

**OpenCms**



An introduction to OpenCms,  
version 5.0

Alexander Kandzior

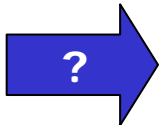
Alkacon Software

2nd Open Source Content Management Conference  
Berkeley, California  
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# Agenda

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- Overview
- Hard & Software requirements
- Basic System demonstration
- System development basics
- Notable features explained
- JSP support in the 5.0 release
- Advanced System demonstration
- Roadmap



# OpenCms overview

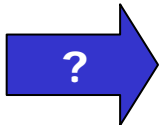
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- OpenCms is a Website Content Management System
- First released as Open Source in March 2000
- Last Version 5.0 (beta 1) released September 2002
- OpenCms is Open Source Software and published under the LGPL license
- OpenCms can be freely downloaded from the project's website:  
<http://www.opencms.org>

# OpenCms overview (2)

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- The “Java approach” to building a manageable website
- Especially suited to build company websites
- Best suited to the needs of medium-large enterprises with existing IT infrastructure
- Most features developed alongside of “real world” consulting projects
- Written in 100% Java



# OpenCms 5.0 feature list

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- Browser based editing
- Integrated user management
- Project based workflow
- Task management
- Version control of content
- History of changes
- Dynamic page rendering
- Fully database driven
- Static export with “backlink” capability
- i18n support for international char sets
- Flexible page & element caching mechanism
- Open module API for extensions
- Supports a wide variety of template mechanisms
- ...



# Soft- & Hardware requirements

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- **Software:** Open Source to „High End“
  - e.g. Linux + Tomcat + MySQL
  - e.g. Win NT + IIS + Tomcat + MS SQL
  - e.g. Solaris + BEA + Oracle
- **Hardware:** High flexibility
  - Runs on a notebook computer
  - Standard configuration:  
Normal Intel PC, 1Ghz CPU, 512 MB Ram
  - Other:  
SUN Sparc or HP Unix Hardware  
Clusters, Load – Balancers ...
- **Installation:** Wizard based on default components (Tomcat, MySQL), takes 5 minutes

# Basic System Demonstration



# Demo Screenshot 1: The Explorer - View




OpenCms Workplace of a.kandziar@opencms.framfab.de - Microsoft Internet Explorer

Alkacon Project: Online View: Explorer

Location: /

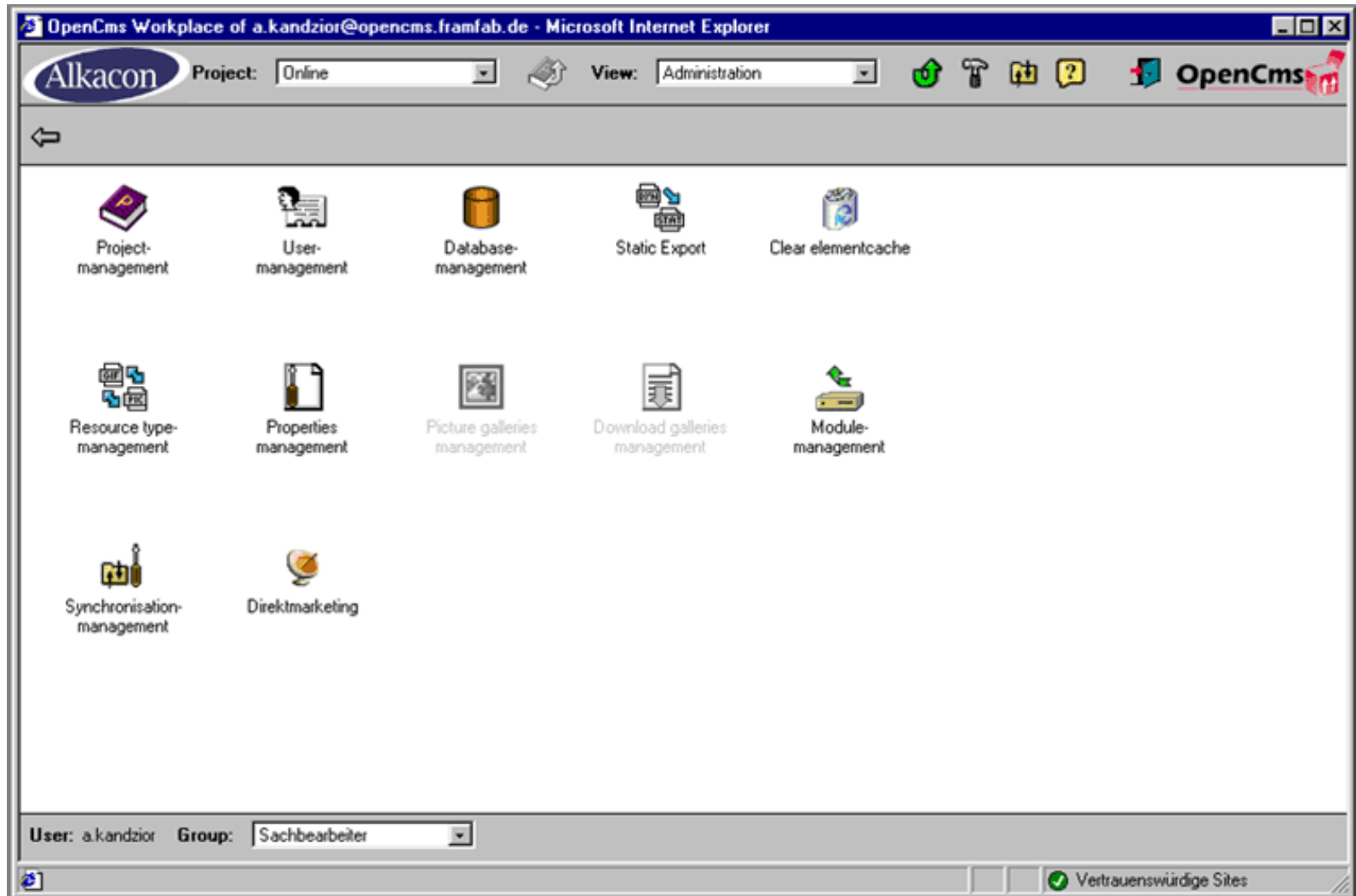
Name	Title	Type	Date Changed	Size	State
content		folder	29.08.2001 18:21		unchanged
download		folder	29.08.2001 18:21		unchanged
extranet	passwortgeschuetzter Bereich	folder	29.08.2001 18:21		unchanged
moduledemos		folder	06.09.2001 08:33		unchanged
pics		folder	29.08.2001 18:21		unchanged
public	oeffentlicher Bereich	folder	29.08.2001 18:21		unchanged
system		folder	06.09.2001 08:33		unchanged
index.html	OpenCmsMicrosite	page	24.09.2001 12:57	406	unchanged
opencms.css	Stylesheet	plain	03.09.2001 10:11	655	unchanged

User: a.kandziar Group: Sachbearbeiter

Fertig  Vertrauenswürdige Sites



# Demo Screenshot 2: The Administration - View



The screenshot shows the OpenCms Administration interface within a Microsoft Internet Explorer browser window. The title bar reads "OpenCms Workplace of a.kandzior@opencms.framfab.de - Microsoft Internet Explorer". The interface includes a navigation bar with the "Alkacon" logo, a "Project:" dropdown menu set to "Online", and a "View:" dropdown menu set to "Administration". To the right of these menus are several utility icons: a green up arrow, a wrench, a calendar, a question mark, and the OpenCms logo. Below the navigation bar is a large area containing ten administrative functions, each represented by an icon and a text label: "Project-management", "User-management", "Database-management", "Static Export", "Clear elementcache", "Resource type-management", "Properties management", "Picture galleries management", "Download galleries management", "Module-management", "Synchronisation-management", and "Direktmarketing". At the bottom of the interface, there is a status bar showing "User: a.kandzior" and "Group: Sachbearbeiter" with a dropdown arrow. In the bottom right corner of the browser window, there is a green checkmark icon and the text "Vertrauenswürdige Sites".



# Demo Screenshot 3: The Tasks - View



OpenCms Workplace of a.kandzior@opencms.framfab.de - Microsoft Internet Explorer

Alkacon Project:  View:

Filter:   For all Projects

Task	For User	For Group	Task Initiator	Date due	Date created	Project
<input type="checkbox"/> Edit page index.html	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input checked="" type="checkbox"/> Check new images	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input type="checkbox"/> Publish extranet - folder	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input type="checkbox"/> Add new User to Projectmanager group	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online
<input checked="" type="checkbox"/> Check Syntax of Masteremplate	a.kandzior	Sachbearbeiter	a.kandzior	10.10.2001	10.10.2001	Online

- Query
- Forward

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- Date Due
- Priority
- New Comment
- Complete

User: a.kandzior Group:

javascript.doTAction(DO\_TOK) Vertrauenswürdige Sites

# OpenCms Development Basics

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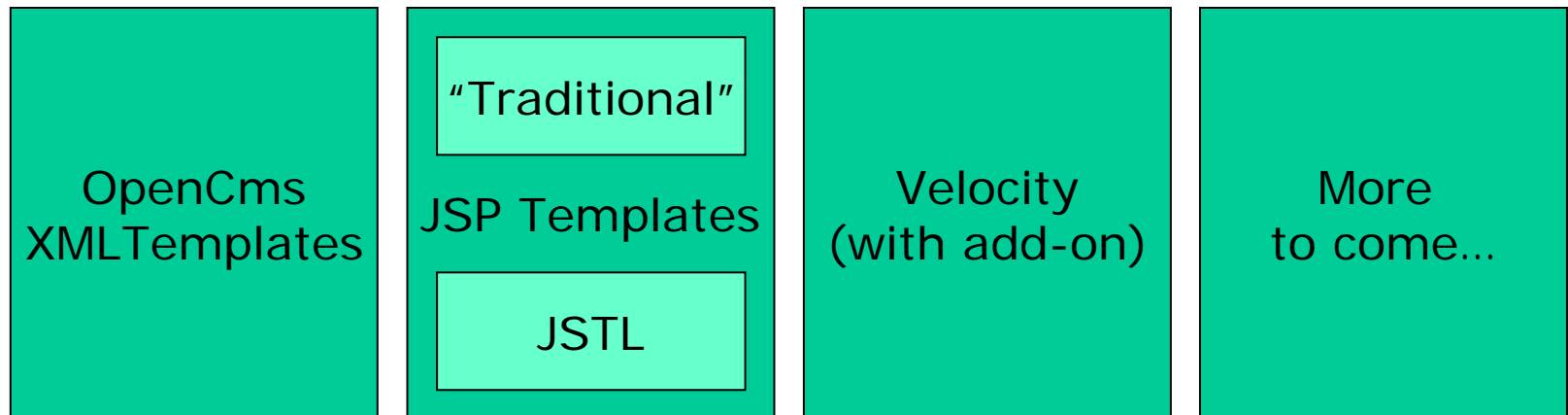
- Development in OpenCms requires knowledge in
  - HTML
  - Java (basic syntax, opt. JSP)
  - OpenCms Template API (JSP and/or XML)
  - OpenCms Java API
- Additional knowledge is helpful in
  - XML
  - SQL (JDBC)
- Development in general is separated in “Core” and “Module” development
- Development on a project is usually “Module” development. These modules are managed with the workplace.



# OpenCms Template mechanism

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- Pages are constructed from several elements and sub-elements
- OpenCms uses a flexible template mechanism to build the pages from a collection of elements



- Elements build in different Template languages can easily be combined

# JSP Support

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- OpenCms 5.0 features full support for JSP
- All JSP are available as *Online* and *Offline* version (like all resources in OpenCms)
- Standard JSTL 1.0 JSP Taglibs are all included
- Additional `cms`: JSP Taglib for access to OpenCms features
- JSP Templates: Easy and fast to use for rapid development of medium sized websites



# The FlexCache

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- Easy, declarative based caching of JSP resources with the FlexCache
- Multiple versions of one resource can be cached to ensure optimal performance
- Caching controlled with easy to set page properties in special cache “language”
- Example:  
**cache=uri;params=(id);no-params=(action)**

http://www.server.com/...

...page.html?id=11

→ cached (version 1)

...page.html?id=22

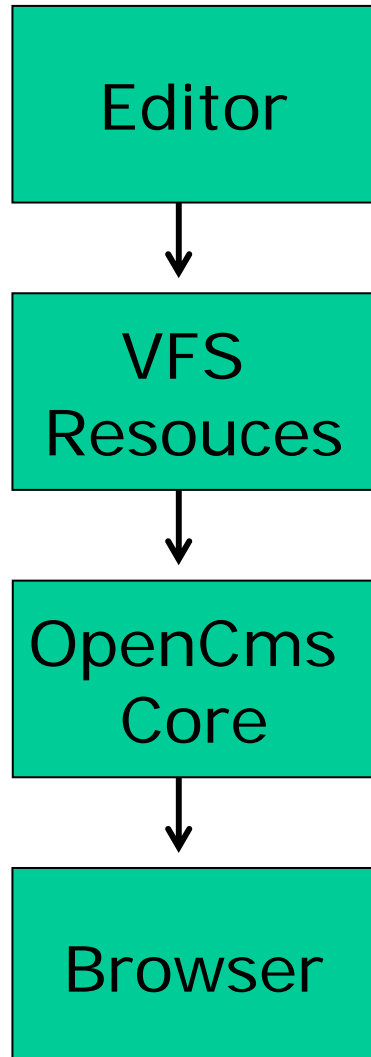
→ cached (version 2)

...page.html?id=11&action=submit

→ NOT cached

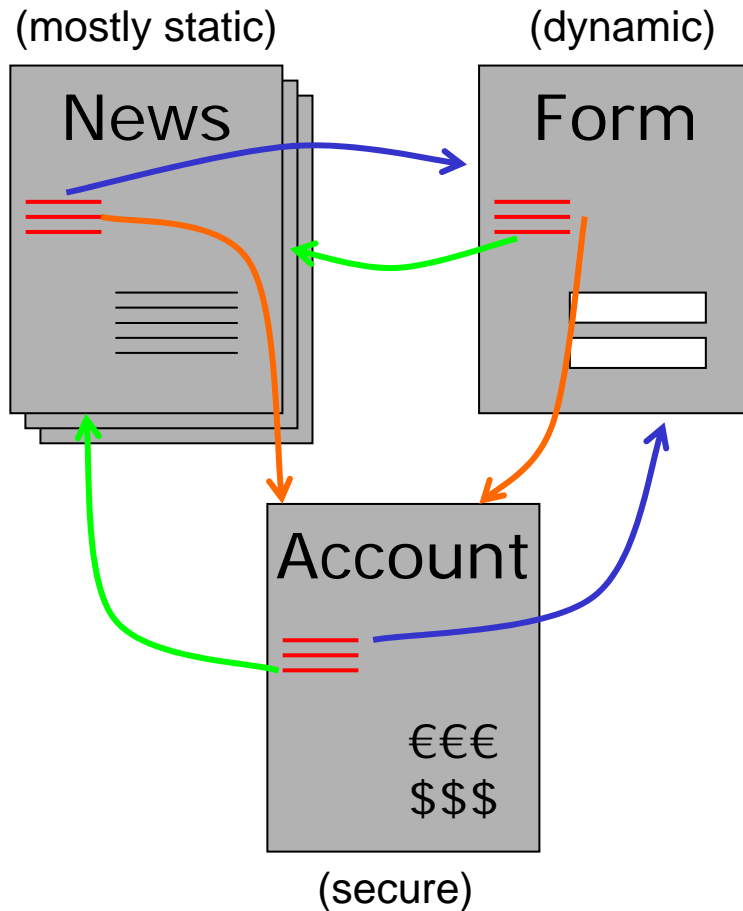
# i18n Support (new in 5.0b2)

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- Content can be in edited / stored in any encoding (e.g. "Big5", "ISO8859\_5" etc.)
- Resource is saved in native encoding in the OpenCms VFS repository
- While processing dynamic pages, content is converted to UTF-8 (Unicode)
- Response encoding is set depending on business logic of the application

# Static Export & "Backlink"



- Pages in "News" contain mostly static information
- Page "Form" is part of a dynamic application
- Page "Account" is dynamic and requires https security
- All 3 Pages should be based on the same system
- **OpenCms 5.0:** Manages all 3 servers with different URLs, sharing one set of templates, automatically ensuring consistent Links





# Advanced System Demonstration



# Demo Screenshot 4: The Mastermodule Backoffice



OpenCms Arbeitsplatz von Admin@3m-pressnet.framfab.de - Microsoft Internet Explorer

Alkacon Projekt:  Ansicht:

Filter:  Filterparameter:

Titel	Projekt	Veröffentlichungs-Monat	Start-Datum	End-Datum	geändert durch	Status	Rechte
3M Dual Lock flexibler Druckverschluss SJ 4570	Test	Oktober 2001	01.10.2001 00:00	01.10.2003 00:00	sterie	unverändert	rwwww-v
3M VHB 5970 doppelseitiges Klebeband	Test	Oktober 2001	01.10.2001 00:00	01.10.2003 00:00	Admin	geändert	rwwww-v
3M-07699-Transparente-Abdeckfolie	Test	Oktober 2001	01.10.2001 00:00	01.10.2003 00:00	sterie	gelöscht	rwwww-v
3M Fastbond 100 Kontakt-Dispersionklebstoff	Test	Mai 2001	01.05.2001 00:00	01.05.2003 00:00	sterie	unverändert	rwwww-v
3M Fastbond 49 Dispersionklebstoff	Test	Mai 2001	01.05.2001 00:00	01.05.2003 00:00	sterie	unverändert	rwwww-v
Neue hydraulik- und bremsflüssigkeitsbeständige 3M Kennzeichnungsfolie 7870	Test	Februar 2001	01.02.2001 00:00	01.02.2003 00:00	sterie	unverändert	rwwww-v
3M erweitert das Produktangebot im Bereich thermisch leitender Klebebänder	Test	November 2000	01.11.2000 00:00	01.11.2002 00:00	sterie	unverändert	rwwww-v
3M elektrisch leitende Klebstoff-Filme	Test	November 2000	01.11.2000 00:00	01.11.2002 00:00	sterie	unverändert	rwwww-v
Klebstoff-Filme	Test	November 2000	01.11.2000 00:00	01.11.2002 00:00	Admin	neu	rwwww-v

Benutzer: Admin Gruppe:

Internet

# Roadmap

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- OpenCms Version 5.0 beta 1 is the current release
  - Support for JSP
  - Internal link management
  - i18n support
  - Many “issues” solved ;-)
- Final 5.0 release expected until end of the year
- Possible features for future releases, currently in discussion
  - WebDAV support
  - Integration of other / better WYSIWYG editors
  - Native XML/XSLT template support
  - Advanced multilanguage features



# Some OpenCms reference projects

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- LGT Bank in Liechtenstein  
<http://www.lgt.com>
- BP South Africa  
<http://www.bp.co.za>
- 3M Imagine  
<http://www.3m-magazin.info>
- UNICEF Netherlands  
<http://www.unicef.nl>
- University of Würzburg  
<http://www.wirtschaftsinformatik.net>
- Catholic Church of Cologne  
<http://www.erzbistum-koeln.de>
- Darik Radio (Bulgarian radio station)  
<http://www.darik.net>
- Terra Semana (Spanish newspaper)  
<http://www.semana.com>

... and lot's of others



# OpenCms Contacts

<http://www.alkacon.com>

<http://www.opencms.org>

[info@alkacon.com](mailto:info@alkacon.com)

