

Usability testing of web site design and content: two case studies

by Heather Lum

At one of the companies where I used to work, I had the opportunity to participate in two usability testing efforts. The teams I participated on learned a lot in both cases. One usability study was a low-cost effort, and the other received additional funding beyond the costs associated with staffing. I'll describe each case and explain what we did to perform the usability test, what we learned, and how the results were (or were not) applied.

Low-cost example

My team's project was to usability test the content model for an intranet site that we were also developing. The site would make new and existing customer service policies, procedures, product information, and contact information available to customer ser-

vice staff from a single portal. It would be integrated with a new customer service application that was being designed to model a new workflow process as well as replace numerous legacy systems.

With the old systems and workflow, when customer service representatives and support staff wanted to reference policy or procedure-related documentation, they had to access an overwhelming combination of mainframe-based online documentation, paper manuals, sticky notes, mainframe-based news groups, and emails. The information within each of these repositories was disorganized, often outdated, and frequently categorized based on the legacy system in existence at the time the documentation was first written.

The intranet site portion of project received

no specific funding beyond staffing, so the cost was limited to the number of person hours it took to complete each phase of the project.

What we did

Our team was made up of information developers, an application developer, business analysts who had been customer service representatives, and support staff who authored customer service policy and procedure documentation.

After researching, tracking, and analyzing every conceivable repository of existing customer service documentation in a spreadsheet, our team used the information to come up with an initial content model for the intranet site. Our content model included categories of information with

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Bringing the user into your work

by Heather Lazzaro

One of the most important maxims in technical writing is "know your audience." But, how can you be sure that you *really* know them? Conduct some basic user and task analysis to understand what documentation type, format, and content will work best for your users. Before you write about even one screen, you should be able to summarize the characteristics of your audience and understand what tasks they will perform with the product that your company is creating. Consider the following questions about your audience. Keep in mind that this

is just a sampling of questions; you can come up with many more depending on the particular product you are documenting.

User Profile Questions

- What is their average age and education level?
- Are they mostly male or female?
- Do they have any biases toward technology?
- How long have they been in their current jobs, and what kinds of positions did they have previously?

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BLUE PENCIL

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President's Column

by Heather Lum

The survey results are in. Thanks to those of you who responded, the Pittsburgh chapter board has learned much more about what topics are of interest to you, when and where you would like to have meetings, and how much you are comfortable paying for food and drink.

The results

Meeting topics: The survey asked members to identify topics that would interest them enough to attend an STC meeting. Each of the popular topics listed below was chosen by over 50 percent of respondents. Each person also indicated the three topics that were most important to him or her. Not surprisingly, these topics were among the most popular.

- Professional development (1)
- Project management strategies (2)
- Tools and technology: publishing (3)
- Information design
- Tools and technology: general Web development

Meals and costs: The survey asked members whether they would attend meetings where hors d'oeuvres were served in lieu of a meal. It also asked members to indicate how much they were comfortable paying for food and drink at a meeting.

Everyone said either that they would like hors d'oeuvres, or that it didn't make any difference to them. The majority (52 percent) said they were comfortable paying between \$10 and \$15 for food and drink at a chapter meeting.

Meeting locations and times: The survey asked members whether they would attend meetings held at times other than a weekday evening. Of those who responded to the question, 56 percent said they would attend a weekday lunchtime meeting, and 48 percent said they would attend a weekday breakfast meeting. There was some interest in weekend meetings as well.

One question targeted members who rarely or never attend chapter meetings, asking them why they don't attend. Of those who responded to the question, 37 percent cited inconvenient meeting times, and 22 percent cited inconvenient meeting locations.

Planned changes

Meeting topics: The topic results were surprising in some instances. "Online help authoring" appears to have been done to death, because the topic ranked near the bottom in interest and importance. Topics such as "Editing" and "Single-source documentation" were also among the least popular.

While most of the meetings for the 2000-2001 year are already planned (and include a mix of very popular and less popular topics), the chapter board will use the survey results to plan meetings for the next program year.

Meals and costs: Most people indicated they are open to or even prefer meetings without meals, so we plan to try a few hors d'oeuvres-style meetings over the next few months. The November meeting dinner was canceled due to lack of response, but three times as many people as those who RSVP'd attended the presentation portion of the meeting, where they enjoyed the finest in soda, chips, and pretzels. The cost to the chapter of providing hors d'oeuvres at little or no cost to attendees is significantly less than the cost of serving dinner and charging attendees \$10 to \$15. Plus, light hors d'oeuvres can be served anywhere, which opens up additional possibilities for meeting locations.

Meeting locations and times: Many people said that meeting times and locations are not convenient and that they are interested in meeting during the weekday over breakfast or lunch. While most of the remaining 2000-2001 meetings are already scheduled for weekday evenings, we will plan some breakfast and lunch meetings for the next program year.

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High-Falutin' Ideas (And Business) At 10th Annual "Tech Fest"

by Jon Szish

Samuel Morse? The father of e-commerce? That was Al Pinkus' bold suggestion at the 10th annual ITEC, or Information Technology Exhibition and Conference, held Oct. 25 and 26 at the David L. Lawrence Convention Center.

"Before Morse, the best you had were signal flags," said Pinkus, vice president of Adonix, Inc., which is a French systems developer with offices in Sewickley. "Everything moved at the speed of the wind." The comment probably wasn't too far from the truth, considering how the electronic alphabet otherwise known as Morse code opened the door to so many new technologies after its first use in 1844.

Pinkus' thoughtful juxtaposition was emblematic of the high-tech idea exchange at ITEC, where ideas flowed freely. The tech fest drew hundreds of area professionals together to ponder the wares and brochures of 130 vendors of high-tech products and services - and in some cases, free give-aways.

In addition, there were plenty of seminars, like the one Pinkus presented that was titled, "Does Your e-Business Backbone Need a Chiropractor?"

For the tech writer, there was much buzz about XML, an acronym for "extensible markup language," the now-contagious format for storing document content that also allows for meaningful description of the content. Companies such as Treehouse Software Inc. of Sewickley gave a seminar titled "Catch the XML Wave," which explored the company's Tamino database management system. Treehouse billed the database as being the first information server to store XML data without converting it into other data structures and as being able to integrate legacy data sources into XML documents.

Westlake Internet Training, a Virginia computer training company with offices in Pitts-

burgh, told tech professionals in a seminar about the pros and cons of the most common Web-to-database integration technologies, such as Perl, ASPs, ColdFusion and JSPs.

Imark Communications, the event management company that produced the conference, puts on about 60 ITEC shows nationwide each year. An Imark spokeswoman said the company doesn't release turnout numbers for its conferences, which are designed to generate exhibit-floor traffic between tech professionals and vendors.

Perhaps several of those very same vendors perked up when the state's chief Information Technology supervisor said Pennsylvania buys \$360 million in new technology products each year.

That tidbit came from Charles F. Gerhards, deputy secretary for Information Technology in the Governor's administration office and one of ITEC's keynote speakers. He told how Gov. Tom Ridge has tried to turn around a low-tech state - one of three states, in fact, that had no Web presence when Ridge took office in 1995. But with a frenzy of refocus in recent years, the state's Web site clocked its billionth visit in August.

Some entreprenurial tech writers might appreciate how another state Web site walks a future business owner through the process of launching a business. Because Ridge wants to promote high-tech growth, he helped launch the web site http://www.paopen4business.state.pa.us, a site which allows users to fill out state business permits online.

Ideally, Gerhards said, the Web site will one day enable users to apply for all state permits and then link to their local county and municipal Web site to fill out those permits online. But in that case, an entrepreneur will be limited by his home municipality's online presence (or lack thereof) to fill out the forms.

Since this site was launched in October 1999, nearly 8,700 prospective businesses have registered with the state online, Gerhards said. In fact, just 11 minutes after the state launched the site, a Canadian bakery company chose to locate in Pennsylvania because of the Web site, which helped the company discover the state's proximity "to a lot of milk and eggs," Gerhards said, referring to the state's strong agriculture industry.

Perhaps more than informational seminars, this year's ITEC showed what a high-tech community Pittsburgh has become. Representatives from local companies such as Treehouse Software, Universal Information Systems (of Plum), Enterasys Networks (of Pittsburgh), and Marconi (British-owned but with offices in Warrendale) showed their wares and gave demonstrations. There were plenty of national ones as well, such as Microsoft, which demonstrated its new server application, Microsoft Exchange 2000, which the company billed as one of the first in a wave of new server applications built to take advantage of the power and reliability of the Windows 2000 server.

If you go next year ...

Next year's Pittsburgh ITEC convention is scheduled for Nov. 28 and 29, 2001, at the Greater Pittsburgh Expo Mart in Monroeville. For information, call (503) 968-1123 or check out Imark's Web site at http://www.goitec.com





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President's Column

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Location is a tricky issue, no matter what time a meeting is held. Meetings are usually located downtown or in Oakland, both central work areas in Pittsburgh. Several respondents requested that the chapter try to hold a few meetings a year outside of the city in, for example, the Monvroeville area. While weekday breakfast or lunch meetings would probably not work in these outlying locations, weekend meetings or weekday meetings scheduled later in the evening could.

Thanks again to everyone who took the time to complete the survey. The first 10 members to respond received \$10 gift certificates to Barnes & Noble, and all participants received coupons for a \$5 discount on an upcoming chapter meeting of their choice.

More information is online: For the complete survey results, visit the STC, Pittsburgh chapter Web site at http://www.stcpgh.org.

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Editorial Calendar

January, 2001 — Presenting your portfolio. Deadline 12/15/00.

February, 2001 — Java technology, part 1 (Java programming language). *Deadline* 1/15/01.

March, 2001 — Java technology, part 2 (Components). *Deadline* 2/15/01.

April, 2001 — Indexing. *Deadline* 3/15/01.

May, 2001 — Writing for the World Wide Web. Deadline 4/15/01.

Summer, 2001 — Annual conference wrap-up. Deadline 6/15/01.

Advertisements

STC Pittsburgh members may place a free business card-sized (2 1/4 inch x 3 1/2 inch) ad for their products or services in each issue; non-member cost is \$25 per ad, per issue. For larger ads, please contact the editor. Ads received by the deadline will be included in the next month's issue.

Guidelines

Send your submissions to:

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Electronic submissions (email or diskette) are preferred. I can accept most word processing and graphics file formats and can scan hard copy artwork. Contact me if you have any special requirements.

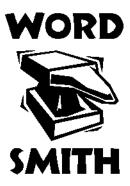


Word Smith: Grappling with graphics

by Bob Mohr

Perhaps no other area in Word causes more grief than graphics. Fortunately, the graphics monster can be tamed.

With a little practice, you'll find you can do with Word's built-in graphic capabilities, the



same things you can do with many dedicated graphic programs. The following examples illustrate some of the possibilities.

Rather than get bogged down here with a discussion of the intricacies of Word's text and graphic layers, let me offer a few rules of thumb concerning graphics that have proven valuable time and again:

- Put graphics in text boxes whenever feasible. Text boxes offer finite placement control.
- Refrain from embedding graphics in documents—especially if the document is large or contains many graphics. Always link your graphics.
- Refrain from using graphics in BMP format. BMP files are excessively large. The same visual quality can be achieved with GIF or JPG versions of the same graphic at a fraction of the size.

WordArt

This is a feature that can be used as many ways as you care to imagine. It's great for newsletters, banners, CD labels, jewel cases, business cards, T-shirt transfers—all sorts of things. It's also easy to use.

WordArt objects are handled in much the same way as other Word objects. They can be dragged and dropped, resized by dragging a resizing handle, and rotated. And best of all, they can be modified with colors, shadows, fills, and textures.

A WordArt object is a great way to mark a document as a DRAFT version while adding a little pizzazz to it. Used this way, the WordArt object appears as a watermark. Watermarks are often used to subtly display a graphic element in your document. This can be a note such as "Draft" or "Confidential." The result could look something like this:

the margin of the document.)

- 4. Select an object style and click **OK**. The WordArt text box is displayed.
- 5. Replace the text prompt with DRAFT and choose an appropriate font. You needn't be too concerned with the font size now as the object can be resized using the sizing handles.
- 6. Click **OK** to close the box. The WordArt object is displayed.
- 7. Place the WordArt object on the page and resize it to suit by dragging the sizing handles. This is also the time to

ACME Telephone/Telecommunication Policy

Policy statement

This policy contains guidelines governing changes to, and use of, telecommunication service within ACME. The guidelines include physical changes to the system, such as adding new services, moving phones, calling cards, voice mail, teleconferencing, training, and terminating services.

Telephone service requests

General telecom-related service questions should be directed toward the ACME Office Manager.

All ACME employees are given their own office phone. Other telecom equipment/en vileges are available as outlined in the remainder of this policy.

Additional phones for new employees

Hiring managers are required to notify the ACME Office Manager a minimum of 48 hours prior to the start date of a new employee.

Relocating an existing phone

Requests to relocate an existing phone line should be made to the applicable department over and the ACME Office Manager.

Here are the steps for adding such a WordArt object:

- Create the document as you normally would
- 2. Double-click on the header area to display the header view.
- Choose Insert > Picture > WordArt.
 The WordArt object gallery is displayed. (The vertical objects are good choices for displaying text vertically in

change the fill color of the letters. The example above used a light green color that is easily seen on screen without being obtrusive and prints on a black & white printer as a very light gray. (An easy way to work on a WordArt object is to display the WordArt toolbar and use the available icons.)

(Continued on page 6)

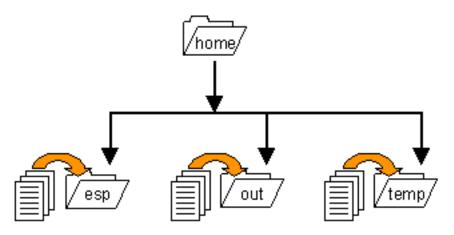
Word Smith: Grappling with graphics

 Click Close on the header toolbar. The WordArt object is displayed on every page that the header appears on.

Word's Drawing Tools

Here's a very simple example of a diagram created with Word's drawing tools and symbols from the Wingdings character set: menu and select a **Microsoft Word Picture**. Once in the Picture Editor, remember to adjust the picture boundaries using the Edit Picture toolbar before closing the editor.

■ To draw a straight, angled line (in 15 degree increments), hold down the SHIFT key while drawing the line.



With 3-D shadows, dozens of predefined AutoShapes, colors, and textured effects, diagrams can be far more elaborate than this simple illustration. The best way to learn about the drawing tools is by using them. There are some very good reasons why you should become familiar with Word's drawing tools:

- You can combine clipart, photo pieces, drawing elements, WordArt, and AutoShapes to create very colorful and elaborate graphic displays.
- Text can be added to many of the AutoShape objects.
- You can "layer" AutoShapes on top of one another to create interesting effects.
- Multiple objects can be grouped together as a single object for more control.

Drawing Tool Tips

 Resist the temptation to start drawing randomly on the page. Instead, use the Insert > Object option from the main

- To draw a perfect circle, hold down the SHIFT key while drawing with an ellipse object.
- To copy an existing object, press CTRL, click on the object, and drag the copy to the new location.
- You can nudge the location of an object using the CTRL key in combination with the arrow keys.

Screen Captures

There are several ways to capture screen images and include them in documents. Here's the worst:

- With the screen you want to capture displayed, press ALT+PrintScreen. This puts a copy of the active window into the Windows Clipboard.
- Open the Word document, position the insertion point, and choose Edit > Paste from the main menu. The captured image is pasted into the document.

This method has several disadvantages:

- Images captured this way are converted to BMP format and may range from 50,000 bytes to well over 200,000 bytes. Embedding several of these in one document will bloat the file size dramatically.
- Graphics pasted "inline" this way are difficult to reposition.
- If the screen you captured changes, you have to recapture it, delete the previously pasted image, and paste the new version in its place. If that same graphic appears in multiple places or multiple documents, this could be a very time-consuming task.

A better way is to use a third-party graphics program capable of doing screen captures and saving the captured image to either JPG or GIF format. (My favorite tool for this is Paint Shop Pro by Jasc Software; http://www.jasc.com.)

Steps to capture and use screen images:

- 1. Display the image to be captured.
- 2. Capture the image using the graphics program of your choice.
- 3. Save the image to a GIF file (if less than 256 colors) or to a JPG file (if more than 256 colors).
- Position the insertion point in your Word document and create a text box to hold the graphic.
- 5. Insert the graphic as a "picture from file" into the text box using a <u>link</u>. Do not check "Save with document."

This method offers several advantages:

- GIF and JPG files are typically much smaller in size than images copied from the Clipboard.
- GIF and JPG files are more convenient when converting your documents to Web pages.

Text boxes make placement of the graphic

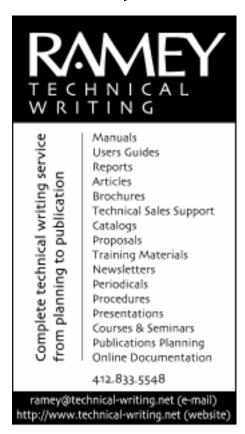
simpler and easier.

If the screen you captured changes, you still have to recapture it, but you don't have to replace it in your document. The link does that for you no matter how many times the graphic changes, the latest version captured will always be displayed.

Here's a quick way to see the filename of a linked graphic without having to open the Link dialog box: Select the graphic and press SHIFT+F9. This displays the hidden field code for the link and the path and filename associated with the graphic. Press SHIFT+F9 again to toggle back to the graphic.

So, stop grappling with graphics. Experiment with these techniques and enhance your documents with graphics.

This article was excerpted from the e-book, The Elements of Word, available at http:// www.writemohr.com.



Enter the worst manual contest!

Just a reminder for the holiday season, if — no, *when* — all else fails, read the manual.

Have you ever been so frustrated with a manual or set of instructions that you cursed the author and wished you had never bought the product? Do you remember the last time you used Help on your computer and every click of the mouse led to a new set of decisions?

Does this sound familiar? How about \$500 for your frustration? Technical Standards, Inc. (TSI), a Southern California documentation services company, is offering \$500 for the winning entry in their 'Worst Manual Contest.'

Send a manual or set of instructions that is hard to understand, poorly written, or just plain wrong. Send it if it has bad grammar, too much legalese, is poorly translated, or has missing steps. If it is the worst entry, you will win \$500.

"We thought we would have fun with this contest. Everyone has had trouble with a manual," says Michelle Wier, Director of Operations of Technical Standards, Inc. "That's why we started our company. People like products they understand how to use, and good technical documentation reduces the need for technical support. That's why good manuals are so important."

You don't have to send the whole manual; excerpts of the worst parts are okay. The deadline for submissions is January 15, 2001, so check those holiday gifts for potential entries. Entries must be in English. For complete contest rules, see the TSI Web site at http://www.tecstandards.com.

Technical Standards, Inc. specializes in contract technical writing projects, technical writer staffing, and training. Since 1993, TSI has provided writers and editors to the high-tech community who produce printed documents, online help, and Internet documentation. Technical Standards, Inc. is located in San Marcos, California. Questions? Contact: Jim Desmond at 760-471-1819 or jimd@tecstandards.com.

Upcoming events

December 2000

December 7 — PittMark meeting

7:00 PM in the auditorium of the Software Engineering Institute, 4500 5th Avenue, in Oakland.

Dan Ketelaar, What We Wish We'd Thought Of Before We Started The Springhouse Project.

Bill Lewis, XSLT and the BizTalk Mapper.

December 9—STC holiday party

Join your friends from STC at the Schenley Park ice skating rink for some winter fun! See page 12 for details.

January 2001

January 3 — PittMark meeting

Paul Cunningham, XML and Intelligent Agents.

January 16 — STC chapter meeting

Monica Cellio and Deanna Rubin, *How to Write API Documentation*.

PittMark is the Pittsburgh area XML/SGML user's group. More information about PittMark can be found at http://www.pittmark.org. Meeting times and dates are subject to change with notice; check the PittMark web site for the latest information.



November chapter meeting highlights: Creating XML Documents with the tools you already have

by Nancy Carpenter, Chapter Secretary

November's chapter meeting (held on November 16 at Clairvoyance Corp.) featured a presentation by Alan Houser on creating XML documents. Alan's presentation is available on the Web at http://www.groupwellesley.com/papers_talks.htm. Here is a synopsis of his talk.

Information Explosion

Publication is no longer done just in hard copy. Since the 1980s, an electronic version often is issued, for instance, in on-line help. Help files can be required in the most unlikely devices – cell phones, palm pilots. Recently, firms have begun to integrate documents with databases in on-line ordering and other applications. As a result, we can expect field support personnel to have computer devices that allow them to place orders (using a database) and open help files.

This information explosion increases the number of documents that we have to maintain. So, we have become interested in single source publishing.

What Does XML Offer?

XML stands for Extensible Markup Language. Like html, it is a meta language that can be used for web publishing, but with one very important difference. XML allows you to define the content, not just the format, of the document. This has several desirable effects.

- The ability to identify the meaning or content of portions of a document allows you to treat a document like a database. Using the content-defined tags, we can easily extract portions for other uses, making single-sourcing and document maintenance easier.
- XML can be used to publish in all newest media, including those that incorporate information entry into a database.
- The content tags allow us to share

documents more easily across desktop publishing packages. Initially the document would import as plain text. But as conversion packages become available, or as you learn to write your own conversions, you can use the tags to create formatted documents in a variety of platforms. Arbor Text, for instance will create a reasonable Word version, but it is still being refined.

So How Big A Deal Is This?

Very big! XML is being used widely in database applications. Most database software web sites have an XML site. And Microsoft has invested huge resources in preparing for XML use, which indicates how big they think it will be.

Some Limitations

XML does not yet support hard copy printing. However, it appears to be easy to use FrameMaker and Word and some other publishing platforms to prepare our printed versions, then generate an XML version for on-line use.

You cannot nest XML tags. This means that you can only sort on one tag, not on a group.

You cannot assign values such as priority or importance to a tag.

Not all web browsers can support XML, but they are moving in this direction. Internet Explorer 5.5 will do this, and others are on the way.

How to Get Started

Analyze the content of your document.

- If you are not already using style templates, begin to do so.
- Choose meaningful names for paragraph styles. Put underlines, not spaces, in the style names.
- Categorize the paragraph styles into content types. See if you can apply a unique paragraph style to a unique

content type. Avoid format overrides. (Hint: In Word, to display the styles, go to Tools/Options/View/Style Area Width and set the style area width to 1 inch. The styles will be listed in the left margin)

- 4. Check your publishing package to see if it will save a document as XML. It will not have the full capability of an XML application, but is quite usable and cost effective. FrameMaker with SGML is the most powerful of these packages. Here is how to do this:
 - In FrameMaker 5.5 and 6.0, just save as XML.
 - In Word, save as RTF (rich text format). Use an RTF-to-XML conversion utility. Some utilities include Upcast, Majix, and Omnimark.
- Pick a pilot application to demonstrate XML to your firm.

If You Only Publish On-Line

For those who only prepare on-line copy and do not need hard copy capability, Alan recommends going right to an XML editor such as Soft Quad XMetaL. Native XML authoring tools have a lot more power than conversions from desktop publishing platforms.

Here is What a Database/ Document Can Do

Alan showed specific examples of how you could use Word or Frame to produce XML output. For a cookbook, for instance, you can put tags on the recipe, its ingredients, and the preparation process. You sort the recipes into a menu for the week, then generate a shopping list.

Now if we could only get someone to do the shopping and cooking and cleanup, we would all use XML!

Usability testing of web site design and content: two case studies

(Continued from page 1)

several levels of organization and cross-referencing.

Next, we prepared a simple usability test using index cards. We worked with customer service supervisors to recruit test participants from different lines of customer service business, asking that they choose a mix of experienced and inexperienced staff.

We gave our testers a pen, and three sets of colored index cards:

- Blue cards represented the main categories, or types, of information.
- Yellow cards represented the actual information.
- Green cards were blank so that testers could create new main categories, new information, or additional copies of information.

We asked testers to sit at a large table and arrange the cards in an organization that made sense to them. In the room with each person was a proctor, who explained instructions to the tester and answered questions as objectively as possible, and a silent evaluator, who took notes on the tester's actions and articulated thoughts.

First we asked testers to order the blue cards, of which there were about seven. If they thought a main category was missing, they could use a green card to create it. If they thought a specific blue card didn't belong as a main category, they were asked to discard it and explain why.

Next, we asked testers to arrange the yellow information cards under the blue category cards to indicate where they thought each card best fit. If they thought a card fit in more than one category, they could make as many copies as they needed using green cards. We asked them to number each green card to indicate the second, third, etc., category where they would look for the information.

If testers wanted to create subcategories under the blue category cards, we asked them to use green cards and the pen to create the subcategories, and arrange any information they felt belonged in each subcategory by putting the applicable card(s) under the green subcategory card(s).

There was no time limit, since the objective was to learn how each tester understood and mentally organized the information. We encouraged testers to keep reorganizing the cards as they needed to until they felt they were finished.

What we learned

We learned that the main categories our team delineated would work—the testers didn't suggest many changes to our model. Testers tended to suggest the same subcategories, most of which we had also identified. However, we learned that there was a great deal of variety in how people categorized information within the subcategories, and we realized we would need a lot more cross-referencing than we originally thought. We also discovered that the verbiage we used to describe some of the topics on the yellow cards was not as meaningful to the users as it needed to be.

Experienced users seemed to long for the organization they were accustomed to, disorganized and illogical though it was. It was apparent that reorganizing the information so extensively would take some adjustment on their part, but it would greatly ease the learning curve for new employees. Experienced users did understand that it would be much easier to fit new information into the proposed model, and find it once it was there, than it had been in the past.

How the results were applied

Our team applied the usability testing results to fine-tuning our site model and develop a working prototype site. Because the team included the application developer and decision makers on the business side, so we were able to make full use of our findings, revising the content model as we

needed to on an ongoing basis.

The next phase of usability testing involved having users navigate a prototype of the site to find information so they could answer questions that arose from a set of defined customer service scenarios. This process was very similar to the "funded example" I describe next, so I will move on to that case.

Funded example

My team's project was to usability test the content model, content, and navigation of the company's first Internet Web site prior to its public release about four years ago. The Internet site was targeted at several user audiences, but we focused on the areas of the site that would be of interest to healthcare consumers.

In addition to funding staffing for the project, the company hired a marketing research firm to recruit test participants who

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Usability testing of web site design and content: two case studies

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met four categories of criteria we established. The company paid each tester \$50 upon his or her completion of the usability test. The effort cost about \$7,500, plus staffing costs for the number of person hours it took to plan and conduct the test, and analyze and report the results.

What we did

The usability testing team was made up of information developers who worked in the same department. We spent many hours preparing instructions for participants, a pre-test, the actual usability survey scenarios, a post-test, and the process we would use to run the testing. We also set up a lab with PCs devoted to the testing efforts, and secured video equipment so we could tape the proceedings.

We were careful not to use the word "test" in any materials or conversations with participants because we didn't want them to think they were being judged or that there were right or wrong answers. Instead, we used the terms "usability evaluation" and "participant."

First, participants entered a welcome room, where we greeted and briefed them, offered them tea or coffee, and asked them to complete the pre-test. The pre-test was designed to gather demographic data, gauge their level of Internet experience, and assess how they interpreted icons they would encounter on the actual Web site.

Next, a proctor lead each participant to the usability lab, where both sat in front of a PC. We instructed participants to read each scenario in the usability evaluation and use the Web site to find answers to the scenario questions. We asked participants to follow a think-aloud protocol if they were comfortable doing so, which enabled us to better document their thoughts and decision-making processes. The proctor took notes based on what each participant said and did, noting what links they followed to find (or not find) information.

Sometimes participants got stuck and asked for help. Each proctor was trained to be objective and not provide any answers or much guidance, stressing instead that participants did not need to answer a question if they had looked for information as long as they would in real life. The search process was more important than the answers participants ended up writing on their surveys.

When participants had finished the usability survey, they returned to the welcome room, where they were given the opportunity to vent to the host or hostess, who had not been their proctor. Participants completed a post-test to measure their opinion of the Web site's organization, ease of finding information, attractiveness, whether it generally met their expectations, and whether they would actually use it in real life. Once they had completed the post-test, participants received their \$50 and went on their way.

What we learned

We analyzed the test results using the surveys, pre- and post-tests, and proctors' notes, reviewed videotapes in some cases, and wrote up an extensive findings report that included lots of data and charts. Some highlights of what we learned:

- Most of the main categories of information and their icons worked, though some could be clarified.
- Graphics were too large, taking up the entire first scrolling region in many cases. While the graphics were pretty, they did not provide real information.
- The site was too text-heavy. Users could not easily scan to find valuable information among all the marketing language.
- In many cases, text links were not worded clearly enough. In other words, a phrase would be underlined, but the verbiage didn't make it clear what users would find if they followed the link.

This lead users down wrong paths in many cases. Link text needed to be more specific, not buried in the text, and free of marketing jargon.

How the results were applied

Unfortunately, our team's findings weren't applied, because the department responsible for the site and its content declined to use our findings. The site was released with very few changes. This was very surprising to us, especially considering the money the company spent on testing. However, our department was able to make great use of the findings in future projects ranging from intranet site design to online help structuring.

Heather Lum is a freelance technical communicator and information designer. She is president of the Pittsburgh chapter of STC.

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Bringing the User into Your Work

(Continued from page 1)

Task Profile Questions

- What types of software do they currently use, and how will your product affect that usage?
- What specific tasks do they need to accomplish with your product?
- What other non-technological tasks are they responsible for and what time constraints are they working under?

There are many options for gathering the answers to these questions – surveys, interviews, and site visits are just a few. Don't forget, this doesn't have to be a time-consuming process. You *can* fit this research into your schedule.

If you work for a software company, you're familiar with the early stages of application development – that period when there isn't much to document. Instead of wasting your time creating volumes of fiction about a product that will change a million times before you even see a prototype, e-mail surveys to your potential audience or interview them. If there's no way you can speak to your audience directly, talk to Product Managers, Customer Service employees, or anyone else in your company who has di-

rect contact with your users. You may only have time to meet with a few Product Managers, but that's a start. Maybe the next time around, you'll be able to expand on that research.

If you have the opportunity, site visits can provide you with a wealth of information. Observing your users in their work environments is probably the best way to really understand how they interact with technology and what their documentation needs are. Another option is to "shadow" Customer Service calls to learn what problems your users are having with current products and to help you identify with your audience. After you hear users' voices on the phone, it's hard to dismiss a design issue or an unclear procedure as a "stupid user error."

Regardless of your method for gaining information and the extent to which you research, performing user and task analysis ensures that you will create quality documentation. Without this analysis, you might end up wasting time creating user manuals or online help that your audience can't or won't use.

Once you can answer all of your user and task questions, it's a great idea to compile

this information into a formal report so that you can refer to it later and so that other employees can benefit from your work. If you don't have time to write a report, that's OK. At least you now have enough knowledge to confidently assert that, indeed, you do "know your audience."

Heather Lazzaro is an information designer at Highmark.



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Note - STC members receive a 20% discount if they mention their membership upon registration.

Holiday Ice Skating Party!

Come and join us for a jolly holiday afternoon! The STC Pittsburgh's 2000 holiday event is a skating party on Saturday, December 9 at the Schenley Park Skating Rink from 1:30-3:30. Thrills and spills on the ice will be followed by refreshments — food and lots of hot drinks! — in the nearby home of our chapter vice president, Mary Ecsedy.

The Schenley Park Skating Rink is a winter playground that offers fun for the whole family. Admission is \$3.50 for adults and \$2.50 for children under 18; skate rental is \$2.00.

Schenley Park lies between Oakland and Squirrel Hill; there are signs to the skating rink throughout the park. A map of this area (with directions from CMU) is available at http://econ.gsia.cmu.edu/Freshman_Seminar/rink_directions.htm.

There's nothing better after fun on the ice than thawing out and relaxing with friends. Mary Ecsedy and her husband Don are hosting refreshments after the skating party (or you can come just for refreshments if you don't want to skate). To get there from the skating rink, take Overlook Drive to Greenfield. Turn left onto Greenfield, and turn right immediately at the light onto Panther Hollow Rd. Continue for approximately 100 yards and turn left onto Beacon St. Continue for two or three more blocks to Wightman. The Ecsedy residence is on the right-hand side of Beacon St. just past Wightman, at 5630 Beacon St., between Wightman and Murray Ave. Parking is available on the street.

See you there!

Date: Saturday, Dec. 9, 2000

Time: Skating 1:30-3:30 PM , Refreshments 3:30-5:30 PM

Location: Schenley Park Skating Rink (412-422-6547), and the Ecsedy residence, 5630 Beacon St. in Squirrel Hill (412-422-0213)

Cost for refreshments: \$5 singles, \$7 couples, \$10 family

<u>RSVP</u>: By **Friday, December 8** to Darlene Mullenix (412-288-8676 or dmullenix@federatedinv.com)

Pay at the door or mail to:
Darlene Mullenix, Meeting Coordinator
c/o STC Pittsburgh
P.O. Box 133, Pittsburgh, PA 15230
Make checks out to STC Pittsburgh. If
you do not cancel your reservation by

December 8, you will be charged.



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P.O. Box 133 Pittsburgh, PA 15230

December, 2000



Usability