RAPS Workshop: Progress Report

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What is RAPS?

- **Real Applications 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**

CERN   **Met Office UK**

CERFACS   **MPI-M**

CSCS   **METEO-FRANCE**

DWD   **NERC**

DKRZ   **ONERA**

ECMWF   **Univ. Southampton**

Working Group of Hardware Vendors

Bull   **INTEL**

Cray   **Linux Networx**

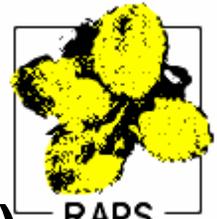**Fujitsu**   **NEC**

Hitachi   **SGI**

HP   **SUN**

IBM
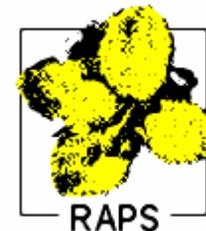
Why RAPS

- **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 (20 in total)**

RAPS process

- **RAPS benchmarks distributed by individual organizations**

- **No official membership required for vendors**

- **Vendors approach (NDA) individual orgs for benchmarks**

- **Meetings**

  - **Once a year**

  - **Every 2 years as part of ECMWF 'Use of HPC in Meteorology workshop'**

  - **Chairmanship with host organization**

RAPS benchmarks

- **Today**

  - **ECMWF IFS (RAPS9)**

  - **DWD LM_RAPS**

  - **Met Office UM**

- **Commitment to produce up to date benchmarks reflecting key operational applications of consortium members**

RAPS internationalization

- **Internationalization**

  - To seek new members outside of meteorological community

  - **Exchange experience with other communities**

  - Fortran Standards

- **Scheduled presentation to ORAP, Paris, 13 Dec 2006**

- **Presentation today by Marie Alice Foujols**

  - ORAP: a French initiative to promote HPC

- **If we are serious about internationalization**

  - We should form a "RAPS internationalization working group"