

Welcome to
the e-IRG
workshop in
Budapest!



The open e-IRG workshop under the auspices of the Hungarian EU presidency will take place in Budapest from 4 to 5 April, 2011 at the historical building of the Hungarian Academy of Sciences. The workshop programme is more dedicated to e-infrastructure policy issues than in previous e-IRG workshops and covers topics of strategic importance requiring special e-IRG attention.

The main sessions will address the role and challenges of e-Infrastructure in the ERA, trends and perspectives of e-Infrastructure, partnerships and relations in developing and using e-infrastructure, and stability and sustainability of leading edge e-Infrastructure services in the ERA beyond FP7.

The two panel sessions will be devoted to respectively the regional and cohesion aspects of e-Infrastructure development, and to e-IRG recommendations



The open e-IRG workshop will take place in Budapest

focusing on the Green Paper of the European Commission on Common Strategic Framework for future EU Research and Innovation Funding.

The overall target of the workshop is to collect contributions from the participants which will help the e-IRG to prepare recommendations with respect to the coming new framework of doing research and exploiting the benefits of e-Infrastructure in Europe in general and in particular to shape the input of the e-IRG to the Green Paper consultation.

The workshop programme features key speakers from the European Commission and from the e-infrastructure community.

The final programme is available at the e-IRG website:

<http://www.e-irg.eu/e-irg-workshop-budapest-4-5-april.html>.

Here you can also register to attend the workshop and contribute in preparing the future of e-infrastructure.

New e-IRG Chair Gudmund Høst reflects on his first three months



e-IRG Chair Dr. Gudmund Høst

Gudmund Høst (Research Council of Norway), was an e-IRG delegate for six years before he was elected new Chair of e-IRG in December 2010. Together with the e-IRG delegates, he will bring forward the work of e-IRG for the next two-year term. How has Gudmund Høst experienced the first three months as the e-IRG Chair and what is his opinion on the role of e-IRG?

What were your initial expectations on the position as Chair of e-IRG?

On the practical side I expected a significant increase in my travelling activity. Fortunately, it has been a rather gentle start, but the pace has picked up to and is now getting close to my saturation level.

The work done by the e-IRG Executive Board is also substantial. Tremendous efforts go into finalising the White Paper

“Amongst policy-makers e-IRG is sometimes viewed as primarily a group of technical advisors, rather than policy-advisors. I think we need to work harder on communicating the policy-implications of our advice, and also risk being more controversial.”

and arranging the next e-IRG workshops. I also find the lively e-mail exchanges on the White Paper stimulating. I think this is a healthy sign of e-IRG; contrasting opinions and open discussions.

I have also started liaising with ESFRI, having met head-to-head with the ESFRI chair and discussed matters of mutual interest. This was a very positive meeting, with concrete actions discussed.

How do you experience the shift to a more “European perspective” in your daily work?

In an earlier stage of my career I worked on problems that I like to think had societal importance, like environmental problems and sustainable fisheries.

I still enjoyed the shift to the Norwegian Research Council with its wider national perspective and strategic issues. Chairing e-IRG is very much about scaling up again, now to a European perspective. I find this both challenging and inspiring.

How would you describe the e-IRG mission and the way you see the future role of e-IRG?

Our mission “to pave the way towards a general-purpose European e-Infrastructure” I find both beautiful and ambitious. Europe has come a long way regarding some crucial elements of this e-Infrastructure, like networking, high performance computing and grids. But one crucial element is still missing, even though there are important initiatives, this is a European (or even better: global) data infrastructure. I hope that e-IRG can contribute more in this direction, in collaboration with other stakeholders.

e-IRG is now widely recognized and well-known as a key advisory body on e-Infrastructure in Europe, and this should be credited to the vigorous work of the previous chair **Leif Laaksonen**. I think we now need to profit on this recognition and strengthen the policy-advisory role. Amongst policy-makers



e-IRG is sometimes viewed as primarily a group of technical advisors, rather than policy-advisors. I think we need to work harder on communicating the policy-implications of our advice, and also risk being more controversial.

I have previously pointed out that time-to-market is a critical factor for production of e-IRG policy documents to have maximum impact. We need to react quickly to the ongoing trends and the needs for advice from our stakeholders. The cloud area is such an example. Even though we treat cloud computing as a natural element of e-Infrastructure services in our White Paper, the current focus on this area suggests that e-IRG should be more visible in this area. Thus, the e-IRG Executive Board will propose a new Task Force on cloud computing at the next e-IRG delegates meeting.

What do you consider to be some of the greatest challenges for a European e-Infrastructure development?

Increasing energy demands of future HPC systems and green IT issues will be challenging to deal with. We are currently discussing this heavily within e-IRG. If or when Europe will step up to exascale, this issue will hit with full force due to the energy cost of operating such an installation. I hope that e-IRG can be a proactive advisor in this area.

Could you mention some potential opportunities that we “cannot afford to miss”?

I already mentioned data infrastructures, and in the end



a global data infrastructure for science may be the goal. This may enable researchers to combine relevant and informative data on a global scale leading to major knowledge leaps within health, climate science, and also provide new business opportunities. Europe should take leadership in this endeavour.

Furthermore, the broad range of disciplines now facing the data deluge needs a correspondingly broad range of digital services. Many of these researchers are currently inexperienced in e-infrastructure use. On the other end of the spectrum there is an ever-increasing need for deep computation to catalyse scientific discovery. To fully tap the potential of research collaboration, Europe will need a future e-Infrastructure that can provide integrating services across the full spectrum of user needs. The United States is now doing this with the Extreme Digital (XD) initiative. I think Europe would profit greatly from gluing the various core services together and improve the user experience and thereby increasing uptake of e-Infrastructure.

At last - What do you like to do on your free time?

I enjoy running and find that it is a rewarding and efficient way for me to recharge my batteries. A pair of running shoes fit in my

hand luggage and I can usually find time for a short run on most business trips. My remaining free time is mainly spent with my family.

Consultation phase of the e-IRG White Paper 2011

The e-IRG White Paper 2011 is entering its consultation phase in April 2011, when a draft version is sent out for comments to the research community. It will also be publicly available on the e-IRG website; www.e-irg.eu. White Paper editor Rosette Vandembroucke describes the main focus and the consultation phase of the e-IRG White Paper 2011.

What is the main focus of the e-IRG White Paper 2011?

This White Paper focuses mainly on the call for innovation. We may not only stay with the current e-Infrastructures, even if they are functioning well, but should look into future needs, into new technologies that can be applied, and explore several possible ways to go with an open mind. This shows best in the Governance, Networks, AAA, Supercomputing and Services sections of the White Paper 2011.

Why is continuous innovation considered to be so important?

If we do not consider innovation we will miss the opportunity to offer our researchers the best technologies and the best services that will enable them to perform top research. It is known that e-Infrastructures can open the door to new results as well as to new insights in research. Individual countries and Europe as a whole need to continuously renew their e-Infrastructures, by looking critically at what we already have and what is missing. We have to make the best possible choices without forgetting coordination and interoperability between country implementations and between

different e-Infrastructures.

Who is the main target group of the e-IRG White Paper?

The White Paper should be taken into consideration by governments, in particular the ministries that are responsible for research, funding agencies and the European Commission. But it is also of interest to individual researchers and users of e-Infrastructures as an incentive to let their voices be heard.

The White Paper is entering its consultation phase. Could you describe this process?

The White Paper is made up by a team of e-IRG delegates. A draft text is accepted by all delegates to go for public comments. This draft text is then sent out to the research community, as wide as possible and comments are collected via a mechanism installed on the e-IRG website for a duration of four weeks. The received comments are then taken into consideration and the draft text can be modified accordingly if appropriate. The final text is then accepted in consensus by all e-IRG delegates.

Every chapter of the White Paper ends with written recommendations. In what way are you hoping that these recommendations would be considered or reflected upon?

These recommendations should be mapped to the situation in each concerned country and the output of this comparison should be reflected upon. Governments, funding agencies and e-Infrastructure providers should work together to implement the recommendations.

Is there any planned follow-up regarding the impact of the e-IRG White Paper 2011?

There is no formal follow-up of the impact of the White Paper. However we try to gather all references made to the White Paper, comments about the implementation or of the non-implementation and of course the delegates report about the acceptance of the ideas and recommendations. We have noticed that the different position papers from e-IRG start to be well-known and are taken as a reference for the definition of new e-Infrastructures and services.



White Paper editor Rosette Vandembroucke

Questions & Answers on Cloudscape III



Cloudscape III: Taking European Cloud Infrastructure Forward, on the 15th and 16th of March in Brussels, brought a packed agenda featuring over 30 diverse speakers and panellists. Organised by the SIENA initiative (EC INFISO/FS3), and introduced by Robert Madelin (Director General DG-INFISO), the event tackled cloud computing in several domains, including eScience, eGovernment, commercial offerings, and existing distributed computing infrastructures.

How did this event stand out from the many cloud workshops in Europe?

These parallel domains are connected through common needs and concerns by their diverse user base: performance, security, legal issues, data privacy and - most prominent at Cloudscape - standards and interoperability.

Cloud interoperability will lower switching costs and facilitate transition of data and applications. In industry this could translate to a key functionality to gain customer share; in eScience it could mean compatibility between established virtual organizations and their communities; and in the emerging eGovernment initiatives it is required to ensure that the public investment arrives in a reliable and sustainable service for its citizens.

Cloudscape brought together representatives from those provider and user groups under one venue, using standards and interoperability as linking drivers for the two-day discussion.

What can be done to expedite cloud interoperability?

Standards play a key role in ensuring interoperability. As innovation continues to evolve the cloud, standards development strives to match its pace, or risk widening the current gap even further. User requirements must be sought across domains, whether VM formats, data, APIs, cloud management, location awareness and, of course, trust & security, a key topic explored at the event. Standards bodies must consolidate their efforts and collaborate directly in this outreach.

With Cloudscape III complete, where does the SIENA initiative go from here?

The SIENA European Roadmap on Grid and Cloud Standards for e-Science and Beyond saw its first release during the event, where speakers and roundtable experts contributed through a use case collection exercise that will further evolve the roadmapping document during the coming months. Dawn Leaf, Senior Executive for Cloud Computing at NIST, participated at the event to exchange information

on complimentary activities between initiatives, setting a collaborative atmosphere that will continue as the roadmap matures further.

More information on Cloudscape III, the SIENA initiative, and its roadmap can be found on the SIENA Channel: www.sienainitiative.eu

James Ahtes, Atos Origin, SIENA Initiative

GÉANT looks to the future with 100Gbps Capacity

World's fastest international research network plans upgraded connectivity to address coming data explosion.

Researchers across Europe will benefit from even faster information exchange thanks to planned high capacity network links. GÉANT, the pan-European research and education network, will be upgraded to 100 Gbps capacity on key routes, providing users with even faster data sharing and enabling more effective collaboration on critical projects that benefit everyone. GÉANT, launched in November 2000, was built and is operated by DANTE on behalf of Europe's National Research and Education Networks (NRENs), connecting national networks to provide a powerful combination of high bandwidth and advanced, user-focused services to Europe's research community.

The major upgrade, which will increase speeds by up to a factor of ten, is in response to the rapidly growing capacity needs of European researchers. This is being driven by a combination of new projects, changing ways of working, and greater user numbers.

"Since its launch in 2000, GÉANT has transformed how research is carried out, driving and enabling collaboration across Europe and the entire world," said Matthew Scott, General Manager, DANTE. "However, our forecasts predict that the combination of major new scientific experiments and innovative new ways of working together is creating an explosion of

"The major upgrade, which will increase speeds by up to a factor of ten, is in response to the rapidly growing capacity needs of European researchers"

data for which we need to be ready. The new 100 Gbps connections build on our advanced hybrid network and will ensure that the 40 million researchers and students across our user communities can rely on the capacity and services they need now and in the future."

In the next ten years major new projects including the Square Kilometre Array (SKA) radio telescope and the ITER nuclear fusion experiment are projected to come on stream. These will join other major research projects, such as the Large Hadron Collider, in requiring high bandwidth, real-time connections to share the massive amounts of data they produce with scientists in Europe and around the world. Additionally, greater collaboration in areas such as genetics and climate change is driving a growing demand to access shared central databases of information across research disciplines, exponentially increasing network traffic.

For more information, please visit www.geant.net

Paul Maurice, Senior Communications Officer, DANTE



DEISA PRACE SYMPOSIUM AND EGI USER FORUM

DEISA PRACE SYMPOSIUM

DEISA, the Distributed European Infrastructure for Supercomputing Applications, and PRACE, the Partnership for Advanced Computing in Europe organise a third major European event in High Performance Computing (HPC): the DEISA PRACE Symposium 2011. The symposium will take place from April 13 to 14 in Helsinki, Finland. It is hosted by CSC – IT Center for Science, Finland at the National Museum of Finland. Participation is free of charge.

This symposium on Advancements in Petaflop Computing covers both European and international developments. The event addresses major interests of a broad audience: computational scientists, HPC technology experts, government representatives, vendors, and industry partners.

Keynote speakers across the world will outline the strategic perspectives of High Performance Computing during the first day. The second day focuses on challenges in computational science. In two Extreme Computing sessions, challenging computational science projects from all over Europe will be presented, covering essential scientific areas.

More information:

<http://www.prace-project.eu/events/deisa-prace-symposium-2011>



DEISA PRACE Symposium 2011 in Helsinki

EGI USER FORUM

Everyone talks about how important e-Infrastructures are, but how exactly are they used? And who relies on grid computing for their research? To find out, make some space in your diary for the 2011 EGI User Forum in Vilnius, Lithuania from 11 to 14 April, the first user-focused event organised by the European Grid Infrastructure (EGI).

The forum will feature presentations, tutorials and workshops aimed at scientific researchers, programmers, software developers, system operators and technology providers. Grid applications will feature heavily, with sessions showcasing the latest developments in biomechanical markers, molecular simulations, a paleobiology database, electrophysiology, the Large Hadron Collider, or simulations for social science.

Confirmed keynote speakers include Steve Rawlings, an Oxford-based astrophysicist, who will talk about the data processing

challenges involved in the Square Kilometre Array telescope, and Ruth Pordes, executive director of the Open Science Grid, who will discuss recent initiatives to promote sustainability.

The EGI User Forum 2011 is organised by EGI.eu, Vilnius University and LITNET (Academic and Research Network in Lithuania), with the support of EGI-InSPIRE project, EMI and local secretariat BAIP (Baltic Amadeus Infrastruktūros Paslaugos).

Forum registration is open until 1 April. More information on EGI User Forum 2011 website: <http://uf2011.e-gi.eu>

NEWS AND UPCOMING EVENTS

**Release of e-Science Briefing:
'Cloud Computing: What's on the horizon?'**
<http://www.sciencetalk.org/briefings.php>

e-IRG workshop - see frontpage of this newsletter
4-5 april 2011
Budapest, Hungary
www.e-irg.eu

EGI User Forum - see article in this newsletter
11-14 April 2011
Vilnius, Lithuania
<http://uf2011.e-irg.eu>

DEISA-PRACE Symposium - see article in this newsletter
13-14 April 2011
Helsinki, Finland
www.prace-project.eu

TERENA Networking Conference 2011
16-19 May 2011
Prague, Czech Republic
<https://tnc2011.terena.org>

ISC'11 - 26th International Supercomputing Conference
19-23 June 2011
Hamburg, Germany
<http://www.supercomp.de/isc11/>

e-IRG
e-Infrastructure
Reflection Group



e-IRG secretariat

c/o Netherlands National Computer Facilities Foundation (NCF)
P.O. Box 93575
NL-2509 AN The Hague
The Netherlands
Phone: +31 (0)70 344 0526
Fax: +31 (0)70 344 0946
secretariat@e-irg.eu



e-infrastructure

