SEVENTH FRAMEWORK PROGRAMME
Research Infrastructures

INFRA-2007-2.2.2.1 - Preparatory phase for 'Computer and Data Treatment' research infrastructures in the 2006 ESFRI Roadmap

PRACE

Partnership for Advanced Computing in Europe

Grant Agreement Number: RI-211528

D3.1.5
Second Dissemination Report

Final

Version: 1.0
Author(s):   Ari Turunen, Anni Jakobsson CSC
Date: 22.6.2010

Project and Deliverable Information Sheet

PRACE Project	Project Ref. №: RI-211528	
	Project Title: Partnership for Advanced Computing in Europe	
	Project Web Site: http://www.prace-project.eu	
	Deliverable ID: D3.1.5	
	Deliverable Nature: DOC_TYPE: Report	
	Deliverable Level: PU*	Contractual Date of Delivery: 30 / June / 20109
		Actual Date of Delivery: 30 / June / 200109
	EC Project Officer: Bernhard Fabianek	

* - The dissemination level are indicated as follows: **PU** – Public, **PP** – Restricted to other participants (including the Commission Services), **RE** – Restricted to a group specified by the consortium (including the Commission Services). **CO** – Confidential, only for members of the consortium (including the Commission Services).

Document Control Sheet

Document	Title: Second Dissemination Report	
	ID: D3.1.5	
	Version: 1.0	Status: Final
	Available at: http://www.prace-project.eu	
	Software Tool: Microsoft Word 2003	
	File(s): D3.1.5.doc	
Authorship	Written by:	Ari Turunen, Anni Jakobsson, CSC
	Contributors:	
	Reviewed by:	Florian Berberich, FZJ, Dimitra Kotsokali, GRNET
	Approved by:	Technical Board

Document Status Sheet

Version	Date	Status	Comments
0.1	05/12/2009	Draft	
0.2	11/04/2010	Draft	
0.3	21/05/2010	Draft	
0.4	08/06/2010	For review	
0.5	21/06/2010	Improvements	

Document Keywords and Abstract

Keywords:	Partnership for Advanced Computing in Europe, PRACE, HPC, Research Infrastructure, dissemination, outreach, training, WP3
Abstract:	This document describes the PRACE project's dissemination, outreach and training activities for project months M13–M30. In addition the document describes updates done to the dissemination package since project month 12. This deliverable also describes the dissemination actions (press releases, newsletters, publications and press cuttings), training actions and PRACE related events from the second project year.

Table of Contents

List of Figures

List of Tables

References and Applicable Documents

[1]   D2.5.2 Report on links with HPC Ecosystem
[2]   D3.1.1 Final plan for the use and dissemination of foreground
[3]   D3.3.3 PRACE Winter School
[4]   D3.2.2 Report of the second industrial seminar
[5]   D3.1.7 Proceedings of the second scientific conference
[6]   D3.2.3 Conclusion on collaboration with the industry
[7]   D3.3.4 Conclusions on code porting, scaling and optimisation workshops
[8]   D3.1.5 Second Dissemination report
[9]   PRACE website, http://www.prace-project.eu
[10]   D3.1.2 Public web site for PRACE
[11]   D3.3.1 Survey of HPC education and training needs
[12]   http://stat.hexagonit.fi/prace-project.eu
[13]   D3.1.3 Dissemination Package
[14]   Communications Kit for Stakeholders, https://bscw.zam.kfa-juelich.de/bscw/bscw.cgi/231415
[15]   PRACE press calendar, https://bscw.zam.kfa-juelich.de/bscw/bscw.cgi/d220118/Press-calendar_ver3.doc
[16]   La Recherche magazine, http://www.larecherche.fr/html/2009/dev/hpc/HPC_2009.pdf
[17]   HTC Keilaniemi Conference Centre, http://www.htc.fi
[18]   DEISA website, http://www.deisa.eu
[19]   Cracow Grid Workshop 2009 http://www.cyf-kr.edu.pl/cgw09/

List of Acronyms and Abbreviations

AUTH	Aristotle University of Thessaloniki
BoF	Bird of Feathers session. Ad hoc session at conferences to solicit interest to work on specific topics.
BSCW	Basic Support for Cooperative Work, The PRACE intranet
CSC	CSC - IT Center for Science, Finland
DEISA	Distributed European Infrastructure for Supercomputing Applications. EU project by leading national HPC centres.
ECRI	European Conference on Research Infrastructures
EGEE	Enabling Grids for E-sciencE; EU Grid project lead by CERN and successfully completed in 2004. Follow-ups are EGEE-II and EGEE-III.
EGI	The European Grid Initiative (EGI) Design Study represents an effort to establish a sustainable grid infrastructure in Europe.
FZJ	Forschungszentrum Jülich
GÉANT	Collaboration between National Research and Education Networks to build a multi-gigabit pan-European network, managed by DANTE. GÉANT2 is the follow-up as of 2004.
GENCI	Grand Equipment National de Calcul Intensif
HPC	High Performance Computing; Computing at a high performance level at any given time; often used synonym with Supercomputing.
ISC	International Supercomputing Conference; European equivalent to the US based Supercomputing Conference. Held annually in Germany.
KTH	Kunglika Tekniska Högskolan, the Royal Institute of Technology, Stockholm, Sweden
NCF	The Netherlands National Computing Facilities Foundation
PDC	Parallellrdatorcentrum, at the Royal Institute of Technology, Stockholm, Sweden
PRACE	Partnership for Advanced Computing in Europe; Project Acronym.
RSS	Really Simple Syndication – a Web feed format used to publish frequently updated works.
SC09	SuperComputing 2009, US equivalent to the European based ISC conference. Held annually.
TeraGrid	TeraGrid is an open scientific discovery infrastructure combining leadership class resources at eleven partner sites in the USA to create an integrated, persistent computational resource.
Tier-0	Denotes the apex of a conceptual pyramid of HPC systems. In this context the Supercomputing Research Infrastructure would host the Tier-0 systems; national or topical HPC centres would constitute Tier-1.
WPX	Work Package X, where X refers to the Work Package's number.

Executive Summary

This document is the deliverable D3.1.5 Second Dissemination Report. It describes PRACE project's dissemination, outreach and training activities for project months M13–M30 (1.1.2009 – 30.6.2010) and preparations for future tasks and activities.

During the second year and the extension of the project, 56 press releases and four newsletters were published. Press releases were sent to over 7,000 journalists around the world. The total amount of the press releases of the whole project is 79.

The total number of PRACE related online articles and news items until the end of May 2010 was 1835.

The number of the web site visitors has been increasing steadily – the total number of visitors as in the end of May 2010 was 201 160 visitors (97493 unique visitors) since the launching of the website on March 19, 2008. The number of visitors has increased to over 10 000 visitors per month which means that the figure has doubled (in the end of the year 2008 the number of visitors was around 5000 per month).

WP3 organized training events and conferences, and gathered feedback and suggestions for future planning from these events. WP3 also made training material accessible to all via the PRACE website and ensured transparency by publishing all important public and best-practise documents (e.g. 34 deliverables) and presentations on the PRACE website. The PRACE survey on HPC education and training needs has steadily arisen interest all over the world. It has been requested to be a template not only in Hong Kong and North East Asia but also in the United States.

In 2009 and in the first half of 2010 WP3 arranged the following PRACE events: the PRACE Petascale Winter School, the Second Industry Seminar, the Second Scientific Conference (DEISA PRACE Symposium 2009), the Third Scientific Conference (DEISA PRACE Symposium 2010) and seven code-porting workshops. The Winter School had 48 students from 18 countries, including all PRACE countries. The Second Industry Seminar had 103 attendees from 18 European countries of which industry attendees represented 57 European companies. The Second Scientific Conference had over 200 attendees from 20 different countries. The Third Scientific Conference had over 130 participants. In 2009 and in the first half of 2010, PRACE attended to 28 scientific events and gained over 2,000 new contacts.

PRACE code-porting workshops had over 130 participants in total from all over Europe. The feedback from all workshops was positive and many participants welcomed the opportunity to gain first-hand instruction, by leading experts, on adapting their codes to the next generation of high-performance computing hardware.

One of the most successful outcomes of the workshops organised by WP3 was the large collection of training material that is now publicly available via the PRACE training portal. In particular over forty-six (46) hours of video content was captured to ensure that the HPC community at large, is able to benefit from the expert instruction and knowledge transfer, on demand and at no cost.

1 Introduction

Scientific computing is now well established as a third branch of science alongside theory and experiment, and a key technology for industrial product development and production optimisation. The Partnership for Advanced Computing in Europe (PRACE) has as its mission the preparation of a persistent, pan-European high performance computing (HPC) service to meet the needs of academia, industry, and society.

The preparatory phase, which runs until the end of 2009, will establish the basis of a pan-European organisational structure for HPC provision to be managed as a single European entity. In addition, the project is undertaking all the necessary technical preparations, including the evaluation of components, systems and facilities, the porting and scaling of key scientific applications, and the development of a comprehensive training infrastructure, so as to be in a position to deploy and exploit the first petaflop/s systems in 2009/2010. The service will comprise three to five "Tier-0" supercomputing centres strengthened by regional and national HPC centres working in collaboration. In this way, European researchers will be provided with access to world-class supercomputing resources, well beyond those affordable at a national level. The project, which has received €10 million funding for 2008/2009 from the EU's 7th Framework Programme on an overall budget of €20 million, is led by principal partners Germany, Spain, UK, France and the Netherlands, along with a further nine general partners and additional partners of the PRACE Initiative.

In its roadmap published in 2006, the European Strategy Forum on Research Infrastructures (ESFRI) identified HPC as a strategic priority for Europe – an area where for the last decade Europe has taken a back seat to the United States and Japan. Since Europe has no significant HPC hardware industry, the process of nurturing European research is based on a coherent integration of infrastructures. For this reason, PRACE will work in close collaboration with other European research infrastructures, notably those in the comprehensive ESFRI road map. The goal is to create a powerful European HPC infrastructure and service to meet the needs of scientific and industrial communities across Europe.

In 2008, PRACE selected six promising architectures (prototypes) for Petaflop-class systems to be deployed from 2010 on. The purpose is to enable future Tier-0 users to assess the prototypes and to prepare their applications for the Petaflop infrastructure. So far nine scientific projects have been granted access to PRACE prototype systems. Also 23 scientific softwares were ported, evaluated and scaled on average to three prototype systems. Additionally, 9 prototypes representing promising future HPC technologies, such as computational accelerators, have been deployed and evaluated.

Work Package 3 (WP3) Dissemination, Outreach and Training is responsible for the coordination and presentation of project results at conferences, the organisation of PRACE events, as well as establishing a training programme for potential PRACE research infrastructure users.

The project is providing input to relevant European Commission initiated dissemination activities (e.g. press releases, newsletters, brochures, success stories, posters, web-based publications, events and training material, etc.). In this context the project's dissemination messages will also reflect its broader societal and economic impact.

The main objectives of WP3 are dissemination to the major HPC stakeholders, the European scientific and research communities, research infrastructure organisations, universities and centres for higher education, and the general public and to liaise with industrial and business partners as potential HPC users, as well as to implement an education and training program

for computational science aimed at scalable computing. These objectives are being achieved with the following tasks:

- Task 3.1: Dissemination activities,
- Task 3.2: Industry and business collaboration,
- Task 3.3: Education and training program.

This document describes PRACE project's dissemination, outreach and training activities for the project months M13–M30 (1.1.2009 –30.6.2010), and preparations for future tasks and activities.

The scope of this document mainly concentrates on the dissemination activities done by WP3; the activities done by WP3 also include people from the project's other work packages as their contributions are needed for creating press releases about the project's activities and for distributing results through local dissemination channels. The relevant stakeholders to PRACE are reported closely in the deliverable D2.5.2 [1], which is a deep analysis of the links to the stakeholders with contacts already been made and the existing feedbacks.

The chapter 2 of this document lists the activities completed during the second project year: the chapter focuses on the completed WP3 deliverables and meetings held. The chapter 3 overviews the PRACE dissemination material and updates done to it during the second project year. The following chapter 4 covers the press releases created during the second project year as well as the publications and press cuttings made and the four PRACE newsletters published. The chapter 5 includes the training tasks completed during the second project year. The chapter 6 is about the PRACE events held during the second project year. The last chapter, 7, has the conclusions.

2 Activities Completed

The objectives for the WP3 Dissemination, Outreach and Training activities are defined in deliverable D3.1.1 "Final plan for the use and dissemination of foreground" [2].

The deliverable D3.1.1 describes the communication channels, including printed information, presentations at scientific and technical conferences, organising workshops for potential users, and an attractive web presence and press releases. It defines the process for the production and management of the dissemination material including the exploitation of existing dissemination channels by the PRACE partners.

During the second year all WP3 deliverables were completed on time. In March 2009 WP3 produced the Winter School report (D3.3.2) [3]. In September and October 2009 WP3 produced the Report of the second industrial seminar (D3.2.2) [4], Proceedings of the second scientific conference (D3.1.7) [5] and the Conclusion on collaboration with the industry (D3.2.3) [6]. In November the deliverable Conclusions on code porting, scaling and optimisation workshops was completed (D3.3.4) [7]. The last deliverable of the second project year is this Second Dissemination report (D3.1.5) [8]. In total, six deliverables were due and submitted by the WP3 during the second project year and total amount of the whole project for WP3 was 14 [Table 1].

Deliverable	Contractual date of delivery
D3.1.1 Final plan for the use and dissemination of foreground	M3
D3.1.2 Public web site for PRACE	M3
D3.1.3 Dissemination package	M6
D3.3.1 Survey of HPC education and training needs	M6
D3.2.1 First industrial seminar	M9
D3.3.2 PRACE Summer School	M9
D3.1.6 Proceedings of First Scientific Conference	M12
D3.1.4 First Dissemination report	M12
D3.3.2 PRACE Winter School	M15
D3.2.2 Second Industrial Seminar	M21
D3.2.3 Conclusion on Collaboration with the industry	M22
D3.1.7 Proceedings of the second scientific conference	M22
D3.3.4 Conclusions on code porting, scaling and optimisation workshops	M23
D3.1.5 Second Dissemination Report	M24

Table 1: WP3 deliverables

In 2009 WP3 held three face-to-face meetings: Athens, Greece on the 10th February, Lugano, Switzerland on the 14th of July, Helsinki, Finland on the 2nd of December and 6 teleconference meetings during the second project year.

3 Dissemination Material

This chapter describes dissemination material that has been created and disseminated within the last 12 project months.

3.1 Website

The PRACE website [9] has an essential role in the dissemination activities. The website has been publicly available since March 2008 and is administrated by CSC. It is described in detail in deliverable D3.1.2 "Public web site for PRACE" [10].

Figure 1. The PRACE website

The website is divided into left- and right-hand side columns. The right-hand side has space for PRACE news (press releases and other announcements), PRACE events and the media watch (PRACE related news). The events section lists PRACE related events and there is also the ability to register to events via the website. The media watch is available in different languages. There are RSS-feeds to all of these items.

The left-hand side links lead to sub-sites: The "About PRACE" section describes the project in general. The "Activities" category describes the project's work packages. Interested parties may inquire here about opportunities for collaboration. The Documents section [21] includes public versions of some of the deliverables (with project related information removed if the document hasn't yet been officially approved by the EC), PRACE related presentations from various events, PR material (flyer, brochure, logos) and the PRACE newsletters. All press releases are listed on the Press corner section. This section also provides links to the auto archived media watch feeds so it is possible to check where PRACE has made press cuttings.

The "HPC Training" section (Figure 2) was updated and upgraded during the second project year. The idea for implementing this section came from the Survey of HPC education and training needs (D3.3.1) [11].

The "HPC Training" section [22] contains presentations and material from the PRACE Winter and Summer School, and from 5 code-porting and optimisation workshops. Video material from the workshop is also available on the HPC training section.

The following material has been uploaded to the website and the HPC training and Documents sections of the website before 1.6.2010:

- 46 hours of HPC video training material
- 114 training presentations
- 138 other presentations
- 34 public deliverables

Figure 2. Video material on the PRACE website

The "Contact us" section has feedback forms for both PRACE related and technical (PRACE website related) questions, and contact information how to reach people responsible of PRACE dissemination.

WP3 has published all public deliverables on the PRACE website. In the end of November 2009, 18 deliverables were available on the website [20]. WP3 has also produced a few public versions of public deliverables that haven't yet been officially approved by the EC, but are interesting to the HPC community.

PRACE website has seven general presentations about PRACE. In 2009 and 2010, 113 new PRACE related general presentations were published. 98 new PRACE training related presentations were published in 2009 and 2010. In total 114 training presentations from workshops and PRACE schools are available. The total number of all presentations in the end of June 2010 was 286.

The site is monitored by a statistics system [12]. There have been a total of 201 160 visitors (97493 unique visitors) since the launching of the website on March 19, 2008. The number of visitors to the website has increased steadily from the beginning of the project and doubled during the second project year, still growing in 2010. Figure 3 shows the number of visitors from March 2008 until the end of May 2010.
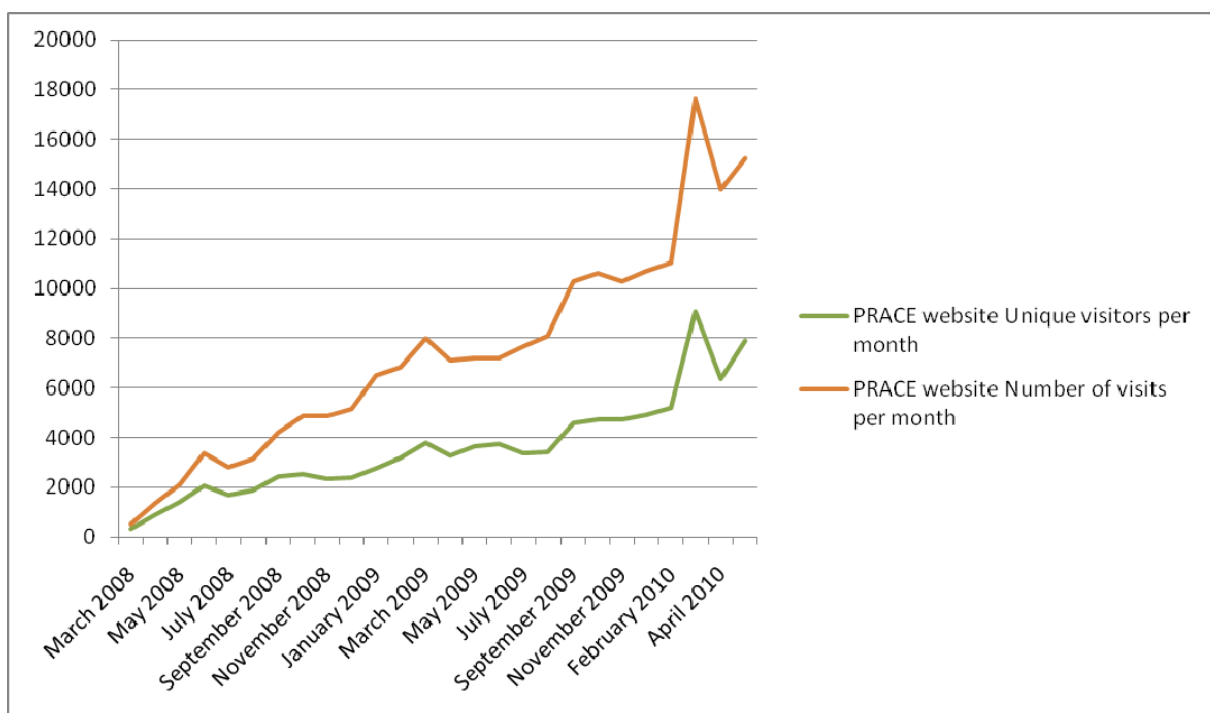
Figure 3. Number of visits to the PRACE website (www.prace-project.eu)

3.2. Dissemination Package

The Dissemination Package was ready by project month six. It is described in detail in deliverable D3.1.3 "Dissemination Package" [13]. The following items have been created for the Dissemination Package and the package has been continuously updated during the project:

- Flyers
- Brochure (updated in 2009 & 2010)
- Folder

- General PRACE poster (updated in 2009 & 2010), also laminated posters for exhibitions
- Prototype poster (updated in 2010), also laminated posters for exhibitions
- Production system poster (new, created in 2010) (see Figure 5)
- Templates
- Press releases
- Newsletters
- Publications in magazines
- Give-aways – t-shirts, candy, USB-keys (see Figure 4)
- Roll-ups– (a big, self stationary poster, see Figure 6.)
- Communication Kit for Stakeholders – a communication kit available on the PRACE intranet BSCW [14]: the kit was done to improve communication with PRACE's stakeholders, updated continuously
- Badges (see Figure 7)
- PRACE t-shirts (reprinted in 2010)

The project partners received a certain number of these materials for their local needs. The PRACE dissemination material has been distributed at events PRACE has taken part to. Press releases, newsletters and publications are described in more detail in this document (4.1, 4.2 and 4.3).

Figure 4. PRACE USB key with information about PRACE in it

Figure 5. PRACE Prototype/production system poster, created in 2010

Figure 6. Roll-ups. This picture shows a roll-up at a PRACE stand

Figure 7. PRACE badge, white

4 Dissemination Actions

This chapter describes the dissemination actions during the second project year.

4.1 Press Releases

During the second project year and the extension period (1.1.2009 – 1.6.2010) the following press releases were published:

- Reminder: PRACE Award 2009 (15.1),
- PRACE Part of Zero-In Magazine - Call for Papers Open (3.2),
- Serbia joins the PRACE initiative (12.2),
- PRACE held All Hands Meeting in Jülich, Germany, February 12-13, 2009 (16.2.),
- PRACE hosts highly successful Winter School (25.02.) ,
- HPC Infrastructures for Petascale Applications – DEISA PRACE Symposium 2009 (25.2.),
- A new world record in Go established by PRACE prototype and French software (2.3.),
- PRACE in the latest Projects magazine (5.3.),
- PRACE to implement STRATOS – a Permanent Research Platform (24.3.),
- PRACE evaluates Technologies for Future Multi-Petaflop/s Systems (30.3.),
- Call for Proposals for PRACE Prototype testing (9.4.),
- PRACE Award 2009 Winner Announced (22.4.),
- CSC and CSCS Arrange Two PRACE Code-Porting Workshops (23.4.),
- PRACE in the latest GridBriefing (6.5.),
- Presentations from the DEISA PRACE Symposium available(14.5.),
- PRACE hosted a Seminar on CUDA and HMPP (18.5.),
- DEISA PRACE Symposium 2009 attracted almost 200 participants from more than 20 countries and four continents (22.5.),
- PRACE at ISC'09 (1.6.),
- PRACE part of La Recherche magazine (26.6.),
- PRACE organises an industry seminar for potential European High Performance Computing users (26.6.),
- Presentations and pictures from ISC'09 (29.6.),
- First projects granted access to the PRACE Prototype systems - 4.4 Million Core hours to 3 projects (22.7.),
- BSC arranges a PRACE code porting and optimization workshop (11.8.),
- PRACE HPC Training Video Material Available (4.9.),
- Bulgaria and Czech Republic joined PRACE (9.9.),
- ACC CYFRONET AGH organises PRACE code porting workshop in Cracow, Poland (17.9.),
- Lisbon selected as the First PRACE Headquarters Location (24.9.),
- European industry went HPC with PRACE in Toulouse (1.10.),

- Six Projects granted Access to the PRACE Prototype Systems - 4.5 Million Core Hours (15.10.),
- Italy became a PRACE Principal Partner (30.10.),
- Supercomputing Experts met at the First European Workshop on HCP Centre Infrastructures (4.11.),
- PRACE Stream Computing Workshop to be held in Stockholm (5.11.),
- PRACE at SC09 (12.11.),
- PRACE is ready for Implementation: Applications Ported (16.11.),
- PRACE is ready for Implementation (16.11.),
- PRACE prototype the Greenest Supercomputer on Earth (19.11.),
- Pictures from SC (23.11.),
- PRACE Task Leader Tim Stitt wins HPC Open Education Cup 2008-2009 (24.11.)
- Call for papers: PRACE award 2010 (3.12)
- New PRACE training material available - 48 hours videos and 69 presentations 15.12.
- New call for Proposals for PRACE Prototype testing 17.12.
- PRACE Benchmark Suite Finalised 15.02
- PRACE to establish a Scientific Steering Committee 23.02
- PRACE evaluated additional prototypes for next generation architectures 26.02
- DEISA PRACE Symposium 2010 in Barcelona: Exciting Computational Science and Future HPC Technologies 05.03
- PRACE granted over 4.3 Million Core Hours to PRACE Prototype Systems 16.03
- PRACE held a Workshop on New Languages and Future Technology Prototypes 18.03.
- Nine PRACE Prototypes are Available for Testing 19.03.
- PRACE Award 2010 Winners Announced 19.04.
- Announcement: PRACE SSC Workshop postponed due to the Volcanic Ash Cloud 19.04.
- First PRACE Petaflop/s System Ready for European Researchers: Early Access Call Open 10.05.
- Presentations from DEISA PRACE Symposium 2010 available 17.05.
- Get up-to-date with PRACE at ISC'10 20.05
- DEISA PRACE Symposium 2010 attracted Participants from 23 Countries 28.05
- Presentations from ISC'10 available 01.06.
  PRACE Research Infrastructure inaugurated: World-class Supercomputing Service for European Science 09.06

During the second year and the extension period, 56 press releases were published. The amount of press releases was increased in the second year. Total amount of the press releases of the PRACE project is 79.

Press releases were published on the PRACE website and via the AlphaGalileo service which reaches over 7 000 journalists and editors all over the world. The press releases were also sent directly to the sources such as the Scientific Computing World, GridTalk-project, International Science Grid This Week, Primeur, EuropaScience, GridToday, HPC Wire,

Cordis and Inside HPC. The PRACE press calendar is available in the PRACE intranet, BSCW [15].

4.2 Publications and Press Cuttings

The PRACE media watch on the PRACE website has counted a total of 1835 PRACE related online articles and news items since the beginning of January 2008 until the end of May 2010 (Figures 9 and 10). Figure 9 shows the amount of hits in English and in all other languages from the beginning of 2009 until the end of May, 2010. Figure 10 shows the amount of hits sorted by countries where the online publications are based. A list of the major publications can be found in Annex 8.1.

PRACE was a part of the latest issue, June 2009, of La Recherche magazine [16] (see Figure 8). This number is a special issue on HPC.

Modelling the climate and its changes, cerebral activity, the effectiveness of medical treatments, propagation of seismic waves, dispersion of pollutants in the atmosphere, nuclear fusion, water depollution, petroleum prospecting - just a few examples of the simulations discussed in this special issue, which has been produced in partnership with CEA, INRIA, Bull, Intel, Total, GENCI and PRACE and illustrates the extent to which high-performance computing has become essential to both research and industry.

PRACE also featured with special articles in Zero-In Magazine (produced by the BELIEF-II project), Projects magazine, the Inside magazine and the Primeur magazine.

Figure 8. La Recherche magazine is available online in English and French.
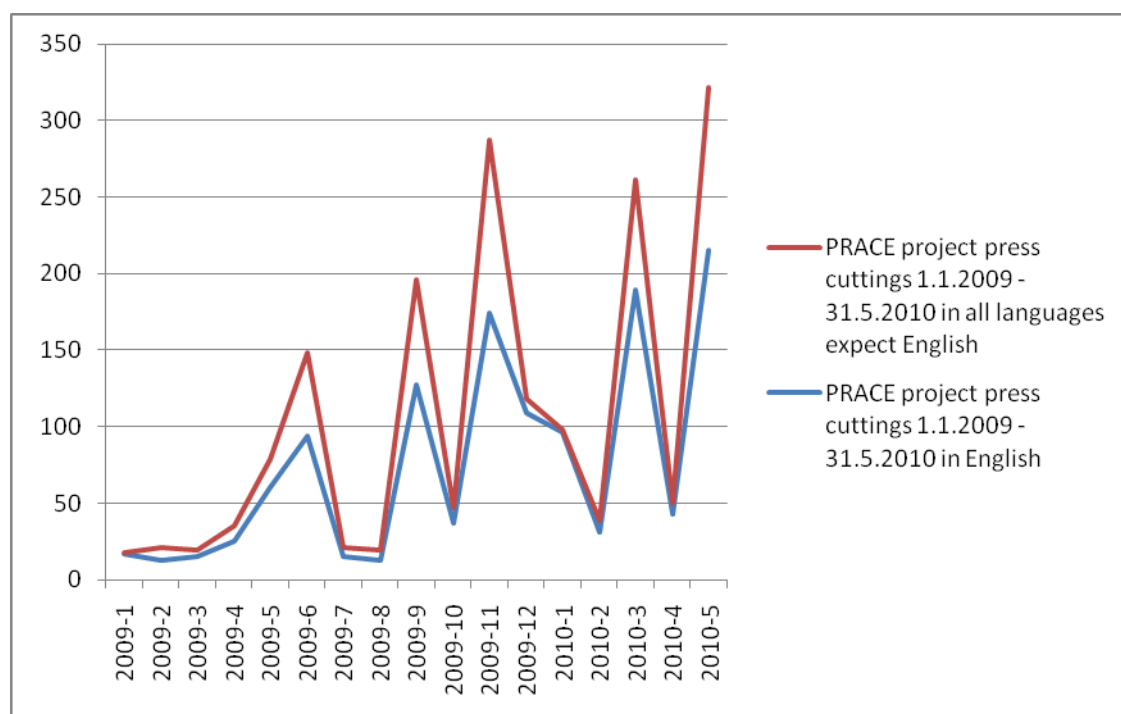
Figure 9. PRACE press cuttings 1.1.2009-31.5.2010 in English and in all other languages expect English
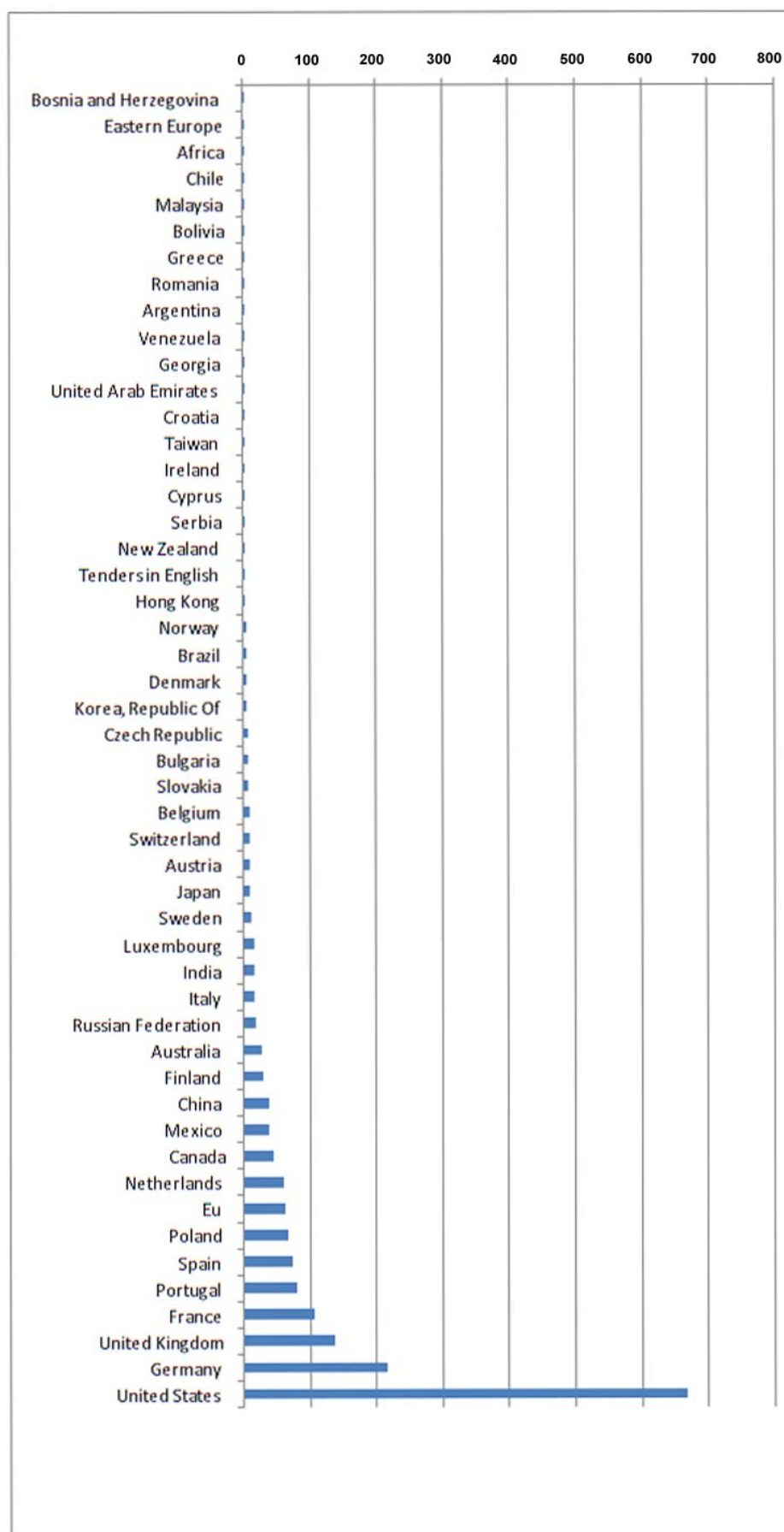
Figure 10. PRACE press cuttings in different countries / areas 1.1.2008 – 31.5.2010

Figure 10 represents the amount of online press cuttings in different countries / areas. The country / area represents the place where the online source is homed. More accurate figures are below in Table 2 below. PRACE made a total of 1835 online press cuttings throughout the project in the following countries / areas:

Bosnia And Herzegovina 1	New Zealand 3	Italy 16
Eastern Europe 1	Tenders in English 3	Russian Federation 19
Africa 1	Hong Kong 3	Australia 27
Chile 1	Norway 4	Finland 30
Malaysia 1	Brazil 4	China 39
Bolivia 1	Denmark 4	Mexico 39
Greece 1	Korea, Republic Of 6	Canada 45
Romania 1	Czech Republic 7	Netherlands 59
Argentina 1	Bulgaria 7	EU 63
Venezuela 1	Slovakia 7	Poland 66
Georgia 1	Belgium 9	Spain 73
United Arab Emirates 2	Switzerland 9	Portugal 79
Croatia 2	Austria 10	France 106
Taiwan 2	Japan 10	United Kingdom 136
Ireland 2	Sweden 12	Germany 216
Cyprus 2	Luxembourg 16	United States 668
Serbia 3	India 16	

Table 2. PRACE online press cuttings in different countries / areas 1.1.2008 – 31.5.2010

4.3 Newsletters

Four PRACE newsletters were published during the second project year. All newsletters are available on the PRACE website [9].

PRACE newsletter 01/09 (Figure 11), distributed in March 2009.

Table of contents, PRACE newsletter 01/09:

- Assessing and Developing Future HPC Technologies is Essential for PRACE
- PRACE held All Hands Meeting
- The Expected Benefits of a European HPC Infrastructure Explained by Two Researchers
- PRACE hosts highly successful
- Serbia joins the PRACE Initiative
- Featured Events

Figure 11. PRACE newsletter 1/09 frontpage

PRACE newsletter 02/09 (Figure 12), distributed in June 2009:

Table of contents, PRACE newsletter 02/09:

- Preparing PRACE for Petaflop/s Systems is a Challenging Task
- Call for Proposals for PRACE Prototype Testing
- DEISA PRACE Symposium 2009 Attracted Almost 200 Participants from more than 20 Countries
- Featured Events

Figure 12. PRACE newsletter 2/09 frontpage

PRACE newsletter 03/09 (Figure 13), distributed in October 2009.

Table of contents, PRACE newsletter 03/09:

- PRACE Prototypes are Important for Petascale System Selection
- European Industry goes HPC with PRACE
- PRACE Award 2009 Winners study Computational Electromagnetics
- PRACE Award 2009 Winner's Report from PPAM'09 Conference
- Lisbon selected as the First PRACE Headquarters Location
- Bulgaria and Czech Republic join PRACE
- Featured Events

Figure 13. PRACE newsletter 3/09 frontpage

PRACE newsletter 4/08 (Figure 14), to be distributed in 12/2009.

Table of contents, PRACE newsletter 04/08:

- WP4 leader interview
- PRACE is Ready for Implementation
- PRACE at SC09
- PRACE Prototype the Greenest Supercomputer on Earth
- Italy became a PRACE Principal Partner

Figure 14. PRACE newsletter 4/09 frontpage

5 Training

This chapter describes the training activities completed during the second project year.

The PRACE training survey (D3.3.1) [11] offers recommendations and describes a roadmap of how user requirements and training deficiencies can be satisfied in conjunction with a sustained, comprehensive PRACE educational programme encompassing summer schools, winter schools and training workshops. The survey of HPC education and training needs was rated excellent by the EC and it has been requested to be template for similar exercise in the United States, Hong Kong and in the Northeast Asia.

During the second project year WP3 started to implement these recommendations; in addition to the PRACE Winter School (see next chapter 5.1), the HPC Training section was launched on the website (see chapter 3.1). WP3 also arranged 5 code porting and optimisation workshops. In addition to the code porting workshops WP3 contributed to arrangements of the CEA-EDF-INRIA Computing SCIENCE Summer School "Emerging grid middleware standards", June 8- 19, Saint-Lambert-des-Bois, France.

5.1 PRACE Winter School

The PRACE Winter School was hosted by GRNET with the cooperation of AUTH in Athens from February 10th to 13th 2009. There were 79 registrations for the event and 48 students were selected from 18 different countries. The participants received advanced training on current and future parallel programming models and optimization techniques. The latest PRACE developments were integrated into the program and two PRACE prototypes were used (POWER6 at SARA and CELL at BSC) for the hands-on sessions. In the anonymous feedback returned by 38 students, the School organization and training content received excellent grades.

The program of the Winter School was designed to provide participants with a deep and thorough insight into the current and the future trends of parallel programming models and paradigms for Petascale computing. As it was clearly demonstrated by the "Survey on Training and Educational Needs for Petascale Computing" [11], which has been published in June 2008, the HPC users in Europe would welcome advanced training on these topics. The objectives of the Winter School were to provide world-class training on current programming trends, which include MPI, OpenMP, Hybrid MPI/OpenMP and the PGAS programming model of UPC. Training on next-generation HPC programming models was addressed with a thorough introduction to the Chapel programming language.

The increased participation of females (6 as students and 2 as trainers) was one of the significant successes of the event.

The Winter School is described in detail in deliverable D3.3.3 PRACE Winter School [3].

Figure 15. The PRACE Winter School was organised by GRNET and Aristotle University in Athens, Greece.

5.2 PRACE GPGPU Training

In addition to the Winter School, a training dedicated to GPGPU (General-purpose computing on graphics processing units) programming was hosted by PRACE in France at the end of April 2009.

Twelve HPC experts from six PRACE countries received a deep insight into CUDA, a language developed to enable general purpose computing for NVIDIA graphic cards. The first two days were dedicated to CUDA, addressing problems from the basics of memory allocation and transfer to more elaborated topics like mixing OpenMP and MPI with CUDA to enable multiple levels of parallelization. Hands-on sessions on the newly installed GENCI-CEA PRACE prototype enabled the participants to test their knowledge on the latest high-end Tesla cards.

After the first two days, the main focus of the lessons switched to the Hybrid Multicore Parallel Programming (HMPP) workbench from CAPS enterprise. HMPP is a collection of tools, compilers and a runtime that allows portable programming for various multi- and many-core architectures. This seminar was jointly organized by CEA and GENCI and took place at the Ter@tec site next to CEA Bruyères-le-Châtel from April 27 to April 30, 2009. Hands-on sessions took benefit from the WP8 prototype set up at CEA, consisting in 2 NVIDIA TESLA S1070 servers

5.3 Code-porting and Optimisation Workshops

WP3 organised five PRACE code-porting and scaling workshops that were hosted during 2009. These workshops complete the PRACE HPC Training and Education programme, for the preparatory phase of the project, and significantly build upon the recommendations proposed within the PRACE HPC Training and Education survey.

The primary objective of these workshops was to provide participants with the necessary training, education and expertise to port and scale user applications to a broad spectrum of

PRACE prototype petascale architectures, which may become resources within Europe's Tier-0 computing research infrastructure during the implementation phase of the PRACE project.

The workshops were hosted respectively by Finland, Switzerland, Spain and Poland and attracted more than 120 participants from across Europe, Asia and North America. The workshops provided students with access to four PRACE prototype systems (Cray XT5, NEC SX-9, BlueGene/P and IBM CELL) and the direct experience of over 10 invited speakers who are renowned experts in porting and scaling applications to these architectures.

As well as the direct knowledge that was acquired during the workshop events, over 30 slide presentations were made available to the PRACE training portal, which captures the contents of the workshops for the entire HPC community. Furthermore, over forty-six (46) hours of digital video recordings were obtained from the workshops which are also available from within the PRACE training portal, and provide the full workshop experience to the HPC community, on demand.

The overwhelming response from the participants of these workshops was positive and it is imperative that the PRACE Training and Education programme is further supported to provide similar events in the future. Without the transfer of knowledge from porting and scaling experts, users of forthcoming Tier-0 computing resources will be inadequately prepared to exploit these valuable tools, in pushing the boundaries of European science and competing successfully within the global scientific community.

5.3.1 Finnish Workshop on Application Porting and Performance Tuning

The Finnish workshop was hosted at the HTC Keilaniemi Conference Centre [17] during the 11th-12th June 2009, in Espoo, Finland, close to the CSC facilities. The goal of this workshop was to disseminate the valuable information that had been acquired within PRACE WP6, in porting and optimising applications to the PRACE prototype systems. The programme for the workshop therefore focused on a series of technical lectures presenting the porting, optimization and profiling techniques currently employed by PRACE researchers within WP6. These lectures included information on new programming models for petascale computing, numerical libraries and performance measurement tools. In addition, these lectures were complemented by a series of case studies, describing the application of these techniques and technologies on real applications.

Figure 16. Workshop on Application Porting and Performance Tuning in Finland

5.3.2 Swiss Workshop on Cray XT5 Code Porting

The Swiss code-porting workshop was hosted at the Swiss National Supercomputing Centre, during the 13th-15th July 2009, in Manno, Switzerland. The principle language of the workshop was English. The focus of this three-day workshop was to provide students with advanced training and expertise in porting application codes to the Cray XT5 architecture; one of the PRACE prototype systems. The format of the workshop saw each day comprise of morning lectures in porting and optimization theory for the Cray XT5 followed by afternoon sessions whereby participants could apply their new knowledge to real application codes. Participants were highly encouraged to bring their own applications to the workshop and were equally encouraged to benefit from the Cray Inc. porting and optimization staff that was present.

5.3.3 Polish Workshop on NEC SX-9 and BlueGene/P Code Porting

The Polish workshop was hosted at the Academic Computer Centre CYFRONET AGH during the 14th-16th October 2009, in Cracow, Poland. The workshop was held in association with the Cracow Grid Workshop 2009 [19]. The goal of this workshop was to provide students with hands-on experience with porting application codes to the BlueGene/P (FZJ, Juelich) and NEC SX-9 (HLRS, Stuttgart) PRACE prototype systems. The first day of the workshop focused on introductory lectures to the prototype systems while the second and third days focused solely on "hands-on" code-porting and optimisation exercises. Access to the two prototype machines was divided between morning and afternoon sessions; the morning session focused purely on the BlueGene/P system while the afternoon sessions focused on the NEC SX-9 systems. This approach allowed the students to gain a clearer understanding of the fundamental differences between the two machine architectures.

5.3.4 Spanish Workshop on Cell and GPGPU Code Porting

The Spanish workshop was hosted at the North Campus, Technical University of Catalonia during the 21-23 October 2009, in Barcelona, Spain. The focus of this workshop was to provide students with advanced training in programming models and optimization techniques for CELL and GPGPU-based systems that comprise some of PRACE's prototype architectures. The first day of the workshop focused on the OpenMP 3.0 programming model. The second day focused on application porting to CELL-based systems. The third and final day focused on UPC, and the CUDA and OpenCL programming models for GPGPU systems.

5.3.5 Swedish Stream Computing Workshop

A workshop on stream computing was arranged on December 7–10, 2009 in Stockholm, Sweden at the KTH Royal Institute of Technology. The workshop was addressed to scientist and graduate students with interest in exploiting stream processing for applications. Good programming experience was a prerequisite. The workshop offered an introduction to OpenCL and stream/GPU programming. It consisted of lectures and hands-on experiences in using OpenCL on state-of-the-art stream processors.

The workshop also covered lectures on stream processor architectures and programming tools for stream processors and multi-core systems. Lectures reporting on successful use of stream processors in scientific applications were also presented. Contributions to the workshop were confirmed   from   AMD,   NVIDIA,   Stockholm   University   and   Synective.

6 Events

PRACE project partners gave in 2008 over 50 PRACE related presentations at a variety of events and conferences In 2009 55 presentations were given. The main PR events for PRACE during the second project year were ISC 2009 in Hamburg and SC09 in Portland, Oregon. For the first half of 2010 the most important dissemination events were the Third Scientific Conference (DEISA-PRACE –symposium) and ISC 2010 in Hamburg, where 13 presentations were given. The PRACE presence at these events is described in the following section 6.1. In addition, PRACE was present at the NSC'09 event, described also in section 6.1.

PRACE also arranged the Second Industrial Seminar and the Second Scientific Conference. These are explained in detail in section 6.2.

6.1 Principal PR Events

Event	ISC Hamburg, June 23-26, 2009, Germany
Full title of the event	International Supercomputing Conference
Attended by	WP3
Description of the participation	PRACE had a booth in the exhibition hall. PRACE also presented the PRACE Award 2009. PRACE arranged also a BoF (Birds-of-a-Feather) session with the following title and agenda: "PRACE: HPC for scientific breakthroughs"

	• 9.00 Dr. Thomas Eickermann, FZJ: PRACE - high end computing service for Europe
	• 9.30 Dr. Thomas Lippert, FZJ: Ab initio Determination of Light Hadron Masses
	• 10.00 Dr. Sergi Girona, BSC: Opportunities and challenges of novel architectures for HPC (talking about Cell)
	• 10.30 Dr. Stefan Wesner, HLRS: Hybrid HPC in industrial applications
	• 11.00 Dr. Sanzio Bassini, CINECA: Towards a petascale infrastructure based on the effective deplyoment of Blue Gene Q
	• 11.30-12.00 Conclusions & discussion
Communications	Press releases published about PRACE activities at ISC09 and about the PRACE Award 2009 winners. Follow-up article in PRACE newsletter. PRACE collected leads at ISC09 by scanning conference passes from those people who showed interest in PRACE. A total of around 140 leads were collected and further information about PRACE sent to these people via e-mail after the event.
Distributed material	80 t-shirts, 3 bags candy, 100 USB-keys, 100 press releases 100 newsletters, 300 brochures, 56 folders, La Recherche magazines
Assessment of the attendance at event	PRACE Award 2009 gained a lot of attention. Presence and material distribution, media coverage.
Preparations	In cooperation with WP3

Figure 17. PRACE booth at ISC09, Hamburg

Figure 18. PRACE at ISC'09 Prof. Dr. Achim Bachem (right) presenting the PRACE Award 2009 to J. C. Mouriño (middle) on behalf of the winning group

Event	NSC'09, Linköping, (Sweden) October 13-14, 2009.
Full title of the event	NSC'09
Attended by	WP3, SNIC.
Description of the participation	Agenda: • "Welcome and opening of the conference, Bengt Persson, NSC • Swedish eInfrastructure for Research: The SNIC Landscape Document for 2010-2013, Sverker Holmgren, SNIC • MariCel: the PRACE prototype at BSC, Gabriele Carteni, Barcelona Supercomputing Centre, Spain • Prototype system at PDC, Daniel Ahlin, PDC • DEISA, Erwin Laure, PDC • Ab-initio studies of advanced multifunctional materials, Biplab Sanyal, UPPMAX and Department of Physics and Materials Science, Uppsala University • Mesoscopic simulations of many-body protein interactions, Mikael Lund, Kemicentrum, Lund University • Whole genome resequencing reveals loci under selection during chicken domestication, Carl-Johan Rubin, Department of Medical Biochemistry and Microbiology, Uppsala University • Constructing error-correcting codes with huge distances, Florian Hug, Lund University • The GIRD Grid Job Management Framework, P-O Östberg, Department of Computing Science and HPC2N, Umeå University Wednesday, October 14 • High performance computing with GROMACS, Berk Hess, Stockholm University • Advanced profiling of GROMACS, Jesus Labarta, Barcelona Supercomputing Centre, Spain • NSC during 20 years, Karl-Fredrik Berggren, Department of Physics, Chemistry and Biology, Linköping University • History of the SMHI and NSC partnership, Per Undén, SMHI • SUNET during 20 years, Hans Wallberg, SUNET • Shape optimization and active flow control for improved aerodynamic properties, Sinisa Krajnovic, Division of Fluid Dynamics, Chalmers • Quantum Aspects of Surface Plasmons in Reduced Dimensions — insights from computational studies, Shiwu Gao, Department of Physics, University of Gothenburg

	• Theory of simple and complex materials, Sergei Simak, Department of Physics, Chemistry and Biology, Linköping University
	• Computational Combinatorics and Experimental Mathematics, Klas Markström, Department of Mathematics and Mathematical Statistics, Umeå University
	• Numerical Simulation of Turbulent Boundary-Layer Flows, Philipp Schlatter, Mechanics, KTH, Stockholm (pdf)
	Abstract: NSC '09 PRACE related event focused on the PRACE prototype systems, examples of PRACE systems usage and the demonstrations of code porting issues
Communications	Advertised in the NSC newsletter NSC News together with an article about PRACE. Electronically advertised to all HPC users in Sweden. Follow-up article in NSC News.
Distributed material	10 t-shirts, 10 USB-keys, 80 newsletters, 80 brochures
Assessment of the attendance at event	78
Preparations	WP3, SNIC

Event	SC09, Portland, Oregon (US), November 14-20, 2009.
Full title of the event	Supercomputing 2009
Attended by	WP3, various other PRACE members.
Description of the participation	The open 20x20 sq ft booth (one back wall, three open sides) created a very positive atmosphere suitable for in depth discussion and round table sessions. The booth was a joint booth with DEISA. Partner videos and slide show (on two 40" screens) served as eye-catchers and made participants ask questions. DEISA video was running on the other screen.
	Treasure hunt (prize: two iPods) was the ideal opportunity to contact by-passers and invite them to read the PRACE flyer (which contained the answers) and to visit the PRACE partner booths.
	Give-aways: The PRACE t-shirt and the memory stick containing the presentations and public documents were highly demanded.
	Posters (PRACE general poster and Prototype poster and DEISA posters) on the back wall contributed to the appealing appearance.
	PRACE arranged a BoF session at SC09 together with DEISA and EGI:

	Agenda: "European HPC and Grid Infrastructures", Konstantinos Glinos, European Commisison "The Distributed European Infrastructure for Supercomputing Applications", Hermann Lederer, Max Planck Society "The Partnership for Advanced Computing in Europe", Thomas Eickermann, FZJ "The European Grid Initiative", Ludek Matyska, Masaryk University "The European e-Infrastructure Forum", Bob Jones, CERN General Discussion Abstract: EGI, the European Grid Initiative, represents an effort to establish a sustainable European grid infrastructure. its foundations are the National Grid Initiatives (NGIs) and the EGI Organization (EGI.eu). The first phase of EGI implementation is prepared to start in May 2010. DEISA is a consortium of the most powerful supercomputer centers in Europe, operating supercomputers in a distributed but integrated HPC infrastructure. It regularly hosts the most challenging European supercomputing projects and prepares a turnkey operational solution fora future integrated European HPC infrastructure. PRACE, the Partnership for Advanced Computing in Europe, prepared the creation of a persistent pan-European HPC infrastructure to support world-class science on world-class systems. PRACE will become operational in 2010 and deploy up to five leadership systems and renowned partner sites. For EEF, the recently formed European E-Infrastructure Forum will present its ideas on a future European compute ecosystem.
Communications	Three (3) press releases published and distributed. One of the press releases was about eQPACE, the PRACE prototype which ranked at number one on the Green500 list, published at SC09. SC09 highlighted sustainability and PRACE avoided to ship a lot of paper material overseas. Instead, 250 PRACE USB-keys with PRACE material uploaded in them were delivered to those interested in PRACE. PRACE was one of the "sustainable exhibits" at the exhibition. PRACE collected leads at SC09 by scanning conference passes from those people who showed interest in PRACE. A total of over 220 leads were collected and further information about PRACE sent to these people via e-mail after the event.
Distributed material	250 PRACE USB sticks , 200 t-shirts, laminated general and prototype posters, 20 newsletters (#7), 400 flyers, badges, La Recherche magazines

Assessment of the attendance at event	Very successful exhibition with a lot of interested people. Treasure hunt drew people to the booth. Bigger (20x30sq feet booth) reserved for SC10 in New Orleans, LA.
Preparations	WP3 SC09 organisation team

Figure 19. PRACE / DEISA booth at SC09 in Portland, Oregon

Event	ISC Hamburg, May 30 – June 2010, Germany
Full title of the event	International Supercomputing Conference
Attended by	WP3
Description of the participation	PRACE had a booth in the exhibition hall. PRACE also presented the PRACE Award 2010. PRACE arranged also a networking session with the following title and agenda: "PRACE Open Dialog with European Tier-0 Users" • Thomas Eickermann, FZJ, Germany:News from the PRACE Research Infrastructure - Status and next steps • Axel Berg, SARA, The Netherlands: Comparison of PRACE prototypes and benchmark results • Iris Christadler, LRZ, Germany: Evaluating performance and productivity of new HPC programming languages • Turlough Downes, DCU and DIAS, Ireland: A PRACE

	user experience: Massively parallel simulations of astrophysical turbulence • Ana Bela Dias, NCF, The Netherlands: PRACE HPC access • Discussion Session chair: Ari Turunen, CSC, Finland (PRACE WP3 leader: "Dissemination, outreach and training")
Communications	Press releases published about PRACE activities at ISC10 and about the PRACE Award 2010 winners. PRACE collected leads at ISC10 by scanning conference passes from those people who showed interest in PRACE. Further information about PRACE sent to these people via e-mail after the event.
Distributed material	100 t-shirts, 1 bags candy, 150 USB-keys, 100 press releases 150 brochures, La Recherche magazines
Assessment of the attendance at event	PRACE Award 2010 gained a lot of attention. Presence and material distribution, media coverage.
Preparations	In cooperation with WP3

Figure 20. PRACE booth at ISC'10

6.2 Other Events

This chapter describes the Industrial seminar and the Scientific conference organised by PRACE during the second project year.

6.2.1 Second Industrial Seminar

The Second Industry Seminar was organized by GAUSS, and GENCI with the sponsorship of Airbus, Grand Toulouse and Midi Pyrénées Region in Toulouse the 7–8th September 2009.

Around 103 attendees representing 57 companies were attending this event. It was one year after the First Industry Seminar in Amsterdam – an opportunity for PRACE to meet again and intensify the contacts with the European industry community.

It allowed PRACE to present the project and the attendees to discuss and exchange ideas about HPC in industry as a tool for increasing competitiveness and accelerating innovation.

Three parallel sessions gave an opportunity to gather industry's needs and expectations about PRACE and to elaborate how the project will build a pertinent European industrial HPC infrastructure.

The Second Industry Seminar and the conclusion on collaboration with industry are described in detail in deliverable D3.2.2 Second industrial seminar [4] and in deliverable D3.2.3 Conclusion on collaboration with the industry [6].

Figure 21. The second PRACE industry seminar attracted more than 100 participants from 18 countries with executive attendees representing 57 companies from a wide variety of industry fields

6.2.2 Second Scientific Conference

PRACE arranged a second scientific conference together with DEISA-project in Amsterdam on May 11-13, 2009. It was the first time that PRACE and DEISA merged their annual science symposia into one big European HPC event:

The theme of this unique symposium was "HPC Infrastructures for Petascale Applications". This is what PRACE and DEISA are jointly creating for Europe - and what other organisations and projects are building in the USA and Asia. The symposium was of major

interest to a broad audience: from scientific users, HPC technology experts and vendors, government representatives and industry partners.

Prominent keynote speakers from all over the world gave the global perspectives of High Performance Computing (HPC) in the Petascale era, the new generation of supercomputers for scientific research. Speakers on the first day included **Kostas Glinos** of the European Commission, **Abani Patra** from the National Science Foundation (USA), **Ryutaro Himeno** from RIKEN (Japan), **Horst Simon** from the Department of Energy (USA), **Ben Evans** from the Australian National University (Australia) and **Vladimir Voevodin** from the Moscow State University (Russia).The symposium also featured speakers from different science communities.

"High-performance computing is crucial for climate research to understand mechanisms of climate change and predict future climate change perturbed by human activities. The powerful computing is needed to understand and to predict extreme events and assess the regional impacts of the climate change on society and economy", stated Prof. **Sylvie Joussaume**, researcher at CNRS and expert in climate modelling. She is also chairing the European Network for Earth System modelling (ENES, http://enes.org). ENES has started the new FP7 Infrastructure project IS-ENES (http://isenes.enes.org) to better understand and predict future climate change by high-end simulations.

In the Life Science community talk Prof. **Peter Coveney** from University College London presented the Virtual Physiological Human project with collaborations from seven European countries. Prof. **Frank Jenko** from the European Fusion Research community, researcher at the Max Planck Institute for Plasma Physics, presented an overview of the world-wide ITER project and the HPC needs for its success. Prof. **Carlos Frenk** from Durham University gave a brilliant insight into the world of cosmology and the challenging simulations of cosmic evolution by the VIRGO Consortium, the world-leading group in this field. All four science communities are supported by DEISA and plan to use the PRACE petaflop systems.

PRACE also provided its perspectives on HPC architectures, Applications, Training and Education. From the DEISA Extreme Computing Initiative ten computational science grand challenge projects from all over Europe covering many science areas were presented.

The presentations from the symposium are available on the DEISA [18] and PRACE [9] websites (http://www.deisa.eu/news_press/symposium and http://www.prace-project.eu/documents).

DEISA PRACE Symposium 2009 attracted almost 200 participants from more than 20 countries and four continents. An evaluation form was given to every symposium participant in the conference kit and later sent via e-mail to all symposium attendees.

97 per cent of the respondents thought that the symposium was very productive (62%) or productive (35%). A total of 45 per cent of the respondents gave "1 (excellent)" to the relevance, agenda and discussions at the symposium; 37 per cent of the respondents gave "2" on a scale of 1 (excellent) to 5 (poor). The organisation of the symposium at the same 1 to 5 scale got the following percentages: "1 (excellent)" 72 % and "2" 22% of respondents. The outcome of the seminar is described in detail in deliverable D3.1.7 Proceedings of second scientific conference [5].

Figure 22. DEISA PRACE Symposium in Amsterdam attracted almost 200 participants from more than 20 countries and four continents

6.2.3 Third Scientific Conference

The DEISA PRACE Symposium 2010 was held for the second time as a big European HPC (High Performance Computing) event. The symposium featured speakers from different scientific communities as well as decision makers in science. The symposium was of major interest to a broad audience: from scientific users, HPC technology experts and vendors, government, EC representatives and industry partners. It gathered more than 130 participants from 23 countries and three continents. This symposium was held from May 10 to May 12 at Casa Milà, in Barcelona, and hosted by the Barcelona Supercomputing Center.

In the sessions on 'Challenges in Computational Science', speakers from different science communities which are supported by DEISA and are planning to use the PRACE Petaflop/s systems were featured. The covered science fields were astrophysics, materials sciences, earth sciences, fusion for energy, and life sciences. DEISA and PRACE speakers reported on project progress and highlights, and PRACE speakers discussed the future technologies. In further science sessions, 14 computational science grand-challenge projects from all over Europe and various disciplines were presented.

6.2.4 Participation to Scientific Conferences

In 2009, PRACE was present at 19 scientific conferences with PRACE booths or presentations:

- OGF25 / EGEE User Forum, 2-6 March, Catania, Italy
- Scientific POWER Meeting, 26-28 March, 2009, Mazurian Lakes, Poland
- 24th Forum ORAP, 26 March, Lille, France

- NAFEMS NORDIC Seminar: Multi-Disciplinary Simulation in Engineering Analysis, April 21-22, Helsinki, Finland
- NOTUR2009, 18-20 May 2009, Trondheim, Norway
- ScicomP 15, May 18-22, Barcelona, Spain
- IESP Workshop, April 7-8, 2009, Santa Fe, NM, USA
- SERI 2009, June 3-5, Paris, France
- HPDC 2009, June 11-13, Munich, Germany
- DFT09, August 31 - September 4, Lyon, France
- ParCo 2009, September 1-4, Lyon, France
- PPAM 2009, September 13-16, Wroclaw, Poland
- NEERI 09, September 30 - October 2, Helsinki, Finland
- ICNSP 09, 6-9 October, Lisbon, Portugal
- LinkSCEEM Conference, October 6-8, Paphos, Cyprus
- Bio IT World Conference & Expo 09, October 6-8, Hannover, Germany
- HiBi09, 14-16 October, Trento, Italy
- I3 Conference, November 4-6, Poznan, Poland
- SciTech Europe 09, November 12, Brussels, Belgium

In the first half of 2010, PRACE took part to / arranged the following events:

- ISC'10, May 31 - June 3, Hamburg, Germany
- EU-Russia Innovation Forum, May 25-17, Lappeenranta, Finland
- DEISA PRACE Symposium 2010, May 10-12, Barcelona, Spain
- PRACE SSC Workshop, April 20, Jülich, Germany (postponed to June 14, 2010)
- 5th EGEE User Forum, April 12–15, Uppsala, Sweden
- ECRI 2010, March 23–24, Barcelona, Spain
- PRACE Workshop - New Languages and Future Technology Prorotypes – at LRZ, March 1–2, Garching, Germany

7 Conclusions

High Performance Computing and networking is getting more and more important and beneficial for the science and industry. Thus communication with potential users of HPC related information and the public is an increasingly important aspect of science. Unfortunately, the general public is not enough aware of how computational methods have improved the research. Partly it is due the lack of communication resources in the supercomputing community, partly because the communication has been traditionally handled by specialists whose primary target audience has been other specialists. The result is that the benefits of the computational science are not widely acknowledged and even understood.

However, there is a constant and increasing demand for the popularised material aimed to funders, decision makers and new potential customers in industry. The importance of communications is stated in Regulation (EC) No 2321/2002 of the European Parliament and of the Council concerning the rules for the participation of undertakings, research centres and universities in, and for the dissemination of research results. Dissemination of research is as important as the generation of research, and it is crucial to understand and address the challenges to knowledge dissemination in order to have a fully effective R&D strategy.

Communicators can be the bridge between academia and industry aiming the technology transfer. In this context the dissemination of the key results also reflects the broader societal

and economic impact. PRACE strives to further enhance communication with the broader scientific community as well as with policy and decision makers, and the public at large.

During the first year of the project 22 press releases and four newsletters were published. During the second year and the extension period 56 press releases were published. The total amount of the press releases is 79. The press releases were sent to over 7,000 journalists around the world. No other EU-funded e-infrastructure-project has published so many press releases.

The total number of PRACE related online articles and news items until the end of May 2010 was 1835. The number of the web site visitors has been increasing steadily – the total number of visitors as in the end of May 2010 was 201 160 visitors (97493 unique visitors) since the launching of the website on March 19, 2008.

WP3 has promoted the transparency of the PRACE project. All public deliverables were published accordingly on the PRACE web site after official approval by the European Commission

All WP3 deliverables were completed on time. The training programme continued with Winter School and five code porting and optimisation workshops which were arranged in Greece, Finland, Poland, Switzerland, Spain and Sweden. In total they reached over 180 participants all over Europe.

One of the most successful outcomes of the workshops was the large collection of training material that is now freely available via the PRACE training portal. In particular over 46 hours of video content was captured to ensure that the HPC community at large, are able to benefit from the expert instruction and knowledge transfer for free.

Across all workshops, the feedback was positive and many participants welcomed the opportunity to gain first-hand instruction, by leading experts, on adapting their codes to the next generation of high-performance computing hardware.

WP3 arranged the Second Industry Seminar and the Second and Third Scientific Conference. The Second Industry Seminar received more than 100 participants from 21 countries with executive attendees representing 57 companies. The Second Scientific Conference attracted almost 200 participants from more than 20 countries and four continents.

In 2009 and in the first half of 2010, PRACE attended to 28 scientific events. PRACE was either introduced to audience by booths or presentations at these events. The key result of attending these events was over 2,000 new contacts for the PRACE database.

8 Annexes

8.1 Annex I – Publications and Press Cuttings

A summary of the major PRACE related publications and press cuttings gathered from the PRACE media surveillance (online news and articles) with some additions. In 2009, 699 online articles were published in English, 309 in other languages. The numbers for the first five months of 2010 are: 574 and 196 respectively.

The titles and publications can be found on the PRACE website at PRACE website [1] under "Press corner" -> "Articles" at the following URLs:

http://www.prace-project.eu/prace-related-news (In English)

http://www.prace-project.eu/prace-related-news/prace-related-news-all-languages (In all languages except English)

8.2 Annex II – Sources for Online Press Cuttings

During the PRACE project, PRACE made press cuttings in 736 different sources:

.NET Developer's Journal	LExpansion
100 Years Online	Lienmarché CNX (ENG)
1440 Minutos	Lienmarché CNX (FRA)
20 Minutos.es	life PR
3G China	Life Scientist
4g-wirelessevolution.tmcnet.com	Linux Today
7thSpace	LUPA - Server o českém Internetu
Aamulehti	M2
ABC 7 San Francisco	M2
ABC [Hobart]	MacNation
ABC News	Macro World Investor
ABC.es	Macworld
Access Sustainable Knowlede (GER)	madri+d
Actualités News Environnement	Maeil Business Newspaper
Ad Hoc News	Manager-Magazin
ADN.es	Manager-Magazin_Boerse
AEC Newsroom	Managersonline.nl
AfterDawn.com	ManagerWeb.cz
Agencia Financeira	Managing Automation
Aidenet	Market Wire
Aktuality	Market Wire
Alacra Store	Market Wire via MSN Money
Alpha Galileo	Marketing & Media
AlphaTrade Finance	Marketpress.info
American Electronics Association	MarketWatch
Amerika Woche	Maximum PC
Ana.gr	MCADCafé
Ando Dudando	MD Weekly
Anp Pers Support(NL)	Media Industry Today
Art of Design	Media NetPR - internet dla dziennikarzy i mediów
Asia Net	Media Newswire
Atlanta Business Chronicle	Media Relations & Event Management
Atodochip	Media Workstation
Austin Business Journal	Media Workstation
Australian IT	media	NRW

Automatiseringgids	Medical News Today
Avenida Central	MikroPC
Aving Global News Network - USA	Ministerie van OCW
Avui	Ministers for Innovation, Industry, Science and Research
Azocleantech	Ministère de l'enseignement Supérieur
Baltimore Business Journal	Minneapolis St. Paul Business Journal
Bankier.pl	MIS.ru - МИС-информ
Baquia.com	mobile.publico.pt
Benzinga	Monash University
Berliner Zeitung	Money Show - Stock Research
BestofMicro	Moneyspecial
BigCharts	MSN Dinero
Bikesport News	MSN Money
BioSpace	MSN Money
Birmingham Business Journal	My Suncoast
BISTA.de	Mytech
Biz Journals	n-tv.de
Blic Online	N2Day
Blocks and Files	NanoVic
Blogspan.net	Nashville Business Journal
Bolsamania	NEC
Bolsamania	Neoteo
Bourse - LCI	NetEco
Boursica	Network World
Boycott Novell	Network World
Brand	Netzwelt.de
Breitbart	New Zealand PC World
Breitbart.com: Business Wire	News Blaze
Bright Surf	News Guide
Broadcast Newsroom	NewsFood.com
Budowa.org	Newspress.fr
Budownictwo.org	Newstin.ae
Bull	Newstin.ae
Bundesministerium für Bildung und Forschung	Newz.dk
Business First of Louisville	Nieuws Bank
Business It Business Net	Nieuws.nl
Business Journal of Milwaukee	Nikkei Business Publications
Business Wire	Noticias 3D
Business Wire (DE)	Noticias del Sol de La Laguna
Business Wire (ES)	Noticias.com
Business Wire (FR)	NTB Pressreleases
Business Wire (IT)	NTZ - News für Kommunikationsprofis
Business Wire (NL)	nu.nl
Business Wire EON	Nuzakelijk
C't - magazin fuer computertechnik	NZ PC World
Cable Technology	Oceania Digital Media News & Technology
Cad-Magazine	Offenes Presseportal
Calibre Macro World	Offenes-Presseportal
Capital	On-Demand Enterprise
CEA	One World Southeast Europe
central IT	OneWorld South East Europe
Centre Daily Times	OnVista
Channel BP	Open Source PBX Community
Chron.com (AP)	openPR
Chytra Zena	Optical Keyhole
Cibersur	OSP - Open Systems Publications
Cincinnati Business Journal	Otopr.pl
CIO	PC Hardwareblips

CIO - IT Strategie für Manager	PC World
CIO Espana	PC World
Cloud Computing Journal	PC-Welt
Cloud Computing Journal (Sys-Con)	PCBCafe
CNBC	Phileleftheros - Φιλελεύθερος Online
Cnrs.fr	Phoenix Business Journal
CNX Markets (Lienmarche Finance (Eng))	Phones @ ConsumerElectronicsNet.com
Columbus Business First	Pittsburgh Business Times
Commissariat ÃƒÂ l'ÃƒÂ‰nergie Atomique	Politiken.dk
Communications of the ACM	politis.com.cy: ΠΟΛΙΤΗΣ ONLINE
COMNEWS	Portal der Wirtschaft
Computable	Portland Business Journal
Computer Scotland	PR Newswire
Computer Sweden	PR Newswire
Computer World	PR Newswire
Computer World Australia	PR Newswire
Computer World Online	PR Newswire (FR)
Computerwoche	PR Newswire Asia (EN)
Computerworld	PR-inside
Computerworld	PR-Inside.com
Comunicati-Stampa.net	Prcenter.de
Congoo	Prdomain Business Register
Consumer Electronics Net	Premier of Victoria
Consumer Electronics Net	Premiumpresse.de
Consumer Electronics Net	Press Release Point
Cordis	Press Trust of India
CORDIS : Wiadomości	pressboard.info: IT in the press
CORDIS Nachrichten	Pressbot
CORDIS News	Presse Box
CORDIS Noticias	Presse Box
CORDIS Notiziario	PresseEcho.de
CORDIS Nouvelles	Pressemeldinger.no
Cordoba.abc.es	Pressemeldungen.at
Correio da Manhã	Pressnetwork.de
Cotizalia	Pressrelations.de
CRN	PressRoom
CRN.Ru	PressTur
CW Richmond WUPV	Primeur
Cybozu.net	Primeur
Cyperus	Processnet
Câmara Portuguesa de Comércio no Brasil	Productivity Applications @ IT Business Net
Daily Finance Blog	Prosessori
DailyNet.de	Publico Pt
Darebin City Council	Publituris
Das IT-Business Portal	Punto Informatico
Das Jülicht	Público.es
Das Magazin: UMWELTRUF	Quartal Life Magazin
Data Manager Online	Quote.com
DCCCafe	Quote.com Germany
DCU	Quoteline
De Telegraaf	Quotidiano Net
De Volkskrant	r-global
Department of Premier and Cabinet - Victoria	RBC Dain Raushcer
Diario Crítico	RCR Wireless: Stock Watch
Diario de Queretaro	Redakcja.pl
Diario de Xalapa	redOrbit
Diario del Sur	Redtram (POL)
Diario Economico.com	Reformatorisch Dagblad
Diario Medico	Republic of Bulgaria - Council of Ministers (BUL)

Diario TI	Reseaux Telecoms
Die News	Reuters US News
Digital Engineering Magazin	RosInvest.com
Digital Post Production	ROVworld Subsea Portal
Digital Producer Magazine	RTTNews
Digital Production	RusCable.Ru
DiGiTAL50	Rzeczpospolita
DiGiTAL50.com	Sacramento Business Journal
Digitoday	SAGA Technology
Dir.bg	San Antonio Business Journal
Direkt Broker	San Francisco Business Times
Diário de Notícias	San Jose / Silicon Valley Business Journal
Diáriodigital	SAT+KABEL :: Digital TV - Medien - Breitband
DMN News Wire	Schattenblick
DMN Newswire	Science Business
Dnevnik online	Science Daily
doit-online.de	ScienceAlert
Domain-b.com	Scientific Computing
domain-b.com	Scientific Computing
Downloads Portal	Scientific Computing (SCW)
E Sol de Mexico	Scottrade
e! Science News	Search (sys-con)
Earth Times	SearchDataCenter.de
East Bay Business Times	Security @ ITBusiness Net.com
EC Plaza News	Semana Informática
Echodnia.eu	Semanario.tp
Econ.bg	SenterNovem
Económico	Servicio de Informacion y Noticias Cientificas
Editorial MKM	Share Cax
EE Times Europe	SIGMA-NOT
EE Times Germany	Silicon.fr
El Heraldo de Chiapas	Silo Breaker
El Heraldo de Chihuahua	Silobreaker
El Heraldo de Tabasco	Sina Taiwan
El Librepensador	Smart Data Centers Micro-Community
El Mexicano	Smart Grid
El Occidental	SmartBrief
El Periodico	Softpedia
El Periódico	Software Development @ It Business Net
El Periódico Extremadura	SOL
El Sol de Cordoba	Sourcews World
El Sol de Cuautla	SPB IT
El Sol de Cuernavaca	SR - Ekot
El Sol de Durango	Stock House
El Sol de Irapuato	Stockwatch
El Sol de Leon	Stockwatch
El Sol de Mazatlan	Stockwatch.de
El Sol de Orizaba	Storage
El Sol de Parral	Storage @ IT Bussiness Net
El Sol de Puebla	Storage Newsletter
El Sol de Salamanca	StreetInsider.com
El Sol de San Juan del Rio	Styropian.biz
El Sol de San Luis	Sun Bloggers
El Sol de Sinaloa	Sun Microsystems
El Sol de Tampico	Suomen Kuvalehti
El Sol de Tlaxcala	Super Computing Online
El Sol de Toluca	SYS-CON
El Sol de Tulancingo	Sys-con
El Sol de Zacatecas	Sys-con

El Sol de Zamora	Sys-Con
El Sol del Bajio	Sys-Con Belgium
El Sudcaliforniano	Sys-Con Brasil
elEconomista.es	Sys-Con EN Español
Empordà info	SYS-CON India
Emportal	SYS-CON ITALIA
Engineers Online	Sys-Con Linux
EnterTheGrid - PrimeurMagazine	Sys-Con Opensource
Entorno Inteligente.com	Sys.Con Canada
Erbol Comunicaciones	Tampa Bay Business Journal
Estrategias de Inversión	Teatr w Polsce
Eulenspiegel News	Tec Trends
EurActiv (ROM)	TechBlogPlus
Euregio Aktuell	Technisch Weekblad
EurekAlert!	Techno-Science.net
Euro Investor	TecTrends
Eurobankier.pl	TED Germany
EuroInvestor.es	Tekniikka & Talous
EUROInvestor.fr	Telcommunity
EuroInvestor.it	Telecom Paper
Europa Press	Telegraph
Europe - IP Communications	Telegraph.co.uk
Eventseer.net	Teleprensa.es
Expresso	Tentakel
Extremadura al día	Terra
Eyewitness News 12	Terra Actualidad
Fabrica de Conteudos	Tf
fair-news.de	The 451 Group
Fenetreeurope.com	The Business Journal (Triad)
Ferra	The Business Review Albany
Finanzas	The CAD List
FinanzNachrichten.de	The Financial
Finanztreff	The Gaea Times
Firmenpresse	The Industry Standard
First Science	The Inquirer
Forbes.com	The Local
Forschungszentrum Jülich	The Portugal News Online
FOX 54 WFXG	The Register
FOX44 News	The Rust Report
Free Library	TheStreet.com
FreshNews.com	Tickertech.com
Fundecyt	Tiempos Del Mundo
FYS	Tietoviikko
g-o.de - geoscience online	Timeline
Gadgets	Tiskovky.info
Game Pro	TMCnet.com
Gazetka	TMCnet.com (Australia)
Geelong Advertiser	tomshardware.fr
GENCI	Trading Markets
Genetic Engineering & Biotechnology News	Tree Hugger
GenomeWeb Daily News	Tribuna de San Luis
Giornale Tecnologico	TV Biznes
GK24.pl	TYN
Global Security Mag	UK Embedded
Globe Investor	UK Technology Startups
goo ブログ	Ulitzer
Greater Richmond Technology Council	UMTS - Report
Green Tmcnet.com	Uni-Online.de
Grid Today	Uni-protokolle

GRIDtoday	United Press International
Génération Nouvelles Technologies	Universia Brasil
Habrahabr.ru - Хабрахабр (Blog)	University Of South Australia
Hamburger Abendblatt	University World News
Handelskammer Hamburg	Urlbase.de
Headlinez.nl	Usinenouvelle.com
Heise Online	Valle Olona
Heise Online (PL)	Vanguardia
Heise Online (UK)	Verein für Informationstechnologie
Helsingin Sanomat	Vereinigte Wirtschaftsdienste
Hiploid	Vetenskapsrådet
Hoovers	Vetenskapsrådet
Houston Business Journal	Videobased Tutorials
Hoytecnología	VilaWeb
HPC Projects	Virtualization Journal (SYS- CON)
HPC Wire	Visão
HPC Wire	Vnunet.fr
HPCwire	vwd group
I Report	Wall Street Italia
Ibero News	Web 2.0 Journal
IDG.se	Web Reporter
idw - Informationsdienst Wissenschaft	Web Wereld
iGOV	Web Wire
inar.de	Webnewswire.com
Individual.com	Website Gear
Industrie & Technologies	WebSphere Journal
Infomercados	Webwweb News
Informador	Wiley InterScience
Information Technology World	WinFuture
Infos Utiles.fr	Wireless Business & Technology
Infrasite.nl	Wissenschaft Aktuell
Innovations Report	WOI ABC-5
Innovations Report	WRCBtv.com
Innovations Report	WRIC ABC-8
Innovations-Report	Wspolczesna
Input Aktuell	www.isgtw.org
InsideHPC.com	www.regiondigital.com
Interest Alert	WXVT 15
Interfax (RUS)	wydawca.com.pl
International Trade Fair fo Plastics and Rubber (GER)	XML Journal
Internationale Zusammenarbeit in Forschung und Bildung	Yacht Charters Magazine
Internet Intelligenz	Yahoo Finance(Spanish)
IntoMobile Finance	Yahoo! Canada
Invertia.com	Yahoo! Finance
InvestEgate	Yahoo! Finance Canada
Investors.com	Yahoo! Finance France
Ionline	Yahoo! Finance US
iPhone News	Yahoo! Finanzas México
iStock Analyst	Yahoo! Korea
IT Business Net	Yahoo! News
It Business Net	Yahoo! News Mexico
IT News	Yahoo! Notizie
IT News Online	Your Industry News
IT Portal	Your Story
IT viikko	Your Subsea News
IT-TOP	YubaNet.com
Italian Innovation	Zebulon

ITespresso France	Zibb
ITnewsbyte.com	Zone Bourse
ITR Manager	Österreich Journal
ITWire	Бестселлеры ИТ-рынка
iTWire	БИТ
ITworld.com	Журнал "Технологии и средства связи"
IT专家	Информационный портал SPBIT
iX Magazin	ПРАЙМ-ТАСС
Java Sys-Con Magazine	マイコミジャーナル
Jornal Cidade	中国创业网
Journal de Negociós online	中国财经网
Juraforum.de	中央日報網路報
KALDATA (ENG)	亚洲外汇网
Kalendarz Polsko-Niemiecki (Deutsch-Polnischer Kalender)	亿八佰电子商务
Kansas City Business Journal	共同通信PRワイヤー
Kauppalehti - Finnish Pressreleases	凤凰网-财经
KCBD NewsChannel 11	创业资讯
Key4biz	北方热线 (Simp.)
Klamm	北方纵横
KLFY	半岛资讯网
KMEG 14	华夏网
KMPH Fox 26	天新网
KOAM-TV	娄底新闻网
Kompetenznetze	山东信息港 (Simp.)
KOTA Territory News	工作站之家
KPAX CBS-8	日経プレスリリース
Krankenkasseninfo.de	智库在线
KTH	江门新闻网
La Dépêche	沃华传媒网
La Informacion	环球财富网
La Moncloa	理化学研究所
La Opinión de Granada	电子发烧友
La Prensa	硅谷动力
La Razón	科客 / 科技要闻-全客网
La Voz de la Frontera	第一信息网
LaboratoryNetwork.com	第一金融网
Le Monde Informatique	网络世界
Lelezard.com	美通社（亚洲） (Simp.)
LeMagIT	股城网
	计世网
	资本市场
	赛迪网
	青岛资讯网