

GridConnections

May 2007

News and Information for the Open Grid Forum Community

In this Issue:

[Standards Q&A with Dave Snelling and Chris Smith](#)

[OGF20 Attendees – Please Take Our Event Survey](#)

[Q&A with the DRMAA Team](#)

[“Grid – Distributed Computing at Scale” and Other Documents In Public Comment](#)

[Welcome New Organizational Members – Pacific Northwest Gigapop and Software](#)

[Process Technologies](#)

[New Area Director Named and Other Updates](#)

[Upcoming Events](#)

[Join OGF Today](#)

[Closing Comments](#)

Standards Q&A with Dave Snelling and Chris Smith

Dave Snelling from Fujitsu is stepping down from his role as Vice-President of Standards for OGF. His term started in early 2004 as the GGF Vice-Chairman of Standards. He steered the standards function through a period of great change for our organization, including GGF's merger with EGA. Chris Smith from Platform Computing will transition into the position starting next week at OGF20. We thought this would be a great opportunity to talk with Dave as he looks back on the last 3 years and Chris as he looks to the future.

Chris, tell us about your background and why you were interested in being considered for the V.P. position.

Chris Smith - *In my role at Platform Computing for the last nine years, I've focused on the integration of our grid middleware with both applications and with system software. The mechanics of implementing these kinds of integrations necessitates interfaces both to the grid middleware and from the grid middleware to external systems. As a practitioner of this type of development, I was naturally drawn to the standards activity in OGF, looking for standards that would make my life as an integrator easier.*

As a technical contributor to OGF, I've been involved in the development of a number of specifications. While I believe that I have been effective in this role, I think that it's time for me to take a more direct role in the strategic direction of the OGF and in the way that we develop standards. As VP of Standards, I could be actively engaged in determining how standards are developed, which standards should be prioritized given industry requirements, and in promoting these standards outside of the OGF. I'm also excited by the opportunity to bring my experience to bear in order to help pursue the OGF's overall mission.

How would you characterize the current state of the grid adoption? And the state of grid standards?

Chris Smith - *I think that we're doing very well in the development of grid standards. While I wouldn't claim that we have 100% coverage for all functional areas of the grid, we have a number of significant standards in key areas of grid computing, such as workload management and data management, both at the protocol and API level. Moreover, the process that is in place*

in OGF and the participants involved, make me confident that we'll continue to cover the functional areas of grid with good progress. Adoption is another matter. It's hard to change the way people do things, and even harder to get ISVs to change their software and middleware . This should be expected. Standards have their own lifecycle: creation, promotion, adoption and deployment. So far, we've been good at their creation, but we're still at early days for promotion, adoption and deployment. I'm only now starting to get significant customer interest in OGF standards, showing that the promotion is starting to take hold, but we still have a lot of work to do, especially in having vendors adopt the standard, and customers deploy solutions based upon them.

Dave Snelling – *I agree with Chris, we are at a crucial point with respect to adoption. There are plenty of standards available with which to build a “Grid Stack”. The current focus in OGF is to get those basic needs addressed, and many of these are in place and interoperable implementations exist. The next step is to build the momentum around these and use that energy to push into the next round. With respect to the standards themselves, there are a lot of quality standards out there that apply to the Grid context. There are even more good ideas that also apply. The challenge that I have been dealing with, which I pass on to Chris, is how to decide which existing standards to use now, which evolving ones to wait for, what work needs to be done by OGF, what work should we push to our fellow SDOs, and what work needs to be put off. In short it is a good time for developing and promoting Grid standards, but a challenging time nonetheless.*

Dave, what do you think were OGF's biggest accomplishments under your term as VP?

Dave Snelling - *The thing about being a VP is you never actually accomplish anything – that's done by all the people around you. In the time since I started as VP, the number of documents published by the OGF has tripled, from about 33 to 100. And while we were doing this, the Grid community had to deal with a lot of changes, both technical and political. One of these significant changes was the merger with EGA. This was a crucial step for the community, which started – in the best possible style – at the technical level, about which I have some pride. The hard work came later and was done by others.*

I know it's early Chris, but do you have a sense for of what areas you want to focus on during your term?

Chris Smith - *I want to focus on the adoption of grid standards by the industry at large. This will happen in a number of ways. First, we must have a dialog with customers of grid solutions in order to make sure that the standards we're developing meet their needs. We do this already with the various industry workshops held at OGF, and we can use these venues to help us close the loop with interested user communities. A second aspect to this is to bring the standards we develop to the industry ourselves. As VP of Standards of OGF, I can take the role of “chief standards evangelist”; as a representative of Platform Computing, I can leverage our partnerships with system vendors, ISVs and stakeholder customers in order to get in front of key industry players and show them the value of OGF specifications.*

What do you think your biggest challenge will be?

Chris Smith - *The biggest challenge will be to make OGF relevant in the IT industry. There is sometimes a false perception that the OGF is too inwardly focused on the pet projects of the OGF membership, and this perception needs to be changed. The work done to bring GGF and EGA together is one step that will help change this perception, and it will be my role to continue to change this perception by getting in front of people using grid technology, and show them that the OGF is an organization that is focused on problems that are faced by the IT industry as a whole.*

Dave, what are your future plans in terms of OGF participation?

Dave Snelling - *The Open Grid Forum and standards development in general are a high priority for me and for Fujitsu. I will continue to be active technically in the OGSA-WG as one of the team and I am now one of the co-chairs of the Reference Model WG, which is carrying on the excellent work of EGA in this area. I have also been returned to the OGF Steering Committee as "AD At Large", a kind of fire fighter.*

Any final thoughts regarding grid standards that you want to share with the readers?

Chris Smith - *I think we're at a crossroads with respect to grid standards. We now have the machinery in place to effectively focus the OGF on creating the standards needed by the industry through a well-defined technical strategy and a very talented and experienced membership. I'm optimistic that we can take these specifications to the industry at large, as I see a desire in customers for standards-based grid solutions that I didn't see even a couple of years ago.*

Dave Snelling - *I wish Chris the best of luck and a good time. We have a good picture of what to expect in the short term, but there will be surprises around the corner. This is a great field with highly dynamic people and technology, and there is certainly never a dull moment.*

OGF20 Attendees – Please Take Our Event Survey

Your feedback is always needed and useful in helping us improve our events. This brief on-line survey is located at <http://www.ogf.org/OGF20/survey>

Q&A with the Digital Resource Management Application API (DRMAA) Team

Hrabri Rajic, Andreas Haas, Peter Troeger.

Why is the DRMAA recommendation important and to who?

The DRMAA specification provides a unified API for the submission and control of jobs in cluster and grid environments. The scope of this specification is all the high level functionality which is necessary for an application to consign a job to a DRM system, including common operations on jobs such as termination or suspension. We concentrate on a small, but relevant feature set, in order to ensure portability of DRMAA-based applications for many different DRM systems. We are more than half way through the process and have seen many potential stakeholders who needed similar technology a few versions ahead of version 1.0 to adopt. Once DRMAA recommendation is fully ratified, we are hopeful to see all of those stakeholders back as additional adopters, providing us with invaluable feedback and also exposure. There is no question that Web Services and Grid solutions have the greatest exposure and promise, but DRMAA gives the walk ability before the fly ability.

Do you have any specific examples of adoption of the recommendation?

There is a mix of interested parties from industry and academia. We have talked extensively to both. For example, Cadence software engineers would love to use DRMAA API to maintain one interface for their products. DRMAA is already part of the Sun Grid Engine product, the Condor system and the Globus GridWay project. We are also aware of implementations for Torque and XGrid. LLNL Bioinformatics group found DRMAA API to be exactly what they needed, so they have developed and contributed Perl DRMAA bindings to CPAN few years ago. eXludus Software uses C bindings as an integrated data grid solution. There are few DRMAA uses in finance, probably many more similar efforts behind the firewalls. We are also finding it in UNICORE backend these days. We have a Wiki page at drmaa.org, which lists all the DRMAA adopters known to us.

What are the key benefits that some of these adopters are reporting?

DRMAA was designed to address the needs of engineering and scientific community for an expressive API that maps to the problems at hand. The universal feedback was that DRMAA API gives the right functionality. Few years ago we have seen the API used in various Grid

workflow stages by the Condor group. Few DRMAA design decisions were incorporated by SAGA-RG and at the lesser extent OGSA-BES groups. Our focus on all the implementation-relevant little nasty issues seems to help people in adopting the spec. The API is also quite stable for while now, which makes it feasible for commercial products with longer update cycles.

Have you learned any lessons along the way?

DRMAA-WG preparations started in the fall of 2001, around the time OGSA had its start. We had a vague idea that preparing a standard takes time, but nobody expected that it would take so long and that we still would be one of the first OGF groups aiming to achieve the OGF recommendation status. Initially, we thought that Globus toolkit GRAM implementation could take advantage of DRMAA API, but got to see it in GridWay project that implemented DRMAA on top of the Globus toolkit. Timing needs to be right, few people could afford to wait in today's World, and so a constant DRMAA rediscovery is a steady reminder for the group to persevere.

What are your future plans for the recommendation?

There is a wish list that we maintain on the OGF DRMAA pages and in the DRMAA GridForge tracker. We have resisted the temptation to advance our thoughts too far, before we see the widespread adoption and feedback from the field. The end users should have lots of say in shaping the DRMAA direction, so there is no particular desire to come up with our comprehensive future plans at this moment. One often heard request from the field are more monitoring features, to select underutilized queues for new job submissions. We are currently finalizing an IDL-based description of the DRMAA API. This forms a common base for object-oriented and Web Service bindings, and supplements the language-independent DRMAA specification. New Python and .NET bindings are on the way, and the existing language bindings for C, Java and Perl will reach a final status with the full recommendation status of DRMAA 1.0. If we look into the group related OGF activities and past engagements, JSDL support in DRMAA is long overdue. A job workflow implementation has also been showcased on top of the Ruby binding last year. Web services interface thoughts have been also considered by the group for a long time, especially in connection with Java and .NET implementations. Both of these efforts need to be tied to the recent OGF efforts.

The DRMAA document can be downloaded here <http://drmaa.org/wiki/>. For more information, feel free to contact one of the DRMAA working group chairs: [Andreas Haas](#), [Hrabri Rajic](#), [Peter Troeger](#)

“Grid - Distributed Computing at Scale” and Other Publications in Public Comment

The marketing function has released their “[Grid - Distributed Computing at Scale... An overview of Grid and the Open Grid Forum](#)” document to Public Comment. This document defines and ‘frames’ the collective viewpoint of our community on the current state of Grid, the role of grid technologies within the broader distributed computing landscape, and the role that the Open Grid Forum plays in accelerating grid adoption in partnership with the grid community and the industry at large. It will be used to communicate our vision to our external stakeholders, so please take a moment to read it and provide your feedback.

The following documents are also available for “Public Comments”. The authors of these documents also welcome your input.

Recommendation: documents a specification

- [OGSA Basic Execution Service Version 1.0](#)
- [HPC Basic Profile, Version 1.0](#)

Community Practice: informs the community of common practice or process

- [Nomination Committee \(NOMCOM\) Process Charter](#)

Welcome New Organizational Members – Pacific Northwest Gigapop and Software Process Technologies

Welcome to our newest silver level organizational members. **The Pacific Northwest Gigapop** (PNW Gigapop) is a not-for-profit serving leading edge organizations and Research and Education networks throughout the Pacific Rim. We provide robust, highest-speed access to current state of the art Internet; Next Generation Internet services and technology; and the exclusive R&D testbeds where tomorrow's Internet technologies are being developed. The PNW Gigapop is built to be the highest caliber Research and Education networking services hub in the world www.pnw-gigapop.net. **Software Process Technologies** engineers provide product driven enterprises with the knowledge and skill required to analyze, design, and develop system level software and web-based applications that are targeted for existing and emerging technologies. Each member of our engineering team maintains a high level of training in areas related to object-oriented analysis and design, high-level programming language development, emerging telecommunications systems architectures, and industry wide standards and procedures. www.spt-inc.com

New Area Director Named and Other Updates

Richard Hughes-Jones, Architecture Area Director

Richard leads the e-science Grid Network Research and Development in the Particle Physics group at Manchester University. He is a member of the Trigger/DAQ group of the ATLAS experiment in the LHC programme, focusing on Gigabit Ethernet, protocol performance, and remote computing farms. He has been responsible for the High performance, High Throughput network investigations in the European Union DataGrid and DataTAG projects, the UK e-Science MB-NG, and GridPP projects. Currently he is a co-PI of the UK e-Science ESLEA project focusing on delivering high performance networking using switched light-paths to science users including VLBI, HEP as well as other e-Science users. He is also a member of the EU EXPReS project working on protocol and network performance for future VLBI. Richard is a co-chair of PFLDnet 2005 & 2006, and a program committee member of the IEEE Real Time Conferences for 2005 and 2007. Richard is currently co-chair of the Network Measurement WG and the Network Measurement RG and he is been a contributor to various other infrastructure related groups.

Chris Kantarjiev, Architecture Area Director

Chris has accepted the position of Area Director for our Architecture Area. He is currently an acting Area Director for Architecture. Chris is a member of the Grid Technologies group at Oracle and as the former chair of the EGA Technical Steering Group, he brings a wealth of great experience to OGF and has been a key contributor to our Technical Strategy and Roadmap efforts through his active participation in our Technical Strategy Committee (TSC).

Dave Snelling, At-Large Area Director

Dave is stepping down from his position of V.P. of Standards. He has accepted an At-Large Area Director position and will continue to serve as a member of the GFSG.

David Martin, Data Area Director

David was reconfirmed for a further term. He has been a Data Area Director since 2003.

Upcoming Events

OGF21 Seattle, Washington October 15-19, 2007

Our meeting venue for OGF21 is now set for the Grand Hyatt in downtown Seattle. Much more information will be announced in the coming weeks. For more on the Hyatt hotel, visit www.grandseattle.hyatt.com

International Summer School on Grid Computing Mariefred, Sweden July 8-20, 2007

The school brings together the leading grid technologies from around the world, presented by leading figures, and gives students a unique opportunity to study these technologies in depth side by side <http://www.iceage-eu.org/issgc07/index.cfm>

Next Generation Data Center San Francisco, CA August 6-9, 2007

OGF is an association sponsor for this event. NGDC will feature discussion of what is happening in the data center – the challenges, successes, pitfalls – and what is likely to happen with data centers in the future. <http://www.ngdcexpo.com/live/11/>

Additional Events

Our calendar page provides a full listing of grid and related technology events for 2007 http://www.ogf.org/News/newscal_calendar.php

Join OGF Today

OGF [membership](#) provides resources, opportunities and insight focused on helping you and your organization stay engaged and ahead in grid technology. OGF membership is a resource from which you can draw the most essential and relevant information about grid standards, issues and best practices. Participation in OGF offers the opportunity to contribute to, and benefit from, a collective point of view at an industry level. As an OGF member, organizations enjoy a wide variety of benefits including:

- **Recognition** through increased corporate exposure and signal to end-users, partners, grid industry experts, media and analysts that you are an industry leader driving specifications and standards
- **Influence** industry change by participating in OGF committees and working groups which provides a tremendous resource to understanding emerging strategies, standards and operational models
- **Insight** into the collective thinking of peers from a variety of industries and institutions who are involved in similar projects and initiatives; accessing fresh ideas from others who are addressing the real needs of technology users

Please consider joining OGF today. The vast majority of our funding comes from membership fees and we simply would not exist without your funding support.

Closing

The success of OGF depends upon member participation. All of the significant events, activities and accomplishments of the forum are member driven. Please contact any OGF staff member if you want to get involved http://www.ogf.org/ggf_contact.htm. We welcome your input!