



Grid enabled access to rich media content

Project Presentation

Project Reference No.	FP6-34363
Deliverable No.	D8.1
Workpackage no:	WP8: Dissemination and Exploitation
Nature:	R (Report)
Dissemination Level:	PU (Public)
Document version:	final
Date:	09/01/2007
Editor(s):	ATC, DW
Document description:	This Deliverable provides information about the GREDIA Project Presentation, including the project objectives, its innovation and the expected results.

History

Version	Date	Reason	Revised by
01	11/12/2006	First Draft	N.Sarris, V.Tountopoulos (ATC)
02	12/12/2006	Editorial changes	Jochen Spangenberg (DW)
03	18/12/2006	Editorial changes	Bartosz Kryza (CYF)
04	20/12/2006	Pre-final Draft	N.Sarris, V.Tountopoulos (ATC)
05	08/01/2007	Peer Review	Jochen Spangenberg (DW)
06	09/01/2007	Final Draft after peer review comments	N.Sarris, V.Tountopoulos (ATC)

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Executive Summary

The GREDIA Consortium has prepared and published a brief project presentation in English of two pages. This presentation has also been made available on the project web site.

The Project Presentation, being set out in this Deliverable, has been structured according to EC Guidelines. In that respect, it outlines the description of the project concept and provides an overview of the work that has been planned to be performed within the 30 months of the project's duration. The Project Presentation also includes details concerning the general social objectives to be met, as well as from a scientific and technical perspective, the innovations arising from the project, the challenges that GREDIA is planning to deal with and the expected results.

1. Introduction

The consortium prepared and published a brief project presentation in English of two pages, structured according to EC guidelines. The presentation provides the following information:

- Project acronym
- Project full name
- Contract number
- Coordinator contact details
- Project logo
- List of participants (organisations' names, country)
- Total cost (€)
- Commission funding (€)
- Priority /Priority Component (e.g. Strategic Objective, etc.)
- The challenge that the project is liable to deal with
- Project main goals
- Scientific and Technical Objectives
- Project's Innovation
- Expected achievements
- Links for provision of further information

The project presentation is available on the project web site and in the form of project brochures that will be produced. The presentation indicates clearly that the work takes place with the financial support of the European Community and identifies the specific research programme. Any updates on the content of the Project Presentation will be applied to its published version as soon as accepted by the Consortium, the Reviewers and the Project Officer.

The project web site presentation has been available since month 3 of the Project and will be maintained and updated at least throughout the duration of the project.

The next section provides a version of the Presentation in Word formatting.

2. Project Presentation

GRid enabled access to rich mEDIA content

At A Glance

GREDIA FP6-034363

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Partners from: Greece, United Kingdom, Germany, Poland, Spain, China, Cyprus and Italy

Partners: Athens Technology Center S.A., SYMBIAN Ltd., Deutsche Welle, The Academic Computing Centre CYFRONET AGH, Institute of Communication and Computer Systems, CITY University of London, University of Malaga, Institute of Computing Technology-Chinese Academy of Sciences, DIAS Publishing Ltd., Banca Popolare di Sondrio

Duration: Oct 2006 – Mar 2009

Total Cost: € 3.32m

Commission funding: € 2.4 m

Programme:

Sixth Framework Programme (FP6)

IST Priority

Further Information

- **Directorate F - Emerging Technologies and Infrastructures**

Unit F2 - Grid Technologies

<http://cordis.europa.eu/ist/grids/index.html>

- **Europe's Information Society: Thematic Portal:**

http://europa.eu.int/information_society/



The Challenge

Grid technology has achieved significant advances in the past few years, thanks in part to a considerable number of prominent organisations that have contributed to Grid middleware. This has opened horizons for new exploitation opportunities; however, these opportunities have not yet fully materialised in terms of the emergence of new applications for industry. Use of Grid technology is still primarily confined to scientific applications, which have been developed by scientific organisations with the necessary expertise in Grid principles. Many organisations developing IT applications for industry have been reluctant to leverage Grid technologies and concepts, due to perceived complications in their use and deployment.

GREDIA addresses this problem with the provision of a Grid application development platform, a tool which will provide high level support for the development of Grid business applications through a completely graphical user interface.

The project objectives

The project aims at the development of a Grid application platform, providing high level support for the implementation of Grid business applications through a flexible graphical user interface. This platform will be generic in order to combine both existing and arising Grid middleware, and facilitate the provision of business services, which mainly demand access and sharing of large quantities of distributed annotated numerical and multimedia content.

Furthermore, GREDIA will facilitate for mobile devices to exploit Grid technologies in a seamless way by enabling the mobile access to distributed annotated numerical and multimedia content. The potential effects of the platform will be validated through two pilot applications, servicing the vital sectors of media (news) and banking.

From a business perspective, the objectives of the GREDIA project can be summarised as follows:

- Develop a reliable Grid application development platform with high-level support for the design, implementation and operational deployment of secure Grid business applications.
- Enable the efficient data management of mobile services for business applications.
- Ensure the protection of data and transaction at all levels through a dedicated security framework.



- Validate the platform by producing two pilot Grid applications to address real life scenarios, servicing the domains of media and banking.

Scientific & Technical objectives

From a technical point of view, GREDIA will focus on:

- Developing and maintaining a novel generic Grid middleware required for servicing business applications accessing distributed annotated numerical and multimedia content.
- Extending the notion of Grid middleware to the management of mobile data, thus allowing mobile devices to participate in a data Grid as service providers, in a peer-to-peer manner.
- Defining and analysing the appropriate interfaces to support the protection of data and transactions among peer-to-peer Grid based applications at all levels through a dedicated security framework.

GREDIA also focuses on supporting Virtual Organisations to handle the complexity of allocating heterogeneous resources in the Grid. An important contribution of GREDIA will be to:

- Provide a script-like programming language of a high level of abstraction that will hide the complexity of semantic service matchmaking, resource registry and Grid job execution from the end user.
- Hide the complexity of heterogeneous resources and support dynamic Virtual Organisations of business entities through a special semantic framework.

The effectiveness and the reliability of the GREDIA Grid application development platform will be validated through the deployment of pilot applications in two operational domains:

- A media and journalism application is intended to allow journalists and photographers to make their work available to a trusted network of peers at the moment when it is produced, either from desktops or mobile devices. This pilot will bring together the market orientation and pervasiveness of mobile communication technology with the promise of a dynamically concerted use of resources and services provided through Grid infrastructures.
- A banking application will enable the exchange of complex information between the customers and their bank(s) in a Basel II related credit scoring scenario. This pilot will utilize the advances in web services and other middleware developed in GREDIA to demonstrate how Grids can be accessed by many partners regardless of location, ensuring that the data sharing is consistent with the principles of the financial sector.

D8.1: Project Presentation Innovation

Through the development of the Grid application development platform, GREDIA will contribute to the state of the art in several important areas:

- Innovative search and retrieval mechanisms for fast access of annotated numerical and multimedia content distributed over the Grid, based on P2P overlay network technology.
- A new notation for Grid application developers, allowing for easy definition of Grid application's static and dynamic aspects, hiding the complexity of semantic service matchmaking.
- Ontological services supporting interoperability in and across Virtual Organisations, building a semantic abstraction layer over available resources in the Grid.
- Implementation of information services that rapidly catalogue content on mobile devices, and design of agents that seek data caching and replication services based on QoS criteria.
- Protection of data and transactions through a secure framework for authentication of entities, confidentiality and integrity to access from remote resources.

Expected Results

GREDIA will produce a reliable platform with high-level support for the design, development and operational deployment of secure Grid business applications. Through the successful deployment of the platform, GREDIA will:

- Build business applications upon a novel Grid middleware, enabling the access to distributed annotated numerical and multimedia content in a secure way.
- Define and specify services that will allow mobile devices to participate in the Grid Virtual Organisation in a seamless way.
- Analyse a security framework that will protect data at all levels of the Grid Virtual Organisation.
- Evaluate the framework by producing two Grid pilot applications, addressing real life scenarios servicing the areas of media and banking.

Further Information

- **Website Home Page:**
www.GREDIA.eu
- **Europe's Information Society: Thematic Portal**
http://europa.eu.int/information_society/

3. Conclusions

This Deliverable set out the GREDIA Project Presentation, including a description of the project concept, the project objectives, the innovation and the expected results.