



EULER



Telematics
for Libraries

Project LB-5609

European Libraries and Electronic Resources in Mathematical Sciences

Since April 1998 the European Commission is funding the EULER project in the framework of the 'Telematics for Libraries' sector from the Telematics Applications programme. Main goal of EULER is to integrate different, electronically available information resources in the field of mathematics. EULER aims to construct a **digital library mathematics** from existing heterogeneous sources.

Starting Point

There's a rapid increase in number of networked resources with information on scientific results and ongoing developments in the field of mathematics. Today, the user has to switch between a growing number of systems with heterogeneous user interfaces:

- Scientific literature databases
- Library OPACs and document delivery services
- Electronic journals from academic publishers
- Archives of preprints and grey literature
- Quality controlled subject information gateways on the Internet
- Robot-generated indexes of other relevant Internet resources

These resource types are considered to be the most frequently used when conducting searches for scientific results. They are rarely interconnected and users have to search them one by one.

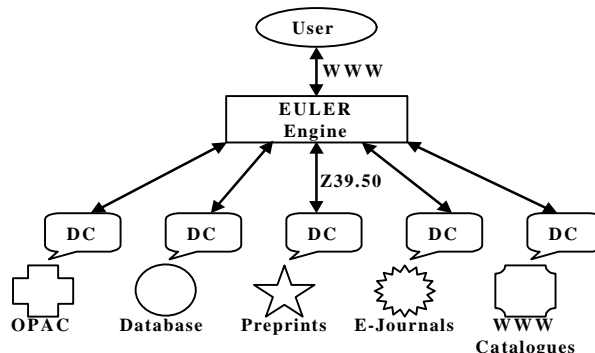
Goals

The aim of the EULER project is to offer a **one-stop-shopping site** for users interested in mathematics. One single integrated networked based access point will be developed, covering the mentioned publications-related information resources on mathematics. A common user interface, available on the World Wide Web, will allow a homogeneous access to all integrated information types. The interface will be developed in close cooperation with the mathematical user community. Only one search will be necessary to generate a broad range of (mixed) hits, irrespective of resource type and information provider. The EULER service will be developed starting with selected important information sources from the consortium partners. The goal is to design an open architecture. New sources of data also from other information providers and libraries can easily be added later.

Integration Approach

The integration approach makes use of common resource descriptions based on the Dublin Core (DC) element set and access to those descriptions via the Z39.50 protocol. Technically, all information providers will produce DC metadata for their resources and offer them as distributed databases, which are located at the providers' sites. The central *EULER Engine* will query these databases parallelly via a common Z39.50 profile and perform result set merging and presentation formatting. The integration approach will take into consideration the requirements of the user community and the different information providers. Participating institutions will still be autonomous in deciding on their scientific and organisational policies, while at the same time providing a common access strategy to their information services. The foremost requirement to achieve such an aim is to choose and apply suitable standards, formats and protocols.

System Architecture



Work Plan

The main objectives of the project correspond to a set of work packages:

- 1. Requirements Analysis:** Final discussion and definition of user requirements. Additionally, tasks on revision of methodologies and standard developments monitoring will ensure the openness of EULER approaches with respect to other developments.
- 2. Resource Adaptation:** Builds the basic set of EULER metadata databases that are finally accessible from the EULER Engine. Done by using DC as switching language. Definition of a common DC format, and mapping of current information to this joint format.
- 3. EULER Engine Implementation:** Carried out in parallel to the Resource Adaptation work package. Designs and implements the EULER Engine: WWW user interfaces and Z39.50 interfaces to the partners Dublin Core metadata databases and document delivery services.
- 4. Evaluation and Demonstration:** Carried out after the release of the EULER Engine (beta version) by selected groups of users. The work package intends to measure the system suitability and scalability and the satisfaction level of users with the service.
- 5. Information Dissemination and Exploitation Preparations:** Relevant reports and demonstrations of project's results will be made publicly available on the World Wide Web. Final exploitation plans for EULER services and other project results will be prepared.

EULER Partners:

FIZ Karlsruhe, Dept. Math. & Comput. Sci., Berlin
The European Mathematical Society
Technische Universität Berlin
NetLab, Lund University Library

Cellule de Coordination Documentaire
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