

## Scope

Business processes are costly, lengthy and error-prone. The vast majority of contemporary business applications rely on widely distributed resources, being either data, computational power, or people. Grid technologies can by definition be useful to organisations to efficiently manage such resources and produce business oriented applications of high value. In that respect, the Gredia project aims at presenting the key concepts for the delivery of an **application development platform**, based on the use of state-of-the-art technologies in Grid computing, which will enable application developers to **build secure resource demanding business** solutions without having any prior expertise on Grid technologies.

## Advances

Gredia is focusing on advancing the research activities in the area of Grid computing and strengthening the applicability of such technologies in a critical mass of business domains. The main scope of the Gredia project is to deliver a reliable Grid **application development platform** with high-level support for the design, implementation and operational deployment of **secure mobile Grid applications**.

Gredia Platform will strengthen the collaboration of business organisations by providing the environment for establishing Virtual Organisations, which allow for the secure and policy-based access to annotated multimedia content. The Platform will facilitate for organisational structure mobility extension, by offering the capability to accomplish enhanced business operations through mobile devices.

## Positioning in global context

Gredia is based on innovative concepts and promotes a state-of-the-art application development platform for building secure mobile Grid applications. Gredia aims to complement existing products of well-known providers and extend current Grid software development solutions, being the only platform which assumes that application developers are agnostic to the complexity of the underlying Grid technologies.

## Contribution to standardization and interoperability issues

The project is developing solutions, based on existing common standards of the Global Grid Forum (GGF) and the World Wide Web Consortium (W3C). The Gredia components are developed to be compliant to these standards, so their future adoption is possible after the project end.

## Target users / sectors in business and society

Gredia results are targeted to **Software developers**, who can use Gredia to build easily a secure Grid application that involves virtual organisations and access to the application through a mobile phone anywhere in the world. In order to validate Gredia, two of such applications are being built for the media and banking and financial services industry. Although Gredia is not restricted for use in these areas, the specific domains will be the first two chosen for market penetration.

## Overall benefits for business and society

The project targets the business applications domain bringing together the mobile service provisioning experience with Grid technologies. It aims at advancing an industry of critical importance in Europe and providing results that can be directly applied in a wide range of business settings. Gredia addresses the main barriers for the acceptance of Grid in both a technical and non- technical sense. It also brings an important player in the field of operating systems for mobile phones, making it possible to access the internet seamlessly over mobile environments and addressing innovative business models and per usage pricing schemes for exchanging documents securely. By doing so, the project will fulfill the potential of delivering advanced working environments and leveraging an entire new generation of tools, services and business opportunities.

Deploying innovative solutions in the context of work collaboration, such as those proposed by Gredia, has great impact on the socioeconomic benefits of the ICT industry. It increases the mobility of European citizens and their perception on receiving added value and of high quality services, by gaining access to distributed information and opportunities anywhere and at anytime. From an economical perspective, the use of open philosophy Grid systems can further drive the ICT adoption in industry and offer agile and promising solutions for novel business processes, which are considered to reduce the cost of services and strengthen the competitiveness of the EU economy.

## Examples of use

The Gredia usage business scenarios include the following:

**Media and journalism:** journalists and photographers will use Gredia Grid Online (GGO) to instantly publish their work to a trusted network of co-workers, either from desktop or mobile devices. The GGO will be responsible for deciding on who should receive the whole volume of the news item and will manage the rapid transfer of content in an intelligent way. A news agency will use GGO to request information about an event that has just occurred. The specific request will target the most appropriate reporters and contact them on their mobile devices to decide how the request can be satisfied in the optimal way.

**Banking Services:** Disparate data, both within a bank and across several trusted sources, stored in multiple technology platforms, can be intelligently accessed in a Grid environment to support critical decision making processes. Easyloan, the Gredia banking application, will enable the efficient and secure exchange of private information between banking organisations and their potential customers for the assessment of their creditability and the risk associated with granting a specific loan, according to the Basel II regulations.

## Achievements

The project is now in the core implementation phase and is approaching the delivery of the first prototype of the Gredia Platform. This consists of the following standalone components:

- The **Application Development Platform (APPEA)** to construct and execute Grid application scenarios.
- The **Gredia Grid Middleware**, which provides innovative search and access to annotated rich media content and enables for the identification of Web Services, based on contextual information.
- The **Framework for Intelligent Virtual Organisations (FiVO)** to provide enhanced management of Virtual Organisations.
- The **Mobile Subsystem**, which allows for mobile devices to participate in the Grid, acting as service consumers or providers, and assists software engineers and researchers in rapid development and experimentation of ideas on mobile phones without a steep learning curve.
- The **Security Framework for Grid applications** to provide protection of data and transactions at all levels through a dedicated security framework for Grid based applications.

After the project end, all the individual components as well as the integrated Gredia Platform will be available through the project Web Site, under an open source licensing scheme.



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Grid enabled access to rich media content

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034363

### type of project

Specific Targeted Research Project

### contact point

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### project website and partner list

<http://www.gredia.eu>

### EC contribution

2 410 895 €

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01/10/2006

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30

