

Participation by Mr. Zoran Stančič in the DEISA PRACE Symposium 2011

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SPEECH

CHECK AGAINST DELIVERY

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- Ladies and Gentlemen, distinguished participants; it is my pleasure to be with you today at this important event for DEISA and PRACE.
 - I had the honour and pleasure to participate in the official launch of PRACE in Barcelona last year. Today we meet with an enlarged community to look back on the achievements of DEISA and PRACE. At the same time we are looking forward to the coming years where DEISA and PRACE will work in an integrated way.
 - PRACE is fully operational now, it is headquartered in Brussels and its service is available to the all scientific communities across Europe. Millions of CPU hours have been made available via PRACE and the support DEISA has provided is well known through-out the research community.

EU- Member States Collaboration

- I was very happy to see that a number of Member States have committed themselves to financially support PRACE. These are not minor financial amounts – four countries committed 100 Million Euro. The commitments of France and Germany have already materialised with the JUGENE and CURIE supercomputer systems.
- The European Commission contributes a similar amount to facilitate the establishment of the PRACE infrastructure. We are prepared to continue our support for as long as PRACE remains an essential element of the European e-Infrastructure. It should

contribute to innovation and competitiveness, and continue to progress in integrating European resources.

- Additionally we have just awarded some 25 million Euro for developing exa-scale computing systems. My colleagues have told me that there is quite some exciting work proposed that will make substantial progress towards exa-scale systems. I am looking forward to see these research teams making their mark on the global scene.
- But returning from these longer-term aspects; more than financial support – it is the result that counts at the end! So I am very pleased to see that the first open calls to access the PRACE infrastructure have been successfully launched; they attracted a lot of attention and some 20 successful research projects are now receiving PRACE services.
- The PRACE model highlights the European integration: it combines national resources into a single pan-European infrastructure, which is open to all scientists in Europe. From June this year onwards DEISA and PRACE will work as a single entity under the PRACE flag. This will enhance the PRACE infrastructure with a broad Tier-1 computing base. From then on PRACE will encompass all computing centres across Europe offering an integrated service.
- Such an integrated service is much needed by scientists. Yes, I am aware that quantum-chromo-dynamics exploits the features of modern supercomputers very well. But please let me point out that there are pressing societal challenges that also need the support of high-performance computing.

- At a recent event in the European Parliament the impact of computing to tackle Alzheimer's disease was raised. Again it was computers in Europe that contributed to the identification of markers that help diagnose this disease earlier. Please let me be clear here: the millions of Europeans that are affected directly or indirectly by Alzheimer's cannot be ignored if HPC can bring tangible benefits in treating the disease.
- Other areas that immediately come to my mind are climate change and sustainable energy. Supercomputers make wind turbines more efficient and the search for the last reservoirs of oil on this planet is only possible with the support of vast computing facilities.

HPC in Europe vs. Global

- It is clear that supercomputing is vital for our future. How is Europe then fairing in this area compared to its peers around the world?
- The study carried out by IDC – that many of you have certainly looked at – has found that supercomputing contributes substantially not only to scientific progress but also to innovation and competitiveness across Europe!
- These were the good and exciting news. On the less exciting side it became very much obvious that Europe has lost 10% of its computing capability from 2007 to 2009! And most of the TOP500 computer systems are not manufactured in Europe.
- Yes, there is great expertise in software for HPC in Europe. But if we do not master the hardware, how can we ensure that the

software exploiting all these new and exciting features can be developed in an efficient and timely way? Are we going to lose 10% of our software capabilities in the coming years too?

- This should not happen. Europe needs to ensure that it has an independent access to high-performance computing systems and software. This is of strategic importance for us. Like we put strategic importance to an independent access to space some time ago. Now it is time to consider doing the same for supercomputing.
- We also need to build a single market for HPC across Europe - both in terms of providing HPC services and in terms of procuring and operating HPC systems.
- We have to reinforce Europe's competitiveness by increasing investment in HPC (e.g. through the joint procurement of supercomputers by several Member States with co-financing from us).
- We need to promote the access and use of HPC to the benefit of the European industry and to the society at large – as I have already pointed out earlier. Industry needs easier access to HPC-based simulation and product prototyping services - especially SMEs who are the backbone of the European industry.
- The availability of a European workforce adequately trained in HPC is key for industrial competitiveness. We need to work with universities and training centres to come up with schemes that will provide this very much needed skills. We are currently

discussing with the European Institute for Technology to develop curricula in this area.

- We must set-up an HPC governance structure at EU level and a plan for the further development of PRACE including the provision of HPC experimental facilities.
- Yes, there is a lot to be done. More integrated and user-friendly services, also to industry, development of new ever more powerful machines and software, training, optimising EU-level governance. And all of these require the cooperation between HPC centres, industry, academia and PRACE, but also the alignment between national and EU policies.
- To realise these goals the Commission will prepare a Communication to the European Parliament and the Council. This will underline the need for a joint effort with Member States to realise the goals I have just mentioned.
- In Europe we hardly ever use pre-commercial procurement that our colleagues in the US are so familiar with. Earlier this week we had a conference under the Hungarian Presidency in Budapest to stimulate the use of pre-commercial procurement. A dedicated session on HPC has brought key people together to reflect on this and to see how it can be effectively applied to HPC and e-infrastructures in general.
- We have to use our combined EU buying capacity to make PRACE a global success. In this way European industry will not only benefit through the use of supercomputing facilities but -

equally important – it will benefit from the supply of such top-class computers and services.

e-Infrastructures

- Over the last years the Commission has been pioneering an integrated eco-system of e-Infrastructures. This is necessary to support compute and data-intensive research, which is how most of today's research is carried out. e-Infrastructures provide researchers and innovators with access to data, computing resources and collaboration tools, building an on-line single market for research and innovation in Europe. Through this they realise the European Research and Innovation Area.
- The Digital Agenda for Europe stresses our efforts in this field. High Performance Computing and Simulation have become a condition for competitive science, for innovation in many sectors, and for sound policy-making. The development of PRACE into an integrated European infrastructure pooling scattered national investments gives Europe the possibility to take a world-leading position.
- We have also seen fast progress in another important area recently: infrastructures for Open Access to Scientific Data. Let me tell you only so much in that – like here with DEISA and PRACE – we have been able through our joint e-Infrastructure efforts to start establishing a European platform that is transforming science and innovation. Open access to publications produced by FP7 projects through the OpenAIRE infrastructure - as it is called – is one element of that. Ultimately

the data e-infrastructure will give researchers open and seamless access to scientific data from all disciplines.

- Being here in Finland I should acknowledge the efforts of the team led by CSC in developing a distributed data infrastructure. Yes, I know it is still early days and EUDAT is currently being negotiated, but its potential for science in Europe is just so big!

Conclusion

- To conclude: I strongly believe that High Performance Computing is of key importance for Science, Innovation and most important competitiveness. It is evident that the only way we can be competitive in this area in Europe is by combining the national and European Union investments. This has been pioneered by DEISA and is now the mission of PRACE.
- Moreover society stands to gain large benefits from supercomputing and this justifies our strengthened engagement in this field.
- On our side - the European Commission – we will continue to work closely with our partners in the Member States to ensure that e-Infrastructures such as DEISA and PRACE provide seamless and state of the art services to scientists and engineers anywhere in Europe; and that they are a real catalyst for innovation. This will guide us for the implementation of the Digital Agenda and the forthcoming 8th Framework Programme – the Common Strategic Framework.
- Let me remind you that making Europe more competitive is not a unilateral activity from the side of the European Commission.

Together with the Member States and industry – yes, this is not only for governments, also Industry has to play its role and to contribute its share – together we have to stay committed to realise the full potential of supercomputing.

- DEISA and PRACE are the materialisation of such a joint commitment across all actors in Europe!
- I would like to thank the people that have come here today for their efforts in getting DEISA and PRACE running efficiently. There are however challenges ahead of us: you have to make sure that the innovation potential of supercomputing is truly made accessible to all and through a large number of supercomputing centres all across Europe. We are addressing the exa-scale computing challenge jointly. This gives Europe a unique opportunity to gain a leading place in the operation and manufacturing of the next generation of computer systems and services. Let us together continue the efforts that have so well started with DEISA and PRACE.