The Texas Course Redesign Learning Object Repository:
Research and Development for a Production System

IntraLibrary Learning Object Repository

Fei Li
fl0030@unt.edu

10/19/2007

Version 1

Version Control				
Specify the **Version**, **Date and Time of Modification** of the document, **Name of the Modifier**, **Section** of the document where the changed have been made, and **Brief Description of the Changes**.				
Document Title	THECB LOR: IntraLibrary Learning Object Repository			
Document Filename	IntraLibrary_fei_19Oct2007.doc			
Original Creation Date	October 19, 2007			
Original Author	Fei Li			
Version	**Date and Time of Modification**	**Name of Modifier**	**Section Modified**	**Brief Description of the Changes**

Table of Contents

IntraLibrary Learning Object Repository

1. Overview

Intrallect is a leading provider of digital object repository software specifically designed for use in the education and training sector. The company specializes in helping organizations such as universities, colleges, schools, professional and corporate bodies to better manage their digital resources at a strategic level. The company is currently chairing the IMS working group looking into interoperability standards for learning object repositories.

IntraLibrary is a web-based digital repository that manages a wide range of digital content, from documents, presentations, lesson plans, case studies, and animations etc. to more complex modules and courses. Contents are made available for searching, browsing, and downloading. It enables educators and trainers to manage, share and re-use digital resources. It was selected as the software solution for the SIESWE Learning Exchange, a national repository of learning objects for higher and further education in the UK, in 2004. The latest version is intraLibrary 2.9, released in June, 2007.

2. Technical requirements

IntraLibrary is written in Java 2 and conforms to Sun's J2EE 1.3 Specification. It works with Firefox, Nescape, and IE. The following applications are required on the server before intraLibrary is installed:
- Java JDK supporting Java 1.4
- Apache Tomcat version 4.06 LE (for Java 1.4) or any commercial Java Application Server compliant with the above
- MySQL 4 or Oracle 9i

It should run on any server that supports the above applications. It has been tested on Microsoft Windows 2000, XP, RedHat Linux 7.2 and 8, and Sun Solaris 2.8.

3. Licensing models

IntraLibrary is available under two license models: the contributor model and the institutional model. The contributor model is designed for small projects or cross-organization collaborations. The software is licensed for any number of users, but the number of users who may contribute resources or metadata to the repository, known as "contributors", is constrained. This would be a cost-effective model for organizations that have a small number of people who will be putting materials into the repository.

The institutional model is designed for adoption of intraLibrary by an entire institution. In this model the number of contributors is not constrained, and the price is based on the number of staff in the institution. This is would be a cost-effective model for organizations that want a large proportion of their staff to be able to contribute materials to the repository.

4. Searching and browsing capabilities

Basic features
- simple keyword searching
- use of wildcards
- image preview of resources
- flexible download choices including single file, URL and structured file options
- rating and making comments on resources
- subscribing to e-mail alert of new comments
- setting up personalized RSS news feeds to be notified of new resources
- creating a Public URL link for a resource and put the link where others (unregistered users) can click on it to access the resource

Click through
http://pictus.intrallect.com/demos/Finding_and_Using_Resources/Finding_and_Using_Resources.htm to
see an animated demonstration of basic features, including search, preview, download, and etc.

Advanced search
- allowing expert users to search by any number of specific metadata fields and collections
- choosing from almost 70 technical format constraints including JPEG, MPEG, AVI and standard Microsoft Office formats
- creating and saving specific searches for future use
- sharing these saved searches with colleagues

All searches at present only search the resource's metadata, not the text of the resource. Click through
http://www.intrallect.com/demos/Refine_Search/Refine_Search.htm to see a demo of advanced
searching features.

Browsing
- selecting a classification system and browsing through it
- customizing the user's own classification systems
- using multiple classification systems

Click through http://pictus.intrallect.com/demos/Browse_Content/Browse_Content.htm to see a demo of
subject browsing using taxonomies.

5. Submission Workflow

IntraLibrary has a highly configurable workflow, which allows customers to define their own complex,
multi-role workflows.

Submission of a single-file learning object involves the following steps:
1. Click on the "upload area" link to get access to the upload tool;
2. select the type of object (in this case "file/package") by clicking on the appropriate button;
3. Select a file on the local computer;
4. Type in a title for the learning object;
5. Click on the "upload" button to upload the file.

Learning objects that contain more than one file must be uploaded as a content package. IntraLibrary
allows contributors to upload standard content packages (IMS and SCORM) to intraLibrary via the simple
Web-based upload page. The process of uploading a content package is exactly the same as uploading a
single file. Contributors can also link to external resources from within intraLibrary and create metadata
for these links.

6. Metadata standards supported

IntraLibrary supports Dublin Core metadata element set, IEEE LOM, and IMS Learning Resource
Metadata. It allows users to export metadata in Dublin Core XML format, and it exposes metadata as
Dublin Core for OAI-PMH harvesting and SRU/SRW searching. The latest intraLibrary uses the IEEE
LOM as its internal information model, but retains legacy support for IMS LRM.

The following document shows how all the metadata fields in the IMS LRM model map to the IEEE
Learning Object Model (LOM). The labels of fields in the intraLibrary are shown in the central column.
Customers can re-configure these labels in any language.
http://www.intrallect.com/index.php/intrallect/content/download/626/2603/file/Metadata%20Field%20Nam
es%20-%20v2.9%20and%20above.pdf.

IntraLibrary also can develop bespoke support for other metadata standards if needed. It currently supports subsets of NISO z39.87 technical image metadata and ODRL rights expression metadata. Customers can request local extensions to their metadata schemas.

7. Metadata creation and application profile creation

IntraLibrary provides a Web-based metadata and classification editor tool. Users can upload resources with metadata already in an IMS or SCORM package, and the metadata can be edited within intraLibrary. IntraLibrary also provides metadata templates that fill in fields for users, including automatically determining the size or format of a resource, filling in the contributor's name from their user record, and generating an identifier. The default metadata template is available at http://www.intrallect.com/support/metadata/default_template.htm. Users can set up any text field in the metadata to be filled in.

IntraLibrary offers two ways to copy metadata from similar sources in the metadata editor. One is importing a previously downloaded metadata record from the local file system. The other is copying metadata from one resource within the system and pasting it into the record.

IntraLibrary allows for creating and editing UK LOM Core, CanCore, SCORM and BECTA NLN (British Educational Communications and Technology Agency National Learning Network) application profiles. Users can use more than one application profile and create specific profiles for particular collections or groups of users. They can apply standard (IOM/IMS) or locally developed vocabularies to fields. The system also allows for setting up searchability, visibility, editability, cardinality, etc. for each field. Users can make decisions on whether the field is mandatory, optional, or "not used."

8. Other product documents

Getting Started: Finding and Using Objects (intraLibrary 2.9)
http://www.intrallect.com/support/intralibrary/v2p9/manuals/getting_started_all_users.pdf.

Advanced Searching (intraLibrary 2.9)
http://www.intrallect.com/support/intralibrary/v2p9/manuals/advanced_search.pdf.

Getting Started: Uploading and Cataloging Objects (intraLibrary 2.9)
http://www.intrallect.com/support/intralibrary/v2p9/manuals/getting_started_contributors.pdf.

IntraLibrary 2.9 Administrator's Guide
http://www.intrallect.com/support/intralibrary/v2p9/manuals/admin_guide.pdf