribute to the establishment of a sustainable European Grid infrastructure. The consortium is to

extend the potential user communities for both beyond traditional scientists and current volunteer computing participants to further involve citizens, school students, and company employees, giving them an opportunity to become involved in science and to apply Grid technology in their every day life. In order to meet these objectives the project will connect Desktop Grid based city Grids, school grids and enterprise grids with EGEE.

Brief USP

Building an interconnected system of desktop and service grids across Europe.

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