

# ETRDL: a Digital Library Infrastructure for academic self-publishing

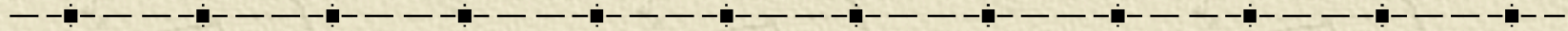
**Stefania Biagioni and Carlo Carlesi**

ISTI - CNR - PISA



PISA-23-06-03

# ISTI - Institute of Information Science and Technologies of National Council of Research



- ✦ Stefania Biagioni, [biagioni@isti.cnr.it](mailto:biagioni@isti.cnr.it)
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  - ◆ coordinator of activities of D-Lib Center
  - ◆ project manager of Etrdl
  
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  - ◆ manager of security polices of ISTI
  - ◆ system administrator of Etrdl

# ETRDL

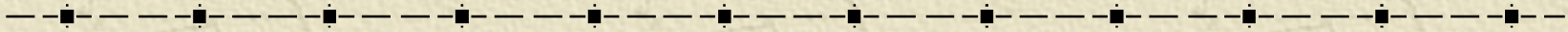
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The aim of this presentation is:

✦ to present ETRDL (Ercim\* Technical Reference Digital Library), i.e. a model of academic self archiving and /or self publishing

*\*European Research Consortium for Informatics and Mathematics*

# ETRDL history



✦ was born on 1997 as a specialised sub-collection of

- ◆ NCSTRL - U.S. Networked Computer Science Technical Reference Library
- ◆ with extended functionality to meet the needs of a European Digital Library service

# ETRDL history (cont.)

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✦ on 1998 became one of the activities of the DELOS project (coordinator of the DL research activities in Europe)

✦ founded by

- ◆ Esprit Long Term Research Programme - LTR n.21057
- ◆ Ercim
- ◆ Participants Institutions

# ETRDL Participants



The screenshot shows the ETRDL website interface. At the top, there is a navigation bar with the text "ercim technical reference digital library" and a menu with buttons for "home", "events", "project", "search", and "support". The main content area is titled "Search on Local Servers" and contains the instruction: "To search the ETRDL collection, select your preferred local server." Below this, there are nine server options arranged in a 3x3 grid, each with a logo and text:

- CNR**: National Research Council, Italy
- GMD**: National Research Center for Information Technology, Germany
- INRIA**: National Institute for Research in Computer Science and Control, France
- FORTH**: Foundation for Research and Technology - Hellas, Greece
- SICS**: Institute of Computer Science, Sweden
- SZTAKI**: Computer and Automation Research Institute, Hungary
- CRCIM**: Czech Research Consortium for Informatics and Mathematics, Czech Republic
- CWI**: National Research Institute for Mathematics and Computer Science, The Netherlands

At the bottom of the page, there is a footer with the text: "© CNR/IEI (Italy) - © Code & Design Copyright by Centromedia Com".

# ETRDL

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✦ is an operational DL service at ISTI

✦ is used as a test-bed during courses on the “Self-Publishing” organized and held at the D-Lib Center, so that students can create digital objects and practice working with an advanced operational DL

*\*European Research Consortium for Informatics and Mathematics*

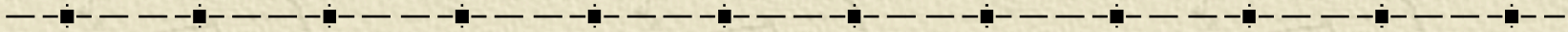
# ETRDL environment

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- ✦ The HW/SW platform consists of
  - ◆ ETRDL servers (operative DL)
  - ◆ 1 ETRDL server (demo environment)

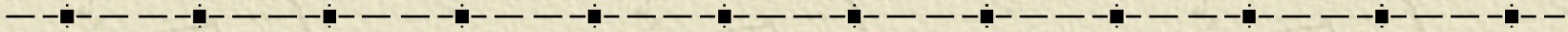
- ✦ The SW platform is
  - ◆ operating system - Unix (or Linux)
  - ◆ http server - Apache
  - ◆ language -Perl
  - ◆ DL package - ETRDL
  - ◆ .....

# ETRDL



- ✦ is a scientific DL realized within ERCIM in collaboration with the Cornell University
- ✦ provides functionality for self publishing
  - ◆ document submission, revision, administration, search and browse
- ✦ is a system easy to be learned and easy to be used

# ETRDL Digital Library



- ✦ is a distributed and multi-format DL accessible via WEB
- ✦ provides innovative functionality for academic publishing
- ✦ its services are managed locally by authors and academic library institutions

# ETRDL features

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- ✦ assists scientists to make their research results immediately available world-wide, and provides them with easy facilities to access documents
- ✦ contains many kinds of grey literature
- ✦ addresses different classes of users

# ETRDL documents

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✦ was born to contain the scientific production of the members of the ERCIM Institutions:

- ◆ Preprints
- ◆ Technical reports
- ◆ EC deliverables (not restricted)
- ◆ Proceedings of conferences and workshops
- ◆ Project reports
- ◆ ....

# ETRDl documents (cont.)

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✦ accepts the following document formats

- ✦ PS
- ✦ PDF
- ✦ TEXT
- ✦ HTML
- ✦ GIF
- ✦ JPG
- ✦ ..

# ETRDL users



✦ offers a complete DL service covering the needs of four classes of users:

Information producers (**Authors**)

Information administrators (**Reviewers**)

Information administrators (**Librarians/System Managers**)

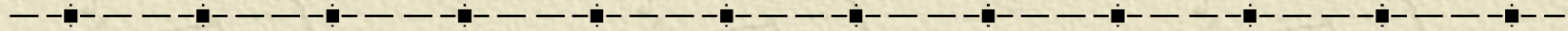
Information seekers (**Final Users**)

# ETRDL self publishing service

✦ includes the following functionality for:

- ✦ simple and advanced search facilities
- ✦ on-line controlled submission and subject classification of documents
- ✦ revisioning of documents
- ✦ updating and deleting of documents

# ETRDL self publishing service (cont.)

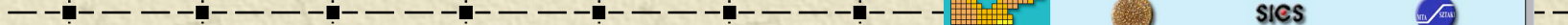


✦ guarantees a common set of services

✦ permits differentiation at local level

- ◆ each institution may customize the administration services to reflect local needs

# ETRDL WEB access



✦ provides access to multilingual interfaces in English and in the local languages to meet the requirements of the European research communities

<http://etrdl.isti.cnr.it>

# Multilingual Interfaces

The image displays five overlapping Netscape browser windows, each showing a different language version of the ERCIM Technical Reference Digital Library (ETRD) interface. The windows are arranged in a collage, with some overlapping others.

- Top-left window (English):** Shows the main page with logos for CNR, ERCIM, and NCSTRL. The title is "ERCIM Technical Reference Digital Library".
- Top-right window (Swedish):** Shows the main page with logos for SICS, ERCIM, and NCSTRL. The title is "ERCIM Technical Reference Digital Library".
- Middle-left window (Italian):** Shows the main page with logos for INRIA, ERCIM, and NCSTRL. The title is "ERCIM Technical Reference Digital Library".
- Middle-right window (Hungarian):** Shows the main page with logos for MTA SZTAKI, ERCIM, and NCSTRL. The title is "ERCIM Digitális Preprint Könyvtár (ETRD)".
- Bottom-left window (French):** Shows the main page with logos for GMD, ERCIM, and NCSTRL. The title is "ERCIM Technical Reference Digital Library".

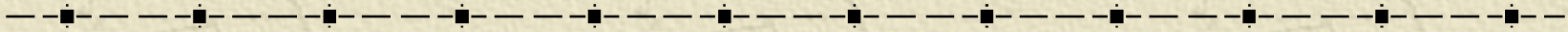
The bottom-right window (Hungarian) is the most detailed, showing a search section with the following text:

Üdvözlünk az ERCIM Digitális Preprint Könyvtárban (ETRD), amelynek fejlesztését a DELOS munkacsoport végzi, a következő partnerekkel: CNR, CWI, FORTH, GMD, INRIA, INESC, SICS, SZTAKI. Ez a könyvtár-tárolás a globális NCSTRL Számítástechnikai Preprint Könyvtár (Networked Computer Science Technical Reference Library) európai tagozatában működik.

- [AQUA Kísérleti keresőfeltétel](#)
- [Keresés / Böngészés a teljes NCSTRL gyűjteményben](#)
- [Keresés / Böngészés az ERCIM gyűjteményében](#)
- [Keresés / Böngészés a helyi gyűjteményben](#)

Navigation links at the bottom of the Hungarian window include: [Suchen / Browsen in der NCSTRL Sammlung](#), [Suchen / Browsen in der ERCIM Sammlung](#), [Suchen / Browsen in der GMD Sammlung](#), and [Dokument hinzufügen oder zurückziehen](#).

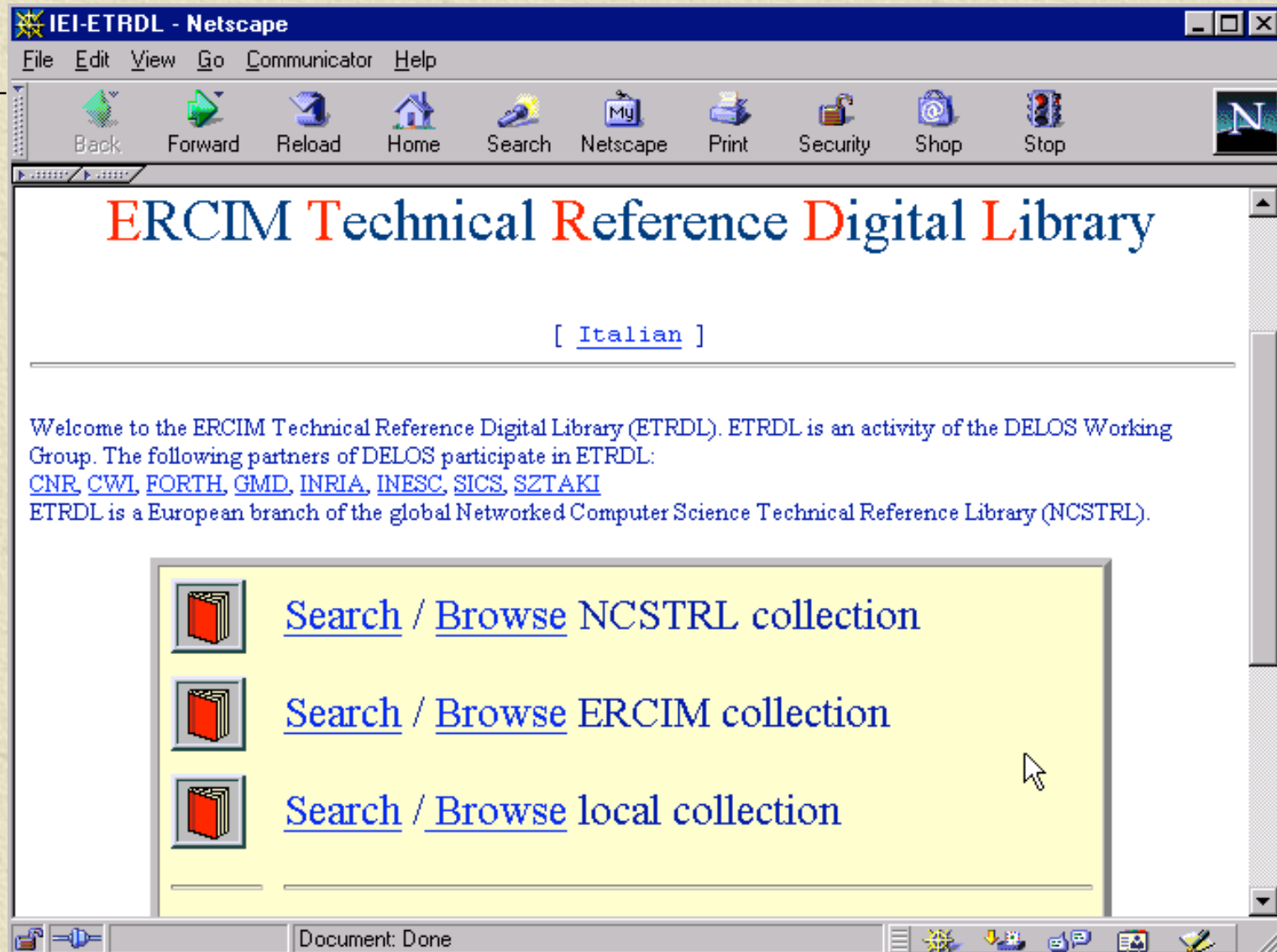
# Common User Interface



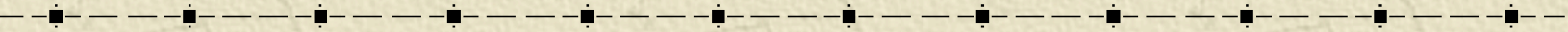
✦ permits easy access through WEB and provides the users with two main options:

- ◆ Submit or withdraw a document from the local collection
- ◆ Search and browse any collection

# Common User Interface



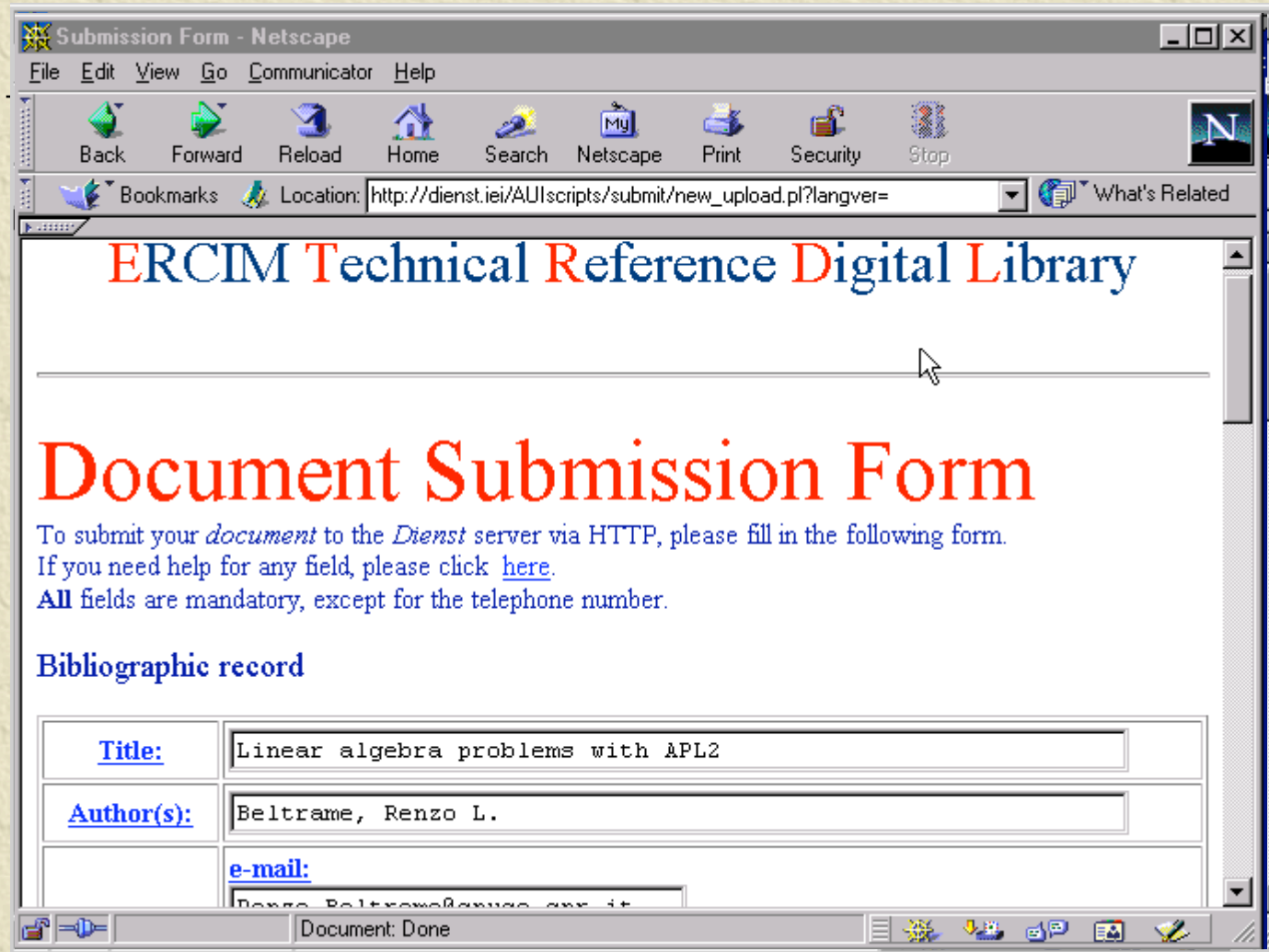
# Document Submission Interface



- ✦ permits the compilation of the form filling in the fields the bibliographic descriptions and the abstracts
- ✦ permits the downloading of the document into the server

*(metadata “RFC 1807” can be mapped into Dublin Core elements)*

# Document submission interface



The screenshot shows a Netscape browser window titled "Submission Form - Netscape". The address bar contains the URL "http://dienst.iei/AUIscripts/submit/new\_upload.pl?langver=". The page content includes the title "ERCIM Technical Reference Digital Library" and a large heading "Document Submission Form". Below the heading, there is a paragraph of instructions: "To submit your *document* to the *Dienst* server via HTTP, please fill in the following form. If you need help for any field, please click [here](#). All fields are mandatory, except for the telephone number." The form is titled "Bibliographic record" and contains three input fields: "Title:" with the value "Linear algebra problems with APL2", "Author(s):" with the value "Beltrame, Renzo L.", and "e-mail:" with the value "Renzo.Beltrame@univie.it". The status bar at the bottom of the browser window displays "Document: Done".

Submission Form - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Stop

Bookmarks Location: http://dienst.iei/AUIscripts/submit/new\_upload.pl?langver= What's Related

ERCIM Technical Reference Digital Library

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## Document Submission Form

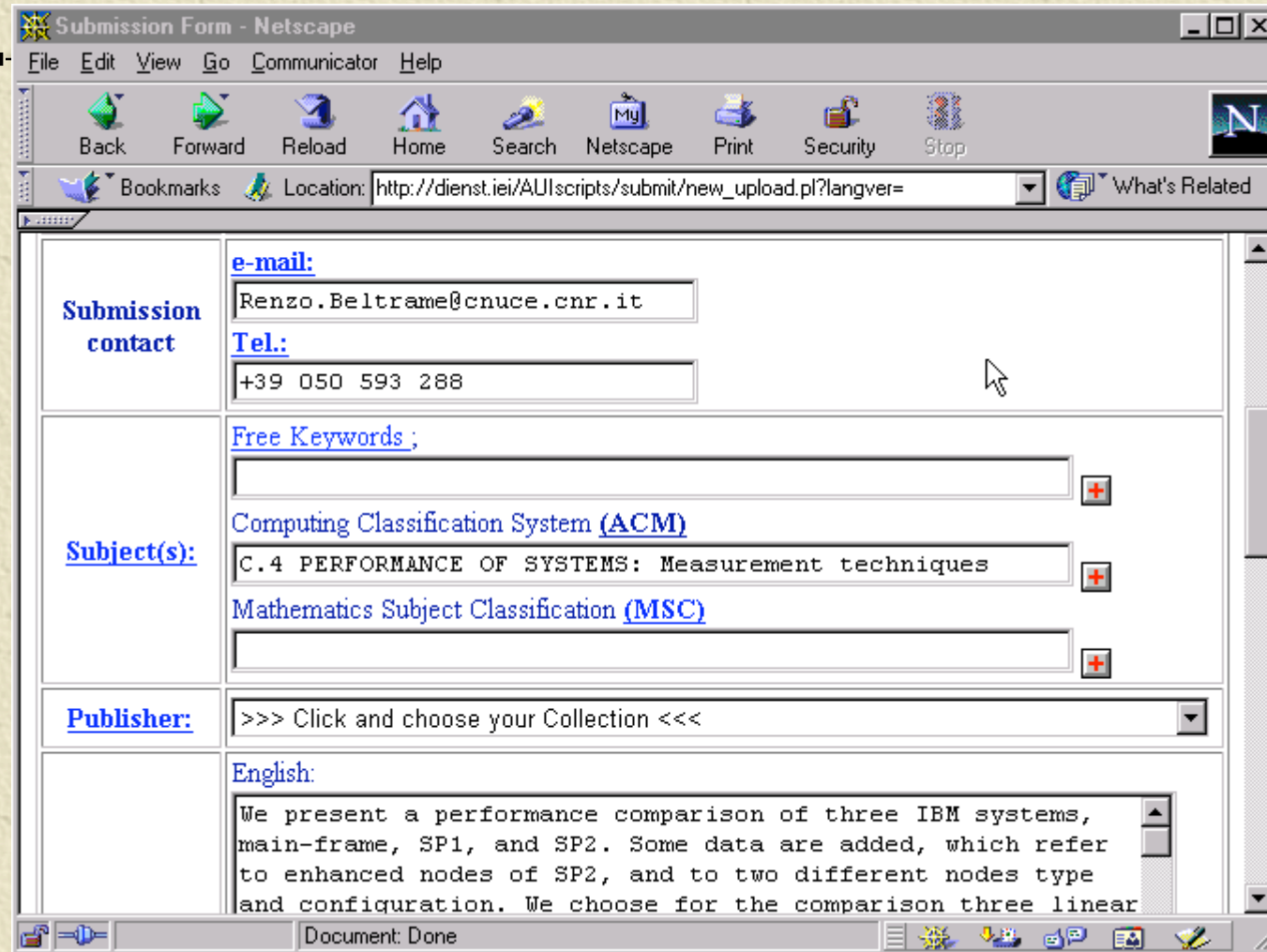
To submit your *document* to the *Dienst* server via HTTP, please fill in the following form.  
If you need help for any field, please click [here](#).  
All fields are mandatory, except for the telephone number.

### Bibliographic record

<b>Title:</b>	Linear algebra problems with APL2
<b>Author(s):</b>	Beltrame, Renzo L.
<b>e-mail:</b>	Renzo.Beltrame@univie.it

Document: Done

# Document submission interface (cont.)



The screenshot shows a Netscape browser window titled "Submission Form - Netscape". The address bar contains the URL "http://dienst.iei/AUIscripts/submit/new\_upload.pl?langver=". The form is divided into several sections:

- Submission contact:** Includes fields for "e-mail:" (Renzo.Beltrame@cnuce.cnr.it) and "Tel.:" (+39 050 593 288).
- Subject(s):** Includes a "Free Keywords:" field and three subject classification fields: "Computing Classification System (ACM)" (C.4 PERFORMANCE OF SYSTEMS: Measurement techniques), "Mathematics Subject Classification (MSC)", and an empty field.
- Publisher:** A dropdown menu showing ">>> Click and choose your Collection <<<".
- English:** A text area containing the text: "We present a performance comparison of three IBM systems, main-frame, SP1, and SP2. Some data are added, which refer to enhanced nodes of SP2, and to two different nodes type and configuration. We choose for the comparison three linear".

The status bar at the bottom indicates "Document: Done".

# Document submission interface (cont.)

**Netscape: Submission Form**

Location: [http://dienst.iei.pi.cnr.it:80/AUscripts/submit/new\\_upload.pl?langver=](http://dienst.iei.pi.cnr.it:80/AUscripts/submit/new_upload.pl?langver=)

**ERCIM Technical Reference Digital Library**

## Document Submission Form

To submit your *document* to the *Dienst* server via HTTP, please fill in the following form.  
If you need help for any field, please click [here](#).  
**All** fields are mandatory, except for the telephone number.

Bibliographic record

<b>Title:</b>	A Comparison-Based Diagnosis Algorithm Tolerating Comparator.
<b>Author(s):</b>	Sallay, Balazs and Maestrini, Piero and Santi, Paolo
<b>Submission contact</b>	<b>e-mail:</b> maestrini@iei.pi.cnr.it
	<b>Tel.:</b> 
<b>Subject(s):</b>	<b>Free Keywords:</b> Algorithms, Design, Reliability <b>Computing Classification System (ACM)</b> B.7.m Miscellaneous B.8.1 Reliability, Testing, and <b>Mathematics Subject Classification (MS)</b>
<b>Publisher:</b>	CNR - Istituto di Elaborazione della In
<b>Abstract:</b>	<b>English:</b> A promising application of syst testing of VLSI chips during th comparison-based diagnosis is e to implement on the wafer than existing comparison models esse invalidation due to the physica

Other language: >>> Click and choose <<<

**Netscape: 1998 ACM Computing Classification System: B.8**

### The ACM Computing Classification System (1998)

#### B.8 PERFORMANCE AND RELIABILITY **NEW!**

- B.8.0 General **NEW!**
- B.8.1 Reliability, Testing, and Fault-Tolerance **NEW!**
- B.8.2 Performance Analysis and Design Aids **NEW!**
- B.8.m Miscellaneous **NEW!**

Return to:

- [B. Hardware](#)
- [The ACM Computing Classification System \(1998\)](#)
- [Overview of 1998 ACM Computing Classification System](#)

# ETRDL Administration Interface

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✦ permits the reviewing

- ◆ document approval or rejection

✦ permits the document administration

- ◆ formal check of metadata, archiving into the repository or removal


# Reviewing and Administration Interfaces

IEI-ETRD - Microsoft Internet Explorer

File Edit View Favorites Tools Help


Back Forward Home Search Favorites History


Address http://dienst.iei.pi.cnr.it/amministra.html




CNR  
Italian National Council of Research


## ERCIM Technical Reference Digital Library

 [Approval](#)

 [Administration](#)

This is Dienst Version 4.1.9  
To access this and the next html pages you have to use a web browser with the Javascript language

 [contact/assistance](#)

 [CNR-Area-Pisa II](#)

## ETRD Approval Page

• Insert your **String of Identification (SID)**

**Password:**

Enter this Collection    Reset this Form

ETRD Administration Page - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Stop

Bookmarks Location http://dienst.iei.pi.cnr.it:80/AUIscripts/admin/admin\_page.pl

## ETRD Administration Page

To browse an incoming document directory:

- Choose the action to do:
  - Insert a document in a collection or
  - Remove a document from a collection (withdraw or delete)
- Select the collection to browse
- Insert your **String of Identification (SID)**

**Action:** INSERT a Document in a collection

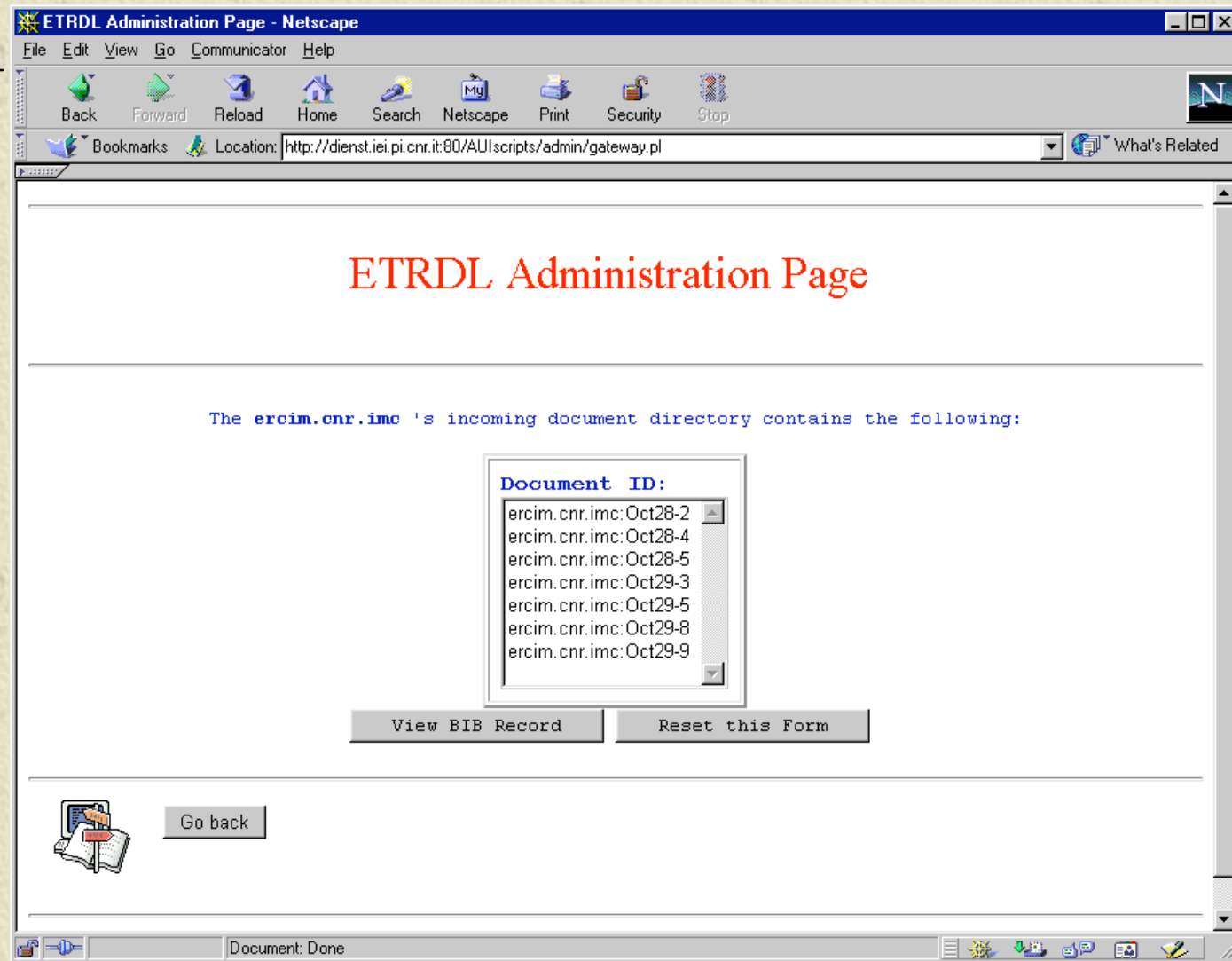
**Collection:** CNR - Istituto di Elaborazione della Informazione (Pisa), Italy

**Password:** \*\*\*\*\*

Enter this Collection    Reset this Form

Document: Done

# List of documents submitted



# Metadata and documents

The bibliographic record for the document ercim.cnr.iei:Feb8-1 is the following:

<b>Title</b>	<i>Degradation identification and model parameter estimation in discontinuity-adaptive visual reconstruction</i>
<b>Author(s)</b>	Tonazzini, A. Bedini, L.
<b>Authority</b>	ercim.cnr.iei
<b>Author's e-mail</b>	tonazzini@iei.pi.cnr.it
<b>Author's tel.</b>	+39 050 3153136
<b>Entry</b>	February 8, 2002
<b>Date</b>	2001-9-30
<b>Type</b>	Technical Report
<b>Language</b>	English
<b>Pages</b>	1
<b>Subject(s):</b>	<i>Unsupervised image restoration;Blind image restoration;Edge regularization;Markov Random Fields</i>
<b>Keywords</b>	
<b>Subject(s):</b>	<i>I.4.4 [Image Processing]: Restoration;I.4.6 [Image Processing]: Edge and feature detection;G.1.3 [Numerical Linear Algebra and very large systems (direct and iterative methods)];G.3 [Probability and Statistics] - Probabilistic algorithms (including Monte Carlo methods);I.5.5 [Image Processing]: Learning: Connectionism and neural nets;P.2.2 [Mathematical Models]: Stochastic models</i>
<b>ACM</b>	

**English Abstract**

The report introduces queuing network models for the performance analysis of SPMD applications executed on general-purpose parallel architectures such as MIMD and clusters of workstations. The models are based on the pattern of computation, communication and I/O operations of typical parallel applications. Analysis of the models leads to the definition of speedup surfaces which capture the relative influence of processors and I/O parallelism and show the effects of different hardware and software components on the performance. Since the parameters of the models correspond to measurable program and hardware characteristics, the models can be used to predict the performance of parallel applications in early stages of software development.

File/s	Filename	Format
	Paper.ps	PS

Approval

Passed: no

Approve Document View the Document Reject the Document

# Document rejection

ETRDL Approval Section - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print Copy Paste

Address <http://dienst.iei.pi.cnr.it/AUIscripts/localadmin/amminap.pl> Go Links >>

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**ETRDL Approval Section**

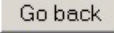
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**Document Reject: ercim.cnr.iei:Feb8-1**

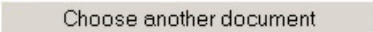
---


Title:	Degradation identification and model parameter estimation in
Entry Date:	February 8, 2002
Reason:	<div style="border: 1px solid gray; height: 100px;"></div>
E-mail:	tonazzini@iei.pi.cnr.it
Choose an action:	<input type="button" value="Send &amp; Delete"/> <input type="button" value="Reset this Form"/>

---

 Go back

or

 Choose another document

 [ETRDL Report Approve Section](#)

Done Internet



**Netscape: ERCIM Search**

Back Forward Reload Home Search Netscape Images Print Security Stop

Location: <http://dienst.iei.pi.cnr.it:80/Dienst/UI/2.0/Search?tiposearch=ercim&langver=> What's Related

## Fielded Search

Enter term(s) in at least one of the fields below. If you need help for any field, please click [here](#).

<b>Title:</b>	<input style="width: 80%;" type="text"/>
<b>Author(s):</b>	<input style="width: 80%;" type="text"/>
<b>Abstract:</b>	English: <input style="width: 80%;" type="text"/>
	Other language: <input type="text" value="All"/>
<b>Subject(s):</b>	Enter Free Keywords or Codes extracted from <a href="#">ACM Computing Classification System</a> or <a href="#">AMS Mathematics Subject Classification</a> <input style="width: 80%;" type="text" value="fault tolerance"/>

Logical operator between fields:  AND  OR

You can refine the search results with one or more of the selectors below.

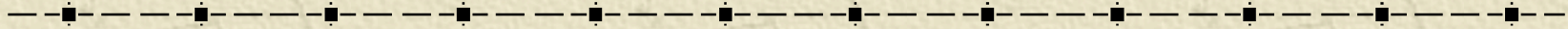
Type:  Year:  Language:

Select one or more collections from the following list:

CNR - Italian National Research Council CWI - Centrum voor Wiskunde en Informatica Foundation for Research and Technology - Hellas, Institute of Computer Science GMD - German National Research Center for Information Technology Inria, Institut National de Recherche en Informatique et en Automatique SICS - Swedish Institute of Computer Science	<input checked="" type="checkbox"/> or search all collections
--	---

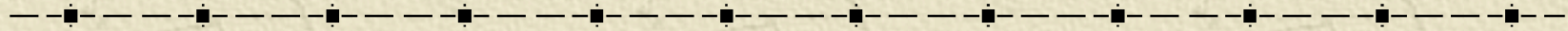


# ETRDL



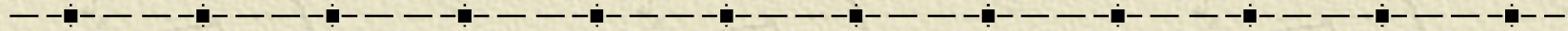
<http://etrdl.isti.cnr.it>

# Architecture



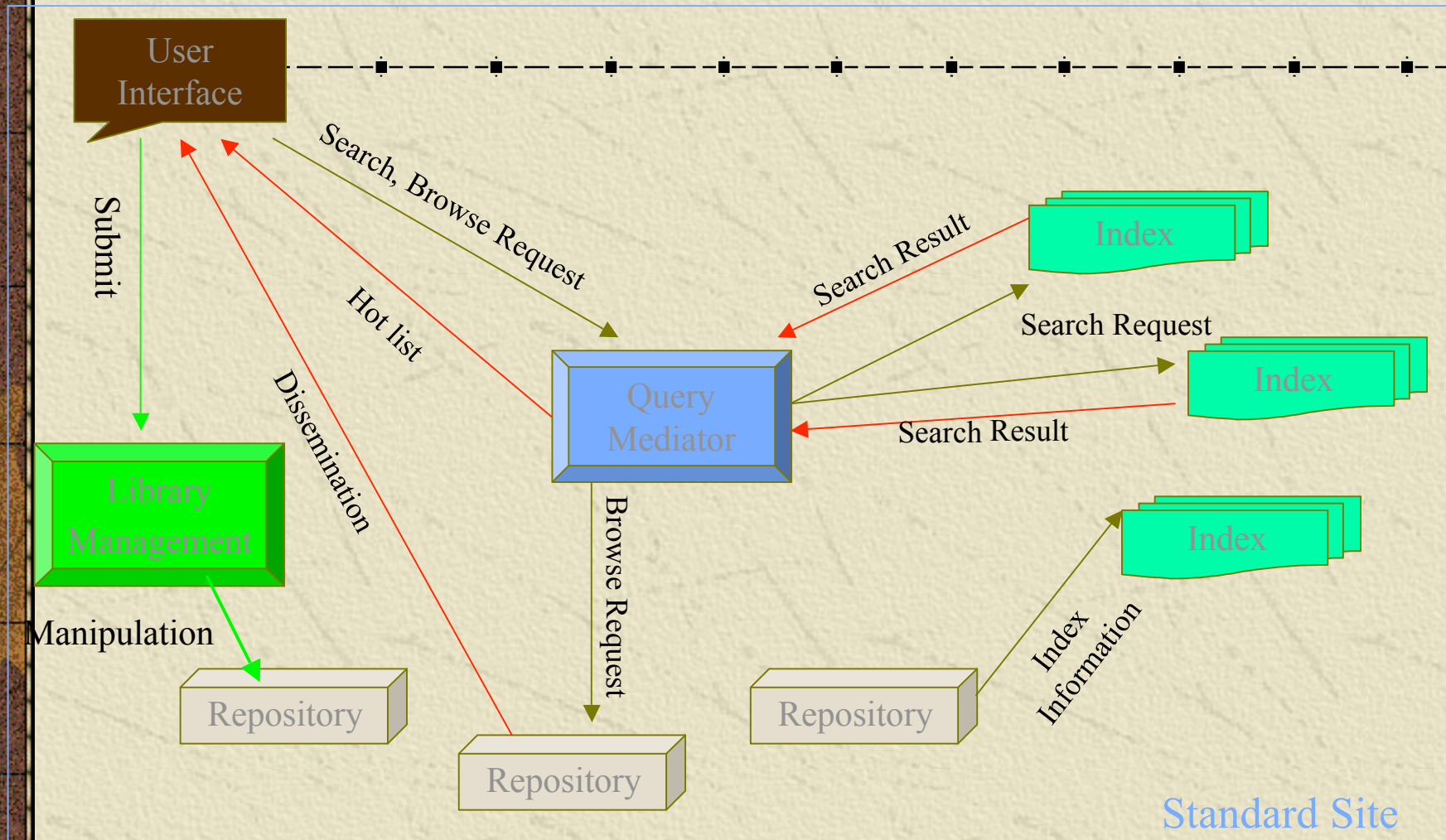
- ✦ Functionality are organized into a set of specific **services** accessible through a protocol which defines the methods for requesting and obtaining a service.
- ✦ A service is realized by a **server** module. The servers communicate with each other and can be replicated and distributed.
- ✦ Many digital libraries can be created with this **infrastructure** through the aggregation of a set of servers.

# Services



- ✦ **Repository Service:** provides the mechanisms for storage of and access to digital objects
- ✦ **Index Service:** provides mechanisms for the discovery of digital objects
- ✦ **Meta Service:** provides mechanisms to localize all services
- ✦ **User Interface Service:** provides a human front-end to the other services

# Servers



# Infrastructure

