

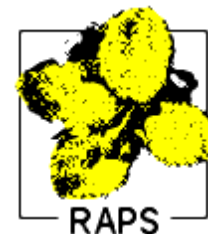


RAPS Workshop: Update

George Mozdzynski
RAPS Chairman



What is RAPS?



- **ReaApplications on Parallel Systems**
- **European Software Initiative**
- **RAPS Consortium (founded early 90's)**
- **Working group of hardware vendors**
- **Programming model (MPI + F90/F95 + OpenMP)**

“The partners of the RAPS Consortium develop portable parallel versions of their production codes which are made available to a Working Group of Hardware Vendors for benchmarking and testing.”

RAPS Consortium



CCLRC

Fraunhofer SCAI/ITWM

CERFACS

Met Office UK

CPTEC

MPI-M

CSCS

METEO-FRANCE

DWD

NERC

DKRZ

ONERA

ECMWF

Working Group of Hardware Vendors



Bull

Cray

Fujitsu

Hitachi

HP

IBM

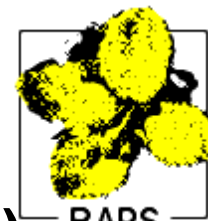
INTEL

NEC

Oracle

SGI

Why RAPS



- **Portability of codes (F90/F95, C/C++, MPI, OpenMP)**
- **Availability of benchmark codes ahead of a formal procurement**
- **Some influence on standardization (PARMACS -> MPI)**
 - **Vendors needed to support F90 + MPI to run benchmarks**
- **Regular meetings in past years (23 in total)**



RAPS process



- **RAPS benchmarks distributed by individual organizations**
- **No official membership required for vendors**
- **Vendors approach individual orgs for benchmarks**
 - **Confidentiality / Licence agreement**
- **Meetings**
 - **Once a year**
 - **Every 2 years as part of ECMWF 'Use of HPC in Meteorology workshop'**
 - **Chairmanship with host organization**

RAPS benchmarks



- **Today**

- **DWD**
 - **ECMWF**
 - **Met Office**
 - **MPI-M**
 - **Meteo-France**
-
- **Commitment to produce **up to date** benchmarks reflecting key operational applications of consortium members**

RAPS topics for this meeting



- **Fortran 2003**

- Discussions in 2008 RAPS meeting at ECMWF
- F2003 wiki/kernels status (Luis Kornblueh)

- **Coarrays (in Fortran 2008 standard)**

- Talk by John Reid

- **Will our applications scale on future supercomputers?**

- **For discussion at RAPS consortium meeting 17:00**

- Proposal to include F2003 in RAPS programming model
- Cancelled RAPS meeting Oct/2009 scheduled at Met Office