



Partnership for Advanced Computing in Europe and the role of standards

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Thomas Eickermann
JSC - Jülich Supercomputing Centre,
Research Centre Jülich, Germany



Consortium members

1 (Coord.)	Forschungszentrum Juelich GmbH	FZJ	Germany
2	Universität Stuttgart – HLRS	USTUTT-HLRS	Germany
3	LRZ der Bay. Akademie der Wissenschaften	BADW-LRZ	Germany
4	Grand Equipement national pour le Calcul I.	GENCI	France
5	Engineering and Phys. Sciences Research C.	EPSRC	United Kingdom
6	Barcelona Supercomputing Center	BSC	Spain
7	CSC Scientific Computing Ltd.	CSC	Finland
8	ETH Zürich - CSCS	ETHZ	Switzerland
9	Netherlands Computing Facilities Foundation	NCF	Netherlands
10	Joh. Kepler Universitaet Linz	GUP	Austria
11	Swedish National Infrastructure for Comp.	SNIC	Sweden
12	CINECA Consorzio Interuniversitario	CINECA	Italy
13	Poznan Supercomputing and Networking C.	PSNC	Poland
14	UNINETT Sigma AS	SIGMA	Norway
15	Greek Research and Technology Network	GRNET	Greece
16	Universidade de Coimbra	UC-LCA	Portugal



Project objectives

- Prepare creation of a persistent pan-European High Performance Computing (HPC) service
 - Provide European researchers with world-class computing resources
 - Establish the top-level of the European HPC ecosystem involving national, regional and topical HPC centres
 - Deploy several leadership systems at selected tier-0 centres
- 14 European Countries participate



- Several are willing to fund and operate a tier-0 centre



e-infrastructure



Work plan outline

- Preparation of the RI as a single legal entity
 - Legal form and governance structure, funding, procurement, and usage strategy, Peer Review process
 - HPC Ecosystem links: European and national HPC infrastructures e.g. DEISA, the ESFRI projects, EGEE and EGI, communities, vendors and user industries, ...
- Prepare operation of petascale systems in 2009/2010
 - Deployment and benchmarking of prototypes
 - Porting, optimising, petascaling of applications
 - Start a process of technology development and assessment for future multi-petascale systems





Standards related work

- PRACE intends to contribute to the international standards process through requirements and best practices
- Standards are required for the interoperation
 - Between tier-0 centre of the PRACE RI
 - With national, regional or institutional HPC services
 - Seamless Grid Access to the RI
- Interoperation requires harmonisation or standardisation e.g. in the areas of
 - User administration and AAA
 - Distributed data management
 - Grid Access
 - Inter-site trust and security
 - Monitoring
 - Resource management
- PRACE will cooperate with other EU projects in these areas
 - Utilising existing technologies e.g. from DEISA
 - Confirmed: DEISA, HPC-Europa, OMII-Europe, EGI, ...

