



open archives *forum*

Open Archives Activities and Experiences in Europe: an Overview by the Open Archives Forum

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Susanne Dobratz, 17. Oct. 2002, Geneva, 2nd Workshop on OAI: Gaining Independence with e-prints and OAI



Partners

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- European Union Information Society Technologies (IST) programm
- Accompanying measure
- Project start October, 1st, 2001 (2 years)
- Partners:
 - UKOLN, University of Bath
 - IEI-CNR, Pisa
 - Computing Centre of Humboldt-University, Berlin
- <http://www.oaforum.org>



... Ask and answer questions

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- ... yet another OAI implementation project?
- It is a clustering activity
 - Communities, new communities
 - IST projects
 - National initiatives
- It is a dissemination activity
 - Share experiences on OA in general
 - Investigation of usage: different paradigms
 - Wide availability: globally
 - Share developments: e.g. enable developing countries to get access to scientific and cultural heritage information

- Communities, New Communities
- Cultural heritage institutions
 - *As service providers*
 - E-print archives
 - Aggregators
 - Added value services
- Museums
- European Digitization Projects
- Research organisations
 - *As data providers*
 - Established metadata repositories
 - New data providers
- Public library sector
- Community organisations
- Publishers
- Commercial sector
- Educational sector



Benefits of a “Forum”

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- Is a tool to reach communities
- What is happening in Europe
- raise awareness on and discuss main issues
 - Common terminology on digital repositories
 - Metadata / fulltext harvesting models
 - Users and communities needs
 - Advanced services
- Make (European) projects ready for action
 - Develop possible solutions
 - Establish business models



Project objectives

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- Provide focus for dissemination
- Encourage collaborative development of software
- Support European liaison with OAI
- Exchange information

- *build community of interest*



Open Archives Forum

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*Forum for exchange of experience
about all aspects of an
Open Archive approach,
including ...*



Susanne Dobratz, 17. Oct. 2002, Geneva, 2nd Workshop on OAI: Gaining Independence with e-prints and OAI



How OAForum works

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- Workshops, Dissimination
 - Spread information
 - Create interest within new communities
- Organisational Validation
 - Explore Business Models
 - Issues of Ownership
- Technical Validation
 - Deployment of OAI technical framework
 - Create an information space on projects, software, implementations, services
 - Interoperability issues





OAF: Dissemination, Workshops

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- May 2002 Pisa, Italy
 - Experiences in Europe from e-prints community
 - Create a forum
- December 2002 in Lisbon, Portugal
 - Archives and libraries
- March 2003 in Berlin, Germany
 - Museums and cultural heritage institutions
- September 2003 in Bath, UK
 - Big Dissemination event
 - All communities
 - In cooperation with other initiatives



OAF: Organisational Validation

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- Business models
 - Data providers co-operating to build network of service provider
 - Metadata 'exchange' between data and service providers
 - Provision of added value services (metadata enhancement, auto classification, addition of OpenURLs)

- Issues of ownership
 - IPR and copyright (impact on authors and publishers)
 - Ownership of metadata (sharing metadata, metadata exchange and commercial agreement)
 - Long term digital sustainability (digital resources, scholarly communication, metadata)

- Discussion Group
 - by Dennis Nocholson (Strathclyde Univ. Glasgow)

OAF: Technical Validation

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- Interoperability Issues Register
 - Integration with other existing technologies
 - Is unqualified Dublin Core sufficiently rich?
- Database management issues
 - Currency and update
 - Scalability
 - De-duplication
- Software, Tools
- Efforts
 - Manpower
 - Skills
 - Time to set up an run a repository, service

Overview of European Activities

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- **Data Provider**
 - Institutional Repositories
 - Subject „Gateways“
 - Library OPACs
 - Commercial Products

- **Service Provider**
 - Search Services
 - Extended Services

- **OAI:**
 - Tendency: not everyone wants to be listed
 - Does not fit for all communities

Overview of European activity on OAI

Leona Carpenter
Donatella Castelli
Susanne Dobratz

Overview of European Activities

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➤ CYCLADES

- EU project (CNR Pisa, Italy)
- Open Collaborative Virtual Archive Environment
 - Access Service to store information in a local database
 - Collection Service to structure workspace
 - Search and Browse
 - Filtering on individual user and community profiles
 - Recommendation service
 - Collaborative Workspace

➤ TORII

- SISSA Italy
- provides a portal, where tools and documents are collected under a unified access point
- Personal workspace for scientists: rank documents according to user profile, impact factor
- Contains:
 - Okapi search engine
 - iCite extracts Citations from the documents to the archive
 - WAP

DP: Subject Gateways

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- **Medicine**
Behavioral and Brain Science Prints Interactive Archive,
By Cambridge University Press, UK
<http://www.bbsonline.org/>
Uses eprints software, OAI

- **Economics**
RePec, Research Papers in Economics, UK
<http://repec.org/>

➤ Mathematics

Math-Net, University of Osnabrück, Germany

<http://www.math-net.de/services>

➤ Physics

PhysNet/ PhysDoc, University of Oldenburg, Germany

OAI-compatible

http://www.eps.org/PhysNet/uk_doc.html

- Cognitive Science
 - CogPrints, University of Southampton, UK
 - Uses eprints2 software, OAI
 - <http://cogprints.soton.ac.uk/>

- Psychology
 - University of Southampton, UK
 - <http://psycprints.ecs.soton.ac.uk/> (eprints 2)

➤ Educational Sciences

–*Education-line*

- conference papers, working papers and electronic literature which supports educational research, policy and practice.

- University of Leeds, UK

- <http://www.leeds.ac.uk/educol/index.html>

–**Journal of Interactive Media in Education**

- Knowledge Media Institute, The Open University, U.K. ,

- Center for LifeLong Learning & Design, Dept. Computer Science, University of Colorado at Boulder, U.S.A.

- <http://www-jime.open.ac.uk/>

➤ Others

–Organic eprints (eprints2)

- <http://www.orgprints.org/>

–Philosophy

- <http://sammelpunkt.philo.at:8080> (eprints2)

- Austria



Institutional Repositories

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- Austria
- Belgium
- Denmark
- Finland
- France
- Germany
- Italy
- Ireland
- Portugal
- Norway
- The Netherlands
- Russia
- Sweden
- Switzerland
- United Kingdom



➤ Data Provider

–University of Viewnna eprints

•<http://epub.wu-wien.ac.at:80/dyn/OAI/oaicgi.pl>

–Philosophy

•<http://sammelpunkt.philo.at:8080> (eprints2)



Belgium

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- **Data Provider**
 - Université Catholique de Louvain (UCL)
 - Université Libre de Bruxelles

- **Service Provider**
 - Université Catholique de Louvain (UCL)





Denmark

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- Aalborg University - *Electronic Library*
<http://www.aub.auc.dk/phd/mainpage.html>



- University of Art and Design Helsinki (Dissertations)
http://www.uiah.fi/julkaisut/listat-en/lista_vaitos.html
- Helsinki University of Technology elect. acad. diss.
<http://www.hut.fi/Yksikot/Kirjasto/Diss/>

➤ Data Providers

–ATILF Resorces, CCSD theses-EN-ligne, Institut National de Physique Nucleaire et de Physique des Particules, The Lacito Archive, Univ. Lyon 2

- <http://jeanNicod.ccsd.cnrs.fr/perl/oai>
- <http://eprints.univ-lyon2.fr:8050/perl/oai>
- <http://documentation.in2p3.fr/oai/oai.php>
- <http://theses-EN-ligne.in2p3.fr/perl/oai>
- <http://lacito.archivage.vjf.cnrs.fr/servlet/metadata>
- <http://archiveSIC.ccsd.cnrs.fr/perl/oai>

➤ Services

–Cybertheses.org

- DINI: German Initiative for Networked Information
 - Recommendation to universities, libraries, etc. to follow the standards of the OAI released in December 2000
- Hosts workshops on different topics
 - Targeted to bring people together working on the same questions in the field of networked computing in general
- Working group on OAI
- <http://www.dini.de>





Germany

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- **Data Provider:**
- **University libraries document servers:**
 - HUBerlin (Humboldt Universität Berlin)
 - SUUB Bremen
 - MONARCH (TU Chemnitz)
 - eldorado (Universität Dortmund)
 - hsss (SLUB Dresden)
 - DUETT (Universität Duisburg)
 - University of Stuttgart, OPUS System
 - Ludwigs-Maximilians-Univ. Munich
- **Media server of universities**
 - TIMMS (Universität Tübingen)
 - <http://oai.uni-tuebingen.de/server/metaserver>



- **Data Provider:**
- **University libraries catalogues:**
 - Univ. Library Oldenburg
 - <http://bis-oai.bis.uni-oldenburg.de>
- **Library service institutions for the region**
 - BSZ-BW (Bibliotheksservice-Zentrum Baden-Württemberg) in Konstanz
- **Subject specific services**
 - Physdoc (Universität Oldenburg)
 - MathNet

- **Service Provider (not officially registered with OAI)**
 - HUBerlin Search Service incl. DINI Search
 - BSZ BW (Bibliotheksservice-Zentrum Baden-Württemberg) in Konstanz Search the union catalog of Baden-Württemberg
 - Physnet Search Service (Universität Oldenburg)
 - Open Archive Portal (ZDV Tübingen)
- **Projects:**
 - CYCLADES Access Service, University of Dortmund,
 - Prof. Norbert Fuhr, Gudrun Fischer
 - Elektra SISIS Library System
 - Institut für Informatik, Technische Universität München
 - Rudolf Bayer

➤ Data Provider

- Tilburg University (Thomas Place)
- University of Utrecht (Dispute)
 - By end of 2002
 - scientific publications from the Utrecht University
 - <http://dispute.library.uu.nl>
- University of Nijmegen
 - **Elektronische publicaties KUN (WebDOC)**
 - <http://www.kun.nl/ubn/Algemeen-extern/Kundocs1.htm>
- University of Maastricht Electronic Documents
 - <http://www-edocs.unimaas.nl>

➤ Data providers

- Sissa Multimedia Database
- Eprints.org
(Bologna, Florence, Padua, Trento, Milan Universities)

➤ Service providers

- Cyclades (CNR-Pisa)
- TORII
 - Tools for Innovative Publishing in Science (SISSA-Trieste)



Ireland

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➤ **DataProvider**

–<http://eprints.may.ie/perl/oai>



- No official data and service providers

Internal experimentation

- The National Library of Portugal (PORBASE)
- BIBSYS
- The National Library of Norway

The Netherlands

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- Service Provider
 - Not yet
- Projects
 - ARNO project
 - Tilburg University, University of Twente, Amsterdam University
 - FIGARO (??OAI)



Russia

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- Data Provider
 - <http://edu.ioffe.ru/oai/>



➤ Data Providers

- Uppsala University Digital Archive
- Two universities are experimenting eprint.org software

(EPSILON EPrints2 Dissertation Test Archive)

- Blekinge Institute of Technology: Electronic Research Archive (<http://www.hk-r.se/fou/>)
- Karolinska Institute (<http://diss.kib.ki.se/info/proj/>)
- Luleå University of Technology: Publications from LTU (<http://epubl.luth.se/index-en.html>)
- Lund University: LU:research (<http://eprints.lub.lu.se/>)

- A new project DIVA
 - <http://publications.uu.se/portal>
 - Stockholm University
 - Södertörn University
 - Umea University
 - Uppsala University
 - Örebro University
- Service providers
 - Internal university local services

- CERN document server
<http://cds.cern.ch/>
See Martin Vesely

- Developments with international impact
 - University of Southampton:
 - Tools development
 - **eprints.org** self archiving application
 - **CiteBase** harvester
 - CogPrints archive
 - Evangelism for the open archive approach
 - Scientific American, print & online debate



United Kingdom

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➤ Data Provider

- CogPrints
- Dep. Comp. Science TR (U Southampton)
- Univ. of Nottingham
- ePrints@Glasgow
- *Education-line* (University of Leeds, UK)

➤ Service Provider

- CogPrints, etc.
- RDN (UKOLN) <http://www.rdn.ac.uk/oai/nph-oai.cgi>



- Repositories and service providers
 - many institutional archives planned and starting;
 - newly-funded projects include some service providers
- Beyond e-prints
 - for interoperability across image repositories:
 - portal for NoF-digitisation projects;
 - other heritage initiatives
 - for “virtual union catalogue” creation (UKOLN)
 - harvesting via OAI in architecture of Resource Discovery Network (RDN)
- **JISC Project RoMEO.**

The **JISC** has funded a one year project to investigate the rights issues surrounding the 'self-archiving' of research in the UK academic community under the OAI-PMH.

➤ Data Provider

- Selfdeveloped: 8 → available for others: 7 • open source: 5
- Not Selfdeveloped: 5 → open source: 4

➤ Service Provider

- Selfdeveloped: 8 → available for others: 4 • open source: 3
- Not Selfdeveloped: 1 → open source: 1

➤ Programming Languages

- PHP: 4 • Perl: 8 • Java: 11 • C: 2
- Visual Basic: 1 • Tcl: 1

▪ eprints

- <http://www.eprints.org/>
- Creator: Christopher Gutteridge, University of Southampton
- Data Provider Software
- Service Provider Software
- used by Université Catholique de Louvain (UCL)
- run centralised, although archives are distributed.
- Requirements
 - UNIX, Linux
 - Apache WWW server
 - Perl programming language
 - MySQL Database

➤ VT ETD-db

- <http://scholar.lib.vt.edu/ETD-db/>
- Creator: Anthony Atkins, Virginia Polytechnic Institute and State University
- Data Provider Software
- used by Université Catholique de Louvain (UCL)
- provide a standard interface for web users to enter and manage metadata related to a collection of electronic theses and dissertations.
- Requirements
 - UNIX server platform
 - Apache WWW server
 - Perl programming language, CGI.pm
 - MySQL Database

- **Questions concerning**
- **the Implementation**
- **Costs**

- **Data - & Service Provider**
- System Administration (UNIX | Linux)
- Web Server Configuration (Apache)
- Knowledge on Databases and SQL (MySQL | Sybase | Oracle)
- Programming (Perl | Php | Java | Servlets | CGI | XML)
- Experiences with Metadata

➤ **Implementation expenditure:**

DP: ≤ week: 3 • ≤ month: 4 • ≤ quarter: 2 • several years: 2

SP: ≤ week: 1 • ≤ month: 2 • ≤ quarter: 2 • ≤ half-year: 1

➤ **Involved Programmers:**

DP: 1 Progr.: 9 • 2 Progr.: 2 • 20 Progr.: 1

SP: 1 Progr.: 6 • 2 Progr.: 2 • 3 Progr.: 1

➤ **Expenditure to keep the OAI implementation running:**

1 person day per month (once: 5 person day/month)

DP – Object Quantity & - Type

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➤ Number of Documents:

490 - ca.800 - 1.600 - 3.000 - 12.000 - 140.000 - 400.000 - 600.000 - 7.000.000 - several million

➤ Disc Space:

15 MB - 150 MB - 1,4 GB - 1,5 GB - 2,5 GB - 10 GB - 300 GB - 2 TB

➤ Type of objects:

Fulltext documents (10)	Metadata (10)
Image files (4)	Video files/ streams (3)
Sound (1)	

DP – Content Type

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- Preprints (5) Dissertations (5)
- Journal articles (6) Lectures (3)

- Conference Proceedings (1)
- Short Articles (1)
- Video streams of University Events (1)
- Library Catalogue (metadata records for books, periodicals, video,...) (1)
- All publications produced by the academic staff of the university (1)
- Recordings (1)
- Earth Observation Satellite Images (1)

- **Questions regarding**
 - **Content Type,**
 - **Structure and Integration**
 - **of Archive / of Service**

- **Metadataformats:**
- Dublin Core (6)
- Qualified DC stripped down to OAI-DC
- Dublin Core Library Profile
- MARC21 (2), German MAB
- RIS, UNIMARC, DiTeD (internal format for thesis and dissertations), CEOS CIP
- Internal format that can be converted to any standard metadata format

- **Disseminate all parts:** 7 Yes • 5 No

DP – Open Access to OAI Interface

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- **OAI interface open:** 7 Yes • 5 No

- **Restrictions:**
 - IP adress controlled
 - Swets licences required
 - Most of the data is only accessible through a search form
 - Awaits funding and management approval for wider access when the service is developed

SP – Kind of Services

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- OAI-Service / Portal
- Searching and browsing for information
- Search in different sources through one form
- Workspace for managing documents and metadata
- Cross linking, annotations

SP – Harvesting Level

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- harvesting level is ok: 2
- better metadata
- the quality of metadata is just a big mess
- more standardized content in the DC metadata, for example, standard ways to specify names, dates, languages
- more structure than unqualified DC
- did some adaptation of the protocol for local service / use different unique keys

- **Questions about**
- **Experiences**
- **and Future planning**

DP - Importance

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- **Provide additional services to existing services**
- Supplement to a paper catalogue
- Delivery of electronic holdings info to an OpenUrl resolver system
- Possibilities of dissemination of information about scientific results of our researcher

DP - Importance

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- **Replace existing services through OAI Interface**
- Replace the single, non-searchable lists of eprints available on the websites
- Develop the practice of alternative means of dissemination of the scholarly communication
- Research project. We used to run a search-engine which tried to combine different HTML-outputs from different sources. This has been replaced by an compatible OAI search-engine

DP - Importance

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- **Better Retrieval, make Metadata exchange available**
- Harvesting own archive via OAI (replacement of search engine)
- Interface for metadata exchange within several projects (new service)
- Exchange of our library catalogue with other university in Brussels
- Integration into virtual union catalogue of Belgium
- Want to be able to develop services based on OAI compliant archives maintained by others

DP – OAI-Advantages

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- Chance to share scientific knowledge and to harvest other knowledge databases
- Opportunity to import metadata in Libraries software
- Major dissemination of researchers' results
- Simple implementation & easy adaptation for project internal usage
- OAI provides a simple to implement facility of exchanging metadata (Z3950 is probably too complicated to implement)

DP – OAI-Advantages

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- Research
- In many cases the archives are too small for a Z39.50 service. By harvesting relatively small archives it is possible to maintain a Z39.50 service.
- Easy (and quick) implementation, minimal maintenance
- Provides a standard approach for metadata harvesting which will simplify extension of a pilot system. Software for prototype freely available
- OAI is easy to implement...

DP - Experiences

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- No experiences / still testing
- It just runs
- Good!

- Multiple services have become available, with only ONE SIMPLE implementation on our catalogue
- Very good impact on usage of information in our archive

SP – Which Services

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- get metadata records
- harvesting, annotation, cross linking
- search-engine
- We use the information for a metadata catalogue (<http://publications.uu.se/metadata>). Currently there are metadata from 5 local databases - about 5 000 records

SP - Problems

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- none
- Problem about the different semantic by defining set
- Different formats of metadata...
- As a harvester of RePEc archives for building a Z39.50 service, our main problem is the quality of metadata.



SP – Plans for the Future

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- search & browse, collaboration environment for users and groups of users, discussion forums, annotations, awareness
- We are planning on implementing a virtual union catalogue for Belgium using OAI (several millions of metadata records). We will be trying out software like Open Digital Libraries (<http://oai.dlib.vt.edu/odl/>) and ALCME (<http://alcme.oclc.org/index.html>) in the near future.



SP – Plans for the Future

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- We intend to develop a resource discovery service for contents related with our mission (the Portuguese science and technology, culture, history and society in general). An alerting service, coordinated with the national union catalogue, is also under consideration.
- Z39.50 services integrated in an information portal (iPort of OCLC|Pica). This will allow searching, browsing, document delivery services, current awareness etc

SP – Plans for the Future

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- Integrate the search engine with compatible new OAI protocol
- The search engine is already running, but more sources will be included. Implementation of version 2.0.

➤ **Weak points in the OAI approach to interoperability**

The protocol is easy to implement for data providers, but the heterogeneity of the content of the metadata records requires the service provider to invest a lot of effort in normalizing the data

Much of this standardization could be done at lesser cost by the individual data providers (less heterogeneity of the data)

Possible solution: development of middleware tools that service providers could use for data normalization

Another suggestion: define additional metadata formats (or use existing ones) and convincing data providers to export them, too.



Open Archives Forum on the Web

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- Glossary
- News
- Questionnaire 1 + 2
- Workshops
- Database



- Questionnaire
- about the
- Technical Validation

Who participated?

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- 21 answers
- 6 Germany • 6 Italy • 2 Belgium •
2 Netherlands • 1 France • 1 Sweden • 1 UK •
1 Portugal • 1 Norway
- With experiences (Implementation 2001):
7 Data Provider - 4 Service Provider
- In planning -, development -, test phase:
6 Data Provider - 7 Service Provider

Questions to the Audience

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- How difficult is it to integrate an OAI Data and/or Service Provider in existing infrastructure, that are based on different technologies? (Z39.50, NCSTRL, REPEC, ????, Metalib, etc.)
- What are your demands on the further work of the Open Archives Initiative committees (technical, steering committee)?

Questions to the Audience

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- What are potential further services to be offered/developed in future?
- How are sets defined? Which classification schemas are used?
- Which meta data formats are used in addition to DC simple?
- How were copyright issues technically solved so far?
- How can a machine-readable rights statement be encoded?



Thank You!

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- Please contribute to our database!
- http://www.oaforum.org/oaf_db/oaf_index.php
 - Information about your projects
 - Your implementation and usage experience
- <http://www.oaforum.org>
 - Leona Carpenter
 - Donatella Castelli
 - Susanne Dobratz



<http://www.oaforum.org>

2nd Workshop

OPEN ACCESS TO HIDDEN RESOURCES

Lisbon, Portugal
5-6-7 December 2002

Venue: Biblioteca Nacional



For a long time libraries and archives have collected documents and preserved them for use. Now, much of this material is being digitised, or starts life as digital. So the foundation is laid for wider availability. The aim of this workshop is to explore whether and under what conditions the open archive approach is viable for these organisations.

Contact: borri@iei.pi.cnr.it

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Used Information

IST- 2001-320015

- Open Archives Initiative
www.openarchives.org/service/listproviders.html
www.openarchives.org/service/listproviders.html
- Open Archives Forum
<http://www.oaforum.org>
- Signal-Hill OAI Site
<http://www.signal-hill.org/nav/archives2.html>
- Eprints.org
<http://software.eprints.org/#sites>

