

## The GREDIA Rich Data Location Services

### Motivation and Challenges

Our target applications require the management of annotated multimedia content. Information from multimedia applications bombards our daily life and is produced by the majority of scientific and business applications. Large amounts of audiovisual data are becoming available on the World Wide Web, in broadcast data streams, in personal and business databases. However, multimedia files contain a lot of information that is difficult to organize. Thus, their utility depends on the existence of efficient mechanisms for discovery, filtering and managing this type of content. Therefore, a distributed system that can easily process this volume of data is needed. The design and the implementation of such systems face several challenges. The most crucial one is the development of a distributed architecture for managing large amounts of data stored in geographically distributed resources. The efficiency of the system should not decline when the amount of stored data and the number of performed operations increase. The system should scale well, providing reliable and concrete services. System users should be able to perform rich queries on the indexed metadata.



### RDLS Solution Overview

The RDLS (Rich Data Location Services) comes as an integrated solution providing the following:

- Support for multidimensional queries with the use of SFC technique.
- Support for complex queries with the use of a distributed index.
- Rich metadata content annotation
- Support for massive, distributed and scalable data processing with the use of peer to peer technologies.

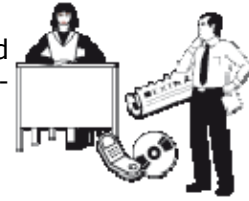
### Innovation

Current annotation and indexing of multi-attribute data is performed by centralized indexes. Relational databases are extensively used to perform such tasks, but when the number of the annotated objects or the object request rate increases, these systems cannot efficiently handle storage or bandwidth demand. RDLS tackles this problem by distributing the index in an arbitrary number of different nodes that can easily satisfy massive concurrent demand over a large number of stored items.



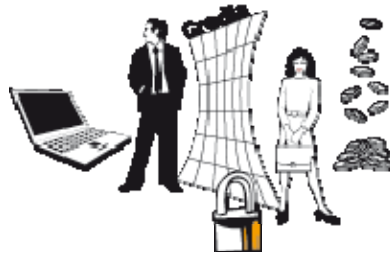
## Business Impact

RDLS targets business needs for massive demand over a large volume of annotated data. Business such as data-centers, media organizations, even SMEs that need a cost-effective and scalable indexing architecture can benefit from the use of RDLS.



## Interoperability

The development of RDLS is based in Open Standards, to facilitate interoperability with other currently used systems. The functionality is exposed to other components with the use of a service layer. The service layer uses standard protocols, in order to communicate with other subsystems. Well defined interfaces are supported to enable the integration of services from different subsystems. The technology used to achieve interoperability is the Open Grid Services Architecture (OGSA), that is based upon another standardization protocol adopted by the majority of both the academic and the industrial community, the Web Services Architecture.



## Partners Involved



## Contact

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