SIXTH FRAMEWORK PROGRAMME
PRIORITY IST-2002-2.3.1.12
Technology-enhanced Learning and Access to Cultural Heritage

Contract for:

NETWORK OF EXCELLENCE

Annex 1 - "Description of Work"

Network acronym: **DELOS**

Network full title: DELOS: a Network of Excellence on Digital Libraries

Proposal/Contract no.: **G038-507618**

Related to other Contract no.: IST-1999-12262

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1 Network Summary

Digital Libraries (DL) have been made possible through the integration and use of a number of IC technologies, the availability of digital content on a global scale and a strong demand for users who are now online. They are destined to become essential part of the information infrastructure in the 21st century. The DELOS network intends to conduct a joint program of activities (JPA) aimed at integrating and coordinating the ongoing research activities of the major European teams working in DL-related areas with the goal of developing the next generation DL technologies. The objective is to (i) define unifying and comprehensive theories and frameworks over the life-cycle of DL information, (ii) build interoperable multimodal/multilingual services and integrated content management ranging from the personal to the global for the specialist and the general population. The Network aims at developing generic DL technology to be incorporated into industrial-strength DL Management Systems (DLMSs), offering advanced functionality through reliable and extensible services.

The Network will also disseminate knowledge of DL technologies to many diverse application domains. To this end a Virtual DL Competence Centre will be established which will provide specific user communities with access to advanced DL technologies, services, testbeds, and the necessary expertise and knowledge to facilitate their take-up.

Other important objectives are: to network and structure European DL-related research in order to consolidate an emerging community; to provide a forum where researchers, practitioners, and representatives of interested applications and industries can exchange ideas and experiences; to promote an exchange programme towards improving international cooperation in DL research areas.

2   Network Objectives

Digital libraries represent a new infrastructure and environment that has been made possible by the integration and use of a number of IC technologies, the availability of digital content on a global scale and a strong demand from users who are now online. They are destined to become an essential part of the information infrastructure in the 21st century.

On the basis of these considerations, our 10-year grand vision for digital libraries is the following: **digital libraries should enable any citizen to access all human knowledge any time and anywhere, in a friendly, multi-modal, efficient and effective way, by overcoming barriers of distance, language, and culture and by using multiple Internet-connected devices.** The new generation digital libraries should not just be seen as static information repositories but as growing, interactively, and collaboratively used nuclei of what will be, at some stage, a good part of human knowledge that depends as much on information as on communication.

The challenges and opportunities that motivate advanced digital library initiatives are associated with this view of the digital library environment.

In recent years, a large number of digital library systems have been developed. However, each system is typically built from scratch and develops its own techniques, focusing on a specific type of information or services, and addressing the needs of a specific application domain. After this first experience, it has become clear that the future of digital libraries goes beyond what these initial efforts may indicate individually.

It is time for *generic* digital library technology to be developed and incorporated into industrial-strength Digital Library Management Systems (DLMSs), offering advanced functionality through reliable and extensible services.

The main objective of the DELOS network is thus to define and conduct a joint program of activities (JPA) in order to integrate and coordinate the ongoing research activities of the major European research teams in the field of digital libraries for the purpose of developing the next generation digital library technologies.

The implementation of an integrated programme of this type will make the accomplishment of our grand vision for digital libraries feasible.

Another main objective of the DELOS network is to integrate research activities carried out in a number of related fields crucial for the development of the next generation of digital libraries with ongoing research activities in the digital library field itself.

The specific objectives of the DELOS NoE are:

- to develop a common architectural digital library infrastructure that can be customized to meet the particular requirements of different sectors and applications;

- to provide a common foundation for several forms of information seeking, searching and querying in digital libraries so that it may become possible for all to be provided by digital library systems in a cohesive way;

- to establish a sound framework for expressing and managing unconventional information manipulations that are very critical in many applications;

- to provide a theoretical framework and practical technologies for supporting truly personalized, profile-based access to diverse forms of information in digital libraries;

- to establish and demonstrate integrated methodologies from different scientific fields for capturing the meaning of audiovisual data in different domains of knowledge and contexts, building on the frameworks of established or emerging multimedia standards;

- to manage multimedia data integration and highly effective retrieval, taking into account domain knowledge and context, as well as community information and interactions;

- to use the multimedia digital library content in innovative applications and different delivery platforms including the web, mobiles and digital TV;

- to establish a theoretically motivated and empirically supported frame of reference for designers and researchers in the field of user interfaces and visualization techniques;

- to create a platform to promote pan-European collaborative research in crucial digital archiving and preservation research areas by establishing distributed research teams investigating self-contextualising objects, metadata and the evolution of ontologies;

- to develop mechanisms for the preservation of complex and dynamic objects; for automatic classification; and to create digital repositories;

- to provide a theoretical and practical framework for the evaluation of Digital Libraries and their components;

- to establish an infrastructure to support DL evaluation, thus providing strategic guidance for the design and deployment of future Digital Library systems.

The Network also aims at increasing awareness of the capabilities of the next generation Digital Libraries and disseminating knowledge of the underlying technologies into many different application domains. To this end, a Virtual Digital Library Competence Center will be established which will provide specific user communities with access to advanced digital library technologies, services, testbeds, expertise and knowledge in order to allow them to take-up these technologies and services.

Other important objectives of DELOS are to:

- network and structure European research on digital libraries, so as to consolidate an emerging community;

- contribute towards improving the effectiveness of European research in the digital library field;

- promote an exchange programme of researchers;

- provide a forum where researchers, practitioners, and representatives of interested applications and industries can exchange ideas and experiences;

- promote cooperation between European and national digital library initiatives;

- contribute towards improving international cooperation in digital library research areas