Market-Oriented Grid and Utility Computing

Call for Book Chapters

As the Grid matures, a vision of a truly global grid computing infrastructure has started to emerge. In this global grid computational resources are acquired on demand and provided with an agreed quality of service. Participation is open to all, and resources may be used or potentially provided by the general public, institutions or companies. Such a global grid will allow the emergence of new marketplaces for trading application services, computation, bandwidth and storage.

The Grid economy encompasses these markets and the means of interacting with them. Ultimately a Grid economy requires a paradigm shift within the Grid community, whereby resources are traded, negotiated, allocated, provisioned, and monitored based on users quality of service requirements. The Grid economy will underpin the evolution of the Grid from a collection of computational islands into a global computational environment capable of delivering different levels of service, risk and cost, depending on the preferences of the user.

Such a Grid economy will create value for all participants. Resource providers can generate revenue, allowing long term investment in their resources, and outsourcing of peak loads can be automated. Users can better express their preferences, trade cost against performance, access a larger pool of resources, and negotiate SLAs (Service-Level Agreements) to enhance the observed stability of their applications.

The purpose of this book is to capture the state of the art in Grid economy research and to identify potential research directions and technologies that will facilitate a global commercial Grid system. We expect the book to serve as a reference for larger audience such as systems architects, practitioners, developers, new researchers and graduate level students. It is expected that one of the prestigious international publishers (e.g., Wiley, Springer, or Prentice Hall) will publish the proposed book.

Topics for potential chapters include, but are not limited to:

- Market-based Grid Computing Systems Architecture
- Grid Economic Theory and Principles
- Grid Business Models
- Grid Economy Models
- Grid Market mechanisms
- Resource Sharing Agreements and Incentives
- Pricing Schemes and Risk Management

- Service Level Agreement (SLA) Negotiation
- SLA-based Resource Allocation
- Resource Management
- QoS based Application Scheduling Algorithms
- Trust and Security in Economy Grids
- Accounting, Billing and Verification Infrastructure
- Support for Market Aware Grid Services
- Experience with Grid Economy Test-beds
- Case studies (roles, systems, applications, legal requirements)

Important Dates

Chapter Proposal: You are invited to submit a 1-2 pages proposal describing the topic of your chapter. The proposal should include the chapter organization, anticipated number of pages of the final manuscript and brief biography of authors. We plan to follow the timeline given below:

* Proposal Deadline: 30th July 2007.
* Notification of proposal acceptance: 20th Oct 2007
* Full draft chapter submission: 15th Jan 2008
* Chapter review report to authors: 30th Jan 2008
* Final version submission: 25th Feb 2008

However, early submission is highly appreciated as the editors would like to have progressive dialogue and work with prospective authors to bring out a book of wide appeal.

If we receive more than one proposal for a chapter on the same topic, the editors may request authors to collaborate to develop an integrated chapter.

Manuscript Submission

Each accepted chapter should be about 20-35 A4 pages. We expect to deliver CRC of the book to the publisher, a MS Word template will be provided later.

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