



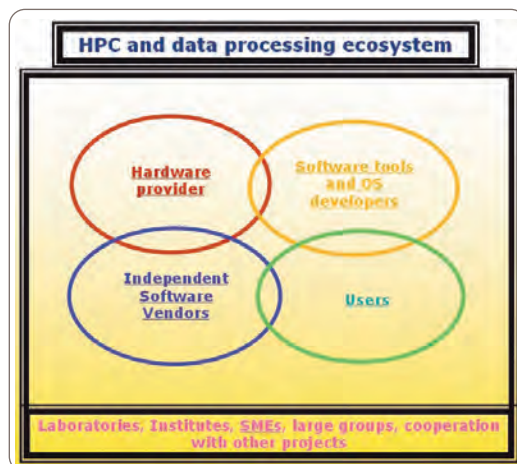
Peta Operations Per Second



Design and develop data processing systems suited to the largest spectrum of High Performance Computing applications, targeting the Petaflops range. Anticipate the programming tools and features needed to obtain efficient applications in such systems.

PROGRESS BEYOND THE STATE OF THE ART

- Hardware architecture, integration and performances → technological options → prototype.
- Basic tools (OS, libraries,...) + performance improvement tools (threads management, adaptive optimisation).
- Applications: simulation codes, management of large databases, multimedia data processing (life science, entertainment).



MAJOR PROJECT OUTCOMES

- Products:** Optimization of codes from Dassault, ESI, Eurodecision, EDF; Bull petaflop architecture and tools; Astek codlet finder by CAPS.
- Services:** VOD transcoding service offer by Resonate MP4; intensive computing services on demand by Bull; Creation of an Intensive computing Master by UVSQ and ECP; ...
- Publications:** About 50 publications, mainly written by the laboratories.
- Experimentations:** Big Video challenge (finding 1 video in 100,000 hours in 10 s; realtime video transcoding; crosslanguage research of multimedia content; protein visualisation).
- Job creation:** About 30 jobs created, on which 3: in start-up Infinite Web Media.
- Business creation:** Extrem computing Business unit created by Bull for the HPC market.

CONTACT

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PARTNERS

Large companies:
BULL, CS, DASSAULT AVIATION, EDF

Intermediate size enterprise:
ESI

SMEs:
CAPS ENTREPRISE, EURODECISION, MEDIT, RESONATE MP4

Research institutes, universities:
CEA, ECOLE CENTRALE PARIS, IFP, INRIA, INT-ARTEMIS, UNIVERSITE D'EVRY, UNIVERSITE PARIS SUD 11, UVSQ

PROJECT DATA

Coordinator:
BULL SAS

Call:
FUI3

Start date:
September 2007

Duration:
23 months

Global budget (M€):
135

Funding (M€):
5

Related Systematic project(s):
CARRIOCAS, EHPOC, IOLS, MEDIATIC, MULTIVAL, MUSCLE, NUMASIS, PARA, ParMA, SAPHIR, TELEDOS