



Spring 2005
Volume 3, Issue 1

GridConnections

News and Information for the Global Grid Forum Community

The Road Ahead: GGF Renews Commitment to Pervasive Grid Adoption

By Mark Linesch, Hewlett Packard
GGF Chair

2005 promises to be another exciting year for the grid community and GGF. Media attention regarding all things “grid” and “utility” continues to grow. Our community is expanding both internationally and commercially as illustrated by GGF13 in Seoul. Progress continues on our flagship Open Grid Services Architecture (OGSA) even as the industry struggles to make sense of overlapping web services standards.

As industry adoption of grid solutions accelerates, the need for GGF leadership and the expectations from our stakeholders continues to grow. GGF is being asked to rise to a new level of leadership based on a foundation of a clear mission and more transparent objectives. The GGF mission must be supported by improvements to the way in which we communicate, collaborate, and operate. To that end, in September of 2004, the GGF Steering Group embarked on an extensive 10 week process to review the GGF strategic direction.

With the approval of the Grid Forum Steering Group and the Grid Forum Advisory Council, we engaged independent consultants to deliver a set of recommendations on the most effective model to ensure the adoption of Grid computing and its associated standards. During the

10-week period, we completed an extensive assessment of GGF and the overall grid landscape—interviewing approximately 40 individuals both within and outside of the GGF worldwide community.

The results of our strategic work and community discussions have re-affirmed the mission of GGF to “lead the pervasive adoption of grid computing for research and industry.” We accomplish this mission by: (1) defining grid specifications that lead to broadly adopted standards and interoperable software; (2) building a broad international community for the exchange of ideas, experiences, requirements, and best practices.

continued on page 5

“Our community is expanding both internationally and commercially...”



INSIDE THIS ISSUE:

- Standards Article 2
- Community Article 3
- Upcoming Events 3
- Group Updates 4
- Document Series 4
- Sponsor Spotlight 5
- GGF People 6

**GGF MISSION:
LEADING THE
PERVASIVE
ADOPTION OF
GRID COMPUTING
FOR RESEARCH
AND INDUSTRY.**

Standards Productivity is Key for GGF in 2005

By David Snelling
Acting Vice-Chair, Standards



A critical component of the GGF mission is to define grid specifications that lead to broadly adopted standards and interoperable software. In this area, the GGF community is asking for clarity regarding the

standards landscape and the roadmap for development and adoption. This will require increased emphasis on communication and continued productivity from GGF workgroups and related standards organizations. We are establishing aggressive objectives in the standards area for 2005. While these objectives were agreed in general terms by the GFSG, they remain to be understood and embraced by the community at-large. Hopefully, this article will aid in that understanding and embracing.

There are three primary objectives for our standards focus, all in the form of published deliverables: 1) GGF Standards Roadmap, 2) Key OGSA Publications, and 3) Other Specifications and Liaison Activities.

GGF Standards Roadmap

The GGF Standards Roadmap will describe a collection of specifications, their possible dependence on other specifications, and an estimated time when the specification will reach, progressively, the stable, standardized, and adopted (by multiple implementations) phases of its lifecycle. The expectation is that the draft roadmap will be presented at GGF14, with formal publication as a GGF Informational Document during 2005.

Key OGSA Publications

With OGSA now described by two different types of document—informational architectural definitions and normative profiles—it is imperative that we continue to make substantial progress toward adoption through the demonstration of multiple implementations. Progress with OGSA during 2005 will be measured through deliverables such as:

- >The OGSA Base Profile V1.0 published as a Proposed Recommendation document with multiple compliant implementations and possible demonstration of interoperability.
- >Publication of Informational documents for OGSA Basic Execution Management and Basic Data Profiles. It is envisioned that both the execution and data profiles have multiple commitments from the software community to comply with the profile as it moves toward Proposed Recommendation status.

Additional Grid Specifications and Liaison Activities

GGF has an extensive pipeline of specifications that are expected to be Proposed Recommendations during 2005. For instance, the WS-Agreement specification, being developed by participants from the Grid Resource Allocation and Agreement Protocol Group (GRAAP-WG) in the Scheduling and Resource Management Area (SRM) has reached public comment stage during the time period this article has been written. Other important specifications involving Data Access and Integration Services (DAIS); Job Submission and Description Language (JSDL); and Grid File Transfer (GridFTP2); will be Proposed Recommendations during 2005. GGF is also working closely with other standards organizations such as OASIS to finalize important contributions such as WSRF—a set of web services specifications resulting from our earlier work with the Open Grid Services Infrastructure (OGSI). GGF has established a new Liaison area to increase collaboration throughout the industry. This is enabling GGF to work more effectively with other standards organizations to better define the overall standards landscape including developing more consistent definitions and taxonomy. While the industry will continue to struggle during 2005 to make sense of overlapping web services standards, GGF continues to look for ways to collaborate and align around common interests and broad adoption.

Progress and productivity in the standards area during 2005 are critical for our software and user communities within GGF and the industry-at-large. I want to thank all of our workgroup leaders and contributors for their outstanding efforts and encourage continued support for our mission during the year.

- >The OGSA V1.5 architectural document published as an Informational document.

“While these goals were agreed in general terms by the GFSG, they remain to be understood and embraced by the community at-large. Hopefully, this article will aid in that understanding and embracing.”

Upcoming Events

GGF14

GGF14 will be held in Chicago, Illinois at the Westin Michigan Avenue from June 26-30, 2005. Located in the heart of the Magnificent Mile in downtown Chicago, GGF14 has something for everyone. Look for additional educational opportunities and community interest sessions as added enhancements to the GGF conference experience. Plan to participate in Working Group and Research Group Sessions as well as BoFs. Your involvement in Chicago will help shape our Plenary Program this fall.

GGF15

GGF15, our global plenary event in October, will have multiple tracks focusing on topics relevant to the several commercial sectors as well as research. As in Brussels, the program will emphasize case studies from the commercial and research enterprise as well as lessons learned from deployed grids. The exact date and east-coast US venue for this meeting will be announced soon.

2006 Events

After two US-based events in 2005, GGF will be covering Europe and Asia with all three meetings in 2005. A candidate venue for GGF16 in Spring 2006 is Athens, Greece. This primarily group meeting will consist of Working Group/Research Group sessions, BoFs and regional plenary sessions designed to showcase the newest grid work from GRNET and other local collaborators. In the summer, we plan on co-locating with GridWorld's 3rd conference in Tokyo in June. The largest Grid event in Japan, the GridWorld conference gathers industry and research on one exhibit floor with session tracks developed by AIST and TITECH to update and educate participants on A/P grid activities. GGF18, planned for Geneva, hosted by CERN, will capture grid activities from the EU and enterprise through a strong plenary program with speakers from top organizations around the globe. Stay tuned to GGF for more news on events!

**Join us in Chicago
for GGF14,
June 26-30.**



“It Takes a Community to Build the Global Grid”

Geoffrey Fox Acting Vice- Chair, Community



In order to pursue our mission of pervasive adoption for research and industry, GGF must continue to foster and manage unique communities of interest. GGF has a rich history of participation from the international research communities and growing interest from industry. Our diverse communities

include technology innovators at the forefront of computer and applied sciences. GGF community members are developers creating interoperable software and grid operators responsible for the day-to-day management of grid solutions. They come from universities, enterprises and research labs. They tackle problems that enable cost-effective utilization and lower cost operation within the enterprise and span large, multi-site grid projects designed to enable scientific collaboration critical to

innovation and government policy around the world. This broad involvement from research, academia, and industry results in robust requirements leading to high quality standards and a growing knowledge base of use cases and best practices.

During 2005, GGF will continue to focus on supporting the work of existing communities while encouraging new areas of growth and expansion around the world. We are in the process of developing a practical set of objectives to

GGF Document Series

Since July 2004, 13 documents have been approved for publication as GGF Published Documents (<http://www.ggf.org/documents/final.htm>).

GFD.31

Open Grid Service Infrastructure Primer Informational Document

Authors: T. Banks, A. Djaoui, S. Parastatidis, A. Mani, S. Tuecke, K. Czajkowski, I. Foster, J. Frey, S. Graham, C. Kesselman, T. Maguire, T. Sandholm, D. Snelling, P. Vanderbilt

GFD.32

Site Requirements for Grid Authentication, Authorization and Accounting Informational Document

Authors: S. Mullen, M. Crawford, M. Lorch, D. Skow

GFD.33

GGF UPDT User Development Tools Survey Informational Document

Authors: S. Balle, R. Hood

GFD.34

Documentation Required to Request Formation of a Working Group in the GGF Community Practice Document

Authors: J. Schopf, P. Clarke, B. Nitzberg, C. Catlett

GFD.35

Management of Grid Services in Production Grids Workshop Informational Document

Author: J. Utley

GFD.36

Optical Network Infrastructure for Grid Informational Document

Authors: D. Simeonidou, R. Nejabati, B. St. Arnaud, M. Beck, P. Clarke, D. B. Hoang, D. Hutchison, G. Karmous-Edwards, T. Lavian, J. Leigh, J. Mambretti, V. Sander, J. Strand, F. Travostino

GFD.37

Networking Issues for Grid Infrastructure Informational Document

Author: V. Sander

GFD.38

Conceptual Grid Authorization Framework and Classification Informational Document

Authors: M. Lorch, B. Cowles, R. Baker, L. Gommans, P. Madsen, A. McNab, L. Ramakrishnan, K. Sankar, D. Skow, M. Thompson

GFD.39

Applications and Programming Tools Informational Document

Author: T. Kielmann

GFD.40

Guidelines for IP version independence in GGF specifications Informational Document

Authors: T. Chown, S. Jiang, J. Bound, P. O'Hanlon

GFD.41

Survey of IPv4 Dependencies in Global Grid Forum Specifications Informational Document

Author: R. Sofia

GFD.42

Authorization Glossary Informational Document

Authors: M. Lorch, M. Thompson

GFD.43

Security Requirements of Advanced Collaborative Environments (ACEs) Informational Document

Authors: D. Agarwal, B. Corrie, J. Leigh, M. Lorch, J. Myers, R. Olson, M. E. Papka, M. Thompson

Group Updates

There are currently 25 Working Groups and 23 Research Groups making a total of 48 groups.

The following groups have been approved since GGF12:

Application Contents Service (ACS-WG)
Grid Storage Management (GSM-WG)
Transaction Management (TM-RG)

support our increased emphasis on communities. Several of these objectives are outlined below to begin the process of dialogue and public comment within GGF.

>One of our most important objectives

is to enable community members to productively participate and contribute. To assist new members just discovering GGF, we are developing a Community Participation Guide outlining how to get the most out of GGF involvement. Each area within the GGF community function will also produce a charter docu-

ment summarizing key interests, activities and deliverables that participants agree are critical to achieving desired results.

>GGF events offer a great way for our diverse communities

to meet and make progress. Starting with GGF14 in Chicago we are planning to increase our community-oriented focus at GGF events—helping to create an environment where participants are productive. We are exploring targeted “tracks” that will allow participants to better connect with the content and activities they are most interested in pursuing.

Stay tuned for more information as we further develop our concepts in this area starting with GGF14.

>One of the great things about GGF communities

is their ability to come together to document use cases, requirements and best practices critical to furthering our knowledge of grids and producing quality standards. During 2005 we will be encouraging our community areas and groups to continue to publish their findings as part of the GGF document series in addition to contributing to the appropriate scien-

tific, technical and industry publications. During 2005, we will also see the completion of significant specifications that will require expertise in developing reference implementations, usability and interoperability testing.

Enabling our traditional and new communities to productively contribute to our mission is an exciting challenge for 2005 and beyond. I am excited to be helping to lead our community focus and working with GGF members to create practical, near term value in your chosen areas of interest.

SponsorSpotlight

K*Grid Project in Korea

By Dr. Jysoo Lee, Director of KISTI Supercomputing Center and Leader of K*Grid Project

The K*Grid project is an initiative in Grid research supported by MIC (Ministry of Information and Communication, Korea) and performed by KISTI (Korea Institute of Science and Technology Information). The main goal of the K*Grid project is to provide an extremely powerful research environment to both industries and academia. The K*Grid project includes the development of national Grid infrastructure and Grid middleware, and the main research topics are in scientific applications and essential software. Supercomputers and high per-



formance clusters are connected to the Grid infrastructure. Grid applications for Bio-technology, Nano-technology and other engineering fields are developed within the K*Grid project. The total budget of K*Grid for five years, from 2002 to 2006, is \$37.5 million. KISTI is a leading institute in Grid research in Korea and more than 50 organizations participate in this project.

The K*Grid project seeks to prove that Grid infrastructure is essential for the Grid middleware and application research, in a sense that it provides a test bed and shows the feasibility of Grid technology. The objective of a seamless computational Grid infrastructure research is to con-

nect supercomputers and high-performance clusters geographically dispersed in Korea with the advanced Grid technologies. Many Grid applications such as CFD, Nano material computing, Bio-technology are studied in the K*Grid project to efficiently fuse Grid technology and application research. These application projects test the state-of-the-art Grid technology, measure the performance of K*Grid infrastructure, and result in new requirements for further development. The construction of K*Grid infrastructure also includes the implementation of an access Grid and of a Grid network operation center. More information on related projects such as the K*Grid Middleware Initiative and MoreDream is available at <http://kmi.moredream.org>.

International collaboration is the key part of Grid research since the philosophy of grid is collaboration. KISTI and Korean Grid research community actively participate in international collaboration activities. KISTI is a member of GGF, PRAGMA (Pacific Rim Applications and Grid Middleware Assembly), APEC-TEL (Asia-Pacific Economic Cooperation-Telecommunication). ApGrid is also a sincere supporter of related international and national collaboration bodies. Many universities and institutes in Korea actively participate in GFK (Grid Forum Korea) to share the Grid resources and research information. KISTI and GFK are very proud to have been a sponsor of the GGF for the last three years and to host GGF13 in March 2005 in Seoul, Korea.

The Road Ahead: GGF Renews Commitment to Pervasive Grid Adoption

continued from page 1

The GGF mission is enabled by a three-fold focus on community and standards supported by efficient operations.



Mark Linesch

First, GGF will continue to foster and manage unique communities of interest to capture require-

ments, share best practices, further research, and accelerate adoption. GGF was founded through a strong commitment from a diverse set of scientific and research communities and these areas will continue to be a critical focus for the organization. As grid continues to become more commercially oriented,

industry communities such as Manufacturing, Finance, Telco, Energy and Pharmaceutical are increasing their participation and contributions to our worldwide efforts. Together, these communities provide a rich diversity of ideas and experiences to further the mission of GGF.

Second, GGF will continue to focus on developing architectures and specifications in collaboration with industry stakeholders that lead to broadly adopted standards with interoperable software implementations. This will require GGF to articulate a clear roadmap and timetable for standards development—setting realistic expecta-

tions, objectives and measures. It will also increase the importance of liaison activities with other standards organizations. Liaison activities are critical for exploring communication mechanisms and projects that can speed the delivery of industry standards while better communicating interactions, dependencies and status to sponsors and the industry at large.

Finally, our mission is supported through efficient operations. During 2005, we will continue to improve the way in which we communicate GGF value to our community, key partners, sponsors, industry analysts and press, while ensuring funding to accomplish our mission and

support our standards and community efforts.

Please take a moment to read more about our community and standards focus for 2005 detailed in the articles written by GFSG leaders Dave Snelling and Geoffrey Fox. I will continue to keep you updated on progress with our strategic plans and improvements and would solicit your continued input. Working together, we can accelerate efforts toward standardization and the pervasive adoption of grid solutions for research and industry worldwide.

GGF People... who's who in the global grid forum

GGF Steering Group (GFSG)*

GFSG Chair

Mark Linesch
Hewlett Packard
linesch@ggf.org

Previous Chair

Charlie Catlett
Argonne National Laboratory
catlett@mcs.anl.gov

Cees de Laat

University of Amsterdam,
liaison with IETF
deLaat@science.uva.nl
AD, Peer-to-Peer

David DeRoure

University of Southampton
dder@ecs.soton.ac.uk
AD, Peer-to-Peer

Geoffrey Fox

University of Indiana
gcf@cs.indiana.edu
AD, Information Systems
and Performance

Andrew Grimshaw

Araki and University of Virginia
grimshaw@cs.virginia.edu
AD, Architecture

Craig Lee

The Aerospace Corporation
craig@rush.aero.org
AD, Applications & Programming
Models

David Martin

IBM
martinde@us.ibm.com
AD, DATA

Satoshi Matsuoka

Tokyo Inst. of Technology
matsu@is.titech.ac.jp
AD, Applications & Programming
Models

Olle Mulmo

Royal Institute of Technology
in Stockholm
mulmo@pdc.kth.se
AD, Security

Bill Nitzberg

Altair Grid Technologies
bill@computer.org
AD, Scheduling &
Resource Management

Stephen Pickles

CSAR HPC center
stephen.pickles@man.ac.uk
AD, Scheduling &
Resource Management

John Tollefsrud

Sun
john.tollefsrud@sun.com
AD, Information Systems
and Performance

Dane Skow

Fermi National Laboratory
dane@fnal.gov
AD, Security

David Snelling

Fujitsu
d.snelling@fle.fujitsu.com
AD, Architecture

Malcolm Atkinson

University of Edinburgh
mpa@nesc.uk
AT LARGE MEMBER

Alan Blatecky

University of North Carolina
blatecky@unc.edu
AT LARGE MEMBER

Dennis Gannon

Indiana University
gannon@cs.indiana.edu
AT LARGE MEMBER

Hiro Kishimoto

Fujitsu
hiro.kishimoto@jp.fujitsu.com
AT LARGE MEMBER

Ken Klingenstein

Internet2
kjk@internet2.edu
AT LARGE MEMBER

GGF External Advisory Committee (GFAC)

GFAC Chair

Bill Feiereisen
Los Alamos National Laboratory
wjf@lanl.gov

Ian Baird

EMC Corp.
Baird_Ian@emc.com

Kyriakos Baxevanidis

CEC
kyriakos.baxevanidis@cec.eu.int

Walt Brooks

NASA
wbrooks@mail.arc.nasa.gov

Frederica Darema

US National Science Foundation
fdarema@nsf.gov

Robert Fogel

Intel Corporation
robert.fogel@intel.com

Ian Foster

Argonne National Laboratory
and The University of Chicago
foster@mcs.anl.gov

Fabrizio Gagliardi

CERN
fabrizio.gagliardi@cern.ch

Tony Hey

EPSRC
tony.hey@epsrc.ac.uk

John S. Hurley

The Boeing Company
john.s.hurley@boeing.com

Lennart Johnsson

University of Houston
johnsson@cs.uh.edu

Sangsan Lee

Dasan Networks
sslee@dasan.co.kr

Yoichi Muraoka

Waseda University
muraoka@waseda.jp

Simon Nicholson

SUN Microsystems and OASIS
simon.nicholson@sun.com

Alexander Reinefeld

ZIB Berlin
ar@zib.de

Mary Anne Scott

US Dept of Energy
scott@er.doe.gov

Satoshi Sekiguchi, AIST

sekiguchi@m.aist.go.jp

Rick Stevens

Argonne National Laboratory
stevens@mcs.anl.gov

Martin Walker

Hewlett Packard
m.walker@hp.com

Irving Wladawsky-Berger

IBM
irving@us.ibm.com

*GFSG membership as of
publication date.

GGF Contact Information

Global Grid Forum

9700 S. Cass Avenue
Building 221-A142
Argonne, Illinois 60439
E office@ggf.org
T 630.252.4300
F 630.252.4466

GGF Office

Steve Crumb
Executive Director
scrumb@ggf.org
Ann Collins
Director of Events & Conferences
collins@ggf.org
Stacy Giannese
Manager of Standard Activities
giannese@ggf.org
Julie Wulf-Knoerzer
Manager of Community Development
wulf@ggf.org

Get involved in the global grid forum community

1

Attend a meeting

GGF14: Chicago
GGF15: Boston (tentative)
GGF16: Athens (tentative)
GGF17: Tokyo
GGF18: Geneva

2

Join a community of interest

3

Join a working or research group

4

Become a sponsor

For more information,
visit www.ggf.org