



# Grid

# Connections

Spring 2003

Vol. 1 Issue 2

*News and Information for the Global Grid Forum Community*

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## GGF Mission Statement

**To focus on the promotion and development of Grid technologies and applications via the development and documentation of "best practices," implementation guidelines, and specifications.**

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## GGF8, HPDC-12 to Shine in Seattle

Two heavyweights of grid information come together in Seattle, Washington, this June as GGF8 and HPDC-12 are set to provide keynote speeches, panels, updates and tutorials highlighting recent innovations and current developments in grid computing. The 12<sup>th</sup> IEEE International Symposium on High-Performance Grid Computing (HPDC-12) will be held June 22-24 and the 8<sup>th</sup> Global Grid Forum (GGF8) will be held June 24-27, both at the Sheraton Seattle Hotel and Towers.

With the theme "Building Grids: Obstacles and Opportunities," GGF8 will update global grid practitioners, enthusiasts and researchers on the current state of grid technology. The plenary program will run from June 25-27 and feature six keynote speakers—John Gage, Sun Microsystems, Shane Robison, HP, David Wallace, Loughborough University, Gordon Bell, Microsoft Corp., Kenichi Miura, Fujitsu America, and Dr. Luis Rodriguez-Rosello,

European Commission—and special "Grid Debate" panels. Panel topics will include: "Real Grids I (Taxicab Confessions)," "International Grid Infrastructure: Is It Real or Simply a Dream?," and "What Needs to be Done to Achieve International Cooperation on Open Software?". In addition, a town hall meeting will be held to discuss hot grid topics. The full plenary program is available at [www.ggf.org](http://www.ggf.org).

Beyond the plenary sessions, Birds-of-a-Feather (BOFs) sessions, workshops, working group/research group sessions and tutorials will round out the four-day program. The GGF8 program has been developed by a number of dedicated grid practitioners from both research and industry, including Program Co-Chairs Fabrizio Gagliardi, CERN, and Dr. Ian Foster, Argonne National Laboratory and the University of Chicago.

Joint HPDC-12 and GGF8 tutorial

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**Seattle is hosting GGF8. This GGF will proceed in conjunction with the 12<sup>th</sup> IEEE International Symposium on High Performance Grid Computing.**

When we created GGF more than four years ago, one of our objectives was to establish a recommendations process with a document series modeled after the Internet Standards Process (RFCs). Early on, the document series consisted primarily of internal GGF process documents and the occasional Informational document. In the past several months, eleven new documents have been advanced in the series, and these are outlined in the GGF@Work section below. Among these are the first two GGF recommendations track documents to advance to the status of "Proposed Recommendation." These are the Open Grid Services Infrastructure (OGSI) and the Distributed Resource Management Application API (DRMAA). Watch for reference implementations and interoperability tests of these specifications later this year.

An equally important GGF goal also has been to support the creation of a broad grid community where researchers, developers, practitioners and end-users can work together. Indeed this is one of the hallmarks of the GGF meetings—wall to wall multi-disciplinary collaboration across technology layers from bits to ideas.

Taking a page from the open source community playbook, we have created GGF "GridForge" at <http://forge.ggf.org>. GGF GridForge is a persistent cyberspace instantiating of the GGF meetings using portal technology. GGF GridForge provides each GGF working and research group with its own project space and a toolbox including a document repository, forums and bug-tracker technology to streamline and track common requests and activities. GGF Platinum sponsors Hewlett-Packard and Oracle are providing the underlying hardware and database technology to make GGF GridForge powerful,

reliable and scalable. Already, many of the GGF support functions, from interactions in the secretariat to the GGF Editor project, have moved into GGF GridForge. I hope you'll visit GGF GridForge, create your login and help us make it a community.

A number of charter members of our steering group (GFSG) will complete up to four years of service to the community this summer. By GGF9 in Chicago this October, we expect to conclude the first GGF Nominating Committee (NOMCOM). Chaired by Brian Tierney, Lawrence Berkeley National Laboratory, NOMCOM was convened in April to function as a search committee to evaluate and recommend candidates for the GGF Steering Committee (GFSG) this year. The NOMCOM process is detailed in RFC 2727, and we anticipate using this process annually. For details see [www.ggf.org/nomcom](http://www.ggf.org/nomcom).

Beginning with GGF9, we plan to convene only working sessions for the October and February/March meetings. Our annual summer meetings will continue to feature a full set of conference offerings, and we expect those meetings to expand in scope and participation. **GGF**



**Charlie Catlett**  
GGF Chairman  
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## GGF@WORK

## GGF Document Series

During the first half of 2003, the GGF Editor project established a public comment website hosted by Sourceforge.net at <http://sourceforge.net/projects/ggf>. As of June 2003, 11 drafts have advanced in the document process to either complete as Informational or Community Practice, or from draft to Proposed Recommendation.

As noted in GFD-C.1, Informational documents (GFD-I) do not define or propose standards or recommendation, but are intended to inform the community of interesting approaches and useful ideas. Community Practices Documents (GFC-C) inform the community of useful common processes, structures or practices.

As of June 2003, two Recommendations track drafts (OGSI and DRMAA) completed a GFSG review and a 60-day public comment period. As outlined in GFD-C.1, these drafts advanced to Proposed Recommendation. In order for these specifications to become GGF Recommendations (analogous to an RFC becoming an Internet Standard), there must be demonstrated operational experience over a period of at least six months with at least two inter-operable implementations. GFD-C.1 also calls for a formal external review and an additional public comment period prior to advancement to GGF Recommendation. **GGF**

Type	Title	Authors/Editors	Area
INFO	Overview of Grid Computing Environments	G. Fox, M. Pierce, D. Gannon, M. Thomas	APME
INFO	Grid User Services Common Practices	J. Towns, J. Ferguson, D. Frederick, G. Myers	APME
INFO	Grid Scheduling Dictionary of Terms and Keywords	M. Roehrig, W. Ziegler, P. Wieder	SRM
INFO	Security Implications of Typical Grid Computing Usage Scenarios	M. Humphrey, M. Thompson	SEC
INFO	An Analysis of the UNICORE Security Model	T. Goss-Walter, R. Letz, T. Kentemich, H.C. Hoppe, P. Wieder	SEC
CP	CA-based Trust Issues for Grid Authentication and Identity Delegation	M. Thompson, D. Olson, R. Cowles, S. Mullen, Mike Helm	SEC
CP	Global Grid Forum Certificate Policy Model	R. Butler, T. Genovese	SEC
REC-P	Open Grid Services Infrastructure (OGSI)	(Editors) S. Tuecke, K. Czajkowski, I. Foster, J. Frey, S. Graham, C. Kesselman, T. Maquire, T. Sandholm, D. Snelling, P. Vanderbilt,	ARCH
REC-P	Distributed Resource Management Application API Specification 1.0 (DRMAA)	R. Brobst, W. Chan, F. Ferstl, J. Gardiner, J. P. Robarts, A. Haas, B. Nitzberg, H. Rajic, J. Tollefsrud	SRM
INFO	Grid Database Access and Integration (DAIS): Requirements and Functionalities	M. P. Atkinson, V. Dialani, L. Guy, I. Narang, N.W. Paton, D. Pearson, T. Storey, P. Watson	DATA
INFO	Services for Data Access and Data Processing on Grids	V. Raman, I. Narang, C. Crone, L. Haas, S. Malaika, T. Mukai, D. Wolfson, C. Baru	DATA

## Working & Research Groups

GGF is now comprised of more than 40 working and research groups. A working group is generally focused on a specific technology or issue with the intention to develop one or more documents aimed at providing specifications, guidelines or recommendations. A research group is often longer-term focused,

intending to explore an area where it may be premature to develop specifications.

The groups listed below are currently active. Participation in groups can be electronic and/or in person at GGF meetings (held three times/year). For more information, visit [www.ggf.org](http://www.ggf.org). **GGF**

Area	Working Groups	Research Groups
Applications and Programming Models Environments (APME)	<ul style="list-style-type: none"> <li>• Grid Checkpoint Recovery (GridCPR-WG)</li> <li>• Grid Remote Procedure Call (GridRPC-WG)</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Collaborative Environments (ACE-RG)</li> <li>• Advanced Programming Models (APM-RG)</li> <li>• Applications and Test Beds (APPS-RG)</li> <li>• Grid Computing Environments (GCE-RG)</li> <li>• Grid User Services (GUS-RG)</li> <li>• Life Sciences Grid (LSG-RG)</li> <li>• Production Grid Management (PGM-RG)</li> <li>• User Program Development Tools (UPDT-RG)</li> </ul>
Architecture (ARCH)	<ul style="list-style-type: none"> <li>• New Productivity Initiative (NPI-WG)</li> <li>• Open Grid Services Architecture (OGSA-WG)</li> <li>• Open Grid Services Interface (OGSI-WG)</li> </ul>	<ul style="list-style-type: none"> <li>• Grid Protocol Architecture (GPA-RG)</li> <li>• Semantic Grid (SEM-RG)</li> <li>• Service Management Frameworks (SMF-RG)</li> </ul>
Data	<ul style="list-style-type: none"> <li>• Data Access &amp; Integr. Services (DAIS-WG)</li> <li>• GridFTP-WG</li> </ul>	<ul style="list-style-type: none"> <li>• Data Replication (REP-RG)</li> <li>• Data Transport (DT-RG)</li> <li>• Grid High-Performance Networking (GHPN-RG)</li> <li>• Persistent Archives (PA-RG)</li> </ul>
Grid Security (GRID SEC)	<ul style="list-style-type: none"> <li>• Authorization Frameworks and Mechanisms (AuthZ-WG)</li> <li>• CA Ops (CAOPs-WG)</li> <li>• Grid Certificate Policy (GCP-WG)</li> <li>• Grid Security Infrastructure (OGSA-SEC-WG)</li> <li>• Open Grid Service Architecture Security (GSI-WG)</li> </ul>	<ul style="list-style-type: none"> <li>• Site Authentication, Authorization and Accounting Requirements (SAAA-RG)</li> </ul>
Information Systems and Performance (ISP)	<ul style="list-style-type: none"> <li>• CIM based Grid Schema (CGS-WG)</li> <li>• Discovery and Monitoring Event Description (DAMED-WG)</li> <li>• Grid Information Retrieval (GIR-WG)</li> <li>• Network Measurement (NM-WG)</li> </ul>	<ul style="list-style-type: none"> <li>• Grid Benchmarking (GB-RG)</li> <li>• Relational Grid Information Services (RGIS-RG)</li> </ul>
Peer-to-Peer (P2P)		<ul style="list-style-type: none"> <li>• Appliance Aggregation (APPAGG-RG)</li> <li>• OGSA-P2P-Security (OGSAP2P-RG)</li> </ul>
Scheduling and Resource Management (SRM)	<ul style="list-style-type: none"> <li>• Distributed Resource Management Application API (DRMAA-WG)</li> <li>• Grid Economic Services Architecture (GESAWG)</li> <li>• Grid Resource Allocation Agreement Protocol (GRAAP-WG)</li> <li>• OGSA Resource Usage Service (RUS-WG)</li> <li>• Scheduling Dictionary (SD-WG)</li> <li>• Usage Record (UR-WG)</li> </ul>	

# Grid Computing: The Technology is Ready, But Are You?

Early adopters of grid computing already recognize its true potential as a way to enable virtualization of computer resources to solve real business issues. Technological concerns, such as standards, security, and data sharing, are being addressed and aggressively resolved by the broader grid community.

However, one of the biggest challenges in implementing grids is not being addressed with the push to resolve technical barriers—it is overcoming organizational politics. Global 2000 organizations are beginning to identify major internal obstacles to grids ranging from loss of control to budgetary issues. “Server-hugging” has become an often-heard phrase, as users are confronted by the requirement to share resources with others. There is also a somewhat intimidating perception that grid computing has to start at a global or enterprise level, which is not always the case—in fact, we recommend that most organizations start by grid-enabling one or two applications in one

department to demonstrate return on investment before rolling a grid out across the entire firm.

Organizations cannot be efficient in servicing their customers when operational silos exist. A business cannot generate incremental revenues when the technology infrastructure supporting a particular business process or line of business is too lean to handle the current volume of work. This is even more frustrating when another business division is down-sizing and has available resources that are sitting idle. When internal politics limit insight into the utilization and availability of enterprise-wide resources, organizations are hard pressed to anticipate or respond to the demands of their own user community and business processes, let alone new customers.

The only way to overcome the organizational politics of grid and implement an IT infrastructure that truly meets business

demands is for an organization to change its attitudes and perceptions and develop policies for sharing, collaboration and open communications. To do this, every organization must clearly address concerns about budget ownership, loss of control over data and resources, and organizational change as part of the methodology of building grids.

A survey recently commissioned by Platform Computing revealed that 89% of respondents feel that internal politics, such as ‘server-hugging’, create significant barriers to widespread grid adoption. The study is the first to investigate the non-technical obstacles to grid computing, with a view to helping organizations gain internal support by educating people within all levels of an organization—from the IT manager to the CEO—about the business benefits of grid computing.

A full report on Platform’s survey results is available at [www.platform.com/barriers](http://www.platform.com/barriers).

—This article was edited from one authored by Dr. Ian Baird, Platform Computing **GGF**

## GGF NEWS

*Continued from p. 1*

### GGF8 Set for Seattle in June

sessions will be held on Sunday, Tuesday and Friday during the week and will provide participants an opportunity to learn about some of the hottest Grid topics today in a more focused, informal environment. The current confirmed topics for the tutorials include: “Security in Open Scientific Facilities,” “Industry Experiences with Grids,” and “Access Grid: Experiences in Collaboration on the Grid.” Tutorial fees are separate from the plenary sessions, but those who register in advance for the tutorials will receive a 50% savings (see [www.ggf.org/meetings/ggf8/tutorials.htm](http://www.ggf.org/meetings/ggf8/tutorials.htm) for more information).

Registration for the meeting is underway with more than 400 attendees already confirmed. For advance registration, the cost to government/academic GGF members is U.S. \$550 (nonmembers \$650). The cost to industry GGF members is U.S. \$700 (nonmembers \$800). Respectively, on-site registration fees will be U.S. \$700, \$850, \$800 and \$950. To register in advance for the GGF8 tutorials, the cost is U.S. \$225 (U.S. \$400 on-site). To register for GGF8 or for more information on the meeting, visit [www.ggf.org](http://www.ggf.org) or contact Ann Collins, Manager-Events & Conferences, at [collins@ggf.org](mailto:collins@ggf.org).

HPDC-12 will be a forum for presenting the latest research findings on the design and use of highly networked systems for computing, collaboration, data, analysis and other innovative tasks. The current topics scheduled for presentation include software environments and language support, application studies, data grids, peer to peer, clusters, resource management and terabit networks.

For information on HPDC-12, visit [www.csag.ucsd.edu/HPDC-12](http://www.csag.ucsd.edu/HPDC-12). Registration is U.S. \$600 (IEEE members) and \$750 (nonmembers). Receive additional savings when registering for both meetings. **GGF**

### Grid School Website Up, More Than 100 Applications Received

Preparations for the 2003 International School on Grid Computing are proceeding (see “Hands-On Grid Computing School Formed,” Winter ’03 *Grid Connections*). The topical school, to be held in Vico Equense, Italy (near Naples) July 13-25, 2003, will provide an in-depth introduction to grid technologies and applications.

A website for the school has been established at [www.dma.unina.it/~murl/SummerSchool/](http://www.dma.unina.it/~murl/SummerSchool/) for information on applying, logistics and cost. The school’s curriculum is in the process of being finalized. It will cover widely deployed grid middleware (for example, Globus, Condor and Unicore), as well as grid and data services. In addition, focused lectures on specialized topics in applications and experiences with bringing up production grids will be explored. Students without a background in grid technologies will be offered an introductory tutorial on July 12 and 13.

Questions regarding the school should be addressed to [grid-school@ggf.org](mailto:grid-school@ggf.org). Visit the website for further updates. **GGF**

### GlobusWORLD The Sequel Opens January ‘04

GlobusWORLD is scheduled for another success from January 19-23, 2004 in San Francisco, California. The conference will feature three tracks of invited speakers, interactive panels and roundtables on grid computing. Sponsors and speakers are being sought for the conference.

This conference follows the successful first GlobusWORLD held in January 2003, which attracted more than 450 attendees from 25 countries. For more information, visit [www.globusworld.org](http://www.globusworld.org). **GGF**



## GGF7 Lights Up Tokyo With ‘Grids Around the World’

Held March 4-7, 2003 in Tokyo, Japan, GGF7 “Grids Around the World” was the first GGF to be held in the Asia-Pacific. Hosted by Japan’s National Institute of Advanced Industrial Science and Technology (AIST) and the Tokyo Institute of Technology (TITECH) with strong support from inSORS, IBM, Qwest, Epson and Hitachi, the meeting attracted more than 800 members of the global grid community, including 365 attendees from Asia-Pacific, 250 from North America and 180 from Europe (29 total countries represented).

Highlights of the meeting included keynote addresses by Dr. Ian Foster, Argonne National Laboratory and the Univ. of Chicago, and Eng Lim Goh, Ph.D, Chief Technology Officer, SGI. In addition, a panel discussion on the state of grids, hype vs. reality and the role of GGF was moderated by Tom Tabor, *GRIDtoday*.

A key focus of the meeting, “Grids Around the World,” was aptly demonstrated by the use of collaborative grid tools. Remote GGF members who were unable to attend the proceedings in person were able to participate using the inSORS Grid and the underlying Access Grid technology. Remote participants included several sites from Korea, Germany, the United Kingdom, Amsterdam and the U.S. Participation levels varied from viewers of the training session to interactive participants in many of the working group and research group sessions. These sessions were recorded and are now available from inSORS. To schedule a playback session, email Jim Miller at [jmiller@insors.com](mailto:jmiller@insors.com).

Other happenings at the meeting included 30 working and research group sessions, eight Birds-of-a-Feather (BOF) sessions (indicating potential new working groups) and an Asia/Pacific Expo Day that allowed an additional 100 Asia-Pacific grid enthusiasts to attend the plenary sessions and working and research group meetings.

In a move toward the future, 10 travel scholarships were awarded to grid students from seven different countries in order to enable their GGF7 participation. **GGF**

## GMAC Meeting Set for GGF8

Initiated in January 2003, the GGF Market Awareness Committee (GMAC) has been established to facilitate information and education dissemination for global grids to the scientific and industrial community. With the growth of the grid tool services and applications, the need for this council has grown to ensure that only accurate and current information on grid technologies, application and experiences is distributed.

The preliminary objectives for the GMAC are: to build awareness of grid applications and related technologies; to promote adoption of GGF specifications; and to engage the broadest spectrum of expertise necessary to ensure success.

The next meeting of GMAC is scheduled at GGF8 on June 25 in the format of a GGF Birds-of-a-Feather (BOF) session. The GMAC is open to all interested members of the GGF community and will conduct its activities in accordance with GGF policies and procedures. Subscribe to the GMAC discussion list by sending email to [majordomo@ggf.org](mailto:majordomo@ggf.org) with a single line of text in the message body “subscribe gmac <your email address>.”

For more information, see “Market Awareness Council Established,” Winter ‘03 *Grid Connections*, or [www.ggf.org](http://www.ggf.org). **GGF**

## APAC ’03 to Serve as GGF-RIG

The APAC ’03 Conference and Exhibition on Advanced Computing, Grid Applications and eResearch will be held at the Royal Pines Resort, Gold Coast, Queensland, Australia, September 29-October 2, 2003. Hosted by the Australian Partnership for Advanced Computing (APAC) and the Queensland Parallel Supercomputing Foundation (QPSF), APAC is a GGF Regional Interest Group (GGF-RIG).

Keynote speakers at the conference will outline the latest research trends. In addition, tutorials will be offered by leading practitioners to provide material on advanced computing and grid technologies. For more information on APAC ’03 or to submit a paper to the conference, visit [www.apac.edu.au](http://www.apac.edu.au). **GGF**

## MEMBERSHIP UPDATE

### GGF Welcomes New Sponsor Members for Y2003

GGF would like to welcome the following organizations as new sponsor members for Y2003 (since the Winter ‘03 *Grid Connections*):

- Dell;
- Hitachi Electrical Services, Ltd.;
- KISTI
- Mountain View Data;
- NEC System Technologies;
- Vision Solutions, Inc. **GGF**

## Y2003 Sponsors Agree: Membership Has its Priviledges

It’s a great time for grid computing and for those organizations that can tout their involvement and dedication to making grid computing happen! GGF counts more than 50 organizations among its Y2003 Sponsor Members already. Is your organization one of the visionary companies making grid computing REAL?

GGF Sponsor Members enjoy valuable benefits for their commitment including:

- recognition within the global grid community;
- GGF individual memberships waivers;
- featured “Sponsor News” section on the GGF web;
- opportunity to contribute editorial pieces for *GGF Grid Connections* (quarterly newsletter with more than 5000 distribution);
- special sponsor registration privileges to GGF meetings;

- opportunity to showcase grid computing efforts and initiatives at GGF meetings;
- priority access to the GGF media/press community (more than 500 members) for sponsor announcements and other news;
- featured content in GGF outreach and community efforts.

Y2003 Sponsor Memberships range from Bronze (U.S. \$2500/year) to Charter (more than U.S. \$50,000/year) and can be arranged with a simple email inquiry to [membership@ggf.org](mailto:membership@ggf.org). GGF can’t succeed without the support of the world’s grid computing leaders. Can your organization be a grid computing leader without the support of the GGF community? Become a GGF Sponsor and together we can ensure that the potential for grid computing is realized! **GGF**

## UPCOMING EVENTS

### GGF Meetings

June 25-27, 2003	GGF8 (with HPDC-12, June 22-24, 2003)	Seattle, Washington, U.S.
October 5-8, 2003	GGF9—Working Sessions Only	Chicago, Illinois, U.S.
March 8-11, 2004	GGF10—Working Sessions Only	Frankfurt, Germany
June 2004	GGF11	Honolulu, Hawaii, U.S.

**A full list of upcoming GGF meetings is available at [www.ggf.org](http://www.ggf.org).**

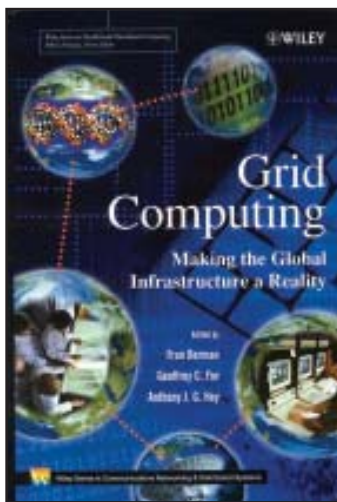
### Grid-Related Meetings

June 2-4, 2003	ICCS Conference, Workshop on Innovative Solutions for Grid Computing and Terascale Performance Analysis Workshop	Melbourne, Australia
June 5-6, 2003	Workshop on Economics of Peer-to-Peer Systems	Berkeley, California, U.S.
June 22-24, 2003	HPDC-12—12 <sup>th</sup> IEEE International Symposium on High Performance Distributed Computing (held in conjunction with GGF8)	Seattle, Washington, U.S.
June 22-24, 2003	AMS 2003—Autonomic Computing Workshop will be held in conjunction with HPDC-12	Seattle, Washington, U.S.
June 23-26, 2003	The ClusterWorld and Clustering Technology Excellence Awards	San Jose, California, U.S.
June 23-26, 2003	First International Conference on Web Services (ICW'03)	Las Vegas, Nevada, U.S.
June 25, 2003	Autonomic Computing Workshop—5 <sup>th</sup> International Workshop on Active Middleware Services	Seattle, Washington, U.S.
June 2003	WACE (held in conjunction with HPDC-12)	Seattle, Washington, U.S.
July 13-25, 2003	First International Grid Computing School	Vico Equense (Naples), Italy
September 9-10, 2003	Applications Grid Workshop (AGW)	Czestochowa, Poland
Sept. 29-Oct. 2, 2003	APAC '03	Queensland, Australia
Sep 29-Oct 2, 2003	EuroPVMMPI 2003 The European PVM/MPI Users' Group Conference	Venice, Italy
November 17, 2003	4 <sup>th</sup> International Workshop on Grid Computing	Phoenix, Arizona, U.S.

**A full list of upcoming grid-related events is available at [www.ggf.org](http://www.ggf.org).**

## NOVEL SOLUTIONS

### Berman, Fox and Hey Make A Decade of Grid Work Informative, Insightful Grid Computing: Making the Global Infrastructure a Reality



There has been a fair amount of “hype” about grid technology lately, and hype usually comes with the connotation that there is not much substance under the surface.

Normally when we see a book of this sort—a compilation of papers—we flip through the table of contents expecting to see a couple of papers we might want to read, expecting that most of the papers will be esoteric or marginally interesting filler. An hour investment of reading and we are up to speed, then onto the bookshelf for reference and intellectual decoration. After a couple of years, most of the content is at best historical, certainly no longer interesting.

We had a different response when we picked up “Grid Computing: Making the Global

Infrastructure a Reality” by Fran Berman, Geoffrey Fox and Anthony Hey. The editors have combed through a decade of papers on grid computing and have put together a veritable “proceedings” of grid computing. We find a mix of interesting papers that have stood the test of time, along with some of the most interesting recent work.

The only problem we have with this book is that it’s going to weigh down a backpack for quite a while, because we’ve got a lot of reading to do, and it’s going to take much longer than an hour.

—This book review was authored by the GGF Book Club. Have a suggestion for a grid computing book to review? Email it to [info@ggf.org](mailto:info@ggf.org). Interested in ordering this book? Contact [info@ggf.org](mailto:info@ggf.org) for special ordering opportunities for GGF members.

**GGF**

For the full articles, visit *In the News* at [www.ggf.org](http://www.ggf.org).

**United Devices Looks for Smallpox Cure with Defense Department**—The U.S. Department of Defense has turned to grid computing specialist United Devices for a new project that will help scientists search for a cure for the smallpox virus. The Defense Department and IBM have funded the project, which will link millions of computers together to form a kind of decentralized supercomputer. The organizations are looking for both businesses and individuals to donate their computer's idle time to the protein analysis that is the thrust of the project, said Michael R. Nelson, director of Internet technology and strategy at IBM. "The groups hope to find a cure for smallpox that will be used after a person has been infected by the virus. "United Devices has already recruited millions of people to donate their computer cycles," Nelson said. "We are really showing that you can solve real world problems with our technology."—*Network World Fusion*

**New Services Aim: Accelerate Grid Deployment**—Grid software vendor United Devices this week announced three new services that are designed to speed the deployment of grids in life science companies. The three service offerings are called the Grid Discovery, Grid Explorer, and Grid Navigator programs, and are aimed at corporations, independent software vendors (ISVs), and systems integrators, respectively. With the Grid Discovery service, United Devices comes into a life science company and helps evaluate how grid technology will help. "Its for companies who are curious about grids and want to know how their enterprise would benefit," says Jikku Venkat, United Devices' CTO.—*Bio-IT World*

**Grid Computing Oracle Style**—Oracle has been at the forefront of database technology for a long time. They have also embraced the Linux environment in a big way. Now they've gone a step further, developing industrial strength database applications that run on clusters of commodity blade servers or grids. As we will see, they have produced bulletproof, scalable systems that should warm the heart of any CIO. Benny Souder is Vice President of Oracle Distributed Database Development. In a recent interview, he talked about Oracle's 9i product, the Linux-based grid platform, and ways that the combination benefit the customers. "The main idea behind a grid is that it is thought of as a utility. Much like the electrical utility grid. The client and user don't necessarily know where the computers or data reside or how it got there, just that it is available with high reliability...Many tasks go on behind the scene (in both industries) to make the resources available, any time, any where."—*LinuxPlanet.com*



**Grid Computing Becomes Strategic**—Making the most out of your existing resources is a sound business strategy in today's wait-and-see economy. But one potential solution, grid computing...seemed too large an undertaking for most enterprises outside the research community. IBM's recent introduction of 10 grid offerings targeting the financial, life sciences, automotive, aerospace, and government markets is the latest attempt to change that perception. John Wark, president and CEO of Entropia Inc., calls this latest announcement by IBM "a milestone for grid computing." While past announcements have laid out the vision of grid computing, these offerings are part of IBM's go-to market strategy, which reinforces the messages that "this technology is important, the major vendors are embracing it, and it is something that people need to be looking at and thinking about."—*Intelligent Enterprise*

**Word of the Day**—At WHATIS.COM, the Word-of-the-Day for April 30, 2003 was grid computing. To quote the website, "Grid computing (or the use of a computational grid) is applying the resources of many computers in a network to a single problem at the same time—usually to a scientific or technical problem that requires a great number of computer processing cycles or access to large amounts of data."—*WHATIS.COM*

**IBM Stretches Grid Business**—IBM has expanded its effort to commercialize the formerly academic concept of grids, groups of computers and storage systems linked together to tackle difficult computing tasks. IBM will announce Monday that it has sold grid systems to three major customers—RBC Insurance, Kansei Electric Power and Royal Dutch Shell—and is offering grid technology packages for four new types of customers. Big Blue also signed on several new software partners as well as Cisco Systems, which will provide switching equipment for grid data storage.—*News.com*

**PCs Help Speed Pharmaceutical Discovery**—Rich Vissa is perhaps a rare case: a technologist whose job lets him be a humanist. Vissa heads up information technology for the research arm of Bristol-Myers Squibb Co., an \$18 billion drug maker. "As an IT guy, I know that the stuff I'm working on is improving mankind's lot," he said. "Not too many IT guys can say their mission is to extend and enhance human life." The past two years, Vissa and his staff have built a grid computer using over 2000 PCs on the desktops of Bristol-Myers researchers in New Jersey and Connecticut. New grid software from Platform Computing Inc. of Toronto is used to harness the idle compute power of those desktop PCs. Bristol-Myers scientists use their grid to run virtual drug screenings. The process simulates the way hundreds of thousands of molecules bind with disease-related proteins. It's much less costly to run the tests on computers than in labs.—*Investor's Business Daily*

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