

TECHNIQUES

Improving the Quality and Effectiveness of Technical Communication Spring 2008



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COMMUNICATION

Who Benefits from Single Sourcing?

by David Chapman

Over the past half-century, technical communicators have come to embrace rhetoric as one of our core areas of expertise, reshaping ourselves from simple transmitters of technical information to true advocates for our audiences. Our technical savvy helps define who we are as communication professionals, but our dedication to the needs of our users defines the value of our work. Simply put, without our users, we are nothing.

Within this progressive professional environment, the concept of single sourcing burst onto the scene in the 1990s. And in less than a decade, single sourcing has gone from a little-known concept to a widely used model for creating, storing, and reusing written information. Making the obvious connection, we would conclude that the swift adoption of single-sourced content management systems was a consequence of single sourcing's superior ability to address the needs of the user.

But what do we find? A comprehensive review of the single sourcing literature reveals scant evidence that technical communicators were placing the user's needs foremost. Instead, we find ubiquitous arguments for efficiency and cost savings. In other words, rationales that speak to the organizations' bottom lines and the desires of technical communicators to improve their own working conditions.

In 2002, an article by Dave Clark, assistant professor of English at the University of Wisconsin-Milwaukee, challenged the technical communication research community to address the theoretical shortcomings that he saw in the single sourcing literature. Clark declared that "sophisticated rhetorical

approaches to communication are noticeably absent from scholarship on single sourcing" (2002, 20), and, among other criticisms, he noted that "what can be lost in attempting to create *kairos*-neutral chunks of content is thoughtful consideration of *context*...[and] we risk producing components that aren't perfect fits for *any* contexts" (2002, 22).

In every organization that Clark investigated, not one had switched to single sourcing to better meet the user's needs. In each case, the decision had been based on the advantages to the organizations and its workers.

Numerous academic articles confirm Clark's thesis. In many of them, the reader must look no further than the title to know where the focus lies: "The Implications of Single Sourcing for *Technical Communicators*" (Williams 2003), "Single Sourcing and the *Technical Communication Career Path*" (Albers 2003), and "Content vs. Product: The Effects of Single Sourcing on the *Teaching of Technical Communication*" (Eble 2003; emphasis added in all titles). In one promising-looking article, "Single Sourcing: It's about People, Not Just Technology," the *people* in question are technical communication professionals, not users (Rockley 2003).

It's probably not a great surprise that at least some of the scholarship on single sourcing would focus on how it affects the work practices of technical communicators. Our field spends more scholarly energy talking about itself than most others. But there has also been a greater force at work. As Rebekka Andersen, also at the University of Wisconsin-

(continued on page 2)

IN THIS ISSUE

- 3 Wikipedia as a Scholarly Resource
- 4 A Focus on Web Communications
- 5 Eliminating Single Sourcing Problems in a Team Environment
- 6 Single Sourcing in the Working World
- 8 Web Content Management
- 9 Wikis on the Job
- 10 Using Blogging Software to Manage Web Content
- 12 Content Management Systems
- 13 The Benefits of Single Sourcing to Small and Medium-Sized Companies
- 14 Course Management Systems in Higher Education
- 16 Document Management – It's All in the Details!
- 17 Applications In Today's World
- 20 The Technical Communicator's Role
- 21 Information Architect—Who? What? How?
- 23 Bulletin Board
- 24 From the Editor

TECHNIQUES STAFF

Copy Editor

J.J. Carlson
jonathan.james.carlson@gmail.com

Layout Editor

J.J. Carlson
jonathan.james.carlson@gmail.com

STC Officers

President

J.J. Carlson

Vice-President

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Secretary

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Karli Bartlow-Davis

Faculty Advisors

Gretchen Perbix
gretchen.haas@mnsu.edu

Lee Tesdell
lee.tesdell@mnsu.edu

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Who Benefits from Single Sourcing?

(continued from page 1)

Milwaukee, recently pointed out in an article in *Technical Communication Quarterly*, the drive to adopt single sourcing is largely being pushed down from the corporate level, rather than built up by those whose work is most affected by it (Andersen 2008). The technical communication landscape in this country is changing as more work heads overseas. Businesses have been under pressure to cut costs, and technical communicators, rather than risk devaluing themselves by harping about their rhetorical obligations to their users, instead have been figuring out how *they*, rather than information technology professionals, should be the ones to inherit the new jobs that single sourcing has created: information architect and content manager.

The irony is that the arguments that technical communicators have used to lay claim to these new positions center on our ability to leap the technology hurdle that single sourcing represents and to meld our technological capabilities with an understanding of our users. Overlooked is the disturbing fact that these new positions may force us to place the needs of the organization above the needs of the user. Andersen states that "from a rhetorical standpoint, the separation of content from form...significantly reduces quality of the communication," and that single sourced documents "are no longer tailored to a particular audience for a particular purpose in a particular context" (Andersen 2008, 74). Isn't that what rhetoric is supposed to be all about?

A further irony of the willingness of technical communicators to join the rush to single sourcing is that it is widely understood that increased automation leads to less autonomy and work value on the part of workers and more control on the part of the organization. By embracing single sourcing, we may inadvertently be

hastening the devaluation of our work, which could undo the significant progress the field has made with regard to workplace status over the past half-century.

Surely, as the new shine of single sourcing begins to fade, technical communicators will alter course and begin reflecting on their rhetorical obligations to their users. But when asked whether he has seen any changes in the scholarly debate over single sourcing over the past five years, Clark responds, "No, I haven't really noticed a significant shift in the literature; every technical communicator I talk to about this is interested primarily in cost and time savings, and rhetorical interests tend to take a back seat" (D. Clark, pers. comm.).

When will we begin to live up to our ethical responsibility to our users, a responsibility that Clark points out "has in fact been the basis of our demands for greater prestige and responsibility" (Clark 2002, 21)?

Works Cited

- Albers, M. J. 2003. Single sourcing and the technical communication career path. *Technical Communication* 50, no. 3:335-343.
- Andersen, R. 2008. The rhetoric of enterprise content management (ECM): Confronting the assumptions driving ECM adoption and transforming technical communication. *Technical Communication Quarterly* 17, no. 1:61-87.
- Clark, D. 2002. Rhetoric of present single-sourcing methodologies. *Proceedings of the 20th Annual International Conference on Computer Documentation*, 20-25.
- Eble, M. F. 2003. Content vs. product: The effects of single sourcing on the teaching of technical communication. *Technical Communication* 50, no. 3:344-349.
- Rockley, A. 2003. Single sourcing: It's about people, not just technology. *Technical Communication* 50, no. 3:350-354.
- Williams, J. D. 2003. The implications of single sourcing for technical communicators. *Technical Communication* 50, no. 3:321-327.

Wikipedia as a Scholarly Resource

by Mary Lukkonen

Wikipedia, an online user-supplied and user-driven encyclopedia, is a well-known example of a content management system. Since its inception in 2001, Wikipedia has grown tremendously. It currently houses over two million articles in English, and over nine million articles total in over 250 languages (www.wikipedia.com). There is a wealth of information available on Wikipedia, but how trustworthy is the information? Students often use Wikipedia as a resource for their research papers. Should this be acceptable?

Wikipedia is an open-source encyclopedia. Anyone can create an article, and anyone can edit an article. By doing either, you become a Wikipediaian. Wikipediaians are motivated to contribute to Wikipedia to gain a sense of community and a sense of accomplishment by sharing their knowledge (Kuznetsov 2006). Wikipediaians can provide their credentials or can contribute anonymously. Because of the continuous edits by multiple users and the anonymity of contributions, the credentials of everyone involved cannot be tracked accurately. Without tracking credentials of every Wikipediaian, there is no way to know if contributors are reputable or not. With their reputation unknown, the content cannot be trusted. Studies have shown that Wikipedia is usually factually accurate (Forte 2006, 182), but without the tracking of the authors, there is no way to be certain that everything is factually accurate, so the use of Wikipedia in the classroom is not recommended.

Even the Wikipedia guidelines state that their information should not be cited as a scholarly resource (www.wikipedia.com). They are a tertiary source, not a source of academic materials. Students are rarely allowed to cite an encyclopedia in an academic research paper, so they are even less likely to be allowed to cite an open-source encyclopedia, such as Wikipedia.

A scholarly article consists of original research that is reviewed and published in an academic journal. The author's biography and credentials are known. Exploring the respected information in academic journals is the type of in-depth research professors are looking for in their students' papers. Wikipedia, on the other hand, consists of general information, often written by anonymous authors and often not reviewed by anyone. There is no original research involved.

Some teachers may encourage students to begin their research with Wikipedia, not to use it as a source, but to gain basic information and possible links to reputable sources. Other teachers frown upon any use of Wikipedia for their class (Aljentera 2007).

The growth of Wikipedia is due to the contributions of the large number of Wikipediaians. In order to gain the reliability in the articles that would be required in order for Wikipedia to become a source of scholarly information, the site would have to eliminate its open-source nature, which would mean the site would no longer be a content management system (Waters 2007, 17).

Works Cited

- Aljentera, Clarissa. 2007. Wikipedia Scorned by Scholars. *Knight Ridder Tribune Business News*, September 17.
- Forte, Andrea, and Amy Bruckman. 2006. From Wikipedia to the classroom: Exploring online publication and learning. *International Conference on Learning Sciences*. Bloomington, Indiana: 182-188.
- Kuznetsov, Stacey. 2006. Motivations of contributors to Wikipedia. *ACM SIGCAS Computers and Society* 36 (2, no. 1) (June).
- Waters, N.L. 2007. Why you can't cite Wikipedia in my class. *Communications of the ACM* 50 (9) (September): 15-17.
- <http://www.wikipedia.com>

Some teachers may encourage students to begin their research with Wikipedia, not to use it as a source, but to gain basic information and possible links to reputable sources.

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A Focus on Web Communications

The Benefits of Using CMS in Nonprofit Organizations

by Jennifer Bruns

Nonprofit organizations (nonprofits) have unique content management needs. Content produced by nonprofits simply differs from that produced by large for-profit corporations (Bernhardt 2007). Nonprofits also face different challenges, such as high employee and volunteer turnover, tight budgets, and time constraints (Bernhardt 2007). Nonprofits need practical solutions for their content management to enter into the next level of technology.

In this era of information technology, and with the vast growth of Web communications, nonprofits need to redefine their approach to communication. With this thought in mind, more and more nonprofits have entered the Internet world and have launched Web sites. These Web sites have become a critical tool because they help build awareness of pertinent issues, expand local and global presence, recruit volunteers, and disseminate information (Bogosian 2001, 17). However, launching a Web site is one matter, while keeping the information up-to-date and consistent is another.

As nonprofits embrace the Internet as a communication tool, they face the challenge of keeping current content on their Web site. To keep the Web site “fresh,” the content management usually ends up costing the nonprofit some of its most precious resources—time and money. Since content management requires an HTML programmer, and the majority of nonprofits either do not have such a staff person or cannot afford a full-time specialist, most content management is contracted out (Bogosian 2001, 17). Estimates are that 55% of development and maintenance costs for Web sites are taken up by content management (Bogosian 2001, 17). Consequently, the Web site sometimes becomes static and the intended communication might prove counter-productive to the nonprofit’s message.

The need to keep information current, in addition to the current growth in Web site size and complexity, has generated a specified need for content management system solutions among nonprofits (Patrick 2006, 18). Nonprofits should at least consider content management systems

(CMS) as a technology solution. A CMS can help keep a nonprofit competitive and make the most use of their limited resources (Burt and Taylor 2000).

CMS are fundamentally about managing Web sites. CMS allows the individuals who create content to post that content to the Web site without any special training. Thus, non-technical users can easily have control over the Web site content. CMS opens the possibility for anyone to update the Web site quickly and easily—updates ranging from adding a missing period to a sentence to adding paragraphs of pertinent information. This opportunity is beneficial in numerous ways.

CMS aids nonprofits because it ensures the right people author content, it allows the authors to focus more on the content rather than the Web site design and navigation, and it provides the right entities with access to approve the content because it is understandable by non-technical users (Beveridge 2001). Furthermore, CMS has an audit capability, as it provides a record of any changes to the Web site. This is beneficial because “[w]ith the right people doing the right jobs, your Web site’s operation will be more efficient, and you’ll deliver better, more timely information to the people who need it” (Beveridge 2001, 19).

CMS are also valuable because they are cost effective and efficient. A CMS in a nonprofit can save money, increase revenue, streamline operations, improve Web site quality, simplify training needs, focus on core mission, and reduce technical staffing (Patrick 2006, 25). Simply put, a CMS can offer the technology needed to update old and static Web sites within a tight budget.

An example of a highly successful nonprofit CMS is Petfinder (www.petfinder.com). Petfinder is a widely known and recognizable online database of pets available for adoption. Any pet lover can go to Petfinder to search for the pet that best fits his or her needs. As of March 2008, Petfinder was a directory of 245,030 adoptable pets from 11,830 adoption

(continued on page 5)



Eliminating Single Sourcing Problems in a Team Environment

by J.J. Carlson

Single sourcing has proven to be both an effective and efficient method of Technical Communication. It allows for the same content to be printed in multiple mediums. But is this method always reliable and consistent?

Take, for example, the work done by a team of technical writers—each person has a unique style of writing. If each member of a team is working on the same project, one section may be inconsistent with the next. Further yet, some companies require employees from different departments to write various sections of a project that they have extensive knowledge in. Given their range of professional backgrounds and personal characteristics, their writing styles and perception of content will often form a

document that appears almost schizophrenic in nature.

Single sourcing software can print multiple documents from specific source material, but it is often seen that one document will be structured different than another. This may result in the coupling of paragraphs written by more than one individual because what the software does is draw information into the document from a database of related content.

So how does a team of writers create a consistent single-sourced document? A meeting of heads is important on large scale projects, but the writing is still often done independently. Albers (2003) suggests that an information analyst would be needed in collaborative

(continued on page 7)



A Focus on Web Communications

(continued from page 4)

organizations across the USA, Canada, and Mexico (Petfinder). These nonprofit organizations maintain their own home pages and available pet databases. Petfinder uses the Internet to its advantage and increases the adoption of homeless pets to decrease euthanasia. Petfinder is one example of the many nonprofits that have successfully used CMS for their needs—the Animal Channel even advertises Petfinder frequently on many of its television programs.

Nonprofits need flexible solutions to address content management. As Web sites become an integral part of the nonprofit, the CMS will become a necessity. Yet, many nonprofits are unfamiliar with CMS and do not understand the benefits CMS can offer their organizations within Web development and beyond. Technical communicators working with nonprofits can recommend CMS as a viable solution. There are an estimated 250 CMS providers offering tools for content management (Patrick 2006, 51). One of these providers might just be the customized solution for your favorite nonprofit organization.

As technical communicators, perhaps the term “Content Management System” is something we should consider within our nonprofit work.

References

- Bernhardt, G.A. 2007. Moving beyond single sourcing to single organizations: Understanding content management in small nonprofits. United States: Michigan State University.
- Beveridge, D. 2001. Why you need a content management system. *Nonprofit World* 24 (November-December): 16-19.
- Bogosian, J. 2006. Internet content management: What's next for nonprofits? *Nonprofit World* 19 (March-April): 17-19.
- Burt, E., and J.A. Taylor. 2000. Information and communication technologies: Reshaping voluntary organizations? *Nonprofit Management & Leadership* 11 (Winter): 131-143.
- Patrick, J. 2006. *Making the right choice: A nonprofit's guide to content management systems*. Common Knowledge LLC.
- Petfinder. About petfinder. <http://www.petfinder.com/info.html>.

Single Sourcing in the Working World: My Experience

by Amy Beeman



Single-sourcing provides a means for similar content to be used in multiple documents or in different formats (e.g., text or Internet). Software companies are notorious for using single sourcing for documents because of their myriad products that all require manuals—rather than maintaining numerous manuals with similar (or the exact same) procedures, they will single-source their documents so there is only one document to update. My first job out of college was as a writer for such a company. Below is my experience:

I had just graduated and couldn't believe my luck when I landed a job as a technical writer at a software company in Rochester, MN. The company built data back-up software, and had two different software suites and numerous applications to help large businesses (mostly banks and casinos) back-up their information. I started in June, and quickly learned the ins and outs of their software and also what they expected from me as a technical writer (actually, their term was *information developer*). The company used Adobe FrameMaker (or "Frame" as we referred to it) as their documentation writing software, so I was briefly introduced to the basics of Frame and was given the easiest and most menial tasks to begin with—basic fixes and edits, and things that were in the manual that could later be evaluated by the senior writer.

For those not familiar with Frame, it is software that is designed for publishing large amounts of information. It is a part of the Adobe Technical Communication Suite of products and generally caters to businesses that desire to single-source their documents, either for hard copy manuals or web-based versions. Frame provides many features that are useful to technical communicators, but the company I worked for liked Frame for its numerous formatting styles, Unicode support, and conditional text settings.

I was involved in a huge release of a software version. How the writing process worked was that each of the four team members was assigned sections of the manual to work

on. We would interview the architects and programmers, and once we had gathered enough information, we would write our sections. We worked both to update the previous manual and write new content. We were also able to work on sections and chapters of the manual that someone else was working on at the same time, so multiple writers could be involved without stepping on the toes of the writer in the next cubical.

Essentially, my company has multiple versions of its software applications, and we used conditional text (which occurs when the text has a format style applied to it and the text will only be visible when certain conditions are set to appear) to set the differences apart. There were versions of the manual for IBM iSeries programmers and for graphical user interface (GUI) clients. There were also clients who ordered either the entire programming suite (which was three products rolled into one), or those who ordered the "regular" version of the software, or those who ordered the "lite" (as it was called) version of the software. Even though there were many different formats that the software needed to be written for, we had only one main manual.

Using Frame, the writers used conditional tags to code each new section of text to be included in the manual. The text would be offset in each section by a certain color (we used purple, teal, red, and orange as conditioning colors), and the generic body text remained black. Then, when our senior writer was ready to send out a manual for review or to print, she would set the conditions to "read" the conditional text that she wanted, and we could then test the links and cross-references within the text. Any items conditioned for more than one manual were also given a specific color, so we would skim the pages for any colors that showed up in the manual that didn't belong. Finally, once the conditions were set, all the text turned black so the reviewer would not notice the color differences.

(continued on page 7)

Single Sourcing in the Working World

(continued from page 6)

There was no reason for the company to spend countless man hours—and who knows how much money—to produce a manual for each software version or product they created. Instead, they had a manual which was more like a flowchart—where after it was determined that the content in the main manual was relevant, management could move down the line of products and determine whether or not the content for those applications needed to be included. In the end, we have “one” manual with many different versions—like software itself.

Overall, I think that single sourcing is beneficial in a circumstance such as software writing, where there are many different releases or versions of documentation that need to be addressed and delivered with the product. I can't imagine how much of a hassle it would've been to hunt for each section of software that needed to be updated. I have a feeling that without using single sourcing, software companies would not be able to put out any major releases or updates because the documentation would not ever be ready.

Eliminating Single Sourcing Problems...

(continued from page 5)

writing: “Information analysts focus on the higher-level concerns of defining what text needs to be generated and which pieces get assembled for the multitude of outputs” (341). The information analyst will study a document's audience, specify appropriate content to include in the document, and ultimately will create a model for information. Since the model is needed early on in the development process, an information analyst should be directly involved in all steps of the project. This should lead to a consistent document without sporadic material.

Some writers fail to comprehend the idea of writing the same material for different audiences—they will end up writing their way rather than what best supports the content. Rockley (2003) explains that similar information can be written for multiple audiences, and, in such a large network of writers, the information analyst aims to eliminate generality of the content by focusing on audience. The information analyst then helps in the construction of content within the template-based assembly process. Late in the development process, the information analyst works to control content production by sticking to the information model and meshing text from multiple authors based on that audience.

Oftentimes, the information analyst role can be filled by a senior writer. An experienced and knowledgeable company writer will typically be familiar with the organization's policies, which in turn leads to an understanding of

document structure. The only concern with a senior writer acting also as information analyst is that the senior writer may attempt to control content based on his or her own writing style. A content controller whose role is only to be the “middle man” will often place importance on the audiences' needs, which results in the most accurate and consistent content.

Some software tools have offered flexibility in the identifying and outputting of information for specific documents/audiences (Rockley 2003), yet content management systems do not carry this ability to analyze audiences intimately, and this is why information analysts are irreplaceable.

Information analysts serve a great purpose in single sourcing, especially when the organization has a large staff of writers for every project. This role is vital in the content production and information model assembly processes as it produces content for intimate audiences. It not only eliminates the problem of conflicting writing styles but it also leads to effective documents for the right audiences.

Works Cited

- Albers, Michael. “Single Sourcing and the Technical Communication Career Path.” *Technical Communication* 50.3 (2003): 335-343.
- Rockley, Ann. “The Effect of Single Sourcing and Technology.” *Technical Communication* 48.2 (2001): 189-193.

Web Content Management

A quick introduction to CMS for Web sites

by Gary L. Teagarden

The explosion of the internet and software applications that help organizations produce content as fast as Toyota cranks out cars has placed a heavy burden on people to manage all those assets. So-called content management systems, or CMS for short, help companies and organizations keep a lid on paper and digital assets. According to Content-Management-Junction.com, “CMS can help companies manage information such as emails, accounts payable and receivable, records processing, customer information, financial reports, video libraries and more” (Different Types of Content Management Solutions 2008). The amount of electronic content is increasing exponentially at companies, mostly because of the ubiquity of applications and tools that make it so painless to create new content. Most modern CMS applications have the flexibility to manage a multitude of file types: documents, spread sheets, image files, video files, and Web files (Trotter 2008, 2).

It’s the management of Web files, localization attributes and associated visual assets that we will explore in this article. Web Content Management (WCM) is a subset of content management systems. According to Content-Management-Junction.com “Web content management is a content management solution that addresses the need for businesses to create and manage multiple Web sites.” WCM provides a strong infrastructure and an easy to use authoring environment for business users. Nearly every organization today has at least one Web site; large enterprises often must manage hundreds of Web sites and microsites. At one time, IBM had more than 300 external facing Web sites before the CEO ordered most to be taken down. Microsoft manages nearly 500 intranet sites and dozens of external sites and microsites across its vast enterprise. Where I work, Cargill, we have more than 300 external Web sites and another 1,000 or so microsites and intranet sites.

With the increased proliferation of Web 2.0 technologies—blogs, wikis, podcasts, videocasts and RSS—the need for WCM has become mission-critical for many organizations. In a 2007 study, Forrester Research spoke with 30 enterprises about their WCM needs. “Organizations want improvements in WCM administrative tool usability, enhanced personalization capabilities, and globalization functionality” (Powers 2007, 2). At Cargill, the globalization of our Web sites is a strategic objective. The company operates in more than 80 countries; our goal is to have a separate bilingual Web site for 55 countries. Since much of this content is the same—with only a small percentage of it tailored for a specific country—content reuse saves developers and contributors a lot of time. According to Forrester, globalization and personalization requirements are what’s driving WCM innovation.

The ability to reuse and repurpose content is also driving the proliferation of content management systems. At Cargill, for example, we use copy and photographs from the latest branding and advertising campaigns on the Web site. Having these items checked into Stellent*—the company’s CMS—makes access convenient, and, in turn, saves time and money. Many companies are repackaging marketing items such as online newsletters and emails for publication on their Web sites. And the next generation of CMS or WCM will publish any document or file in a Web-ready format. For example, a document formatted as XML can be integrated directly into Flash or XHTML files.

Software Applications and Tools

Organizations looking to implement their own WCM system have a wide range of options and costs to consider. The options depend upon the organization’s technical requirements and budget restraints. A number of companies offer pure-play Web content management systems: Oracle (Site Studio), Interwoven, and Day Software to name a few. Other platform vendors

(continued on page 9)

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Wikis on the Job

by Dianna Cowles

A content management system (CMS) is used to manage the content of a Web site. CMSs are employed primarily for interactive use by a potentially large number of contributors. A wiki—a type of CMS—is “a web site that encourages visitors to contribute to the content by editing pages” (Fernando 2007, 11). The first wiki software was created by computer programmer Ward Cunningham a decade ago. He conceived of it as “a way to allow colleagues to more easily discuss programming language” (Dorroh 2005, 50). The name is derived from the Hawaiian term *wiki wiki*, which means quick. A few years after the creation of the wiki, Wikipedia, a collaborative online encyclopedia, was created by a group of wiki enthusiasts, and has become one of the best known wikis.

As with any other technology, wikis have both positive and negative implications for use

in the workplace. This article will discuss in detail the pros and cons of how wikis are used in the workplace as well as give examples of how they have failed and succeeded in their purposes in various workplaces. To conclude, the article will consider the future of wikis in workplaces.

Benefits of Wikis in the Workplace

Perhaps the most obvious benefit of wikis is the ease with which it allows people to collaborate. In his article, “Working off the Same Page,” Angelo Fernando discusses some of the ways in which this type of collaboration is beneficial. Fernando terms the variety of wikis used in the workplace as “walled gardens” because they are “appropriate for secure internal

(continued on page 11)



Web Content Management

(continued from page 8)

and enterprise content management (ECM) companies include giants EMC, IBM, and Microsoft. Microsoft’s WCM support comes as a part of the Microsoft Office SharePoint Server. IBM’s WCM support is part of the Lotus collaboration platform. EMC offers WCM as an add-on product to its core Documentum platform.

For companies wishing to eschew the installation and maintenance of their own software package there is another option: it’s a pay-by-the-month option called software-as-a-service (SaaS). Observes Forrester: “In an SaaS model, customers pay a subscription fee to access externally hosted software applications via the Web. Organizations that are looking for general-purpose WCM support, and can’t overburden internal IT resources will jump to this model” (2007).

Learn More

Not surprising, there are a multitude of options for exploring the fast changing world of WCM. For technical information concerning applications from the major application

developers I recommend visiting their company Web sites: IBM, ECM, Oracle, Microsoft, Interwoven, and Day Software. In addition, I recommend these research companies, Industry trade magazines, blogs, and Internet sites: InformationWeek, Computerworld, Internet.com, STC.org, thecontentwrangler.com, Forrester Research, and Gartner Group.

*Stellent, the Minneapolis, Minnesota software applications company was purchased by Oracle in 2006.

Works Cited

- “Different Types of Content Management Solutions,” <http://www.content-management-junction.com/cm-solutions.html> (accessed March 26, 2008).
- Powers, Stephen, and others. “The Trends Driving Web Content Management Innovation,” Forrester Research Inc. 2007, pdf.
- Trotter, Paul. “Component Content Management: What is it and why does it matter?” http://thecontentwrangler.com/article/component_content_management_what_is_it_matter/html (accessed March 26, 2008).

Using Blogging Software to Manage Web Content

by Jane Xiong

Managing Web content can be a challenge in any organization, but when that organization is the largest academic department at a major research university, the challenge is even greater. Dan Kunitz, Web Project Manager, and his colleagues in the Office of Information Technology Software and Web Development (OIT) support the technology needs of more than 16,000 students and 1,400 employees in the College of Liberal Arts (CLA) at the University of Minnesota, Twin Cities (Regents of the University of Minnesota, 2007). Therefore, Kunitz explained in a March 13 interview, OIT staff are constantly searching for tools to make their job easier. That's how, after the University of Minnesota Libraries launched the UThink blogging service in 2004, OIT staff came to adapt UThink for their content management needs.

UThink is a University-hosted blogging service using Movable Type software. In a personal interview on March 10, Shane Nackerud, Web Services Coordinator with the University Libraries, described how UThink is used to support instruction, encourage collaboration, and preserve the "cultural memory" of the University. Any University member with a valid Internet account can create a blog to communicate with faculty and students, post assignments or research, or promote club or group activities (Regents of the University of Minnesota, 2006). Users do this simply by creating a UThink account and typing in content or uploading files. Entries are dated and archived for easy viewing and retrieval.

As UThink gained popularity among University members, Kunitz and his colleagues saw that this could simplify the way content was added to and updated on the CLA Web site. Before UThink, CLA members submitted even the most minor content to OIT staff to post on the Web site. Since UThink has gone into use, OIT staff have linked CLA Web pages to special UThink blogs that are edited by designated members of the CLA community. This process

has improved the speed with which the Web site is updated and has reduced the amount of time OIT staff spend on basic content management tasks.

During a March 13 interview, Kunitz and Software Engineer Joe Goggins explained how the process works. OIT staff manage the official CLA Web site, which contains pages for various departments, academic groups, and faculty members. OIT staff also create UThink blogs for those same groups, but they designate specific contributors to add and edit blog content. Using Really Simple Syndication feeds or other formats, OIT staff link the content of the blog pages to related sections of the official CLA Web site. Changes made to blogs by contributors are then automatically updated on the official CLA pages with little or no action on the part of OIT staff. According to Kunitz, this is particularly helpful for frequent but minor updates, such as faculty members editing their curricula vitae or student groups posting upcoming events.

Using UThink to manage CLA web pages has several advantages over the old system. It frees OIT staff from having to perform every single update on the CLA Web site and allows department staff, faculty members, and students to edit content without downloading special software. Contributor access is still controlled by OIT staff, as is the the layout of the site, including banners, fonts, and colors. Content is easily categorized and tagged using UThink, allowing for easier searches on the CLA Web site. Of course, the biggest advantage is efficiency. Official Web pages are updated almost as quickly as changes are made to the blogs, since OIT staff don't have to make those updates by hand.

Incorporating blogging software has been so successful that Kunitz, Nackerud, and other University staff are presenting a workshop on using UThink for content management at the Minnesota Web Convention in April. However, Kunitz points out that improving content management doesn't stop at UThink. While

(continued on page 12)



Wikis on the Job

(continued from page 9)

communication. He discusses that changes can be archived and are easily tracked, giving collaborators the chance to discuss changes with more ease. Fernando also points out that users of wikis need very little expertise, meaning that they would be feasible to implement for many different organizations, not just those employing experienced computer users” (Fernando 2007, 12).

Wikis have been successfully used at the BBC. Nic Price, who manages “Gateway” (the BBC’s intranet), states that wikis have grown in popularity among employees because of their availability and their usefulness as a collaboration tool. He says they have been used “for collaboration space, for teams to use on an ongoing basis, or for specific projects.” The leadership wiki for the BBC Leadership Program allows users to add new information, share their experience, and comment on existing content. A wiki was even used to develop the BBC’s blogging guidelines. Price states that the ways in which wikis are used at the BBC are not administered, i.e., anyone can set one up, and there are no guidelines regarding how they are to be used (*Strategic Communication Management* 2006, 3). *The Business Communicator* (2006) also advises that organizations take advantage of the freedom that wikis allow, rather than trying to control their use. In other words, workplace wikis should be controlled by the users, which allows them more creativity and to work off of one another without the fear of being watched or monitored in an oppressive manner.

Drawbacks of Workplace Wikis

One example of the failure of wiki use in the workplace relates to an attempted collaboration between the Los Angeles Times and its readers in June 2005. The paper posted its editorial “War and Consequences” as a wiki and allowed readers to edit any part of the piece. At first, the

“wikitorial” was a place for lively discussion and debate, but only for about a day, when a few visitors to the site added inappropriate material to the piece, prompting the paper to remove the wiki. Dorroh suggests that those who try wikis “should prevent or quickly remove inappropriate posts,” as “wikis can be a magnet for online vandals.” Blogger Jeff Jarvis, in response to the situation, suggested that wikis include tools that let readers report obscene content, and that the site responded quickly to such reports (Dorroh 2005, 51). Although the idea of allowing a newspaper to collaborate with its readers seemed a good idea, this was perhaps not the best application of a wiki.

The Future of Wikis in the Workplace

As Scott B. Anderson, director of shared content for the Tribune Co.’s interactive unit, states, “with wikis, or with any tool, you have to think through what the tool does and how we can use it” (Dorroh 2005, 51). Nic Price from the BBC concurs with this opinion, stating that it’s important to find the right use for wikis, and not just using them because they’re there; for some tasks, a blog or e-mail is the more appropriate choice (*The Business Communicator* 2006, 3). Organizations considering implementing wikis should research their best applications and find the most appropriate medium that works for their particular purpose.

Works Cited

- The Business Communicator*. 2006. Will social media affect who leads internal communication? Volume 7, no. 7: 1–2.
- Dorroh, Jennifer. 2005. Wiki: Don’t lose that Number. *American Journalism Review* 27, no. 4: 50–51.
- Fernando, Angelo. 2007. Working off the same page. *Communication World* 24, no. 3: 11–13.
- Strategic Communication Management*. 2006. Collaborating with wikis at the BBC. Volume 10, no. 73: 3.



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Content Management Systems

by Robin Erickson

Content management software (CMS) allows anyone with access rights to change and update everything from web pages, documents, or other forms used by large and small businesses. Anyone with access rights can update and make changes needed to keep all the documents current.

The systems today have all the basic features: managing users, implementing pictures, assigning access levels, sending emails to the administrator or manager, pushing out the documents to a separate storage unit, and creating style sheets to keep all documents and pages the same.

There also is the need to consider the server size you will be using to operate the software system on. The main thing to look at is the storage space you will need, which depends on the future growth of your company and/or project. Today it is not uncommon to have a server that will store a terabyte or more. A terabyte should last a company a good while, and expanding on most servers is rather easy. After you determine the server size, you must decide on which kind of CMS to use. You need to know which database your software will be using to make sure that it is compatible with your server. Some types of databases that are currently in use are Oracle, SQL Server, MySQL, PostgreSQL, flat file database, Perl DBI, and Informix. Prices range between zero and five thousand dollars.

There are some setbacks with using this system. One is that you cannot always proof what others are putting out there. There are software programs that have an administrator who must give permission for any changes made to the documents. Most software programs in use do not allow you to use meta tags (key words) which are used primarily for search engines, which in turn will get your webpage a better rating. There are possible restrictions with editing the HTML source code. It may be more difficult to implement best practices search engine optimization, CMS may not comply with web standards (Hochman Consultants 2008).

CMS has many pros and cons, but ultimately one has to review which system will work best for their organization. To help you decide which CMS to use for your business, I have listed a few websites to look at that use some types of CMS:

- <http://phpwebsite.appstate.edu>
- <http://www.exhibitsusa.com/> (uses PHP)
- <http://www.ecs-online.biz/> (uses JavaScript)

Reference

Hochman Consultants. 2008. "The Pros and Cons of Content Management Systems." < <http://www.hochmanconsultants.com/articles/content-management-systems.shtml> >.

Using Blogging Software...

(continued from page 10)

blogging software is a useful tool, it is only one of a number of new and developing tools that may change the way that content management is performed. While Kunitz can't say exactly what the future of content management might hold, you can bet that he and his resourceful colleagues will lead the way in finding better content management tools in a dynamic university environment.

References

- Kunitz, Dan, and Joe Goggins. 2008. Interview by Jane Xiong. March 13. University of Minnesota, Minneapolis.
- Nackerud, Shane. 2008. Interview by Jane Xiong. March 10. University of Minnesota, Minneapolis.
- Regents of the University of Minnesota. 2007. Employees and by Department Fall 2007. University of Minnesota. http://www.irr.umn.edu/hrdata/Employees_and_Students_by_Department_Fall_2007.pdf (Accessed March 22, 2008).
- Regents of the University of Minnesota. 2006. UThink: Blogs at the University of Minnesota. University of Minnesota. <http://blog.lib.umn.edu/> (Accessed March 22, 2008).

The Benefits of Single Sourcing to Small and Medium-Sized Companies

by Vanda Heuring

This article will help you gain an overview of single sourcing and its importance for technical communicators in the workforce. Specifically, it will list the benefits of single sourcing in the field of project management for small to medium size companies (which shall be defined for this article as “up to 100 full-time employees”).

Single sourcing (also known as “single-source publishing”) is “writing documentation and information in one format and publishing it in multiple formats”¹; the short definition is “flexible, automated output”². A good example is source text that can be written in a word processor, but converted to a variety of publishing formats, such as HTML, PageMaker, or Windows Help. SGML and XML are commonly used formats for single source publishing. What makes single sourcing helpful to all companies is its efficiency, information accuracy, completeness, consistency, timeliness, usability and alleviation of duplicate effort³.

Using specific single sourcing software (such as Author-It), the writer can create a document and display its contents in several different ways without having to re-enter the information elsewhere and editing it to fit the audience. Efficiency is especially important for small companies that have to leverage their resources in order to remain competitive and financially viable. Smaller companies often employ “multi-taskers” who are good in several disciplines. Often, those employees fill more than one role within the company and are required to perform at full-time capacity in each of those roles.

As companies grow and try to manage their resources wisely, they usually employ help of a project management tool, system or professional. The idea behind project management is that the system in itself needs to be efficient and save time, rather than create busywork. The project management process (PMP) needs to be as efficient as the projects that the process is supposed to manage, and time is a critical component. In order to eliminate

a steep learning curve for the technical writer as well as to minimize the effort spent on efficiently locating the relevant content required by top management, implementation of proper single sourcing techniques is a one-time investment that pays for itself quickly.

Although it is difficult for small companies to justify up-front costs with initially “invisible” and “immeasurable” benefits to the company, the long term benefits are tangible. The tasks that initially took 3 software packages and a full day of re-write and page layout now only take a few additional clicks. An example would be a time and cost report for upper management and a time allocation report for the department group. Without single sourcing, the employee would have to use one software product to capture the data (e.g. MS Project), another product to calculate the data (e.g. MS Excel) and yet another product to create a report (e.g. MS Word). MS Office 2007 has done a great job at developing collaboration tools that allow the user to import the data that is entered once and manipulate the output using views or Import Wizards.

Of course, real-life application of single sourcing in a start-up engineering R&D company may be much more difficult in practice than in theory. Often, especially when the business is just in its infancy and is busy with production and R&D, PMP falls by the wayside. With new hires and growth in employee numbers, the need for proper streamlining processes, project management and task coordination increases exponentially and a major role of single sourcing is “fine tuning” of those processes, improving team member communication, decreasing the margin of error and wasted or duplicate effort. This is where single sourcing comes into play.

However, if a company wants to embrace single sourcing as the main process of document creation, management and publishing, its stakeholders should consider that in order “[t]o succeed and save money, single sourcing

(continued on page 19)

Although it is difficult for small companies to justify up-front costs with initially “invisible” and “immeasurable” benefits to the company, the long term benefits are tangible.

Course Management Systems in Higher Education

by Anna Ignatjeva

Numerous instructors and students have experienced the influence of technology on teaching and learning practices across disciplines in the past few decades. More than 80% of public higher education institutions have embraced technological advancements and offer web-enhanced or online courses (Benoit, et al 2006). In addition, about 50 % of four-year colleges and universities in the United States offered distance education degree programs in the academic year 2000-2001 (Beatty et al 2006).

What does this overabundance of technology in the educational environment mean to instructors and students? The presence of technology in the classroom has significantly changed strategies that many instructors used to teach. Teaching in the online environment requires instructors and students to be technologically savvy in order to navigate the emerging online classrooms. Most colleges and universities use a content management system to provide a learning platform for web-enhanced or online courses.

According to Svarre (SearchSOA.com), the term content management system is defined as a system used to manage the content of a web site. The content management application element allows the content manager or author—who may not know Hypertext Markup Language (HTML)—to manage the creation, modification, and removal of content from a web site without needing the expertise of a Webmaster. The main purpose of a content management system lies in the idea that content is stored and managed easily for various purposes. Content management systems can be used for Digital Asset Management (to store and retrieve digital multimedia), Web Content Management (to store, control, and publish documentation in various web formats), Enterprise Content Management (to store, preserve and display content related to an organizational process), and Course Management Systems (to develop, deliver, administer, and evaluate online learning environments).

As previously indicated, this article explores the content managed within CMS in higher education. Michael Simonson states

Course management systems, also called learning management systems or virtual learning environments, are software systems designed to assist in the management of educational courses for students, especially by helping teachers and learners with course administrations. (2007, vii)

In this article, I will provide a brief overview of the emergence of virtual learning environments. Then I will explore how course management systems have been effectively utilized in higher education. Finally, I will contemplate how they can be utilized across curriculum in the future.

Course management systems—or virtual learning environments—began to emerge as early as the 1950's with the first televised college credit classes. The first courses using the "PLATO" computer system in the mid 60's compiled of various functions such as presentation of the material, sorting of the material, spell checking, help systems, and other useful tools. Many other developments of virtual learning environments followed, and they finally took resemblance of the course management systems we know today.

Along with the development of technologies, a number of studies and projects on the innovative use of computers for teaching purposes began to appear. Many educators focused on how to channel and use the newly promising technologies for the benefit of academia. Well-known projects such as MIT's Project Athena and Stanford University's Education Program for Gifted Youth (EPGY) contributed not only to the development of new technologies, but they further explored the impact of teaching and learning online. Similar studies were conducted across Canada, the United Kingdom, and other European countries.

As early as 1990, the results of MIT's Project Athena produced the system of "shared

(continued on page 15)

The presence of technology in the classroom has significantly changed strategies that many instructors used to teach.

Course Management Systems...

(continued from page 14)

services” that very closely resembles many current course management systems. The features of the system included printing, e-mail, bulletin board conferencing, online help, and access to system libraries. Soon, popular proprietary course management systems were created—BlackBoard, Inc. (1991), WebCT (1995), Ucompass.com with Educator Course Management System (1998), and Desire2Learn (1999). In addition, open-source content management systems such as Moodle, ATutor, and Sakai Project appeared on the market between 2002 and 2005. This leads us to discuss how course management systems are effectively utilized for teaching and learning in higher education.

The Achieved Course Management Systems (EduTools) web site provides a list of course management systems for easy product comparison. Some course management systems compared include BlackBoard, Desire2Learn, WebCT, Moodle, Sakai Project, and ATutor. The most common course management elements utilized in online learning are discussion boards, file exchange (drop box), real-time chat, orientation help, group work, course management, online grading tools, and student tracking. All of the above programs offer these tools in various capacities.

Michael Simonson states, “A course management system allows teachers to manage their classes, assignments, activities, quizzes and tests, resources, and more in an accessible online environment” (Simonson 2007, vii). As a result, students and instructors in an online course can interact and perform similar tasks as students and instructors in a face-to-face classroom. Students can use online classrooms to present content, share files, and communicate with each other during or between class meetings via chat or discussion board (Beatty et al 2006, 36).

The majority of educators who do not utilize course management systems in their instructions consider online classrooms as less collaborative than face-to-face classrooms. It is quite the opposite, however. Many tools such as group work element, chat, and discussion promote communication (along with critical thinking skills) among online students. It all depends on the instructor’s willingness to adapt the teaching

style to the online environment while still maintaining the curricula goals of the program. Connie Ulasewicz—assistant professor in the program of apparel design and merchandising at San Francisco State University—understands that most of her students are visual learners. This encourages her to create activities that match up the visual learning styles in her web-enhanced course; thus, she creates an environment where open and active participation in discussions and projects leads to self-discovery and improved learning (Beatty et al 2006, 37).

The future of course management systems in higher education looks promising. The trend of Web 2.0 use requires instructors to match their teaching with the learning styles of the current generation of students. As Edward Maloney points out, there is “focus on innovation, creation, and collaboration, and an emphasis on collective knowledge versus static information delivery” (Maloney 2007, 29). Consequently, wikis, blogs, and social networking create and encourage an active participatory user—a student who shares, collaborates, problem solves, and reflects on his/her thinking.

The challenge of course management systems and their developers is to continue grow technologies that provide student-centered and active-learning features within their platforms. More so, higher learning institutions need to address the effective integration and use of Web 2.0 technologies in teaching and learning across disciplines.

References

- Beatty, Brian and Connie Ulasewicz. “Faculty perspective on moving from Blackboard to the Moodle Learning Management System.” *TechTrends* 50 (2006): 36-45.
- Benoit, Pamela, et al. *The Effects of Traditional vs. Web Assisted Instruction on Student Learning and Satisfaction*. Columbia, MO: University of Missouri, 2006.
- EduTools. “ArchiveCMS: Product List.” http://www.edutools.info/item_list.jsp?pj=8 (accessed March 24, 2008).
- Maloney, Edward J. “What Web 2.0. Can Teach Us About Learning.” *Chronicle of Higher Education* 53 (2007): 29-31.
- Simons, Michael. “Course Management Systems.” *The Quarterly Review of Distance Education* 8 (2007): vii-ix.

LCMS in Transition

From the Classroom to the Boardroom

by Lori Hood

Education has been transformed by the ability to provide anytime, anywhere instruction. This transformation has accelerated through the use of learning management systems (LMS), which are software applications that enable content management as well as interaction between instructors and students. While content management systems (CMS) are commonly used in business to manage corporate information, why is industry now implementing a learning content management system (LCMS)—an offshoot of a CMS?

In education an LCMS provides administration of learning and training programs. “An LCMS is a system (mostly Web-based) that is used to author, approve, publish, and manage learning content (more specifically referred to as learning objects)” (Nichani 2001). Key building blocks to a good LCMS include assessment tools, user-friendly content creation tools, flexible course design and delivery, administrative tools, and communication and collaboration features. A primary advantage in an LCMS is the inclusion of reusable learning objects (RLO) within a course. Nichani (2001) defines RLOs as the “smallest self-contained chunks” of information “that can be mixed and matched to create larger personalized instruction sets” that target specific goals and competencies. Stated another way, RLOs are the building blocks of e-learning content (Ellis 2001) and can include various media types such as text, graphics, audio, video, animation, tests, and simulations. The benefits of an LCMS to a learner enrolled in an educational program are obvious, but how do companies and organizations benefit from an LCMS?

Prior to the emergence of e-learning technology, organizations provided training in a traditional, face-to-face manner or through expensive interactive technology. If an employee began employment midway through a course, he/she would need to wait until the course was repeated to enroll. In addition, traditional

classroom instruction (one teacher, many students) offered limited ability to tailor a course to the individual needs of each student; instead, a one-size-fits-all approach was used. Today’s technology, however, now enables corporations to develop and deliver proprietary knowledge to a targeted audience through an LCMS.

Delivery of learning at the corporate level may begin with a pre-assessment that targets learning gaps in employees’ skills. Pre-assessment results are then used to determine necessary training that may include entire courses or individual modules that are “just right” for each employee. The administrative function of an LMS enables companies to plan and track employees’ progress as well, which is particularly useful for employees who require special certification and/or licensure. An added benefit is that every learner receives consistent and current information.

An LCMS allows companies to react to predictable knowledge gaps. For instance, if a product is set to launch in a month’s time and the sales force needs to learn about the product quickly, an RLO can be created to provide “just in time” training. Traditional training and learning strategies necessary in a global workplace were at best unmanageable and most likely impossible. With an LCMS, however, training can be developed and made available to accommodate different types of materials, learning methods, and schedules. (Robbins 2002) The elimination of wide-scale training efforts is a definite cost reduction for organizations.

According to Ryann K. Ellis, an editor at Learning Circuits, the benefits of LCMSs are clear. Users can create, manipulate, and deliver learning that is on-demand, based on context, and determined by the learner’s query. The end result is what organizations continually seek: higher productivity.

(continued on page 17)

Single Sourcing

Applications in Today's World

by Karen Conyers

At the end of the 20th century, as computer use flourished, corporations began making product information available online. No longer were traditional paper manuals and marketing materials the only options for users; now there were also task-oriented online help, reference information hyperlinked to particular words, and PDF views of the original manuals. As writers busily created documents for each of these formats, a major problem was revealed: what worked in print did not always work in the electronic world.

Manuals are designed to be read like a book, with two facing pages of text and diagrams and references to other pages within the document. Users can flip back and forth between sections

to learn a system or locate answers to their questions. In many cases, it is assumed that the user has read information found in earlier sections of the chapter or book (Butland 2001).

Although electronic information contains much of the same information, it requires a different approach than printed documents. There are no pages to reference; instead, links embedded within the program or website connect users to additional information, or a help menu provides targeted or indexed information for specific problems. Users do not move sequentially through pages and not all users will read the same information.

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LCMS in Transition...

(continued from page 16)

Works Cited

- Ellis, Ryann K. 2001. LCMS roundup. *Learning Circuits*. < <http://www.learningcircuits.org/2001/aug2001/ttools.html> >.
- Nichani, Maish. 2001. LCMS = LMS + CMS [RLOs]. *e-learningpost*. < http://www.elearningpost.com/articles/archives/lcms_lms_cms_rlos/ >.
- Robbins, Shelley R. 2002. The evolution of the learning Content Management System. *Learning Circuits*. < <http://www.learningcircuits.org/2002/apr2002/rob-bins.html> >.



STC Members

The April issue of *Intercom*, a special issue on DITA, has been posted to www.stc.org/intercom



Among the topics covered in this issue:

- DITA tools for editing, content and translation management, and publishing
- the possibilities of DITA-wiki hybrids
- specialization in DITA

Single Sourcing: Applications...

(continued from page 17)

As electronic formats were adopted, it became increasingly difficult for writers to keep all of their information format-specific, up-to-date, and error-free. In the late 1990s, the single source technique was developed to help address all of these issues.

Philip Butland (2001) defines single sourcing as using “the same source document to produce multiple versions in any medium.” Chapters, paragraphs—even sentences—can be “packaged” as chunks of information, or modular components, and then combined for use in any type of document format. Butland notes, “To create good single source documents, information must be written and structured so that it makes sense in a number of different contexts.”

The key to successful use of single sourcing is in-depth planning done well in advance of implementation. Workflows, document outlines, and even cross-referencing must be identified before any writing actually takes place (Brierly 2002). Writers must identify what information is likely to be used in multiple venues, how small or large the modules should be, and what modules should be used in which documents. Linda Greene (2000) likens modules to ingredients such as butter and flour combined in different ways for different recipes. Templates can also be created for different types of materials, such as reference, application notes, user guides, or training materials (Rockley 2000).

The goals of single sourcing are to reduce costs and improve efficiency. To meet these goals, information modules must conform to a style guide that ensures consistency. Ann Rockley (2000) recommends structured writing as a method for

analyzing information to determine how it is best communicated to users, identifying common information elements across a documentation set/product line, dividing information into manageable chunks, determining a suitable format for reach chunk of information, grouping and sequencing chunks into related topics, and presenting the information in a manner best suited to the information’s purpose and the users’ needs.

“Effective structured writing,” she states, “produces clear, understandable, and very consistent materials. This consistency is critical in single source materials.”

Patricia G. Moell and Helen Weeks (1996) note that each module must be tested to assure that it can stand alone. Modules must also be reviewed for content accuracy, grammar, spelling, logical arrangement, links to other modules, and any legal requirements.

Once written, a consistent naming convention must be used to organize modules and make sure they are easy to identify and locate. A relational database tracks where modules are used and how they fit with other information modules. This assures that modules are readily accessible for re-use and for later updates (Greene 2000).

Because of the effort required to convert to single source systems, this technique has not yet been widely adopted. But many software tools have been developed to help users make this transition, and as they do, the reports are favorable. Single sourcing does seem to be the wave of the future.

Works Cited

- Brierly, S., 2002. Beyond the buzzword: single sourcing. *Intercom Online*. < http://www.stc.org/intercom/PDFs/2002/200201_15-17.pdf >.
- Butland, P., 2001 Introduction to single source, part 1. *Intercom Online*. http://www.stc.org/intercom/PDFs/2001/200102_23-27.pdf >.
- Greene, L., 2000. Challenges and advantages of modular documentation. *STC Proceedings*. < <http://www.stc.org/confproceed/2000/PDFs/00012.PDF> >.
- Moell, P. and H. F. Weeks, 1996. Developing information for multiple formats: you can get there from here. *STC Proceedings*. < <http://www.stc.org/confproceed/1996/PDFs/P26973.PDF> >.
- Rockley, A., 2000. Designing effective single source materials. *STC Proceedings*. < <http://www.stc.org/confproceed/2000/PDFs/00023.PDF> >.



The key to successful use of single sourcing is in-depth planning done well in advance of implementation.

The Benefits of Single Sourcing...

(continued from page 13)

requires a disciplined, template-driven approach to content authoring²⁴. The initial switch-over and process setup should be considered as up-front investment that will pay off fast with proper application of single sourcing. In addition to set-up cost, the company should evaluate its specific needs and decide on the level of single sourcing (low, mid, or high), each varying from one another on cost, setup, and content structure⁵.

Single sourcing benefits speak for themselves: efficiency, streamlining of processes, minimizing duplicate effort and errors, and many other cost-saving advantages. Smaller companies with limited resources need to maximize the impact of each task and optimize their processes for most efficient resource usage. Single sourcing seems to be a good fit for small companies with smarts.

Notes

1. http://www.pcmag.com/encyclopedia_term/0,2542,t=ingle+sourcing&i=51401,00.asp (accessed February 8, 2008).
2. Gemmell, Alison. 2004. *Single Sourcing, Structured Authoring, and XML*. ActiveVoice, STC San Francisco Chapter <http://www.stc-sf.org/newsletter/2004-dec/september.html> (accessed January 17, 2008).
3. Rockley, Ann and Steve Manning. *Single Sourcing: Benefits to the Life Sciences*. <http://www.stc.org/ConfProceed/2003/PDFs/STC50-086.pdf> (accessed Jan 21, 2008).
4. Gemmell, Alison. 2004. *Single Sourcing, Structured Authoring, and XML*. ActiveVoice, STC San Francisco Chapter <http://www.stc-sf.org/newsletter/2004-dec/september.html> (accessed January 17, 2008).
5. Wing, Wendy Y. 2003. *Single-sourcing-the Solution for Duplicated Efforts With Documentation*. Wing Group. <http://www.wing-group.com/article0303.asp> (accessed January 17, 2008).

References

- Gemmell, Alison. 2004. *Single Sourcing, Structured Authoring, and XML*. ActiveVoice, STC San Francisco Chapter <http://www.stc-sf.org/newsletter/2004-dec/september.html> (accessed January 17, 2008).
- Rockley, Ann. *The Impact of Single Sourcing and Technology*. Technical Communication 48.2 (2001): 189–193.
- Rockley, Ann and Steve Manning. *Single Sourcing: Benefits to the Life Sciences*. <http://www.stc.org/ConfProceed/2003/PDFs/STC50-086.pdf> (accessed Jan 21, 2008).
- Wing, Wendy Y. 2003. *Single-sourcing-the Solution for Duplicated Efforts With Documentation*. Wing Group. <http://www.wing-group.com/article0303.asp> (accessed January 17, 2008).

STC Academic Programs

One of the incorporating principles of the Society is to “guide and inform students and to aid colleges and universities in the establishment of curricula for training in the arts and sciences of technical communication.” STC provides support to teachers and students of technical communication through programs, scholarships, grants and loans, annual conferences, and seminars. The Society also provides information about events and courses related to technical communication.

Please visit STC.org for further details on academic programs.



Content Management Systems – The Technical Communicator’s Role

by Lance Schwartz

With students enrolled in the Minnesota State University Technical Communication program coming from a variety of backgrounds, it really shouldn’t come as a surprise that their familiarity with content management systems (CMS) ranges from neophytes to expert users. In this article, I’d like to answer some common questions about CMS and the role they may play in your career as a technical communicator.

CMS is most often thought of as a tool for managing and publishing content on a Web site. The basic concept with CMS is the ease by which content can be posted to a Web site (Guenther 2006, 54). Many CMS applications allow the content creator (writer) to simply type content into a database through a user-friendly interface and the CMS generates a Web page automatically. With most CMS applications, all of the coding goes on in the background (Harrison 2006, 5). With this ease of use, the CMS is a great tool for a business that is maintaining hundreds or thousands of Web pages. Instead of waiting for a Web master to post newly submitted information, the information is posted immediately (or after gaining editorial approval). This process has the potential to eliminate a Web content bottleneck in the Web master’s office (55).

But Web content management is merely the tip of the iceberg in today’s world of CMS. Content management systems help the technical communicator manage much more than just a Web site. Other CMS systems include **digital asset management**, which is a repository for graphics, **document management** is designed to manage an entire document (graphics and text), **enterprise content management (ECM)** combines hardware, software, and infrastructure to enable an organization to store, manage, and access information generated throughout the organization without regard to its form or source. ECM manages a range of content as varied as e-mail archives, radio frequency identification-tagged inventory, and document management of paper files, to name a few.

Finally, **single-source content management** allows users to store “chunks” of content such as paragraphs of text, graphics, sound clips, multimedia clips to a central repository. The content can then be reused for a variety of different purposes (Mescan 2004, 54-55).

Technical communicators can benefit greatly from the implementation of a CMS. But the learning curve can be steep and you’ll need to know the ins and outs of CMS. There are a host of good articles about CMS. Simply search your favorite academic database for CMS and you’ll find many good articles.

While the technical communicator will be a primary user of a CMS, the installation of a CMS won’t be the technical communicator’s responsibility alone. Your company’s information technology department (IT) will be a key player in the CMS installation. The CMS application your company chooses must be able to operate on your company’s network (Savarese 2004, 64). Before the purchase of a CMS package is made, it would be wise to get to know your company’s IT department well. Devoid of a partnership with IT, the CMS project could be on the fast track to failure.

Choosing a CMS for your company’s situation won’t be an easy task. There are literally thousands of choices on the market today (Doyle 2007, 31).

The process of finding the best CMS for your company will most likely be budget driven. CMS are expensive with prices ranging from \$25,000 to many hundreds of thousands of dollars. Most good CMS applications also charge a yearly user fee (Angelo 2005, 70). Know what you need before you go shopping and know your budget before you start asking for proposals (July 2006, 69). Put together your must have list of features and have a price range in mind. Without a list of needs and a budget, you’ll most likely be wasting your time and the sales department’s time.

Assume that your new CMS application will not be perfect. Good customer service will be

(continued on page 22)

Choosing a CMS for your company’s situation won’t be an easy task. There are literally thousands of choices on the market today.

Information Architect – Who? What? How?

by Keeley Mathews

I've been watching with interest as a new office building is going up in my neighborhood. The ground was prepared, building materials were brought in, equipment and workers arrived. Now, the structure is beginning to take shape. It is several stories high and will have a brick exterior, lots of windows, and a slanted roof. Although I feel like I have been observing since its inception, the truth is that I missed one of the most important parts of the project. Long before the actual building started, an architect created a plan which detailed the design and construction of the building.

Imagine a well-designed website. Information is easy to find, navigation is intuitive and user-friendly, and the design is pleasing as well as unobtrusive. Just as with the building construction described above, long before the website was actually constructed, an architect—an information architect (IA)—created a plan which detailed the design and construction of the site.

A content management system in its simplest form addresses three functions. The first deals with creating and collecting information, or content. The second requires a system or environment for storing the content. And the third allows the content to be published or presented in different formats. Information architects are concerned with understanding and interweaving the three functions into a cohesive process, focusing especially on the underlying structure of the information. According to webmonkey.com, “information architecture is the science of figuring out what you want your site to do and then constructing a blueprint before you dive in and put the thing together.” (Shiple)

On a job posting seeking an IA, the idea was described this way: “The Information Architect’s primary responsibility is to translate user needs into comprehensive online experiences. The design of the experience is rooted in site analysis, information design, usability principles, and customer research.” Although there is no one definition for an IA that is commonly agreed upon, in its narrowest form, information architecture focuses on content organization and the structure of information

spaces. As the definition widens, information retrieval, usability, and findability are added.

Just as there is no standard definition of an IA, there is no traditional path that will lead someone into this career. Jesse James Garrett, cofounder of the Information Architecture Institute, says, “Most working information architects got to be information architects by doing [information architecture] as part of some other job they had ... They get hired to do a job for which information architect may or may not be a defined part of their responsibilities, they take an interest in it, and they manage to talk somebody into letting them take responsibility for those things” (Hoffman).

Successful IA’s have gotten their start from the fields of programming, library science, journalism, database design, and technical communication. Their skill sets include competency in analysis, organization, design, and communication, and they must have a good working knowledge of information technology, especially as related to content management. Most information architects have a college degree of some sort. Although there are limited opportunities for formal training in information architecture, programs are beginning to appear.

The Information Architect Institute has a quick online test¹ (Information Architect Institute) that might show if someone has the interests and abilities desirable for success in the field.

Note

1. < http://iainstitute.org/documents/learn/Am_I_an_IA.pdf >.

Works Cited

- Hoffman, Allan. Information Architects—Web Builders with a Sales Bent. <http://career-advice.monster.com/job-industry-profiles/technology/Information-Architects/home.aspx>. (accessed March 27, 2008)
- The Information Architect Institute. 2007. Am I An Information Architect? http://iainstitute.org/documents/learn/Am_I_an_IA.pdf. (accessed March 27, 2008)
- Shiple, John. 2008. Information Architecture Tutorial. http://www.webmonkey.com/design/site_building/tutorials/tutorial1.html. (accessed March 27, 2008)



Content Management Systems...

(continued from page 20)

important. Most likely, you'll need some help from the CMS vendor when something with the application isn't working just the way you expect it or like it to. Good customer service will help you to keep your sanity when making the move to a CMS.

Finally, keep in mind that CMS is not a cure-all solution for every technical communicator's content problems. CMS is merely a tool and people must use the tool (Guenther 2006, 54). It's best to have a plan in place that all the stakeholders will follow. The plan will guide the technical communicator through such issues as: who is responsible for content creation, editing, and delivery of the content. If you fail to plan for the use of the CMS, you'll most likely be stuck with a very expensive piece of software that nobody will utilize (56).

Works Cited

- Angelo, Jean Marie. 2005. Oh, what a tangled web... *University Business* 8.3: 69-74.
- Doyle, Bob. 2007. Compare and contrast CMS. *EContent* 30.1: 31.
- Guenther, Kim. 2006. Content management systems as silver bullets. *Online* 30.4: 54-56.
- Harrison, Warren. 2006. From the editor: content mismanagement systems. *IEEE Software* 23.1: 5-8.
- Joly, Karine. 2006. 10 tips for surviving a CMS switch. *University Business* 9.10: 69-70.
- Mescan, Suzanne. 2004. Why content management should be part of every organization's global strategy. *The Information Management Journal* 38.4: 54-57.
- Savarese, John. 2004. Web content management. *University Business* 7.12: 63-64.



Sunday, June 1 - Wednesday, June 4, 2008
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If you have an interesting story idea, or if you are interested in contributing to *Techniques*, please contact our editors or faculty advisors listed in the staff section on page two. We look forward to hearing about your idea!



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English 271 (4 credits)
Technical Communication
7 sections (1 online)

English 4/571 (4 credits)
Visual Technical Communication
H (online) 7:00 – 8:30 pm Hurley

English 4/572
Topics: Document Design and Usability
S (online) 10:00 – 11:50 am (9/08–11/10)

English 4/573 (4 credits)
Desktop Publishing
F (online) 12:00 – 3:30 pm Nord

English 4/574 (4 credits)
Research and Writing Technical Reports
M 6:00 – 9:30 pm MacKenzie

English 4/575 (4 credits)
Editing Technical Publications
W (online) 7:00 – 8:30 pm Nord

English 4/577 (4 credits)
**Technical Documentation, Policies,
& Procedures**
T H 10:00 – 11:45 am Tesdell

English 479 (4 credits)
**Rhetorical Theory Applied to Technical
Documents**

T H 10:00 – 11:45 am MacKenzie

English 673 (3 credits)
Research and Theory of Tech Comm
M 6:00 – 8:30 pm Perbix

English 674 (3 credits)
Topics: Presidential Election Technology
W (online) 7:00 – 8:30 pm Perbix

English 680 (3 credits)
Topics: Proposals

T (online) 7:00 – 8:30 pm Hurley

Reminder!

The Minnesota State Mankato STC Student Chapter is run by its student members. If you are interested in joining the chapter, please contact one of our faculty advisors listed on page two.



FROM THE EDITOR

Well, this is my last contribution to the STC student chapter at Minnesota State University, Mankato. I've thoroughly enjoyed and appreciated my time here, and the Technical Communication program has blessed me with many skills that will carry me into a successful future.

During my time in the Graduate Certificate program, I acted as president of our small student chapter; re-designed *Techniques*; got hired to work an irreplaceable graduate assistantship; and, of course, took many courses that showed me the ins and outs of Technical Communication.

This program is a demanding and rewarding one, and I feel so incredibly comfortable with moving on to the workforce. The faculty have been so helpful with giving me the time and motivation I needed, so, first off, I must thank Gwen Griffin for starting it all. She offered me an internship when I was just an undergrad, and because of her generosity and encouragement,

I continued into the graduate Technical Communication program. I also must thank my amazing and dedicated professors, Lee Tesdell, Gretchen Perbix, Roland Nord, Kathy Hurley, and Nancy MacKenzie. Their knowledge and kindness goes much further than the classroom!

This issue of *Techniques* focuses on single-sourcing and content management systems. The Spring 2008 English 577 students wrote the fantastic articles, and the following individuals were kind enough to contribute as editors:

- Amy Beeman
- Karli Bartlow-Davis
- Sasha Komarenko
- Kelcey Woods-Nord

Thank you all so much for your support over the last year. It means so much! Please continue to support the student chapter in the future, as other talented students take over. I hope you enjoy this issue and those still to come. See ya!

—J.J. Carlson

SOCIETY FOR TECHNICAL COMMUNICATION



Minnesota State Mankato Student Chapter
Department of English
Minnesota State University, Mankato
230 Armstrong Hall
Mankato, MN 56001