

Enterprise Blog & Wiki Recommendation

Graham Chapman, Andrew Kutz, and Glenda Sims

The UT Austin community is increasingly using blogs and wikis to collaborate, research, document and share information. Based on customer requests and needs, UT ITS is implementing a general enterprise-wide blog and wiki service that can eventually scale to the entire campus. ITS will be responsible for maintaining the servers and keeping the software up-to-date. The advantages of offering a central solution include decreased maintenance time for departments, increased security and reliability and reduced costs for the University. The first phase of this project will be scoped based on currently available hardware.

The process for making an informed product recommendation included researching current use cases on our campus, as well as other higher education institutions, review of current literature and research on blogs and wikis, development of appropriate selection criteria and a comparison of products that met the enterprise-class requirements. Based on these findings, our recommendations are as follows:

- For **general use**, we recommend **WordPress[®]** for blogs and either **Atlassian Confluence** or **Jive Clearspace** for wikis.

In a university of our size and diverse needs, there is no “one-size-fits-all” blog or wiki solution. Therefore, we also endorse the following approaches based on user needs.

- If tight integration with BlackBoard is desired in a **classroom context**, we recommend **Learning Objects CampusPack** (unfunded at this time) for blogs and wikis.
- If tight integration with SharePoint is desired in a **workgroup context**, we recommend using the native blog features along with the **Confluence SharePoint Connector** for wikis.

Departments requiring functionality beyond these recommendations are free to pursue unique solutions. ITS is available for consulting for specific departmental needs.

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Project Description

The goal of this project is for Information Technology Services (ITS) to select enterprise blog and wiki Products that meets the varied needs of the students, faculty and staff at the University of Texas at Austin.

Definition of Terms

A **wiki** is software that allows users to collaboratively create, edit, link, and organize the content of a website, usually for reference material. Wikis are often used to create collaborative websites and to power community websites. ¹

A **blog** is a website where entries are commonly displayed in reverse chronological order. "Blog" can also be used as a verb, meaning to maintain or add content to a blog. Many blogs provide commentary or news on a particular subject; others function as more personal online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. The ability for readers to leave comments in an interactive format is an important part of many blogs. ²

Pedagogy

For an excellent discussion of wiki pedagogy, please see

http://www.profetic.org/dossiers/dossier_imprimer.php3?id_rubrique=110.

Blogs and wikis are both powerful and simple. They form an excellent basis for collaboration in and out of the classroom. But especially in an academic context, it is important that they be used in a manner consistent with the aims of the instructor. We recommend that classes be offered for faculty and instructors on:

- How to use these tools
- The pedagogy of blogs and wikis
- Instructional effectiveness of blogs and wikis
- How to tie learning objectives into blogs and wikis

While ITS is well suited to provide these tools, training on how to use the tools, technical support, and simple "how to" documentation, ITS is not skilled (nor do we have the appropriate credentials) to offer training, advice, or research on the pedagogy, instructional effectiveness and learning objectives in relation to blogs and wikis. We greatly value the role the Division of Instructional Innovation and Assessment (DIIA) plays in helping faculty integrate technology using best teaching practices. We suggest that ITS and DIIA provide dual training opportunities. ITS

¹ From <http://en.wikipedia.org/wiki/Wiki>

² From <http://en.wikipedia.org/wiki/Blog>

would focus on how to use the tools and DIIA would train on appropriate methods and means to provide the support faculty would need to effectively incorporate blogs and wikis into their instruction.

Wiki Findings

WIKI USE CASES

Academic Information

Academic scenarios include:

- Class-wide aggregation of research and notes
- Ad hoc collaborative space for a study group
- Temporary repository for individual research
- Inter-university research container

The range of academic uses requires a range of access control from formal classes to informal collaborations. Collaboration may be peer-to-peer or may rely on an instructor or teaching assistant to moderate.

Team Collaboration

Staff scenarios include:

- Departmental or team “how to and where is” documentation
- Workgroup collaboration space

Like the academic scenarios, staff wikis may be public or restricted, and may require moderation.

Community Organization

Community scenarios include:

- Knowledge base for a student or staff organization
- General community information (e.g., collection of best barbeque restaurants in the Austin area)

WIKI PRODUCT SELECTION CRITERIA

In order to narrow the field of possible product candidates several criteria were used to select a wiki that would serve the needs of such a diverse population.

Scalability

The wiki must be able to scale to handle hundreds of concurrent connections and around 75,000 users at any given point in time.

Database-Backed

Due to the scalability requirements of the wiki, a database backend store is required.

LDAP Integration

It is not enough that the wiki simply use LDAP to authenticate users upon login, the wiki must be able to authorize individual pages and sections of the wiki based on a user's LDAP group affiliations/memberships.

Delegation of Site-Specific Administration

The wiki administrator should be able to create sub-administrators such that user Theta can be given administrative access to wiki space (or spaces) of the wiki without being granted access to the entire wiki. User Theta then should be able to grant authorizations in their assigned space.

Product Maturity

The product should be established and ideally already in use in higher education.

Active User Community

This document evaluates wikis in a snapshot view; those products with large and active user community will achieve the greatest relevant growth.

Ease of Use

The majority of wikis facilitate user input and editing of wiki pages through a special markup language known as wiki markup. Wiki markup is often regarded as an adoption barrier by people who are resistant to using wikis, and therefore one of the criteria for this project is included support for a rich text editor.

Ease of Customization

Users should be able to customize the look and feel of their assigned space or spaces they have administrative access to (or a role that allows theme customization).

Web Standards & Accessibility

Is the product compliant with web and accessibility (508) compatible?

Spam Control, Comment Workflow and Filtering

Users should be able to administer the level of comment administration and automatic spam control they prefer.

RSS Syndication

The blog software should support RSS or Atom subscriptions to content.

Domain Scheme

The wiki should support individual spaces for users such that <http://wiki.utexas.edu/akutz/> is a space where the user akutz has his own namespace root.

WIKI PRODUCT SELECTION CANDIDATES

Using product websites, product contacts, Wikipedia, and Wikimatrix, this project examined the following wiki software products as possible candidates to fulfill this project's requirements.

MediaWiki

Whether they know it or not, almost everyone is familiar with MediaWiki as it is the software used to host one of the web's most familiar websites, Wikipedia.

MediaWiki has proven without a shadow of a doubt that it has the ability to scale to the sizes needed by the University. However, it is so closely associated with the look and feel of Wikipedia that extended its functionality has proven to be a challenge.

DokuWiki

DokuWiki is already heavily used on campus, and therefore it had to be examined as a possible candidate for a campus-wide wiki solution. However, it has scaling issues due to its file-based backend storage.

Clearspace (ClearspaceX)

Clearspace is easily the most beautiful and fully thought out wiki among the bunch. It is offered by Jive software as a part of a much larger collaboration suite, which includes blogging functionality as well. The regular price is very high compared to the rest of the software reviewed here, however, we are in conversation with Jive Software about achieving educational pricing on par with Atlassian Confluence.

MoinMoin

MoinMoin is the darling of Python wikis and was looked at largely to satisfy the University's Python programmers. Like DokuWiki it uses file-based storage and would not scale well.

Learning Objects CampusPack

Integration with BlackBoard may be Learning Objects' claim to fame, but that does not mean their CampusPack solution is not a wiki product to be reckoned with. Just the opposite, CampusPack comes loaded with software for creating wikis, blogs, podcasts, and more. CampusPack has two unique capabilities among the products reviewed:

- Ability for faculty to track student participation for grading purposes
- Ability to quickly and easily create wikis and blogs for the overall class and for individuals and groups defined in Blackboard

Microsoft SharePoint

The Windows Enterprise Support (WES) team has done a tremendous job in providing SharePoint services to administrative offices across campus. In fact, many of the users of SharePoint who wish to leverage some type of wiki functionality are perfectly happy using SharePoint's bare bones wiki. And honestly, there is not reason they should not be able to – the SharePoint wiki, although lacking many features associated with more mature wiki products, does its job and does it well.

Confluence

The darling of many a CxO round-table discussions over the past year, Confluence wiki software did not attain such a lofty place in the wiki pantheon without cause or reason. Written in Java, the Confluence wiki places a lot of emphasis on the marriage

of form and functionality. This is one bit o' wiki software that not only has worker-productivity in mind, but keeps the experience fun as well. Confluence offers all of the features one would expect from a market leader, such as database and directory support, quarantined user arenas, etc.

WIKI PRODUCT SELECTION MATRIX

The following table is a comparison of the wikis based upon the product selection criteria. The following column headings have been abbreviated:

- **Scale** Scalability
- **DB** Database Backend
- **LDAP** LDAP Authentication and Authorization
- **508** Section 508 Compliant
- **Adm** Ease of Administration
- **Use** Ease of Use
- **Cust** Ease of Customization
- **URL** Domain Scheme

In addition to the defined product selection criteria the selection matrix also defines the last column as cost where multiple dollar signs (\$) represents higher cost values including both acquisition cost and total cost of ownership (TCO).

Legend:

○ = Good, ◐ = Better, ⊙ = Best

\$\$ = License Cost, [UT] = Product is already in use on campus

	Scale	DB	LDAP	508	Adm	Use	Cust	URL	Cost
MediaWiki	⊙	⊙	◐	⊙			◐	◐	
DokuWiki			○	○			⊙	○	
Clearspace	⊙	⊙	⊙	○	⊙	⊙	⊙	⊙	\$\$
MoinMoin				○					
Learning Objects	⊙	⊙	◐	◐	◐	◐		◐	\$\$
SharePoint	⊙	⊙	⊙	○					[UT]
Confluence	⊙	⊙	⊙	○	⊙	⊙	⊙	⊙	\$

WIKI PRODUCT RECOMMENDATION

It is clear from the [Product Selection Matrix](#) that no single wiki product satisfies all of the criteria that have been set forth. Therefore, it has been concluded that instead of recommending a single product, this project will instead put forth a selection guide for users to rely on when choosing wiki software offered by the University.

IF the user is a faculty member wishing to integrate wiki software in the classroom THEN *CampusPack* or *Confluence* should be used. *CampusPack* is the only product reviewed that gives faculty the easy ability to measure student participation.

IF the user is a consumer of Windows services and wants a basic wiki THEN *Confluence SharePoint Connector* should be used to integrate Confluence's wiki into SharePoint.

IF the user desires a fully functional, **general-purpose wiki** THEN **Confluence** should be used.

Although the first two choices and selections are inextricably tied together, the third selection was less certain. Research shows that Clearspace from Jive software offers greater total functionality, and includes features such as blogs, forums, polls, etc., that make it a suitable foundation for a full University collaborative environment. If Jive Software is willing to reduce the price of Clearspace to be competitive within the field of candidates surveyed, it is worth considering.

In choosing a product, the selection committee also debated whether a product that supported multiple users with a single code-base or the deployment of many products (e.g. a shared hosting model) made more sense. Ultimately the latter proved to be too associated with a project geared towards offering a one-click installation model that many hosting providers such as Dreamhost offer. Because the scope of **this** project is to choose a wiki project, buying or building the infrastructure to manage the creation of many wiki installations falls outside the scope of this project at this time.

In the course of the project, we researched two products already on campus that contain wiki functionality: *Xythos WebSpace* and *Oracle UCM*. In each case, we determined that the wiki functionality was not adequate for our customers' needs.

Blog Findings

BLOG USE CASES

The blog software should support three general types of use:

1. One user posting content to a single blog
2. A group of users posting content to a single blog
3. A group of blogs aggregating into a single blog

The students, faculty and staff of the university may participate in each of these blogging scenarios.

Academic Information

Academic scenarios include:

- Instructor-directed course blog for the publishing of lecture notes
- Course collaborations between instructors and students
- Inter-university research blogs

The range of academic uses requires a range of access control from class-aware boundaries around course blogs to closed handling of sensitive research information to anonymous access to published results. Collaboration may be peer-to-peer or may rely on an instructor or teaching assistant to serve as a moderator.

Team Collaboration

Staff scenarios include:

- Departmental publication of project news, important dates, and client requests (may be aggregated from blog sources)
- Intra-team work updates
- Blogging to raise awareness on a particular topic (e.g., web application accessibility)

Like the academic scenarios, staff uses of blog software require a range of access control and may require moderation.

Community Organization

Community scenarios include:

- Student life blogs like Longhorn Confidential ³
- Blogs in support of student organizations
- General community blogs

³ http://www.utexas.edu/inside_ut/blogs/

BLOG SELECTION CRITERIA

In keeping with the general requirement that the blog software support thousands of singleton and group blogs, we focused our research on enterprise that support multiple users working with multiple blogs.

Enterprise-Class Features

Enterprise-class blogging packages offer several important features that all candidates support.

Scalability

The blogging software must be able to scale to handle thousands of blog instances with hundreds of concurrent connections and around 75,000 users at any given point in time.

Database-Backed

Due to scalability and portability requirements, a database backend store is required.

LDAP Integration

The blog software must be able to use UT EID through LDAP or Active Directory to authenticate users upon login, and to authorize blog owners to manage their sites.

Delegation of Site-Specific Administration

The blog software must allow site owners to delegate specific user permissions.

Web Standards and Accessibility

The blog web interface must be Section 508 compliant and generally adhere to W3C standards.

Differentiating Features

Among the product candidates, the following criteria may be used to differentiate the blog software best suited to the diverse needs of the university community.

Product Maturity

The product should be established and already in use within higher education.

Active User Community

This document evaluates blog software in a snapshot view; those products with large and active user communities will achieve the greatest relevant growth.

Ease of Administration

The blog software should be easy to install and should offer a straightforward upgrade path. It should also allow for painless proliferation of blog instances.

Ease of Use

The blog software should make it easy to post and maintain blog entries. It should support direct markup (HTML, Textile, or equivalent) and offer an inline WYSIWYG editor. The software should make it easy to upload and reference multimedia files.

Ease of Customization

Users should be able to define per-blog settings and customize those blogs with themes and plugins.

Spam Control, Comment Workflow and Filtering

Users should be able to administer the level of comment administration and automatic spam control they prefer.

Easy to Migrate Away From

Industry-leading products tend to be easy to migrate *away from*, making it easier for graduating students to take their content with them when they leave.

RSS Syndication

The blog software should support RSS or Atom subscriptions to content.

Domain Scheme

The blog software should allow blogs to be created in accordance with [http://blog.utexas.edu/\[blogname\]](http://blog.utexas.edu/[blogname]).

BLOG PRODUCT CANDIDATES

WordPress^μ 1.1.3

<http://mu.wordpress.org/>

WordPress^μ is a fork of WordPress designed to support multiple users and multiple blogs. WordPress^μ runs several high-profile, high-volume sites (including <http://wordpress.com>) and is installed at a number of universities offering exactly the service this project promises to deliver. WordPress^μ has a broad set of plugins and themes, and can function as a lightweight Content Management System (CMS), allowing users to author “pages” along with “posts.” WordPress^μ is written in PHP.

Drupal 6.1

<http://drupal.org/>

Drupal is a fully-featured and popular CMS that has a well-designed blog component. Out of the box, Drupal caters to advanced users, offering extensive and detailed customizations, but leaving out such niceties as a WYSIWYG editor for new bloggers. Drupal has a broad set of plugins that allow it to achieve feature parity with the other product candidates. Drupal is written in PHP.

Elgg 0.9.1

<http://elgg.org/>

Elgg is a social platform aimed primarily at higher education that includes a blog component. In addition to blogging, Elgg offers friend networking, communities, and podcasting. Elgg also features a solid set of plugins. Elgg is written in PHP.

Movable Type Enterprise Solution 4.1

<http://www.movabletype.com/>

Movable Type Enterprise Solution is the multi-user blog flavor of Movable Type. Movable Type was once the industry leader but lost market share (and mind share) with licensing changes in version 3. MT4 was released under an open source license in late 2007. Movable Type Enterprise Solution is feature-competitive with WordPress[®].

Roller 4.0

<http://roller.apache.org/>

Roller is the multi-user blog software powering <http://blogs.sun.com>. Roller is written in Java.

Learning Objects CampusPack 2.8.21

<http://www.learningobjects.com/CampusPack.jsp>

Learning Objects is an add-on product for BlackBoard. Their CampusPack contains support for wikis, blogs (journalLX), podcasts, and ePortfolios, all designed to support a classroom experience. CampusPack has two unique capabilities among the products reviewed:

- Ability for faculty to track student participation for grading purposes
- Ability to quickly and easily create wikis and blogs for the overall class and for individuals and groups defined in Blackboard

Microsoft SharePoint

<http://www.microsoft.com/sharepoint/>

<http://www.utexas.edu/its/sharepoint/>

SharePoint is general-purpose collaboration software that makes it easy for non-technical users to build websites, discussion boards, surveys and more. SharePoint contains minimally featured blogging capabilities.

Oracle UCM

<http://www.oracle.com/technology/products/content-management/ucm/>

<https://webcms.utexas.edu/cms/>

Oracle Universal Content Management (UCM), née Stellent Content Server, is a general purpose CMS that contains a blog component. The blog features are minimal at this time.

BLOG PRODUCT SELECTION MATRIX

The following table is a comparison of the blog software candidates based upon the product selection criteria. The following column headings have been abbreviated:

- **Mat** Product Maturity
- **Com** Active User Community
- **Adm** Ease of Administration
- **Use** Ease of Use
- **Cust** Ease of Customization
- **Spam** Spam Control, Comment Workflow and Filtering
- **Mig** Migration Paths
- **RSS** RSS Syndication
- **URL** Domain Scheme

Legend:

○ = Good, ◐ = Better, ⊙ = Best

✓ = Feature exists, \$\$ = License Cost, [UT] = Product is already in use on campus

	Mat	Com	Adm	Use	Cust	Spam	Mig	RSS	URL	Cost
WordPress ^u	⊙	⊙	⊙	⊙	⊙	⊙	✓	✓	✓	
Drupal	⊙	⊙	◐	◐	⊙	⊙		✓	✓	
Elgg	◐	◐	◐	◐	⊙	⊙		✓	✓	
Movable Type	⊙	◐	◐	⊙	⊙	⊙	✓	✓	✓	\$
Roller	◐	○	◐	◐	◐	⊙		✓	✓	
Learning Objects	◐	○	◐	◐	○	?		✓		\$\$
SharePoint	◐	○	◐	◐	○	○		✓		[UT]
Oracle UCM	○	○	○	◐	○	○				[UT]

BLOG PRODUCT RECOMMENDATION

Blogging is both a feature in its own right and, increasingly, a component of every type of collaborative software. There is enough variation among use cases and enough availability of blog functionality that it is fruitless to recommend a single product for every application.

General-Purpose Tool

For a **general-purpose blogging application**, we recommend **WordPress[®]**. WordPress[®] scores well across all selection criteria and is the most popular choice among the universities we interviewed.

Runners Up

Our research revealed that our peers are successfully using Drupal, Elgg, and Movable Type to offer blogging capabilities to their campuses. *Drupal* would be a compelling choice if its broader content management features fit a need. *Elgg* would be a compelling choice if the social context fit a strategy. *Movable Type* is the closest competitor to WordPress[®] in terms of purpose and features, but falls slightly short in our direct comparison.

Special-Purpose and Legacy Applications

If a faculty member wishes to incorporate blogging capabilities into a classroom, we recommend either *Learning Objects* or WordPress[®], depending on the aims of that particular class. Learning Objects is the only product reviewed that gives faculty the easy ability to measure student participation.

If a workgroup already using *SharePoint* wishes to use the inbuilt blogging capabilities for an established site, we endorse them. We would also endorse using SharePoint in conjunction with WordPress[®].

We cannot recommend that the blogging features of *Oracle UCM* be exposed to our customers.