Fostering collaboration through digital libraries in Latin America

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Agenda

• Latin America, who, where, what
• National and regional networks
• DLs in the agendas of CS research in Latin America
• DLs in Mexico: RABiD/ONeDL case
• Using DLs to foster collaboration
• Open areas
Latin America

- Spanish (~400 million people)
- Portuguese (~190 million)
- French (~10 million)

~600 indigenous languages: 40 million people
Advanced networks in Latin America

CUDI
RNP
InnovaRed
REUNA
RENATA
RAAP
RAICES
RAGIE
REACCIUN
CEDIA
RedCyT

RNP
REUNA
InnovaRed
As much as they aim to provide infrastructure, these networks provide collaboration opportunities.
México’s CUDI: Corporation of Universities for the Advancement of Internet

- Established in 1999
- Promotes the development of a high performance network and its applications
- 200+ members
- Supports projects involving 2+ members
- Activities driven by an Applications Committee and organized around communities
  - Education, remote labs, student television, digital libraries, astronomy, mathematics, engineering
• Latin American Cooperation for Advanced Networks
• Focus: collaboration in research, innovation and education
• Established in 2004 by higher education institutions and science and technology ministries of 14 countries, and supported by European Union programs
CLARA’s membership

Current members:
1. Argentina
2. Bolivia
3. Brazil
4. Colombia
5. Costa Rica
6. Chile (REUNA)
7. Ecuador (CEDIA)
8. El Salvador
9. Guatemala
10. México
11. Panama
12. Peru
13. Uruguay
14. Venezuela

Expected to join in 2010: Paraguay, Honduras, Nicaragua
CLARA’s topology (http://www.redclara.net/)
CLARA’s actions

• Currently developing communities around topics of interest
  – Considering the priorities set forth by UN’s Millenium Development Goals, European Union’s Framework Program 7, OAS and IDB
  – MDG: Water, social sciences, health, education
  – FP7: Materials technologies, grids, natural disasters
  – OAS: Renewable energies, astronomy, **digital libraries**
  – IDB: E-government, food, **cultural heritage**

• Established an **Applications Committee** with members from Astronomy, Epidemiology, Archeology, **Digital Libraries**, Nanotechnologies, Grids, Medical Imaging, Biodiversity

• **Eight Approved communities** (May 14): Collaboratories, nanotechnologies, **digital libraries**, food and agriculture, coastal management, **digital arts, learning objects**, gamma radiation
Are DLs in Latin America’s CS research agenda?
Grand challenges for CS in Mexico

• Large-scale information management (from data to knowledge)
• ICTs for Biomedicine
• Innovation in education
• ICTs for a secure country
• Ambient intelligence for addressing problems of large cities
• Citizen-oriented knowledge-based services

http://tinyurl.com/grandesretos
Grand challenges for CS in Latin America

- Citizen-oriented ICTs
- Multi-linguism and Latin American identity
- Computing for environmental monitoring and control
- Complex collaboration networks

http://tortuga.lbd.dcc.ufmg.br/ (coming up...)
DL Challenges in Latin America

• **Presence** – Contents in our languages on work and culture from our countries for our people and the world

• **Access** – Tools, services, user interfaces and collaboration environments so existing contents can be used and new knowledge can be generated by Latin Americans

• **Preservation** – Using the digital medium to preserve and disseminate our culture and heritage

• **Education** – Curricula in Information and Knowledge Technologies; (re) train librarians

• **Policy** – Bringing DLs to the forefront of development agendas

• **Infrastructure** – Bridging gaps; building high performance networks
Progress on DLs

- Repositories registered as OAI data providers:
  - Brazil: 31
  - Mexico: 12
  - Venezuela: 10
  - Argentina: 3
  - Chile: 2
  - Colombia: 2
  - Ecuador: 2
  - Peru: 1

- Repositories in OpenDOAR
  - Brazil: 31
  - Mexico: 6
  - Colombia: 6
  - Venezuela: 6
  - Chile: 5
  - Peru: 4
  - Argentina: 4
  - Ecuador: 2
  - Costa Rica: 2
  - Bolivia: 1
  - Cuba: 1
Progress on DLs

• Some salient efforts in **content** development
  – **Redalyc**: [http://www.redalyc.org](http://www.redalyc.org), 562 scientific journals from 15 countries
  – **Scielo**: [http://www.scielo.org](http://www.scielo.org), 546 scientific journals from 7 countries
  – **Cybertesis**: Digital theses from Chile, Peru and Colombia
  – Repositories of theses, 3D learning objects and multimedia objects ([http://ict.udlap.mx/](http://ict.udlap.mx/))
Progress on DLs

• Some efforts in **tools** development
  – Search engine for open access collections (UNAM)
  – Federated visualization tools (UDLAP)
  – Software for managing digitized ancient books (UDLAP)
  – Software for constructing personal digital libraries (ITESM)
CUDI’s DL Community (Mexico)

- 600+ members (at individual level)
- Includes developers of services and collections, librarians, vendors, users
- **Meets twice a year** at the Spring and Fall CUDI conferences (tutorials, discussion panels) – Tampico, Fall 2010; Manzanillo, Spring 2010
- **Holds “Virtual DL Days”**, thematic videoconference meetings (open access, digital theses, digitization,...)
- Fall 2010: **Virtual Day on Institutional Repositories**
- Develops multi-institutional projects
  - Digitization, learning spaces, meta search engines,...
RABID / ONeDL

• **Red Abierta de Bibliotecas Digitales** (RABiD)

• aka **Open Network of Digital Libraries** (ONeDL)

• Promotes
  – open access to digital contents
  – open source tools, services, environments
  – coexistence of open and proprietary technologies
  – open membership
RABiD’s membership

UDLAP

MORA

BUAP

UASLP

UNAM

UDG

PUC-Rio

UVa

TAMU

UAA

IPN

UJED

UAH

UAEH

UAEM

UV

USON

UCOL

Electronic publications
Digital theses
Ancient books
Federated search
Federated visualization
Virtual reference
Collaboration tools and environments
Learning object repositories
...

IPA
Sample RABiD projects

- UDG-UV-UDLAP: Extending multimedia rooms
- UDG-UDLAP: 3D Learning Objects
A wiki to record experiences

**Los Primeros Libros de las Americas: A Digital Library of 16th Century Colonial Mexican Imprints**

Escrito por Dr. Gregory Lee Cuellar, Curador de los Impresos Mexicanos de la época colonial (Colonial Mexican Imprint Collection)

Las Bibliotecas de la Universidad Texas A&M, en cooperación con Texas A&M México City Center en la Ciudad de México, y la Biblioteca “José María Lafragua” UDLA, BUAP, en Puebla México digitalizaron el libro:

Ledesma, Bartolomé de. Reverendi patris fratris Bartholomæi à Ledesma


Este esfuerzo es parte de un proyecto piloto que se llevará a cabo de impresos mexicanos del siglo XVI. La copia de este libro que hemos digitalizado es propiedad de La Biblioteca “José María Lafragua” en Puebla México. Con un convenio firmado por Lafragua y La Biblioteca de la
A wiki to record experiences
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RABiD’s upcoming activities

• RABiD-TDL Meeting
  – Puebla, Mexico, August 2010

• Virtual Day on Institutional Repositories
  – October, 2010 (TBA)

• RABiD Workshop
  – Tampico, Mexico, October 2010
DLs can be used to promote collaboration
The GReCo Project: Collaboration Networks

• Ongoing collaboration among UDLAP, ITESM and UAEM
• Main thesis: Collaboration networks can be inferred from repositories
Harvesting, normalization

Inference/ontology construction

Visualization & exploration of collaboration networks

UAEM

RABiD Collections

ITESM

UDLAP
Node-link + filters visualization
Ontological starfields visualization
Video OntoStarfields
Open areas

• Collections are rich mines that can be exploited to find collaboration networks
• Regional and national networks provide access to collaborative projects with Latin America
• RABiD / ONeDL is a natural partner for TDL
  – Preservation network
  – Digitization of ancient books
  – Digital theses
  – Open repositories...
• CLARA offers access to the networks and communities of 15 countries
Graphical invitation
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