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Note: SUMMIT@aClick was included in the full registration fee for the Summit. Attendees should have received an email with username and password.
A Note from the Guest Editor

ACCESSIBILITY AND USABILITY are specifically discussed on a fairly regular basis in Intercom. There are columns on usability (with Brian Still) and accessibility (with Linda Roberts). The October 2012 issue covered usability and user experience topics, and the January 2011 issue was a special accessibility issue. Articles with a focus on one of these two areas appear on their own now and then. Then there are the less-visible appearances. The May 2013 Intercom centered on content strategy, but accessibility and usability are part of what makes a successful content strategy. With this issue of Intercom, the focus is on accessibility and usability and how they fit into the “bigger picture” of technical communication.

“Content for everyone” is a perfect starting point to define the bigger picture. Whitney Quesenberry’s article introduces the overlap of accessibility, usability, and technical communication.

Karen Bachmann brings you a great review of many of the usability and accessibility sessions from the 2013 STC Summit in Atlanta. This refresh of that great live event puts those sessions at the top of my list to revisit in Summit@aClick (www.stc.org/education/technical-communications-summit/summit-at-a-click). Perhaps they will inspire you to submit a great accessibility or usability (or both) proposal for the STC Summit in Phoenix in 2014?

Mak Pandit provides us with another perspective on accessibility in his interview with Shilpi Kapoor. Shilpi Kapoor is a strong role model in the field of accessibility in India. We’re lucky that she could take the time from her busy schedule to discuss the progress of accessibility in India.

Being up in the cloud is definitely a bigger picture, but David Dick reminds us to bring our usability skills along. Geoff Hart brings us back down to Earth with a tale of how usability applies to the humble word processing tool we call Word.

Ethics is certainly a part of the bigger picture for accessibility and usability. The article Dan Voss wrote on ethics in 2006 is still surprisingly (or shockingly) fresh today. When discussing this article with Dan, we were both pleased that, although the journey toward improved accessibility can seem very slow, a look back makes you realize there really and truly has been significant progress.

That progress can continue with more technical communicators applying usability and accessibility skills to their work. With these skills, we contribute to making our products more welcoming and inclusive.

I hope this issue whets your appetite to learn more about accessibility and usability, either online or in real life. If so, be sure to check out the list of “unconferences” and online conferences in my short article on page 26.

For ongoing inspiration about accessibility and usability from STC SIGs, follow @stcaccess on Twitter, visit the AccessAbility SIG and the Usability and User Experience (UX) SIG on LinkedIn, or join us (www.stc.org/membership)!

KAREN MARDahl is a technical author at SimCorp, an investment management software company based in Copenhagen, Denmark. In 2012, she was a keynote speaker for the special accessibility track at Technical Communication UK conference (TCUK). She gets passionate about accessibility on Twitter at @kmndk and especially at @stcaccess where she tweets for STC’s AccessAbility SIG.

www.stc.org
I ONCE RAN a usability study of cancer information. One of the participants was a nurse in a women’s health clinic. As we got the session started, I suggested that cancer might not be a top priority in her work. She looked at me sternly and said, “We are the front line on screening and prevention.” In just the same way, technical communicators are the front line on accessibility for content.

A bold statement? Perhaps. But most people don’t visit a website to admire the cleverness of the code or the graphics: they are looking for information, for ways to do things, and for connections. Creating content for everyone means that your site doesn’t start that conversation by slamming the door in visitors’ faces.

If you’ve been scared of accessibility because it seems too hard to understand or another big checklist of requirements, think again. Many of the guidelines for making information accessible match best practices for technical communication.

One of the reasons why content accessibility is so important is because people read with different degrees of literacy. In fact, according to the U.S. National Assessment of Adult Literacy (http://nces.ed.gov/naal/kf_demographics.asp), over 40% of people in the United States read at a basic or below basic level. They can read, but have only the most concrete reading skills for everyday tasks. The largest group (44%) read at an intermediate level, able to tackle moderately challenging activities like consulting reference...
material. Only 13% are proficient readers, able to interpret information to draw inferences from textual or numerical content or compare viewpoints in different documents.

For an example, let’s look at sites for the general public that allow people to check their risk of getting specific types of cancer. Typically, the person answers a series of questions about themselves and are then shown conclusions based on research. When we looked at assessments for colon cancer, many of the sites presented their results as a numerical score or as a percentage lifetime risk. Would you know what a 3.8% lifetime risk means? Is that good or bad? Should you be worried? Rush to your doctor? Or keep up the good work? When we asked participants in the usability test, they didn’t know either. But one site stood out (see Figure 1). Even though it had more information on the page, people understood it better because they presented the information clearly and anticipated the questions that people might have. For example, they:

- Gave the result in plain language, right at the top of the screen. A more quantitative version was shown visually using a color-coded graph.
- Offered suggestions for how to lower your risk.
- Told you what you were doing right, so you could keep up the good work.
- Provided links at the bottom to let you drill down into more detail.

In addition to basic literacy ability, people might not read information well for many reasons. They don’t always read carefully, as they quickly scan for the information they need. They may not know (or read) the language well. In today’s busy, global economy, technical communication needs to consider these factors.

They may also have a disability. In the National Assessment of Adult Literacy, people with multiple disabilities were disproportionately likely to read at the lowest literacy level, making them even more vulnerable.

Writing Content for Everyone

Thinking about five guidelines will help you make your content more accessible. The first three are basics of technical communication:

1. Write for (and to) your audience
2. Organize information logically
3. Design for reading

The last two remind you to make sure that your content communicates to all senses, duplicating information for both vision and hearing:

4. Provide alternatives for images
5. Provide alternatives for media

1. Write for (and to) your audience

There are two parts to this guideline. First, you must understand the audience so that you can write in a way that matches their expectations, fits their tasks, and uses terminology they know. Accessible content is clear, not dumbed down. But even the most advanced technical user appreciates clear writing and having terminology defined.

The second part is to write to the audience, making sure the information is written, organized, and presented in a way that fits into their context. You can start by speaking directly to the audience. Don’t be afraid to use “you” and write sentences that help them take action.

Which is easier to read, write, and translate: “do this” or “this must be done”?

2. Organize information logically

If your content includes instructions, procedures, or even general “how-to” information, make sure it’s the right information in the right order in the right format.

- Start with any preparation or materials that they will need to complete the task, especially if it is not likely to be easily available.
- Summarize what will happen. Don’t make readers guess at the outcome: tell them the goal before they start.
- Put instructions and prompts in the right place—just before they are needed. This includes boxed warnings. No one wants to fill in a form only to find out at the end that they didn’t need to or that are in the wrong place.
- Put error messages in the right place, too. The best practice is at the top of the page with links to the specific section where the error can be fixed.

Getting the order right is important for everyone, but it’s critical for people who read the information in a
linear order. People using screen readers, for example, can’t easily jump around the screen or casually notice a message placed off to one side.

3. Design for reading
We know people scan. It’s not that they don’t read. They are looking for the right thing to read. In her research with low literacy readers, Kathryn Summers discovered that they will skip to the next paragraph when they get stuck. This style of skimming—reading the beginning of a paragraph before skipping to the next one—is called “F-pattern reading” because of the way eyetracking shows fingers reaching out from a spine along the margin.

We can help everyone by breaking up walls of words with cues in the text and presentation that take reading habits into account. Good headings, short paragraphs, and use of lists and tables make sure skimmers and scanners don’t miss important information. Headings work well with screen readers because they have a mode that allows users to jump from heading to heading.

Typography makes a big difference for everyone, too. Many problems with reading start with a visual disability that makes it hard to see the words on the screen clearly. There are also conditions that affect visual processing, such as being able to track from one line to the next efficiently.

You can make tables easier to read with a few simple elements: add an informative caption, mark column and row headings so they are identified correctly, and use zebra striping (alternating background colors on rows). Tom Tullis and Stan Fleishman’s research shows that zebra stripes and loose spacing in the table cells is the best way to help everyone read a table. More recently, Jessica Enders updated and confirmed their conclusions (see Further Reading section for references).

4. Provide alternatives for images
So far, good technical communication and good content accessibility have lined up pretty well: do the first and it’s easy to improve the second. But now, we move into two guidelines where it takes a little extra work to make the content accessible: images and interactive media.

Illustrations are content, not decoration. This is especially true in technical communication. To make an image accessible to someone who can’t see it, we use “alternative text” (or alt text, for short). You can create alt text for Web pages, any Microsoft Office document, PDF files, and more.

The key to creating good alt text is to write it as part of any content, paying attention to the context.

- Describe the image briefly, in 8 to 15 words. You don’t need to say that it’s an image unless you want to emphasize the kind of image, such as a photo or schematic, for example.
- First, include any text that is in the image. If there is a lot of text, find a way to include it outside of the alt text: link to a new page for a long description, include it in the body of the document, or even in a footnote.
- Don’t repeat the same information in the caption or image title. Use the alt text to add context or description.
- Consider the context and provide a description that will be meaningful to the audience. Is it a “microphone” or a “Shure SM58 Mic”?

5. Provide alternatives for media
Audio, video, and animation are all forms of content, too. Interactive tutorials or product information can be accessible as long as you remember to provide alternatives for all senses. Before you start on an interactive project, test the authoring software to be sure it can be accessible.

Depending on the type of multimedia or the information you are communicating, you might have to:
- Replace visual information with text or good audio description
- Replace audio information with transcripts or captions.
- Provide an alternative to links that are hidden in an animation or can only be discovered by mousing over them.
- Be sure that hovers, pop-ups, and other interactive elements are accessible from the keyboard.

Defeat the Myths
One of the myths of communication is that technical information can’t be expressed in plain language, because … well … because it’s technical. It’s time to defeat this myth. Information can be:
- Technically accurate
- Interesting and well written
- Appropriate to the audience
- And also clear and understandable

Let’s put our technical communication skills to work to create information that is also accessible to everyone.

This article is based on a presentation given at the Technical Communication Summit 2013. The slides are online at www.slideshare.net/whitneyq/content-for-everyone-20599326.

WHITNEY QUESENBERY’S work includes user research, plain language, usability testing, and accessibility—all part of creating an awesome user experience for everyone. She is the author of three books, most recently A Web for Everyone with Sarah Horton (Rosenfeld Media). You can find Whitney on Twitter @whitney, at www.wqusability.com, or at whitneyq@wqusability.com.

FURTHER READING


User Experience & Accessibility at the 2013 STC Summit

By KAREN BACHMANN | Associate Fellow
MANY GREAT SESSIONS at this year’s Summit conference covered user experience (UX) and accessibility. They focused on how we should be bringing all users into our work, both in the methods we use and in integrating inclusive and user-centered thinking into our creative processes. The following article summarizes lessons I learned from each of the sessions I attended. I found value for the experienced practitioner, the all-around technical communicator, and the newcomer to this area. All of the sessions reviewed here can be viewed online in Summit@aClick (www.stc.org/education/technical-communications-summit/summit-at-a-click).

Adding to Our UX and Accessibility Toolbox
These sessions focused on core methods and approaches to existing tools and how to make them part of our everyday practice.

Customer Journey Maps: Visualizing an Engaging Customer Experience
Donn DeBoard defined customer journey maps (http://lanyrd.com/2013/society-for-technical-communication-summit/scfpg/) and recommended them as a way to help technical communicators understand our customers and their point of view. Customer journey maps offer a specialized map through each action and point of engagement that a user has with a product. It goes beyond a simple task flow, though, when it looks at the emotion at each point of engagement. This helps illuminate how customers experience a product throughout an interaction. Customer journey maps are particularly useful when creating complex products or anticipating product use that evolves over time.

Customer journey maps are rooted in research and focus on answering why a customer interacts with a product as much as how and what. Types of journeys include transactional, experiential, emotional, relationship building, and rite of passage. Each answers a different question about the customer experience and provides insight into the entire context of the engagement that sometimes is missed when developing documentation.

Donn explained the steps to develop customer journey maps:
1. “Engage customers and hear their stories” to understand the customer “ecosystem.”
2. Identify actions and the touch points, or goals, for the actions.
3. Identify moments of truth—two to three significant moments that can make or break the outcome of the journey.

Each journey is captured in its own map. These maps create an “internal, customer-focused communication tool” that supports a user-centered process.

Storytelling the Results of Heuristic Evaluations
Carol Barnum shared her personal journey to rethinking heuristic evaluation in “Storytelling the Results of Heuristic Evaluations” (http://lanyrd.com/2013/society-for-technical-communication-summit/scfpg/). She started out using heuristic evaluation following Jacob Nielsen’s original method (www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/) where 3-5 expert evaluators review a user interface and then meet to write a report consolidating their individual findings. In a survey conducted by UXPA, 75% of UX practitioners reported using the heuristic evaluation. After participating in Comparative Usability Evaluation CUE 4 (www.dialogdesign.dk/CUE-4.htm), an evaluation of practice of heuristic evaluation conducted by Rolf Molich, however, Carol learned that many practitioners were modifying how they used this tool and many were really doing expert reviews.

Carol then took a looser interpretation of Nielsen’s heuristics. More importantly, she started to add screen captures with callouts and to provide recommendations, moving her practice and reporting of heuristic evaluation closer to thinking like the user. She continued to modify her approach, moving to persona-based heuristic evaluation as developed by Dana Chisnell and Ginny Redish (http://assets.aarp.org/www.aarp.org_/articles/research/oww/AARP-50Sites.pdf) and then delivering findings using the users’ voice and telling their stories. By focusing on the users and letting their stories guide the evaluation, “user experience emerges in the expert review.” She encouraged participants to approach heuristic evaluation in a way that lets us “walk in your users’ shoes by telling the users’ stories.”

For a quick introduction to heuristics, see the description at www.usability.gov/methods/test_refine/heuristic.html.

Usability Testing to Evaluate Web & Mobile Content
In his session (http://lanyrd.com/2013/society-for-technical-communication-summit/scfpg/), Cory Lebson described how to plan, conduct, and evaluate outcomes for a usability test. The starting point of any usability test is to define key content goals and key user groups. We need to know why we are developing a product and for whom we are developing to understand if we have succeeded in delivering a usable product. In documentation testing, we can assess:

- Findability and identification
- Readability and comprehension
- Functionality

Once we understand these, we use the goals to define tasks that the right users complete to demonstrate whether a design is successful. We can test at any point, but Cory noted that “when you have a limited budget, test

By focusing on the users and letting their stories guide the evaluation, “user experience emerges in the expert review.”
at the latest point you can, when changes will not be a significant problem.”

Cory explained how to create a test plan documenting what we are doing and why, how we are doing it, who we need to speak to, and the moderator’s guide. He talked about the roles during a test: the “test administrator” or moderator, the “logger” or notetaker, and the observers—a valuable role for clients to fill to increase their understanding.

He then talked about reporting, ranking issues by severity, and providing recommendations in a spreadsheet to supplement the report. He noted that he includes positive feedback when he has some to share. He also discussed creating video highlights to illustrate issues for “high emotional impact.”

Cory advocated making testing part of the design mindset and process. Even if time is limited, a lean UX approach, which compresses the typical timeline and scope, can add value. He also encouraged establishing a follow-up process to find out how things went and whether clients need more insights as the product is being used over time.

Realigning Our Core Thinking About UX and Accessibility
A number of sessions talked about the fundamentals that underlie our work, including standards and best practices, and also fundamentally how we think about the content we develop.

Accessibility in Documentation, Media, & Web Design
In this session developed with Sarah Horton (http://lanyrd.com/2013/society-for-technical-communication-summit/scfpgq/), Mike Paciello presented on the why behind how to implement accessibility, which was discussed in Whitney Quesenbery’s presentation on plain language (www.slideshare.net/whitneyq/plain-accessibility) and Char James-Tanny’s presentation on writing for everyone (-summit/scfpgq/). Mike started by providing an overview of the accessibility landscape where standards are concerned. Three waves of standards, from the Americans with Disability Act to the new Section 508, have shifted focus from the right to access to a ubiquitous approach aligned with current business practices. He emphasized that current initiatives factored in international standards.

Nevertheless, challenges remain. He described three issues. First, he discussed the “maze of standards and laws that make it hard to figure out what applies and when.” Not all of the standards are aligned, but effort to align them is underway.

The second issue is that many organizations are not legally obligated to comply with accessibility laws, but they can be sued. He noted that the litigation efforts of low vision and deaf advocates is a huge motivator for organizations to be compliant.

Finally, he borrowed the title of the book Living in the State of Stuck (www.amazon.com/Living-State-Stuck-Technology) to describe the third issue—the gap between mainstream technology and accessibility and aging. The speed at which technology is moving means that assistive technology is always trailing behind. A change in thinking is needed for original designs to reduce the number of people being left behind.

Mike commented, “Bad design hurts. Good design helps. Everyone.” He pointed out that the updated guidelines reflect this thinking and attempt to support good and inclusive design. The refresh of section 508, the Web Content Accessibility Guidelines (WCAG) 2.0, and the 21st Century Communications and Video Accessibility Act (CVAA) all have the goal of providing the same means of use for all users—identical when possible, equivalent when not possible. WCAG 2.0, as an example, is based on the POUR principles: Perceivable, Operable, Understandable, and Robust. Each principle has a guideline and is testable—an important support for adoption and implementation. Mike expressed the new Section 508 operability principle by saying, “Things that seem obvious and easy to many of us require thought.”

The call to content creators and designers is clear: We need to be creating inclusive, accessible content and designs from the start. The standards and guidelines continue to evolve to help support that goal.

In writing for people who will use our content, everything we write is part of a conversation. This “asynchronous conversation” is the contribution of professional technical communicators.

Purposes, Personas, Conversations: Practical Techniques for Everything You Create
Ginny Redish started her session (http://lanyrd.com/2013/society-for-technical-communication-summit/scfpgk/) by asking the audience to identify the types of content they worked on—marketing, Web, user manuals, online help, proposal, technical reports, etc. She stated that, although her examples were drawn from the Web, the lessons applied to all types of “basic, good writing.” She went on to note that everything we write serves a purpose, but that purpose is not to “give out information.” We want to help people accomplish something with the information we provide. In writing for people who will use our content, everything we write is part of a conversation. This “asynchronous conversation,” Ginny asserts, is the contribution of professional technical communicators. Technical writing has “moved from statements of fact to a conversation that has the user in the middle.”

For most of what we write, the other person starts the conversation. The conversation is driven by their needs and goals. She noted that a study on documentation found
that people don’t read when “documentation doesn’t fit the reality of their story.” Defining purposes, personas, and conversations helps you plan, organize, write, and evaluate.

Ginny stated that we should develop and follow a content strategy. A strategic approach to content will ensure we deliver the right content, in the right amount, to the right person, and at the right time. To do this takes planning at every level: why (the purposes), who (the personas), and what (the conversations).

When considering the purpose—the why—think about what effect you want to have on your reader. It’s not enough, or not deep enough, to say you are trying to inform or persuade. You have to answer “why?” Ginny encouraged us to write a purpose statement for everything we write and focus on what we want people to do because of our content.

When considering personas—the who—we need to understand the people who use our content, including their abilities, attributes, and attitudes. “A name and face to the person, not just a list of characteristics, puts them in the room and in our head, and that really helps us write better information.” Once we know who they are, we can hear our readers as we write.

When considering the conversations—the what—we need to flip what we often have been taught about writing and put the key message, from the users’ point of view, first. Ginny shared the “bite, snack, meal” approach of Leslie O’Flahavan (http://ewriteonline.com/articles/2011/11/bite-snack-and-meal-how-to-feed-content-hungry-site-visitors/) to layer content to “feed all hungry people.” The bite becomes the tweet. The bite and snack becomes the Facebook post. We need to think about how to give readers exactly what they want when they need it.

We should hear the conversation as we design and write. It’s important to know that until we answer the question of the visitor, they aren’t going to get to what we want. To ensure that we’ve achieve a successful conversation, we have to evaluate our content using tools such as usability testing or persona-driven heuristic evaluation.

**Writing for Everyone: SEO, ESL, Translation, and Accessibility**

Char James-Tanny’s session, “Writing for Everyone” (http://lanyrd.com/2013/society-for-technical-communication-summit/scfppd/), started with the diversity of our audience from Millenials and GenZ who live in a world of devices and whose preferred mode of communication is text messaging, to people who use English as a second language, to people who have disabilities that can affect their consumption of content, to people who may be assumed to be readers but have distractions. We need to know our audience and accommodate all. When considering accessibility of our content, we cannot ask about disabilities, as that is against the law, but we can ask about making accommodation.

Where we once put content in silos, we now put our audience in silos. We have to think about so many channels—SEO, ESL, translation—that when we bring up accessibility after all these passes, there can be resistance to yet another pass. Additionally, Char noted that because disability scares people (“What happens if I become blind? Deaf?”), we must also overcome the fact that people avoid what they are scared of. And yet people with disabilities make up the largest minority in the world: 11%. And at some point, everyone will have a disability, even if only temporarily (broken arm, for example) and definitely as we age (who put on their reading glasses before reading this article?).

So what are we to do? Char shared this quote by Marcus Fabius Quintilianus: “We should not write so that it is possible for [the reader] to understand us, but so that it is impossible for him to misunderstand us.” We must stop and think about what we write because we could confuse someone. Fortunately, many of the essential good writing techniques are also those that improve accessibility:

- Use headings (and when publishing to the Web, mark up in the correct tag order).
- Correctly use numbers and bullets as appropriate.
- Use active voice and second person. She shared Rebecca Johnson’s test for passive voice by putting “by zombies” after the verb.
- Write consistently. People get used to following a pattern.
- Use serial commas.
- Write in sentences of less than 25 words and short paragraphs. One sentence in a paragraph is the best for translation and Web copy. Three is the max.
- Keep in mind the readers’ context.
- Use smaller words.
- Define or avoid acronyms.
- Use a clear date and time format for users.

In summary, Char encouraged us to avoid putting people in silos, to write for all, and to write simply and well to make our content accessible.

**Nuggets of Wisdom vs. the Mother Lode**

I hope you’ve enjoyed this tour of some of the new tools and approaches for UX and accessibility offered at Summit ’13 and that these nuggets help you understand how you can apply these to your own work. If these summaries just whet your appetite or you attended and had to make some hard choices as I did, you are in luck. All sessions were recorded and are available through Summit@aClick (www.stc.org/education/technical-communications-summit/summit-at-a-click). Additionally, many presenters have uploaded their presentations to SlideShare or are linked through the Lanyrd conference site (http://lanyrd.com/2013/society-for-technical-communication-summit/).

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MAK PANDIT interviews Shilpi Kapoor, managing director at BarrierBreak Technologies and Net Systems Informatics, about accessibility in India.

Mak Pandit: What made you begin contributing to accessibility issues?

Shilpi Kapoor: I was working as a security analyst and networking consultant for a U.S.-based company. I didn’t know that my boss was paralyzed until the day there was an issue with his assistive technology. It was a shocking realization that if you are not aware of someone’s disability, you treat that individual as equal.

In a country like India, when you hear the word “disabled,” everything is negative in context. There were hardly any efforts to use technology for providing much-needed accessibility.

Considering the condition of infrastructure in our country, I thought it was better to use technology to provide people with accessibility rather than work on improving physical infrastructure.

Mak: Among various types of impairment, which do you think is the most difficult to cater to? Why?

Shilpi: We don’t have such a take. There are different problems that people face with different disabilities. Technology can help them overcome some of those problems. We prefer to address the issues rather than figuring out who is more affected. That is our approach.

Mak: What are the various challenges you’ve faced so far?

Shilpi: The first challenge we faced was that nobody wanted our service. When we talked with some IT companies, they were not willing to pay for our service. There was no value attributed to our work—it was a zero-demand market. We literally had to create the market by increasing awareness.

The second challenge was the absence of a legal framework that stressed accessibility. The government was not thinking about technology for disabled people when we started. No organizations, neither private nor public, were concerned about providing accessibility for disabled people. They used to say, “We don’t have disabled clients.” This was shocking. With no legal framework, the IT sector was ignoring the issue of accessibility within their contracts. Unfortunately, the scenario has not changed much to date.

Mak: Isn’t that strange considering the fact that many IT companies have offices all over the world?

Shilpi: True! They are catering to international clients. When you deal with organizations from countries like the U.S., the U.K., or Australia, it is impossible to neglect the accessibility guidelines. If you cannot satisfy a client’s requirements (exclusively mentioned in a contract), then it’s your mistake. But why be led by contractual obligations? Accessibility is something you can offer as an integral part of your service. I think the IT industry in India should gear up and self-govern.

Mak: Is there any provision of Section 508 in India?

Shilpi: We don’t have a law yet. We merely have guidelines for Indian government websites (GiGW), hidden within the general guidelines. We are now working on the new “Persons with Disabilities Act.” When it is passed, all government websites and private websites related to and concerned with citizens will have to be accessible.

As the new e-governance policies are being implemented, government bodies are becoming more aware about Web content accessibility. For example, in Maharashtra, when a vendor delivers the project, he has to give a duly filled-in checklist that assures the content is accessible. [BarrierBreak is headquartered in Mumbai, the capital of the state of Maharashtra. Mumbai is considered the financial capital of India.]

Mak: Can we say that the state governments will apply pressure so organizations will have to comply?

Shilpi: Let’s hope so! Take the example of Maharashtra state. The income tax department got the vendors trained
in accessibility, which is very interesting. They are paneling vendors based on their knowledge of localization. The government is making sure that the vendor is delivering exactly what is asked for before making any payment. That kind of systemic change is what we need.

We don’t mind waiting. But it has to be systemic if we are to see true implementation of the principle of accessibility. I hope that we can see noticeable changes in the coming six months.

Mak: Isn’t anyone looking at this issue at the central government level or in other states?

Shilpi: Lately, the governments of Punjab and Madhya Pradesh [two other states in India] released statements about making their websites accessible. The central government is taking positive steps in implementing GI GW, but Maharashtra seems to be the leader and a truly progressive state.

Mak: How are assistive technologies being developed at BarrierBreak? Are you inventing them or are you localizing imported solutions?

Shilpi: Our approach is not to reinvent the wheel. Instead, we emphasize localizing the products. For example, an English screen reader in India costs Rs. 60,000/- if bought directly. We negotiated for the bulk of requirements for India, localized it in Hindi [India’s national language], and brought the price down to Rs. 21,000/- We plan to localize it into the regional languages as well.

Considering their economic condition, disabled people may not be able to afford the price of equipment. But an employer who employs a disabled person can afford to buy that technology at a slightly higher price. This is one of the ways to reduce the entry barrier.

A lot of these products are expensive. When you buy an expensive product, you want warranty, training, and support, which we provide. We are not just selling the technology. We want to bring a systemic change through our products. In the future, we will be developing many products on our own, like mobile apps. We are sure that apps can play a major role in making the world more accessible.

As far as hardware products are concerned, we are not in a position to do much owing to limitations of manufacturing facilities in India. There is one more angle to this. At the moment, we don’t have the numbers that can make design and manufacturing feasible. The demand for assistive technology is fairly limited. Many people still think assistive technology means wheelchairs and hearing aids. Hopefully, by educating the masses and subsidizing the products, we can achieve the numbers.

Mak: What are the economic aspects of accessibility in India?

Shilpi: If we provide a disabled person with assistive technology that gives him mobility and connectivity, he can contribute to society with full potential. Skills of disabled people are grossly underutilized in our country. With assistive technology, job opportunities will open up. Once a person is employable, he would soon become a taxpayer. Thus, assistive technology can certainly increase the state’s revenue.

Establishments like restaurants, coffee shops, and cinemas can raise their revenue by providing simple accessibility solutions, such as a restaurant menu in braille.

Assistive technology can make a large part of the population more productive. With income, their standard of living will improve and so will the demand for appliances and lifestyle products. Consider the total untapped purchasing potential of this population segment. It will be a boost to the country’s economy! This is as true about the rest of the world as it is for India.

Mak: How can training in assistive technology be improved in India?

Shilpi: We need to train the people with disabilities at an early age, say, from school level. We must train the educators for effective implementation of assistive technology.

Currently, schools are not teaching assistive technology. Nonprofit organizations are doing this job. The problem is that by the time a disabled child meets a nonprofit organization, he or she is 14 to 16 years old, which is too late.

What we need is standardized training across the country. The government should work with the corporate sector to design a curriculum for this training program for teachers. Everyone will benefit as a result.

Mak: What is the role of technical communicators and developers in ensuring accessibility?

Shilpi: Technical communicators are producing a considerable part of the content being consumed today. It is their responsibility to develop accessible content. In fact, everybody creating content has to know how accessibility works. A lot of difference can be made by simply following the established guidelines.

Mak: India is considered a development hub. What do you think about accessibility training for developers in India?

Shilpi: Training for developers is a must. But IT companies should realize this. Accessibility is considered an add-on, not an essential entity. SDLC [software development lifecycle] should include testing and assessment for accessibility. We must understand that it is not about a separate disability sector but about mainstream industries.

Mak: What do you expect from government bodies, NGOs, and international organizations that want to work with BarrierBreak?

Shilpi: We are willing to work with any organization with matching or overlapping goals. Our only hurdle is resources. Collective efforts of NGOs and international organizations will be of great help. There are so many segments where we cannot reach. Any proposal from NGOs or international organizations is most welcome.
Shilpi: E-commerce sites must realize that they could be the preferred buying mechanism for a large part of the disabled population. They should not only make their shopping carts accessible, but also stock a lot of assistive technology products. The conventional stores may not be able to stock such products for the lower demand and limited rack-space. We are talking with some e-commerce sites and hoping for positive results very soon.

Shilpi: We largely sell to government, corporate, and NGOs. We have outlets in Mumbai, Delhi, and Bangalore. We are now looking at setting up a dealer network. In the past, we tried using nonprofits to provide technology, but had limited success.

Another reason for going mainstream is the mentality of Indian parents. They tend to be secretive about their child’s disabilities and would rarely make a direct call and ask for our product. However, if a product is available at a retail outlet, they quickly buy it.

We are also in discussion with hospitals and government organizations regarding making our products available through them.

Mak: Given your experience, what would you suggest to anybody who wants to work in this field for short- or long-term?

Shilpi: First and foremost, don’t look at this as a charity. Look at this as a sustainable business. Considering it as a charity is killing the sector. Charity is what you do only once and out of extra income. Making a product accessible is a one-time action. Keeping it accessible is a continuous process.

For short-term, pick a focus area and work not only with nonprofits, but also with mainstream organizations to push your idea. That is what we are lacking. When any assistive technology product comes to India, they are talking only with the disability domain. To make people aware of your product, you must work with mainstream business. That is what is going to change the entire field.

For long-term, show organizations the value associated with providing accessibility to users. Show them the economies of scale. You need to invest time for collecting data and demographics. If more data is available, a lot of business and government policy decisions will be easy and quick.

Mak: How can EPUB 3.0 help to improve accessibility?

Shilpi: EPUB 3.0 is the latest standard for eBooks. Until now, books for disabled were published separately. EPUB 3.0 is a format that is accessible for disabled as well as non-disabled people. EPUB 3.0 is an important step toward mainstreaming accessibility. It eliminates the need for a separate version.

Currently, a separate version is published for disabled readers. Then some nonprofit organization converts it, prints it, and distributes it. A book published in EPUB 3.0 format is a common version for all users. Thus, there will be a great reduction in cost and time. This will increase the number of buyers and hence encourage the publishers to publish more.

EPUB 3.0 is certainly a major development that will have a far-reaching impact. It is capable of bringing about a revolutionary change.

Mak: Among the numerous electronic gadgets available today, which one do you think is most useful?

Shilpi: All of them are useful. These devices enable you to access any information, anytime, and from anywhere.

Recently I saw a “talking TV” in London on sale in a retail outlet. I instantly thought, “I want it in India.” We need that kind of technology right now, but many of the available devices need to be a lot more user-friendly. For example, almost all set-top boxes in India have manual and screen instructions in English. These things must be localized because half of the population using them does not understand English. Most of them cannot even read the local language. A “talking menu” will be of great help to them.

Mak: Any concluding remarks?

Shilpi: I think awareness is the first step and it is increasing. Technology will definitely act as an enabler. The future looks brighter than the past. The only wish is, the sooner, the better! ■

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How Cloud Computing Is
HAVE YOU NOTICED that smartphones are replacing cell phones and laptops? This trend is not likely to change and it is driving opportunities for designing and creating Web applications and mobile websites.

The next time you buy software, you might be renting or leasing it from a cloud provider. You will have fewer applications installed on your hard drive because you will access them from the cloud. Your PC will not require the storage capacity it did in the past because you will store data in a cloud. There will be lesser importance of your software being compatible with an operating system, and greater importance of compatibility with a service provider. This is the evolution in technology that cloud computing is taking us, and it’s changing the way we design software.

It’s In the Cloud
Cloud computing gives consumers the ability to access services located at a data center and connect to them over the Internet. (Consumers, not users, is the term used when writing about cloud services.) If you ever wondered, “What is the cloud?”, I can assure you that it is not a mystical place. The term cloud is a metaphor for the Internet and telephone networks. The cloud makes it possible to connect consumers to services. There is nothing new about this concept except the way we are using cloud computing.

The services provided in the cloud come from multiple organizations. These organizations are referred to as cloud providers. As a result, the cloud has multiple services provided by multiple cloud providers. A cloud provider strives to ensure high availability of its infrastructure. Some cloud providers have the building blocks to create services: software tools, database management systems, hardware, back-up services, and so on. Other cloud providers have suites of services such as accounting, customer relationship management, document management, and many more.

Types of Clouds
There is a cloud to fit the needs of every organization. The two most common types of clouds are public cloud and private cloud. When we access services, we do not think about whether the service is in a public or private cloud; we just know that it’s available and accessible.

Public Cloud: A public cloud provides Web services that are accessible to the public, such as hotels, airlines, email, weather, taxis, radio, social networks, conference services, or a personal calendar. The level of security in a public cloud is less restrictive than a private cloud. The cloud provider will need to segregate private data from public access and use anti-malware, intrusion detection, and authentication to ensure data integrity.

Private Cloud: A private cloud is restricted to one organization. The level of security is higher than a public cloud. Most often that organization is the single tenant. The types of services accessible from a private cloud are corporate email, enterprise-wide systems, calendars, content management systems, and database management systems.

As consumers of Web services, we are concerned about the integrity of data and privacy of our information. Security is enough for opponents to argue against cloud computing. The problem is very real and slowing the adoption of cloud computing. Ensuring integrity of data will mean employing measures to safeguard it. Start with strong passwords.

Usability of Web Applications
Web applications (also referred to as Web apps) allow consumers to connect to Web services from their smartphones. You may have noticed that for every one Web application, there are a dozen similar ones. Do you know what makes a well-designed Web application? Usability, that’s
right. You probably have several Web applications on your smartphone and you know which ones you like best. With so many Web applications on the market, it’s easy to delete one from your smartphone and replace it with another. Usability plays a big role in what you keep or delete.

As organizations shift to cloud computing and designing applications for mobile devices, you might assist developers to design the user interface or design information on how to use the application. The following are a few tips for designing user-friendly Web applications:

- **Design for compatibility.** A mobile website needs to be compatible with any number of mobile device formats and maximum download speed. Use Cascading Style Sheets for the layout to ensure maximum compatibility. Avoid using tables because they do not appear well on a small screen. It is easiest if your site is coded using either XML or XHTMl, with your character encoding set at UTF-8.

- **Design simple forms.** Forms can be difficult to use on a mobile device, so offer users radio buttons and lists for data entry. Reduce the number of screens a user passes through to complete a form. Forms should require the minimum amount of data input and should remember the data for the next time a user visits the site. Most mobile browsers don’t support plugins or extensions, so avoid them if you can. Avoid unnecessary graphics to maximize download speed.

- **Design simple workflows.** Reduce the number of steps consumers have to make to get to the information they are looking for. The sooner consumers have the information they need, the sooner they can make a decision or complete a transaction.

- **Design to accommodate screen sizes.** If you want to assure usability of your application, make sure that it automatically adjusts to any size screen. An application that is only compatible with one size of screen is not likely to win over users.

- **Design for touch.** If you design a user interface that relies on a physical keyboard, you are wasting your time. Mobile devices are driven by touchscreen keyboards and single buttons to execute a program. The user interface needs to be capable of multi-touch gestures such as tap, swipe, flick, double-tap, rotate, pinch, touch and drag, and touch and hold. Buttons should be labeled with the action it performs: back, submit, cancel, and arrows to move forward or backward.

- **Design cross-platform applications.** HTML5 is a potential candidate for cross-platform mobile applications. Many of the features of HTML5 have been built to run on smartphones and tablets.

- **Design for the future.** There’s a Web application that guides you on a three-dimensional tour through a museum and provides commentary on the objects you are viewing. There’s a Web application that can convert the spoken word into a document, email, or even translate it into another language. Want to know where your friends are and contact them with a press of a button?—there’s a Web app for that. Cloud computing makes it possible to create whatever you can imagine. Let your imagination be your guide.

**The Rise of Virtual Personal Assistants**

New to the smartphone is a Virtual Personal Assistant (VPA). A VPA uses artificial intelligence to reason and learn from experience. The wealth of connections available on the Internet makes it possible to create various types of VPs that can take advantage of those connections. VPs have a component that is a service much like other services in the cloud.

My smartphone interacts with the VPA component in the cloud. The VPA service in the cloud acts independently. My smartphone’s VPA does not know if a service is in a public cloud, a virtual private cloud, or supported by a legacy system at my company. The interaction is similar and there is no need to know where a service is physically located.

Usability will become a critical factor in the design of a VPA by having the ability to learn our accent, dialect, and colloquial slang; our preferences; and the accuracy of answers to questions. The VPA is especially useful for people who are blind or visually impaired by translating audible sounds into text and understanding basic commands and questions.

**Summary**

Cloud computing is a natural evolution of information technology. It opens up new opportunities to design and deliver services to consumers. It enables small businesses to get online quickly and sell their goods and services. Cloud computing makes it possible to connect to a myriad of Web services, and Web applications facilitate connectivity to those services.

The usability of Web applications will be the deciding factor of what’s successful and what’s not. If an application cannot satisfy the consumers’ needs—they will find a better product elsewhere. Innovation and imagination will drive what’s here today and gone tomorrow.

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**RECOMMENDED READING**

Intuitive
DOESN’T MEAN
Obvious

By GEOFF HART | Fellow

THE HOLY GRAIL of design is to create a product that is intuitive; often this means “capable of being understood without explanation.” A vessel used to hold water, whether a concave piece of wood or a grail, is intuitive in this sense. A rock used as a hammer or thrown as a weapon is sufficiently intuitive that even our Neandertal ancestors learned how to use such tools without online help or a Web-based technical support forum. Fortunately for those of us who earn a living explaining things, few things are this intuitive. Indeed, most things we describe are abstract—and therefore not obvious. Using a rock as a hammer is easy enough, but using it to knap flint to produce a cutting edge and learning how to throw a 100-MPH split-finger fastball are far more difficult to explain. Even the seeming simplicity of a bowl conceals surprising complexity; ask any student of topology about homeomorphism, a carpenter about wood carving, or a potter about crafting porcelain from what seems nothing more than muck to the untrained eye.

The lesson is clear: intuitive is rare and may be unobtainable for anything that’s even slightly abstract. Thus, our real goal as designers should be to mask this inherent complexity and create something whose logic can be learned and transmitted easily. Consider the smartphones that most of us own: “swiping” and multi-finger gestures aren’t obvious, but once you learn these options exist, most users confidently begin experimenting to see whether they work in new contexts. Google took advantage of this in their Gmail app for the iPhone, in which swipe-left and swipe-right gestures move between messages; this is intuitive because the same gestures move between screens of apps. When an interface’s logic makes sense and operates consistently, users apply that logic without our help because they can predict what will happen; this provides enough confidence to support exploration, and when the logic is consistent, they succeed sufficiently often that they consult the documentation less. This design philosophy supports minimalism, in John Carroll’s sense of the word. (See the March 2013 issue of Intercom for an interview with Carroll about minimalism.)

Some of us don’t design products but have some say in how they should be modified to improve their usability. Some of us design information architectures such as a website or help system or eBook structure that can be read equally well on devices with different screen sizes, shapes, and resolutions. Understanding how to make such designs more intuitive is therefore valuable for our work. To provide an example, I’ll focus on Microsoft Word in this article. Word has a great many egregious design flaws, but I’ve chosen it for its familiarity to most readers, not because it’s an unusually bad example of design. Word fails the “intuitive test” not because it is a complex, highly abstract creation but rather because:

> Its logic is often obscure.
> Its implementation of that logic is inconsistent.
> Its behaviors are therefore difficult to predict.

This combination undermines confidence in one’s ability to explore safely. Worse yet, the software’s behaviors vary between versions (undoing the confidence gained by using previous versions for years) and between platforms (Mac vs. Windows). The combination makes life unnecessarily difficult for upgraders and corporate trainers, and makes software maintenance a nightmare for Microsoft. In the rest of this article, I’ll use Word to illustrate design choices that make software unnecessarily unintuitive and lessons for our own design efforts.

**Logic and Metaphor**

Many people anthropomorphize their software because it seemingly has a mind of its own, and trying to understand how that mind thinks is essential to using the software.
productively. If men are from Mars and women are from Venus, Microsoft Word is from Terry Pratchett’s “Discworld” (http://en.wikipedia.org/wiki/Discworld). Consider something as basic as how we interact with the software, which follows two main patterns:

- **Noun–verb syntax**: we first select the object we want to change (the noun) and then tell Word what we want to do (the verb). Example: File > Open
- **Verb–noun syntax**: we first tell Word what we want to do (the verb) and then identify what object should be affected (the noun). Example: Open > File

Both are legitimate syntax, with different strengths and drawbacks. Problems arise when the two forms mix without a clear pattern, forcing our audience to determine which of the two different grammars applies in a given context. Word doesn’t help, because some menus follow the first syntax (the File and Table menus define the object first), some follow the second logic (the Edit and Insert menus define the action first), and others follow an entirely different logic. For example, “Help” is not clearly a noun or verb. It implies that help is available, but provides no clues about whether to select the verb and specify an object for that verb (help me to understand revision tracking) or select an object and then specify a verb (in the online help system, help me find something). The Help system perpetuates that lack of clarity by failing to distinguish clearly between topics that start with a verb, topics that start with a noun, and “other” logic.

The problem returns in the ribbon introduced with Word 2007, but with an additional complication: users now face tabs such as Home, Layout, and Developer that are neither nouns nor verbs and that add a fourth logic (“this tab contains miscellaneous objects and verbs”). Worse, despite the claimed goal of eliminating complex menus and the ribbon more efficient for different tasks. Microsoft accepted the spurious logic that Word’s users represent a checkbox (“choose multiple options”), a radio button (“choose only one option”), and an action button (“click to implement the selected options”) in different programs. Consistency is crucial because once you learn the logic, you don’t have to relearn it for each new dialog box. The behavior is not initially obvious (it must be learned), but it becomes intuitive once learned.

In any design project, the first step should be to identify the kinds of concepts, objects, and actions you must design and reveal to your audience. Next, create a style guide that defines how you will accomplish each goal and apply the guidelines consistently. If you’re developing a familiar product such as an eBook, follow the design used by other eBooks to minimize the number of new things readers must learn. It’s never wise to radically change a familiar, functional interface if readers must abandon skills and overcome reflexes they have spent years developing. The only exception is when you’re solving serious problems with the old design or enormously improving the user experience, but even then you should retain the old interface as an option. Microsoft’s elimination of Word’s menus in favor of the ribbon was ill-considered. It would have been easy to retain the menus and offer the ribbon as an option, thereby retaining a familiar interface for long-time users and offering a nominally simpler interface for those who were learning Word for the first time. Word 2011 for the Macintosh offers both menus and the ribbon. I find the menus and the ribbon more efficient for different tasks.

Unfortunately, Word 2007 and 2011 appear very different. This inconsistency is another poor design choice. Microsoft accepted the spurious logic that Word’s users can only use the interface conventions provided by the two operating systems, and produced versions that are visually and functionally inconsistent. Anyone who uses Word at work and Word 2011 at home and any corporate trainer who must support users of both versions faces the difficult task of mastering and teaching the differences. (In my book on onscreen editing, the length is 50 to 50% longer than necessary solely to account for interface and logical differences between the two versions.) The Web demonstrates why such differences are unnecessary: when we interact with Web pages, what we do is identical on all platforms. We focus on our goal (e.g., viewing a Web page), and largely ignore subtle nuances of the interface used to achieve that goal (e.g., the “furniture” of dialog boxes). The same principle should apply to any design:

- Focus on how users will interact with the design and make those aspects consistent for users on any platform.
- Deviate from this consistency only when absolutely necessary. For example, smartphones have smaller screens than tablets; thus, we must create “fluid designs” that display the same information equally well on both.
The more consistent your design is with familiar designs, previous versions your audience has mastered, and versions on other platforms, the easier it is for them to intuit how the product will behave. That leads us to the concept of predictability.

**Predictability**

Once you understand a program’s logic, it becomes easier to predict its behavior. That removes the stress associated with being uncertain what will happen when you perform an action. That stress is the biggest barrier to learning that I encounter when I train people to use Word. Understanding that there’s an undo function (Control+Z) increases their confidence that they can experiment without fear that they’ll damage something irreversibly. Unfortunately, only some actions are obviously undoable (e.g., copy/paste). Most others are only partially undoable; for example, if you delete sentences in widely scattered parts of a document, at some unknown point you’ll reach the undo function’s limit and be unable to undo the earliest deletions. Others actions cannot be undone at all; for example, many students are reluctant to change Word’s settings because once you make a change, there’s no going back—you have to memorize or write notes about what you changed and where you changed it so you’ll know where to go to undo the changes if Word starts behaving strangely. Teaching students to record what they did on a scrap of paper reduces their fear of experimentation, but that would be unnecessary if there were any easy and predictable way to undo such changes.

Many of Word’s functions provide warnings when their effects cannot be undone. Unfortunately, enough don’t that Word seems dangerously unpredictable to many users. Many functions provide no useful explanation about why a function failed even after you’ve carefully followed the instructions. For example, shortcuts for the AutoCorrect function must be at least three characters long, but Word will happily accept a two-character shortcut without warning you that it won’t work. Older versions didn’t warn that AutoCorrect was limited to 255 characters and truncated longer text. Worst of all, newcomers to Word have no idea this function exists, and when the function is triggered for the first time without warning or explanation, this creates a powerful fear: you don’t know what you did and therefore don’t know whether you might trigger more serious problems by inadvertently repeating that action. For simple changes, this isn’t a problem. But I’ve seen colleagues raging in frustration after Word suddenly changed a line of dashes into a paragraph border. No matter how hard you try, you can’t select and delete the line unless you know the secret: the line is a paragraph-level format. Even then, it’s not obvious that you change this format via the Borders and Shading dialog box and not (as you’d expect) from the Paragraph dialog box.

In any design, users will use what they already know to predict what your design will do. For example, most users will rarely encounter AutoCorrect during their first few hours with Word and will therefore not expect Word to suddenly change its behavior and start modifying text without being asked. The key is to remember that what may be obvious to you (the designer) may appear scarily unpredictable to your audience. Since most users will not receive formal training in all but the most basic functions of a product, advanced features such as AutoCorrect should be disabled by default; they should only be enabled by a conscious action, usually after someone has learned of a feature and how it works. They should never be triggered by means of an accidental keystroke. This increases the likelihood that if the product’s behavior suddenly changes, the user will recognize what they did to cause this change.

**Creating Intuitive Products**

Usability and user experience design is a complex field, and it requires a profound understanding of the design principles I’ve discussed (logic, consistency, and predictability), human psychology (e.g., how people use these design properties to become comfortable with a product and what happens when they lose that comfort), and their interactions. Problems arise whenever we unnecessarily require users to master new types of logic, fail to eliminate inconsistencies in how that logic is implemented or revealed, or allow unpredictable product behavior. It’s rarely possible to eliminate all of these problems, but being aware of their existence lets you seek ways to minimize the problem. Where a problem can’t be eliminated, we may be able to mitigate its severity by clarifying the logic, revealing inconsistencies and their meaning, and triggering those inconsistencies only in response to deliberate action by an informed user. The result is a more predictable (and therefore intuitive) design.

Creating intuitive products does not eliminate the need for documentation, and that documentation is particularly important when a product requires additional forms of user assistance such as training and technical support. Trainers will be grateful for design choices (e.g., creating consistent Macintosh and Windows interfaces) that let them develop a single set of training materials. Support staff will be grateful for only having to learn a single set of peculiarities and bugs, rather than one per version. To accomplish this, you’ll have to carefully think through every aspect of a design to ensure that the logic is clear and consistent and predictable, even if it’s not inherently obvious. As technical communicators, it’s our responsibility to explain away (or conceal) illogic, a lack of clarity, and inconsistencies. But we should also help other designers create more intuitive designs based on the same approach.

GEOFF HART (geoff@geoff-hart.com) has worked with many difficult and challenging individuals during a diverse career as a technical communicator and sometimes-manager. None of this prepared him for having to manage himself as a freelancer.

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USABILITY AND ACCESSIBILITY
The Ethics of Accessibility: It’s a Matter of Fairness

By Dan Voss | Fellow

Editor’s note: This article was originally published in 2006 in the 49th Proceedings of the STC conference. The original title was “The Ethics of Special Needs: It’s a Matter of Fairness” because the name of the AccessAbility SIG at the time was the Special Needs SIG, which grew out of the original Special Needs Committee formed in 1999 by Judy Skinner. The name of the SIG has changed and the scope of the SIG has morphed into encompassing the methods, skills, tools, etc. that all technical communicators can use to create and promote accessible and inclusive products and services for all. The message of this article—fairness—has not changed and probably never will change.

“MOMMY! DADDY FELL off the ladder. I think he’s hurt!”

Actually, Daddy was extremely lucky that day. After taking a two-and-a-half-twist, double-somersault dive from the roof, Daddy escaped with a pair of badly sprained wrists.

So as I sit here typing this article, I am taped up on both wrists, looking very much as if I had double Carpal Tunnel Syndrome. And, yes, it hurts—though not all that much. And yes, I’ve lost a couple words a minute. But all in all, considering the things that could have happened, I am not...
complaining. No, that’s an understatement…. I am, in fact, deeply thankful to be sitting here typing with sore wrists.

You see, the wrists will heal. In all likelihood, the pain and the inconvenience will turn out the same way my previous encounters with disability have—temporary. Not everyone is that fortunate.

As a matter of fact, according to a survey by the National Institute on Disability and Rehabilitation Research (NIDRR), more than 32 million Americans of working age (that’s 18.7% of the population from 15 to 64) have a disability, using the definition in the Americans with Disabilities Act (ADA):

1) The term disability means, with respect to an individual:
   (A) a physical or mental impairment that substan-
       tially limits one or more major life activities of such
       individual;
   (B) a record of such an impairment; or
   (C) being regarded as having such an impairment …
2) Major Life Activities, in general are
   (A) In general
   For purposes of paragraph (1), major life activities
   include, but are not limited to, caring for oneself,
   performing manual tasks, seeing, hearing, eating,
   sleeping, walking, standing, lifting, bending, speaking,
   breathing, learning, reading, concentrating, thinking,
   communicating, and working.

Under these definitions, the ADA legislation cited 43 million Americans as having disabilities (see http://dsc.ucsf.edu/pub_listing.php?pub_type=abstract). That’s pretty sobering, if you ask me.

Speaking of sobering statistics, try this one on for size: only 27.8% of working-age people with work disabilities have jobs, compared to 76.8% of those without disabilities (http://dsc.ucsf.edu/pub_listing.php?pub_type=abstract).

And the picture gets even bleaker for minorities. Asserts Jesse Jackson:

People with disabilities have always been excluded from the bounty of our nation’s resources. Minorities with disabilities, in particular, have been the most disenfranchised of the disenfranchised. It is time that we bring them into the fold as full, first-class partici-
pants in our society.

In 1995, Supreme Court Justice Thurgood Marshall wrote that the plight of the people with disabilities reflected nothing less than a “regime of state-mandated segregation … that in its virulence and bigotry rivaled, and indeed paralleled, the worst excesses of Jim Crow”—City of Cleburne v. Cleburne Living Center (American Civil Liberties Union).

Why have we failed for so long, as a society, to correct this injustice? Because it costs money. It costs more to equip public buses with wheelchair lifts, to retrofit public restrooms with accessible facilities, to purchase speech recognition software or Braille keyboards, and to install telephone devices for the deaf.

The Americans with Disabilities Act (1990) was born out of a sense of our collective social responsibility to open up opportunities to those with special needs.

When he signed the ADA into law, then-President George Bush said:

ADA is powerful in its simplicity. It will ensure that people with disabilities are given the basic guarantees for which they have worked so long and so hard. Independence, freedom of choice, control of their lives, and the opportunity to blend fully and equally into the right mosaic of the American mainstream. (National Disability Policy)

“Well, what would you expect the president to say?,” I hear the cynics in the crowd cry. But even the fiercely independent American Civil Liberties Union hailed the ADA as “the most comprehensive civil rights law in a generation” (American Civil Liberties Union).

ADA was, and is, a good step in the right direction. But the still-lagging employment statistics for those with disabilities, for example, indicate that those who are abled, as a group, have a long way yet to go before re-enfranchising a large segment of the population with equal opportunity to contribute to and enjoy the bounties that Reverend Jackson refers to.

The 1997–1998 progress report on national disability policy concluded:

The rate of progress is slower and less steady than many in the community had hoped when ADA was enacted into law…. For people with disabilities truly to accomplish the vision of ADA, it is critical that the Administration work with leaders in Congress to forge a disability agenda that brings children and adults with disabilities into the mainstream of American life. (National Disability Policy)

Yes, there has been progress, but much remains to be done. Now let’s do the math and make the segue into technical communication. Imagine that 18.7% of STC members are practicing their craft with one or more of the specific disabilities outlined above.
It was with this realization that STC formed a new committee in May 1999 called the Special Needs Committee. Its immediate charter was to help members with special needs achieve their potential by making available to them information about products, services, and literature that can assist them in their career activities. Its larger mission was to blaze a trail that we hoped would inspire other professional organizations to create similar support groups for their practitioners who have disabilities.

My focus on the committee was ethics. One of our committee’s functions was to help managers and instructors not only by providing resources to help those with special needs, but to make them aware of the legal and ethical principles which govern this area of interest.

Let’s look, briefly, at STC’s Ethical Principles (www.stc.org/about-stc/the-profession-all-about-technical-communication/ethical-principles). The six major areas are as follows: 1) legality, 2) honesty, 3) confidentiality, 4) quality, 5) fairness, and 6) professionalism. All six areas can be tied in to special needs, but the three areas with greatest relevance are legality, professionalism, and fairness—probably in increasing order of importance.

Let’s start with legality. The heart of the law for special needs is, of course, the Americans with Disabilities Act. It specifies that employers must “reasonably accommodate” employees with disabilities. But what governs reasonableness?

Say, for example, a small software development house with a staff of two documentation specialists has a job opening for a third. One of the applicants has a severe disability that would require a fairly significant capital investment in equipment to accommodate the special need and allow productive work. (Most disabilities, by the way, do not require a large investment to accommodate, and many require little if any.) In all other respects, this applicant’s qualifications are comparable to those of others seeking the position, but the others would not require special facilitation.

What’s the legal thing to do? And what’s the ethical thing to do?

As I’m sure Rosa Parks would tell you, those two things are not always one and the same.

Under the ADA guidelines, if the software house could show that the extent of the investment for special accommodation would pose an unreasonable economic hardship based on the size of the company that would cover them legally against a lawsuit based on discrimination.

But would that also cover them ethically? That’s a tough one. As is so often the case, ethical dilemmas carry us into gray areas. In this case, there is almost certainly a level of investment that would simply be unachievable; after all, the company can hardly be expected to go bankrupt in order to extend an employment opportunity to one person with a disability, thereby consigning 28 other people to the ranks of the unemployed.

On the other hand, could the company “cook the books” a little to make the economics of accommodation appear worse than they really were in order to escape the situation? Of course it could. And would that be right? Of course not.

But where, exactly, is that line? I would like to find it somewhere on the ledger, but I suspect it lives closer to the heart.

One area where STC could contribute would be to offer informed feedback to guide decisions in cases like this, researching precedent in similar cases and urging the decision-makers to be guided both by the law and by their conscience.

Next, let’s consider special needs from the standpoint of professionalism. Our ethical guidelines specify that we advance the technical communication profession through our integrity and performance.

So it is our professional duty to help those with special needs, but is that the point? No. While I don’t discourage a sense of responsibility as an initial motive for extending a helping hand, my brief tenure on the Special Needs Committee has made me realize that duty is not the right word. It is an opportunity to help those with special needs.

The point is to focus not on disabilities but on abilities. That’s what we mean by “taking the ‘dis’ out of disabilities.” That’s why our logo reads “Disabilities Don’t Stop Development.”

I have functioned on many committees in my professional career, as I’m sure most of you have, but few have matched the energy, vision, commitment, and sheer productivity of this group. And, of the dozen committee members in 2006, half have a specific disability of one kind or another: low vision, hearing, mobility, cognitive dysfunction, etc.

The last thing I want to do, by the way, is to patronize my esteemed colleagues by implying that this is due to some kind of special courage—although that is a very tempting word to use in all sincerity, given the adversity many of them have overcome—but I have come to realize that professionals with special needs do not want any medals for bravery.

They simply want to be recognized and respected as professionals.

That, indeed, is the whole point—technical communicators with special needs are professionals with an enormous amount to contribute. Employers should not hire people with disabilities as a form of charity. They shouldn’t even hire them primarily as a result of social responsibility—although there is certainly nothing wrong with that motive.

They should hire them primarily because to do so is good business.

According to the U.S. Department of Education, workers with disabilities are rated consistently as average or above average in performance, quality and quantity of work, flexibility, and attendance. (www.disabilityfunders.org/disability-stats-and-facts)
The millions of Americans with disabilities represent one of the largest, if not the largest, single pool of under-exploited talent available for the workforce!

And finally, there’s the question of fairness.

Our ethical guidelines specify: “We respect cultural variety and other aspects of diversity in our clients, employers, development teams, and audiences” (STC Ethical Principles).

Diversity, of course, is the tie to special needs. I refer not to “diversity,” the buzzword. I refer to the concept of enriching our workplace and our lives by sharing our differences and growing from them, instead of fearing those who are different and isolating ourselves with an invisible veil of prejudice.

Joan Bova, director of community resources for the Center for Independent Living in Winter Park, FL, who herself has a mobility limitation, addressed this point at a professional workshop to improve awareness of disabilities in the workplace. Bova explained how for generations well-meaning parents, hoping to protect people with disabilities from embarrassment by rebuking their children for staring at them, pointing at them, or even talking to them, inadvertently sent the message that somebody who is a little different is something to be feared, to be ignored, to be isolated (Bova, 1997). How ironic—a decent impulse led to precisely the wrong message!

And that message has, over the years, created a manifest injustice. Collectively, our society has parlayed our fear of those who are different into a paradigm of injustice that denies fellow humans equal opportunity as a result of something over which they have absolutely no control. It’s time to change that.

Another member of the Special Needs Committee and I were in attendance at a technical symposium where the speaker was railing against the inefficiencies inherent in reworking Web page designs to make sure they were readable on-screen for those with visual disabilities, in compliance with the ADA (which was de rigueur in this case, since the Web page in question was for a government-funded project).

“How accommodating this small fraction of the population means that we can’t use tables, which are one of the key devices in designing Web pages.” My colleague and I bit our lips. Don’t jump in, we thought—the affront is not intentional. It’s simply a matter of awareness. Talk to the presenter later, offline.

But later, during the Q&As, the presenter became even more vehement: “If we didn’t have to deal with this darn ADA thing, we would have been a lot better off.”

That pushed us over the edge.

“With all due respect, while we understand the difficulties achieving full text accessibility can present for the Web page designer, has the presenter considered the difficulties a visually impaired person might experience in trying to read a page that is not designed to be accessible?”

Yeah, we put the speaker on the spot. Maybe that wasn’t very nice of us. But if it happens again, we’ll speak up again.

We probably wouldn’t have spoken up six months earlier, before our service on the Special Needs Committee opened our eyes to the gauntlet of unfair obstacles that confront so many of our fellow professionals—indeed, our fellow humans—in performing their basic responsibilities on the job, even the basic functions of life.

They don’t want special treatment—other than in the sense that they may require a technological boost or a simple hand to help them overcome their disabilities and put their abilities to use.


Is that too much to ask? I think not.

It’s more than a question of legality and professionalism. It’s a matter of fairness.

DAN VOSS (daniel.w.voss@lmco.com) is a member of the STC Orlando–Central Florida Chapter and the Academic and Accessibility SIGs, and an STC Fellow. He co-led the Society’s student outreach initiative from 2010–2013 (with student mentees Sarah Baca and Bethany Bowles) and remains active in educational outreach and mentoring programs. Dan is a 35-year veteran proposal writer and technical marketing/media communicator with Lockheed Martin Missiles and Fire Control (LMMFC) in Orlando, FL, and a 20-year adjunct instructor for Webster University. Dan is a writer, communicator, author, speaker, teacher, award-winner, and, perhaps above all, a mentor. He was honored with the President’s Award at the 2013 STC Summit in Atlanta for mentoring and student outreach work.

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Continuing Your Accessibility and Usability Education

By Karen Mardahl | Senior Member

WHERE CAN A curious technical communicator
learn more about accessibility and usability
(or UX/user experience)?
Unconferences
Unconferences are a great place to start “in real life.” These are informal conferences where agendas are created on the spot and where all are more than welcome to contribute actively.

There are unconferences with an accessibility theme in Seattle, London, Toronto, Boston, Perth, Los Angeles, and more. Find them at www.accessibilitycamp.org/events.shtml.

There are free or inexpensive UX camps (camps are also informal gatherings) such as http://uxcampeurope.org or http://uxcampdc.com/.

Search Lanyrd for future events tagged “UX” and “camp” (http://lanyrd.com/search/?context=future&q=ux+camp) or “accessibility” and “camp” (http://lanyrd.com/search/?q=accessibility&context=future).

Don’t equate informal with lower standards. Very knowledgeable people attend these events, and it’s an excellent place to get started.

UX Book Clubs
Even more informal events are the UX book clubs. You can finally get those books read and discuss them with others at the same time. Follow https://twitter.com/uxbookclub for possible news about an event in your area. Why not start one yourself in your area? Just meet up at a local café after reading the books and start talking! For inspiration, check out the stream of books read by the UX Book Club in Copenhagen: http://uxbookclub.dk/. There are more resources at www.uxbookclub.org/ as well. Unfortunately, this site is not completely up to date; it has had spam attacks in the past. Use with caution.

Online Events
There are several online events throughout the year.

- Global Accessibility Awareness Day on 9 May 2013 with meetups and online events: http://globalaccessibilityawarenessday.org/
- The Accessibility Summit from Environment for Humans, a two-day online conference 10–11 September 2013: http://lanyrd.com/2013/accessibility-summit/
- World Usability Day on 14 November 2013: www.worldusabilityday.org/

Monitor the KeyContent site at http://keycontent.org/tiki-calendar.php and on Twitter at @keycontent for notification about many valuable events around the world for technical communicators curious about accessibility and usability. See the bio for Karen Mardahl on page 5.
STC Launches First Advisory Council at the 2013 Summit in Atlanta

By Liz Pohland | Senior Member

AT THE 2013 Summit in Atlanta, GA, STC celebrated its 60th year supporting technical communication and, to commemorate the event, a new initiative was launched—the STC Advisory Council. The Council had its first meeting during the Summit on Monday, 6 May.

The function of the council is to serve as an industry “think tank” that advises and makes recommendations to the STC Board of Directors. Council members draw from their experience and expertise and serve as strategists to help advance technical communication in the workplace. Members are stakeholders, such as senior executives, who work in a wide range of industries. Attendees at the May 2013 meeting included representatives from Adobe, American Public University System, Boston Scientific, CA Technologies, Google, IBM, MadCap Software, and Oracle. Academia was also present with professors and program directors from Virginia Tech and Texas Tech. In addition, several STC Board members and staff were present.

STC President Alan Houser (now Past President) steered the meeting, which began with an introduction, welcome remarks, and the purpose of the Council. “This is a new, exciting initiative by the Society for Technical Communication. These high-level representatives from the academic, industrial, and vendor communities have formed an invaluable resource, to the STC and to each other, for monitoring and staying ahead of trends in the profession.”

Echoing his inaugural address at the Annual Business Meeting at the 2012 Summit, Houser commented:

It’s an exciting time to be a technical communicator! It’s also a time of great change for our profession and its members. By partnering with these advisors, STC is maintaining its role as a go-to resource and champion for the technical communication profession.

To form the STC Advisory Council, the Society reached out to our key stakeholders: the academic community that educates our members, the industrial community that employs our members, and the vendor community that provides the tools many of our members use daily. By chartering this group, STC continues its mission as an advocate for our evolving profession.

Discussion centered around how technical communicators add value to products and services, the roles they play in organizational landscapes, the perceptions of technical communicators—from their supervisors, their peers, and those outside their workplaces—and what employers, educators, vendors, and STC can do to support the field.

For newly appointed STC Executive Director Chris Lyons, this meeting was one of his first events on the job. “I’m really pleased at the response from companies to our advisory council,” he said. “STC members frequently discuss how their jobs are changing and their skills are used in new ways. What we need to better understand is how the constant change looks from the corporate side and what is driving it. That way we can ensure our members are better able to join the conversation within their companies and are trained in the right tools and skills that will be needed.”
STC Partners with Blackboard for a Tech Comm MOOC

BY KEVIN CUDDIHY

STC TAKES A “massive” step forward in online education this September and October when they partner with Blackboard for a tech comm Massive Open Online Course (MOOC).

“MOOCs held by educational institutions attract thousands of attendees,” explained STC Director of Education and Meetings Lloyd Tucker. “But to our knowledge, no other professional association has ever attempted one. We’re extremely excited to be blazing the trail.”

According to Wikipedia, a MOOC is “an online course aimed at large-scale interactive participation and open access via the Web. In addition to traditional course materials such as videos, readings, and problem sets, MOOCs provide interactive user forums that help build a community for the students, professors, and teaching assistants.” And Blackboard is one of the leading companies in the field. “It’s a great opportunity,” enthused Phylise Banner, director of online teaching and learning at Union Graduate College and head of the team organizing the MOOC. “We’re partnering with one of the leading providers of academic support systems, of LMSes.”

The STC MOOC will take place over five weeks (30 September–1 November) and explore the field of technical communication. It will highlight the roles and responsibilities of technical communication professionals from a variety of field specializations. Subject area experts will be responsible for developing content areas, designing learning activities, and presenting at least one synchronous learning event during the MOOC. And STC is inviting members of our SIGs to be study group facilitators as well to add to the expertise. Each week will cover a different topic area:

- **Introduction to Tech Comm** (30 September–4 October)
- **Content Development and Delivery** (7 October–11 October)
- **Content Strategy/Content Lifecycle** (14 October–18 October)
- **Instructional Design** (21 October–25 October)
- **Usability/User Assistance** (28 October–1 November)

“The tech comm MOOC gives you the opportunity to be part of a large community of learners—to participate as a content developer and a content curator as well as a student,” said Banner. “It exposes you to a rich array of resources that you may not be aware of related to the topic at hand. In our MOOC, the benefits are to have an understanding of the entire field and to take a larger perspective. You can participate on a micro level—details of what you’re interested in—and a macro level, to see the bigger picture and what others are interested in.”

The MOOC format includes an open Web presence, scheduled synchronous sessions (and recordings), discussion areas, facilitated study groups, social media components, guided activities, and aggregated content from participant blogs, Twitter posts, etc. After successfully completing this MOOC, participants will be able to:

- **Define technical communication**
- **Understand the function of technical communication in industry and academia**
- **Identify the elements of effective technical communication**
- **Develop basic core technical communication skills**
- **Establish methods for integrating effective practices into current and future work**
- **Seek out professional opportunities as a technical communicator**
- **Recognize the value of STC and other related professional organizations**
- **Further explore related technical communication research and applied effective practices**

By definition, MOOCs are open to all. As such, the tech comm MOOC will be completely free and open to both STC members and nonmembers worldwide. “Everyone can benefit from attending this MOOC,” stated Banner. “It’s a benefit for anyone at any level. It’s designed to have content for beginners and to have areas to explore. Intermediate people can hone their skills and learn about other areas they’re perhaps interested in, brush up on expertise, or explore different areas. And for experts, it’s a place to share and add to the content, to add to resources, participate in discussions and conversations, and even take on the role of a leader.”

See the STC website (www.stc.org) for more information on how to register as the MOOC gets closer, and keep an eye on your emails from STC as well. If you’re interested in volunteering to help, email Lloyd Tucker at lloyd.tucker@stc.org. Then prepare to learn—and more.

“It’s more than just an education opportunity,” said Banner. “It’s a professional development opportunity, networking, and even research.” Join STC on this exciting new venture into the world of massive open online courses!
By Chris Hester | Conference Chair

The STC14 Planning Committee recently visited the Hyatt Regency in Phoenix for our initial site planning, and I can’t wait to return to Phoenix in May 2014 for the Technical Communication Summit. The people, location, facilities, event plans, and sightseeing opportunities are incredible.

We packed in a great deal during our visit, but I thought I would highlight some of my thoughts:

- Travel from the airport to the Hyatt Regency is fast and easy. Taxis take about 15 minutes ($20), and light-rail is an inexpensive option ($2) and requires less than an hour.
- You can get a light-rail day pass ($4) and easily ride around the city to see the sites. A light-rail stop is only two blocks from the Hyatt.
- The Hyatt Regency is a great hotel with many public seating/conversation areas, Wi-Fi, comfortable rooms, and friendly and helpful staff. There’s an outdoor garden area and pool, plus a well-equipped gym. Hotel dining includes Einstein’s Bagels and Networks bar and grill, both of which provide ample outdoor seating.
- Misting systems on many buildings and outdoor patios keep you cool so you can enjoy the area.
- Many shops, bars, restaurants, and sites to see (including Alice Cooperstown) are within walking distance of the Hyatt. I can’t wait for the TweetUp and other social gatherings.
- The architecture of many of the older Phoenix buildings is beautiful, as is the art and sculptures throughout the city.
- The baseball stadium is an easy walk from the hotel, so I look forward to seeing an Arizona Diamondbacks game while I’m in town.
- The convention center, which is the location of our conference session rooms and exhibit hall, is across the street from the Hyatt—just 56 steps away, and provides wonderful accessibility.
- Starbucks is located at the convention center entrance—so convenient!
- Our session rooms in the convention center are located in the same wing, just inside the entrance, and give us great flexibility to deliver a powerful program with new formats—stay tuned for more information and announcements.
- The Hyatt provides great meeting space for our preconference education programs and our evening events.
- The Arizona Cardinals football stadium, which will host the 2015 Superbowl, is 20 miles from the Hyatt and can be seen from the revolving restaurant on the top floor.
- The Grand Canyon is about four hours away.
- Sedona, Flagstaff, and Tucson are each less than two hours away.
- The Symphony Hall is next to the convention center and several museums are nearby.
- Our group enjoyed breakfast at Steve’s, just across the street from the Hyatt. It’s an easy place to meet with friends.
- The Honors Banquet meal will be delicious, offering a wonderful filet mignon, fish, or vegetarian grilled, stuffed poblano chili main entree. The chef shared how the Hyatt uses local suppliers whenever possible to create fresh, enjoyable dishes.

I hope you are getting excited about the 2014 Summit in Phoenix and putting it on your calendar today. The Call for Proposals will be opening in early August and will close in early September. STC will announce the Call for Proposals to all members via email, but you can also watch for an announcement on the STC website. Watch www.stc.org for a banner announcing the Call for Proposals. For more information about the Summit, be sure to watch #stc14 on Twitter and the Summit website at http://summit.stc.org.

We look forward to seeing you in Phoenix!
I approached the 2013 Summit in Atlanta, GA, from the perspective of both a first-time attendee and a technical writing professional in the midst of a significant career switch—from the practice of law to technical writing and editing.

I wouldn’t have attended the Summit at all had it not been for Cherie Woodward, president of my local STC chapter (Sacramento Metro). Cherie tipped me off that student volunteers were being recruited to work at the Summit as room monitors (assisting the speakers with A/V issues if any occurred, taking a headcount, etc.). As a student in the technical writing program at American River College, I was selected to volunteer—saving myself hundreds of dollars on registration fees in the process.

The real joy of attending the Summit was the ability to mingle with so many really funny, interesting, and experienced tech writers. The overwhelming majority of people were just pleased to meet you, excited to bring others into the fold, and comfortable providing new technical writers with advice about how to develop their careers.

While working as a room monitor, I sat in on some fantastic presentations! Speakers from around the world had assembled in Atlanta for four short days, and they tackled the entire spectrum of communication issues—like content strategy, CSS development, explaining complex concepts to end users via multimedia presentations, and managing the impact of social media on corporate documentation. No single person could have possibly taken it all in. Fortunately, all of the presentations were recorded for future viewing, so I can watch the sessions that I couldn’t attend.

Better yet, I connected with SIG members from across the United States and around the world. Attending the annual meetings for the Policy & Procedure, Europe, and International Tech Comm SIGs helped me learn more about emerging trends in technical communication.

So, what did I learn about technical communication? Over the course of four extremely busy days, I soaked up a lot of great advice. The core messages were simple:

**Good technical writers can make modern life simpler.**

Keynote speaker David Pogue, the New York Times’ technology columnist, publishes witty reviews of consumer electronics. But underneath his slightly silly façade lurks a consumer advocate with a message for all STC members: he’s worried that users can’t find streamlined, understandable user documentation. People need help navigating our increasingly connected homes and workplaces, and clear, concise documentation will help everyone get more out of their technology—from software suites to high-tech “connected” refrigerators to medical equipment.

**Policy and procedure writing is an area of tech writing desperately seeking additional talent.** At the P&P SIG meeting, Dawnell Claessen informed attendees that the number of companies looking for “policy and procedure” writers on Indeed.com has always outstripped the number of qualified candidates. The need for sharp, savvy writers will only increase going forward.

**Everyone underestimates the value of policy and procedure writing—until they need it.** During the Writing & Editing Progression, Emily Kowal discussed why helping client companies outline how their values and priorities guide their employees’ conduct can eliminate confusion, increase efficiency, and translate into greater client satisfaction.

**Technical writing is international, whether we’re aware of it or not.** Issues of localization and translation will become increasingly critical to tech writers as our written work is accessed by end users worldwide. At the Communication & Translation Progression, Kirsty Taylor highlighted some of the issues inherent in translating concepts or terms of art from one culture’s lexicon to another, and offered smart suggestions for how to help translators switch your work effortlessly from one language to another.

Thank you, Atlanta, for a lovely trip—and thanks to STC for an amazing opportunity!
Nomination Process Opens for STC Academic Awards

STC recognizes individual member achievement through several award programs. Below is information on the academic award programs and their deadlines.

**Sigma Tau Chi and Alpha Sigma Honor Societies**
STC sponsors two honorary societies for students, and this year the criteria for each have changed.

Membership in STX is an honor given to students enrolled in a program in technical communication, who have a cumulative grade point average of 3.5 or above, are exemplary in participation in STC, and demonstrate a potential for significant contribution to the profession.

Membership in AS is an honor given to students enrolled in a program in technical communication who have a cumulative grade point average of 3.5 or above, demonstrate active participation in STC, and have the potential to contribute to the profession.

Nominations are due by **1 October 2013**. Contact: Pam Brewer (brewer_pe@mercer.edu).

**Jay R. Gould Award for Excellence in Teaching Technical Communication**
The Jay R. Gould Award honors the distinguished teaching career of Professor Gould and celebrates true academic mentorship, demonstrated by the personal and professional concern that great teachers extend to their students beyond the classroom.

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The Gould award nominating committee is seeking nominees for the award. To be eligible, a nominee must have been a member of STC for at least ten years and must have been involved in postsecondary education for at least fifteen years. Current STC board members and members of the Gould award nominating committee are not eligible.

Nominations are due by 1 November 2013. Contact: Tharon Howard (Tharon@clemson.edu).

Ken Rainey Award for Excellence in Research
The Ken Rainey Award honors the distinguished research contributions of Dr. Rainey, a professor at Southern Polytechnic State University and an STC Fellow who produced major research studies that continue to provide ongoing benefit to both practice and teaching in the field of technical communication.

This award honors research that has made positive, significant contributions to technical communication practice and teaching. One award will be given each year to an STC member who has conducted a lifetime of quality research in the field or has completed a single high-quality empirical study or a set of related high-quality studies.

To be eligible for the award, a nominee must have been a member of STC for at least one year.

Nominations are due by 1 November 2013. Contact: Nancy Coppola (nancy.u.coppola@njit.edu).

For more information on all of these awards and nomination forms, see www.stc.org/membership/recognition/awards.

Are You A Jolly Good Fellow?
Applications Due 15 October 2013

BY CINDY CURRIE-CLIFFORD | Chair, Fellows Nominating Committee

EACH YEAR, THE STC FELLOWS Nominating Committee invites STC Associate Fellows who have held that rank for three years or more to submit an application to the committee for possible elevation to the rank of STC Fellow. This honor recognizes members’ significant achievements in and contributions to the field of technical communication and sustained and significant service to STC. It is the highest honor that STC can bestow upon a member.

If you are an STC Associate Fellow who was inducted to that rank at or prior to the 2011 STC Technical Communication Summit, we invite you to submit an application to the committee. The committee thoroughly reviews each nominee’s application, researches and verifies the nominee’s qualifications, and contacts the nominee’s references. When all evaluations are completed, the committee recommends qualified nominees to the STC Board of Directors for consideration. Those nominees receiving a two-thirds favorable vote from the board will receive the honor as long as their membership is in good standing and they meet the requirements as stated in the guidelines. (If the committee determines that a nominee is not qualified for elevation to the rank of STC Fellow, it will provide a brief explanation of why the nominee does not meet the qualifications.)

To be considered for elevation to the rank of STC Fellow, you must have accomplished all of the following: (1) performed important work and attained distinction in the field of technical communication; (2) done notable original work that has contributed to the advancement of the field; and (3) made significant contributions to STC and helped to tell STC’s powerful story. Length of career, quality of accomplishments, service to the Society, and continuity of achievement are all factors in the selection process.

You can find the application and related information on the STC website at www.stc.org/membership/recognition/honors. Send your completed application to Lloyd Tucker in the Society office at lloyd.tucker@stc.org, with a copy to Cindy Currie-Clifford at stc_cindycurrie@yahoo.com to arrive no later than 15 October 2013. The committee will forward their recommendations to the STC Board, who will consider nominees in January 2014. The Society will recognize new Fellows at the honors banquet in May at the 2014 Technical Communication Summit in Phoenix, AZ.

For more information, review the Fellows page available at www.stc.org/membership/recognition/honors or contact committee chair Cindy Currie-Clifford at stc_cindycurrie@yahoo.com.

Please note that there is an administrative fee of $25 that must accompany your application.
Associate Fellow Recommendations
Due 15 October 2013

BY LINDA OESTREICH | Chair, Associate Fellow Committee

EACH YEAR, STC members and communities have the opportunity to recommend senior members for the rank of STC Associate Fellow to the Associate Fellows Committee. This honor recognizes members’ achievements in the field of technical communication, contributions to STC, or both.

Any voting member of STC may submit a nominee’s application to the Associate Fellows Committee, including those who wish to apply on their own behalf. The committee reviews each nominee’s application and contacts the identified references. Based on evaluation of the information collected, the committee forwards nominees to the STC Board of Directors for consideration. Those nominees receiving a two-thirds favorable vote from the board will receive the honor as long as their membership is in good standing and they meet the requirements as stated in the guidelines.

To be considered for selection as an Associate Fellow, the nominee must have been active in the field of technical communication for at least 15 years and have been a member of the Society for at least 10 years, as of the application submission deadline. They must also be members in good standing at the time of the application and at the time of the honors banquet the following May. But, most importantly, the nominee must have significant accomplishments one or more of the following areas: (1) performed important work and attained distinction in the field of technical communication, (2) done notable original work that has contributed to the advancement of the field, or (3) made significant contributions to the Society and helped to tell STC’s powerful story.

In August, the STC office and the Associate Fellows Committee will send a message to STC qualifying senior members and Society and community leaders describing the nomination process and the information required for a nominee’s consideration by the Associate Fellows Committee. By August, this information will also be available on the STC website at www.stc.org/membership/recognition/honors. Upon request, the Society office will email community leaders a list of all eligible nominees in their communities. Please email your request to stc@stc.org.

If you want to submit yourself or a colleague as a nominee for Associate Fellow, please use the Recommendation for Associate Fellow form and refer to the completed sample forms on the STC website.

The Associate Fellows Committee encourages submitters to work with nominees to ensure applications are complete and accurate. Please use e-resources whenever possible so that the committee can check facts, publications, presentations, and the nominee’s presence online. It is not the length of the application that will ensure the acceptance of the nominee, but the consistency, variety, and level of work and influence the nominee has had on technical communication and the Society. An online portfolio would be an ideal resource. Remember that this is an STC honor and emphasis will be placed on STC accomplishments.

The committee recommends involving Associate Fellows, Fellows, or members who are experienced in submitting Associate Fellow applications. Also, the committee strongly recommends that the submitter be fully convinced that the nominee meets all the criteria for recommendation as an Associate Fellow. Keep in mind that those who attain this honor serve as models of our organization. This honor is not easily attained and those who receive the honor have worked for many years to support the profession and the Society in various ways.

Completed nomination packages must be received by the committee by 15 October 2013. Send them to the STC office in care of Lloyd Tucker, lloyd.tucker@stc.org, with a copy to the committee chair, Linda Oestreich, at liloriter@cox.net. In January 2014, the STC Board of Directors will consider the nominees forwarded to them by the Associate Fellows Committee. In May, at the 2014 STC Technical Communication Summit in Phoenix, Arizona, the Society will recognize the new Associate Fellows at an honors banquet.

For more information, refer to the Associate Fellows Committee Web page at www.stc.org/membership/recognition/honors or contact Linda Oestreich at liloriter@cox.net. Keep in mind that some changes have taken place over the past couple of years and the website and guidelines reflect the changes.

Qualifying senior members can self-recommend—however, the application must be endorsed by two senior members, one of whom must be a community leader or hold an honorary STC rank. Endorsers cannot also serve as a reference for the same nominee. No member of the STC staff, the STC Board of Directors, or the Associate Fellows Committee can serve as submitter, reference, or endorser.

Please note that there is a one-time, $25 administrative fee.
An Interview with Joe Jenkins

BY SCOTTABEL | Senior Member

IN THIS EXCLUSIVE interview for Intercom, Scott Abel, The Content Wrangler, discusses with Joe Jenkins of Oberon Technologies the changing nature of documentation and the impact interactive documents will have on the technical communication profession.

The Content Wrangler: Joe, thanks for sharing your time and insights with us. Let’s start at the beginning. What is an interactive document? What makes an interactive document interactive, specifically?

Joe Jenkins: In terms of documentation and technical content, interactive documents enable the dynamic exchange of information between the consumer of the content and the publisher. This is made possible via the device used to deliver the content.

Basic interactive documents like Web pages, email messages, and PDFs often include static hypertext links to additional content. Clicking on a hyperlink is the same as issuing a command to the Web browser: “Take me to this content!” More advanced, interactive XML documents can be made to follow complex rules and other business logic. This type of interactive document can be instructed to deliver, often automatically, content to the consumer based on specific interactions, behavior, customer data, and/or feedback collected.

Some advanced interactive documentation capabilities include:

- integration of XML content with machines via sensors (or other equipment) designed to automatically measure things like temperature, pressure, voltage, and provide measurement data as feedback
- decision logic that determines allowable values for input fields to ensure data validation and data integrity at time of data capture
- decision logic that determines appropriate content to be delivered based on inputs received during the execution of a task
- automatic delivery of content

TCW: Why do documents need to be interactive?

Joe: Not all documents need to be interactive, yet those written more in a procedural format are good candidates. Many forms of technical documentation are written to cover a broad set of material. For example, a service manual for a vehicle might contain all the information for all makes and models of that vehicle for a given year. It’s up to the service technician (the user) to determine which content is applicable based on the features—stereo equipment, transmission type, option packages, etc.—of the vehicle being serviced. This approach makes the service technician responsible for knowing in advance exactly what information is available and how to find it, which leads to confusion, frustration, and reduces productivity.

With interactive documents, a service technician could enter the Vehicle Identification Number (VIN)—or make and model of the vehicle being serviced—and then be guided through the technical content to the information relevant to repairing the vehicle being serviced. If we add additional filters to the mix, we can help the service technician diagnose the problem and repair it quickly. For example, a service technician could be prompted to enter a diagnostic reading, or we could read data directly from an on-board diagnostic device, and then push the appropriate service procedure(s) to the technician.

TCW: It’s clear that interactive documents can be designed to simplify complex service and repair tasks. Can you provide some examples?

Joe: Here’s one. Consider the procedure for “checking battery voltage.” If your instruction is:

- Take a voltage reading on the battery and record the reading. If the voltage is less than 12 Volts, go to the “Check Alternator.” If the voltage is between 12 Volts and 14 Volts, go to the “Check Battery Cells.” If the voltage is over 14 Volts, go to the “Replace Battery.”

In traditional documentation examples, the service technician has to read the instructions, remember the voltage options, take the reading, record the results, and then perform the appropriate next steps. This type of documentation shifts the burden to the service technician. The technician has to read all the instructions and then determine which option he or she should perform next. It’s cumbersome, time-consuming, and inefficient. And, it relies on human memory, which is, at best, error-prone.

When this approach fails, the service technician, it leads to errors, potential re-work, wasted time, and lost productivity. In certain cases,
the approach may create unsafe working conditions.

Interactive documents offer users efficiency gains over traditional documentation. The first efficiency gain comes from adding input controls that allow the service technician to record the voltage reading in the document. After the reading is recorded, the interactive document uses this information to display the correct next step to the technician automatically. This approach streamlines the process and provides a positive customer experience. This is only one simplistic example. You could take this example much further by embedding a voltage meter on the battery that can automatically record and communicate the measurement to the document, triggering the display of the relevant repair instructions to the service technician without their assistance at all.

TCW: What types of traditional documents should we consider making interactive?

Joe: The best candidates are things like procedures. Some candidates might include procedural documents where:

- the results of performing a step determine the instructions presented in subsequent steps (e.g., a diagnostic procedure)
- there are alternate configurations, like a repair procedure for a brake system that differs based on the specifics of the brake system (e.g., 9- or 10-inch brakes)
- the results of performing the procedure need to be captured to support audit and/or other compliance requirements (e.g., manufacturing batch records for pharmaceutical, maintenance procedures for aircraft, installation procedures for hardware/software) or to support enterprise decision-making (e.g., reports detailing standard repair times, inefficient step execution, and other business-critical data points)
- the input/readings for a procedure can be captured directly from the equipment (reading temperature values, on-board diagnostic/fault codes, pressure readings, other data able to be read by sensors)
- multiple departments or organizations need to perform the procedure and/or have access to the results of performing the procedure (e.g., when a field technician needs to interact with the technical support team in order to resolve an issue and the technical support team needs to know which parts of the procedure have been completed and the results of those steps to assist in developing a solution)
- the input is captured by one group and the results evaluated by another (e.g., a call center capturing information and an engineer evaluating the results)
- the procedures displayed are based on who the person performing the task is (e.g., where instructions are role-based)

Some document type examples include:

- Diagnostic procedures
- Maintenance procedures
- Operating instructions
- Repair instructions
- Batch records
- Manufacturing instructions
- Installation instructions
- Standard operating procedures
- Training material—certifications/assessments

TCW: What technology has Oberon Technologies developed to help organizations create interactive documents?

Figure 1. A Typical Technical Publishing Architecture
Joe: Oberon is currently developing a software product named IDEA (Interactive Delivery Application), an application initially targeted to field service personnel. IDEA enables repair and maintenance technicians to execute service procedures more safely, efficiently, and effectively through the dynamic delivery of diagnostic and service/repair information. Although field service is the primary target market, this product also has wide application among companies that need to communicate all sorts of operating instructions, maintenance procedures, installation steps, certifications, and assessments to those who need them. Organizations in automotive, aircraft maintenance, household goods/appliances, medical device, telecommunications, nuclear, mining, and manufacturing sectors will find many applications for the technology.

Traditionally, service technicians have access to information associated with many makes/models of equipment. Finding the right information specific to the equipment they are working on can be challenging. Using IDEA, the right content is delivered to the technician based on input and interactions captured from the technician (such as make/model of equipment and instrument readings) or from data coming directly from the equipment being serviced. All data associated with the executed procedure—instrument readings, steps executed, by whom, duration of each step, and the overall procedure, etc.—is captured in an integrated database to support analytics and reporting, enabling visibility into overall service metrics across the organization.

Currently, many companies with field service teams create technical documentation—service manuals, operation and maintenance manuals, troubleshooting/diagnostic procedures—using Extensible Markup Language, or XML. As its name implies, XML is a markup language that separates the content from the format, allowing content to be written independent of its output format (e.g., PDF, HTML, eBook, etc.). More often than not, XML content is used for creating publications in multiple formats (print, PDF, online help, HTML) from a single source. IDEA enables organizations to leverage their existing technology investments and extends the use of this existing content by providing additional markup that can be authored into the XML files to control interactive feedback (e.g., technician records a certain temperature reading or receives a fault code from a diagnostic tool) and determine the appropriate information to deliver next to the technician.

In addition to the interactive controls (text box, radio button, date field, pick list, etc.), IDEA also provides the ability for companies to embed business rules and validation controls into their technical content to allow for dynamic procedural flow based on input from the user (or from machine readings), and ensure data integrity at time of execution.

As interactions occur directly from the technician or from sensors or other machines, all the data associated with the executed procedure—instrument readings, steps executed, by whom, when, duration of each step, and the overall procedure, etc.—is captured in an integrated database to support analytics and reporting. Capturing data automatically and storing it directly in an integrated database helps to reduce errors and expedite the data collection process. Having visibility into the performance metrics of the field service team will
allow for better decision-making in terms of new service plans/offers, as well as identification of procedures/steps that may need to be re-written due to lengthy execution cycles.

IDeA provides the following business benefits:

- Enables field service personnel to efficiently and effectively perform service procedures
- Improves compliance with defined procedures, which limits risk, including injury and damage to equipment and property
- Ensures compliance with government standards and regulations such as OSHA, EPA, and FDA
- Enhances decision-making through integrated data capture and visibility into service performance metrics
- Reduces call center volume
- Decreases service time, allowing technicians to visit more customers each day
- Lowers IT costs (hardware, software, and personnel)
- Improves customer satisfaction by increasing first-time fix rates

TCW: How do we create interactive documents using your approach? Is there an authoring tool needed? A CMS? Do you sell a tool or are you somehow helping to make the documents interactive?

Joe: Leveraging interactive documents consists of two key parts: 1) creating/authoring the content and 2) delivering the content in such a way as to enable the interactivity to be applied during the authoring process. If you are not creating your content in XML, such as in unstructured FrameMaker or MS Word, then you likely won’t be able to reap all the benefits of component-based authoring and publishing, let alone interactive content. There may be ways to make this work, but it would require lots of unnecessary work, custom development, and significant funding that would leave you with a solution that is singularly-focused and not future-proof.

If you are using XML (either DITA or some other data model), you have already taken the first step toward interactive documentation. In some data models, such as DITA 1.2 and DITA 1.2 Learning and Training, many tags already exist to support interactivity (including userinput, choices, uicontrol, stepresult, lcQuestion, etc.). Additional tags can be added/specialized to support additional interactivity requirements. Therefore, no additional XML authoring tools are needed—just the knowledge of which XML markup is to be used to deliver the desired interactivity in the delivery application. Additionally, you don’t have to change the publishing tools and content management systems/repositories you use today. Neither do you have to change your processes. IDeA sits alongside your current technical publications architecture, uses your approved technical content, and delivers it in the right format to the consumer.

Figure 1 (on page 36) depicts a typical technical publishing architecture, where you have the content creators, illustrators, and subject matter experts creating and managing component-based content in either a content management system or file-sharing environment. A composition engine is used to create traditional outputs of PDF, HTML, eBook, etc.

Figure 2 (on page 37) shows that IDeA is integrated with your current content repository such that once a component/topic, or possibly an entire publication, is approved and available to be released, it is pushed to the IDeA repository. Once stored in IDeA, this content is immediately available for use by the IDeA delivery to an end consumer, such as a service technician. There is no additional content creation required for a delivery application, as IDeA dynamically publishes content directly from the authored XML source. So the ability to deploy content updates to all delivery channels is dramatically expedited and simplified. Additionally, IDeA has an integrated database that captures and maintains the data associated with executed procedures to support reporting needs.

TCW: What does the future of technical communication look like in a world where documents are interactive?

Joe: First and foremost, companies will need to stop viewing their core information assets as documents. And, they’ll need to continue moving to structured content comprised of self-contained components. Without this, the ability to create content quickly and accurately to serve customers will not be possible. This paradigm shift to component-based authoring is critical to exploit the advanced technologies available today.

The skills of the technical writer, both now and certainly in the future, will need to extend beyond just being able to create a well-formatted document. Understanding XML and component-based authoring will be required in order to meet the content creation and delivery needs of the future.

JOE JENKINS is a vice president at Oberon Technologies and has over 20 years of enterprise software development, implementation, and business consulting expertise in content management, automated publishing, and content delivery across many industries. He is responsible for overall product and business development at Oberon. In addition, Joe performs strategic implementation services activities including development of multi-year implementation roadmaps, conducting requirements workshops, and architecting enterprise solutions enabling content reuse, automated publishing, improved translation processes, and interactive content delivery. Joe is a frequent speaker at industry conferences on the innovative use of structured content to drive enterprise value.
Mark Your Calendar

Organization events across the globe

1 30 Sept–4 Oct
The Human Factors and Ergonomics Society (HFES) will hold its 57th annual meeting at the Hilton San Diego Bayfront in San Diego, CA. For more information, contact:
HFES
+1 (310) 394-1811
info@hfes.org
www.hfes.org/Web/HFESMeetings/2013
annualmeeting.html

2 10–12 Oct
The Rocky Mountain Modern Language Association (RMMLA) is holding its annual conference in Vancouver, WA, at the Hilton Vancouver Washington from 10–12 October. For more information, contact:
RMMLA
www.rmmla.org

3 26–29 Oct
The Public Relations Society of America (PRSA) hosts their international conference, “One World: Connection. Community. Collaboration” at the Philadelphia Marriott Downtown in Philadelphia, PA. For more information, contact:
PRSA
+1 (800) 350-0111
www.prsa.org/Conferences/InternationalConference/

4 1–6 Nov
The American Society for Information Science and Technology (ASIS&T) will hold its Annual Meeting, with a theme of “Beyond the Cloud: Rethinking Information Boundaries,” at the Centre Sheraton in Montreal, QC, Canada. For more information, contact:
ASIS&T
asis@asis.org
www.asis.org/asist2013/am13cfp.html

5 6–9 Nov
The American Medical Writers Association (AMWA) will hold its 73rd annual conference in Columbus, OH. For more information, contact:
AMWA
+1 (301) 294-5303
amwa@amwa.org
www.amwa.org/events_annual_conference

6 6–9 Nov
The American Translators Association (ATA) will hold its 54th annual conference at the Marriott Rivercenter in San Antonio, TX. For more information, contact:
ATA
+1 (703) 683-6100
ata@atanet.org
www.atanet.org/conf/2013

F.Y.I. lists information about nonprofit ventures only. Please send information to intercom@stc.org.
Genesis: TechCommGeekMom

BY DANIELLE VILLEGAS | Member

WHILE MANY PEOPLE have interests outside of work, not as many necessarily have hobbies that are an extension of their work. While I do like to dabble in genealogy and knitting, I spend most of the little free time I have working on my technical communications blog, TechCommGeekMom.com. TechCommGeekMom isn’t the first blog I’ve written, but it’s the most fulfilling one.

I started blogging about ten years ago. A friend had a LiveJournal account and if you wanted to keep up with her you had to get an account to read her posts. I figured that I could try to post a few things on my account, simply to update other people as well. The next thing you know, I’m blogging whole “novellas,” as my husband would call them. It became cathartic for me, as it gave me an outlet to talk to many friends at once. I would write several other blogs after that. Like anything else in this world, the more you do it, the more it becomes routine. I don’t know if practice made perfect, but I definitely became comfortable with blogging.

I wrote a blog that was a requirement for my editing class in graduate school as my first foray into tech comm blogging. Initially, we would have to write posts that reflected our studies, but after a while I would contribute to my blog a little more often, reflecting on tech comm topics. I suppose that this first grad school blog was the pre-cursor to TechCommGeekMom. Sometimes, I still pull some of those old posts into TechCommGeekMom with updates or use them for inspiration.

In March 2012, I was unemployed and finishing up grad school. A social media class (which I loved) required writing a blog that would tie into social media outlets, such as Facebook or Twitter, in order to create a community around a particular focus. At the same time, a classmate encouraged me to start a tech comm blog. He claimed that I had some good insights into tech comm topics. I also felt that showing my competence through these blog posts might help my employment prospects. From the convergence of unemployment, a grad school class, and the encouragement of a friend, TechCommGeekMom was born.

I have often been asked how I came up with the name, “TechCommGeekMom.” I have yet another friend who is an editor for a website called GeekMom.com. I identified with the target audience of that website very well and felt that my geeky ways were encouraged, especially as a mother, rather than discouraged. I wanted to celebrate being a geeky mom, and since I chose to concentrate on tech comm topics, I was the “tech comm” GeekMom, much like there is a Ginger Spice in the Spice Girls. If anyone asked me, I could confidently say that I was “TechCommGeekMom.”

Flash forward to today. I have used my blog to comment, share, and promote topics relating to tech comm and elearning—for better or worse. I never expected anyone to read my blog, but promoting it through various social media outlets certainly helped to create an audience. As a result, TechCommGeekMom has received about 12,000 hits since its launch, and it hasn’t stopped yet! I never anticipated that it would reach as many people as it has, or for it to yield so many fantastic opportunities for me. It has allowed me to “rub elbows” with leading thought specialists in the tech comm and elearning fields, attend conferences I would have otherwise missed, and have great writing gigs for these events. It still shocks me when someone stops me at a tech comm event to ask me, “Aren’t you TechCommGeekMom?”

I do my best to continue to post on my blog by curating content or posting original articles whenever I can. It’s a little harder now that I’m juggling a full-time job and parenting responsibilities as well, but I keep doing it. Why? Because blogging has given me a voice, and I like to be heard. My blog has opened doors for me that I would’ve never guessed in a million years that I’d be stepping through. I’ll keep doing TechCommGeekMom as long as I can, as it’s a great way for me to spend my free time—talking with others and gaining more opportunities to grow and learn in the tech comm field in the process.
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