e-IRG workshop session on supercomputing

Chaired by P.J.C. Aerts

Helsinki October 5, 2006

Issues discussed

- 1) How to balance support to European supercomputer industry and the scientific requirements for various architectures
- 2) How to anticipate on the growing power consumption problems with todays technologies
- 3) Invest in scalable software
- 4) Involvement of "smaller" countries in the HPC discussion
- 5) HPC has a magnificent added value to Europe as a society
- 6) HPC and supercomputers are an integral part of the European Science Grid and supercomputers are to be seamlessly integrated in the e-infrastructure

1

- European HPC-Industry?
  - EU HPC industry already is lively and broad:
  - R&D centres
  - Internal HPC-networking
  - Software
- Support HPC-industry, without sacrifycing (real) open competition at procurement time
- Use RfP to have vendors (in general) incorporate European elements in their offer (f.e. through collaborative projects)

2

- How to anticipate on the growing power consumption problems with todays technologies
  - Possible opportunity for combines scientific and industrial research
  - Support fundamental research dedicated to this problem

3

- Invest in scalable software
  - Advantage of optimal software still underestimated
  - Broadcast a long term commitment of EC to HPC to stimulate software developments from scratch

4

- Involvement of "smaller" countries in the HPC discussion:
  - Smaller countries can sometimes only contribute through their niches expertises
  - Consider taking advantage of niches that smaller countries can derive their expertise from

5

- HPC has a magnificent added value to Europe as a society:
  - Important fields that cannot be served by any other means
  - Bring the results of the "science case" forward
  - Take into consideration the "barriers" between research and production
  - "urgent computing"

6

- HPC and supercomputers are an integral part of the European Science Grid and supercomputers are to be seamlessly integrated in the e-infrastructure:
  - Pre- and postprocessing
  - Transparent data access
  - Transparent linking of SC to any other needed facility through grid (-middleware)