

GridConnections

October 2007

News and Information for the Open Grid Forum Community

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OGF President, Craig Lee's Letter to the Community

Of course, the big OGF news in September was the announcement of Craig Lee as the new president of our community. GridConnections invited Craig to discuss his thoughts as he officially takes on his new position today:

A New Era for the OGF

It is with great pleasure that I write this first newsletter article as President of the Open Grid Forum. It was tremendously gratifying to receive the many congratulatory emails after the announcement was made. I wish to thank everyone again. I am, however, under no illusions that we don't have a tremendous amount of work ahead of us. Much ink has been spilled, powerpoint projected, and blogs blogged about when, or if, grids will make the transition from research infrastructure to mainstream IT.

While market forces certainly affect the adoption of any new technology, we can be certain that technical value or capability is a necessary prerequisite. It is by no means the sole determining factor, but any technology that does not offer some type of technical value or capability will eventually be cast aside.

Hence, it behooves us -- OGF and the grid community -- to take stock of our current portfolio and determine what value do we offer the spectrum of end-users. We must then survey and understand the landscape of (1) distributed computing requirements, (2) technical solutions/approaches, and (3) organizations in which important work is being done. Finally, we must plan the Big Picture Technical Roadmap to get us from where we are now, to where we want to be.

In our current portfolio, we have over ten years of experience in building what would be called traditional grids. There are millions of nodes and petabytes of storage managed by grids in some way, shape or form, across a wide range of scientific and engineering domains. OGF represents an established community of world-class researchers and industrial leaders. We have a growing document series that includes recommendations

such as the OGSA HPC Profile, OGSA Basic Execution Services, the Job Submission Description Language, GLUE, Byte-IO, GSM, SAGA, DRMAA, and OGSA-DAI, just to name a few.

Despite all this tremendous work and accomplishment, however, grids have not been as widely adopted as we would like. There is no set of core services that are emerging as a dominant paradigm. In fact, we see a tremendous amount of related work going on in different communities and organizations that intersect with the grid concept, yet use none of the traditional grid tools to a significant degree.

Enterprise data centers consist of huge numbers of machines that must be managed as a whole to service complex processing chains. Machine virtualization is catching on like wildfire since it offers an effective way to provide capabilities such as dynamic provisioning, process migration, and automatic fail-over. A new user community is growing up around Web 2.0 since it is so easy to use to integrate remote data and services and present them through a portal.

In terms of other organizations, a wide range of work on web services is being done in OASIS, including WSDM, WS-BPEL, SAML and XACML. Work on Information Lifecycle Management, File System Management, and policy-based storage management is being done in SNIA. Other work on Web-based Enterprise Management and the Common Information Model is being done in DMTF. There is also work on Service Components and Data Service Objects in the Open Service-Oriented Architecture Collaboration.

It is clear that established grids, and grid computing in general, bear on all of these topics and that OGF is a prime vehicle for driving requirements, harmonization and adoption. To this end, OGF Reference Model Working Group is defining a coherent model for grids in the data center. CIM and GLUE are being discussed between the DMTF and OGF with the goal of aligning these information models. The Grid-Virt Working Group is examining machine virtualization in the context of grids and is also spinning up a collaboration with the DMTF. We are in discussions with SNIA to work on data movement standards.

In terms of user communities, OGF is pursuing a collaboration with the Open Geospatial Consortium (OGC). OGC has a suite of tools for managing and presenting geospatial data -- anything that goes on a map -- and wants very much to extend their tools with the capability for distributed resource management, i.e., grids. I should also note that there is a Web 2.0 workshop at OGF-21 that covers social networking, semantic grids, and sensors. The fact that half of all Web 2.0 services registered at programmableweb.com are geospatially related, and that Google is sending KML through the OGC standardization process, indicates that there is a huge potential for grids in this arena.

To follow through on these tremendous opportunities, it is critical that OGF's core constituency stays fully engaged as we identify these new research thrusts and industrial development efforts. Research is the backbone on which effective technologies are built. Hence, OGF is developing closer ties with peer-reviewed conferences and plans to publish special issues in respected journals to engage academic researchers with OGF-related research topics. To actively drive collaboration with industry, we are engaged with groups in finance, biomedical HPC, satellite ground systems, and many others. We are also spinning-up a Thought Leadership Series where influential researchers and industry leaders can sound-off about key issues in grids and distributed computing.

This next phase of OGF will be challenging, exciting and rewarding. We should be careful, however, not to let ourselves be accused of having "technical religion", because the goal is not just to "build grids" or be a grid fanatic. The real goal is the development and pervasive

adoption of effective distributed computing technologies across the board. We all want OGF to be a robust, vibrant organization in the service of that goal and must work together as a unified team to fully achieve it. I therefore welcome your comments and suggestions. Please feel free to send them to me at craig@aero.rush.org.

OGF Marks First Year Anniversary

The other big news was that OGF celebrated its first birthday last month. Steve Crumb, OGF Executive Director, shares his thoughts on OGF passing this major milestone:

Much has happened in OGF's first year and much more is in progress. Let's take a look at a few of the many highlights from OGF's first year and the impact OGF is making. (As always, all of the accomplishments mentioned are due to the hard work of OGF's global, volunteer army and the funding of our organizational members).

Documents

OGF has carried forward the hard work begun years ago in GGF and EGA to develop high-quality, relevant grid specifications and other documents that enable developers and infrastructure providers to deliver interoperable software solutions and architect production grids for research and commercial uses. During OGF's first year, 40 new documents were published including 19 specifications and six experimental documents recording implementation experiences with OGF specifications. These published specifications resolved such challenges as scheduling jobs across multiple application platforms; describing and accessing data such as databases, files, or XML repositories; managing the deployment of various applications in a distributed environment; providing a uniform API for programming grid applications; and many more. This year also marked the release of two companion documents: Grids: Distributed Computing at Scale, and the Technical Strategy and Roadmap for the Open Grid Forum. These documents describe grids in the broader landscape of distributed computing and define how the current and future work of OGF applies to this broader landscape. These are just a few of the important deliverables coming out of OGF groups in the past year. More are sure to come so keep your eyes on www.ogf.org/documents for a full listing of current and upcoming publications.

Events

Bringing the OGF community together in open forum at OGF events continues to be an important part of OGF's contribution. OGF was formally launched at the GridWorld/GGF18 event last fall in Washington DC. This event served as a "getting acquainted time" with the new OGF leadership including the Board of Directors. Many of the sessions, including workshops on grids in pharma and finance, were well attended and provided OGF with helpful insight into the challenges facing commercial providers of production grids.

OGF19 in Chapel Hill was an opportunity for our standards groups to "roll up their sleeves" and get important work done. While attendance was relatively small, I can only wonder if the results of that highly productive event for OGF's chartered groups are seen now in the number of documents published since that event.

At OGF20 (Manchester, UK), OGF enjoyed the privilege of co-locating with the EGEE's Second User Forum. This provided a unique opportunity for builders of grid standards and applications to engage with the users of grids in Europe. With over 900 people in attendance and over 20 organizations exhibiting, OGF20 delivered a number of highly relevant sessions including workshops on Campus Grids and Service-Oriented Knowledge Utilities, enterprise-focused content exploring subjects like software licensing, security management, and scaling up to enterprise deployments, workshops on grids in key

industries like Financial Services, Transportation, and Pharma/Life Sciences, and over 60 chartered group sessions including Telco and Storage Networking communities.

With OGF21 (Seattle, October 15-19) just around the corner, the community is gathering once again to work productively on new specifications and explore new technologies such as Web 2.0 and social networking.

Additional Accomplishments

While providing open standards through OGF documents and an open forum through OGF events are key points of OGF's mission, the community was busy in other ways as well. During this first year, four new groups were formed tackling topics like Grids and Virtualization; Build, Test, and Certification; Network Mark-up Language; and a re-formation of a former EGA group building an Enterprise Reference Model for grids.

At OGF19, OGF officially launched its Affiliate program with participation from Japan, Korea, the Netherlands, Israel, and Singapore. This program provides an important two-way communication channel for feedback and alignment on global standardization issues and enables consortia from around the world to experience the benefits of aligning with OGF's global mission.

During Supercomputing 2006, 12 organizations participated in an interoperability demonstration of the High Performance Computing Profile specification. Organizations like Microsoft, Platform Computing, HP, and a number of open source and research projects showed how jobs could be submitted across multiple application platforms using implementations of OGF specifications including Job Submission Description Language (JSDL) and Basic Execution Services (BES). The demonstration was the culmination of a hard-working group of experts who, in a very brief period of time, produced a profile that solved a well-defined problem. I hope this work becomes an example to follow for other well-known challenges to grid adoption we face in the next year.

On the leadership front, ten new Area Directors were appointed and Chris Smith from Platform Computing was named as the new Vice President of Standards. And last, but certainly not least, OGF welcomed 12 new organizational members to its list of organizations committed to accelerating grid adoption in research and industry worldwide.

I hope this "year in review" has helped you see how OGF continues to be a place where relevant and exciting work gets done. As the number and scope of production grids continues to grow in the next year, OGF will face more and more problems to be solved and OGF needs your participation. If you are not currently engaged with OGF, please visit our [website](#) or participate in an upcoming event and see how you can contribute.

Only Two Weeks Left Until OGF21

Please strongly consider attending the OGF21 event in Seattle, Washington on October 15-19. We need you to help close out a great year by continuing the momentum established through OGF19 and 20. OGF21 will feature an exceptional technical working group program, enterprise track focused on Grid use in IT data centers, and workshops on software solutions and scientific applications.

Technical Working Group Program

Over 80 sessions dedicated to advancing the work of OGF's research, community and working groups including OGSA, Reference Model, Virtualization, GLUE, SAGA, GRAAP, and many more! Also, learn about the SC07 demonstration plans of the HPC Profile, Grid Interoperation Now (GIN) and Byte I/O groups.

Enterprise Track

This full day track is dedicated to the emerging application of Grids in enterprises. Sessions will focus on thought leadership and case studies of Grid deployments in the IT data center, grids and server virtualization and data caching applications. Presentations by Boeing, SAS, Platform Computing, Gemstone, Gigaspaces, Intel and others are anticipated.

Software and Solutions Track

The software and solution track features over a dozen sessions dedicated to open-source and commercial software providers discussing their offerings and interacting with grid users and managers on desired features. The software providers will also participate in a round-table discussion on critical requirements to the interoperation of production grids around the world, as identified by OGF's GIN Working Group.

Workshops

Web 2.0 - This full day workshop features presentations on research and commercial applications of Web 2.0 technology including HPC, Cyberinfrastructure, Semantic Research, Social Networking and more.

Geospatial - This half day workshop is a collaboration with the Open Geospatial Consortium (OGC) . Engage on topics such as grid-enabling the OGC's Web Processing Service and a NSF proposal on Community-based Data Interoperability Networks.

GridNet2 - this workshop will highlight the work of the UK eScience at the OGF and in related standards bodies and encourage work across different working groups.

The full program schedule for OGF21 is available [here](#).

DRMAA and GridRPC First OGF/GGF Documents to Achieve “Grid Recommendation” Status

Last month, the Grid Forum Steering Group (GFSG) voted to approve Grid Recommendation status for the DRMAA and GridRPC standards. Achieving Grid Recommendation status signifies that the DRMAA and GridRPC Proposed Recommendations are being adopted within the distributed computing community. The DRMAA and GridRPC proposed recommendations had to pass several hurdles (as documented in OGF document GFD.1, which describes the process by which draft specifications become standards) in order to become Grid Recommendations, including:

- Remain as a proposed recommendation for at least 6 months
- Demonstrate at least two interoperable implementations documented in the form of an “Experience” document
- Go through a 4 month review by at least 3 experts in the subject matter and context of the work
- Be approved by the GFSG verifying the feasibility and utility of the recommendation

DRMAA has multiple implementations for different commercial and freely available DRM systems and a number of usage stories for these implementations. DRMAA also has four published implementation experience report documents including for Condor, PBS/Torque, GridWay and N1™ Grid Engine. More information is available on the [DRMAA website](#) and the [OGF Document Series web page](#).

Implementations of GridRPC include the NetSolve group at the University of Tennessee, Knoxville; the Ninf group at the Tokyo Institute of Technology and the National Institute of Advanced Industrial Science and Technology; the DIET group at INRIA/École Normale Supérieure, Lyon; and the OmniRPC group at Tsukuba University.

Congratulations to the DRMAA and GridRPC teams for being the first in OGF/GGF history to achieve this major milestone!

NOMCOM – Our Open Process for OGF Leaders

While some things have changed during this first year of OGF, one thing remains the same: we remain an open, community-driven organization with leadership that represents the priorities and interests of its participants. One of the many ways this is preserved is through our Nominations Committee (NOMCOM). This committee manages the transparent and open process of identifying and selecting operational leadership for OGF including its At-Large Board members, Vice Presidents and Area Directors. This process results in selected leaders who have a community mandate.

In the coming year, OGF has several leadership positions that need to be filled including the VP and two Area Directors of eScience; Area Directors (AD's) for Architecture, Management, and Infrastructure; and numerous AD's in the Enterprise Function (see full listing [here](#)). Filling these critical positions is the work of the community as a whole and cannot be ignored. The process to fill these positions starts with developing a small team of volunteers who can offer an average of five hours a month over the next ten months to participate in this vital activity of interviewing and recommending new leaders.

We are appealing to individuals who value the work of OGF and its community-driven approach to consider volunteering for the NOMCOM. If you are interested in participating on this year's NOMCOM, please contact [Neil Chue Hong](#) who serves as this year's NOMCOM Chair. Thank you for your consideration of this activity which is vital to future of the organization.

Documents Update

Recently Published Documents

The following document was published in September. Congratulations to the authors and working group members involved in getting this important work accomplished!

DOCUMENT	TITLE	TYPE	AUTHORS	AREA
GFD.117	PBS/Torque DRMAA 1.0 Implementation – Experience Report	Experimental	L. Ciesnik, P. Domagalski, K. Kurowski, P. Lichocki	Applications

Documents in Public Comment

Prior to formally publishing a document, OGF solicits “public comments” from the greater grid community, which is an important step in the OGF document process. The following documents are currently available for public comment. Please take a moment to provide your feedback.

[Distributed Resource Management Application API Specification 1.0](#)

[Grid Certificate Profile](#)

[OGSA Data Architecture](#)

Upcoming Events

- **OGF22 Boston, Massachusetts February 25-29, 2008**
- **OGF23 Barcelona, Spain June 2-6, 2008**
- **OGF24 Singapore September 15-19, 2008**
- **[SC07 Reno, Nevada November, 10-16 2007](#)**

SC07 is the international conference for high performance computing, networking, storage and analysis.

- [SYSTOR 2007 Haifa, Israel October 29-30, 2007](#)

This conference, organized by IBM and the Technion of Haifa, includes two complementary events: A Virtualization Workshop and a Storage Practitioners' Seminar.

- Additional Events

Our calendar page provides a full listing of grid and related technology events for 2007.

Newsletter Contributors Needed

The purpose of the OGF GridConnections newsletter is to inform and educate the greater grid community about our activities and accomplishments. If you have any news you would like to submit for the newsletter, please do not hesitate to do so. You, our members, drive all of the significant events, activities and accomplishments of our community and we would love to hear from you. Just send an email to the [GridConnections editor](#). We welcome your input!

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.