



Introduction

This newsletter summarizes the work that the InteliGrid project accomplished after 18 months of its duration. It is an "administrative" newsletter again, however, it is trying to capture not only the key figures but the interesting developments that took place in the last half year. After a soft review in spring 2005, InteliGrid had a standard review in November 2005. It passed with some constructive suggestions that have been taken into account in the work reported.

Work performed and results achieved

InteliGrid has three tightly connected aspects. Technical development that is providing ground for exploitation and dissemination.

The technical work

It was focusing on:

Refining system architecture. It was documented in the D13.2 and took into account the requirements analysis defined in D12. The architecture now provides a comprehensive architectural framework as well as sufficient detailed architectures for the InteliGrid products.

Requirements analysis report (D12) has been modified to take into account the reviewer's comments. The requirements have also been summarized into the 5Ss: security, simplicity, stability & standards, scalable service orientation and semantics.

Intensive prototyping and development work took place that is leading to a new generation of the demonstrator that can be shown live on the net. Significant progress has been made with the ontology services, document management, applications and an overall secure collaboration infrastructure.

Definition of ontologies. The ontological framework is breaking up the discussion into business process ontology, organizational ontology, service ontology and resource ontology. Ontologies are otherwise defined in Deliverable D31.

Non technical efforts

The activities that take place throughout the project continued:

Dissemination activities continued. The partners made a number of significant conference presentations including keynote and invited lectures. Web presence is maintained, two new newsletters have been published, an interview has been given to IST Results and a new project flyer has been defined.

Collaboration and concertation activities are reported in D62.1 Collaboration report and plan deliverable. The project is concerting with other grid projects, particularly with OntoGrid and K-Wf Grid projects on the semantic grid issues.

Exploitation planning has significantly intensified. An exploitation group has been set up and created a new version of the Exploitation, dissemination and standardisation report.

Evaluation and impacts assessment: work continues both on internal and external evaluation; the objects of evaluation were most of the technical achievements to date; some methodological changes reflect the recommendation from the review.

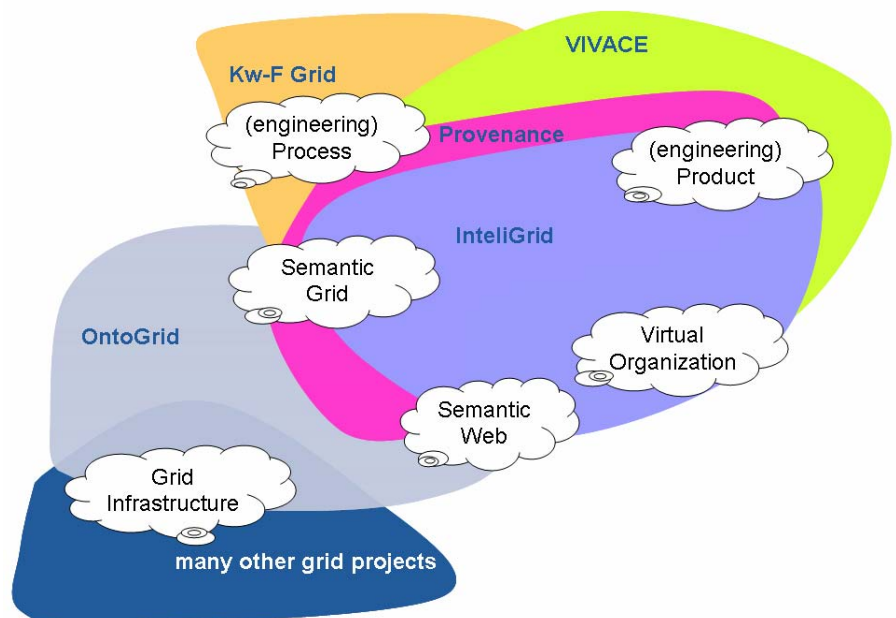
Management of the project was to a large extent consumed by the complex procedure of getting the audit certificates and ensuring the coherence between various documents.

Risk management was looking at the results of the technical work and came up with some initial analyses and corrective actions documented also in this report.

Resources

In the reported 6 month period the project had 3 plenary meetings and several bi- or trilateral meetings (particularly between LJU, PSNC and TUD). The technical group and the exploitation group of the project are meeting on a weekly basis using Voip technology.

In terms of resources used, the project as a whole used 60% of the costed person-months and 200% of the non-costed person months in the first 60% of the duration of the project.



Relation to other projects

We are finding out that many of the technologies that are reported in papers and conferences are not mature enough to be ready for practical application; much of the open source software that we hope to lean upon is not quite as stable and complete as we would like it to be.

InteliGrid is also taking into account the results of other projects and shifting the work in directions that avoid too much duplication of effort. The Figure below shows the positioning of InteliGrid vis-à-vis other projects and how InteliGrid is unique in providing a combination of the grid, semantic web, virtual organizations and engineering collaboration.

Challenges

Auditing has been a novel exercise for most contractors and has drained resources from the r&d work in September and October 2005.

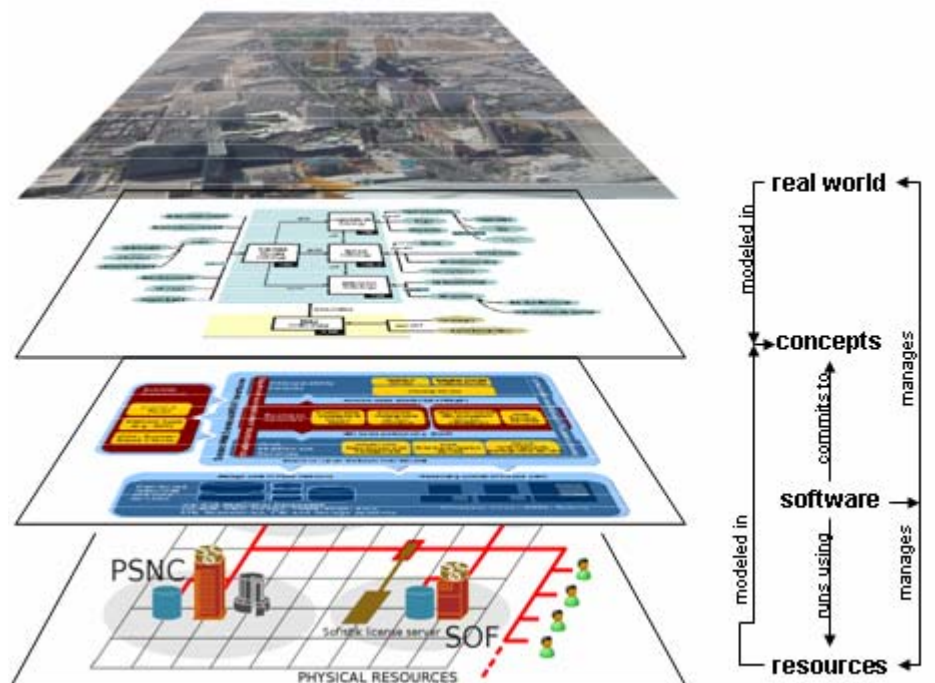
Lack of detailed theoretical and technical knowledge on ontology development and use with a few partners called for seminars on the subject within project meetings, intensive exchange of ideas over a number of telecons.

Involvement of two competent sub-contractors in respective subtasks of WP3 enabled extension of the original scope in several aspects, led to new ideas and concepts and cross-fertilisation with other projects as well as the IAI BuildingSMART initiative.

More interest in semantics has developed during the project than initially planned. Whilst the consortium sees this as a very positive recommendation which adds value to many of the developments within the project, it also leads to some necessary redistribution of resources and, due to that, difficult to avoid delays.

Architecture in a nutshell

One of the most important achievements in this period is the second revision of the InteliGrid architecture. InteliGrid's basic assumption is that software not only has to model the real world, it also has to model the technical resources that this software



is using, because these resources are becoming increasingly complex in a networked or grid environment. The InteliGrid framework architecture therefore includes four layers (Figure above):

- problem domain layer,
- various conceptual models and ontologies,
- the software layer which includes applications and services,
- the layer of basic hardware and software resources,

whereby both (c) and (d) are to some extent also modelled in (b).

This understanding is based on reference models such as the Service Oriented Architecture and the semantic web stack and the Virtual Organization Reference Architecture. Technically InteliGrid commits to Web Services/WSRF technologies used to implement various middleware services together with security enhancements for dynamic VO control and enforcement.

The specification for the various applications and services include:

- Business applications:** InteliGrid Portal and deployed portlets, Document Management Application, other desktop applications, ...
- Interoperability services:** Ontology Service, Directory Service and Business Process Object Service
- Business services:** Product Data Management service, Document Management Service, and High

Performance AEC Simulation Service,

- Grid middleware services:** Data access and management service, Grid Authorization service and Broker service.

This architecture is defined in D13.3 and provides the basis for the ongoing prototyping.

Project meetings ...

12-13.Sep-2005 Poznan, Poland, 17-18-Oct-2005 Ljubljana, Slovenia, 22-24-Nov.2005 Brussels, Belgium, 21-Nov-2005 Cracow, Poland, Cracow Grid Workshop, 23-27-Jan-2006, Kranjska gora, Slovenia, 13-Feb-2006 in Athens, Greece.

Key Project Figures

Partners:	9 from 7 countries
EU funding:	2.1 MEuro
Total funding:	3.1 MEuro.
Effort:	360 person months
Duration:	30 months
Start-end:	1.9.2004 - 28.2.2007

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