

PHAIDRA – Fact Sheet [2009, April]

*Permanent Hosting, Archiving and Indexing of
Digital Resources and Assets at the University of
Vienna*

Phaidra: maintaining information, in a correct and independently understandable form, over the long term.

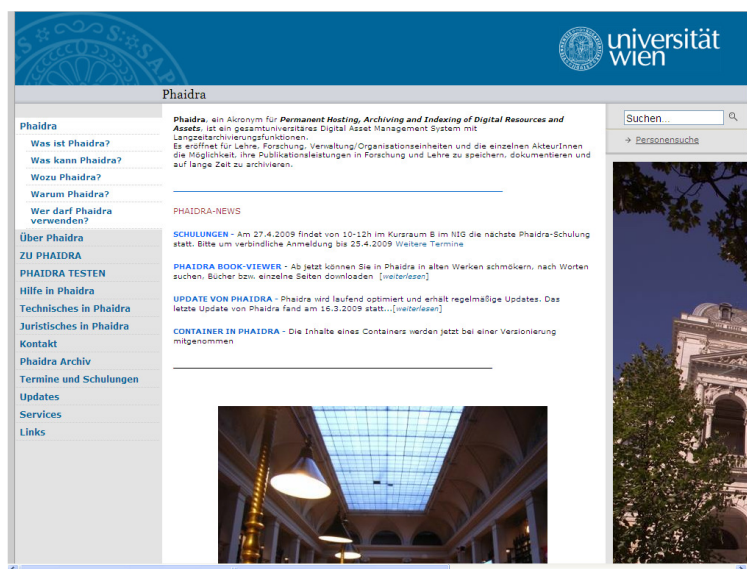
A project of the University of Vienna

To make sure digital objects can be located, rendered, used and understood in the future.

Intent of Phaidra:

... to be able to:

- *manage large collections of multimedia data;*
- *ensure long-term preservation of data*
- *provide controlled access to documents;*
- *provide controlled addition of new content to original form of a document;*
- *provide controlled permissions for use of digital documents;*
- *provide web service for entering of documents metadata together with addition of documents itself;*
- *connect metadata with digital objects;*
- *register technical metadata about documents with purpose of their final archiving by itself;*
- *search contents in full-text whether in PDF, DOC, RTF or any other format;*
- *display high resolution pictures and documents in multy-page way;*



Phaidra: Customer Service Site
<http://phaidraservice.univie.ac.at/>

A. PHAIDRA / Fact Sheet 1 - General Information

1. Summary

Title: Phaidra - Permanent Hosting, Archiving and Indexing of Digital Resources and Assets

Institution: University of Vienna

Launch Date: April 16th, 2008

Goals: Phaidra is used

- as a long-term preservation system through the assignment of persistent identifiers (*permanent links*)
- to manage and store any kind of digital object (digital born and analogue) that is developed in an academic environment: in the fields of
 - a) research (e.g. articles, papers, videos, audios, containers),
 - b) learning & teaching (e.g. learning objects) and
 - c) administration (e.g. forms) at University of Vienna
- to make abovementioned assets per default freely accessible (according to the wishes of the owner of the object and the therefore assigned access rights). The objects are provided with licenses.
- to provide tools to manage / view / edit the assets (e.g. e_book viewer).

Target groups: according to the digital information policy of the University of Vienna, there are three main target groups:

- a) all members of the University,
- b) all students of the University, guests. Detailed: researchers, lecturers, the students of the University, University management,
- c) Guests/ External Users: professional agencies, national institutions (cultural heritage), companies, cooperating researchers from outside University, other guests.

Context, Scenario: Phaidra provides a good frame in order to

- implement an open access policy,
- implement e-learning strategies,
- realize a better evidence of the University's achievements in research and teaching and eventually
- to shape research results into collections of digital objects.

Applications: specialized tools for accessing, viewing, editing and eventually storing digital assets

2. Relevant Factors

Impact: Phaidra is expected to host all digital assets stemming from the fields of

- research,
- teaching,
- technology enhanced learning and
- management.

It offers general search functionalities covering the full range of stored assets as well as faculty and project specific areas.

Effort and Achievements:

Phaidra is an in-house project and thus fully financed by university budget.

Phaidra Team: University of Vienna decided to top up the team of software developers by 3 persons to guarantee the continuous and consistent development of the system which is

built on top of the open source software Fedora. Two more persons are in charge with programme/ project management and customer management service. All legal aspects have been elaborated by a respective expert. The project is supervised, supported and accompanied by an interdisciplinary advisory board.

Unique feature

The University of Vienna is currently developing an open access policy to motivate researchers to store the intellectual output of the research activities in Phaidra and grant free access to it.

Strength:

- Access rights

All persons who have a contract of employment with the University of Vienna as well as all our students are allowed to upload assets into Phaidra. Guest-Accounts are foreseen and currently used. "The world" is able to view (read-mode) and/or download the assets save the asset's owner restricts access to specific groups of people, individuals or fully hides the asset. The latter means that only the owner is able to access the object and to modify the metadata. Nobody is allowed to delete any object.

- Terms of Use

The *Terms of Use* stipulate the duties and the rights of the service-provider (which is Phaidra) on the one hand and of the system's user on the other hand: E.g. usage of logfiles, user's commitment to conduct correctly (e.g. be aware of copyright issues), allowance to delete illegal objects, security issues, .. Special terms offer regulations in case of establishments of groups coordinated by a Super-User holding the maximum of rights.

- Licensing

A person who uploads an object must choose one of *six plus one* licences, otherwise he/she is not able to finalize the upload process. There are six creative commons licenses and one general license available:
Attribution 2.0 Austria
Attribution-Noncommercial 2.0 Austria
Attribution-Noncommercial-No Derivative Works 2.0 Austria
Attribution-Noncommercial-Share Alike 2.0 Austria
Attribution-No Derivative Works 2.0 Austria
Attribution-Share Alike 2.0 Austria
Users have finally the possibility not to choose any license but keep all rights reserved.

In Quarter II/2009 users of Phaidra will be offered the software license model GNU General Public License.

- Formats

A document (best practice) informs users about formats that are recommended in order to achieve best permanent digital preservation.

- Ease of Use

Several tutorials and guidelines have been developed to support target groups to properly use the system.

- Training and dissemination work

- In addition workshops are offered monthly to train people how to use Phaidra. Members of the Phaidra Team are also organizing on a regular basis meetings at faculty level ("Phaidra-Days"), in order to develop dissemination work, reach broad acceptance within university and eventually enhance willingness to share learning objects and other materials

- **First Level and Second Level Support**

Customer oriented service is carried out by a Customer Manager. The Help Desk of the University is been trained for the first level support. Second level support is provided through the technical development team.

The website <http://phaidraservice.univie.ac.at/> additionally offers extensive information about the system and respective services.

- **Updates**

Updates are made once a month

- **Classification of Digital Objects**

Several subject-specific thesauri have already been implemented in order to support indexing.

3. Next Steps

The project follows a top-down as well as a bottom-up approach. Though Phaidra provides services for the whole University, development and customization are tightly aligned with the target groups' needs and requirements.

- Establish Phaidra as single point of entry to all digital assets (enhance visibility for the university's research and teaching efforts)
- Achieve integration with other software systems
- Develop additional features and services
- Implementation of open access institutional repository (OA IR)
- Development of new features (e.g. integration of a streaming server)
- Improvement of the usability
- Interoperability with similar external repositories or systems
- Integration with the University's AAI (Authentication and Authorization Infrastructure) (shibboleth).

References

Technical presentation, English language

<http://phaidra.univie.ac.at/o:19583>

Phaidra Website

<https://phaidra.univie.ac.at/>

(German language)

Phaidra Service

<http://phaidraservice.univie.ac.at/>

(German language)

Best practice guide für Phaidra - Dateiformate mit Zukunft

<https://phaidra.univie.ac.at/static/pdfs/PhaidraBestPractice.pdf>

(German language)

Phaidra News Digest (*Collection*)

<http://phaidra.univie.ac.at/o:21966>

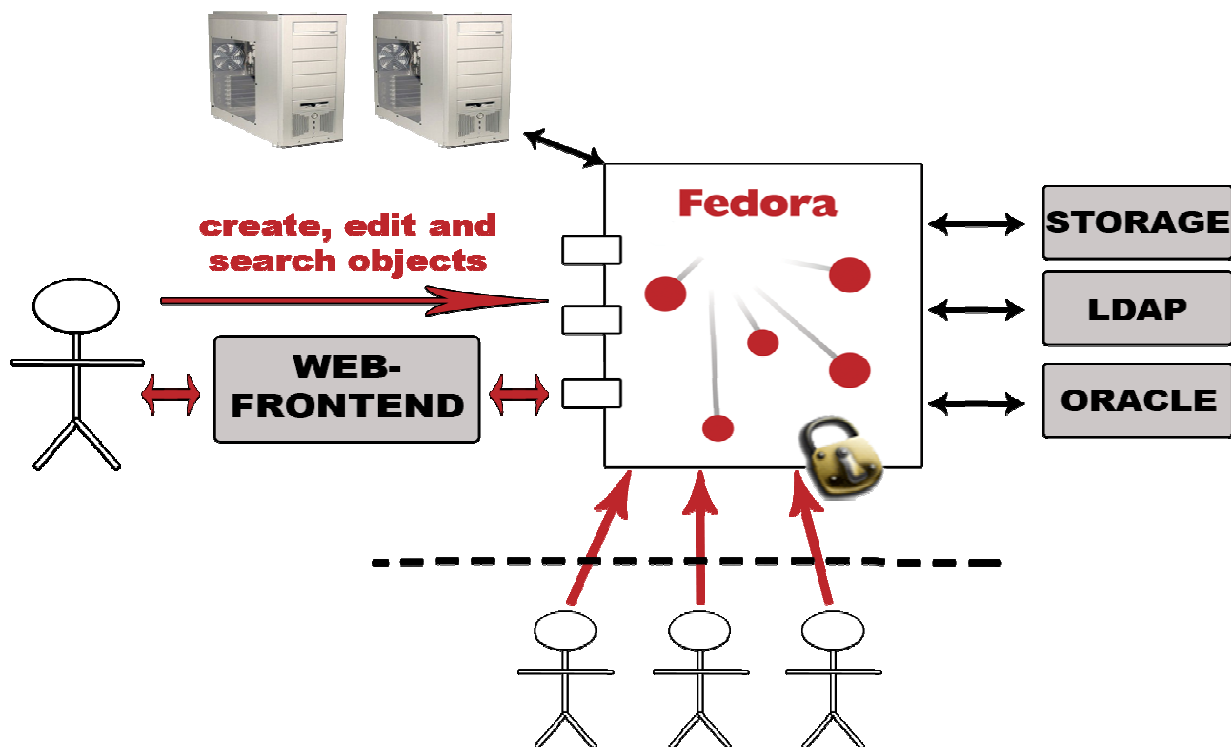
(German language)

A. PHAIDRA / Fact Sheet 2 - Technical Information

Used technologies

- Web-Frontend: mod_perl applications
- Catalyst: MVC-Framework for Perl *Model*: DBIx::Class as ORM, own Model for Fedora (Facade)
- View: Template::Toolkit
- Fedora 2.2.3 at Red Hat Enterprise Linux 5, Tomcat 5.5.20, Apache 2.2.3 as Frontend Server
- Databases: Oracle 10 & MySQL 5.0.32

Architecture



Security

- Authentication over LDAP: differ between staff, students, external (soon use of Shibboleth)
- Authorisation over XACML: who is allowed to use which API-(A|M)-functions under which terms
- Phaidra: all users are allowed to use (certain) API-(A|M)-functions, not only admins. XACML not sufficient!

Phaidra Core

- APIs for Perl and Java
- Abilities to search: Fulltext, Metadata, „Google Search“, Browse (Lucene)
- User-Interface: fully localized in german; usability very important
- Persistent Unicode (UTF-8)
- Right-management: allocation of rights for single user, user groups, departments, faculties.
- Rights can expire!
- Version-management: in RELS-EXT datastream; also available in „external view“

Metadata schema

- Modified LOM-Schema
- Faculties are able to save own metadata to their objects
- Different classification databases to classify the object (ÖFOS, GETTY, PACS, EuroVoc, ACM, ...)
- XML datastream is saved to every object
- DC is generated machinable

Content models

Object groups:

Single File

1 Content DS: picture, document, audio, ...

Collection

No content but members in RELS-EXT DS

Container

Multiple content datastreams

Object types:

Picture,
Document,
Audio,
Video,
Resource,
Book,
Page,
Container,
Collection

Design of a typical Phaidra object:

DC
POLICY
RELS-EXT
OCTETS
UWMETADATA
RIGHTS
STYLESHEET
THUMBNAIL

Bdef: Asset
Bdef: ImageManip

Supported formats

	<i>recommended</i>	<i>possible</i>	<i>not recommended</i>
picture	.tiff	.jpg	.psd, .gif, .png, .psd,...
audio	.wav	.mp3	.wma, .aac, .ogg
video	.avi, .mpeg.2		.wmf, .flv, .mov, ...
documents	.pdf, .tei	.tex, .html	.doc, .ppt, .indd, .qxd

Book-Viewer

- Vienna University Library import of „E-Books on Demand“ into Phaidra
- All pages either in TIFF or JPG, whole book in PDF
- If available OCR data is also included
- With the help of Phaidra Book Viewer the User is able to view the E-Book and scroll it in a browser
- Main functions: stepless zoom, navigation through the book, full-screen view, download pages in JPG or PDF, ...
- Communication with Fedora over AJAX
- Search and highlighting of words or phrases is supported if OCR is available