

Intro

Table of contents

1 Introduction.....	2
1.1 What is a digital library?	2
2 Why should I use ADL software?.....	3

1. Introduction

The Alexandria Digital Library Developer's software package includes ADL middleware version 2 and webclient software.

The ADL middleware server is a distributed, peer-to-peer software component that provides mediated programmatic access to digital library collections. To clients, it presents standard library services in the areas of metadata search, retrieval, and ranking; access control; and collection management and organization. To collections, it presents a standard framework in which heterogeneous, collection- and/or item-specific metadata can be mapped and returned.

The middleware server works cooperatively with a centralized collection discovery server and, in peer-to-peer fashion, with other middleware servers. The server is written in Java and Python and can be run as a web application inside a servlet container, as an RMI server, or both. Distributed with the server is the "Bucket99 driver," a configurable component that allows relational databases to be viewed as collections.

Using this software, you can publish geospatial digital content for structured search and retrieval over the Web, including:

- adding your collections to the Alexandria Digital Library?
- using the webclient code to develop your own libraries
- developing other clients on the middleware interface

1.1. What is a digital library?

A digital library is a focused collection of digital objects, including text, video, and audio, along with methods for searching, access and retrieval, and for selection, organization, and maintenance.

Many digital objects can have a geospatial reference. Geospatial collections can include items as diverse as maps, historical photographs, field data, remotely sensed images or archeological data. The Alexandria Digital Library is a distributed digital library for geographically referenced information.

1.1.1. Geospatial & georeferenced information

Although the Alexandria Digital Library lets you search using standard library semantic concepts, such as author and keyword, it really focuses on geospatial and georeferenced information.

Intro

Geospatial information is directly referenced by longitude and latitude coordinates that locate its footprints on the face of the Earth, such as maps, aerial photographs, and remote-sensing imagery.

Georeferenced information references a geographic location without explicit geospatial representation. Any kind of document that is about a particular geographic place, (A Tale of two Cities or History of the Decline and Fall of the Roman Empire) is potentially an example of georeferenced information.

2. Why should I use ADL software?

A digital library lets you share your information with users in a consistent manner. It also provides consistent access information to computer programs. In addition, a digital library provides structured information about the data, known as metadata, such as author, title, date, and keywords, which make it easier to access the data.

ADL has the following features that make it unique:

- The ability to search for fundamentally different document types in the same way. For example, a search of a specified location will return text documents, maps, or multimedia about the area.
- The ability to search using standard library terms, such as author, title, and keyword.
- A simple query language.
- Support for distributed searches across heterogeneous collections and instances of ADL.

Distributed searches means you can search different types of databases at different locations. ADL has the potential to develop into a worldwide network of databases with geographically referenced information.

- A gazetteer service for translation between place names and geographic coordinates. The large international gazetteer database allows for a less coordinate-dependent client. It also has a standard for the content of a gazetteer and an XML-service to allow you to add new elements to the gazetteer.
- The ability to use existing metadata. ADL defines a general architecture that makes it possible to use with totally different types of databases and representation of data. It can be used with a wide variety of databases, often without changing the content or information within the database.