Assisting scientists to make their research results world wide freely available: An experience begun in the 90's

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Abstract
The ERCIM Technical Reference Digital Library service (ETRDL) was promoted by the European Research Consortium for Informatics and Mathematics (ERCIM) with the aim of managing grey literature produced by scientists working in the areas of information science and applied mathematics, making their research results immediately world wide available and also building a test-bed for their research activities. In this paper ETRDL is described and its future development presented. Section 1 traces the history of ETRDL from its conceptualization to the first experimental service given by the early ETRDL prototype. This was implemented to satisfy the requirements of the European IT scientific community, although realized as a part of NCSTRL (the US Networked Computer Science Technical Reference Library). Section 2 describes how further developments made ETRDL a system presently capable to manage DLs for very different types of literature. Section 3 discusses issues related to migration of ETRDL managed repositories to OpenDLib, an advanced digital library service system developed by ISTI-CNR. Advantages and difficulties of this migration are considered in the conclusions.

1. ETRDL history: an experience begun in 90s
In the 1996 the European Research Consortium for Informatics and Mathematics (ERCIM) [1] recognized the importance of the digital library technologies and thus decided to establish an ERCIM programme for R&D in Digital Library (DL) sector. The Italian National Council of Research (CNR) [2] was appointed as coordinator of the ERCIM Digital Library Initiative (DLI)[3].
The aim of DLI was to promote the development of DL technologies in Europe. Such Initiative had three objectives: to support long-term research activities, develop large digital collections, collaborate with the US Digital Library Community. Since 1996, a series of research-oriented activities, mainly sponsored by the DELOS Working Group [4], were thus organized, e.g. workshops, conferences, collaborative studies on DL-related research issues. Within this context, towards the end of 1997, ERCIM decided to undertake an implementation activity by setting its own digital library up to provide open access to grey literature: the ERCIM Technical Reference Digital Library (ETRDL) [5][10].
During the preliminary meeting held in Budapest (1996) and in Pisa (1997), ERCIM Librarians and computer scientists decided to build a DL infrastructure that should satisfy particular needs of different European Institutions and contemporarily participate to the international research context. The first step towards the development of ETRDL was a survey of above requirements. Two main objectives were identified: (i) to implement functionality to satisfy specific local requirements regarding the language of the user interfaces; (ii) to assist ERCIM scientists to make their research results world wide immediately available by providing them with on-line facilities for a self-publishing service. The Project, funded by ERCIM and the Delos WG on DL - Esprit Long Term Research Programme - LTR n. 21057 5, was a collaborative effort among the following National Institutions: CNR-Italy, CWI-The Netherlands, CRCIM-Czech Republic, FORTH-Greece, GMD-Germany, INRIA-France, SICS-Sweden, SZTAKI-Hungary.
The system was developed by ISTI-CNR (Pisa) in the context of collaboration with Cornell University DL Group. This group had already realized an on-line grey literature distributed service in the Computer Science domain, called NCSTRL (the US Networked Computer Science Technical Reference Library) [6][9].
The system employed by NCSTRL was Dienst [7][8], an open conceptual architecture for digital libraries, an open protocol for communication in the architecture, and a reference software system implementing the architecture, an open system that provides internet access to a distributed, decentralized, multi-format documents collection. ERCIM DL should have become a node of the NCSTRL federation and adopt the infrastructure Dienst: in this way ETRDL would form part of an international collection of grey literature.

1.1. The Dienst Architecture and the ETRDL extended functionality
The Dienst architecture was built on the notion of individually defined services that when combined together create a distributed digital library. Services and resources in a Dienst digital library may be located anywhere on the Internet. The functionality of a Dienst digital library includes storage and access to resources, deposit of new resources, discovery and browsing of those resources.
Communication with and among individual Dienst services takes place via an open protocol, which makes it possible to build other service layers on top of the existing basic Dienst services.
The services defined in the protocol are as follows: