

Theo Mandel

# a solid intranet in eight steps

**"This year, I estimate that the world economy will lose roughly \$100 billion because of bad intranet usability."** —Jakob Nielsen

Corporate intranets are old news—everyone has one. But have you ever stepped back and wondered whether your intranet is cost-effective? Or, whether it increases your company's productivity? Have you ever asked your corporate users if they like it? For that matter, do they even use it?

Because intranets have become commonplace, it's easy to assume they're well designed and usable. Unfortunately, most intranets have grown undirected and unchecked, like weeds in a garden. To dispel the myth that good intranet design just happens, let's look at the rules that my colleagues and I follow when we design corporate intranets.

## 1. Forget about your Internet site.

For several years, designers have debated whether intranets should have the same look and feel as their Internet counterparts. Nielsen's 1997 article, "The Difference Between Intranet and Internet Design" (see the "Online Resources" box), highlights critical issues in site design. He details four key differentiators between intranets and Internet sites:

- users (your employees versus external customers or viewers),
- tasks (everyday work and apps versus browsing, buying, or research),
- the type of information (detailed, work-related documents and

processes versus marketing and customer-support information),

- the amount of information (there is 10 to 100 times more information on an intranet than an Internet site).

An intranet requires an approach that is much more task-oriented than promotional. The site navigation system must be more robust and capable of handling multiple types of information displays in effective and usable presentations.

Focusing on logos and corporate colors to maintain the corporate brand on an intranet site isn't as important as addressing critical interface design issues. Concentrate on how users will navigate the intranet and how information and resources should be organized. Don't waste time putting lipstick on the bulldog.

It's unfortunate that many intranet sites get less corporate attention than Internet sites. My colleagues and I often see companies spending much less time and money on their intranet design. The Internet site is public, so companies must make it look good and work well; the intranet is typically an afterthought. Entire teams of designers and developers work on the corporate Internet site, but frequently, small groups of nondedicated people (sometimes even a single person!) create and maintain intranet sites.

Intranets are one of your company's most important vehicles to

## online resources

## inside info

General information on Web interface design and usability, and further reading on intranet design.

"The Difference Between Intranet and Internet Design"  
[www.useit.com/alertbox/9709b.html](http://www.useit.com/alertbox/9709b.html)  
 "Disabled Accessibility: The Pragmatic Approach"  
[www.useit.com/alertbox/990613.html](http://www.useit.com/alertbox/990613.html)  
 Interface Design and Development  
[www.interface-design.net](http://www.interface-design.net)  
 "Intranets Save Time—But for Whom?"  
[www.business2.com/content/magazine/ebusiness/2001/04/09/29409](http://www.business2.com/content/magazine/ebusiness/2001/04/09/29409)

"To Intranet, or Not to Intranet"  
[www.business2.com/content/research/numbers/2001/02/07/25872](http://www.business2.com/content/research/numbers/2001/02/07/25872)  
 Usable Web (intranet section)  
[www.usableweb.com/topics/000616-o-o.html](http://www.usableweb.com/topics/000616-o-o.html)  
 W3C Web Accessibility Initiative (WAI)  
[www.w3.org/WAI](http://www.w3.org/WAI)  
 "You Think Tomatoes I Think Tomatoes"  
[www.cio.com/archive/webbusiness/040199\\_nort.html](http://www.cio.com/archive/webbusiness/040199_nort.html)

influence and enhance employee behavior and productivity. Put another way, your intranet influences how employees use your time and money. Recent studies show a tremendous increase in cost savings based on sound intranet redesigns. For example, as described in the article "You Think Tomatoes I Think Tomahtoes" (see the "Online Resources" box), Bay Networks designed and implemented a \$3 million information management and delivery system (IMDS) intranet that company officials estimate saves its sales staff two minutes a day searching for documents. That translates into \$10 million a year in savings!

Corporate officers often have a love-hate relationship with intranets. A recent *Business 2.0* article, "To Intranet or Not to Intranet," reported that 73 percent of North American small to medium-size businesses and government or nonprofit institutions believe that intranets will help them work more efficiently and productively. However, 58 percent of them perceive the cost of development and maintenance as a barrier to establishing an intranet. This dichotomy is a theme that runs through many of the other topics discussed here.

## **2. Eliminate frames from your design.**

Whether to use frames to display Web sites and pages is almost a religious debate. Interface designers agree that in most cases, frames are necessary only if specific areas of a Web page must always remain in view for the user, such as search or filter fields. Frames can also support input and management of Web content. However, usability evaluations show that users find that frames make it more difficult to bookmark pages, use the browser's Back and Forward buttons, and print what they see onscreen.

Fortunately, new techniques have emerged that let designers display key information without resorting to frames. For example, floating menus can simulate a framed navigation area as the page is scrolled. In general, it's best not to use frames unless you have a very good reason to do so, because they make life more difficult for your users.

## **3. Create intranet guidelines and stand by them.**

Developers often rebel against attempts to "constrain" their creativity. Even when Web user interface (WUI) guidelines are in place, developers may ignore them.

Determining guidelines and creating interface style guides aren't trivial projects. If you decide to do this, budget enough money, resources, and time to do a complete job. Define key areas where guidelines and consistency are most important, and require designers to follow those rules. For site-specific branding and content presentation, offer general guidelines, but don't microdesign—let designers flex their creativity in these areas.

To make effective corporate intranet guidelines, several critical things must happen. You must:

- Get support from business executives and development managers.
- Establish levels of compliance, a high-level checklist, and an overall process for using the guidelines. Define what constitutes mandatory compliance and full compliance.
- Build a cohesive team of designers, content owners, corporate communications experts, interface designers, usability professionals, graphic designers, and users.
- Establish several corporate circles with varying degrees of input to review and participate in guideline development.
- Create development tools and a library of examples, templates, and graphics.

- Implement your Web guidelines as an intranet site that not only defines and describes the corporate interface style, but that also is designed as a compliant site.
- Work with a key partner intranet project to build an internal site or application as an example for the rest of the corporation to follow.
- Conduct usability evaluations of your guidelines to ensure that designers can use them and can build compliant intranet sites.
- Plan and promote the publication of the guidelines (using posters, press releases, newsletters, contests, emailings, and so on).
- House the guidelines in a prominent place on the intranet, and link to them from high-traffic pages and key development areas.

Be prepared to hear bad news about your intranet design process. Developing WUI guidelines and the processes for using them will expose flaws in how intranet development work gets done. Many companies try to avoid the large, sensitive design and process issues until after the first version of the guidelines are completed. However, these issues won't just go away—they should be addressed in the next iteration of the WUI guidelines.

## **4. Put usability before consistency.**

One of the dangers in striving for usable products is that executives and developers often settle on consistency as the visible, critical measure of usability success. As I often remind clients, this is a double-edged sword—you can live or die by it. Interface design can be consistently good (the goal) or it can be consistently bad. The key is to first create a usable design, and then follow it consistently throughout the product.

Consistency doesn't mean that every site or page on your intranet must appear exactly the same. Determine the critical areas of your Web site (banner, site features, site navigation, colors, fonts, and so on) that must look and work the same across the intranet. Promote and enforce conformity in these areas. In all other areas, offer suggestions and general guidelines, but allow or encourage designers to do their own thing. Consistency in Web interface presentation and interaction should be addressed across multiple dimensions. Consider applying it within a Web site, with other corporate or industry sites and applications, with common Web presentation and interaction techniques, and with previous versions of your Web site or application.

While consistency is definitely a desirable trait for ease of learning, there are times when an interface can be more usable if consistency is forsaken in favor of user expectations. As UI designers, we can usually predict when it's safe to break with consistency to improve usability. In many cases, it's simply an educated judgment call on our part. For example, it may be consistent for a site to use a drop-down menu for all single-selection types, yet it may be much more usable or expected to display the choices visually. A "choose color" example: Consistency says to use a drop-down menu with Red, Green, and Blue as choices. A more usable and visually appealing approach would be to display three swatches of color (with descriptive text) to choose from. This breaks from the consistency argument, but makes the information's presentation and selection more appealing and usable.

## **5. Start small and grow iteratively.**

Last year, I was asked to submit a proposal for redesigning and usability testing a company's divisional HR intranet site. The company wanted to better communicate its policies and procedures. We were ready to begin work in August 2000, when the HR group was promoted to the corporate level. Good news, right? Their employee base grew from 4000 to

20,000. The small intranet redesign project suddenly received lots of attention, and evolved into a corporate-wide effort. A new Request For Proposal (RFP) was issued. The corporate effort was a huge, outsourced, user interface to back-end integration project. And, due to other client commitments, I was unable to submit a new proposal.

Five months later, the company began working on a severely scaled-back project—the interface design and usability testing for the original HR intranet! The planned corporate project had become too costly and would take too long to implement. In addition, the HR department found that the company wasn't quite ready to embrace the complete concept.

Unfortunately, the project was scaled back so far that the allocated resources and budget estimates for user analysis, focus groups, interface design, and usability testing turned out to be much less than realistically required. There are several lessons to learn from this situation:

- Don't make the project so large that it's too overwhelming for anyone to tackle.
- Don't underestimate the amount of work involved in basic design and usability activities.
- Start small; build iteratively on a well-designed, basic intranet site.
- Bigger isn't necessarily better.

## 6. Use standard link characteristics.

Links are among the biggest usability problems on the Web. Visitors to a Web page should be able to tell immediately what is and isn't a link—it shouldn't be a guessing game. In fact, visitors to your site should always know three things:

- **Where they are.** Give visitors clear navigational cues and a description of the current page.
- **Where they've been.** Supply navigation trails and overall site organization.
- **Where they can go.** Help them recognize links and understand where the links lead.

The key to showing users where they can go is twofold: It lets them figure out what's a link on the page and lets them know where they'll end up when they follow one. It's critical to test your navigational structure and links (both text and graphic) early in the design. Good navigation is predictable. Successful prediction leads to confidence, which leads to exploration. Web research reveals several critical link issues:

- Text links are recognized most often and produce fewer errors if they're displayed using default link colors and highlighting.
- Try not to wrap text links across multiple lines—users can't tell if it's one continuous text link or separate links.
- Users should be able to determine quickly whether your graphics are links or just pictures.
- Use HTML alternate text tags for both text and graphic links to provide additional information for your viewers.

## 7. Evaluate against measurable objectives and criteria.

Usability evaluations aren't just for your public sites. Remember, your employees are users too! However, they're very different kinds of users.

In many ways, usability testing your intranet sites can save you even more money. Earlier, I pointed out that saving employees just minutes a day can save you millions of dollars over a longer period. Your employees use the intranet every day for work, research, and information.

Important factors in evaluating intranet sites are:

- Determining user profiles and demographics. Who are your users?
- Defining user tasks by user groups. What do users do?
- Establishing usability criteria. How do you measure user productivity and satisfaction? What are your productivity criteria?
- Testing both the guidelines and the intranet sites.

## 8. Make your intranet accessible.

The Web is the fastest-adopted technology in history. However, for people with disabilities, that's sometimes a mixed blessing. The Web is displacing traditional sources of information and interaction—schools, libraries, print materials, and workplace information. Some of those traditional resources were accessible; some weren't. The Web is becoming an essential, but sometimes inaccessible, resource for: news, information, commerce, entertainment, classroom education, distance learning, job searching, workplace interaction, and civic participation (laws, voting, government information, and services). An accessible Web means unprecedented access to information for people with disabilities. Some of the barriers to avoid include:

- for users with visual disabilities: unlabeled graphics, undescribed video, poorly marked-up tables or frames, lack of keyboard support or screen-reader compatibility.
- for users with hearing disabilities: lack of captioning for audio, proliferation of text without visual sign-posts.
- for users with physical disabilities: lack of keyboard or single-switch support for menu commands.
- for users with cognitive or neurological disabilities: lack of consistent navigation structure; overly complex presentation or language; lack of illustrative, nontext materials; flickering or strobing designs.

Companies are slowly beginning to address accessibility concerns on Internet sites, but rarely on their intranets. However, governmental regulations and Internet standards are fast becoming the baseline (and sometimes the law) for acceptable Web-site development. In his article, "Disabled Accessibility," Jakob Nielsen states, "It would not surprise me if we start seeing money-back guarantees in design contracts that state that clients don't have to pay for sites that violate these rules." Web-development tools are beginning to incorporate accessibility standards into their tools to help Web designers build the most usable and accessible Web sites possible.

The W3C Web Accessibility Initiative (WAI) offers three levels of guidelines for developing accessible Web sites. For more information, checklists, and a listing of the accessibility guidelines, visit the W3C site.

## The Final Word

Obviously, there's much more to learn about each of these interface design and usability areas, but I'll leave that for future articles. A focus on the design and usability of your intranet is critical to its success, as are other areas covered in articles in this issue, such as content and information management, technical issues, and making your intranet more interactive. ■■

*Theo is the founder and principal of Interface Design and Development, a user interface design and usability consulting and training firm. He has written numerous books and articles, and presents seminars at major Web conferences. You can reach him at theomandel@interface-design.net.*