Chapter 1

Understanding Wikis: From Ward's Brain to Your Browser

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When Ward Cunningham started programming the first wiki engine in 1994 and then released it on the Internet in 1995, he set forth a simple set of rules for creating Web sites that pushed all the technical gobbledygook into the background and made creating and sharing content as easy as possible.

Ward's vision was simple: Create the simplest possible online database that could work. And his attitude was generous; he put the idea out there to let the world run with it. The results were incredible. Ward's inventiveness and leadership had been long established by the role he played in senior engineering jobs, promoting design patterns, and helping develop the concept of Extreme Programming. That a novel idea like the wiki flowed from his mind onto the Internet was no surprise to those who knew him.

The wiki concept turned out to have amazing properties. When content is in a shared space and is easy to create and connect, it can be collectively owned. The community of owners can range from just a few people up into the thousands, as in the case of the online wiki encyclopedia, Wikipedia.

This chapter introduces you to the wonderful world of wikis by showing you what a wiki is (or can be), how to find and use wikis for fun and profit, and how to get started with a wiki of your own. We even take a brief look at some possible futures for wikis.

Finding Your Way to Wikis

How does one usually enter the wiki world? So much is made of the community-enabling aspects of wikis that the everyday value of wikis can get lost. You don't have to be on a mission to create the best encyclopedia in the world, build a winning startup, or organize the ideas of thousands of people for wikis to be useful. Wikis are amazingly helpful for simple tasks. Say you want to set up a carpool schedule for your hockey team, or arrange a food chain for a sick friend, or share ideas about the latest fashions in opening moves from members of your chess club. For all these scenarios, wikis are frequently the fastest way to do it. Part II of this book focuses on the mechanics of getting a wiki up and running, creating and linking pages, and organizing information — all the techniques and skills to serve the needs of individuals.

And you can't predict what happens when a wiki hits a group of people. Whatever happens, though, those groups are generally never the same again because wikis rarely start as a top-down decision. Wikis succeed because someone found his way to a wiki, created some pages, and let the world know. A few people get the idea and start changing and adding pages. Usually, many others use the information on the wiki. For every one person who writes content on a wiki, tens or even hundreds read it. For large public wikis, that ratio might be more like 1:100,000.

Wikis invade organizations when one team starts using them and then other teams find out about it and learn how to solve their problems with wikis. Pretty soon, the whole company is using wikis. Part III of this book focuses on the special challenges encountered when using wikis in businesses and other large organizations, or when a wiki created for any purpose becomes popular and used by thousands of people.

No matter who you are, finding your way to wikis and figuring out how they can help you doesn't come by overanalyzing the subject. To get value from wikis, you must start putting up pages with information you want to share with others. Relax; making a wiki successful is not a problem that you must solve by yourself. Everyone you invite to use your wiki will help you get it right.

What makes a wiki a wiki

Perhaps the simplest definition of a wiki that accurately captures its essence is the following:

> A *wiki* is a collection of Web pages that anyone can edit.

Several questions then follow naturally: What's on those pages? Who is included in the community of *anyone?* What will those folks be doing when they edit the pages? Are there any rules for how the ownership of the content is shared?

And those very questions lead to the definition of a specific wiki. A precise general definition of a wiki is hard to come by for two reasons:

- ✓ **When Ward Cunningham developed the wiki concept, he set down the basic ideas and let the world run with it.** The world then ran in many directions, so each wiki *engine* (the program that runs a wiki; see Chapter 10 for more on wiki engines) works a little differently. There is no wiki academy that decides whether a wiki engine or a wiki is worthy to carry the name.

- ✓ **The mechanisms of wikis are so simple that they make people wonder how such a basic set of workings can be such a big deal.** The hidden factor is that much of the value of wikis derives not from the mechanisms but instead from the culture that seems to naturally form around a wiki in the people who use it.

Ward Cunningham was interested in solving problems and sharing his ideas, so he didn't rush to the patent office. Rather, he put his ideas on the Portland Pattern Repository (http://c2.com/ppr) for others to find and even improve. (c2 stands for Cunningham and Cunningham, Inc., which is Ward's company.) The brilliance (not to mention generosity) of this approach is that it allowed scores of wiki engines to bloom. Almost all are *open source* (software distributed for free, along with guaranteed access to the source code), and others are commercial software. From Ward's basic foundation, the idea of wikis quickly evolved, largely because of the culture of cooperative innovation.

To clarify just what wikis are, we reach into our vast metaphorical toolbox for the best image to help you understand the mechanisms that have created so much excitement. Hmm, what might work? A note pad? No, that's not general enough. The HyperCard program? (See "The History and Future of Wikis" later in this chapter for more on HyperCard.) Close, but too complicated. PostIt notes? Nah, too sticky and too small. A pack of index cards? That's it!

To get going with wikis, imagine that a wiki is just a container that can hold a pack of index cards.

What can you do with an index card container? You can

✔ Add new cards.

✔ Write information on the cards.

✔ Link one card to another.

✔ Sort the cards and search through them.

✔ Copy the cards.

✔ Keep track of the changes that you make to them.

The information on each card can be plain text or text with formatting (such as bold, underlining, italics, or headings). You can put bullet points on cards as well as tables of information.

The pages of a wiki are like the index cards in our container. Instead of physical objects, they're electronic virtual objects created by the wiki engine. Figure 1-1 shows a wiki page that we used to keep track of this book while it was being written.
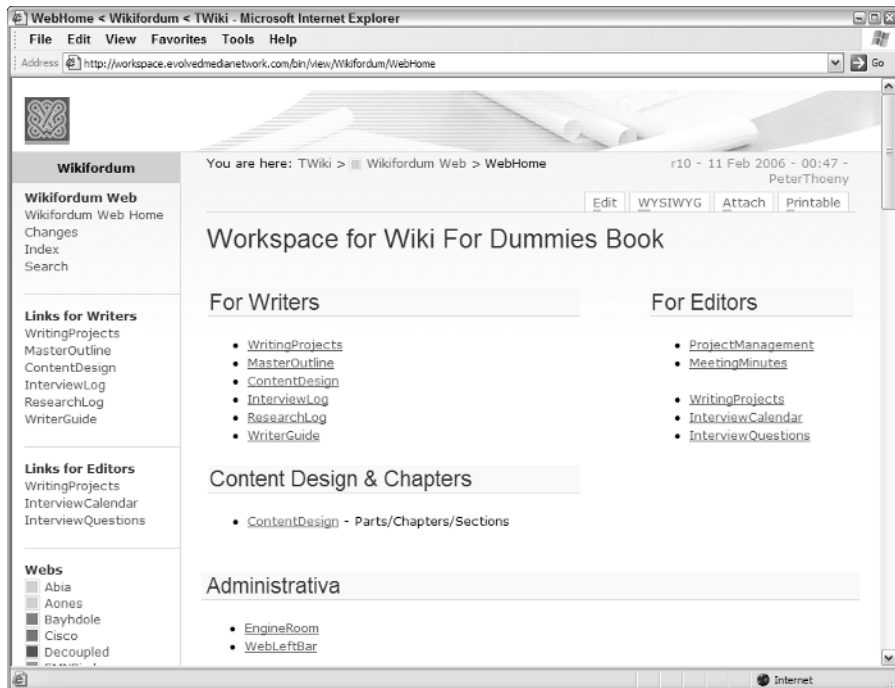

Figure 1-1: This wiki page was used while writing *Wikis For Dummies.*

One of the most important aspects of wiki index cards is that they can be linked. One card (or page, or whatever you want to call it) can easily refer to another. To jump to a linked card, you simply click a link, just like you move through any other Web site. Cards can even be linked to other cards that don't yet exist. When you click a link to a card that doesn't exist, the wiki engine creates it; then, you can add whatever you like and save it.

REMEMBER

The ability to handle partially completed content by putting in links to topics (covered later) is one of the most powerful aspects of wikis. It allows your thoughts to flow and to easily keep placeholders for issues to which you want to return.

If you think of all these cards in a central place where anyone can go and look at them and (this is the important part!) *change them to add their two cents,* then you are on to the secret sauce of wikis and are ready to begin using and contributing to wikis yourself. A whole new culture is created as people work together to build and improve a wiki. This value of shared content ownership is quite powerful. It allows people to use their special knowledge to correct each other and to complete thoughts and ideas started by others.

But wait, you must be thinking, there must be more to it. A simple little Microsoft Access or MySQL database can do all those index card things. Yes, there is more to it — or actually, less to it. The reason why wikis are as popular as they are is that creating and editing content on a wiki is easy, easy, easy. That's why wikis have succeeded. The idea of a shared online database is not unique, but the quest for an easy-to-use computer program is rarely realized. An easy-to-edit, shared online database of pages that really works? That's a wiki.

Comparing wikis and other communication tools

One of the fastest ways to improve your understanding of wikis is to see how wikis are different from many other tools for Internet-based communication such as e-mail, blogs, bulletin boards, forums, content management systems, and Web publishing systems.

Wikis are toolkits for creating pages. The pages created can work in many different ways. This is key to understanding the differences between a wiki and other forms of Web sites and tools for collaboration.

- ✔ **Wikis are not e-mail.** Individual e-mails share some wiki properties — they are easy to create, they can be quickly formatted, and almost anyone can create an e-mail. And, e-mail can also be used for one-to-one

or many-to-many communication by sending mail to many people or by using mailing lists. However, e-mail lacks a central place where everyone can work at once. And e-mail also doesn't allow many authors to work on the same page or for pages to be linked. E-mails are also usually short whereas wiki pages can be as long as needed.

✔ **Wikis are not blogs.** A *blog* is a set of pages on which short entries are posted, usually appearing in a list with the most recent entries on top. Comments can appear attached to each posting. RSS (*really simple syndication,* a format for live online data feeds) feeds allow people to be notified when new blog content appears. (Note that RSS feeds can apply to any sort of content, but they seem to be wildly popular with blogs.)

Wiki pages can be made to look like blog pages, but they don't come out of the box with all the pages needed to automatically write and publish blog entries. Blogs are usually focused on one-to-many communication, but wikis are more oriented to many-to-many communication about shared content.

✔ **Wikis are not bulletin boards or forums.** *Bulletin boards* (sometimes called *forums*) are Web pages where you can ask a question, make a comment, or put forth a proposition to which others can respond. The list of comments about a topic appears in a long list of entries, which sometimes branches into subtopics.

Bulletin boards are more focused on many-to-many communication than blogs but in a way that is more structured than wikis. Wiki pages can be used like bulletin boards in a style called *thread mode,* in which new comments are added to the bottom of a wiki page, but this is a style (not a structure) that is enforced by the wiki. In bulletin boards, the structure of the pages and the communication are always the same and cannot be changed by the people using the board.

✔ **Wikis are not content management or Web publishing systems.** Content management and Web publishing systems are general purpose engines for creating all sorts of Web sites. Like wikis, content management systems are toolkits; unlike wikis, though, they aren't governed by the rules that Ward Cunningham set down for what wikis are.

Almost any kind of Web site, blog, bulletin board system, and wiki can be built by a content management system. Many content management systems have extensions to allow wikis to be included in the Web sites that are built. Usually, content management systems can only be used by expert programmers, but wikis can be used right away by almost anyone.

The (almost) formal definition of a wiki

In the preceding section, we determine that wikis aren't e-mail, blogs, bulletin boards, or Web publishing systems. So what *are* wikis, exactly?

One of the reasons why wiki engines went off in many different directions is that Ward Cunningham didn't define wikis too tightly, and he set nothing in stone. However, the first wiki that he created at the Portland Pattern Repository had a bunch of features that have become so widely imitated that they became the *de facto* definition of wiki. In our opinion, for a wiki to be a wiki, it must have the following characteristics:

- ✔ **The pages must be stored in a central, shared repository.** The wiki should be located in one place to make it easy to share.

- ✔ **Anyone should be able to edit pages.** Wikis are flexible, which means the organization of the information on each page can be changed as needed and not just by an expert or an administrator.

- ✔ **Editing should be easy and accessible and not require special tools.** The wiki should be simple, making getting started easy. Wikis are easy to master, which allows other people to join in and create pages.

- ✔ **Formatting information pages should be much simpler than using HTML.** Table 1-1 shows how much simpler it is to create links (see the following bullet) and bullets in a typical wiki than in *HTML,* the language used to program most Web pages.

  Linking one page to another should use WikiWords or use a technique that is just as easy. See Chapter 7 for more on WikiWords and creating links in wikis.

- ✔ **A list of recently changed pages should be available.**

Table 1-1	Wiki Markup versus HTML	
	TWiki.org	*HTML*
Creating links	`ThisIsALink`	`<A HREF="ThisIsALink.HTML"> ThisIsALink</A>`
Creating bullets	`* A bullet` `  * A sub-bullet`	`<ul>` `<li>A bullet</li>` `<ul>` `<li>A sub-bullet</li>` `</ul>` `</ul>`

No formal standard for wikis exists like the standards that are used for HTML. HTML (HyperText Markup Language) is controlled by an official standards body that changes the standards for HTML according to a public, collaborative process that is governed by a set of rules. Lots of people have said that creating a standard for wikis would be a good idea, and many proposals have been made for standardizing various aspects of wikis, but none have taken

hold. Given the fact that the idea of wikis is not controlled by anyone, a standard is not likely to emerge any time soon. The definition of wikis used in this chapter represents the true spirit of wikis, although like with any community in which a thousand anythings have bloomed, some people are sure to disagree. No doubt they will say so on their wiki — or more likely, on their blog.

Having no set standards for wikis doesn't mean that wikis haven't evolved. Several innovations created since the first days of wikis have become part of almost every wiki engine:

- ✔ **Versioning:** Saving a version of each wiki page so that previous versions can be referred to or restored

- ✔ **Attaching files:** Allowing files to be attached to wiki pages

- ✔ **Backlinks:** Allowing easy browsing of all pages that link to a certain page

- ✔ **Notification of changes:** Alerts sent when a page has been changed

- ✔ **Searching:** Offering some way to enter words to search for in wiki pages

- ✔ **Printable pages:** Creating a printable version of a page that takes out the navigation

It is only fair to point out that printable pages were not invented by wiki developers. This innovation occurred in many different types of sites, but it is now a standard feature of almost every wiki engine.

You, Too, Can Wiki

So, you must be thinking, "Let me have at a wiki! I want to see what it's all about. How can I get started?" But another part of you must be thinking, "If wikis are so great, why don't more people know about them? Why aren't more people using wikis?" It turns out that understanding the second question is key to making progress with the first.

Starting your wiki engines

The growth of wikis was severely limited up until 2006. Before then, the only way you could use a wiki was to first set up a wiki engine on a server. This meant that to use a wiki, you had to have access to a server that was available through the Internet as well as the skills to set up and run a wiki engine.

For most people, these barriers were insurmountable. And even if someone had the skills, he had to have access to a server connected to the Internet. In

engineering organizations, this is almost always no problem. Servers and skills to set them up abound. That is one reason why wikis have been so popular in engineering organizations and generally scarce everywhere else.

But from 2004 to 2006, something dramatic changed. Entrepreneurs noticed the market opportunity for providing *hosted wikis* (also known as *wiki farms*) that allowed people to create wikis without needing their own server or special skills. With a hosted wiki, anyone can get started right away. All you need to know is how to create and edit wiki pages, which is much easer than setting up a wiki engine.

JotSpot, WikiSpaces, Wikia, PBwiki, XWiki, BluWiki, and Fluxent (to name just a few) all offer hosted wikis, mostly based on open source software. Google's entry into the field with its purchase of JotSpot will dramatically widen the awareness of wikis.

The great thing about hosted wikis is that you just have to sign up to start working. What sometimes bothers people about hosted wikis is that you have to sign up for an account, which means keeping track of yet another login and password. To make money, hosted wikis usually either have on-page advertising, or they have some sort of per-user charge that hides advertising and/or gives access to premium services.

Creating your first wiki page

The best way to start wiki-ing is to find an existing wiki (that is, a hosted wiki) and start adding to it. To start creating your first wiki page, you can go to any of the wikis in this list:

- ✔ http://wikisfordummies.pbwiki.com
- ✔ http://wikisfordummies.wikispaces.com
- ✔ http://wikisfordummies.xwiki.com
- ✔ http://wikisfordummies.wetpaint.com
- ✔ http://wikis-for-dummies-swicki.eurekster.com

Each of these wikis was set up at a different hosted wiki provider to allow readers of this book quick access to page creation. Go to any of these Web sites, and you will see a prominent link to a sandbox page of the sort shown in Figure 1-2, which shows the page on http://wikisfordummies.pbwiki.com. A *sandbox* is a practice page on a wiki where you can go to play around and become familiar with the ways of the wiki. Click the Sandbox link to go to a page that looks something like Figure 1-3.
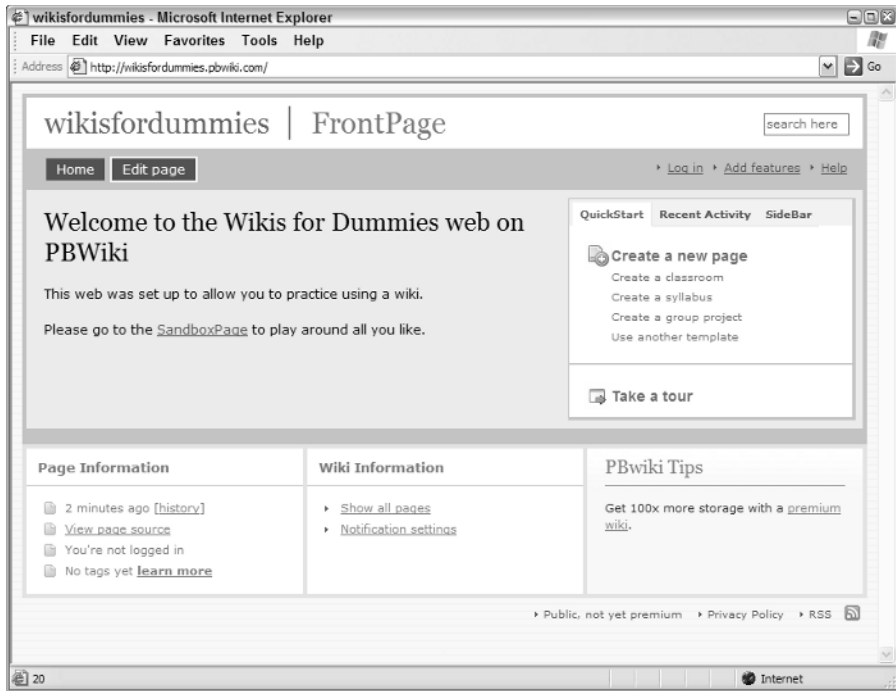
Figure 1-2:
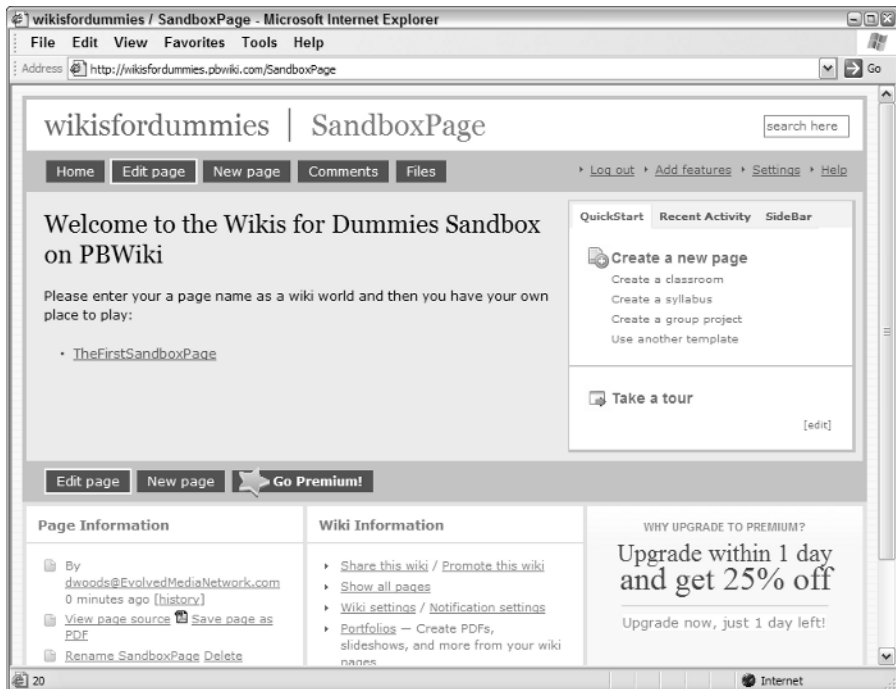This is the
*Wikis for
Dummies*
home page
on PBwiki.

Figure 1-3:
Here's the
Sandbox
page on the
*Wikis for
Dummies*
web on
PBwiki.

A generic sandbox page allows you to create your first wiki page. To create a page at PBwiki, follow these steps:

1. **Click the Edit Page button.**

2. **Enter the PBwiki password, which is** wikis4dummies**.**

   After you enter the password, you see a page that looks like Figure 1-4. If it doesn't look like Figure 1-4, click the Switch to Classic Mode link in the upper right of the window.

3. **At the end of the list, enter a name for your reader page in camel case, something like** TestPage**.**

   Camel case is a way to capitalize words, using capital letters in the middle of a word, to indicate that the word is a link to a page. MyTestPage, ThisTestPage, and a TestPage are all camel case and would be recognized as links by most wikis. For more on using camel case, see Chapter 7.
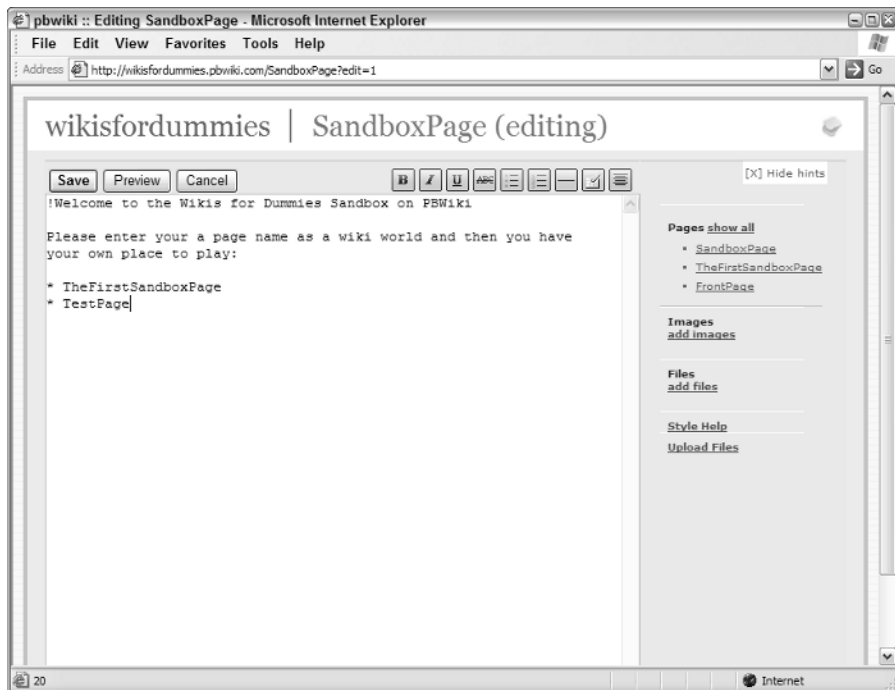
Figure 1-4: Editing the Sandbox page.

4. **Click Save.**

   You see a link that reads `TestPage`. The name is underlined with red dashes to indicate that it has not yet been created. When you click `TestPage`, a page appears asking whether you want to apply a template or change the name of your page. Don't change its name. (And for now, skip the template — come back later and be adventurous.)

5. **Click Create New Page.**

   You see a new page into which you can enter text. This is your first wiki page. Play around, have fun. Don't worry. You can't break anything.

REMEMBER

In other wikis, pages that are inserted as links but have not yet been created are indicated in other ways. One common method places a question mark at the end of the name of the page like this: `TestPage?`

If you feel ready, you can create an account on any of the hosted wikis listed here and start creating your wiki right away. Chapter 5 explains how to find a home for your wiki. Chapters 6, 7, and 8 cover how to create content, link pages, and design your wiki.

Wabi-sabi: The beauty of unfinished content

Wabi-sabi is one of the most important attitudes to embrace as you start entering the world of wikis. Most of us are nervous about putting incomplete work in a public place. For wikis to work, though, this has to happen. One of the cultural aspects that wikis embrace is the value of unfinished or half-finished content. One of the reasons why ideas can flow so quickly when creating content in a wiki is that links to wiki pages can serve as placeholders for later thinking. When you move through capturing an idea, you can write about the idea you have; when a complex problem comes up, you can just put a link to a wiki page that you plan on creating and continue with the flow of your thoughts. Then, you or someone you're working with can then use that link to the new page as a way to build on the initial ideas. In wikis, the idea of one author is shattered. Because of this, unfinished content ends up being encouraged because it provides the opportunity for other authors to come in and help finish the job.

Wabi-sabi is a Japanese expression that roughly translates to the "beauty of things imperfect, impermanent, and incomplete." It is the beauty of things modest and humble. It is the beauty of things unconventional. Observe a ceramic cup for a tea ceremony, for example. It might have rough edges, an irregular shape, and glazing that covers only half of the cup. This cup represents the content you initially put on a page, in rough shape, without finishing touches. Unlike a tea cup though, a wiki page may and will change over time. Share content often and early, and people will participate and help improve the content.

Putting Wikis to Work

After you have a home for your wiki, the fun begins. Wikis reward action and participation. Here's the wrong approach: Spend huge amounts of time planning what will be on your wiki and deciding how people will use it. The right approach: Get content up on the wiki and show people how they can change and improve it. Hand them this book, for example. What happens then is that the nerds come out. You will know them by their sense of excitement and by how much they write on the wiki.

Of course, certain patterns and structures work really well on wikis. And wikis can and should be designed for certain purposes. *Content-focused wikis* are all about a subject or many subjects. For example, Wikipedia is a content-focused wiki. *Process-focused wikis* are wikis that are focused on getting something done, like managing a project or writing a book. *Community wikis* bring a group of people together based on a shared interest. And *ease-of-use wikis* are for people who just want to put up a Web site the easy way: for example, to share family photos or create a quick brochure. In Chapter 3, we cover all these types of wikis. The type of wiki should influence the wiki's design. We cover many different design ideas in Chapter 8. The most important thing is to get people on the wiki. We explain the tricks and techniques for that in Chapter 9.

Who are wiki people?

To make wikis successful, you need to understand the conditions under which wikis thrive and the sorts of people who use them.

It is no accident that wikis had early success among engineers, and then next among the sort of writers/editors who make Wikipedia happen. Wikis are about sharing knowledge; to do so, you have to have enough passion to actually sit down and communicate your ideas. Writing is one barrier, and putting your ideas out there for others to see can also be scary. Who does this sort of thing?

Knowledge nerds, that's who — nerds whose passion for knowledge overcomes most everything else (like taste in clothes, for example). There are engineering nerds and word nerds, law nerds and math nerds, medical nerds and music nerds. You get the idea. Nerds know things and want to spread the message. So, a wiki won't work unless you have passionate nerds somewhere in your organization who want to get their knowledge out.

For those who think we're kidding or that we're a few cards short of a full deck, we're not. In most wiki environments, the key thing that happens is that someone really wants to share information or get everyone on the same page — and that they are willing to spend time to make it happen. That person is the *wiki champion,* and he or she eventually becomes the wiki coach. (See Chapter 16 for descriptions of the various roles people play in wikis.) After that person makes a stand and gets a wiki engine going, a committed group of others needs to join in and start creating and sharing knowledge, or else the wiki withers and dies. The reason why wikis are such a big deal is that they uncover the nerds in an organization who want to make a difference; by sharing knowledge, they can make that difference.

Everyone need not be a nerd for wikis to succeed. There just needs to be enough nerds to make the wiki useful. For every nerd, 20, 40, or perhaps 60 other people benefit from the information just by clicking through the wiki and seeing what's there.

The first things to ask yourself when you set out to introduce a wiki into an environment are: Who will join me in sharing knowledge on the wiki? Who has the passion? Do we really have enough wiki people to make this work?

The lifecycle of wiki people

The natural lifecycle of the wiki person is another useful thing to keep in mind as you discover how to make wikis a part of your life. How fast you move through this lifecycle when you encounter a wiki is usually a good indicator of how important a wiki is to you. Some knowledge nerds go from a reader to a champion in a matter of days, and the wiki concept makes their brain rage with possibilities.

The first way how most folks start using a wiki is as a *reader.* You go to a wiki, see the content, and enjoy it. That might just be enough. Many people who regularly use Wikipedia have no idea that it is a community-created resource that they could get involved with if they wished.

The big first step for most wiki users is to actually reach into a wiki and change some content to improve it. You see something incorrect, and you want to fix it. When you do this, you have become an *editor.* Although this sounds like a simple act, it has an unusually large emotional effect. After you change content, it no longer belongs to all those other people: It becomes partially yours. As every writer knows, the pleasure and pride of authorship is a satisfying reward.

After you join the community of authors of a wiki, it doesn't take long for your imagination to lead you to ways to extend the wiki by creating content that covers new areas. You have progressed to become a *contributor* of a whole new chunk of content that may be corrected by others.

Although many wikis start out as self-organizing communities where everyone just takes care of what needs to be done, certain roles and processes naturally develop. As you participate and lead these activities, you become a *manager* of a wiki. (Chapter 12 covers the typical wiki management tasks.)

The final step in the lifecycle of a wiki user is recognizing that a new wiki is needed to meet your needs or the needs of a community to which you belong. By starting a new wiki, you become a wiki *champion* and bring the benefit of wikis to others.

Herding a small group with wikis

The first thing that generally happens with a wiki is that a small group starts using it for project management or to jointly create some sort of content. For project management, the wiki becomes a repository of lists, notes, schedules, and documents, all keeping the state of the project up to date. As an example, this book was written using a wiki to coordinate the activities of everyone who worked on it. Content creation can encompass documenting requirements for a software program, writing a policy-and-procedure manual, or collecting and posting research. It could be anything.

The first project on the wiki leads to the second and the third, and the group of wiki users starts growing. As the user base grows, you have to be more methodical about running your wiki. You then need a more structured, wide-body wiki.

Wide-body wikis for your company

If a small-scale wiki works for you, pass Go, collect $200, and roll it out company-wide. If you're not just creating an interesting collaboration environment for a few folks but changing the entire culture of your company, however, that requires more planning. It's not that the use of the wiki becomes restricted, but the support activities must be planned for. The idea is not to force a specific wiki solution on people but to teach them to put wikis to work by themselves. Wiki coaches must be trained so that each group using the wiki has someone to turn to. System administrators must be trained to perform tasks such as setting up new webs, managing user

accounts, and archiving old content when necessary. Chapter 13 of this book covers all these issues related to the care and feeding of wikis.

After a company has become wiki-wise, the more advanced uses of structured wiki applications might make sense. Structured wikis are described in Chapter 14. Although the fundamental transformation of the workplace occurs through basic wiki functionality, structured wiki applications can be a huge boost to productivity. Structured wiki applications help track and automate flexible processes that combine both structured and unstructured elements.

Going public with your wiki

In the first years of wikis, much of the action in wikis took place within corporations and other large organizations. The rise of Wikipedia and hosted wikis shows that wikis can organize large groups of people quite effectively outside of an organizational context. Some companies try to use wikis to communicate with customers. Activists use wikis to organize people for social change or to create special kinds of content. In Chapter 9, we cover wiki evangelism and explain the different ways how people carry the message of wikis to new domains.

The History and Future of Wikis

So far, the idea of wikis has been explained from the general to the specific: from the outside-in, is one way to say it. To better understand the essence of wikis, understanding wikis from the inside-out is also useful. How did the idea originate? What was Ward Cunningham's mission when he developed the wiki concept? What were the false starts? How did the idea of a wiki flower into being? The following sections explore some of the history behind wikis as well as the directions in which they might go.

HyperCard and other wiki precursors

You can find many wiki-like things in the past. For example, Tornado Notes, which became InfoSelect, was a database of free-form notes. And FolioViews made it easy to link between pages. Of all the precursors, HyperCard is probably the most wiki-like thing that existed before wikis. HyperCard was a program created by Bill Atkinson for organizing information; when it came out in 1987, it was distributed with every Macintosh computer sold.

HyperCard used the metaphor of index cards and stacks of cards. On each card, fields of information could be stored, text could be entered, and cards could be linked. Boy, this sounds a lot like a wiki. What wasn't wiki-like about HyperCard was that it was not on the Web. In their first incarnation, HyperCard stacks could be used on a single computer or a bunch of computers sharing a file system where a common stack could be accessed. Still, HyperCard stacks weren't created to allow anyone on the Internet to be able to access them through a browser. This is a big difference from wikis.

The other thing about HyperCard was that it was sort of a programmer's tool. It was easy to use, but when you wanted to link one card to another, you had to go through some rigamarole, like starting at the card to which you were linking, jumping to the card from which you were linking, and then planting the link there. The rest of HyperCard was a pretty cool programming environment, but it wasn't very easy for normal people to use. This is another big difference from wikis.

Of course, the biggest and most influential predecessor of wikis is the World Wide Web. Without Web sites and browsers to provide easy, universal accessibility, wikis could not exist. The World Wide Web introduced the linking and browsing paradigms now found in wikis.

Ward's challenge

The unusual aspect of the development of wikis is that Ward Cunningham didn't set out to create wikis. Ward's goal was to share information. In 1995, he was deeply involved in the consulting firm Cunningham and Cunningham, Inc., working with other people on developing the idea of Extreme Programming (a radical restructuring of the process of creating software), and also developing the concept of reusable patterns in software development.

The itch that Ward wanted to scratch was to create a repository of patterns that other people could see and modify as well as supplement with their own patterns. The idea was to create a shared space that allowed people to communicate and collaborate about this nifty idea of patterns.

Ward's solution

As Ward Cunningham pondered the challenge of easily sharing information, the stars started to align. As an accomplished programmer, Ward knew how to write programs for the Web. As a seasoned developer and as someone who really wanted to get others interested in patterns, Ward was suspicious of the

idea that just writing any old script that imitated traditional approaches would actually solve his communication problem. He knew that his solution had to be easy to use and accessible to everyone without much effort.

So, by using the Perl scripting language, Ward at first created a system that was a database of pages. Then he figured out a way to edit those pages in a browser window. Web browsers were spreading like wildfire, and making editing happen through a browser window meant that everyone could use his repository without much effort.

But then he had to figure out how to make the information on the pages look good, convey information, and (most of all) link to other pages that were related. Again, Ward felt that all this had to be much easier than existing alternatives like HTML, which is why the simple markup language was invented.

After Ward got his ideas working, he went back to his work of creating pages about patterns. It was like falling downhill. What took two hours or longer in HyperCard could be done in 10 or 20 minutes or even faster. In about three hours, Ward had 15 or 20 pages done.

The only thing left was the naming. Ward first considered using the word Quick. A product called Quick Basic already existed (an easy-to-use form of the BASIC language), and Ward considered using the name QuickWeb. That seemed about as exciting as cold oatmeal. Ward then remembered that *wiki wiki* means *quick* in Hawaiian, and he called his invention the *WikiWikiWeb,* which eventually got shortened to *wiki.*

The not-so-overnight success of wikis

Wikis gradually took hold over the 11 years following Ward Cunningham's development of his first wiki engine, called WikiBase. During that time, the concept was expanded by the open source community. Wikis became popular with one group, then another, and eventually began invading the mainstream.

It didn't take too long for wikis to be noticed by developers in the open source community. What happened was that many people discovered — surprise, surprise — that Ward hadn't thought of everything. This, of course, was no surprise to Ward, who assumed that he hadn't thought of everything and was eager to see what other people would think of.

If you ever go to the Portland Pattern Repository front page (`http://c2.com/cgi/wiki`), you might be surprised at how bare-bones it is compared with other wiki sites you may have visited, such as `www.wikipedia.org`. What Ward created was the dune buggy of wikis. Some features added by the open source community include

- ✔ **Version control:** The ability to save every version of a page and go back to previous versions as needed. This is important because so many people might change a page; see Chapter 13 for details.

- ✔ **Access control:** The ability to control who accesses the wiki and what they can do; also covered in Chapter 13.

- ✔ **Plug-ins for added functionality:** The ability to add in any other kind of functionality that might be needed. See Chapter 14 for some great examples of plug-ins.

Wikis lurk in the realm of the engineers

As the number of wiki engines grew, the concept became extremely popular in engineering, technology, and software development companies. Here are some reasons why:

- ✔ Engineers are early adopters of anything cool.

- ✔ To get a wiki running in the early days, you had to have access to a server and know how to set up a wiki engine. Engineers had these skills.

- ✔ Even though wikis were easy for anyone to use, engineers found them ultra-simple. Some aspects of a wiki, like the simple markup, never presented a problem for engineers even though they could seem somewhat scary to newcomers.

- ✔ Wikis were incredibly flexible in how they could represent different ways to organize information. Engineers love *taxonomies,* which are different structures of information. (We discuss taxonomies in Chapter 8.) That a wiki could organize information many different ways at the same time seemed cool to an engineer.

The open source roots of wikis

Almost all early implementations of wikis were open source, which is one of the reasons why so much experimentation took place about the right way to build a wiki engine. Wikis have succeeded because in many ways, they bring the open source values of shared ownership and rapid-fire experimentation to the world of collaboration, content creation, and knowledge management. The fact that so many early wikis were open source eased the way for the propagation of wikis in so many different kinds of organizations. After the ideas of wikis were in tens of thousands of brains, ideas like Wikipedia and other innovative uses sprang up. Now that the idea of wikis has become so popular, entrepreneurs have created commercial versions of wikis with special features that are not shared. Although some resent this commercialization as a form of robbery of ideas that were in the public domain, others (including us) see the emergence of commercial wikis as confirmation that wikis are here to stay. It is clear, though, that the road to this success could not have happened without the structures and values of open source showing the way.

So, at many of the biggest companies in the world — such as Sun Microsystems, the German software maker SAP, and Motorola — and at many other companies all over the world, wikis became the central nervous system, all the while lurking in relative obscurity.

Wikis grow beyond engineering

The next wave of wiki expansion occurred as awareness of wikis grew organically inside companies. An engineer would show someone from marketing the requirements for a new system on the wiki. They would discuss it, the engineer would just edit the page to change the requirements, and perhaps an e-mail would be automatically sent out notifying everyone on the team that something had changed.

The marketing person would look at this and say, "Dude, this is pretty darn useful. How can I get one of these for my projects?"

In this way, the marketing department and eventually other departments overcame the technical barriers that stopped them from using a wiki by themselves. They couldn't set up a wiki engine. They had no skills to do so. They had no servers on which to put a wiki engine. But the engineers did.

Many an engineer became an unofficial wiki champion, leading the way in the use of wikis. They would set one wiki up for one team, and that team would use it with another, who would want their own, and then the cycle would repeat until lots of people were using this really easy project management tool without ever knowing that it was a wiki.

The other way awareness of wikis expanded was the growing momentum behind Wikipedia, which was founded by Jimmy Donal Wales (who had started an earlier version of an online encyclopedia, Nupedia). Nupedia (which used a different, non-wiki technology) didn't catch on, but as soon as the project was switched to a wiki, a new culture took hold. Thousands of people starting working on Wikipedia and also spreading the word about wikis.

Wikis go commercial

The growth of wikis certainly didn't happen in a vacuum. The technology press paid attention as did a few academics. As in the open source and engineering communities, there was much activity. New wiki engines were created every year, and still are. (Dan's current favorite newcomer is TiddlyWiki, a wiki created by using JavaScript, that is contained within an HTML page.) Wikis were created for special purposes: DokuWiki is an excellent wiki engine created for writing and publishing documentation. Microsoft created a wiki engine called FlexWiki as an open source project built by using .NET technology.

The commercial use of wikis expanded rapidly through the many, many open source wiki engines that were available. Peter Thoeny, creator of TWiki (and co-author of this book), created a huge wiki at Wind River dedicated to product support. Google has revealed that it is a major user of wikis and has one of the largest internal wikis in terms of the number of pages. Yahoo!, Amazon, and hundreds of other companies have jumped on the wiki bandwagon as well.

Recognizing that the basic concepts of wikis were quite powerful, and that a large segment of the information technology world (the world of corporate computer users) was nervous about the support and maintenance burdens of open source technology, a number of entrepreneurs stepped in and built on the ideas that were developed in the open source wiki engines. Some of these include

- ✔ **Socialtext (`www.socialtext.com`):** Ross Mayfield created Socialtext, which built a product to deliver the benefits of many of the technologies used in social networking as an integrated product. Socialtext combines blogs, wikis, and other features to create an environment to help groups communicate and do work.

- ✔ **JotSpot (`www.jot.com`):** JotSpot, founded in 2004 by Joe Kraus and Graham Spencer, calls itself an *application wiki*. JotSpot offers a wiki with many features, such as e-mail integration and database-like functionality, which allow it to create wikis that are applications but also wikis. JotSpot was purchased by Google in October, 2006.

- ✔ **Atlassian (`www.atlassian.com`):** Atlassian, an Australian company, created Confluence, what it calls an *enterprise wiki* that complements the company's first product, JIRA (a bug-tracking database). Confluence is one of the more popular wikis in corporate environments.

Hosted wikis open the door to everyone

Other companies such as WikiSpaces, PBwiki, wetpaint, Wikia, BluWiki, XWiki, and more offer free wiki hosting, which we discuss in greater detail in Chapter 5. These companies frequently put advertising on pages but also offer premium versions of wikis with advanced features. Each of these companies helped promote the use of wikis in environments that were previously unfriendly to open source or that wanted the special features in each of these products.

The process of wiki propagation didn't stop inside companies. After wikis spread from engineering to other parts of firms, those who dealt with customers realized that wikis could be an excellent way to harvest information and build communities.

Amazon.com was the most prominent company to put wikis on its site. At the end of many Amazon.com pages is a ProductWiki section, where visitors to the site can add their thoughts on the products. Other companies are following suit, and the number of wikis facing consumers grows every month.

Where wikis will go

We have a long way to go before wikis are part of everyday life. Most people still don't know the term, let alone the cultural changes that wikis entail and the benefits they can bring. We can take a quick look into the wiki future and make some predictions, though.

Wikis become your desktop, your Web site, your intranet

What has happened for Dan (the other co-author of this book) is that wikis have taken the place of his desktop. His day starts at his e-mail inbox and on the home page of his wiki. He doesn't store files on his personal computer but stores them on the wiki. When he writes a project management note, he writes it in the wiki first and then sends a link to the wiki page to others who are working on the project, or he copies from the wiki into an e-mail. The first step in a new project for Dan? Creating a wiki to manage it.

Wikis will invade other applications

Wikis will come to most people over the next ten years through hosted wikis and wikis embedded in other applications. Many wikis that are now being developed are being added to existing environments. Large software companies have yet to get serious about incorporating wikis into their products, but this will all change as Google's incorporation of JotSpot puts wikis into the hands of millions of people who cannot get over the current barriers to using wikis. Software manufacturers will then take notice, and you will find wiki functionality as part of enterprise applications and desktop productivity suites.

Wikis will disappear

After wikis have conquered, they will disappear and become part of the landscape. Our grandchildren will wonder why anyone ever worked without them. Perhaps, they won't be called wikis. They will just be the way things are done, just like how WYSIWYG (What You See Is What You Get) editing is no longer an innovation for word processors but is instead just the way they are assumed to work.