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GridConnections

News and Information for the Global Grid Forum Community

New GGF Chair Plans to Listen, Leverage, Lead

An interview with Mark Linesch, Hewlett Packard (linesch@ggf.org)

GC: What do you think our readers need to know about your background and your approach to this new appointment as GGF Chair?

ML: While it's difficult to capture a career that spans over 20 years in the computer industry in a few sentences, I can certainly understand that many in the GGF community are probably wondering "Who the heck is this guy?" I guess the short answer is that I am someone who has a passion for emerging technologies and markets; extensive experience in strategy, partnerships and new business development; and a strong belief that the architectural and standards work of the GGF are absolutely critical to enabling the next generation of distributed computing.

I would not really classify myself as "a marketing guy"—although I have managed hardware, software and solution marketing organizations. I would not call myself a "technology guy" either— although I have managed software and solution engineering teams. I guess the best description would be to call me a "business guy" — someone who understands how to develop strategy, prioritize work and collaborate across different communities of interest to enable a vision and/or reach milestones.

As chairman of the GGF, I would hope to build on the success of the founding members while increasing collabora-

tion with the research, industry and standards communities. This will require a balanced approach — continuing to evolve the vision; driving consensus on priorities; adapting to the practical realities of industry so that the architectural concepts and standards can be broadly adopted and commercialized.

GC: As a member of a commercial enterprise, do you think your appointment sends a message to the scientific research community that they are no longer needed or important?

ML: During my years at Texas Instruments working on artificial intelligence, I had the opportunity to work extensively with the scientific research community and thoroughly enjoyed the experience. At HP, I have worked closely with HP Labs and the extended HP research and business communities concerned with next generation Internet, grid and distributed computing. My perspective is that while research and industry are sometimes different in their goals, requirements, incentives and measurements, this diversity can be a great source of strength— particularly when aligned around the right vision. I believe that to enable this

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THE GLOBAL GRID FORUM (GGF) IS A COMMUNITY-INITIATED FORUM OF THOUSANDS OF INDIVIDUALS FROM INDUSTRY AND RESEARCH LEADING THE GLOBAL STANDARDIZATION EFFORT FOR GRID COMPUTING.

GGF'S PRIMARY OBJECTIVES ARE TO ACCELERATE THE CREATION, DEPLOYMENT AND IMPLEMENTATION OF GRID TECHNOLOGIES AND APPLICATIONS VIA 'BEST PRACTICES'—TECHNICAL SPECIFICATIONS, USER EXPERIENCES AND IMPLEMENTATION GUIDELINES.



FRIENDS,

As you know, I announced in March of this year that I would conclude my tenure as GGF Chair as of GGF12, marking the completion of five years in that role. I'm delighted to introduce Mark Linesch as the next GGF Chair beginning with GGF-12 in September. Our search process began with a search subcommittee of the GFSG who narrowed the field to a small number of finalists. The GFSG and GFAC interviewed these finalists and selected Mark by an overwhelming majority. Mark has two decades of experience in emerging technologies - collaborating both with commercial and science/research organizations to develop innovative strategies, products and solutions. He is a results-oriented executive with track record of leadership, performance and industry collaboration. Mark will operate on a full time basis as an independent GGF Chair, with support from Hewlett-Packard. He will begin his three-year term at GGF-12 in Brussels.

During the past five years we as a community have grown from a small group of primarily academic researchers to become the preeminent Grid standards body today, with participation from over 30 countries and 500 organizations worldwide. Our flagship architecture, OGSA, has emerged from the work of individuals from over 60 companies and as many research organizations— experts from the science community working shoulder-to-shoulder with commercial product designers and developers.

Participation from end-users has also expanded over the past few years, so we are a real melting pot.

This is GGF. We are an ecosystem comprised of multiple strong, collaborating communities. Mark will start the job with a tremendous advantage—a very strong GGF Steering Committee that includes international leaders from throughout the GGF community. I'm very proud of what we have accomplished together, but more importantly I am enthusiastic about what we can now accomplish on the foundation we've built. The search process helped all of us on the GGF leadership team to think carefully about the needs of the GGF community and the work we do, where we are today, and where we need to go. Having participated fully in the search process I am convinced that Mark brings the leadership skills and experience that are precisely what we need moving forward.


In my final Chairman's Forum I want to express my admiration and appreciation for the people who have made GGF what it is today. We have an outstanding leadership team in the GFSG and the GFAC, an amazing GGF Secretariat, and we have now over 100 individuals who work hard as group chairs, leading and organizing our working groups and research groups. I'm grateful that I have had the privilege of chairing this community!

Charlie Catlett
Retiring GGF Chairman
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SponsorSpotlight

GGF Sponsor Wins Computerworld 21st Century Achievement Award

United Devices Receives "Best IT Application in the World in Medicine"

 United Devices, a leading provider of enterprise grid solutions, recently received the coveted 21st-Century Achievement Award from the Computerworld Honors Program for visionary use of information technology in the category of Medicine. The win represents a significant achievement in the growth of the grid computing industry, which is rapidly maturing and moving toward standardization as more and more companies adopt the technology as a permanent IT fixture.

"Recipients of the Computerworld Honors 21st-Century Achievement Awards represent those organizations whose use of information technology has been especially noteworthy for

the originality of its conception, the breadth of its vision, and the significance of its benefit to society," said Daniel Morrow, Executive Director of the Computerworld Honors Program. Nominated by IBM, United Devices was one of 11 winners announced from a pool of over 300 nominations.

United Devices was selected for its creation and ongoing management of Grid.org, a massive resource for research projects of global significance. One of the largest public compute resources in existence, Grid.org aggregates the computer capacity of volunteers worldwide to locate drug candidates for target diseases through grand-scale in silico life science research. Over 2.5 million systems in over 225 countries and territories power Grid.org, offering their unused compute power to qualifying projects.

"It's been exciting to work on these global research projects and witness the achievements that grid computing can make - not only in business and the commercial sector but also for the public good," said Ed Hubbard, founder and president, who accepted the award on behalf of United Devices. Jikku Venkat, United Devices CTO, also noted that the recognition by this public body in a non-grid-related forum was a positive step for the grid computing industry in general.

"Achievements like this are important for our industry - as grid technology continues to be recognized and validated, the move toward defining global standards will accelerate. That's good for all of us."

Recent Grid.org projects include highly publicized searches for cancer, anthrax and small-pox treatments. Results were


unprecedented in the Anthrax project, for example, over three-and-a-half billion molecules were processed against the target protein in only 24 days. Of these potential molecules, 376,064 candidates were identified to be potential structures for development into new anti-anthrax drugs, with 12,000 looking highly promising. Had this project been undertaken using traditional methods, it would have required years instead of less than four weeks.



President & Founder Ed Hubbard receives Computerworld award

Recent developments in U.K. e-Science

By Mark Parsons and Malcolm Atkinson, National e-Science Centre

 The U.K. e-Science Programme has been running since 2001 and there are now 20 e-Science centres located throughout the United Kingdom. These include specialist centres, such as the National Institute for Environmental e-Science and the

National Centre for e-Social Science. There is also a Grid Operations Support Centre, which is integrating support for services from the National Grid Service (NGS) and the EGEE and GridPP Projects. Recently, in addition to the National e-Science Centre, the Open Middleware Infrastructure Institute at The University of Southampton and the National

Data Curation Centre at The University of Edinburgh have been established.

All of this costs money and the U.K. Government has committed £250 million over five years to the programme. Additionally income of £30 million from more than 60 companies has been committed towards running over 100 U.K. e-Science projects, including 70

percent of which are applications driven, 25 percent focusing on middleware development and 5 percent on fundamental computer science research.

Recently, an additional £3 million per year has become available from central Government embedding e-Science in long-term supported services and demonstrating the *continued on page 5*

GGF Welcomes 5 New Sponsors

The following organizations have joined GGF as new sponsor members since the last issue of this newsletter.



GGF Document Series

Since our last newsletter, eight documents have been approved for publication as GGF Published Documents. (<http://www.ggf.org/documents/final.htm>):

GFD.22

Distributed Resource Management Application API Specification 1.0

Authors: R. Brobst, Waiman Chan, F. Ferstl, J. Gardiner, J. P. Robarts, A. Haas, B. Nitzberg, H. Rajic, J. Tollefsrud

GFD.23

A Hierarchy of Network Performance Characteristics for Grid Applications and Services

Authors: B. Lowekamp, B. Tierney, L. Cottrell, R. Hughes-Jones, T. Kielmann, M. Swany

GFD.24

GSS-API Extensions

Authors: S. Meder, V. Welch, S. Tuecke, D. Engert

GFD.25

An analysis of

“Top N” Event Descriptions

Authors: D. Gunter, J. Magowan

GFD.26

Persistent Archive Concepts

Authors: R. Moore, A. Merzky

GFD.27

Grid Information Retrieval Requirements

Authors: K. Gamiel, G. Newby, N. Nassar

GFD.28

Job Submission Information Model

Authors: E. Stokes, L. Flon

GFD.29

Open Grid Services Architecture

Use Cases

Authors: I. Foster, D. Gannon, H. Kishimoto, Jeffrin J. Von Reich

Upcoming Events

GGF Meetings 2005

GGF13: Seoul, Korea

GGF14: Chicago (tentative)

GGF15: London (tentative)

GridNets 2004

October 29, 2004

San Jose, CA, USA

First Workshop on Networks for Grid Applications (GridNets) Co-located with BroadNets 2004. Technically Co-Sponsored by IEEE Communication Society:

The emergence of data-intensive grid applications will engender movement and replication of very large data sets (up to petabytes of data) among geographically distributed sites. To the overall performance of grid applications, the data access-time is as much of a critical component as the computational speed.

The high-bandwidth demand created by very large data sets require for the deployment of network infrastructures with efficient data transport capabilities. At the same time, the application-level control of network resources, end-to-end, results in intelligent, dynamic service provisioning and access platforms.

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Group Updates

There are currently 27 Working Groups and 25 Research Groups making a total of 52 groups.

The following groups have been approved since GGF11:

Enterprise Grids

Requirements-RG

Network Measurements for Applications-RG

The following groups are proposed new groups waiting for approval:

Humanities, Arts, and

Social Science-RG

Ubiquitous Computing-RG

Grid Scheduling Ontology-WG

Business Process-WG

Grid Transactions-RG

Grid Logging System-WG

Grid and Social Issues-RG

Peer-to-Peer Discovery-WG

Grid Exchange-RG

Access to Data in Files-WG

RG: Research Group

WG: Working Group

The World Comes Together at 2nd Grid School

This year's Grid school in Vico Equense, Italy (near Naples) saw an increased number of participants from all over the world. The level of the students was also much higher than in the previous year, with many already involved in established Grid projects in the U.S., the E.U. and other part of the world as far as the Far East countries and Australia. "This is probably a sign of the increased maturity of Grid technology which is now coming out from the labs and entering the real production world." said Dr. Fabrizio Gagliardi, one of the original founders of the Grid school and co-director of this year's event.

The 2nd International Summer School on Grid Computing was again held in Vico Equense, from July 18-30, 2004. The school consisted of lectures by experts in various aspects of grid middleware and grid applications and laboratory sessions. Students also carried out practical exercises in a specialized computer lab.

As with last year's inaugural grid summer school, students were hand-selected by the

school's chair, Almerico Murli, University of Naples "Federico II" and ICAR-CNR. By the end of the school, more than 85 students learned about fundamental components of Grid environments, such as authentication, authorization, resource access, and resource discovery, and grid environments for basic and advanced job submission. They also became aware of Grid efforts worldwide and key emerging Grid applications.

Praise for the 2nd International Summer School came from students and instructors alike:

"It was wonderful to return to Vico Equense for the second summer school on Grid Computing. It surpassed the first, with a real buzz from committed, able students soaking up everything the experts could offer, bursting with ideas and challenging us to do even better—and still they found time to enjoy themselves. Their energy and enthusiasm makes me very optimistic about the future of Grids."

—*Malcolm Atkinson, NESC.*

"What I found most interesting about this year's summer school was that the students came from many different nationalities and ages. I now realize that a global way of living and cooperation is not impossible!"

—*Cesare Delle Fratte, INFN Grid School Student.*

"I found the students' enthusiasm made my job more exciting as a teacher and the contacts I formed will be useful in upcoming grid projects."

—*Jason Novotny, the Albert Einstein Institute, EU GridLab project.*

This year's school was sponsored by GGF with funding support by U.K. e-Science Program, HP, IBM, Institute for Nuclear Physics (INFN), Institute for High Performance Computing and Networking (ICAR-NA), and Institute for Composite and Biomedical Materials (IMCB).

Plans for next year's school are already underway. Information on how to apply will be available later this year.



GGF
NEWS

Sponsor Spotlight...

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UK's long-term commitment to the Grid and e-Science.

The U.K. invests very heavily in supporting GGF (£400K through the fund administered by NeSC for standardisation work - in addition many attend using more specific funds or from industry). This has led to high atten-

dance from the U.K. at all GGFs and many face-to-face meetings in between. We provide a substantial number of group chairs. For example we lead the DAIS WG. This builds on the OGSA-DAI projects, which to date have involved a total investment of £3 million plus IBM and Oracle labour. The U.K. e-Science Programme is proud to

have been a sponsor of the GGF for the last three years and looks forward to the organization continuing its strong growth.

Upcoming Events... continued from page 4

The new challenges posed by grid applications lead to new research directions in network infrastructures, services, and data transport.

The significant push generated by grid applications has already led to the deployment of small-scale nationwide optical networks (For example, Teragrid) connecting few remote experimental sites. The various new challenges posed by the grid application requirements have also initiated new research directions in network infrastructures, services and data transport.

Visit <http://www.gridnets.org/>

5th IEEE/ACM International Workshop on Grid Computing

*November 8, 2004
Pittsburgh, PA, USA*

In the last few years, the Grid community has been growing very rapidly and many new technologies and components have been proposed. This, along with the growing popularity Web-based technologies, and the availability of cheap commodity components is changing the way we do computing and business. There are now many ongoing grid projects with research and production-oriented goals.

Grid 2004 is an international meeting that brings together a community of researchers, developers, practitioners, and users involved with the Grid. The objective of Grid 2004 is to serve as a forum to present current and emerging work as well as to exchange research ideas in this field.

The previous events that are part of this series of events were Grid 2000, Bangalore, India; Grid 2001, Denver, CO; Grid 2002, Baltimore, MD; Grid 2003, Phoenix, USA. All of these events have been successful in attracting high quality papers and a wide international participation. Last year's event attracted over 400 registered participants. Since the first event we have published our own independent proceedings, either with Springer-Verlag or more recently with the IEEE Computer Society Press. Grid 2004 partially follows the focus of last year's event, but extends it to also include service-oriented grid and utility computing technologies, with greater emphasis on e-Science and e-Business applications.

visit <http://www.gridbus.org/grid2004> OR

<http://www.gridcomputing.org> (held in conjunction with SuperComputing 2004)

11th International Conference on High Performance Computing (HiPC 2004)

*December 19-22, 2004
Bangalore, India*

HiPC is an international meeting on high performance computing. It serves as a forum to present current work by researchers from around the world as well as high-light activities in Asia in the high performance computing area. The meeting emphasizes both design and analysis of high performance computing systems and their scientific, engineering, and commercial applications. For more information visit <http://www.hipc.org/>

GlobusWORLD 2005

*February 7-11, 2005
Boston, Massachusetts, USA*

*Featuring the Globus Toolkit (R)
The Open Source Solution for
Grid Computing Sheraton Boston
Hotel Boston, Massachusetts*

The dates and location of GlobusWORLD 2005 are now set! Come join us in Boston, February 7-11, 2005. The conference will be held at the Sheraton Boston, the largest hotel in New England, located in the city's historic Back Bay district. Check out our site in the coming months as more details become available.

GlobusWORLD 2004 was a major success, thanks to everyone who attended and participated. The conference featured parallel plenary sessions of Globus Toolkit and Grid-related content for attendees from both industry and science. Visit <http://www.globusworld.org/>

vision it will require the energies and talents of everyone—large and small, business and research, individuals and institutions. My clear mandate is to work for the entire grid community and leverage expertise, balance needs and articulate priorities while encouraging everyone to keep their eyes on the prize—pervasive, standards-based, grid computing.

GC: How does HP view your appointment and what assurances can you give that there will be no conflict of interest?

ML: The company has agreed to fund me to work as the GGF chair and considers it a full time position. HP is a company that believes strongly in open, industry standards and the critical nature that standards play (particularly grid standards) in the next stage of distributed

“The GGF community has crystallized a very compelling vision; developed critical architectural specifications to enable this vision; and aligned with emerging web services standards to encourage broad industry adoption.”

computing. The HP culture also encourages employees to contribute in the broader communities where they live and work. HP has funded similar positions in the past so there is precedence for these types of independent positions within the company.

Regarding the conflict of interest portion of the question, as the GGF chair, it is clear that I represent the GGF community and the interests of all its members. It would be extremely inappropriate to utilize the position of GGF chair as some type of HP marketing scheme—undermining not only my credibility but also that of HP. In the final analysis the buck stops with me, my reputation and integrity.

GC: As you look ahead to your three-year term, where do you see GGF going?

ML: I think the success of the Global Grid Forum in the first five years has been extraordinary. The GGF community has crystallized a very compelling vision; developed critical architectural specifications to enable this vision; and aligned with emerging web services standards to encourage broad industry adoption.

During the next phase of community development and growth, we must continue to build on our successes even as we face new challenges. Not to oversimplify, but I think our task together can be summarized with three words: listen, leverage, and lead.

Listen: GGF chair represents the entire community both in support of its diversity and in helping to pull together the common themes and priorities that will enable our vision. This starts with fostering an open dialogue, asking the right questions and practicing good listening.

Leverage: Like the early Internet, the scientific research community has provided the leadership and forms the bedrock or “foundation” for grid computing with many of the most demanding grid-related problems and a rich history of community collaboration. And like the later Internet period, the full promise of grid computing cannot be realized until commercial organizations implement the standards and best practices and make them available in the marketplace. Together, we need to insure that we are leveraging all the talents and energies of the grid communities in pursuit of our goals.

Lead: Finally, leadership is about setting a vision (which we have but we will need to continue to evolve), setting our priorities (which we need to do in a productive, inclusive set of transparent processes) and enabling execution (through active participation by our communities of interest).

I do not have all the answers. Answers will come as we listen to the needs of the community, leverage its varied expertise and lead with agreed upon vision and priorities.

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

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Get involved in the global grid forum community

1

Attend a Meeting

GGF13: Seoul, Korea
GGF14: Chicago (tentative)
GGF15: London (tentative)

2

Propose a NEW Working Group (WG) or Research Group (RG)

3

Join a Working or Research Group

4

Become a Sponsor

For more information,
visit www.ggf.org.