# SEVENTH FRAMEWORK PROGRAMME
# Research Infrastructures

**INFRA-2011-2.3.5 – Second Implementation Phase of the European High Performance Computing (HPC) service PRACE**

# PRACE-2IP

# PRACE Second Implementation Project

**Grant Agreement Number: RI-283493**

# D3.1.3
# First Dissemination Report

## *Final*

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## Project and Deliverable Information Sheet

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# Table of Contents

# List of Figures

# List of Tables

# References and Applicable Documents

[1]  D3.2.2 "Presentation Kit for Schools and Public"
[2]  D3.2.1 "Dissemination Package for Stakeholders"
[3]  www.prace-ri.eu
[4]  http://www.linkedin.com/groups?gid=3671809&trk=hb_side_g)
[5]  http://www.linkedin.com/company/prace
[6]  http://www.prace-ri.eu/Job-vacancies
[7]  http://en.wikipedia.org/wiki/PRACE
[8]  http://groups.google.com/group/news.announce.conferences/browse_thread/thread/f0ad6738a6597ad5/4002f8bac58212a5?show_docid=4002f8bac58212a5&pli=1
[9]  D3.1.8 "Final Dissemination Report" (PRACE-1IP)
[10] D3.1.6 "Second Scientific Conference" (PRACE-1IP)
[11] http://www.prace-ri.eu/PRACE-Scientific-Annual-Report

# List of Acronyms and Abbreviations

| | |
|---|---|
| BSC | Barcelona Supercomputing Center (Spain) |
| CEA | Commissariat à l'Energie Atomique (represented in PRACE by GENCI, France) |
| CINECA | Consorzio Interuniversitario, the largest Italian computing centre (Italy) |
| CINES | Centre Informatique National de l'Enseignement Supérieur (represented in PRACE by GENCI, France) |
| CSC | Finnish IT Centre for Science (Finland) |
| CSCS | The Swiss National Supercomputing Centre (represented in PRACE by ETHZ, Switzerland) |
| EC | European Community |
| EPCC | Edinburg Parallel Computing Centre (represented in PRACE by EPSRC, United Kingdom) |
| ESFRI | European Strategy Forum on Research Infrastructures; created roadmap for pan-European Research Infrastructure. |
| FZJ | Forschungszentrum Jülich (Germany) |
| GENCI | Grand Equipement National de Calcul Intensif (France) |
| HET | High Performance Computing in Europe Taskforce. Taskforce by representatives from European HPC community to shape the European HPC Research Infrastructure. Produced the scientific case and valuable groundwork for the PRACE project. |
| HPC | High Performance Computing; Computing at a high performance level |
| IDRIS | Institut du Développement et des Ressources en Informatique Scientifique (represented in PRACE by GENCI, France) |
| ISC | International Supercomputing Conference; European equivalent to the US based SC0x conference. Held annually in Germany. |
| JSC | Jülich Supercomputing Centre (FZJ, Germany) |
| KB | Kilo (= $2^{10}$ ~$10^3$) Bytes (= 8 bits), also KByte |

| | |
|---|---|
| KTH | Kungliga Tekniska Högskolan (represented in PRACE by SNIC, Sweden) |
| LRZ | Leibniz Supercomputing Centre (Garching, Germany) |
| NCF | Netherlands Computing Facilities (Netherlands) |
| NIIF | Nemzeti Informacios Infrastruktura Fejlesztesi Iroda (Hungary) |
| PRACE | Partnership for Advanced Computing in Europe; Project Acronym |
| PSNC | Poznan Supercomputing and Networking Centre (Poland) |
| SNIC | Swedish National Infrastructure for Computing (Sweden) |
| STFC | Science and Technology Facilities Council (represented in PRACE by EPSRC, United Kingdom) |
| TFlop/s | Tera (= 1012) Floating-point operations (usually in 64-bit, i.e. DP) per second, also TF/s |
| 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 |

# Executive Summary

The First Dissemination Report describes the PRACE dissemination and outreach activities for project months M1–M11 (1.9.2011 – 31.7.2012). Although PRACE-1IP and PRACE-2IP projects have both work packages focussed on dissemination and outreach, there are a few differences. In PRACE-1IP the work package 3 took care of training, which is not the case in PRACE-2IP. In PRACE-2IP it is clearly stated that WP3 will disseminate also results of Tier-1 projects and will create dissemination material for schools on HPC.

During the project months M1–M11, 30 press releases and four newsletters were published. Press releases were sent to over 7000 journalists around the world. The total number of PRACE related online articles and news items from the beginning of September until the end of July 2012 was 590. The press releases were sent by both PRACE-1IP and PRACE-2IP projects since it is a normal PRACE dissemination process.

The last three newsletters contained industrial as well as scientific cases which have used the resources provided by PRACE. Generally, there is also information about featured events, latest news and project presentations in each newsletter.

During the reporting period the special section of 21P project was created to PRACE-RI website. It provides detailed information on PRACE-2IP project, its objectives, and its action plan. Also the research, service, and networking activities are described. It also has a section for all public deliverable created by the PRACE-2IP project.

There have been a total of 304 701 visitors (157 031 unique visitors) since the launching of the PRACE project website on March 19, 2008. The monitoring period ends until the end of May 2012. There have nearly 600 visitors daily in average. The number of (unique) visits is increasing steadily.

The PRACE brochure, folder and flyer were updated for the Industrial seminar and ISC. One new poster was created and three posters were updated. Two new rollups were printed. Small amount of PRACE gadgets (pens, USB memory sticks, mugs and T-shirts) were distributed during the major events. Moreover, WP3 created new general presentations to be shown at various events. The PRACE video production was shifted from PRACE-2IP to PRACE-1IP and thus the outreach activities related to video is described in PRACE-1IP the deliverable D3.1.8 [9].

PRACE participated in three major events (Supercomputing 2011 in Seattle, USA, ISC 2012 in Hamburg, Germany, and Industrial Seminar in Bologna, Italy). PRACE has actively collected contacts from these events to CRM database, and this work continued also during the PRACE-2IP project. The total number of new contacts in August 2012 is 3765. Of those contacts 2950 were collected in PRACE-2IP reporting period. This was due to extensive effort to populate the database with all the collected contacts.

PRACE ensures transparency by publishing all important presentations and public deliverables and best-practice documents on the PRACE RI web site. Until the end of July 2012 there was on-line

- 83.5 hours of HPC video training material
- 173 training presentations and 201 other presentations
- 89 public deliverables
- 10 best practise guides and 11 user documentations
- 50 white papers

# 1 Introduction

Effectively organised dissemination, outreach and training activities are a prerequisite for the success The PRACE Research Infrastructure (RI) which is established as an international non-profit association based in Brussels. Twenty-four countries are presently members of the association Partnership for Advanced Computing in Europe AISBL.

This deliverable is part of Task 3.1 "Dissemination of PRACE-2IP project results". One of the aims of the PRACE Second Implementation Phase (PRACE-2IP) dissemination is to make the PRACE RI a well-known Research Infrastructure in Europe and beyond. PRACE-2IP supports specific and new activities that are not already covered by the PRACE First Implementation Phase (PRACE-1IP) dissemination tasks, thus continuing and complementing the extensive ongoing dissemination. Due to the continuing feature of the WP3 dissemination function this deliverable lists also the overall status of dissemination activities and results, e.g. total number of press releases of participation and support for conferences and exhibitions.

The principal objectives for dissemination and outreach in PRACE-2IP are to disseminate project information, training opportunities, and scientific results created in the project. A specific task of Task 3.1 is to highlight new Tier-1 projects and calls. This deliverable describes the process for the production and management of the dissemination material including the exploitation of existing dissemination channels by the PRACE partners. The training material for undergraduate students will be described in detail in D3.2.2 "Presentation Kit for Schools and Public".[1]

| Deliverable | Contractual date of delivery |
|---|---|
| D3.1.1 The Dissemination Plan | M3 |
| D3.1.2 The PRACE-2IP Web Site | M4 |
| D3.1.3 First Dissemination Report | M12 |
| D3.1.4 Second Dissemination Report | M24 |
| D3.2.1 Dissemination Package for Stakeholders | M5 |
| D3.2.2 Presentation Kit for Schools and Public | M18 |

**Table 1: WP3 deliverables**

The second chapter of this deliverable describes dissemination and marketing activities. Also PRACE-2IP web activities are described in detail. The third chapter focuses on events-coordination. The fourth chapter highlights the scientific results published on PRACE annual report. The last chapter draws conclusions of the activities during the reporting period.

## 2 Dissemination and marketing activities

PRACE-2IP dissemination activities are interrelated with the completed PRACE-1IP project as well as with the PRACE-3IP project dissemination activities complementing one another. The Website, along with the training portal are the most important dissemination channels, as well as printed materials, such as brochures, posters, flyers etc. Constant renewal of these materials and information is needed. As a new feature in PRACE-2IP also social media tools have been tested during the first reporting period. PRACE has started the social media monitoring and started to regularly tweet the news and events related press releases as well as events activities. First active trials were made in June 2012 during ISC12. Social media activities will be continued and strengthened also in the future, especially generating interest around events.

### 2.1 The PRACE marketing and dissemination material

PRACE had three new member countries and four new supercomputers included in the infrastructure. Due to these changes in organizations and countries all the maps, posters and brochures and flyers were updated accordingly during the first PRACE-2IP dissemination reporting period. Also new materials such as rollups and notepads were created based on partner event needs. Two new PRACE rollups with logo and internet address were printed for use in the various exhibition and training events.

PRACE marketing and dissemination materials are listed in this chapter below. They are stored in the PRACE intranet BSCW. Dissemination material also includes a small number of giveaways, such as pens, notepads mugs, T-shirts and USB keys which have been presented in the Deliverable D3.2.1 in detail [2].

PRACE uses traditional printed materials in dissemination such as General Brochure, of four pages describes the project and its major activities and milestones achieved. PRACE folder is used to collect the dissemination materials in press related events and as a give-away to the press and to other interested audiences together with a USB stick. The PRACE flyer is a summarized version of the brochure.



**Figure 1: The PRACE Folder**

**Figure 2: PRACE Flyer (Front)**
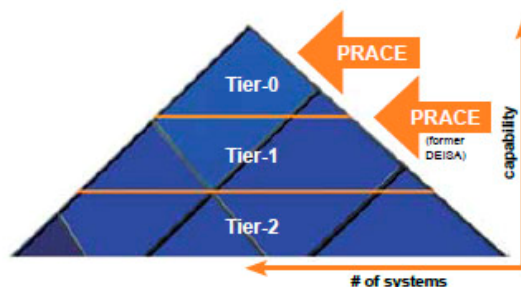
## The PRACE Research Infrastructure

- PRACE is incorporated, as an international non profit association based in Brussels, Belgium.
- Twenty-four countries are currently members of the PRACE AISBL.
- PRACE provides a pan-European HPC service with world-class systems (Tier-0) well integrated into the European HPC ecosystem (Tier-1).
- Initial PRACE Tier-0 systems have a capability to carry out computations at a rate of one or more Petaflops/s (one quadrillion operations per second). To keep pace with the needs of the scientific communities and technical developments, systems deployed by PRACE are expected to reach capabilities of one Exaflops/s (one quintillion) by 2020.
- Four European states (France, Germany, Italy, and Spain) committed funding of €400M for the initial PRACE systems.
- Access to PRACE Tier-0 and Tier-1 resources is granted to European researchers and their collaborators through a single European peer-review process overseen by the PRACE Scientific Steering Committee. Tier-1 access is managed by DECI. Leading scientists evaluate the proposals submitted in response to the bi-annual calls.

- The current and announced PRACE Tier-0 systems:

|          | Hosting Centre | Launch date | Architecture    | Final capability |
|----------|----------------|-------------|-----------------|------------------|
| JUGENE   | GCS/FZJ        | Q3 2010     | IBM BlueGene/P  | 1 Petaflop/s     |
| CURIE    | GENCI/CEA      | Q2 2011     | Bull Bullx cluster | 2 Petaflops/s |
| HERMIT   | GCS/HLRS       | Q3 2011     | Cray XE6        | 5 Petaflops/s    |
| FERMI    | CINECA         | Q2 2012     | IBM BlueGene/Q  | 2 Petaflops/s    |
| SuperMUC | GCS/LRZ        | Q2 2012     | IBM iDataPlex   | 3 Petaflops/s    |

BSC (Spain) has committed to host an additional Tier-0 system in 2012.

### Find more information how to apply at: www.prace-ri.eu/hpc-access

## The PRACE Implementation Road Map

The European Commission supports PRACE through a series of projects to accelerate the implementation of the PRACE Research Infrastructure. The Preparatory Phase Project has successfully concluded, leading into the First Implementation Phase Project (PRACE-1IP, 2010–2012). The project is in full swing. PRACE-1IP is granting access to Tier-0 systems across Europe. The second Implementation Phase Project (PRACE-2IP, 2011–2013) has started integration of Tier-1 services and extending scientific and industrial community relations and support. The Third Implementation Phase Project (PRACE-3IP) is being planned presently for 2012–2014. This phase has a focus on the scaling of applications, joint pre-commercial procurement pilot, training and outreach.

The total European funding is expected to be €70M and complements the consortium budget of over €60M.

## PRACE Achievements

- 1.1 billion core hours on Tier-0 systems granted to 36 projects by mid 2011; nearly six billion core hours had been requested for 173 projects.
- Training portal (www.prace-ri.eu/training) for web based training and dissemination of advanced educational material.
- PRACE has established six PRACE Advanced Training Centres (PATCs).
- Benchmark suite of 22 codes created.

### www.prace-ri.eu

**Figure 3: PRACE Flyer (Back)**

**Figure 4: Updated PRACE Brochure (Front)**
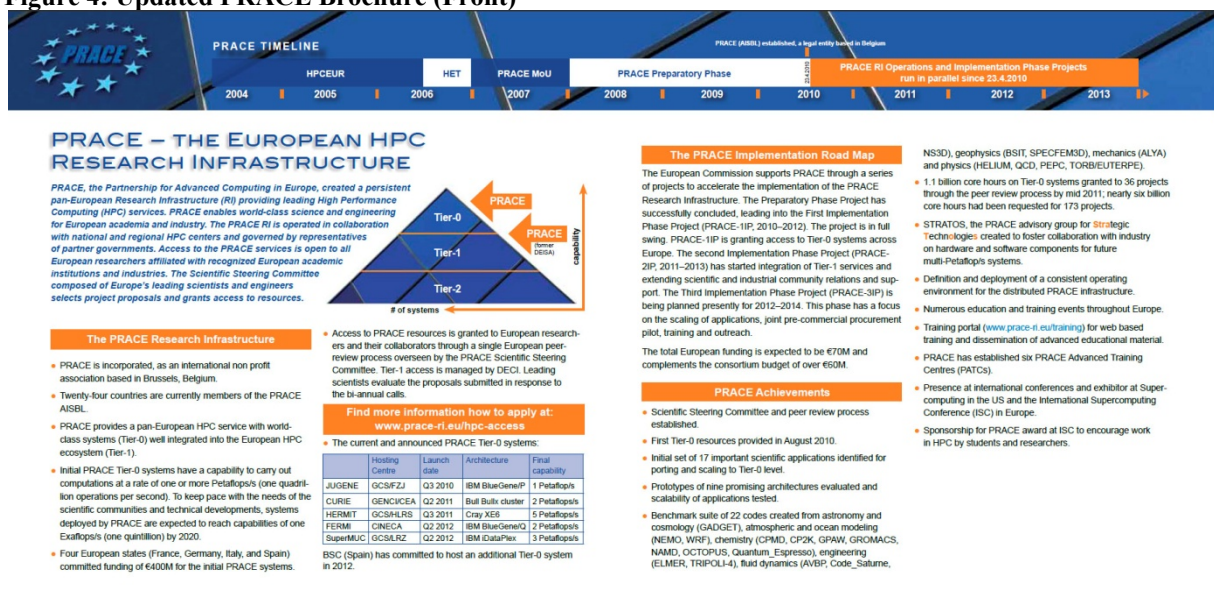


**Figure 5: Updated PRACE Brochure (Inside)**

**Figure 6: Updated PRACE Brochure (Back)**

**Figure 7: The updated poster**

**Figure 8: New events rollup**

## 2.2. The PRACE website

PRACE-2IP undertook the renewal of the PRACE website which resulted to new layout. During the reporting period the new sections for the PRACE-1IP and PRACE-2IP projects were created. In those sections there are descriptions of the objectives of the projects as well as project partners. Also the deliverables created by the project have been made accessible. During the reporting period the PRACE Training Portal was added and Integrated Digital Conference (Indico) system was taken into use in maintaining the training portal content. The "HPC Training portal" is continuously updated by PRACE-2IP web team with presentations and material from the PRACE training events and partner's training events. Training portal also provides access to video material from the events organized. During the reporting period the training material of winter school 2012 of Bologna and Spring school in Edinburgh and EU-US Summer school were added (video material and presentations).

WP3 has published all public deliverables on the public documents section of the PRACE project and RI websites. WP3 has also produced a few public versions of public deliverables that haven't yet been officially approved by the EC, but are of interest to the HPC community. In summary, during the reporting period new deliverables were published as well as presentations from ISC and seasonal schools.

Following material has been uploaded to the HPC training and Documents sections of the PRACE RI website before 31.7.2012:

- 83.5 hours of HPC video training material
- 173 training presentations
- 201 other presentations
- 89  public deliverables
- 10  best practise guides
- 11 user documentations
- 50  white papers

**Figure 9: The PRACE website in its current form**

PRACE-RI [3] website was launched on February 2011.The website was then 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 of news is available in different languages. There are RSS-feeds to all of these items.

- The left-hand side links lead to 7 sub-sites which describe PRACE and its activities.
- The "PRACE Implementation Projects" category describes each project's work packages. Interested parties may inquire here about opportunities for collaboration. This has been described in deliverable 3.1.2 [4]
- The "Media" section includes public versions of some of the deliverables, PRACE related presentations from various events, PR material (flyer, brochure, logos) and the PRACE newsletters. All press releases are listed on the "news" subsection. 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 "Contact us" section consists of feedback forms for both PRACE related and technical (PRACE website related) questions, and contact information how to reach people responsible for PRACE dissemination.
- The middle of the website front page highlights the scientific results obtained on the PRACE resources and advertising major information about HPC in Europe.
- The "Activities" category describes the project's work packages. Interested parties may inquire here about opportunities for collaboration.
- The Documents section includes public versions of some of the deliverables, 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 "Contact us" section has feedback forms for both PRACE related and technical (PRACE website related) questions, and contact information how to reach people responsible for PRACE dissemination.

The number of unique visitors has widely increased since the website begun on February, 2011, establishing currently a monthly average of over 17000 visits (see figure below).
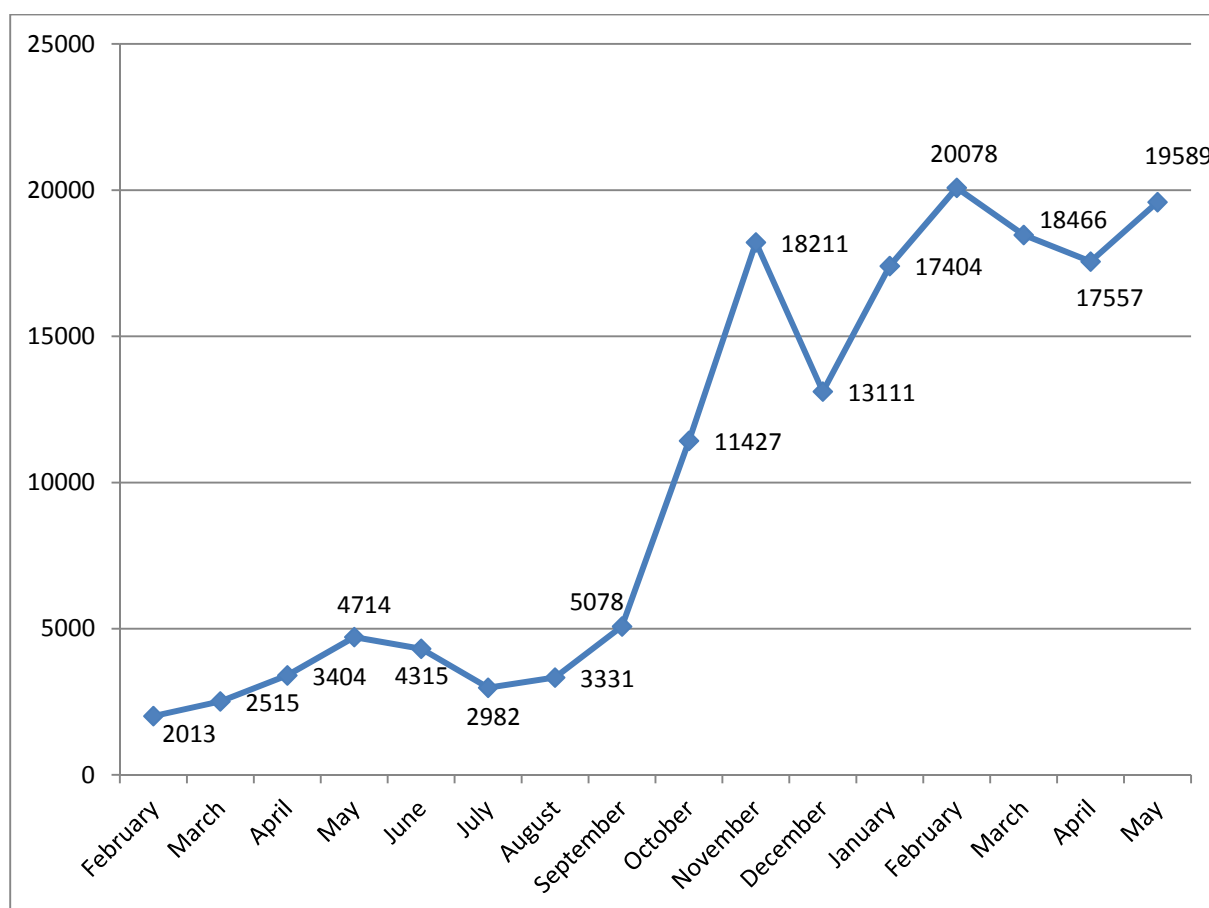


**Figure 10: The PRACE web site visitors**

These results lead to an average of about 600 unique visitors per day and the figures show steady growth.

## 2.3. Press releases

In the PRACE-2IP reporting period total of 30 press releases and four newsletters were published. Press releases were sent to over 7000 journalists around the world through Alpha Galileo and ISGTW online service. In addition the partners were distributing the releases and translated the most relevant releases to their national languages. The total number of PRACE related online articles and news items from the beginning of September until the end of August 2012 was 599. It shows that two peak periods (November 2011 and June 2012).
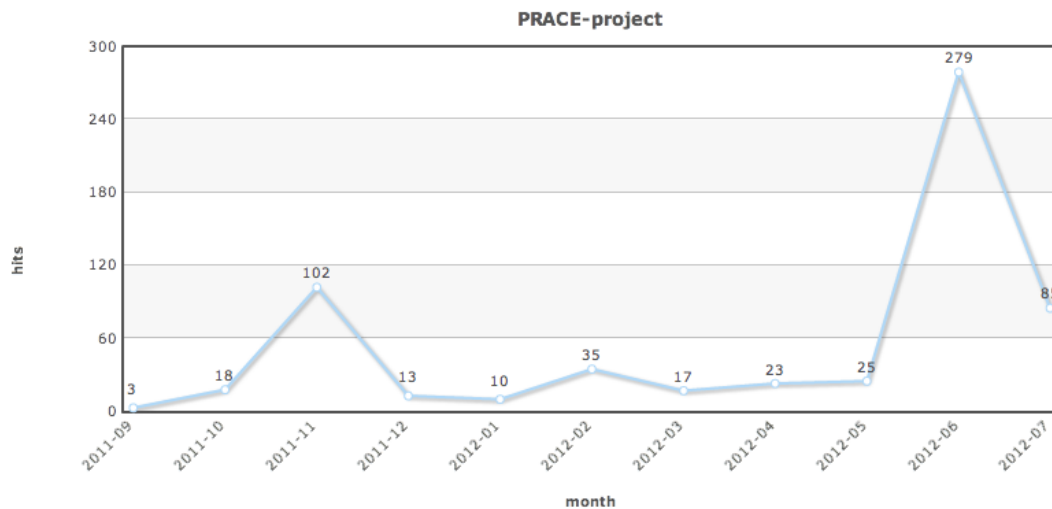
**Figure 11: PRACE-related articles in all languages**

First peak was during the Supercomputing conference (SC'11) and the second in June 2012 during the ISC'12. During the ISC PRACE arranged the second scientific seminar (PRACE Day) and published its first results of usage of Tier-0 systems. This caused 279 media hits all over the world. In total PRACE aroused a lots of interest in media in United States (352 hits) and United Kingdom (68 hits). This is partly due the official language of PRACE (English). Interestingly though the other big countries were Thailand (30 hits), Singapore (18), Russia (16), Romania (13) and Pakistan (13). The biggest PRACE countries after the UK were Spain (24), Netherlands (10), Italy (4), Ireland (3), Germany (2), France (2), Finland (2), Cyprus (2), Bulgaria (1), and Austria (1).
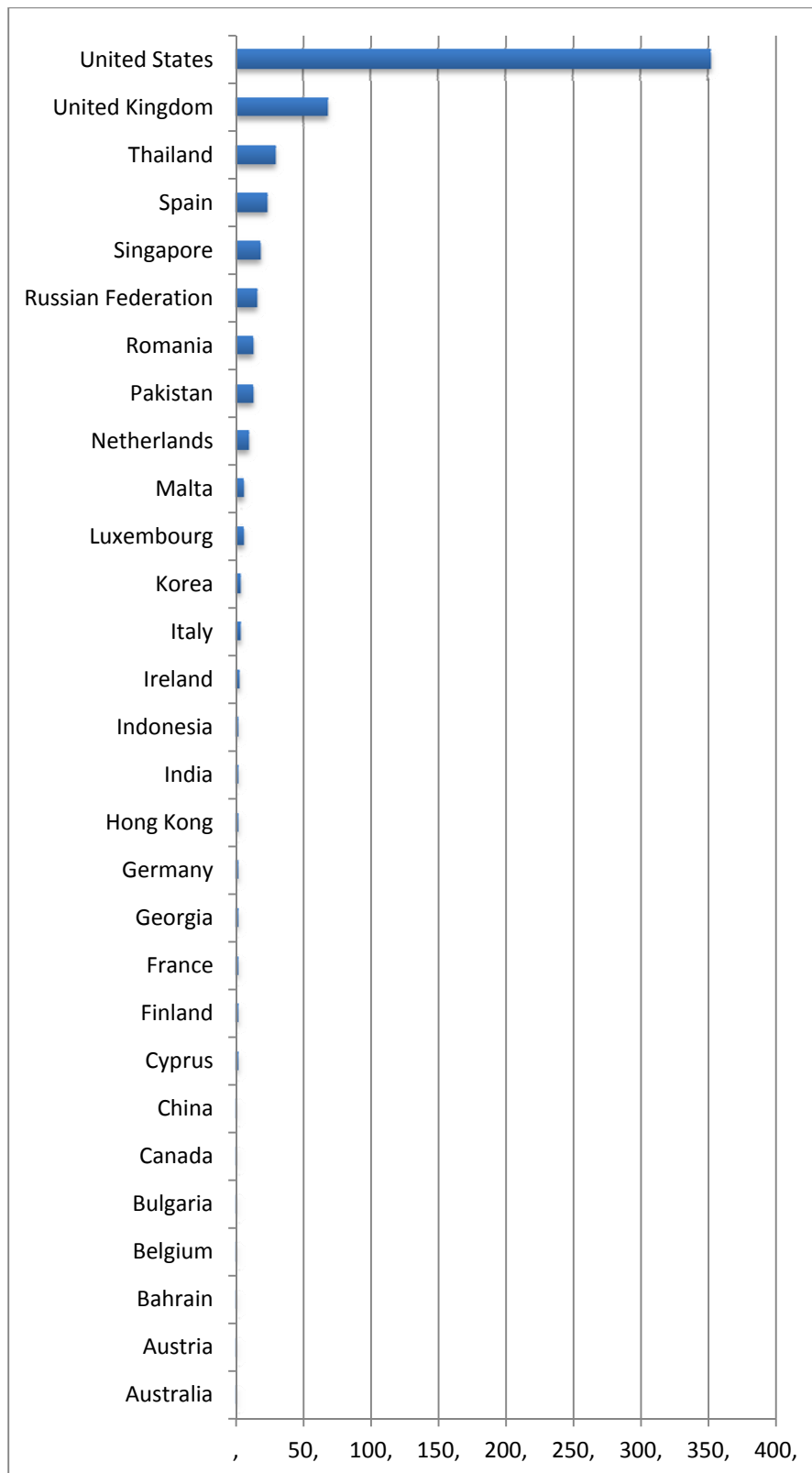
**Figure 12: PRACE-related articles by countries**

The impact of the press releases impacts is complemented with social media, mainly through Twitter tweets, announced by the press team members, who also maintain the profile. The last 20 press releases published in 2 IP reporting period are listed here in chronological order. The last five releases of the above listed press releases are published after the PRACE-1IP reporting period, but due to the continuous manner of dissemination activities there is not a strict project distinguisher to be found.

The Press releases are listed here in chronological order:

Dr. Maria Ramalho took appointment as PRACE Managing Director (17.10.2011)
CURIE: the first large scale hybrid system available in PRACE (19.10.2011)

PRACE partner Jülich joins XSEDE (21.10.2011)

European Research Heads Get a New Body (25.10.2011)

PRACE grants 721 million compute hours on Tier-0 systems to twenty-four European research projects and opens new call for Project Access (28.10.2011)

PRACE –The European HPC Infrastructure at SC11 (11.11.2011)

PRACE to establish six advanced HPC training centres (2.2.2012)

EU-U.S. Summer School (3.2.2012)

CURIE Grand Opening on March 1st, 2012 (15.2.2012)

FERMI ready for launch in PRACE (6.3.2012)

PRACE Call for Proposals for 5th Project Access and Multi-year Access (Tier-0) and synchronized Call for DECI-9 (Tier-1) (17.4.2012)

PRACE celebrates 2nd anniversary and launches 5th Call for Proposals (23.4.2012)

Summary of the Call for Proposals for 5th PRACE Project Access and Multi-year Access (Tier-0) (26.4.2012)

PRACE 4th Call for Proposals accepted 43 applications and granted 1.134 million core hours on Tier-0 systems: a record! (30.4.2012)

PRACE Summer School on Code Optimisation for Multi-Core and Intel® MIC Architecture (2.5.2012)

PRACE Scientific Conference 2012 (7.5.2012)

120 million core hours on CRAY XE6 Hermit allocated to 3 awardees of the PRACE 4th Call for Proposals (22.5.2012)

PRACE Award for Most Innovative Industrial HPC in Europe goes to Xcelerit (22.5.2012)

Europe shoots up in TOP500: 4 systems in the top 10 (18. 6.2012)

PRACE Prototypes evaluation in ISC´12 BOF session (19.6. 2012)

The PRACE Award winners 2012 announced (19.6. 2012)

Catherine Rivière appointed as Council Chair of PRACE aisbl (20.6. 2012)

PRACE looks back on successful Scientific Conference at ISC'12 26.6. 2012

PRACE Scientific Annual Report 2012 now available! 4.7. 2012

Third Annual HPC Summer School welcomes 60 students from 4 continents (16.7.2012)

PRACE and XSEDE call for Expressions of Interest for Joint Access by International Teams (18.7. 2012)

CURIE spices up PRACE portfolio (19.7. 2012)

Europe's fastest supercomputer SuperMUC gives PRACE a head start. (20.7. 2012)

## 2.4. Newsletters

Regularly published PRACE Newsletters are included in the press activities. The newsletters are published quarterly. Four newsletters (Numbers 5-8) were published during the PRACE-2IP reporting period. All newsletters and their contents are available at the PRACE RI website [3].

The latest newsletter, number 8 was published on 14 June before the ISC12.

Below the cover page of newsletter 7.



**Figure 13: PRACE Newsletter 7**

## 2.5. Outreach and Social media

During the first project year the outreach team led by NIIF has been working on the different components of the subtask which aims to promote HPC for schools. A survey have been made, which is intended to be disseminated and filled out within schools of the partner countries. This survey gathers information about the HPC awareness in the schools, and welcomes comments and ideas from teachers how a presentation kit like should look like to be useful. The indirect objective is to raise HPC, and PRACE awareness within its scope. The survey is intended to be made public no later than the middle of September 2012 after a number of internal reviews. The survey was preceded by a small sampling and evidence gathering activity targeting the question of what kind of information regarding HPC would be attractive to students at all.

PRACE-2IP explored new social media for dissemination. PRACE has a Twitter account as PRACE_RI. PRACE has started tweeting on 23rd April 2012, the day of the 2nd PRACE Anniversary. By 27th July 2012 it had 38 tweets, 37 followers and followed 26 other accounts.

All PRACE press releases and PRACE newsletters are tweeted with their link to the PRACE website. All PRACE relations (members, staff, etc.) can suggest items to be tweeted. Twitter is a quick and easy channel to attract attention to the PRACE website.

**Hashtags** are words or phrases prefixed with the [symbol #](). Hashtags are used to label groups and topics. They are also used to mark individual messages as relevant to a particular group, and to mark individual messages as belonging to a particular topic or "channel".

Hastags to be used in relation to PRACE are:

- #PRACE
- #HPC
- #PRACEday
- #Supercomputer
- #Supercomputing
- #PRACEaward

Other hashtags can be used if they relate to the content of the tweet, e.g. #ISC12. The account is moderated by the PRACE Communications Officer in Brussels. Also PRACE-2IP press team members have access to the PRACE Twitter account and can tweet in the name of PRACE:

- Marjolein Oorsprong, PRACE Communications Officer
- Renata Gimenez, BSC
- Tiina Leiponen, CSC
- Danica Stojiljkovic, IPB

Some PRACE Members (e.g. ICHEC) re-tweet PRACE tweets on their own twitter accounts. This increases the reach of the PRACE tweets and should be encouraged. PRACE can also decide to re-tweet certain tweets of its members or other followers/followed accounts.

**LinkedIn**

PRACE has a Discussion Goup, under the name PRACE Research Infrastructure [4]. It currently has 103 members. It was created on 4th November 2010 as a networking group by Stephane Requena. The PRACE Communications Manager is owner of the group and Laetitia Baudin, Stephane Requena and Anni Jakobsson are managers of the group. The group is a closed group, meaning that anyone wanting to become a member of this group (to be able to follow and contribute to discussions) will need to send a request and be approved by the group owner.

The PRACE LinkedIn Group was mostly used to publish press releases and other announcements. As these are better suited for a LinkedIn Company Page, such a page was created for PRACE [5]. The PRACE Communications Officer is administrator of this page. Anyone registered on LinkedIn can follow PRACE as a company and employees of PRACE can include a link to the company page on their profiles.

Currently, job vacancies of PRACE aisbl and PRACE Members are published on the PRACE website [6].

**Wikipedia**

PRACE currently has a very incomplete lemma [7]. Because Wikipedia is also thoroughly indexed by Google and other search engines it is advisable to complete the PRACE lemma with up-to-date information and links and to keep an eye on any changes and updates made by others (Wikipedia is open to contributions by anyone).

**Google Search**

Via SPIP the necessary SEO is undertaken to make sure that PRACE website is the top-result when googling for "PRACE"

PRACE is present on Google Places with the location of the association office in Brussels. This makes PRACE easier to find on Google Maps. It also has a limited feature for publishing updates about our association.

**Google+**

There is a Google Group [8]. It was created by Tanja Weber and only lists an announcement for the PRACE Day at ISC'12.

**Facebook**, the largest social networking site to date has few entries related to PRACE or to HPC. Before a decision is taken on the possible creation of a Facebook page for PRACE, a due consultation of our main audiences should be done to assess their need for and interest in this channel.

**Youtube**, an online service for video can be used to publish and promote the PRACE videos. It is indexed by Google so that PRACE videos may be more easily found by web-surfers who are not (yet) aware of our website.

## 3  Events

During the first year of the PRACE-2IP project partners have given numerous PRACE related presentations at a variety of events and conferences. The main PR events for PRACE were:

- SC'11 in Seattle, Washington in November 2011
- ISC12 in Hamburg, Germany in June 2012
- PRACE scientific conference, PRACE Day in Hamburg in June 2012
- The Industrial seminar in Bologna in April

SC'11 and the industrial seminar have been described in D3.1.8 [9] of PRACE-1IP. The PRACE Scientific Conference 2012 has been described in D3.1.6 of PRACE-1IP [10]. The Marketing and dissemination material package (brochures, flyers, folders, poster, pens, notepads, USB sticks) were sent to the events. All the PRACE training events also have PRACE dissemination material at site. The previous training events were PRACE Spring School in Warsow, PRACE Summer School in Lugano, Switzerland, EU-US Summer School in Dublin.

PRACE was again prominently present at ISC'12, the International Supercomputing Conference that was held in Hamburg, Germany, from June 17-21, 2012. PRACE presented the PRACE services and project achievements at the Exhibition, including a treasure hunt linking to the PRACE partners in the exhibition. It organised a BoF on 'PRACE Future Technologies Evaluation Results' and the PRACE Award. For budget reasons the PRACE exhibition was funded by the PRACE-2IP project.

The PRACE Scientific Steering Committee (SSC) selected the winner of the PRACE Award in 2012. The Award was presented at the Opening Session of ISC'12 (International Supercomputing Conference) in Hamburg on Monday, June 18 th, 2012. All papers that were submitted to ISC'12 Research Paper Sessions were reviewed by the PRACE Scientific Steering Committee. This year's PRACE Award went to the paper "A Fast & Scalable Low Dimensional Solver for Charged Particle Dynamics in Large Particle Accelerators" signed by a group of authors: Yves Ineichen (Paul Scherrer Institut, IBM Research – Zurich, and ETH Zürich), Andreas Adelmann (Paul Scherrer Institut), Costas Bekas (IBM Research – Zurich), Alessandro Curioni (IBM Research – Zurich), Peter Arbenz (ETH Zürich)

The aim of strengthening the human network within the scientific community worldwide was fulfilled during the presentations and the joint evening networking event between PRACE and the participants of HPC in Asia Workshop. More about the seminar has been described in D3.1.6 [10].

PRACE has actively collected contacts from these events to CRM database. The total number of new contacts is 3765.

# 4 PRACE Annual Report

WP3 in PRACE-2IP contributed to PRACE annual report[11] by collecting information on six scientific projects which have used Tier-0 resources. According to MB and AISBL decisions the first Tier-1 results were published during the PRACE-1IP project and the first Tier-0 results were shifted to the first months of the PRACE-2IP project. The first Tier-0 projects completed their production runs in October 2011.

## 4.1 Do enzymes use tunnelling to take a shortcut?

Professor Dominik Marx together with his research team led by Dr. Ian Grant at the Chair of Theoretical Chemistry of the Ruhr-University Bochum have sought to understand the complex nature and role of the so-called quantum tunnelling phenomena in the catalytic cycles of enzymatic processes. By doing so, the group hopes to find out if there are special cases where this non-classical promotion effect increases the catalytic power of enzymes.

## 4.2 Turbulence research helping to reduce energy consumption

Professor Javier Jiminez from the department of Aeronatics at the Universidad Politecnica Madrid has simulated the effect of roughness on turbulent boundary layers. Improving our knowledge about turbulence is essential, as up to 10% of total global energy consumption is spent on overcoming turbulent friction.

## 4.3 Fast Ignition boosts fusion energy

Professor Luis Silva at the Department of Physics of the Instituto Tecnico in Lisbon has studied fast ignition, which could pave the way for more practical and efficient use of lasers in fusion energy generation. The project involved simulating fast ignition with realistic target properties. The results provide information about the energy deposited in the target which, unlike previous studies, demonstrates a higher probability of achieving a successful configuration for fast ignition with ultra intense lasers.

## 4.4 Modelling flow and fluctuations in blood

Professors Federico Toschi and Jens Harting at the Eindhoven University of Technology have focussed on the numerical modelling and the statistical properties of blood. The project ran large-scale simulations in order to investigate the statistics of cell motion, when subject to external flows, and in model geometries. The research results may be helpful in understanding drug delivery and why blood cells clog and cause thrombosis and other illnesses.

## 4.5 Dislocation dynamics form light-year-long math

A project led by Professor Dierk Raabe at the Max-Planck-Institut reveals the nano-structural physics behind these intricate dislocation phenomena, and more specifically the interactions that lead to alloy hardening. Understanding the qualities of metal is essential for countless different industries in the fields of energy, safety, and health.

# 5 Summary and Conclusions

During the project months M1–M11, 30 press releases and four newsletters were published. Press releases were sent to over 7000 journalists around the world. The total number of PRACE related online articles and news items from the beginning of September until the end of July 2012 was 590. It can be concluded that the media interest concentrates prominently on Supercomputing and ISC. The PRACE scientific conference in conjunction with ISC had 230 registered participants from 35 countries and represents a promising beginning of a new series of PRACE Scientific Conferences. PRACE has actively collected contacts from events to CRM database. The total number of new contacts is 3765. Of those contacts 2950 were collected in PRACE-2IP reporting period. This was due to extensive effort to populate the database with all the collected contacts.

Although one can be satisfied with the increasing number of new contacts and web site visitors the disturbing fact is that European media (apart from English speaking media) has not taken a prominent interest of PRACE. Of the total 590 media hits almost 2/3 was found in United States and United Kingdom. Obvious reason for this is that the press releases and other dissemination material has not been localised and translated to the native language of each PRACE member country. More effort for translation is clearly needed. However, this should not be a challenge since the Dissemination work package in PRACE-3IP is represented by almost all PRACE member countries and a considerably number of person months could be used for translating the material and targeting it to the local audiences.

## 6 Annex: Magazines which published PRACE-related material

4-Traders
Ad Hoc News (EN)
Adobe Flash - Digital Media Net
AEC Newsroom
After Effects
AfterDawn.com
Alpha Galileo
Alpha Trade Finance
AndhraNews.net
Animation & Special FX
Animation Artist
Antara News
ASE Labs
Asia Press Release News
AsiaNet
Audio Video Producer
AZom
Balkans.com Business News
Barchart.com
Belga Media Support
BetaNews
Biz Daily
Bowebo
Broadcast Newsroom
Business and Leadership
Business Issues @ IT Business Net
Business News Asia
Businesspress24.com
Cardiff University
China PR News Distribution Agency
CMPCH - Mediawebsite.net
CNW Group
Computer Business Review
Computer Technology Review
Consumer Electronics Net
CORDIS News
Corporate Media News
Creative Mac
CSC - IT Center for Science
CWEBNews.com
Daily Markets
Daily News & Analysis
DailyTech
Dallas Morning News - Mediawebsite.net
Dallas South News - Mediawebsite.net
Dark Vision Hardware
Data Center Knowledge
Data Centre Solutions
Datacenter Dynamics
DCU
Delayed Quotes - CBOE

Design And Reuse
Digital Game Developer
Digital Journal
Digital Media Designer
Digital Media Net Forums
Digital Post Production
Digital Pro Sound
Digital Producer
Digital Producer Magazine
Display Plus
DMN Newswire
DTV @ BroadcastNewsroom.com
DV Format
DVD Creation - Digital Media Net
DVD Studio Pro
e! Science News
Eco Seed
EDN Europe
EE Journal
EE Times Europe
EIN Presswire
El Paso Times - Mediawebsite.net
Electronic Specifier
Electronics Weekly
Engineers Online.nl
EnterTheGrid - PrimeurMagazine
Environmental Expert
EPSRC
Euroalert.net
Europa - Press Room
eWeek
Film Imaging
Final Cut Pro
Finance.comcast.net-Stocks
Financial Technology
Financial Times Print Edition (Asia)
Financial Times Print Edition (Europe)
Financial Times Print Edition (UK)
Finwin
Fixed Mobile Convergence - TMCnet
Fraunhofer
Free Press Release
Free Republic
FreshNews.com
Gadgets - TMCnet
GE Force Italia
GlobeAdvisor.com
GoArticles.com
Good News From Finland
Green Technology
Gulf Press.com
Hal Eisner.com - Mediawebsite.net
HardwareLogic
Hazmat Magazine
Hollywood Industry
HPC in the Cloud

HPC Projects
HPC Wire
IBM News - TMCnet.com
IBM Systems Magazine
Illustrator
Innovations Report
Investor Village
InvestorPoint.com
iSGTW - International Science Grid This Week
iStockAnalyst
IT Analysis
IT News Online
IT-Director.com
ITbriefing.net
iVEC
KFMB-TV CBS-8
KGO-TV ABC-7 - Mediawebsite.net
KING5 - Mediawebsite.net
Las Vegas Business Press - Mediawebsite.net
Las Vegas Review - Mediawebsite.net
LexisNexis
Linux - Sys-Con
Live-PR (EN)
Mac Audio Pro
Mac Design Pro
Mac Video Pro
Manufacturing Digital
Marketwire
Media Workstation
Media Workstation
Media-Newswire.com
Melodika.net
Money
Morningstar
Morningstar
Morningstar News
Nanotechnology Now
NASDAQ
News about Radioelectronics
NewsBlaze
Newswire Today
Nieuws Bank
Nvidia
O Six Media
One News Page
Open Source Magazine
OSIX ::World Business Broadcast
OTCMarkets.com
Outlook Series
ParisTech Review
PE.com
Phys.Org
PR Newswire
PR Newswire (EN)
PR Newswire - Cerc Aziende.it
PR Zoom

PR-Inside.com
PR-USA.net
Premiere
Presentation Master
Press Release Point
Press Trust of India
Productivity Applications @ IT Business Net
ProfitQuotes.com
PublicityInsider.com - Mediawebsite.net
Publicservice.co.uk
Research in Germany
Reuters Press Release News Headlines
Ryt9 (English)
Satellite Spotlight
Scientific Computing
Scoop Asia
Seattle Times - Mediawebsite.net
Security @ ITBusinessNet
Seeking Alpha
Silicon Republic
Smart Grid
SOCcentral
Softpedia
Software Development @ ITBusiness Net
Solid Waste & Recycling
Stockhouse
StockRants
Stockwatch
Storage
Storage @ IT Bussiness Net
StorageNewsletter.com
Supercomputing Online
SYS-CON
SYS-CON AUSTRALIA
SYS-CON France
SYS-CON INDIA
SYS-CON Media
SYS-CON UK
Sys.Con Canada
Taume News
TD Ameritrade
TD Waterhouse - Markets & Research
Tech Central.ie
Tech Focus Media
TechOnline India
TechPowerUp
Teletimes International
Thailand 4
The 451 Group
The 451 Group
The Austin American Statesman -
Mediawebsite.net
The Chattanoogan.com
The Finchannel
The H
The Malta Independent Online

The Register
The Sacramento Bee
The Salinas Californian - Mediawebsite.net
The Telegraph
ThomasNet News
Thoroughbred News
Ticker Technologies
Times Leader - Mediawebsite.net
TMCnet.com
TradersHuddle.com
TweakTown
Ulitzer
Videobased Tutorials
Virtual-Strategy Magazine
Virtualization Conference & Expo
Web 2.0 Journal
Webcast - Broadcast Newsroom
Webindia123.com
Webnewswire.com
Website Gear
WebWire
Welsh Icons
Wired-Gov
WJRT-TV ABC-12 - Mediawebsite.net
Worcester Telegram & Gazette -
Mediawebsite.net
Yahoo! Finance US
Yahoo! Singapore Finance
ZDNet UK
Sum