

CERN openlab
Communications
2006-2007

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The CERN openlab message

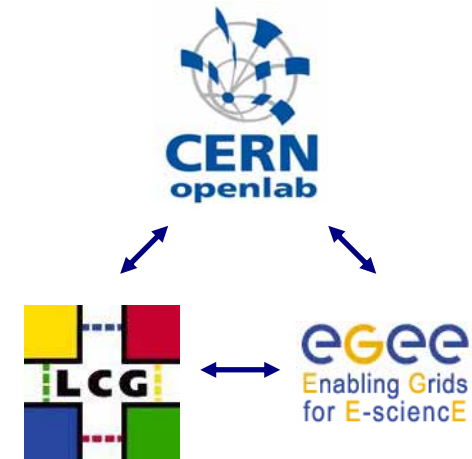
CERN openlab is...

- ...a framework for collaboration between multiple industrial partners...
- ...in a pre-competitive spirit and based on open standards. ...
- ...to explore jointly the future of computing and Grid technology...
- ...motivated by CERN's extreme computing demands for HEP and the LHC.

The openlab team's motto: "you make it, we break it"

CERN openlab and CERN's Grid strategy

- 1) LHC Computing Grid (LCG)
 - provides Grid service to LHC experiments, HEP community
- 2) Enabling Grids for E-science (EGEE)
 - multi-science Grid infrastructure co-funded by the EC, LCG is flagship application
- 3) CERN openlab
 - Future technology test and validation for LCG deployment (hardware & software)
 - "R&D lab" associated with EGEE industry activities (Grid middleware)



Documents

- CERN openlab first phase summary document (by Intel intern)
- New logo, posters and flyer (by Intel intern)
- CERN press release for launch of openlab second phase
- Articles in International Science Grid This Week, CNL, Cern Courier
- Advertorials in CERN Courier (HP ProCurve)
- Support for various press articles, partner case studies (backgrounders, interviews etc.)

Multimedia

- Flash introduction to LHC Data Life Cycle (used at Supercomputing)
- Film introducing CERN IT (with HP ProCurve)



PARTNERS



ORACLE

CONTRIBUTORS



STONESOFT



Events and outreach highlights

CERN openlab events

- CERN openlab phase 2 kick-off event, April 2006
- OpenFabrics / Infiniband Workshop, June 2006
- CERN openlab/EGEE/ETICS "Grid Industry Readiness Event", June 2006 (hosted by HP Invent Centre)
- Grid Entrepreneurship Day in July (part of openlab student programme)



Partner-specific events

- Intel HPC Roundtable event in May (first day held at CERN)
- Sponsorship of EGEE Conference, Geneva, September
- Oracle speaker at First Tuesday event on e-archiving in September
- CERN Computing Colloquium by Pat Gelsinger, Intel, October
- Collaboration with HP and Intel at Supercomputing '06 in November
- Intel quadcore launch event in the Globe, November
- VIP visits: Craig Barrett, Chairman, Intel; Juan Rada, Senior VP, Oracle

- **Intense media coverage anticipated**
 - Opportunity to bring groups of journalists
 - NB: experiments no longer visitable after ~August!

- **Computing Expo in Computing Centre**
 - All visitors, VIPs and press will see this, spend time there.
 - Themes are "History of Computing at CERN", "From Web to Grid", "Future of computing", "Grid Monitor", "CERN openlab"
 - Will feature original Next server on which web was developed.
 - Sponsorship opportunities include:
 - Equipment and/or neat demo material
 - Manpower to develop expo (student, intern – funded or seconded)

- **Computing Itinerary for visitor groups**
 - When experiments close, CC becomes key visitor attraction
 - Computing itinerary involves ATLAS control centre, CC
 - Sponsorship opportunities include:
 - Wireless guide system for visitors
 - Computing related expo in the Globe





GRIDBIZ

What is it? Competition to stimulate entrepreneurship by scientists, software engineers in Europe.

Who can apply? European nationals and persons currently residing in Europe.

When will it happen? Jun 07: Call for business ideas
Oct 07: Business plan workshop for top 20
Feb 08: Award ceremony at CERN for top 3

How can companies/organisations participate? 120 K€ Sponsorship required
Platinum sponsor 45 K€
Prize sponsor 6 K€ in-kind
Corporate sponsor 6 K€
Institutional sponsor 6 K€

Grid Events

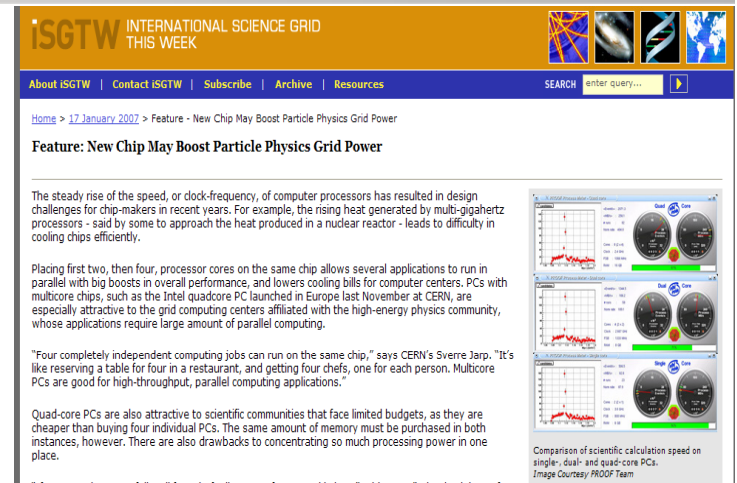
- AAAS Meeting San Francisco (Grid session with EGEE) Feb 15-19
- EGEE Users Forum and OGF meeting, Manchester May 9-11
- CHEP'07 (Victoria, BC) Sept 2-7
- EGEE'07 (Budapest, Hungary) Oct 1-5
- SC'07 (CERN/Caltech stand, Reno, NV) Nov 10-16
- CERN Computing Colloquia

Press Releases & articles

- Release announcing new contributors to CERN openlab (CERN)
- Releases highlighting key technical results of first year (partners)
- Continued support for backgrounders, interviews

Articles for HEP/Grid communities

- CNL, CERN Courier
- International Science Grid This Week
 - iSGTW has 2800 subscribers
 - >11000 visits in March (2x level in December)



iSGTW INTERNATIONAL SCIENCE GRID THIS WEEK

SEARCH enter query...

Home > 17 January 2007 > Feature - New Chip May Boost Particle Physics Grid Power

Feature: New Chip May Boost Particle Physics Grid Power

The steady rise of the speed, or clock-frequency, of computer processors has resulted in design challenges for chip-makers in recent years. For example, the rising heat generated by multi-gigahertz processors - said by some to approach the heat produced in a nuclear reactor - leads to difficulty in cooling chips efficiently.

Placing first two, then four, processor cores on the same chip allows several applications to run in parallel with big boosts in overall performance, and lowers cooling bills for computer centers. PCs with multicore chips, such as the Intel quadcore PC launched in Europe last November at CERN, are especially attractive to the grid computing centers affiliated with the high-energy physics community, whose applications require large amount of parallel computing.

"Four completely independent computing jobs can run on the same chip," says CERN's Sverre Jarp. "It's like reserving a table for four in a restaurant, and getting four chefs, one for each person. Multicore PCs are good for high-throughput, parallel computing applications."

Quad-core PCs are also attractive to scientific communities that face limited budgets, as they are cheaper than buying four individual PCs. The same amount of memory must be purchased in both instances, however. There are also drawbacks to concentrating so much processing power in one place.

Comparison of scientific calculation speed on single-, dual- and quad-core PCs.
Image Courtesy: PROOF Team



CERN openlab student programme

CERN openlab student programme 2006

- 20 Students from Europe, US, Asia (BSc-MSc-PhD levels)
- Projects involving Grid technology, team-based
- 2 months at CERN
- Study tours + Grid lecture series



Partner-sponsored students 2006

Compiler testing - Kevin Liu, Uni California Berkeley, USA

Adapting SmartFrog to the Grid - Olivier Pernet, ENSIMAG, Grenoble, France

Database Virtualisation - Atle Rudshaug, NTNU, Norway

Benchmarking hardware platforms - Tanya Sandoval, Imperial College, London

CPU Performance measurements - Martin Tingstad, NTNU, Norway

Tycoon for use in LCG - Salman Toor, Uppsala University

Projects planned for 2007

Planned projects 2007

Platform virtualisation in a Grid environment

Provisioning computing resources with high availability

Power measurements

Performance monitoring

Tycoon, Xen and gLite

Monitoring interface system

Oracle Real Application Clusters Virtualisation

Database Access Management Framework extension

Communications Menu for 2007

- 1) Computing Expo in CC
- 2) Computing Itinerary at CERN
- 3) Presence at Grid events
- 4) Coverage in HEP/Grid and general press
- 5) Grid Business Plan Competition
- 6) CERN openlab student programme
- 7) CERN openlab communications intern?



Comment of the year 2006

"CERN openlab...aren't you the guys who run that LHC project?"
(Journalist at a meeting in London)

...CERN openlab is a great brand – let's continue to build it together!