



Fall 2005  
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# GridConnections

News and Information for the Global Grid Forum Community

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

## GGF Perspectives and Directions – A question of balance?

by Mark Linesch, Hewlett Packard, GGF Chair

As our community gathers for GridWorld/ GGF15, I want to welcome GGF members from around the world and express my gratitude for your hard work and support throughout 2005. Together, we have made great progress on our mission of pervasive adoption.



As industry adoption accelerates, we must continue to rise to a new level of leadership and strike the right balance in support of our diverse communities worldwide. Balance in the way in which we foster and build our academic, research and industry communities; balance in the way we utilize stakeholder input to prioritize our work on architectures and specifications; and balance in the way we encourage interoperability and commercialization through our growing partnerships with grid solution providers.

During 2005, we have taken the first steps on our multi-year journey of improving the way in

which we communicate, collaborate, and operate.

In January we completed a significant strategic process that resulted in a set of proposed enhancements to GGF's operating model. These enhancements were announced in April during GGF13 in Seoul and included an evolution of our Grid Forum Steering Group (GFSG) to provide more focus on three primary functions:

- Community** – building an international community for the exchange of ideas, experiences, requirements, and best practices.
- Standards** – defining grid specifications that lead to broadly adopted standards and interoperable software.

**Operations** – ensuring ongoing support of our mission and communication of our progress.

At our GGF14 meeting this summer in Chicago we transitioned fully to the new GFSG model and aligned our areas

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# NOMCOM – Selecting GGF Leadership

By Dietmar Erwin  
GGF NOMCOM Chair 2005

Over the past five years, GGF has grown from a small BOF at a Supercomputing conference to a global community. During these years, care has been taken to ensure GGF remains an open, community-driven organization with leadership that represents the priorities and interests of its participants. This month marks the completion of the third year of the GGF Nominations Committee (NOMCOM), which manages the process of identifying and selecting leadership for GGF. This article will discuss how NOMCOM is a team as well as a process and will give ideas of how you can get involved in selecting the future leadership of the GGF.



The primary role of NOMCOM is to represent the broader GGF community in the selection of GGF leadership. NOMCOM is first and foremost a team of ten volunteers charged with soliciting, vetting, and recommending candidates to serve on the Grid Forum Steering Group (GFSG) – GGF’s primary steering body. These ten voting members are selected - by a verifiable, random process – from a set of nominees proposed by the broader GGF community. Thus, NOMCOM represents the GGF community during the selection of GGF leadership and it gives the elected GFSG members a community mandate. In addition to the voting members, the GGF Chair appoints three non-voting members: a chairperson who manages the process, an advisor from the previous NOMCOM, and a liaison to GFSG.

In addition to being a team, NOMCOM is also a process, which is currently modeled after the corresponding Internet Engineering Task Force (IETF) process (see RFCs 2777, 3777). The process begins at the last GGF meeting of each year (GGF15 this year) with an appeal for participation on the upcoming NOMCOM team. The chairperson asks for volunteers who are prepared to become voting

members of NOMCOM and announces the future event on which the random selection will be based (for example the results of a national lottery draw at a fixed date in December). All announcements are published prominently on the GGF web site and distributed via the GGF mailing lists.

Once team nominations are collected and the team is selected via the random selection process, the NOMCOM team begins to solicit nominations for the GFSG positions that will become vacant in the coming year. These nominations are collected via email, may include self-nominations, and are kept strictly confidential. In parallel, the team prepares a questionnaire that will be used to collect the information necessary to determine a final set of GFSG candidates. Once nominees commit to the time and travel requirements of a GFSG member, they become one of a set of candidates to be interviewed for an open position. They are then requested to complete the questionnaire and make themselves available for a telephone interview with members of the NOMCOM team. Additionally, a face to face interview of each of the nominees at the mid-year GGF meeting (GGF17 in 2006) is also requested. Based on the written statements from the candidates, their responses during the telephone interviews and the face to face meeting, the voting members decide which of the nominees will be proposed as a candidate for a given position. The NOMCOM chairperson submits the list of candidates to the GGF Chair for confirmation by GFSG. The confirmed candidates are then announced at the last GGF meeting of the year.

All nominations, deliberations and discussions are held in strict confidence. Only the names of those candidates that have been confirmed by the standing GFSG will be announced. It is the role of the NOMCOM chairman to ensure that the process is conducted and completed in a proper and timely fashion. He or she is the primary contact with the candidates and the GGF Chair.

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**“...care has been taken to ensure GGF remains an open, community-driven organization.”**

## Building the Electronic Records Archives of the Future

By Robert B. Chadduck,  
Computer Engineer, NARA



The National Archives and Records Administration (NARA), an annual sponsor of GGF, is building the Electronic Records Archives (ERA). This program is evaluating grid technology for its use in the ERA system.

One of the current projects in ERA's research is the data grid enabled "Transcontinental Persistent Archives Prototype" project. This research is a partnership between NARA, the San Diego Supercomputer Center (SDSC), the University of Maryland Institute for Advanced Computer Studies (UMIACS), and the Georgia Tech Research Institute (GTRI). The purpose of the project is to design and evaluate architecture for a federated persistent archive which can address the requirements for large scale, long term preservation of electronic records.

**"The ERA program has benefited greatly from its sponsorship of GGF and the resulting collaboration with the global grid community—especially with the Preservation Environments Research Group and the Persistent Archives Research Group."**

The persistent archives research at NARA focuses on developing the attributes of a persistent system that will continue to operate over a long period of time and is primarily concerned with the issues of scalability, extensibility, and evolvability.

### Cutting Edge Technology and Forward-Focused Initiatives

Cutting Edge Technology and Forward-Focused Initiatives ERA research has set up a prototype system running on servers at all partner locations that leverages the SDSC's Storage Resource Broker technology (SRB), (a middleware application that uses grid and metadata technologies to transparently manage data), and the metadata catalog (MCAT) to manage NARA designated data collections. The system makes the storage and retrieval of the data stored at these locations transparent to users. One of the key features of the SRB is that it is designed to be scalable, modular and infrastructure independent. Over the course of the first phase of this initiative, several terabytes of data collections will

be ingested, registered and replicated among the four sites over high speed connections.

### Research Partnerships

Partnerships are an important part of the ERA Research program. To explore the possibilities, National Archives has established key partnerships with Federal agencies, state and local governments, universities, other national archives, the scientific community, and private industry, including: the ERA Program partners, the Global Grid Forum, the National Science Foundation, Army Research Laboratory, Digital Library Federation, Department of Defense, Institute of Electrical & Electronic Engineers, International Research on Permanent Authentic Records in Electronic Systems, PDES, NASA, National Center for Supercomputing Applications, and National Institute of Standards and Technology. The ERA program has benefited greatly from its sponsorship of GGF and the resulting collaboration with the global grid community – especially with the Preservation Environments Research Group and the Persistent Archives Research Group.

## GridWorld – A Unique and Powerful Blend is Brewing in Boston

The inaugural GridWorld™ event combines a unique blend of enterprise solutions, technology innovations, and standards activities – all under a single roof. GridWorld brings together experts in the field of grid and distributed computing, end-users and decision makers from a variety of industries and research disciplines; grid solution providers, and analysts from around the world. GridWorld also hosts the Global Grid Forum (GGF) community and our 15th GGF event.

Across industry, research and government enterprise organizations, the growing trend is to focus horizontally within and across organizations for collaborative research and design; process and data integration; resource and information sharing. This trend has been accelerating through the availability of low cost, standardized infrastructure and the widespread adoption of the Internet and Internet-related standards for information, collaboration and commerce.

These trends place increasing demands on organizations to break down existing people, process, and technology silos that inhibit the flow of information, innovation and commerce in our increasingly inter-connected economy. Organizations are challenged to deliver increasing value while reducing costs and maintaining stability as they transform to support this more dynamic, global collaborative environment.

You'll have countless opportunities to explore these and other issues as you collaborate with industry experts and fellow grid users during GridWorld's extensive conference program.

The Enterprise Program focuses on the grid deployment lifecycle, starting with the exploration stage, and moving through initial adoption and deployment. This program is designed to explore issues, trends and technologies while highlighting practical, real-world solutions. The program will also explore Grid-related technologies such as virtualization within the context of the broader evolution of distributed computing that is taking place within the industry.

The Community program features productive interaction with a variety of grid communities to exchange ideas, discuss requirements and explore best practices. This program is for those wishing to dive deeper into technology innovations, grid applications and lessons learned solving problems in advanced grid deployments in research and industry. Issues of security, grid usability, web service performance, and data access and integration will all be discussed. Additionally, sessions will be devoted to open source solutions such as the Globus Toolkit, the Open Middleware Institute's grid middleware offerings, and Edinburgh Parallel Computing Center's OGSA-DAI software.

Throughout the week, architects and technology experts will gather in group sessions to continue their work on interoperable software standards and grid best practices so critical to our GGF mission of pervasive grid adoption. During GridWorld/GGF15,

nearly 40 groups will be collaborating on grid specifications and other deliverables that will promote the standardization of grid technologies.

You'll also have an opportunity to explore the latest in grid solutions at our Sponsor Showcase. Over 20 organizations will be showcasing their grid products and solutions through the event – allowing plenty of time for productive investigation on the state of commercial grid solutions. Many of GGF's annual sponsors are also sponsors of GridWorld/GGF15 because they understand the important role that standardization and commercialization can play in our mission of pervasive adoption. Be sure to talk with the key grid solution providers to see how they can help enable successful grid exploration, adoption and deployment in your organization.

GridWorld/GGF15 is an exciting opportunity to continue the standards and best practice work of our grid community while contributing to enterprise adoption and deployment success. On behalf of the Global Grid Forum and the team at IDC World Expo, we are pleased to bring this unique blend of enterprise and community content, and group sessions along with the Sponsor Showcase to the GGF community. Please give us constructive feedback on our inaugural GridWorld event and let us know how we can improve our efforts in the future.



## NOMCOM – Selecting GGF Leadership...continued from page 2

You as a member of the GGF community have two ways to influence the future leadership of the GGF through the NOMCOM. First, you can volunteer to be part of the NOMCOM team in 2006. Becoming a member starts with a simple email to the NOMCOM Chairman. Self-nomination is perfectly acceptable as is a nomination from someone else in the community. While you need no special credentials to be on the NOMCOM, volun-

teers should be familiar with GGF, its structure, and must have attended at least two out of the last four GGF meetings. Volunteers must commit to 2-3 hours per week to participate in the NOMCOM activities and you cannot be voting member and a nominee for the GFSG at the same time. If you can't participate on the NOMCOM team, a second way to be involved is to nominate individuals from the community to serve as future

leaders in GGF. The success of the NOMCOM is largely based on the number of leadership nominees and their representation of the broader community both geographically and demographically (industry, academia, etc.). Serving on and participating in the NOMCOM process can be a very rewarding experience and is your unique opportunity to engage in the selection of GGF's future leaders.

### NOMCOM 2005 Candidates Confirmed by the GFSG

| <b>Community Function</b>   | <b>Standards Function</b>  | <b>Operations Function</b>   |
|---|--|--|
| <b>Vice Chair of Community</b><br>Robert Fogel, Intel   | <b>Vice Chair of Standards</b><br>David Snelling, Fujitsu                  | <b>Area Director, Marketing</b><br>Miriam Vializ-Briggs, IBM                               |
| <b>Area Director, Research Applications,</b><br>Thilo Kielmann,<br>Free University Amsterdam  | <b>Area Director, Infrastructure</b><br>Cees de Laat,<br>U. of Amsterdam   | <b>Area Director, Sponsorship</b><br>Beth Plale, Indiana U.                                |
| <b>Area Director, Industry Applications,</b><br>Robert Cohen,<br>Economic Strategy Institute  | <b>Area Director, Infrastructure</b><br>Franco Travostino, Nortel          | <b>Area Director, Information Technology</b><br>Andre Merzky,<br>Free University Amsterdam |
| <b>Area Director, Grid Operations</b><br>Ken Klingenstein, Internet2  | <b>Area Director, Compute</b><br>Ramin Yahyapour, U. of Dortmund           |  |
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| <b>Area Director, Technology Innovators,</b><br>Dennis Gannon, Indiana U.   | <b>Area Director, Applications</b><br>Stephen Newhouse, OMII               |  |
| <b>Area Director, Major Grid Projects,</b><br>Victor Alessandrini,<br>IDRIS & DEISA   | <b>Area Director, Liaisons</b><br>Jay Unger, IBM                           |  |
| <b>Area Director, Major Grid Projects,</b><br>Wolfgang Gentsch,<br>D-Grid, MCNC and RENC1   | <b>Area Director, Liaisons</b><br>Matthew Dovey, Oxford<br>eScience Center |  |
| <b>Area Director, Major Grid Projects</b><br>Hai Jin,<br>Huazhong University of Science<br>and Technology,<br>AD, Major Grid Projects – China |  |  |

and groups accordingly. We also made progress on major GGF initiatives such as the: OGSA roadmap and profile process, our standards landscape work in collaboration with other standards organizations, and the announcement of our partnership with IDG World Expo to establish GridWorld as the premier commercial, educational and technical event for grid worldwide. These and other GGF projects are “works in process” and we solicit your continued feedback and support.

As we approach the fall, we celebrate completion of the third year of the GGF Nominations Committee (NOMCOM) process of identifying and selecting leadership for GGF. GGF takes great care to ensure we remain an open, community-driven organization with leadership that represents the priorities and interests of its participants. I want to thank the entire NOMCOM volunteer team for their efforts in managing this critical process during 2005. With the changes to GFSG and the expansion of our Community and Operation functions, this team of dedicated volunteers has worked overtime to identify and recommend an outstanding set of new GFSG leaders. Confirmed candidates will populate the new GFSG structure and/or replace existing GFSG members whose term limits expire this fall. Please take a moment to read more about the outstanding work of the GGF NOMCOM volunteers in this issue of our newsletter and become familiar with the new members of the GFSG.

Our inaugural GridWorld event is also featured in our fall newsletter. GridWorld brings together experts in the field of grid and distributed computing, end-users and decision makers from a variety of industries and research disciplines; grid solution providers, and analysts from around the world. GridWorld also hosts

the Global Grid Forum community and our 15th GGF event. Bringing together this rich mix of grid leaders across many disciplines and perspectives is a challenging opportunity. The experience will be a further test of our “balance” as we come together to explore the commercial benefits of grid solutions while maintaining a productive and collaborative environment for our international GGF community. One of the great things about GGF is that we have a community that is rich in diversity – allowing us to investigate requirements across the academic/research and industry/enterprise spectrum. This allows us to look for the “common themes” that can inform our architectures and specifications while still appreciating the unique requirements of different sectors. So while the differences are important, events such as GridWorld enable us to look for the common elements important to standardization and broad adoption. Please give us constructive feedback regarding the content of our extensive

**“One of the great things about GGF is that we have a community that is rich in diversity – allowing us to investigate requirements across the academic/research and industry/enterprise spectrum.”**

enterprise and community programs and let us know how we can improve our efforts during future events.

Finally, I want to continue to thank our dedicated group participants and GGF staff members for their excellent contributions to our mission of pervasive adoption during 2005. I also want to extend a special welcome to the many new GridWorld participants who have chosen to become part of our growing international community. Together we can continue the standards and best practice work of our grid community while contributing to enterprise adoption and deployment success.



## GGF Document Series

New since GGF14:

### GFD.49

#### Peer-To-Peer Requirements On The Open Grid Services Architecture Framework

Author: *K. Bhatia*

### GFD.50

#### Configuration Description, Deployment, and Lifecycle Management (CDDL) Foundation Document

Authors: *D. Bell, T. Kojo,  
P. Goldsack, S. Loughran,  
D. Milojicic, S. Schaefer,  
J. Tatemura, and P. Toft*

### GFD.51

#### CDDL SmartFrog-Based Language Specification

Author: *P. Goldsack*

### GFD.52

#### A GridRPC Model and API for End-User Applications

Authors: *H. Nakada,  
S. Matsuoka, K. Seymour,  
J. Dongarra, C. Lee,  
H. Casanova*

## Group Updates

New since GGF14:

Open Grid Services Architecture  
Resource Selection Service  
WG (OGSA-RSS-WG)

## Upcoming Events

### GGF16

Join us in Athens for the 16th Global Grid Forum hosted by Greek Research and Technology Network (GRNET) on February 13-16, 2006. The 4 day meeting will take place at the Divani Caravel Hotel ideally situated in the heart of the city. GRNET, together with the GGF Community Council, will offer an exciting regional program that will bring together Greek and other European experts in the field of grid and distributed computing. In addition to the regional program, GGF16 will host the work of our Standards Groups through WG/RC sessions, BoFs and workshops. GGF's community program will emphasize the applications and operation of grids in eScience and other

research environments. The community program will consist of workshops, invited talks, technical tutorials, and demonstrations of standards-based implementations of grid software.

### GGF17/Grid World Japan

The 17th Global Grid Forum will be held in conjunction with Grid World Japan, May 9-12, 2006 in Tokyo. With a robust plenary program organized by AIST and TITECH and an expansive exhibit hall, Grid World Japan is expected to draw over 2500 participants. GGF17 standards work, community sessions and BoFs will run concurrent to the program. More details will be available on the GGF website. Stay tuned for updates!

# GGF NEWS



## Get involved in the global grid forum community

1

#### Attend a Meeting

GGF16: Athens  
February 13-16, 2006  
GGF17/Grid World Japan: Tokyo  
May 9-12, 2006  
GGF18/GridWorld: Boston, TBA

2

#### Join a community of interest

3

#### Join a working or research group

4

#### Become a sponsor

For more information,  
visit [www.ggf.org](http://www.ggf.org).

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

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