BEinGRID BUSINESS EXPERIMENTS IN GRID

CALL ANNOUNCEMENT

ANNOUNCEMENT OF A COMPETITIVE CALL FOR ADDITIONAL BUSINESS EXPERIMENTS

(*Draft version 0.5* – September 24th 2007)

--- DISCLAIMER FOR THIS DRAFT VERSION ---
This is a working version of the BEinGRID competitive call text. Please refer to the official version once published which will be the only valid and official document and will, in case of discrepancy, overrule the content of this preliminary text.

Project context

Project Information	
Contract number	034702
Instrument type	Integrated Project
Project coordinator:	Santi Ristol, ATOS ORIGIN
Project acronym	BEinGRID
Project full name	Business Experiments in Grid
Project websites	www.beingrid.eu www.gridipedia.eu
Project start date:	June 1, 2006
Duration:	42 months
Consortium:	75 partners
Budget:	24.8 M euros
EC contribution:	15.7 M euros

BEinGRID is the European Union's largest integrated project funded by the Information Society Technologies (IST) research, part of the EU's sixth research Framework Programme (FP6).

The central objective of BEinGRID is to establish effective routes to foster the adoption of Grid technology by European business and to stimulate research into innovative business models using Grid-enabled service oriented infrastructures.

The strategic objectives of BEinGRID are:
- To understand the requirements for Grid uptake in the commercial environment, involving software vendors, IT integrators, service providers and end-users.
- To enable and validate the adoption of Grid technologies by business.

- To design and build a Grid toolset repository with components and solutions based on the main Grid software distributions such as the Globus Toolkit, gLite, Unicore, Gria and basic Web Service specifications.
- To develop and deploy a critical mass of Grid-enabled pilots, embracing a broad spectrum of economic sectors with different needs and requirements in terms of technological Grid challenges.

To meet these objectives, BEinGRID is undertaking a series of targeted Business Experiments (BEs) designed to implement and deploy Grid solutions across a broad spectrum of European business sectors. With 18 Business Experiments currently underway, the BEinGRID project is now looking forward to the second phase of Business Experiments.

BEinGRID has established two horizontal cross supporting activities for both technical and business aspects. Further to their supportive role to the BEs, the technical cross activity contributes by analysing and eliciting common requirements across the BEs, their dependences, elaborating common capabilities, associated design patterns, best-practice guidelines and developing missing generic software components. These evolutions are being consolidated for some software foundations in order to be reusable and will be offered through the repository. The generic components cover common functionalities for different technological areas such as Trust & Security, Data Management, SLA (QoS provisioning), Licensing, Virtual Organisations and Portals.

BEinGRID is setting up a toolset repository – called Gridipedia - of Web services and Grid upper middleware layer components, using existing research results of state of the art technology. Gridipedia aims to become a reference source of information on applications of Grid related technology in business contexts.

Tasks to be performed

BEinGRID needs to incorporate new contractors and/or extend the participation of current ones in the consortium in order *to conduct the second wave of Business Experiments.*

A Business Experiment is a real Grid pilot application that addresses a concrete business problem, that makes a strong business case, and in which the main actors of the economic sector are represented: end-user, service provider, Grid service integrator. The involvement of the full value chain is considered necessary, as a catalysing aspect to demonstrate Grid potential and to capitalise on the derived benefits.

The execution of the Business Experiments is organized in two waves; the first set of reference cases (18) are already in place. They are addressing real and concrete business cases and adapting and improving sector specific applications and processes while gathering requirements for the underlying Grid middleware. The second set of Business Experiments will mainly focus on validating and evaluating the usefulness and reusability of the common functions identified in the first half of the project.

This second wave of Grid pilots will also support the definition of best practice and profiles of Grid services. It is expected that they will also allow the incorporation of new relevant applications and economic sector examples and validate the business models.

The activities to be carried out in the Business Experiment involve
- Documentation of the application scenario, identification of the requirements.
- Design of the Grid-based solution incorporating one or more generic software components included in the Gridipedia repository.
- Implementation and integration of the solution considering interoperability issues to be addressed
- Validation of the selected approach and demonstration of the compelling benefits of using a Grid solution
- Elaboration of a sound business plan
- Participation in the regular interactions with the technical and business cross activities of the project for the derivation of lessons learnt and best practises.

Target outcome: General considerations

BEinGRID combines both technical and business aspects at the same level of importance in the BEs.

Technical perspective
The technical cross activities of BEinGRID have elicited the common technical requirements of the first wave of Business Experiments and have elaborated the problem description. They have elaborated the so-called "Common capability", i.e. key functionality that contributes to solving a solution conceptually common across the Grid pilots. In addition, the project has prepared "Design patterns" of an exemplar solution that offers the functionality. An overview of these outcomes can be found at Gridipedia. Finally, the project is developing derived software components on top of specific Web Services and Grid technologies.

BEinGRID cross technical clusters have prioritised these common capabilities to be further elaborated and validated in the second wave of BEs. BEinGRID considers essential that this second wave of Business Experiments make use of one or more of these components as part of the validation process.

The second wave of Business Experiments must demonstrate in the proposed application scenario that the use of the proposed Grid technology is *key* (the only solution or the best solution) to solve the business problem highlighting the added value of this technology. Such justification must be clear in the proposal. A new Business Experiment can be also based on the consolidated results of another FP6 project or pre-commercial products provided that it combines some BEinGRID components in the solution approach. Alternatively, the proposed Business Experiment should clearly justify the adopted solution in relation to the BEinGRID common capability descriptions.

Example of the targeted aspects to be clearly elaborated in the BE for validation can be:

- Trust & Security. Dynamic adaptation of the security mechanisms in dynamic virtual organization. Managing the Circles of Trust in a Federation. Issuance, distribution and validation of claims. Authorisation and Access Control management systems with Administrative Delegation. Secure end-to-end communication within a federation.
- Grid Licensing Management. Accounting and billing mechanisms. Authorisation of access to licenses. Flexible schedulable licenses.
- SLA Management. Cases with complete SLA framework need (publication, negotiation, monitoring and evaluation). Mapping QoS request on hardware resources. Resource selection optimisation.
- Data Management: Homogenisation and synchronisation of multiple databases. Primary-Secondary Replication. Data federation and advanced use cases with required techniques for xml databases,
- VO Management. Composition of application capabilities across organisation boundaries. Application virtualization and distributed hosting environments. Automatic resource discovery. VO life-cycle management.
- Grid Portals. Job submission, monitoring and control. Flexible support the composed workflows execution. Complex and interactive visualization capabilities.

Business perspective

From a business perspective, we would like to encourage the participation of industry verticals that are under-represented or not represented in the first wave of the Business Experiments. We are looking for industries where the possible convergence of Grid with other new technologies (e.g.: SOA, Semantics, etc. and including mobility, etc) can be analysed such as tourism, media, construction, etc.

BEinGRID does not deal with e-Science scenarios. We are explicitly interested in real commercial scenarios that meet real customer needs.

In general, the new Business Experiments should also cover the whole value chain (end user included) as did the Business Experiments of the first wave. Our aim is to exhibit how different types and sizes of companies can be linked together and make money in commercial scenarios where Grids are an essential part of the game. Business experiments should also show dynamic collaboration amongst different organizations.

We are looking for service based models and not traditional pure HPC static ones. Following the application-pull approach set for the first phase of Business Experiments and our findings regarding the potential industry-oriented use of Grid, the preferred models to be analysed further on are the service and the knowledge models (a service as optimal capacity utilisation, software as a service (SaaS), pay-per-use and usage of commercial codes in a grid environment, etc)

The lack of B2B methodology that can actually use the grid technology is a potential threat. With B2B issues we refer to things such as how you establish contracts with other market players, how you monitor that these contracts are fulfilled, what actions you take in order to guarantee the fulfilment of

these contracts, how you handle accounting and payments as remote services, etc. Companies / institutions covering this aspect, could add further value to the current findings.

Profile of participants

Partners for these new Business Experiments will be both from within the BEinGRID consortium and from outside BEinGRID. This combination is considered essential because the participation of partners already in the consortium will ensure a smooth integration of these new experiments into the project, while new partners will incorporate fresh ideas and applications/sectors to the existing ones. It is envisaged that approximately 1/3 (33%) of the total available funding for this open call will be assigned to partners already in the consortium and 2/3 (66%) for entities outside the consortium.

The typical profile of a BE is maintained and the involvement of an End User, a Service Provider and Grid expert will be requested. The mixture of newcomers and existing partners in new BEs is considered crucial for the second wave of experiments to succeed. There can be new BEs completely external to the project (with no members from current consortium) and also regional BEs (all members from the same country) provided that this shows a better and more focussed business plan perhaps due to existing links of commercial relationships.

Indicative budget distribution, BEs timing and call calendar

Expected duration of participation in project (administratively): from February 2008 to May 2009
Expected duration of the execution of the BE: 12 months.

Estimated costs and funding for the tasks
The funding schemes follow the general FP6 rules.
All activities related to the Business Experiments are Research costs (including management of the BE).
Estimated total Commission funding available €1,950,000

Language in which proposal should be submitted: English

Date of close of call – *Mid November 2007* **(TBC)**
Time of close of call - 17h00 Brussels time

Web address for further information (call webpage): www.beingrid.eu

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Submitting a proposal - Some additional considerations of this draft text

The call text will be approved and published by EC in October (TBC) 2007 and will be open for 35 days. Proposals received will be evaluated by external experts during the end of November, with results of the evaluation to be communicated to the European Commission in the month of December. The new Business Experiments approved by the Commission would start in February / March 2008 at the latest.

The evaluation process is done according to the FP6 guidelines published by EC to incorporate new contractors (Competitive Calls Guidance Note). The evaluation criteria (S&T excellence, Quality of consortium, Mobilisation of resources) has been extended for the specificity of BEinGRID call with a 4th parameter (Business relevance and plan)

A "*proposer package*" will be available soon in BEinGRID website.
This package will contain information such as:
- the official call text
- the template for submitting the new Grid pilots proposals with concrete instructions with the sections that need to be covered, a baseline gantt diagram with associated control points. Estimated length for BE proposal is 12-15 pages.
- the evaluation criteria with additional comments for the external reviewers specially adapted for this BEinGRID call.

Each BE will be a Workpackage 4.x of the Activity 4 of BEinGRID work breakdown structure.

In terms of planning, all Business Experiments of this 2nd wave will be synchronised in time (as BEinGRID has done in the 1st wave) and there will be a common baseline time scale. In general, there will be standard phases (Requirements Elicitation, Solution Design, Implementation, Integration, Test and Validation) although some BEs can present particular iterations or rapid prototyping approaches when it is justified. Each BE will have a task dedicated to exploitation and business aspects. Common control points are established for the execution of the pilot and these allow the exchange of information between the business experiments and the technical & business cross activities as well as checking the correct evolution of the pilot. The control points are often associated with the delivery of official or internal document.

Each Business Experiment must appoint an experiment leader who takes on the responsibility of the internal co-ordination of the experiment partners.

Each Business Experiment is autonomous enough to produce the results, the solution for the end user and their business case. This means that it has to be able to progress and carry out their pilot without external help although cross activities will support them.

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