

XoWiki

An Experiment for an XOTcl based
Content Management Infrastructure

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Overview

- Basic Ideas
- Advanced Concepts
- Includelets
- Weblog
- Prototypes
- Policies

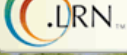


Basic idea

- Wiki + Content Management + Dynamic Page Fragments = Basic Web Application
- Ease of Wiki
 - ☐ Named Pages/Links for Referencing and Content creation
 - ☐ Reference Management
 - ☐ Multi-Language support
 - ☐ Revision Management
- Extended Features
 - ☐ Typed Wiki Pages
 - Predefined: xowiki::Page, xowiki::PlainPage, xowiki::Object, xowiki::PageTemplate, xowiki::PageInstance, xowiki::File
 - XoWiki pages are subclassable
 - ☐ Typed Links
 - ☐ Search with weighted Terms
 - ☐ *Categories* and Delicio.us like *tagging* (Folksonomies)
 - ☐ ADP-Inclusion for reuse of OpenACS packages, nested content

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The screenshot shows a web application interface for 'mySpace'. At the top, there is a navigation bar with links: 'Main Site » xowiki » mySpace'. On the right, it says 'Welcome, Gustaf Neumann | 1 member online | Logout'. Below this is a header for 'mySpace' with tabs: 'My Space', 'Courses', 'Communities', 'Preferences', and 'Tools'. To the right of these tabs are links: 'Edit · Revisions · New Page · Index'. Below the tabs is a sub-navigation bar with 'Home', 'My Calendar', and 'My Files'. The main content area is divided into several sections. On the left, there is a profile section for 'gustaf neumann' with a photo and a description: 'This is the Personal Wiki-Page of Gustaf Neumann. This shows, how to place arbitrary text into a kind of Portal-Page developed as a wiki.' Below this is a 'Groups' section with a link '[Join/Drop a Class or Community Group]' and two groups: 'Information Systems 1' and 'learn@wu'. Below the groups is a 'Forums' section with a link 'Learn@WU Developer Forum' and a 'New' button. On the right, there is a 'Day Summary' section for 'November 01, 2005'. It shows a timeline from 12:00 AM to 10:00 PM. A specific event is highlighted: 'Breakfast with Tiffany (09:00 AM - 10:00 AM) Personal'.

 Main Site » xowiki » Edit Wiki Page

Welcome, Gustaf Neumann | 1 member online | Logout

Edit Wiki Page


My Space | Courses | Communities | Preferences | Tools

View · Revisions · Index

Home | My Calendar | My Files

Name * en:mySpace

Content



This is the Personal Wiki-Page of Gustaf Neumann. This shows, how to place arbitrary text into a kind of Portal-Page developed as a wiki.

-gustaf neumann

```

{{adp portlet {title Groups portlet /packages/dotlrn/www/dotlrn-main-portlet}}}
{{adp portlet {title #forums-portlet.pretty_name# portlet forums-portlet}}}

>><<
>>right-col<<
{{adp portlet {title #dotlrn-calendar.Day_Summary# portlet calendar-portlet}}}

```

Path: [body](#)

Description

Language en-US



OpenACS Home Page (source)

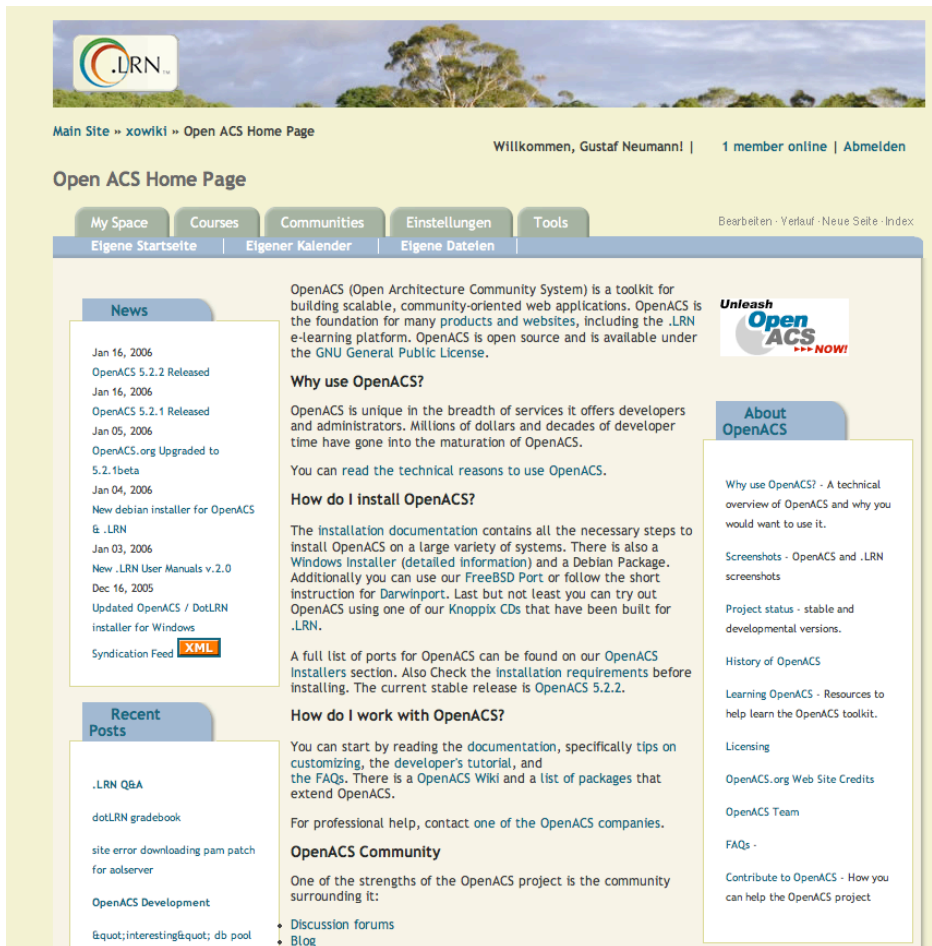
```

>>left-col25<<
{{adp portlets/wiki {name de:News}}}
{{adp portlets/wiki {name de:Recent\ Posts}}}
>><<
>>right-col25<<
{{adp portlets/wiki {name de>About\ OpenACS}}}
{{adp portlets/wiki {name de:Recent\ Posts}}}
>><<

```

OpenACS (Open Architecture Community System) is a toolkit for building scalable, community-oriented web applications. OpenACS is the foundation for many products and websites, including the .LRN e-learning platform. OpenACS is open source and is available under the GNU General Public License.

...




Realized as
Nested
XoWiki Pages



Typed Links



- Idea: Define different **kind of relationships** between Pages
- Realization: A Link is a Class defining
 - ☐ Page lookup
 - ☐ Renderer for links for found pages
 - ☐ Renderer for links for unknown pages
- Example
 - ☐ The `[[glossary:PostgreSQL]]` Global Development Group ...
 - ☐ Page named `PostgreSQL` in an XoWiki instance named `glossary`
 - ☐ Use special symbol for denoting the link type on Link Label
 - ☐ Use a popup for rendering the glossary content (using `overlib.js`)



You are here:
 Main Site » xowiki » My first weblog

Willkommen, Gustaf Neumann! | 1 member online | Abmelden

My first weblog

Bearbeiten · Verlauf · Neue Seite · Löschen · Index

Eigene Startseite | Kurse | Mitgliedschaften | Einstellungen | Tools | .LRN Administration

Eigene Startseite | Eigener Kalender | Eigene Dateien

Weblog

Filtered by date 2006-04-29

XoWiki Introduction


... Created by Gustaf Neumann, 14:37, Samstag

XoWiki

XoWiki is a wiki implementation for OpenACS in XoTcl. Instead of trying to implement the full set of wiki markup commands of systems like MediaWiki, XoWiki is based on a rich text editor and focuses more on integration with oacs (e.g categories, general comments, adp-includes). XoWiki combines aspects of wikis (ease of page-creation) with aspects of a content management system (revisions, reusable content, multiple languages).

XoWiki support complex markups on wiki-pages through the richtext editor. It is quite easy to reuse HTML-formatted text as wiki-pages (see right, the table with the page view statistics from Learn@WU).

Furthermore, XoWiki allows to define different types of links such one could define book-structures (where a navigation structure could be built on the fly) or glossaries with different kind of word relationships (like synonym, etc.). XoWiki supports pages in multiple languages.



April 2006

Mo	Di	Mi	Do	Fr	Sa	So
27	28	29	30	31	1	2
3	4	5	6	(1) 7	(1) 8	9
(1) 10	11	12	13	14	15	16
(1) 17	18	19	(1) 20	21	22	(4) 23
24	25	26	27	28	(3) 29	30

xowiki-toc

- ☐ 1 Introduction (2)
 - ☐ 1.1 Hardware (2)
 - ☐ Mac (1)
- ☐ 2 Complex pages (1)
 - ☐ 2.2 Page Instances (2)
- ☐ 3 Includelets (1)

Purpose

- ☐ Introductory Stuff (1)
- ☐ Test Cases (5)



Including content in XoWiki Pages



■ Adp-Includes

- ☐ Standard OpenACS include semantics; example
- ☐ `{{adp portlet {portlet /packages/dotlrn/www/dotlrn-main-portallet}}}`

■ Include of other XoWiki content

- ☐ Full pages
- ☐ Page fragments
- ☐ `{{categories-portallet -count 1 -skin plain}}`
- ☐ Similar to function calls returning HTML
- ☐ Argument Resolving
 - Portlets provide defaults
 - Content can be taken from URL
 - Invocation in page provides values



Prototypes

- Named after “Prototypes” in object based programming languages like SELF
 - Rather than creating fresh instances of some type, developers provide clone-able content
 - Example in architects software:
 - some designer creates a sofa via graphic tools, user can copy the sofa and put it into his room, maybe with slight modifications
 - Similar with web pages
- Need for shared pages between multiple xowiki instances
 - Index page, Weblog, ...



Prototypes (2)

- Prototype Life-Cycle in xoWiki
 - File named SOMENAME.page in xowiki/www/prototypes
 - Page name resolver checks prototypes
 - If found instantiates for the package instance denoted by url
 - Revisions are kept in the content repository
 - If page is deleted, it is recreated in a fresh query for SOMENAME

```
::xowiki::Page new -title "Index Page" -text {  
<p>This is the default start page of XoWiki. You can edit this page and  
save it to provide a personalized look of the XoWiki instance.....</p>  
>>left-col<<  
{recent -max_entries 25}  
>><<  
>>right-col<<  
{last-visited -title "Last Visited" -max_entries 10 }  
<br>  
{most-popular -title "Most Popular" -max_entries 10 }  
>><<  
}
```




Policies

- XOTcl Objects to govern access control decisions
- Configurable via package parameter
- Used to control the visibility of links for certain users
- Define, what methods on objects of which classes can be used by which subjects
- Possible to differentiate on attributes of the objects
- Subjects:
 - ☐ None, swa, login
 - ☐ [read|write|create|admin] permission on the values of certain attributes



Policies (2)

```
Policy policy3 -contains {
  Class Package -array set require_permission {
    reindex      {{id admin}}
    rss          none
    delete       swa
    edit-new      {{{has_class ::xowiki::Object} id admin} {id create}}
  }

  Class Page -array set require_permission {
    view          {{item_id read}}
    revisions      {{item_id write}}
    edit          {{item_id write}}
    make-live-revision {{item_id write}}
    delete-revision swa
    delete        swa
    save-tags      login
    popular-tags    login
  }

  Class Object -array set require_permission {
    edit          {{package_id admin}}
  }

  Class File -array set require_permission {
    download      {{package_id read}}
  }
}
```




XOTcl primer

- Tomorrow: Friday morning
- Short XOTcl introduction
- XOTcl and aolserver (initialization, serialization)
- Xotcl-core
 - Oo-layer for content repository
 - Forms, templating, mixins
 - Threading
 - Async I/O; background delivery