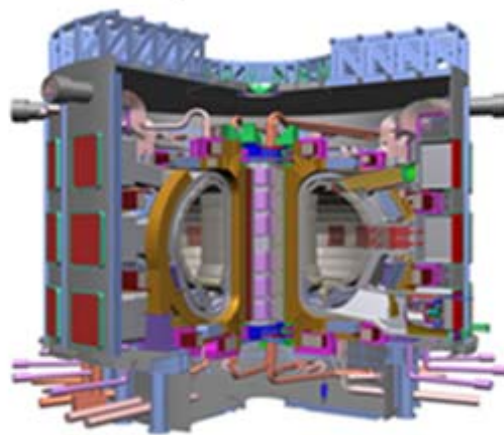
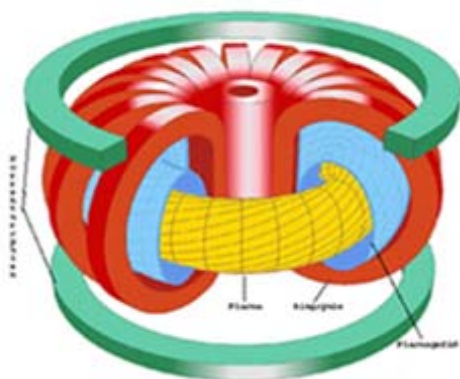


EUFORIA

EU Fusion for ITER Applications

ITER is the next generation of fusion devices and is intended to demonstrate the scientific and technical feasibility of fusion as a sustainable energy source for the future. To exploit the full potential of the device and to guarantee optimal operation for the device a high degree of physics modelling and simulation is needed already in the current construction phase of the ITER project.

EUFORIA



Detailed modelling tools that are needed for an adequate description of the underlying physics cover both a wide range of timescales and spatial orderings and are in general very demanding from a computational point of view.

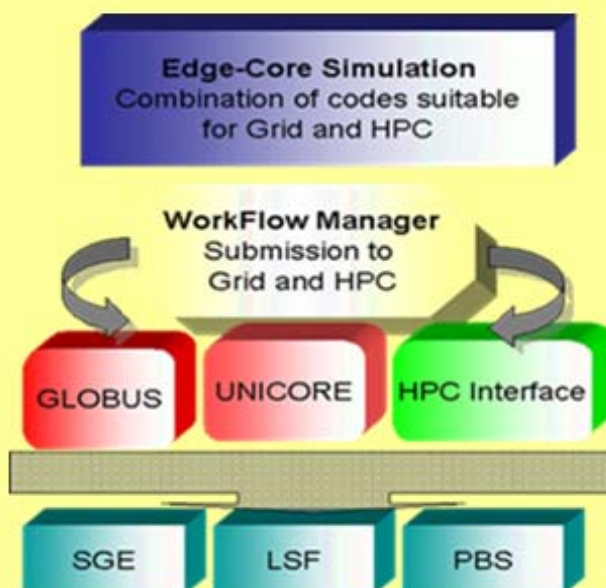
The EUFORIA project will provide a comprehensive pan-European framework and infrastructure for core and edge transport and turbulence simulation, linking grid and High Performance Computing (HPC), to the fusion modelling community.

Standards related work

- Adoption of Grid
- Virtualization of core services
 - Interoperation

- User Services
- Data management
 - Uniform access tools
 - Membership handling
 - Certified by EUGridPMA and run everywhere

- Complex Workflows
- Job submission
 - Resource Allocation
 - Data retrieval



PROJECT PARTNERS



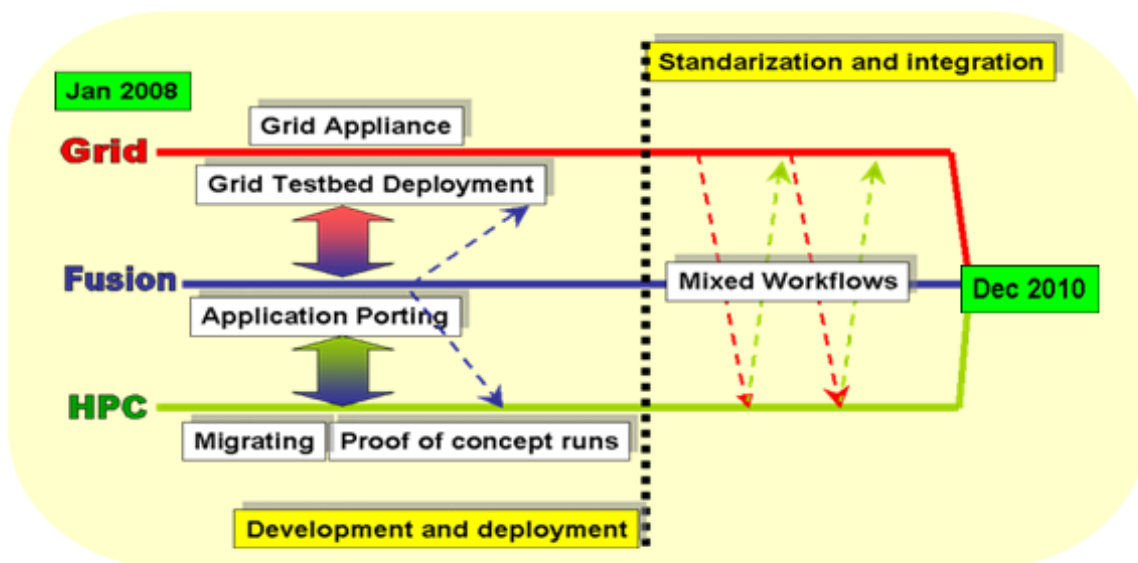
Objectives

The principal objective of the EUFORIA project is to bring a comprehensive framework and e-infrastructure to the fusion modelling community oriented to the development of ITER.

Furthermore, EUFORIA have the following objectives:

- Deployment of Grid and HPC infrastructure
- Adaptation and Optimization of Fusion Codes
 - Platform oriented Grid and/or HPC
- Development of advanced tools for: Workflow management, Visualization tools and Data mining

Work plan outline



Consortium members



Fusion Scientist

- Chalmers Univ. (Goteborg, Sweden)
- CIEMAT (Madrid, Spain)
- CEA (Cadarache, France)
- Univ. Louis Pasteur (Strasbourg, France)
- IPP (Munich, Germany)
- Univ. of Ljubljana (Ljubljana, Slovenia)
- ENEA (Italy)

GRID Computing Expertise

- CSIC (Santander, Spain)
- FZK (Karlsruhe, Germany)
- PSNC (Poznan, Poland)

HPC Centers

- BSC (Barcelona, Spain)
- EPCC (Edinburgh, UK)
- CSC (Helsinki, Finland)
- ABO Akademie (Helsinki, Finland)