



WHY USE A WIKI?

An Introduction to the Latest Online Publishing Format

A WebWorks.com White Paper

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Overview

The aim of this paper is to introduce the concept of the Web-based collaborative authoring environment commonly referred to as wikis, and examine how they can be used in a corporate publishing environment. The paper also includes suggested techniques for transferring existing content from native authoring tools into a wiki format for online delivery.

What is a Wiki?

In simple terms a wiki is perhaps best described as a Web site that can be easily edited by anyone straight in the Web browser without need for any additional software.

The official definition of a wiki, by the wiki creator Ward Cunningham in his book "The Wiki Way: Quick Collaboration on the Web," gives a slightly more detailed definition.

Cunningham describes the concept of wikis this way:

- A wiki invites all users to edit any page or to create new pages within the wiki Web site, using only a plain-vanilla Web browser without any extra add-ons.
- Wiki promotes meaningful topic associations between different pages by making page link creation almost intuitively easy and showing whether an intended target page exists or not.
- A wiki is not a carefully crafted site for casual visitors. Instead, it seeks to involve the visitor in an ongoing process of creation and collaboration that constantly changes the Web site landscape.

From a publishing perspective, a wiki gives a means for documents to be created collaboratively among a group of authors without those contributors needing to learn a complex mark-up language. The basic premise can be very powerful in opening up content creation to subject matter experts and knowledge holders.

But wikis are far more than a simple collection of documents. Individual wiki pages can be easily linked to other wiki pages through a series of hyperlinks, thereby creating what is essentially a database that can be browsed, navigated, and searched.

Open Editing = Collaborative Authoring

Perhaps the most significant aspect of a wiki is how easy it is to create and update pages. In most wiki installations there is no review process before modifications are accepted, with changes appearing almost instantly.

This facility, while one of a wiki's biggest advantages, is also perhaps the area of greatest controversy and concern to those new to wiki publishing.

Does having open access lead to chaos and devaluation of the material?

Most wikis require that anyone who wishes to contribute first register a user account. Depending on the wiki setup different type of accounts can be given different access and editing privileges. It is also recommended that wikis be set up with a login needed at the start of an editing session to create a wiki signature cookie to enable tracking of who makes edits.

The driving philosophy behind wikis is to encourage peer review and to make it easier to input material and correct mistakes, rather than putting up barriers that make it difficult to contribute in the hope of preventing mistakes.

Wikis in More Detail

As mentioned earlier, the content of a wiki can have structure and formatting applied through the use of a simple mark-up language, usually referred to as wikitext. For instance, most wikis use a simple asterisk (*) to indicate a bulleted list. This is a lot simpler than, for instance, the same code in HTML for display on a traditional Web site.

Wikitext	HTML Code	Formatted Content
* This is a bulleted list item	This is a bulleted list item.	◆ This is a bulleted list item

Note that the style of wikitext markup can vary between different types of wikis, and some wikis will allow the use of HTML coding too.

The reason for using a simpler mark-up syntax is that HTML coding can get very complex, making it difficult to easily differentiate and edit the content. This complexity can also act as a significant barrier to contribution. Most wikis favor plain-text editing. An increasing number of wikis, especially those designed for more general public usage, are incorporating WYSIWYG type editing interfaces.

Many types of wikis allow users to include an edit summary, usually just a few lines, describing why they have made the changes they have. This information is not displayed, but kept as part of the page's history. Most wikis keep a record of changes; in fact, they usually keep a copy of each version of a page, enabling simple "rollback" to a previous version if required. Some wikis also include a "diff" functionality so that different versions of a given page can be easily compared. This amounts to a simple content management / revision control system that is included as part of the wiki implementation, providing functionality only previously available through separate and expensive third-party applications.

Navigation between the pages of a wiki is achieved through the use of hypertext links. This technique generally leads to a flat navigation structure rather than a more formalized hierarchical structure. Links are created in wikis using a simple syntax, and it is a common practice in wikis to create a link to a page that does not yet exist in the hope that the existence of the link will encourage another participant to supply the required content for the missing page. Many wikis also include a backlink feature so you can



see which pages link to the page you may be working on, or see what other topics reference the one you are reading. Despite the inherently flat structure of wikis, it is still possible to create more traditional hierarchical navigation tools such as a table of contents.

The flat, some would say anarchic, format of wikis can present a management and maintenance challenge. To help with this most wikis provide ways of categorizing and tagging pages.

Studies have shown that among the current "Internet generation" the first reaction of over 50% of users when they need to find information is to use a search tool, like Google, rather than navigate through a series of steps. Wikis support this growing behavior pattern as most offer at least a title-based search, and many also include full-text search capability. The performance and scalability of these searches can vary depending on whether the wiki engine uses an underlying database. Several wikis will also support the integration of third-party specialist search engines such as Google.

Wikis Are Everywhere

Wikis were initially used within enterprise-based technical communities as a collaborative software platform. Once the flexibility of wikis started to be appreciated the uses expanded and today they are used for things such as project communication, intranets, and documentation. Many companies have totally replaced old static HTML-based intranets with collaborative wikis. While there are still probably more wiki implementations behind corporate firewalls than on the public Internet, that landscape is also changing, with more and more wikis being made available for public usage.

One example of this trend can be seen with the adoption and use of wiki by the WebWorks.com team.

- 2003 – First wiki was installed for use by the software development team.
- 2005 – A **Project wiki** (Trac) was selected for use by the services group to communicate with customers. Access was controlled behind the firewall between the services group and selected customers.
- 2006 – Internal and external wiki software (MoinMoin) was selected as the standard WebWorks wiki platform.
- 2006 – The development wiki expanded to become a company-wide **Inner wiki** replacing a static HTML Web-page-based intranet.
- 2007 - An external **Help Center wiki** was launched (wiki.webworks.com) with access by request. Customer contributions are welcomed and encouraged.
- 2007 – Showed "proof of concept" wiki publishing demo at RoundUp Users Conference.
- 2008 – The **RoundUp wiki** launched (webworksroundup.com) as a collaborative tool for organizing and posting information about the WebWorks Users Conference, replacing a traditional Web site.
- 2008 – First practical use of "publish to wiki" with launch of WebWorks **Documentation Wiki** (docs.webworks.com) with merged content from FrameMaker, MS-Word and DITA-XML sources used to automatically deliver both PDF, help sets and wiki pages online simultaneously, and give customers access to wiki feedback features.

At the time of writing the WebWorks team uses and maintains five wiki installations: two internal (the MoinMoin corporate information wiki and the Trac projects wiki), and three external wikis that our customers can access and use (the RoundUp conference wiki, the Help Center wiki, and the Documentation wiki.)

In the space of just five years the wiki platform has gone from being just a technical tool used by a small number of developers to something that is an essential part of our business operations. In fact we consider ourselves to be a "wiki-driven company."



Outside of corporate use wikis are also gaining wider acceptance and use in the consumer market. Wikipedia, the online collaborative wiki-based encyclopedia, has become one of the most visited sites on the Internet, and for many people has replaced textbooks as their default source of information about almost everything.

Wikis are also replacing Web-rings and other similar groupings of Web sites among special-interests groups. Instead of people with a shared interest creating their own Web sites (often duplicating information) and sharing cross links, these groups are now creating a wiki where people can share information in a central, searchable repository.

Wikis are also gaining popularity as individual productivity tools. A personal wiki can be used as a notepad, a repository of Web links, or a scratch pad to capture ideas and information. Some vendors offer centralized wiki farms, which hosts individual wiki instances. Other wiki vendors have versions of their wikis that can be downloaded to a local machine or even run off a flash drive. Using a wiki as a personal productivity tool gives the advantage that it is platform- and browser-independent, so you can access it and use it from any machine, anywhere.

If wikis have one negative aspect at the moment, it is the simple fact that there are so many different types of wikis available. The potential confusion isn't helped by the fact that there is, as yet, no agreed standard for the wikitext mark-up language.

The first attempt at standardizing wikis has been based on the already existing XML-based remote call procedure (RPC). Although not originally designed for wikis, XML-RPC can be used between wikis that use XML as their encoding mark-up language. This standard is currently only supported by a handful of wikis, but its use is spreading.

Despite the apparent plethora of wiki choices, there are a few that are emerging as market leaders and it only takes a short amount of research to establish which wikis are best suited for a particular application. As mentioned earlier, the WebWorks team standardized on the MoinMoin wiki for most uses, but retained the Trac wiki for project management. Wikipedia is based on the popular MediaWiki format, while Confluence is another popular implementation in the corporate world. The best way to pick a wiki is to decide what you want to use it for and what usability and functions you need, then do some research on what other people have used.

Why Use a Wiki

The Good

There are many advantages to setting up a wiki for use in a corporate environment. The following is a list based on our own experience at WebWorks.

Easy to set up – Ease of setup can vary from wiki to wiki. The MoinMoin wiki that we standardized on is very easy and quick to set up. It also comes in desktop and personal versions that can even be run from a flash drive if required. Setup can be achieved in less than an hour for a personal implementation and in just a few hours for a corporate version. Note that some of the other wikis can be more complex to set up and may also need the installation of other tools (such as an underlying SQL database) and IT-level configuration of the Web server.

Easy to use – Navigating a wiki is intuitive and usually means using a familiar Google-like search and then simply clicking on links in the search results to navigate to the page you want. Related information within the page is shown by hyperlinks, while some wikis also keep a track of the pages you have visited and show an interactive “bread crumb” trail so you can backtrack if needed.



Easy to edit – Most wikis can be edited by a simple click of an “edit” button. With more wikis adopting WYSIWYG interfaces the edit controls will be similar to those found in a popular word processor. If you do need to use a specific wikitext markup language, they are invariably easy to learn and the basics can be mastered in minutes.

Anyone can edit them – The fact that wikis are open and easy to use means that people from all over the company can contribute content, comment, and discuss as needed, reducing reliance on production bottlenecks and expensive training in unfamiliar tools that might only be needed on an occasional basis.

Just load, populate, and go – As mentioned earlier, a wiki can be set up in a very short time. Of course for a wiki to be useful it needs data. Once the initial population of data is complete it’s ready for use by anyone in the company. They can then quickly become a valued contributor and the wiki can become a growing information resource in a short time.

Enabling collaboration – By lowering the barriers to entry, wikis encourage collaboration. Teams can work together to easily produce documents, project plans, etc. And each member of the team can easily track progress and make comments on other contributions.

User-generated content – No one knows your product or service like your customers. They are the ones who use it every day. By having an accessible wiki you can leverage that expertise by encouraging your customers (internal and external) to document their experiences, make suggestions, and even let you know about new ways they have found to use your product. By using a wiki, publishing of product information is no longer a one-way broadcast of knowledge; it becomes a feedback loop based on shared experiences.

Tagging – Most wikis allow the use of categories and tagging, familiar to many from various Web 2.0 tools such as blogs and various social networks. Using tags and categories can replace traditional hierarchical navigation techniques, replacing an enforced taxonomy with a user-driven folksonomy that will give a better indication of what information the wiki users are really interested in.

Version control – Most wikis include a version control capability that lets the user see the history of the page, and if required open an earlier version and compare it with the current version of the page. This is functionality that until a few years ago required a special document or content management system.

Change tracking – As well as version control, most wikis include a “Recent Changes” function that allows a user to see what changes have been made in a set timeframe. The changes are tagged with time and date stamps and the user name of the person who made the last change. Most wikis also include an optional “reason for change” field that is kept as metadata separate from, but linked to, the changed content. It is also possible with some wikis to set up an RSS feed so that recent changes can be monitored from an external application.

Reduced training costs – As wiki usage is largely intuitive, and many of the skills and techniques used with a regular word processor and surfing the Web apply, the learning curve is very shallow and short in duration. At WebWorks our initial wiki training session for the staff was just two hours, and has been followed up by the occasional 30-minute lunchtime “brown-bag” session if any major changes or software upgrades have been made.

Cross-functional cooperation – As stated above, a wiki can be used by anyone. Wiki usage removes departmental boundaries and the need for specialized tools, skills, and training.

Enables agile development process – A wiki is the ideal tool for companies, such as WebWorks, that use an agile development process. The wiki enables a team-driven approach where information needs to be shared, communicated, and discussed in a short timeframe.

Can be used to capture corporate knowledge – As much as 60% of corporate information is trapped in e-mail threads and as attachments that are never downloaded and shared. By encouraging people to post the information to a wiki instead, and just e-mail the hyperlink to the wiki page, companies can drastically reduce the risk of “lost” information, and also reduce unnecessary duplication of effort. By reinforcing the “put it on the wiki” message a wiki can quickly become a usable corporate knowledge base.

Keeps everyone informed – A well-maintained centralized wiki that is frequently updated and seen to be a living repository of useful information can quickly become an information resource that is trusted as the “depository of record” and an approved source of information.

The Bad

While wikis are a great enabling tool with vast potential for improving many aspects of your business, they aren't perfect. Listed below are some areas of wiki usage that you need to give serious consideration to before implementation.

Anyone can edit them – While an open wiki encourages collaboration, you may not want everyone to see and be able to edit everything on a wiki. By enforcing the need for a user login, you can then restrict access and editing rights as needed. You may want to restrict some information to particular groups, or you may want particular groups to have full edit authority in some areas, but only be able to comment on other areas. This can all be controlled through applying different access controls to named groups and user accounts. However, beware that being too restrictive will undermine the reasons for implementing a wiki in the first place. The philosophy behind wikis is to make it easy to contribute and correct, rather than trying to prevent “mistakes” by putting up barriers.

User-generated content – The main consideration with encouraging user-generated feedback is that, if not correctly organized, labeled, and managed, it can easily blur the lines between what is “official” information and what isn't. If you are encouraging users to contribute content then it needs to be done in a controlled way.

Information overload – Wikis can grow very quickly, and if not monitored topics and pages can be duplicated. There can also be a tendency to overload the wiki with irrelevant information (although some may argue that nothing is irrelevant on a wiki). Inevitably some pages will become “orphaned” and may need to be deleted to avoid redundancy.

Not everyone will contribute – No matter how you try you will not be able to get everyone to contribute. Some people have a natural built-in reluctance to sharing in an open forum. Wikis are best if they grow naturally, and through peer usage. Don't mandate wiki contribution; let it spread naturally. The section below contains some ideas on how to get people to contribute based on our experience at WebWorks.

Wikis need maintenance – For a wiki to be useful it needs to be maintained. Maintenance includes user administration, cleanup, structural organization, relocating or deleting orphaned pages, etc. However, any company or group that has experience in maintaining a static HTML-page-based Web site will find that maintaining a wiki is a lot less work.

You need to pick a wiki – As noted earlier, there is currently no standard for wikis, and the features and functions can vary from wiki to wiki. You need to do some research to define which wiki best suits your requirements. You also need to establish a migration path for your data in case you decide to change to another wiki format (or a standard emerges) at a later date.

Getting People to Use Wikis

In the previous section I mentioned that it is impossible to get a 100% contribution to a wiki. The best we ever achieved for the internal wiki at WebWorks was 90%. At the time of this writing, about 70% of the company contributes something on an occasional basis, with about 50% being active wiki contributors. The following are a few tips and techniques that we find useful in achieving that level of participation.

Social feedback – One of the best ways to ensure continuation of wiki contribution is to acknowledge the contributions as they are made. A simple verbal “Thanks for posting that great information on the wiki” from a fellow team member or manager will help reinforce the value of the contribution. A verbal acknowledgement will also encourage others who hear it to contribute.

Seed the wiki – While the main focus of the wiki may be technical, you can speed acceptance by seeding the wiki with other topics that may have a broader appeal. For instance, one of the things we use the wiki for at WebWorks is organizing the company holiday party – something that everyone was interested in and wanted information on. By asking for menu suggestions and comments we also introduced the idea of using the wiki for feedback and commenting.

Feedback for contribution – Nothing encourages contributions like receiving feedback. Make sure that every contributor gets some meaningful feedback. Of course too much meaningless feedback soon becomes valueless, so it is a fine balancing act. The main thing to ensure is that the feedback, either verbally or on the wiki itself (not by e-mail), adds value.

Keep as open as possible – While you may want to impose some initial structure, it should be very minimal – ideally only top-level categories like department or projects. This way the wiki user community will build the structure that best fits their own information retrieval requirements.

Senior involvement and buy in – While senior managers may approve of and want to promote a wiki, it will not gain any credence unless they also participate. Good wiki practice and contribution levels will only happen if key stakeholders and sponsors also participate. At WebWorks every member of the executive management team is a frequent contributor to the wiki; in fact, the wiki is a central part of the way we conduct all of our business activities.

Design for the culture, not the process – Do not model the initial wiki structure on an existing paper process. Wikis function best when they grow organically in response to the culture of the group using them. Having said that, a more formal organization may find greater acceptance with some appropriate level of recognizable structure applied. You need to determine what “level of chaos” you are comfortable with. You will also need to do a periodic review to see if the content needs to be reorganized. We have done at least three complete reorganizations of the content structure of the WebWorks inner wiki since its inception to reflect changes in our business and our team’s structure and personality mix.

You need a wiki maven – You will need either a person or group that is passionate about the wiki, not only its underlying technology, but in promoting its business benefits and use. (As you are reading this white paper – perhaps it’s you?)

It takes cheerleaders to bring others to the wiki – Wikis are a social network, and like all good Web 2.0 type social networks it grows and functions best through recommendation. Collect stories about how a wiki makes life easier for people and teams to deliver on their objectives. Encourage people to share those stories. “I found that out on the wiki,” should become a catchphrase.



Populating the Wiki

So you've decided that a wiki can bring benefits to your business, improve your team's performance, and become a great knowledge base. You've done the research, selected a wiki you want to use, and made some decisions about structure, access rights, and management tasks. Now you want to seed the wiki with information that you already have in the company, in either HTML pages, XML, FrameMaker, or Word documents.

How do you go about importing all that information?

Until recently there were only a few choices:

- Some wikis had dedicated one-way filters from a selected editing environment. This would be fine if all your information is just in Word and the destination wiki just happened to fit your needs.
- Cut and paste the content over from the source document into the wiki and pray that the formatting transferred. Invariably this means doing some clean-up work.
- Retype the selected content and apply the wikitext markup through the wiki editing interface.

In the fall of 2008 that changed with the release of the 2008.3 version of the WebWorks ePublisher platform.

WebWorks ePublisher and Wikis

The 2008.3 release of the WebWorks ePublisher platform in the fall of 2008 included the first commercially available multi-input / multi-output "Publish to Wiki"™ functionality. First unveiled at the WebWorks 2007 RoundUp Users Conference and subsequently shown at Doc Train West and the STC National Summit during 2008, the "Publish to Wiki"™ concept was met with enthusiasm from industry experts and customers considering moving to the wiki format for delivering online content.

This functionality supports ePublisher's automation workflow, and gives publishing teams the ability to convert existing information developed in Adobe FrameMaker or Microsoft Word or to the DITA-XML standard, and deploy it to wikis that support the Wiki XML-RPC standard as well as the popular MediaWiki format, without having to do any manual conversion or mark-up. The ePublisher "Publish to Wiki"™ functionality saves hundreds of hours for companies wishing to embrace the latest in online publishing technology. Once content has been converted, publishing teams can take advantage of wiki technology to enable feedback via commenting, tagging, version rollback, and even user-enabled editing if required.

WebWorks is further supporting the move to wiki distribution by publishing ePublisher 2008.3 documentation on a dedicated wiki site at <http://docs.webworks.com>. Tony McDow, CEO and founder of Quadralay, said that "The ePublisher Fall 2008 release marks another significant milestone for the WebWorks.com team, opening up the power of ePublisher to a new generation of content publishers who are embracing Web 2.0 technology."



Conclusions

Are wikis the next step in online publishing, as recent industry buzz would tend to suggest? Wikis have a lot of things in their favor: You don't need to be a programmer or learn a new mark-up language or esoteric standard in order to set one up and use it, they are inexpensive (some are even free), and above all you will find that passionate people will share.

Yes there are issues to think about, such as planning and management, but that is true of any information system irrespective of the technology it is based on. Initial population of wikis used to be an issue, but that obstacle has been removed with the release of ePublisher's "Publish to Wiki"™ functionality.

Every branch of publishing is looking at wikis. We believe that wikis have the potential to be the most widely accepted form of online publishing in the near future.

Additional Resources

- ◆ Wikipedia on Wikis – <http://en.wikipedia.org/wiki/Wiki>
- ◆ Wiki matrix – Web site for comparing Wikis - <http://www.wikimatrix.org/>
- ◆ Wiki Patterns – a guide to Wiki adoption - <http://www.wikipatterns.com/display/wikipatterns/Wikipatterns>
- ◆ Wikis in Plain English – Short video explaining the concept of a wiki - <http://www.youtube.com/watch?v=-dnL00TdmLY>
- ◆ Future Changes: Grow Your Wiki – excellent blog on adopting and using wikis - <http://www.ikiw.org/>

WebWorks Wikis

- ◆ WebWorks Help Center – <http://wiki.webworks.com>
- ◆ WebWorks Documentation Center – <http://docs.webworks.com>
- ◆ WebWorks RoundUp Users Conference – <http://webworksroundup.com>



About ePublisher

ePublisher is a multiple component product that enables cost-effective processes for efficiently writing, presenting, and deploying online and print publications. Through the use of its three components, organizations can leverage existing authoring tools and content management systems and meet organization-wide publishing needs without incurring expensive training or software deployment initiatives. Its open system architecture, based on industry-standard XSL, enables a large degree of flexibility, customizability, and migration investment protection.

ePublisher is available in two packages: ePublisher Standard Version and Enterprise.

ePublisher Standard Version is for writing groups that manually convert and deliver their online content. The Standard Version includes ePublisher Pro and ePublisher Express. Pro will be used to create, maintain, and deploy your ePublisher Stationery; Express will be used by your writers to run reports, proof online output, and deliver final online content.

ePublisher Enterprise Version is for writing groups that have frequent updates of their online content, would like to integrate online help deliverables into a software build, or want to utilize the power of a content management system. The Enterprise Version has the same components as the Standard Version, plus the powerful and flexible ePublisher AutoMap.

Each version of ePublisher will save your group time and seamlessly fit into your writing workflow, giving your writers more time to do what they do best - write.

About WebWorks.com

WebWorks.com, a brand of Quadralay Corporation, is the leading provider of comprehensive online publishing and help system delivery solutions. Its products and services constitute the definitive single source for all your ePublishing needs. We specialize in content conversion software that outputs Web, online help, wiki, and electronic publication formats. Our ePublisher Platform can automate the conversion of source documents in popular authoring formats such as DITA-XML, FrameMaker or Word and convert them to multiple end-user formats such as WebWorks Help, HTML, CHM, and PDF. Our conversion system is based on XSL so that output formats can be customized or even developed from scratch.

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