DRIVER-II
Digital Repositories Infrastructure Vision for European Research

Summary: DRIVER is a multi-phase effort whose vision and primary objective is to establish a cohesive, pan-European infrastructure of Digital Repositories, offering sophisticated functionality services to both researchers and the general public. Based on the establishment of a co-ordinated network of Digital Repositories, containing (textual) research and other scholarly publications, and on the development of an advanced-quality test-bed infrastructure, DRIVER will enable enhanced interoperability of data and service-providers while providing the required functionalities to the end users. Through its awareness and advocacy programme, it will foster the development of Digital Repositories in all European countries. With a number of studies on the current state of the Digital Repository landscape, it will also identify the most pressing issues for future developments.

Objectives: DRIVER’s main objective is to establish a flexible, robust, and scalable infrastructure through which potentially all European and world-wide Digital Repositories can be presented in a cohesive manner and supported by a range of specialized or generic functionality services. It focuses on the following elements: (i) Strategy: establishment of a “European Confederation of Digital Repositories” that will offer to all interested stakeholders an open forum for discussions on the theme of Digital Repositories, interacting with and complementing other related organisations and communities both in Europe and globally. (ii) Content Genre: expansion of the types of content supported by the DRIVER environment both at the physical level, focusing on non-textual content, as well as at the conceptual level, focusing on non-publication material. (iii) Information Space: enrichment of the intellectual value through the construction and exploitation of “enhanced publications”, i.e. publications coupled with other related objects. (iv) Functionality: extension of the fundamental functionality to serve established, as well as new modes of scientists’ operation in their research endeavours.

Action plan: DRIVER-II applies a work breakdown structure, in which work packages are wrapped in the three activity areas: Networking, Service and Research. There is continuous exchange, interaction and information flow among these areas: the Service activities provide the operational basis for both the Networking and Research activities. The Research outcome feeds technological upgrades and innovation into Service activities. Networking activities ensure the community uptake from and for the Research activities. Each area is described in more detail below. The work packages of DRIVER II have been designed with well-defined tasks that are allocated to partners according to their expertise. The corresponding deliverables are either reports, which ensure conceptual clarity and terminological consistency throughout the consortium, as well as software releases, which promote the enhancements carried out in the infrastructure services.

Networking activities: The Networking activities area is concerned primarily with the task of “Building a Confederation of European Digital Repositories” that will enable the share and reuse of scholarly information, through the involvement of representatives of academic institutions that host scientific digital repositories and representatives of national, regional or subject-based federations. Furthermore, the Networking activities will advance the current status of DRIVER from a test-bed project to a fully functional organisation and ensure its controlled geographical and thematic extension, the uptake of DRIVER technology and the close correspondence between its research activities and established communities of practice.

Service activities: The Service activities area ensures the stable technological operation of the infrastructure in terms of a production system and at the same time provides a system of advancement for the “upgrades” developed in the research area. Its main tasks will revolve around the production software release cycle, aided by the corresponding testing procedures and the accompanying documentation supporting the repository managers and service providers.
**Joint Research activities**: The Research activities area aims at enhancing the DRIVER infrastructure by both consolidating and extending the service components. In particular, the consolidation process will improve the quality of service provided by a service layer, while the extension process will involve the addition of new functionalities, a task which is accomplished by enriching the existing services or by adding new ones. The research activities outcome will (i) allow for larger scalability and improve usability of the infrastructure, (ii) offer virtually centralized access to an Information Space of DRIVER objects aggregating all types of digital repositories, and (iii) offer new functionalities which will allow researchers to search, browse, access, and be informed about the multifaceted publications populating the DRIVER Information Space and, more specifically, to permit specific scientific communities to manage enhanced publications.

**User communities**: There are three principal stakeholders that will use DRIVER services and technologies: (i) Research Community End-Users using the provided advanced functionalities to fulfill their research interests, (ii) Service Providers willing to realize their applications exploiting DRIVER’s services and enriched Information Space, and (iii). Data Providers wanting to promote their institutional data. In addition, through its networking activities, DRIVER will focus on a number of subject-based communities to identify their needs and special requirements, on both technological and data representation aspects, in order to develop its enhanced publication functionalities and collaborative environments.

**International aspects**: Internationally, DRIVER represents a unique venture, drawing together stakeholders and integrating repositories over a diverse and expansive physical and cultural landscape. In its first phase, the project has succeeded in securing a high profile as well as an awareness among the international Open Access community and the targeted stakeholder groups. Moreover, DRIVER’s studies on interoperability and technological issues, combined with the uptake of subject-based communities, examine practices performed in similar environments stretching across European boundaries.