DECI Call 2007
DEISA Extreme Computing Initiative

Distributed European Infrastructure for Supercomputing Applications

Juha Fagerholm
juha.fagerholm@csc.fi

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DECI call 2006

- DECI = DEISA Extreme Computing Initiative
- In the 2006 call:
  - 23 projects were approved
  - a total of 12 million CPU hours were allocated for the DECI projects
  - enabling work was included

Call for proposals 2007

- Applications that will be supported and/or deployed from November 2007
- **The closing date is June 30, 2007**
- **Contact the Applications Task Force for support in the preparation of the proposal (email to ataskf@deisa.org)**
- **Send a proposal, by June 30, 2007**
  - **to the DEISA Executive Committee (email to execomm@deisa.org)**
  - **and to the Applications Task Force (email in cc to ataskf@deisa.org)**

Supported application profiles

- The following applications profiles are particularly suited to the DECI:
  - Large, highly scalable parallel applications requiring exceptional computational resources
  - Data intensive applications requiring access to distributed data repositories
  - Workflow Simulations managing simulation chains that access more than one computing platform
- Distributed applications that need to run synchronously on more than one platform
- DEISA is ready to provide increased support to the design and enabling of these applications. In some cases, this support can entail a medium term commitment of human resources for the application design and enabling work (i.e. an engineer for several months).

Support to the Initiative

- In order to facilitate the identification and the support and design of new leading applications adapted to DEISA, the Consortium has established an "**Applications Task Force.**"
- The objective of the Applications Task Force is to carry out a prospective action with the European scientific community to support the design of new, leading applications. Scientists willing to benefit from the DEISA infrastructure should contact the Applications Task Force in advance to obtain the guidance needed to find the best fit between their requirements and the distributed supercomputing environment.

DECI Proposal Template (1)

- http://www.deisa.org/files/DECI-proposal-template-2007.doc

DEISA

Proposal
for a challenging project within the
DEISA Extreme Computing Initiative

DEISA is an EU FP6 Research Infrastructure Project to advance computational sciences in the area of supercomputing in Europe.

The DEISA Extreme Computing Initiative is aiming at leading, ground breaking applications in selected areas of science and technology dealing with complex, demanding, innovative simulations with a label of excellence from at least one national evaluation committee.

The initial focus on "Grand Challenge" applications with only little or moderate application enabling work for the DEISA environment has been expanded to include medium to long term support for important complex application enabling.

*Please mail this **Proposal** to the DEISA Executive Committee execomm@deisa.org (and in cc to: ataskf@deisa.org) not later than **June 30, 2007**.*
For technical questions please contact the DEISA Applications Task Force ataskf@deisa.org

Project Title	
Project Acronym (up to 8 characters)	
Name of Principal Investigator	

Proposal for a project within the DEISA Extreme Computing Initiative 1

DEISA

DEISA Extreme Computing Initiative

Principal Investigator:

Institution:	
Name of Investigator:	
Street Address:	
City:	
Country:	
Email:	
Phone:	

Further investigator from a different institution

Institution:	
Name of Investigator:	
Street Address:	
City:	
Country:	
Email:	
Phone:	

In case of further cooperating institutions, please list them here (or copy the above table):

Research area:

Proposal for a project within the DEISA Extreme Computing Initiative 2

DEISA

DEISA Extreme Computing Initiative

Type of proposal with respect to resource requirements:

Types of Requirements	low	medium	high
Compute resource requirements: Total amount of cpu-h			
Compute resource requirements: Number of cpus per job			
Storage requirements for a common community data repository			
Requirements for application enabling			

Proposals with application enabling requirements only will also be considered
Examples for low, medium or high requirements are:

Compute resources: low: < 300 k cpu-h; high: > 1 M cpu-h
Compute resources
Number of cpus: low: < 128 cpus per job; high: > 512 cpus per job
Storage resources: low: < 500 GB; high: > 5 TB
Application enabling: low: limited migration effort (1 FTE up to 1 month);
medium and high: application specific fine tuning and optimization, and eventual redesign (IO redesign, scalability extension, workflow design, .)
medium: 1 FTE between 3 and 6 months;
high: 1 FTE between 6 and 9 months.

Resource Requirements

Total number of cpu-h *(elapsed time of a single run)* (number of cpus used in a single run) * (total number of runs)*	
Type of cpu, clock rate and architecture on which the cpu-h requirement is based, available in DEISA (IBM Power4/Power5/ PowerPC, SGI Itanium-2, NEC SX-8, Cray XT4 Opteron)	
Requirements for a typical run	
Code scalability fort the targeted problem	Max number of cores:
Minimal total memory for targeted problems	
Maximal total memory for targeted problems	
Min. memory per core at max. number of cores usable	Memory (GB): Number of cores:
Temporary disk space requirement for a single run (input, output, restart)	
Storage requirements for the total project (incl. mass storage)	

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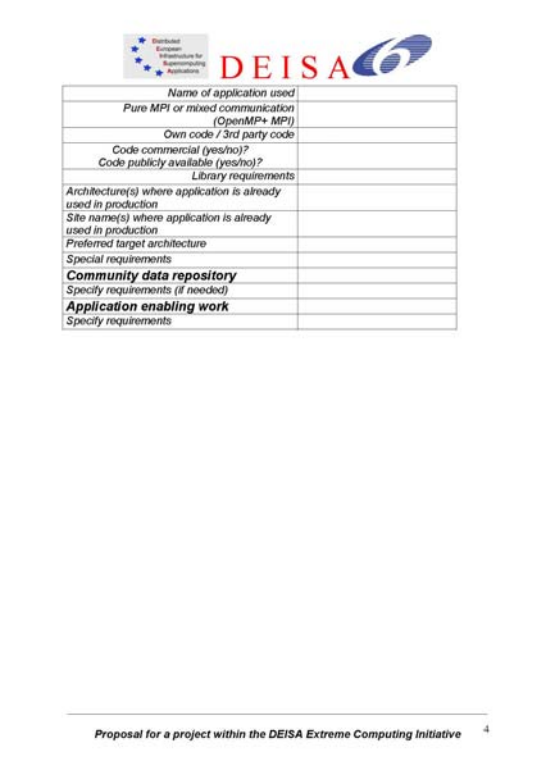
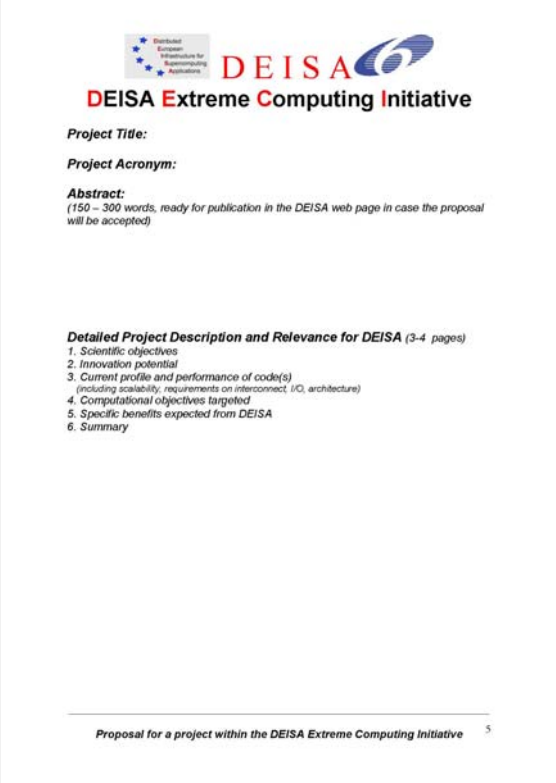
DECI Proposal Template (2)

- http://www.deisa.org/files/DECI-proposal-template-2007.doc



Name of application used	
Pure MPI or mixed communication (OpenMP+ MPI)	
Own code / 3rd party code	
Code commercial (yes/no)? Code publicly available (yes/no)?	
Library requirements	
Architecture(s) where application is already used in production	
Site name(s) where application is already used in production	
Preferred target architecture	
Special requirements	
Community data repository	
Specify requirements (if needed)	
Application enabling work	
Specify requirements	

Proposal for a project within the DEISA Extreme Computing Initiative 4



DEISA Extreme Computing Initiative

Project Title:

Project Acronym:

Abstract:
(150 – 300 words, ready for publication in the DEISA web page in case the proposal will be accepted)

Detailed Project Description and Relevance for DEISA (3-4 pages)
1. Scientific objectives
2. Innovation potential
3. Current profile and performance of code(s)
(including scalability; requirements on interconnect, I/O, architecture)
4. Computational objectives targeted
5. Specific benefits expected from DEISA
6. Summary

Proposal for a project within the DEISA Extreme Computing Initiative 5

Proposal Evaluation

- Technical evaluation by the Applications Task Force
  - technical requirements
  - allocation of computational resources
  - human resources required for the long term application enabling.
- Scientific evaluation of the proposals will be done by a number of National Scientific Evaluation Committees in early September
  - recommendations to the Consortium on the proposals' scientific importance