Integrating Digital Libraries and Traditional Libraries: Collaborating for Sustainability

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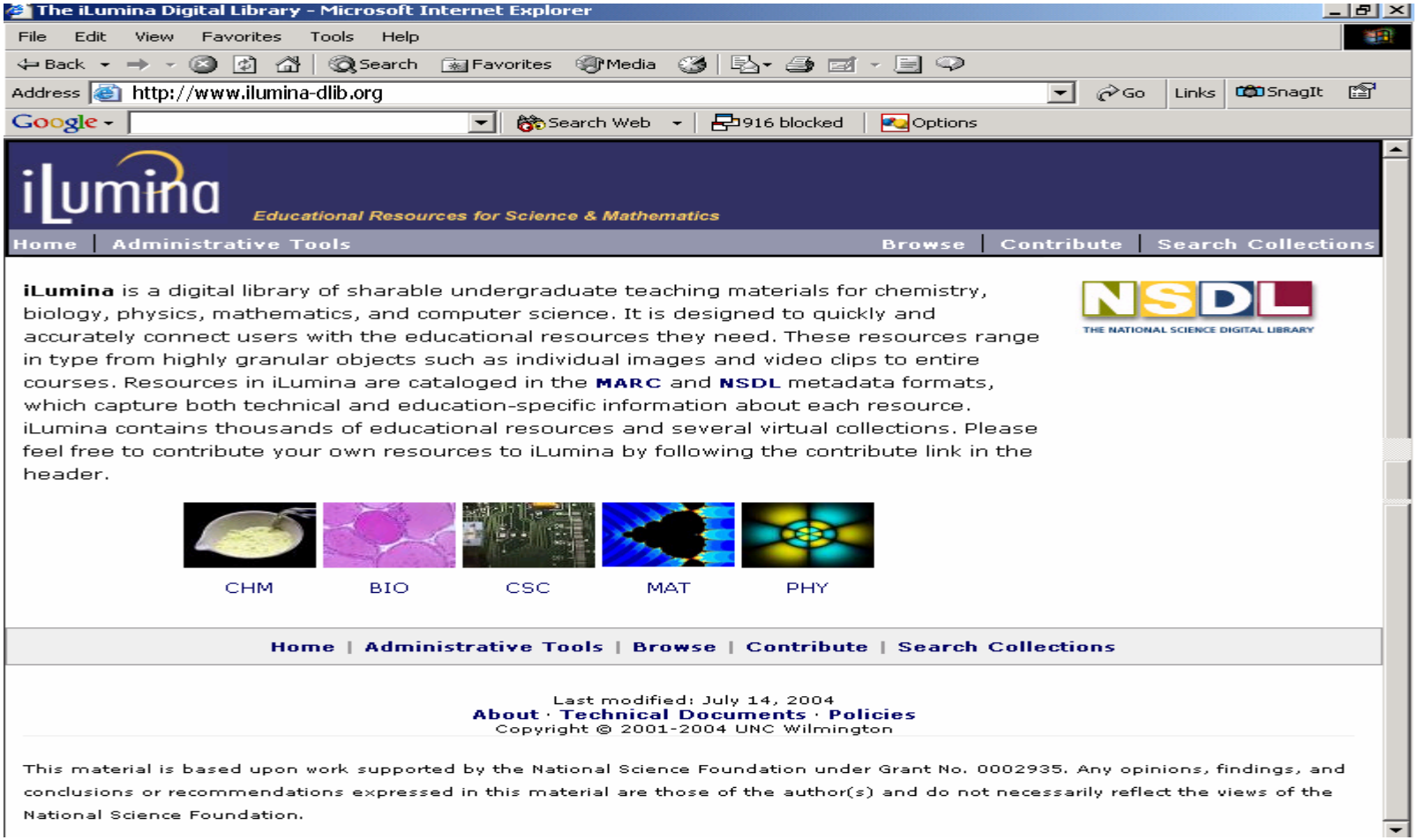
iLumina Digital Library

http://www.ilumina-dlib.org



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iLumina Digital Library

- One of 356 collections of the National Science Digital Library (NSDL)
- Features 1600 digital learning objects for undergraduate education in science and mathematics
- Funded by the National Science Foundation Digital Library Initiative Phase II (NSF DLI-II)
- Created by scientists using IMS-compliant metadata in XML format

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iLumina History

- Original iLumina project (2000-2003) funded to develop database & interfaces for searching and contributing learning object resources
- With NSF funding ending, the key issue became sustainability of the collections
- The original team of scientists turned to librarians for collaboration

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Sustainability Issues

- 80-88% of NSDL projects are university-based

- Libraries' traditional roles are adaptable to the digital environment:
  - Innovative use of technology
  - Standards of bibliographic description
  - Philosophy of open access

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Integration Issues

- What is gained by integrating iLumina into a traditional library catalog?
  - Wider dissemination
  - Stable environment

- What may be lost?
  - Contribution form for new submissions not integrated into catalog
  - Robust search form with multiple pull-down menus

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iLumina Goals

- Current iLumina project (2003-2005) funded with scientist-librarian team in place
- Goal 1: Create a widely applicable model for sustaining NSDL collections beyond the period of their grand funding
- Goal 2: Develop a method for enhancing access to the digital resources contained in the collections

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Librarians' Roles

- Cataloging, Systems, Technical Services, & Public Services librarians involved as a team
- Provide expertise in bibliographic standards
- Analyze and study iLumina record fields
- Create metadata crosswalks
- Harvest the digital library's metadata
- Convert metadata to MARC format
- Add records to local library catalog and WorldCat

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Cataloging Challenges

- iLumina record fields vs. MARC fields
  - Fields not in local system load table
  - Fields not indexed in local library system
  - Lack of label for 5xx fields in MARC
- Limiting searches to iLumina
  - Location scoping
  - Advanced keyword search
- Determining publisher, distributor

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Metadata Scheme Crosswalks

- Two tracks for iLumina data:
  - Ending at NSDL
  - Going into local library and ending at WorldCat
- Three initial crosswalks considered before availability of Innovative XML Harvester
- Two final crosswalks created and used after understanding functionality of XML Harvester

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Crosswalks Continued

- Experimental crosswalks:
  - IMS-DC-MARC
  - IMS-MARC-DC
  - IMS-MARC
- Final crosswalks:
  - IMS-NSDL_DC (Qualified DC)
  - IMS-MARC XML

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Innovative XML Harvester

- Converts XML data to MARC and provides mechanism for loading records
  - DC (Unqualified) to MARC
  - MARC XML to MARC
  - Other XML schemes to MARC
- Processes XML data through OAI provider

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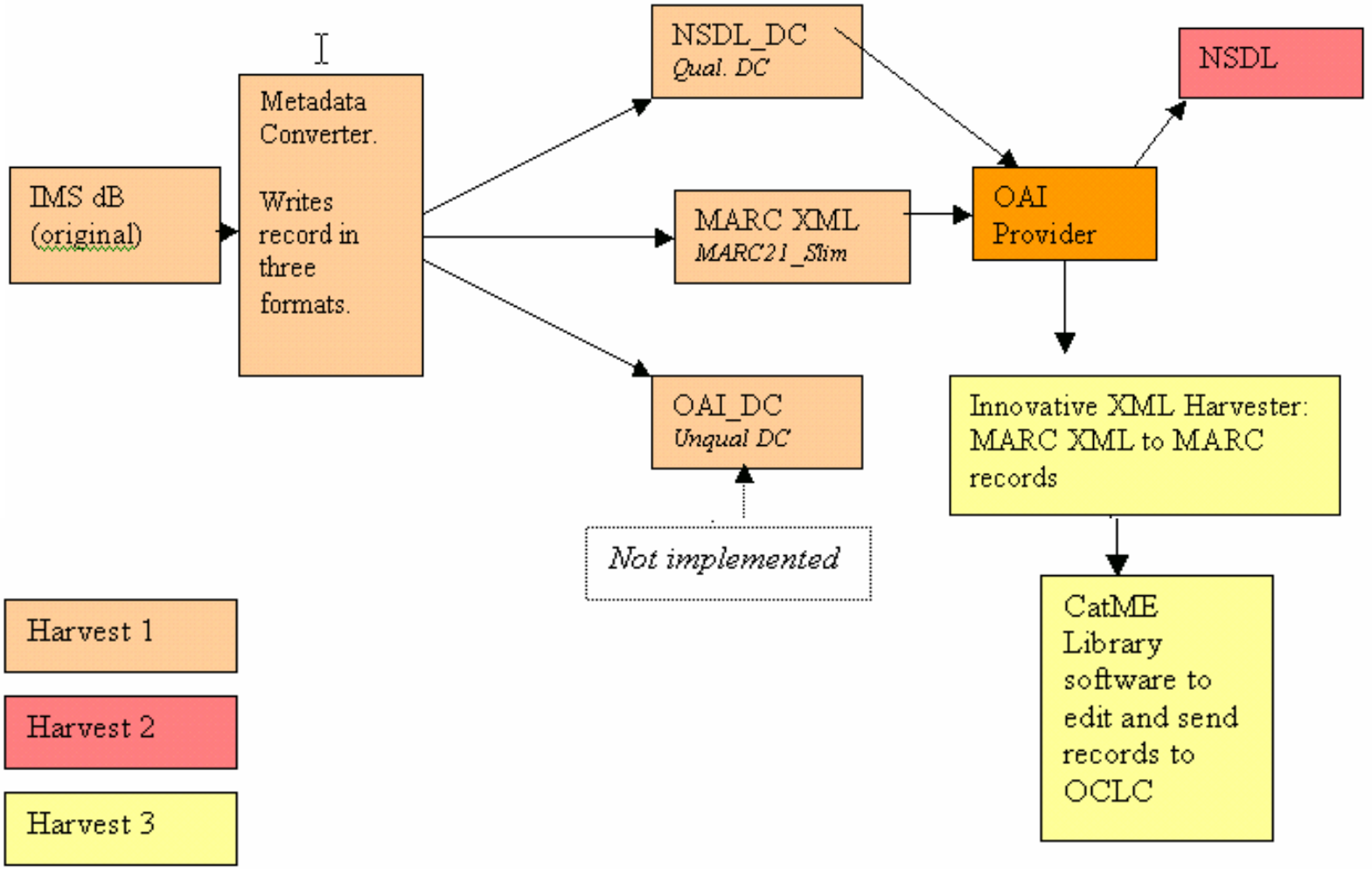
Metadata Harvesting



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Metadata: IMS to MARC

iLumina

Quick Search: hydrogenic [Go!]

Educational Resources for Science & Mathematics

Home | Login | Advanced Search | Browse | Contribute | Collections

back to search results — 4 of 6 found resources — < Previous | Next >

Hydrogenic v4.0 Package <XML>

GUID	iLumina:1107
Title	Hydrogenic v4.0 Package
Author(s)	Wolfgang Christian Mario Belloni
Download	http://dl.uncwil.edu/physics/x_physlets_01/physletprob/ch18_v4_physlets/hydrogenic4/default.html
Size	3.884 Kbytes
Description	This section contains three Physlets that plot the radial wavefunction, angular wavefunction, and the probability density in the x-z plane. Principal quantum numbers from n=1 to n=50 are supported.
Mediatype	Java Applet
Keywords	
Taxonomy Path	Physics/Quantum Mechanics/
Learning Resource	Example Simulation
Interactivity	Low
Difficulty	Easy
End User Role	Learner
Structure	Individual Learning Resource
Cost	No
Copyright	Physlets, that is, the applets themselves, may be used to author new problems and these problems may be distributed along with the Physlet jar files for non-profit, educational purposes without requesting permission under certain conditions. Please contact the author for these conditions.
Datatype	.class(application/x-java-class) .htm(text/html)
Tech Requirements	
Other Platform Requirements	
isPartOf	1037: http://dl.uncwil.edu/physics/x_physlets_01/physletprob/ch18_v4_physlets/default.html
Submission Date	5/23/2002
Contact Information	**Wolfgang Christian** **Email:** wc@phyhost.davidson.edu **Institution:** Davidson College **Department:** Physics **Position:** **Work Phone:** **Work Fax:** **Work Address:** P.O. Box 1719 Davidson NC 28036 **Mario Belloni** **Email:** mabelloni@davidson.edu **Institution:** Davidson College **Department:** Physics **Position:** **Work Phone:** **Work Fax:** **Work Address:** P.O. Box 1719 Davidson NC 28036

UNC WILMINGTON LIBRARY CATALOG

Return to Browse | New Search | Modify Search | Start Over | Show Similar Items | Coded Display | Mark for Export | Enter Hold Request

Central NC Consortium | Western NC Consortium | (Search History)

KEYWORD | hydrogenic | Wilmington | Search

Sorted by Date

Author	Christian, Wolfgang
Title	Hydrogenic v4.0 package [electronic resource] / Wolfgang Christian, Mario Belloni
Publisher	[Wilmington, NC] : iLumina, 2002

Click on the following:

View this online learning resource

View related resource

Note	Type of file: Java Applet, .class(application/x-java-class), .htm(text/html) Learning resource: example, simulation Interactivity: low Difficulty: easy Structure: individual learning resource Cost: no Copyright: Physlets, that is, the applets themselves, may be used to author new problems and these problems may be distributed along with the Physlet jar files for non-profit, educational purposes without requesting permission under certain conditions. Please contact the author for these conditions Submission date: 5/23/2002
Summary	This section contains three Physlets that plot the radial wavefunction, angular wavefunction, and the probability density in the x-z plane. Principal quantum numbers from n=1 to n=50 are supported
Note	End user: learner
Subject	Physics -- Computer-assisted instruction Internet in education Wave functions Quantum theory Field theory (Physics)
Alt author	Belloni, Mario iLumina

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Harvesting to Library

- Customize local library system load table
  - 270 field
- Review local library index table
  - 024 indexed in ISN (I)
  - 516 indexed in Keyword notes (w)

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Clean up and Enhancement

- Catalog librarians enhance harvested iLumina records in local library database
- Authority work
  - LC Subject Headings
  - Name authority
- Bibliographic quality control
  - Punctuation & capitalization
  - Abbreviations
  - Fixed fields

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Sending Records to WorldCat

- Import enhanced iLumina records from local library system into CatME
- Batch upload iLumina records file to OCLC WorldCat

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iLumina's Future

- Integration of submission, review, & cataloging processes within library
- Determination of usage trends by monitoring library holdings added to iLumina records in WorldCat
- Implementation of plans to increase size of the collection
- Creation of model for sustainability through documentation of the integration process

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Collaboration & Teamwork

- Benefits for scientists and librarians
- Scientists learn about record structure and bibliographic standards and conventions
- Librarians learn about NSF environment, grant writing, new resources for science instruction, and new XML/OAI applications
- Both groups explore ambiguity of terminology: “library,” “cataloging,” “metadata”

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Implications

- Sustainability is an important challenge for digital collections
- Integrating digital collections into an established university library catalog is a feasible model
- Non-librarians will be increasingly involved in creating digital collections
- Librarians can collaborate to provide expertise in library systems and bibliographic standards and conventions

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Additional Web Resources

- NSDL

http://www.nsdl.org/

- IMS

http://www.imsglobal.org

http://www.imsproject.org/metadata/imsmdv1p2/imsmd_infov1p2.html

- OAI

http://dl.uncw.edu:8080/oai/index.jsp

http://www.openarchives.org

- Dublin Core

http://dublincore.org/documents/dces/

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The iLumina Team

Scientists

--Dr. Dick Ward, PI

--Dr. Dick Dillaman

--Dr. Russell Herman

--Dr. Gabriel Lugo

--Dr. James Reeves

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Programmers

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