



# Wikidora

A Wiki for Collaboration and Publication  
in Research

Prof. Dr. Andreas Hense

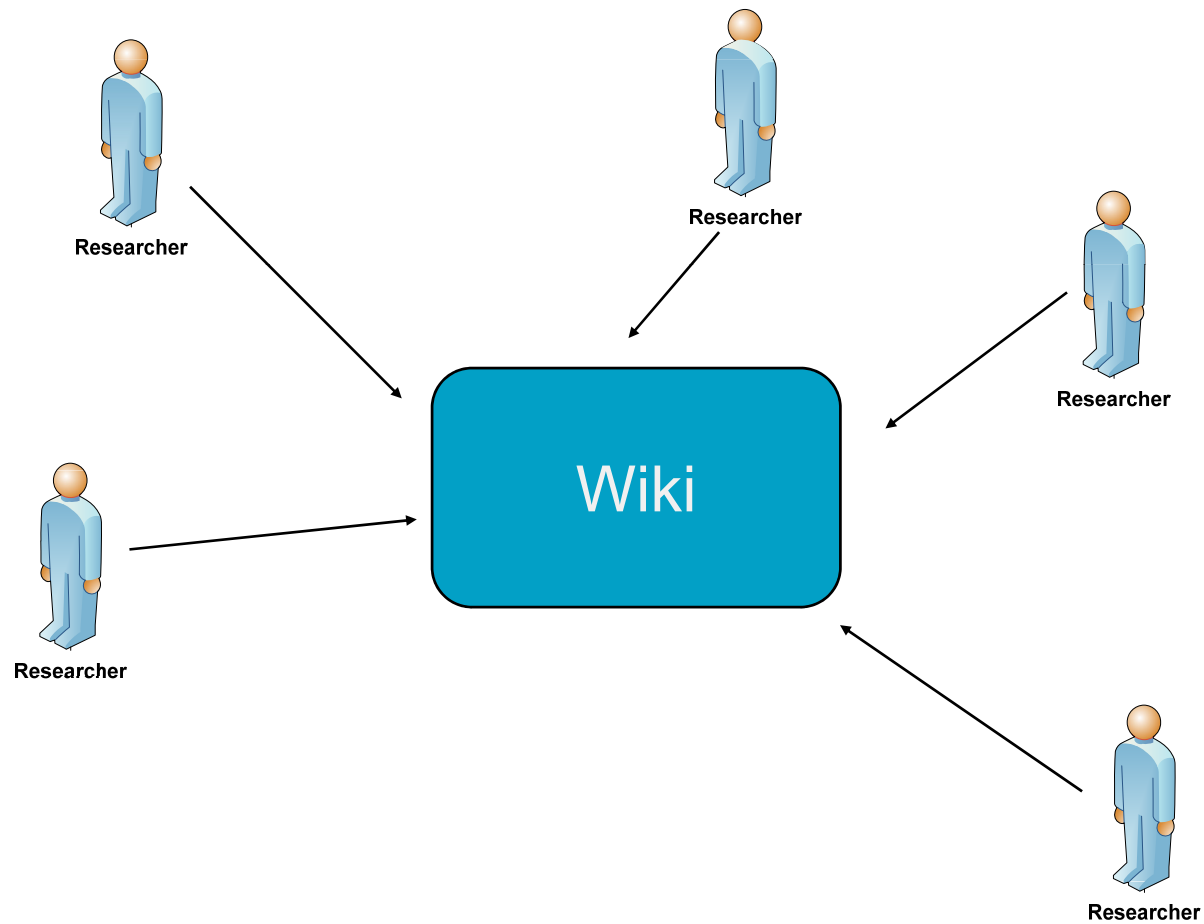


# Agenda

- Scenario: a Wiki in a Research Project
- Wikidora: a Wiki on a DOR
  - Components
  - Implementation
  - Future development
- Demonstration
- Conclusion

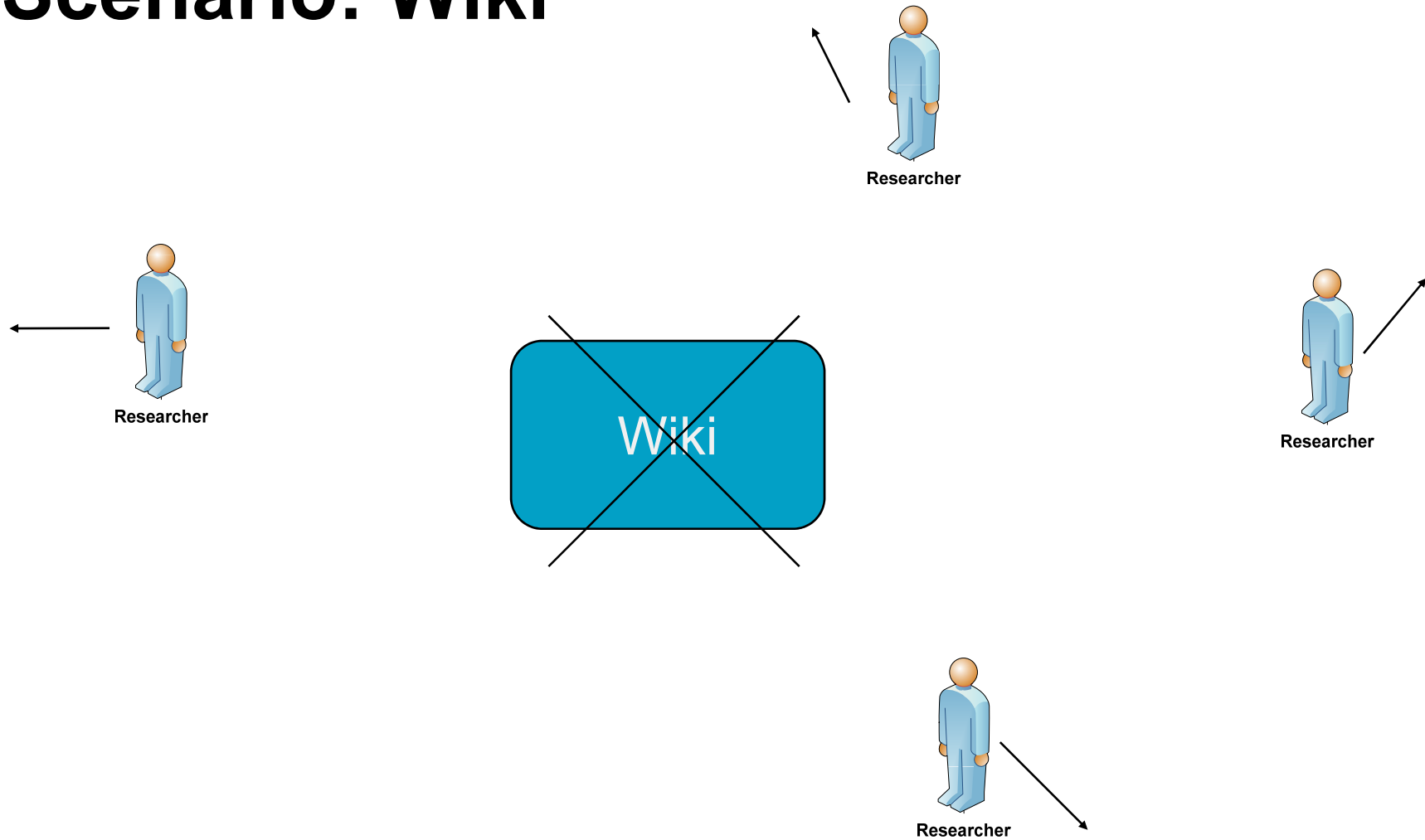


# Scenario: Wiki





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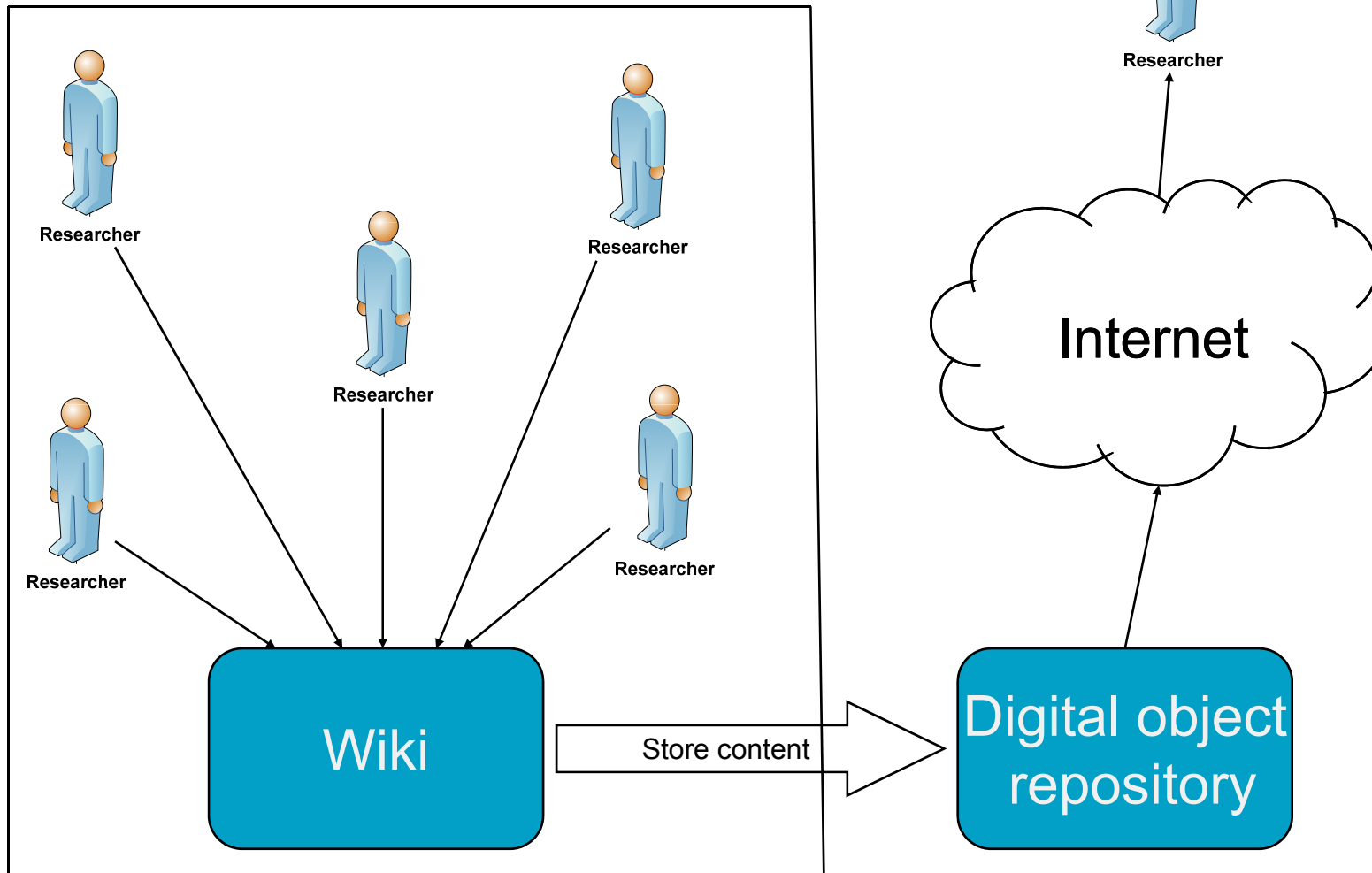


# Problem

- When research projects start, a quick collaboration solution is needed.
- LTA: in many cases you do not know which content that is created now will be valuable in the future.

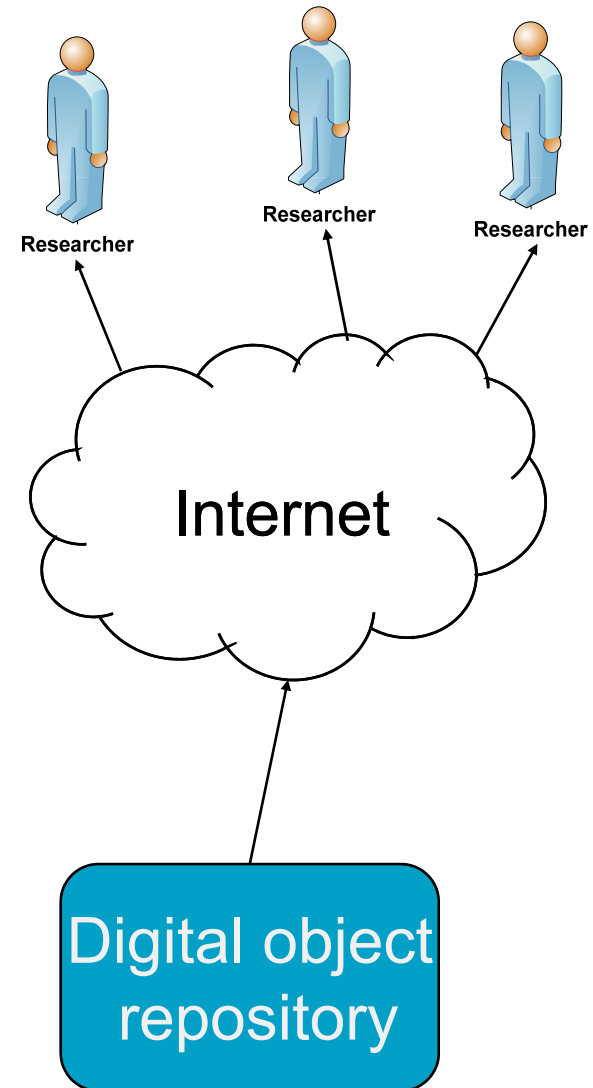
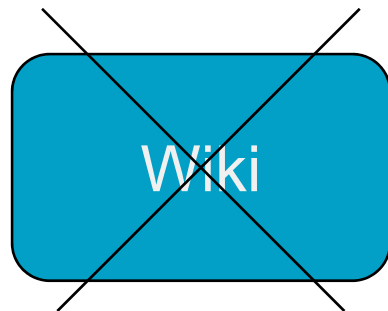
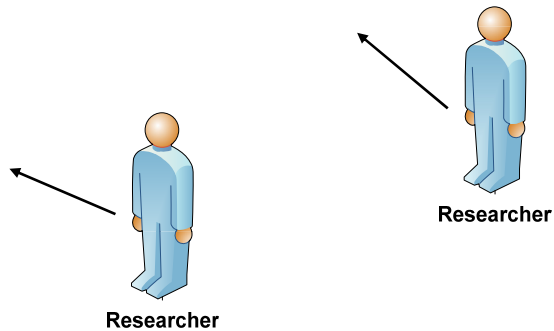


# Solution: Wikidora





# Solution: Wikidora





# JSPWiki

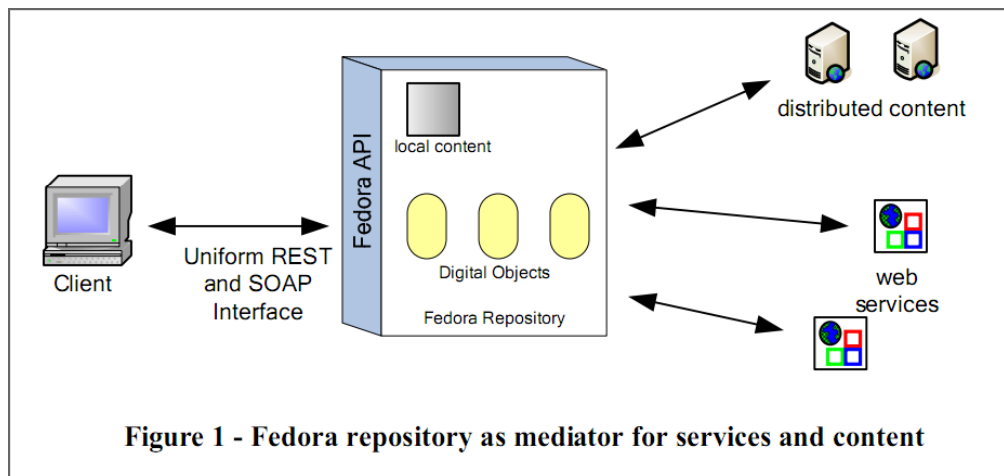
- JSPWiki is a wiki software using Java and J2EE
- Popular in intranet environments
- Flexible data storage using providers
- Transition to an Apache project
- Features:
  - Markup language
  - Templates
  - Security





# Fedora

- General-purpose, open-source digital object repository architecture.
- Unstructured content, collaboration, preservation.
- Architecture, i. e. not for the end-user.








## Apache FOP



- PDF generation
- Motive
  - Converse the version
  - Easy distribution
  - Formal publication
- Features
  - Branding
  - Link rewriting

 Hochschule Bonn-Rhein-Sieg

 Max-Planck-Institut für Meteorologie  
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 universität bonn

### About the project

#### Problem description#

In the field of meteorology, we distinguish between weather simulation and weather experiments. While weather simulations are model-based hypotheses of future weather, weather experiments describe fact views of the current weather. In combination, the weather experiments can be used to verify the weather simulation. Both types generate large amounts of data that may be of interest to other scientists. Hence, the publication and long-term availability of these data are a matter of high priority, and relevance.

In Germany, data from weather simulations are archived in the World Data Center for Climate (WDCC) in Hamburg. Particularly significant scientific simulations will be added to the long-term-archiving worldwide via the Technical Information Library Hannover (TIB) using a Digital Object Identifier (DOI).

Such a publication does not allow any changes to the primary data and metadata at a later stage. Therefore, the simulation data has to be the subject of a particular Quality Control. This quality control includes both a scientific and technical quality control. In the future, there will also be experiment data in the WDCC archived and published with DOI. There is currently no software solution to support this release process systematically.

#### Objectives of the project#

- Definition of a standard procedure for the publication of observational data.
- Development of a workflow system to automate the data publication process.
- Ensure the reusability of the results and its application to observational data of other environmental sciences.
- Integration of the procedure and the system in the normal operation of the WDCC

#### Requirements of the project#

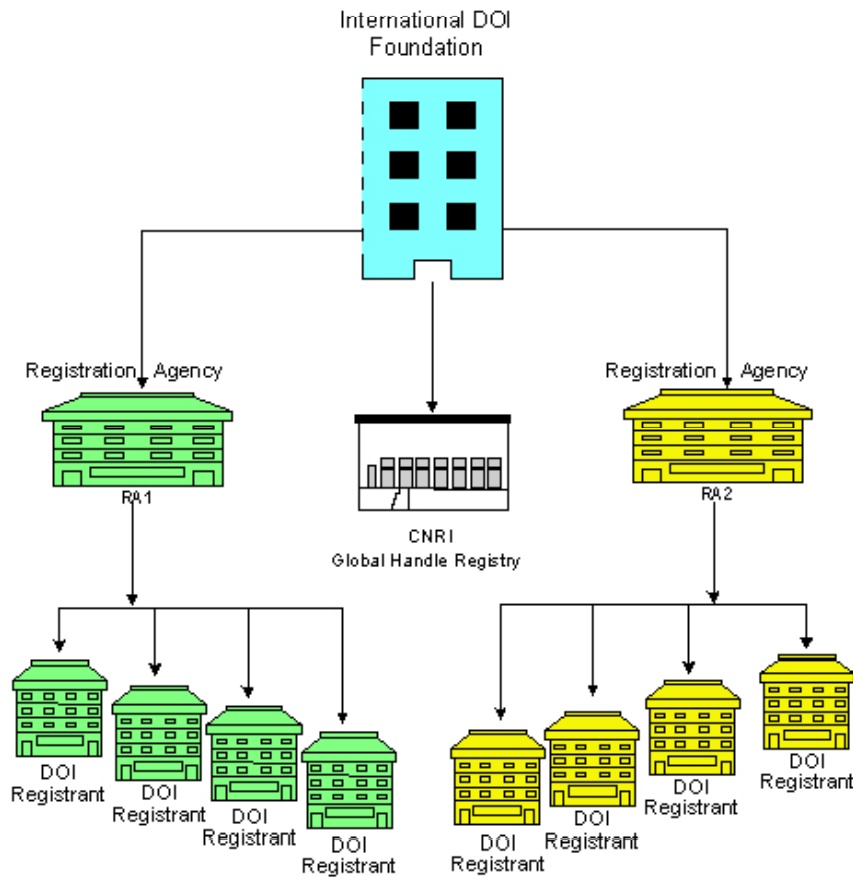
- The system must be web-based and support the publication of environmental data (observation data)
- Use of modern web technologies (e.g. Ajax) to provide convenient user interfaces.
- In addition to the entire and correct functionality the focus will be particularly on the quality attributes usability and transferability

Publikation Umweltdaten Projekt gefördert von der DFG

- 1 -



# Handle.net



Handle System®



# Handle.net


- Integration with Wikidora.
- Each version gets a unique handle.
- Handle server is operated at BRSU.

[View](#) [Attach](#) [Info](#) [Edit](#) [More...](#)

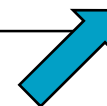
**Hello World from Wikidora with Handle.net**

Just try out the Handle-Link at the bottom of this site.

*The Handle System is a general purpose distributed information system that provides efficient, extensible, and secure HDL identifier and resolution services for use on networks such as the Internet. It includes an open set of protocols, a namespace, and a reference implementation of the protocols.*

This page (revision-4) was last changed on [24-Oct-2009 00:11](#) by FelixMannhardt 

Cite this version: <http://repository.wikidora.com/fedora/get/wikiHandle:4/2009-10-23T22:11:27.623Z10490/inf.ah.wikidora-1165067649>





# Components of Wikidora

## JSPWiki

- Create and edit content
- Rights management
- Versioning

## Fedora

- Long-term archival
- Versioning
- Persistent identifiers
- Metadata

## Apache FOP

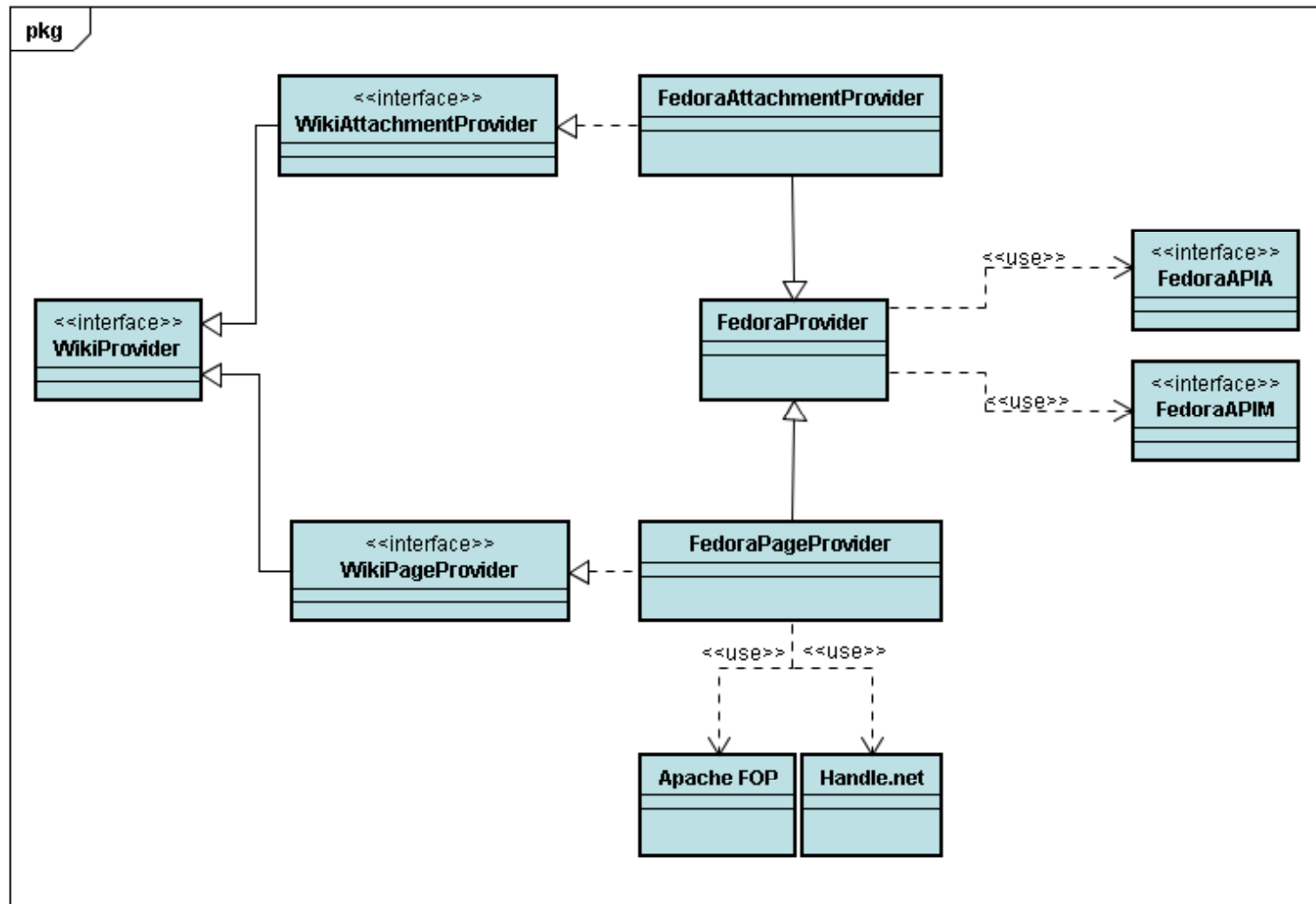
- Generate fancy PDF
- HTML to PDF conversion
- Using XSLT

## Handle.net

- Unique identifier
- Persistent identifier
- Suitable for citation



# Structure of Wikidora

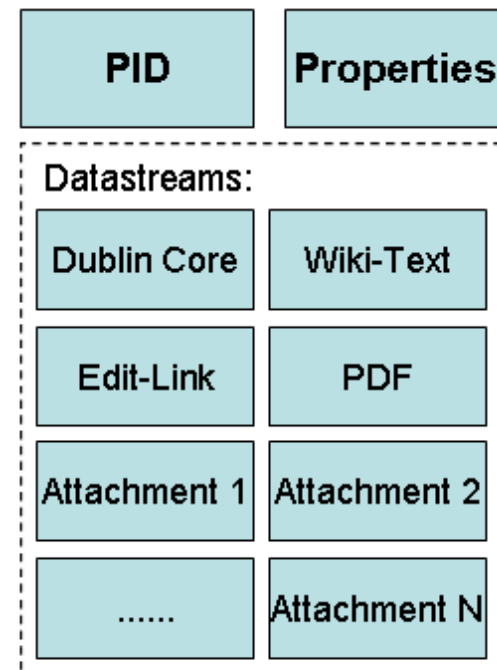




# Fedora Content Model

- Manages all essential data of a wiki page:
  - Dublin Core Metadata
  - Wiki-Markup source code
  - Link to the wiki-page
  - PDF representation
  - Multiple attachments

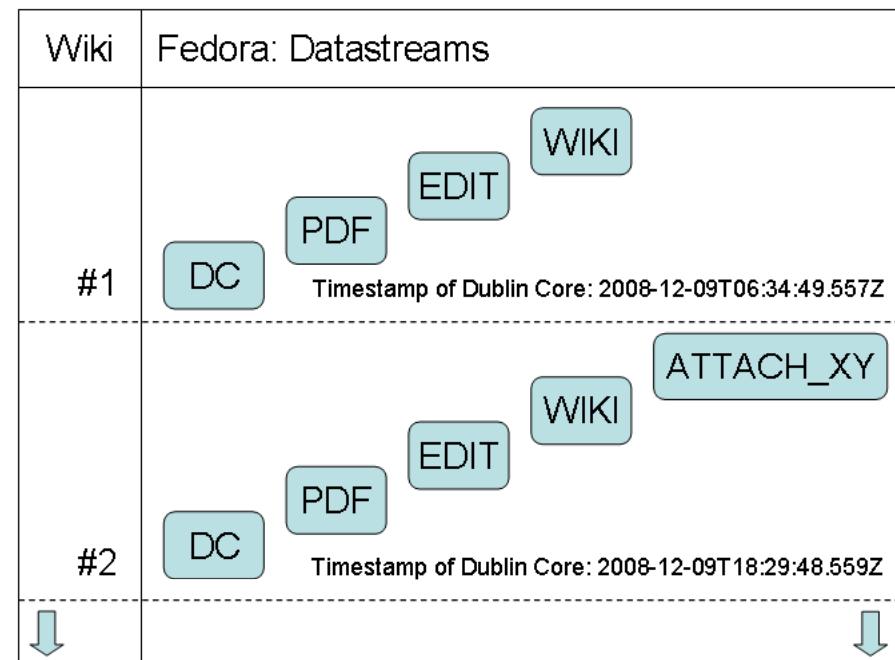
Digital object:





# Versioning

- Every datastream in Fedora's digital object is separately versioned upon save
- Timestamp of the Dublin Core datastream identifies a version





# Future development

- To-Do
  - Authentication concept
  - PDF face-lift
  - Get DOI/Handle only on special version
  - Update to JSPWiki v3.0?
  - Further use of the RELS-EXT datastream?
- Sourcecode available under Apache v2.0 license
  - <http://wikidora.sourceforge.net/>



# Demonstration

- Writable sandbox for your experiments:  
→ <http://wiki.wikidora.com>
- Fedora repository in read-only mode:  
→ <http://repository.wikidora.com/fedora/search>
- Handle.Net integrated:  
→ <http://wiki.wikidora.com/wikidoraHandle/>



## Related work

- National Science Digital Library: Wiki functionality in NCore middleware.
- Scholarpedia: articles are published in a journal after approval.
- eSciDoc: advanced infrastructure with publication management and scholarly workbench.
- Semantic MediaWiki.
- Media2mult: integrates multimedia formats.



## Vision / Discussion

- Extend Wikidora with other Web 2.0 tools to build a scholarly groupware.
- Wikidora as a new form of publication:
  - peer-reviewed wiki-based publication
  - boundaries of wiki-based publications
  - “living” publications
  - ...



# Contact

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  - Bonn-Rhein-Sieg University of Applied Sciences
  - [andreas.hense@fh-brs.de](mailto:andreas.hense@fh-brs.de)



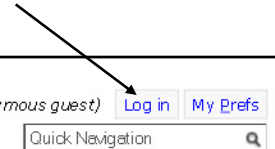
# Backup slides

[Es kommen noch aktuelle Backup slides dazu]



# Demo – Start page


Log in / Register as new user



The screenshot shows the Wikidora start page. At the top right, it says "G'day (anonymous guest)" with "Log in" and "My Prefs" buttons. Below this is a "Quick Navigation" search bar. The main content area has a "View" and "Info" tab, and a "More..." dropdown. The main heading is "What is Wikidora?". The text explains that Wikis are used by many projects but not adopted by researchers for permanent scientific output. It describes the system's goal to overcome this by replacing the persistence layer with a digital object repository, combining JSPWiki and Fedora Commons. Below this is a section "How to work with this Demo-Wiki" which states that users are invited to try out features but must use "Sandbox" in front of page names. It lists three requirements: register for edit privilege, edit pages starting with "Sandbox", and view older revisions in the Fedora repository. The next section is "What is special in Wikidora", explaining that each version is stored in a Fedora repository and linked to the current version. At the bottom, it notes the page was last changed on 11-Nov-2008 13:13 by F.Mannhardt and provides a URL to cite this version. A "Get bit.ly link" button is at the bottom right.




# Demo – Register as new User

 **Login** G'day (anonymous guest) [My Prefs](#)

Your trail: Quick Navigation

[Login](#) [Lost password](#) [Register New User](#) [Help](#) [More...](#) ▼

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### Create a new user profile

**Login name \***

**Password \***

**Password verify \***

**Name \***  Use your name in Access Control Lists or wiki Groups.

**E-mail address**  (optional). If you lose your password, you can ask to have a new, random password sent to this address.

This wiki automatically remembers you using cookies, without requiring additional authentication. To use this feature, your browser must accept cookies from this website. When you click "save profile," the cookie will be saved by your browser.



# Demo – Logged In

**Main** G'day, TestUser (authenticated) [Log out](#) [My Prefs](#)

Your trail: Quick Navigation

[View](#) [Info](#) [More...](#)

## What is Wikidora?

Wikis are used by many projects as part of a collaboration platform. Yet, they have not been adopted by the majority of researchers for creating permanent scientific output.

In this system we try to overcome the shortcomings of Wikis by replacing their persistence layer by a digital object repository. Our solution, which combines [JSPWiki](#) and [Fedora Commons](#), provides automatic provenance metadata, assigns persistent identifiers, takes care of proper versioning, and prepares the Wiki's content for long term archival. Our architecture allows the Wiki application to be run by a temporary project, whereas the digital object repository can be maintained by a long-lasting organization.

## How to work with this Demo-Wiki

You are invited to try out almost all features.

To protect this wiki, you may only edit pages with "Sandbox" in front of their name.

So a good start may be this page: [Sandbox1](#)

- You are required to register to gain "edit" privilege.
- You only may edit pages starting with "Sandbox"
- You may view older revisions in Fedora repository

## What is special in Wikidora

Each version of a wiki-page is stored in a Fedora repository. At the bottom of every page there is link to the Fedora object representation of the current version. Like in a common wiki the "Info" tab contains information about previous versions of the page, but there is also a link to the Fedora representation of each previous version.

This page (revision-8) was last changed on **11-Nov-2008 13:13** by F.Mannhardt


Cite this version: <http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-11T12:13:44.913Z>

[Get bit.ly link](#)

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# Demo – Fedora Commons



**Fedora Digital Object**  
Object Profile View

---


Version Date: 2008-11-11T12:13:44.913Z  
[View the Dissemination Index for this Object](#)  
[View the Item Index for this Object](#)

---

Object Identifier (PID):	wiki 1
Object Label:	Main
Object Content Model(s):	info:fedora/fedora-system:FedoraObject-3.0
Object Creation Date:	2008-11-04T12:22:43.804Z
Object Last Modified:	2008-11-11T12:13:44.913Z
Object Owner Identifier:	fedoraAdmin



# Demo – Object Index



**Fedora Digital Object**

Default Disseminator - Item Index View

---


Object Identifier (PID): [wiki:1](#)  
Version Date: 2008-11-11T12:13:44.913Z

---

Item ID	Item Description	MIME Type
DC	<a href="#">Dublin Core Record for wiki 1</a>	text/xml
WIKI	<a href="#">Wikitext for wiki 1</a>	text/plain
EDIT	<a href="#">Link to Wiki for wiki 1</a>	text/html
PDF	<a href="#">PDF for wiki 1</a>	application/pdf



# Demo – Old versions




## Main

G'day, [TestUser](#) (authenticated) [Log out](#) [My Prefs](#)

Quick Navigation

Your trail: [Main](#), [Sandbox1](#), [Main](#), [Sandbox2](#), [Sandbox1](#), [Main](#), [Sandbox2](#)

[View](#) [Info](#) [More...](#)

This page (revision-8) was last changed on [11-Nov-2008 13:13](#) by F.Mannhardt 

This page was created on [04-Nov-2008 13:22](#) by F.Mannhardt

Only authorized users are allowed to rename pages.

Only authorized users are allowed to delete pages.

[+ Incoming links](#) [+ Outgoing links](#)

Version	Date Modified	Size	Author	Changes ...	Cite this version
<a href="#">1</a>	04-Nov-2008 13:22	44	F.Mannhardt	<a href="#">to last</a>	<a href="http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-04T12:22:47.915Z">http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-04T12:22:47.915Z</a> <a href="#">Get bit.ly link</a>
<a href="#">2</a>	04-Nov-2008 13:27	80	F.Mannhardt	<a href="#">to previous</a>   <a href="#">to last</a>	<a href="http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-04T12:27:55.849Z">http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-04T12:27:55.849Z</a> <a href="#">Get bit.ly link</a>
<a href="#">3</a>	05-Nov-2008 14:34	866	Christoph	<a href="#">to previous</a>   <a href="#">to last</a>	<a href="http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-05T13:34:02.288Z">http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-05T13:34:02.288Z</a> <a href="#">Get bit.ly link</a>
<a href="#">4</a>	11-Nov-2008 12:25	919	F.Mannhardt	<a href="#">to previous</a>   <a href="#">to last</a>	<a href="http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-11T11:25:13.296Z">http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-11T11:25:13.296Z</a> <a href="#">Get bit.ly link</a>
<a href="#">5</a>	11-Nov-2008 12:25	920	F.Mannhardt	<a href="#">to previous</a>   <a href="#">to last</a>	<a href="http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-11T11:25:34.662Z">http://repository.wikidora.com:80/fedora/get/wiki:1/2008-11-11T11:25:34.662Z</a> <a href="#">Get bit.ly link</a>

[Home](#)  
[Sandbox1](#)  
[Sandbox2](#)

Links:  
[Wikidora Website](#)  
[Project News](#)  
[Project Site](#)  
[Fedora](#)  
[JSPWiki](#)

Special thanks to:  
[University of applied sciences](#)  
[Bonn-Rhein-Sieg](#)

[Im pressum](#)

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# Demo – Old versions

Your trail: [Main](#), [Sandbox1](#), [Main](#), [Sandbox2](#), [Sandbox1](#), [Main](#), [Sandbox2](#)

[View](#) [Info](#) [More...](#)

This is version . It is not the current version, and thus it cannot be edited.  
[\[Back to current version\]](#) [\[Restore this version\]](#)

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[Get bit.ly link](#)

Home  
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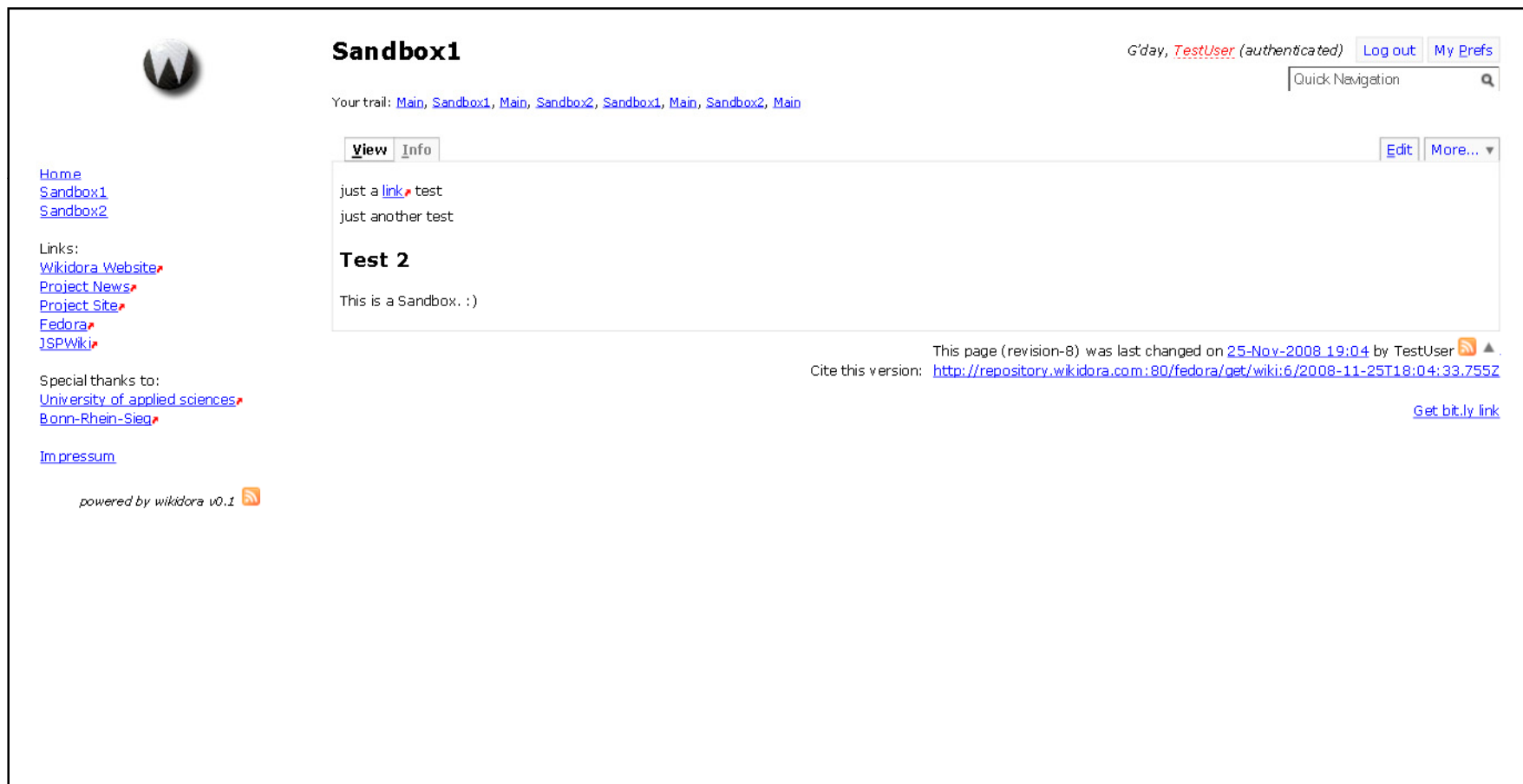
Special thanks to:  
[University of applied sciences](#)  
[Bonn-Rhein-Sieg](#)

[Im pressum](#)

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# Demo – Sandbox



The screenshot shows a web browser displaying a Wikidora page titled "Sandbox1". The page layout includes a header with a logo, a title "Sandbox1", and user information "G'day, TestUser (authenticated)" with "Log out" and "My Prefs" links. A "Quick Navigation" search box is present. Below the header, there is a breadcrumb trail: "Main, Sandbox1, Main, Sandbox2, Sandbox1, Main, Sandbox2, Main". The main content area has tabs for "View" and "Info", and buttons for "Edit" and "More...". The text content includes "just a link test" and "just another test". A section titled "Test 2" contains the text "This is a Sandbox. :)". At the bottom right, there is a note: "This page (revision-8) was last changed on 25-Nov-2008 19:04 by TestUser" with an RSS icon and a "Cite this version" link: "http://repository.wikidora.com:80/fedora/get/wiki:6/2008-11-25T18:04:33.755Z". A "Get bit.ly link" link is also visible. The left sidebar contains navigation links: "Home", "Sandbox1", "Sandbox2", "Links:" (with "Wikidora Website", "Project News", "Project Site", "Fedora", "ISPWiki"), "Special thanks to:" (with "University of applied sciences", "Bonn-Rhein-Sieg"), and "Im pressum". At the bottom left, it says "powered by wikidora v0.1" with an RSS icon.