

Site Map Usability

47 Design Guidelines Based on Usability Studies with People Using Site Maps

2nd edition

By Donna Tedesco, Amy Schade, Kara Pernice, and Jakob Nielsen



48105 WARM SPRINGS BLVD., FREMONT CA 94539-7498 USA

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Executive Summary

One of the oldest hypertext usability principles is to offer a visual representation of the information space in order to help users understand where they can go. Site maps can provide such a visualization, offering a useful supplement to the primary navigation features on a website or intranet.

A site map's main benefit is to give users an overview of the site's areas in a single glance. It does this by dedicating an entire page to a visualization of the information architecture (IA). If designed well, this overview can include several levels of hierarchy, and yet not be so big that users lose their grasp of the map as a whole.

We define a site map as a page intended to act as a website guide. The site maps we studied took a variety of forms, including alphabetical site indexes, dynamic diagrams, and two-dimensional lists. The term "site map" here thus encompasses a wide array of features, appearances, and names, including "guide," "overview," "index," and "directory."

TWO RESEARCH STUDIES

To find out how people use site maps, we conducted two rounds of usability research, testing a range of site map designs with users as they performed representative tasks.

A total of 30 users participated in our site map testing, with 15 in each of the two research rounds.

We tested the following 20 websites, which included a mix of e-commerce and marketing-oriented sites, high-tech companies, B2B sites, content sites, non-profit organizations, and government agencies.

Sites Tested In Study 1	Sites Tested In Study 2
CDNOW (e-commerce)	Administration on Aging (government)
Documentum (high-tech product)	BMW USA (marketing site for cars)
Interwoven (high-tech product)	Citysearch Boston (visitor info)
Mercedes Benz USA (marketing site for cars)	Harvard Pilgrim (health insurance)
Museum of Modern Art (non-profit)	iRobot Corporation (high-tech/e-commerce)
New Jersey Transit (local transportation)	The Knot (wedding information/e-commerce)
Novell (B2B)	Marriott (hotels, with online booking)
Salon (online magazine)	Scholastic (children's books)
Siemens Medical Solutions (B2B)	Texas Roadhouse (restaurant chain)
United States Treasury Department (government)	TiVo (high-tech product)

In both studies, we first took users to a site's homepage and gave them a task without any special mention of the site map. This part of the research assessed the extent to which users naturally turn to site maps. Later in each study, we specifically asked users to go to the site map if they hadn't already gone there on their own.

Study 1 was conducted seven years ago. Comparing the two studies thus allows us to assess long-term trends in site map usability.

SITE MAPS ARE USED RARELY

People rarely use site maps. In Study 2, only 7% of users turned to the site map when asked to learn about a site's structure. This is down from 27% of users in Study 1.

The good news is that users can actually find the site map in those few cases where they want to. In Study 2, 67% of the users successfully found the site map when we asked them to "Find a page that lists every part of the website."

KEEP IT SIMPLE

The two main usability guidelines for site maps are:

- Call it "Site Map" and use this label to consistently link to the site map throughout the site.
- Use a static design. Don't offer users interactive site map widgets. The site map should give users a quick visualization without requiring further interaction (except scrolling, if necessary).

These guidelines are unchanged from the report's first edition. Dynamic or interactive site maps caused horrible failures seven years ago, and they still caused trouble in Study 2. The site map's goal is to give users a single overview of the information space. If users have to work to reveal different parts of the map, they lose that benefit.

A site map is, after all, a *map*; it should not be a navigational challenge of its own.

As we've found repeatedly, users hate non-standard user interfaces that force them to learn a special way of doing things for the sake of a single website. Site maps should be simple, compact layouts of links, and they should show everything in a single view.

The one small complexity we recommend is to use a multi-column layout. In Study 2, users easily succeeded with 61% of tasks involving multi-column site maps compared to 47% of tasks with single-column site maps.

Multi-column site maps worked better because users needed less scrolling to get an overview of the site's structure. People were more likely to become lost within long, scrolling site maps. They typically scrolled up and down the map multiple times, often accidentally or purposefully skipping content. In fact, users often started with one quick scan of high-level categories, then scrolled back up and did a more detailed search, sometimes repeating this process multiple times with more and more focus each time. In contrast, multi-column site maps made it easier for users to quickly glance at all categories and subcategories, and thereby get a lay of the land before digging deeper.

WHY HAVE A SITE MAP?

Seven years ago, 48% of the 50 websites we surveyed had site maps. Today, 71% of the 150 websites we surveyed had site maps and 59% of the 56 intranets analyzed in our report on Intranet Information Architecture had site maps. Also, most site maps have become somewhat more usable during the time between our two research rounds.

Despite the prevalence of good site maps these days, users don't use them very much. So why bother making a site map for your website? Because it can help users understand your site and what it offers.

We still recommend site maps because they're the only feature that gives users a true overview of everything on a site. One could argue that a site's navigation serves the same purpose. For example, some navigation offers drop-down menus that let users see the options available in each site section. But even with these menus, users can see only one section of content at a time.

A site map lets users see all available content areas on one page, and gives them instant access to those site pages. Site maps can also help users find information on a cluttered site, providing a clean, simple view of the user interface and the available content. Site maps are not a cure-all, however. No site map can fix problems inherent in a site's structure, such as poor navigational organization, poorly named sections, or poorly coordinated subsites.

If site maps required a major investment to design, they wouldn't offer sufficient ROI to be worth doing. But because all of our guidelines call for site map simplicity, making a good one doesn't require a lot of work, and it will help some of your users. More importantly, it will help users at a critical time: When they are lost and might abandon your site if they don't get that last piece of assistance to find their way around.

Site maps are a secondary navigation feature—a humble role that they share with breadcrumbs. Indeed, the arguments in favor of site maps are the same as the arguments for breadcrumbs:

- They don't hurt people who don't use them.
- They do help a few people.
- They incur very little cost.

Research Overview

This report updates the first edition of our *Site Map Usability* study, published seven years ago. The purpose of both studies was to learn about how people use site maps on websites.

Based on our research, this report offers guidelines for designing site maps. Our usability guidelines are based on observation, interviews, and general user feedback.

This section offers a brief overview of the research study. For details about our testing procedure, please see the *Methodology* section (page 126).

In both studies, we gave users several tasks to perform on various websites. We then observed users as they worked and encouraged them to think aloud as they attempted tasks. We also gave participants questionnaires to complete after using each site.

Fifteen people participated in each study, ranging in age from 20 to 55. More information the participants is available in the *About Participants* section of this report (page 125). All participants were very comfortable with using the Web, and all but one were working professionals.

Sites Studied

We tested 10 sites in each of the two studies, and all of the sites contained site maps.

As the lists below show, we tested sites from a variety of industries, including: high tech, insurance/financial, government, automotive, informational/educational, and e-commerce.

The site map designs also varied: some sites listed links alphabetically, while others used categories; some had many categories, while others were streamlined; some contained images, while others used only text; and so on.

The *About the Sites Studied* section of this report offers a detailed description of all sites tested.

Study 1:

- CDNOW (www.CDNOW.com)
- Documentum (www.documentum.com)
- Interwoven (www.interwoven.com)
- Mercedes Benz USA (www.mbusa.com)
- Museum of Modern Art (www.moma.org)
- New Jersey Transit (www.njtransit.com)
- Novell (www.novell.com)
- Salon (www.salon.com)
- Siemens Medical Solutions (www.smed.com)
- United States Treasury Department (www.ustreas.gov)

Study 2:

- Administration on Aging (www.aoa.gov)
- BMW USA (www.bmwusa.com)

- Citysearch Boston (boston.citysearch.com)
- Harvard Pilgrim (www.harvardpilgrim.com)
- iRobot Corporation (www.irobot.com)
- The Knot (www.theknot.com)
- Marriott (www.marriott.com)
- Scholastic (www.scholastic.com)
- Texas Roadhouse (www.texasroadhouse.com)
- TiVo (www.tivo.com)

Site Maps Today

SITE MAP USE: STILL RARE

People either don't care about site maps or are completely reluctant to use them. And, when comparing user behavior today with that of our first study, we found that people are now even less likely to use site maps.

People look for site maps far less frequently than they used to. In fact, in our first study, 27% of users turned to the site map when asked to learn about a site's structure. In our second study, the number dropped by 20%—only 7% of users turned to the site map when given the same task.

In our first study, we hypothesized that the main reason people didn't use site maps was that they were simply unavailable much of the time. In fact, looking at the landscape at the time of the earlier study, less than half of all websites had site maps:

- When we asked users to go a site they'd recently visited, we found that only 45% of the sites they selected had site maps.
- Of the sites surveyed around the same time for our *Homepage Usability* book, only 48% of the sites had site maps.¹

When we embarked on this second study, we wondered if the landscape had changed. To get an initial pulse, we first surveyed the websites we tested in the first study. Of those 10 websites, five no longer had a site map. We also surveyed a larger sample of 150 random websites and found that 71% of those sites did have site maps. With almost three-quarters of the sites surveyed having site maps, it's possible that site maps have made a comeback in website design. Intranets are somewhat less likely to have site maps: In our *Intranet Information Architecture* report, only 59% of the 56 intranets had site maps (screenshots of 25 intranet site maps are included in that report).²

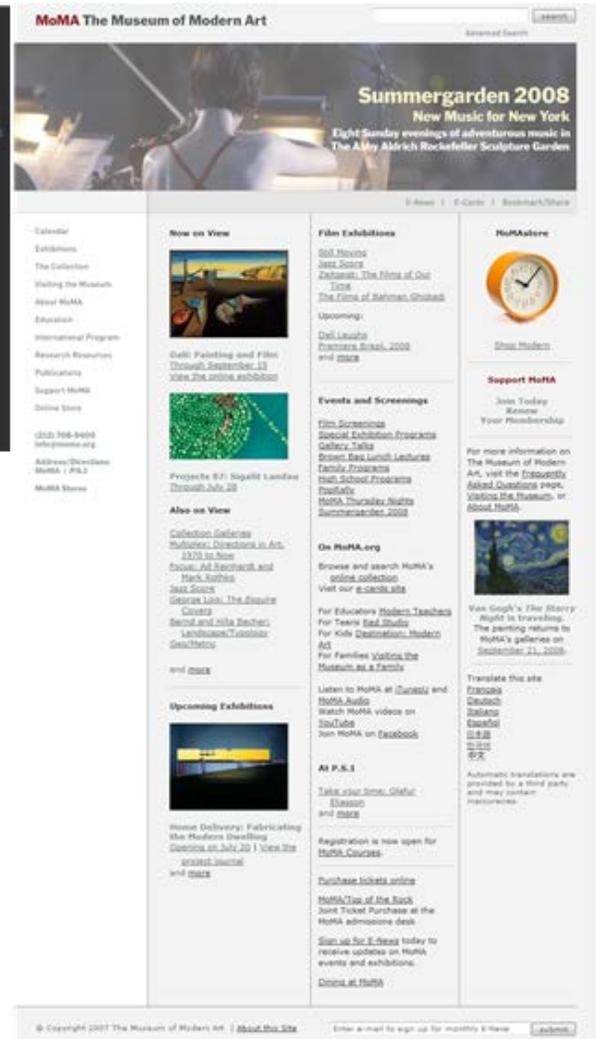
In any case, site maps seem to be more prevalent today, yet people are turning to them less. Why? Some theories:

First, as people become more confident Web users, they sometimes read less and scan more. And, as time goes on, people are increasingly reading less in general.

Second, websites today generally have more information than they used to. For example, consider the case of the Museum of Modern Art (MoMA) website, tested in Study 1. In the seven years since we studied it, the museum's homepage information has become much denser.

¹ [Homepage Usability: 50 Websites Deconstructed](#) (New Riders Press, 2001)

² Nielsen Norman Group report [Intranet Information Architecture Design Methods and Case Studies](#)



The Museum of Modern Art's homepage from Study 1 was quite plain and simple; in Study 2, it was much more dense with information and links, giving users more to filter out when seeking information.

People have come to expect to access larger amounts of information quickly. If site maps have become more standard, they've also become harder to find among all the other information that users need to filter out. Some users might bypass a site map because they didn't see it or didn't think to use it. But a few people in both studies simply weren't aware of site maps at all.

- In Study 1, most users were even unaware of site maps on sites they visited on their own. We asked users to show us sites they had used recently; on those sites that included site maps, users were aware of the site maps only 15% of the time. At that time, we posited that most people didn't know about site maps.
- In Study 2, aside from asking users to learn the structure of a site, we asked them to "Find a page that lists every part of the website." Although they hadn't seen or used a site map yet in the study session, 67% of the users

successfully found the site map when given this task. For the remaining third, we had to ask them to “find the site map” directly or show them where it was in order to proceed. And, within this latter group, we found that some users were completely unaware of the existence of a site map feature. One user said, “This is the first time I’ve seen [a site map].” A few other participants made similar comments; they were savvy Web users, but had never heard of or used site maps before.

Many participants explained why they don’t use site maps. Some said they use alternative methods for finding information on a site, while others said they don’t look for a site overview at all because they simply don’t care how sites are organized. One user commented, “Most of my browsing is impulsive. If I see anything interesting, I get sidetracked.”

PEOPLE USE SITE MAPS ONLY WHEN THEY ARE COMPLETELY LOST

When we asked participants to use the site map, they didn’t seem to want to. One user asked, “Do I *have* to use the site map for this [task]?” People often mentioned how uncharacteristic it was for them to use a site map.

Users seemed naturally inclined to use the site navigation rather than the site map. One user, after successfully completing a task using the site map, noted “It’s easy if you do it from the site map, but I personally never go to the site map ever. Things need to be on the homepage.” Another noted, “I rarely use the site map, because the things on the site map are things I can find other ways.” This is discussed in more detail in the next section of this report, *Hunting strategies* (page 17).

One participant thought the site map was a tool only for technical people. He commented, “I don’t think anyone is going to go to the site map unless they are a developer.”

Participants rarely used site maps of their own accord. They did so only after we’d driven them to the site map in a prior task, and only then if they were on a website that was particularly cluttered or disorganized. In all cases, users turned to the site map only if they were already lost or frustrated or both. One participant said, “I use site maps as a last ditch effort for finding information I couldn’t find via other avenues. I thought site maps were for people who didn’t know how to navigate the Web.” Another said, “[I’d use one] if I needed to. Once I became frustrated and couldn’t find what I was looking for, I’d reach that point and ask for help.”

Because our first study showed some evidence that people use site maps only when they’re desperate to find something and can’t, we decided in Study 2 to research how participants might treat the site map when attempting relatively difficult tasks. (Note: This usability methodology must be pilot tested well and monitored very closely by the test facilitator, as test participants can feel defeated and get totally lost at times. In our case, we mixed the difficult tasks with easier ones to offset the possible problems. See the *Methodology* section on page 126 for more information.)

Prior to being exposed to site maps in the session, we asked users to locate information that we deemed somewhat difficult to find. Forty percent of the users who attempted the task either gave up, were stopped by the moderator after an extended period of time, or had major difficulties but eventually found the answer. Despite these challenges, none of the participants looked for or used the site map. Even when people significantly struggled to find information, they still didn’t turn to the site map for help.

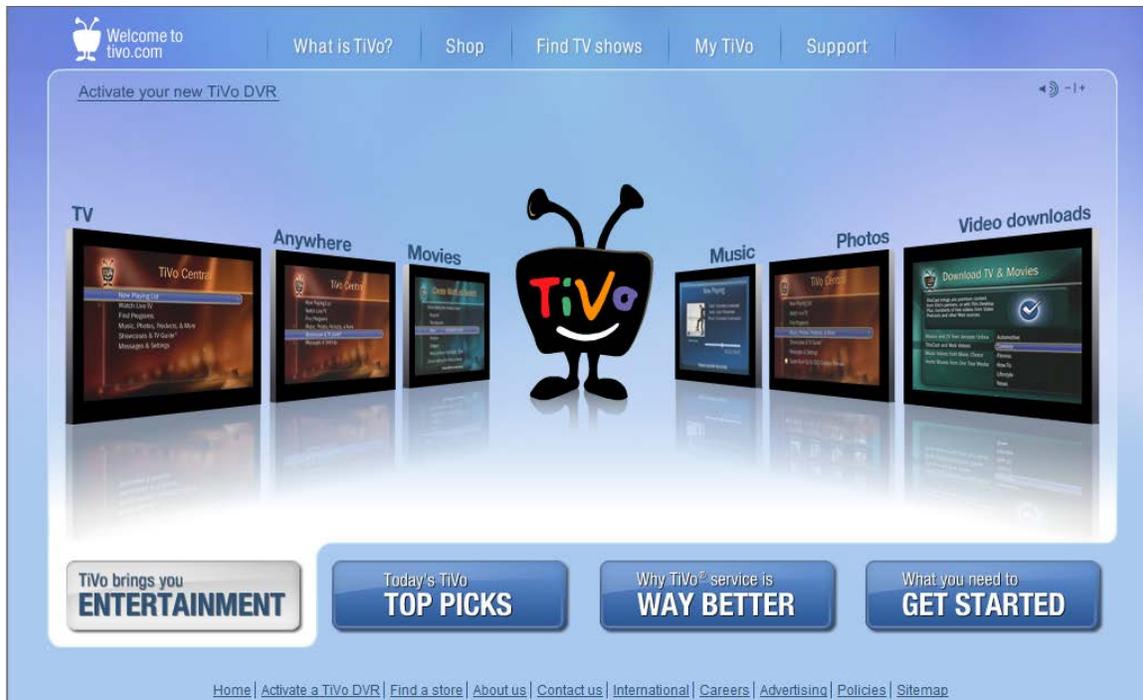
Once participants had been exposed to site maps in previous tasks, we observed how often and when they opted to use them on their own. In Study 1, participants

returned to the site map for tasks that didn't specify its use in 11 of 30 cases, or 37% of the time. In Study 2, this percentage was higher; users returned to the site map 57% of the time. The percentage may have been higher in Study 2 because of our test methodology: In the second study, we primed participants to think about and use the site map through multiple tasks, whereas in Study 1, they only briefly visited it at the start. Another reason users returned more often could be because Study 2's site maps were a bit more straightforward than those tested in Study 1.

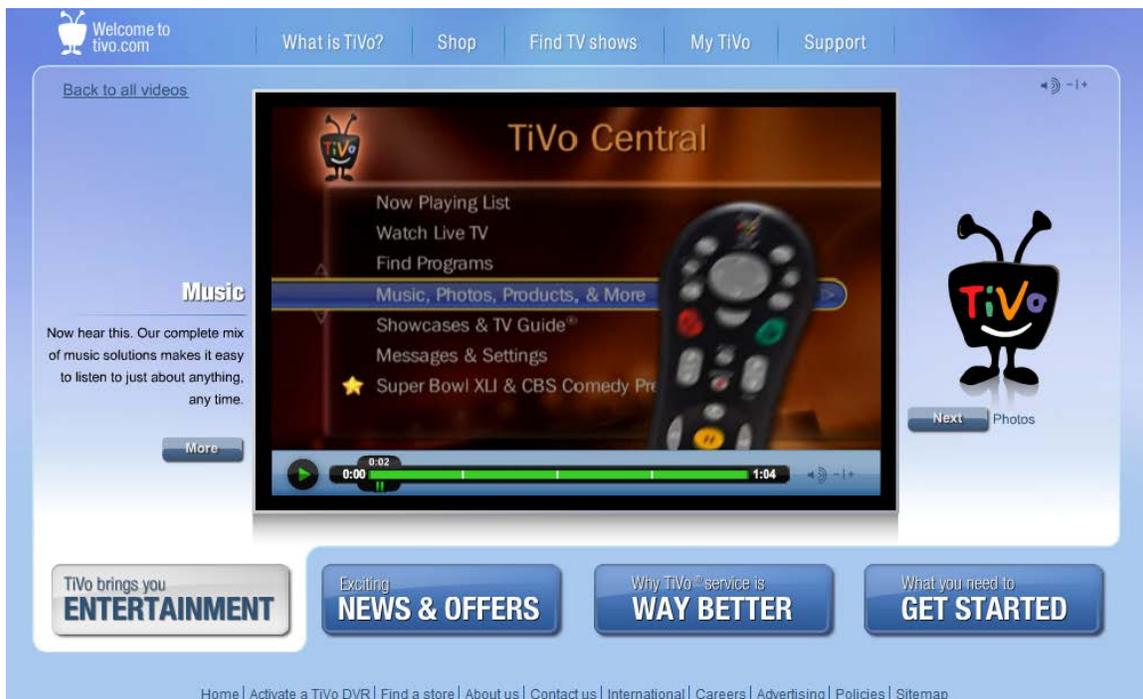
For example, in the first study, we tested two dynamic, interactive site maps (at Interwoven and Siemens Medical Solutions). Both site maps gave users a difficult time. The site maps tested in Study 2 were mostly a standard listing of links. This might have contributed to participants' increased likelihood to use them again. (In Study 2, we chose more straightforward site maps because we didn't find any dynamic or non-standard site maps when we randomly surveyed 150 sites in preparation for the study.)

If people are successful in using site maps, it seems plausible that they would be more likely to use them again—or not use them again if they weren't successful. But our studies showed that success at using site maps had little impact on whether people returned to them. In fact, a slightly larger percentage of people who weren't successful returned to the site map than did those who'd previously succeeded. Of the people who'd succeeded with the site map in a previous task, only 55% returned to the site map in a subsequent task. Of those users who were unsuccessful using the site map—that is, those who gave up or were stopped by the facilitator—60% returned to the site map in a subsequent task.

Participants tended to use site maps when sites were generally cluttered or disorganized. An example of the latter was the TiVo website. As we discuss later, that site map actually tested well and had some of the best attributes. However, it also reflected a fairly disorganized website with some major usability issues. For example, users often got stuck within a set of videos promoted on the homepage, causing them to overlook the primary navigation categories at the top of the page. Once they realized the site map existed, users often returned to it for their tasks rather than fight the navigational issues.



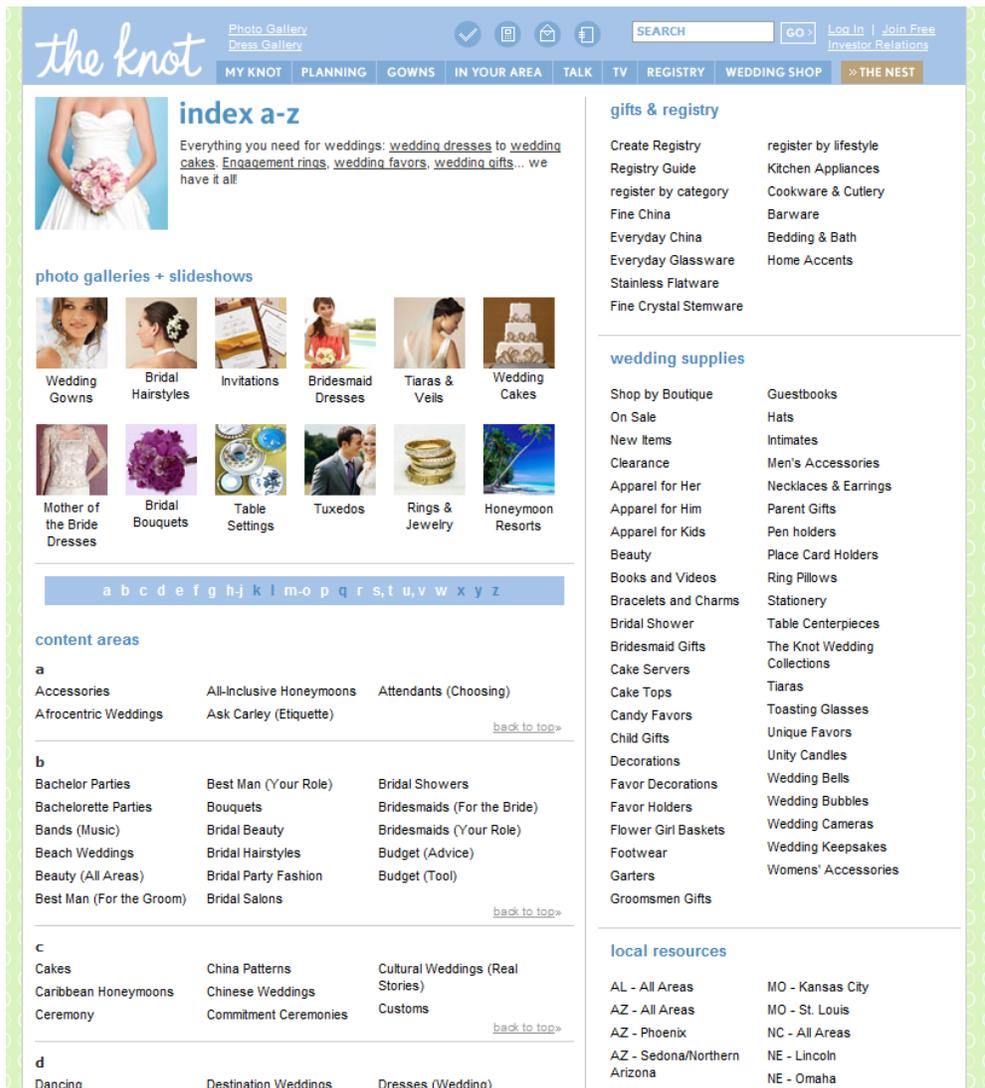
On the TiVo website, users were drawn to the categories in the middle of the homepage, rather than to the primary navigation at the top.



Upon clicking the homepage's Music section, users saw a video that didn't help with their task goals, but didn't see the primary navigation at the top. This left them frustrated, and they resorted to the site map on this and subsequent tasks.

An example of a cluttered site was theknot.com, a wedding website. The site was very difficult to navigate for most users. There was a great deal of content throughout the site, and it was poorly organized. This made it difficult for users to rely on the site's primary navigation. As a result, they often turned to the *Site Index*. Although some sites use the terms interchangeably, an *index* is different than a *site map* in that it typically contains an alphabetical link listing. We recommend you use the name *site map*, unless it is truly an alphabetical index. (See guideline #8: *Name the site map link Site Map. If you offer a variation of a site map, name its link something that users will easily understand and recognize.*)

The *Site Index* on theknot.com let users navigate the interface alphabetically or by other categories. Once users found it, they were prone to look for information there rather than trying to use the primary navigation.



The Knot website was cluttered with information. Most users relied on the Site Index to navigate the site and accomplish their tasks.

It's important to stress that while people might use site maps rarely—usually only when they're lost—they're still useful tools. Site maps not only aid in navigation, they

can aid users' understanding of the site and what it has to offer. When asked when and why people use site maps, one user said, "If the site has so much content that you don't know where to look. It's like looking at a roadmap—you don't look at the map unless you're not sure where you're going." Another participant said, "I can get a better grip of what's there in one place. It's the most efficient way to search a site. It's all right in front of me to see where I can go. It simplifies a search to go to a site map."

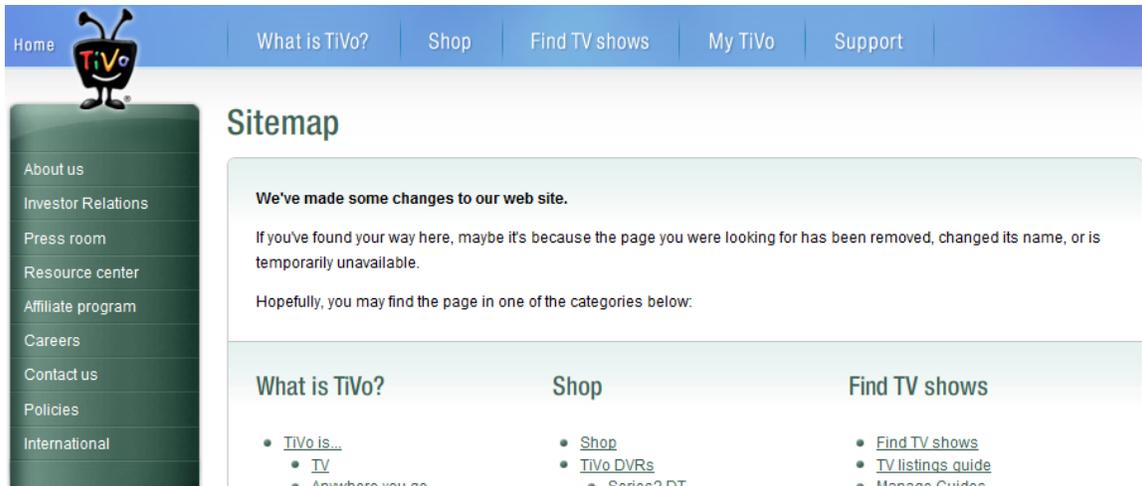
A few of the study participants also saw site maps for the first time and were excited to keep an eye out for them in the future. They might still be a little-known secret, but they're a good feature to offer.

A SITE MAP IS ONLY AS GOOD AS THE SITE'S INFORMATION ARCHITECTURE

A site map can help users get around the odd mechanics of menu design. For example, a user can go to the site map to avoid an annoying menu that spins and animates onto each page. But hierarchical site maps are only as good as the site's IA. If there are content redundancies or poorly sorted information, this will become even more apparent and confusing to users while on the site map. The site map should reinforce good structure, not serve as a band-aid or hack for a poorly structured site.

We saw many instances of poor structure in our studies. One was Scholastic.com, which focused primarily on books. However, rather than having one structured information flow around books, the site divided content into several categories listed among other unrelated information. For example, one site section featured a *Books and Reading* link, while another linked to *Book Central*. Other section titles included *Book Fairs*, *Book Clubs*, and *Books & Authors*. On one of our author-related tasks, users had to navigate among the many parts of the website that touched upon authorship in different ways. When users struggle with tasks like this, it's not a reflection of a poorly designed site map, but rather a poorly designed site.

On Tivo.com, a note at the top of the site map read: "We've made some changes to our website. If you've found your way here, maybe it's because the page you were looking for has been removed, changed its name, or is temporarily unavailable. Hopefully, you may find the page in one of the categories below." This instruction appears to be saying, "It's not our fault if our site or site map doesn't seem logical." If they had changed their site, hopefully they created a better IA that could stand alone—and thus eliminate the expectation that users would have to consult the site map to find their way around. In our study, users tended not to read instructions and thus did not comment on this note.



A note at the top of the TiVo site map indicated that users might have been visiting it because they were lost. We don't recommend doing this, as a site's IA should stand on its own, and the site map should not be used as a crutch.

If you find that your site map isn't testing well in usability studies, that you're having a hard time organizing it, or that you're trying to conceal obvious redundancies or holes in it, you probably have a structural problem. Take a step back first, and re-examine the IA before trying to patch it up with the site map.

HUNTING STRATEGIES

To find information, participants used methods other than the site map, including site navigation, the search feature, and simply looking around the homepage.

Users rarely turned to the site map, even when struggling. As noted earlier, for a difficult early task, before users had been exposed to a site map, none of the participants thought to turn to one. However, eight out of 14 participants (57%) used the search feature at least once during that difficult task. Now that "Google" has become a household name (and even a verb), users have come to expect that they can resort to a search feature and have it work the same way as their preferred search engine.

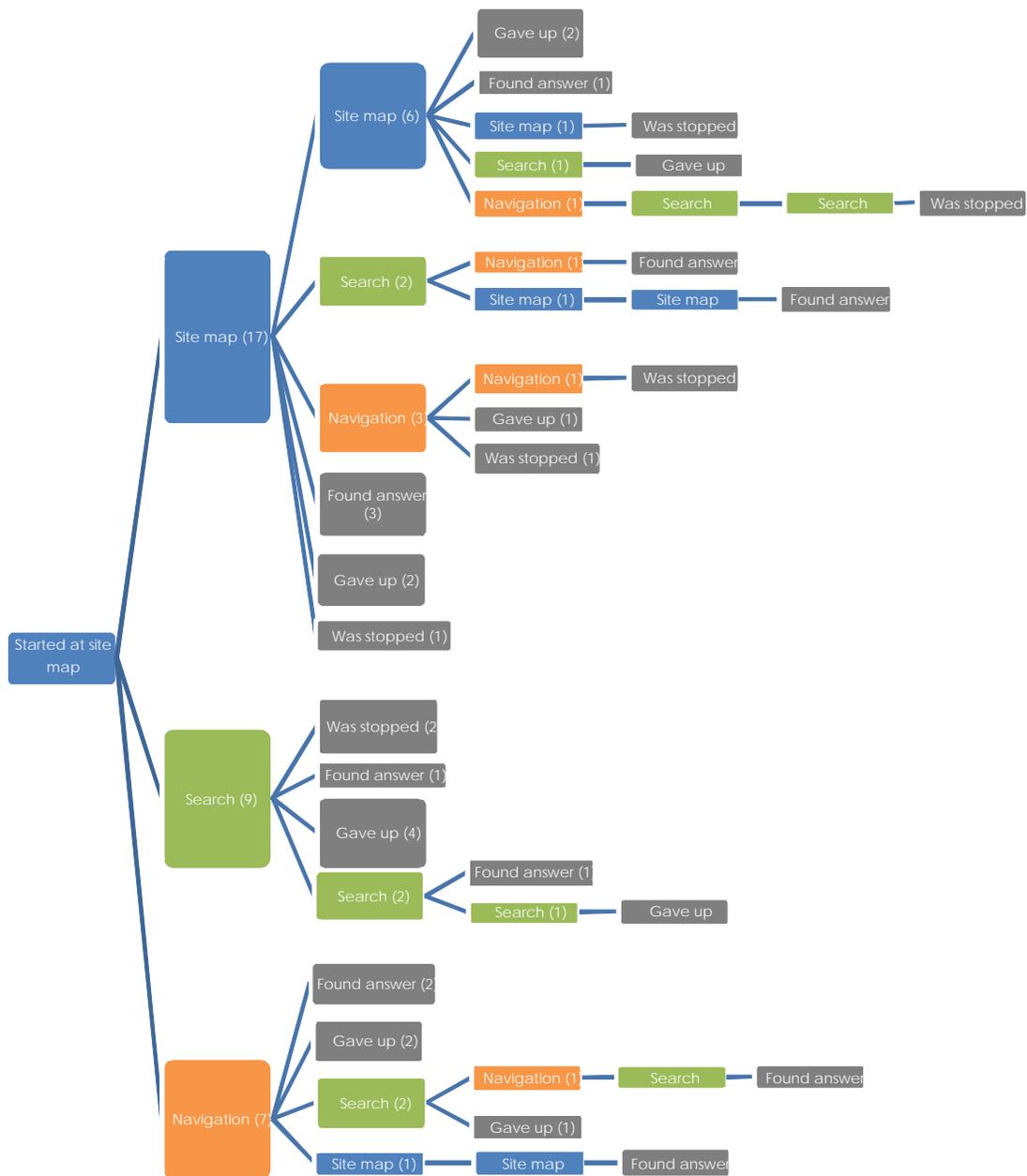
When asking them about using the site map, we often heard a reluctant response. One user said, "I would do a site search before I would think to use a site map." Another shared that sentiment: "Actually, most of the time I would do search. I would have to say I infrequently use site maps." Another explained his preference for search, saying, "It seems if you were going to look for something in general, you'd just type it into search." While struggling on a difficult task for a site that did *not* have a search feature, one participant complained, "There isn't a search? I need... a search on the website." Even when we directed a user to attempt a task using a site map, she asked, "Can I just type in the search?" Users were far more inclined to search than to go looking for a site map.

Another trend that we've seen in many other studies also showed up in this study: Users left a website to go to a Web-wide search engine and search for something, even though they knew it was available on the site. Some users trust a search engine's ability to find a page deep-linked into a website more than they trust the website's own search engine or the site's navigation or site map. This is the result of both past Web experiences and more recent experiences on the sites themselves.

In one case, a user had been exploring a site for a few minutes, clicking around to various places. When he didn't find what he was looking for, he stated, "I think I'm frustrated. I think I would Google it or something." Another person did this while struggling to find information about the Rhapsody music service on the TiVo website. He wound up going to Google and typing in *tivo rhapsody music service free* in order to find a deep link to the answer. If IA and site maps continue to suffer from bad design, we will likely see this behavior increase in future years.

Even when we directly asked people to use the site map to find information, they often resorted to other strategies if they couldn't readily find the answer. In fact, users failed to find the answer in their first click from the site map 51% of the time. As the figure below shows, people used various hunting strategies when this occurred.

In most cases, users tried the site map a second time (17 out of 33 cases). In 16 cases, they tried a different strategy after one failed attempt at using the site map. A select few tried the site map a third time, but most tried other strategies, gave up, or found the answer.



When participants started at the site map for a task and didn't find the answer on their first try, they used various hunting strategies. Each branch shows the next strategy that one or more users tried. As the gray boxes show, their attempts ended when users gave up, were stopped, or found the answer.

This confirms an observation we found interesting: Most users tended to be forgiving, even if the site map did not initially lead to the information they were seeking. That is, they would continue using it after a failed attempt. However, if the site map failed them more than a couple of times, they quickly abandoned it in favor of methods such as navigation or search.

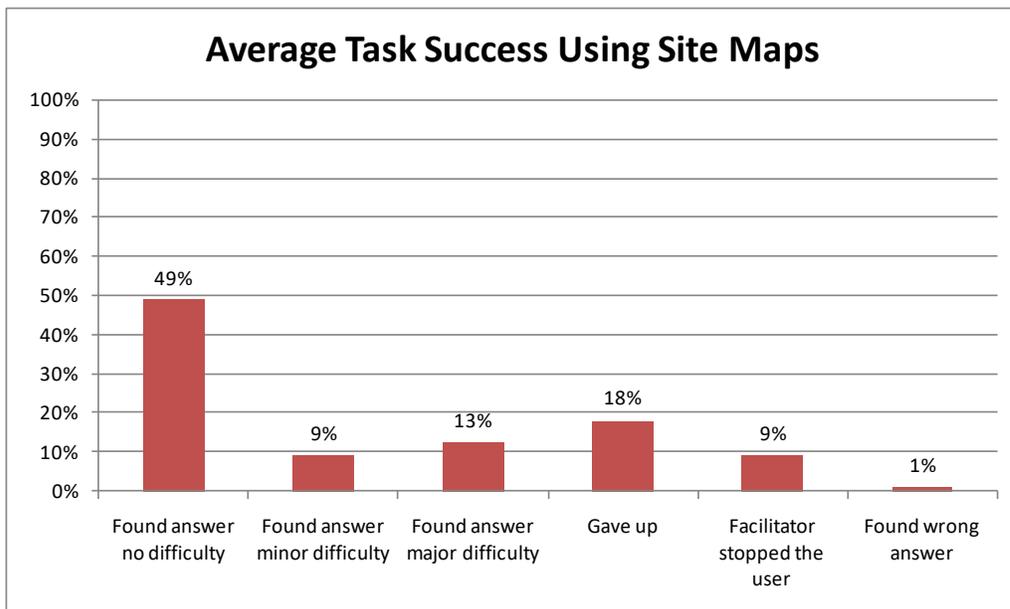
We found that users had less tolerance for site maps that were harder to scan or navigate, such as the Scholastic site map. Users abandoned that site map six out of the eight times they attempted tasks. (We discuss the Scholastic site map's issues in more detail under guideline #41: *Simply list links on the page, and use category headings that are clearly distinguishable from the category links.*)

SUCCESS USING SITE MAPS

For tasks in which we specifically asked participants to use the site map, we measured task success based on several categories, including:

- *Found the answer with no difficulty.* Users found it without having to look around much.
- *Found the answer with minor difficulty.* Users found it, but may have briefly gone down a wrong path or became slightly confused along the way.
- *Found the answer with major difficulty.* Users found it, but struggled a great deal—pursuing multiple paths before finding the information, getting extremely confused, and/or taking a very long time.
- *Gave up.* Users announced that they would stop looking for the information.
- *Stopped by the moderator.* After taking more than five minutes and attempting multiple paths, the moderator gently halted the task.
- *Found the wrong answer.* Users thought they had found the answer, but it was the wrong one.

The graph below shows task success for those tasks in which we asked users to start at the site map. When using a site map, participants easily found the right information 49% of the time. If we consider all successful tasks—even those that were difficult—users found the correct answer 71% of the time.



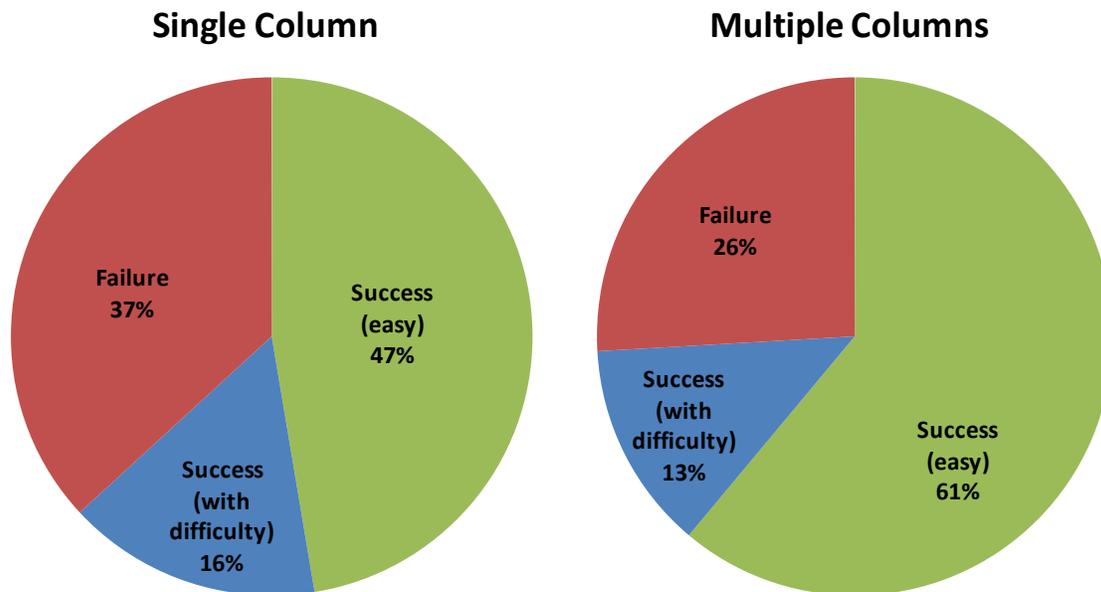
In our study, 49% of people found the answer with no difficulty, 9% found the answer with minor difficulty, and 13% found the answer with major difficulty. Of those who were unsuccessful, 18% gave up, 9% were stopped by the facilitator, and 1% thought they had the right answer but did not.

Although 71% is a decent task success score compared with other studies, it is low by our standards for a site map. A site map is meant to be a straightforward listing of all site content, and is generally looked to as an aid. If users go to the site map as a last resort, yet succeed only 71% of the time (and do so with difficulty 22% of the time), they're likely to get even more frustrated with the website.

ONE COLUMN OR MULTIPLE COLUMNS?

We next examined our data to see whether the success results were different for site maps that had a single scrolling column versus those with multiple columns. Although some users expressed a preference for one over the other, no trends emerged, and the sample size was too small to extract preference data. However, we did breakdown our observational data, as the graph below shows. (The data is for categorical site maps only; it excludes alphabetical site maps).

Site maps with multiple columns were slightly more useful in cases where participants found the answer with little or no difficulty. This is a statistically significant difference (χ^2 test, $p < .05$). For cases in which participants either found the answer with major difficulty or were unsuccessful (gave up or stopped), we found no significant differences between multiple and single columns.



Site maps with multiple columns were easier to use than site maps presented in a single column: 47% of users found the answer with no or minor difficulties on single-column site maps, compared to 61% of users on multi-column site maps. Users who gave up, were stopped by the facilitator, or found the wrong answer accounted for 37% on single-column site maps and 26% on multi-column site maps.

Multi-column site maps likely had better success because the single-column site maps we tested typically scrolled for many screenfuls, and users became lost within them, forgetting which sections they had already seen. They tended to scroll up and down the map multiple times, often accidentally or purposefully skipping content. In fact, users typically did one quick scan of high-level categories first, then scrolled back up and did a more detailed search, sometimes doing this multiple times with

more and more focus each time. In contrast, multi-column site maps often made it easier for users to grab a quick glance of all categories and subcategories to get a lay of the land before digging deeper.

Still, multiple columns might not work for all site maps. Much depends on the type and volume of your content. As we discuss later in this report, you should balance information density and also pay attention to the design, including font size, type, color, and spacing.

PAGE DENSITY

Although there are many ways to define page density, we objectively define it here as a ratio of the words per page to screenfuls—that is, how many screens long a site map is, assuming a 1024 x 768 screen resolution. (Note: This is an approximate measure, and might differ depending on your browser and other platform variations. Also, word count includes other words on the page, including navigation and surrounding text. In our case, we measured all sites in the same way and compared them relative to each other.)

Using this measure, the five most dense site maps were:

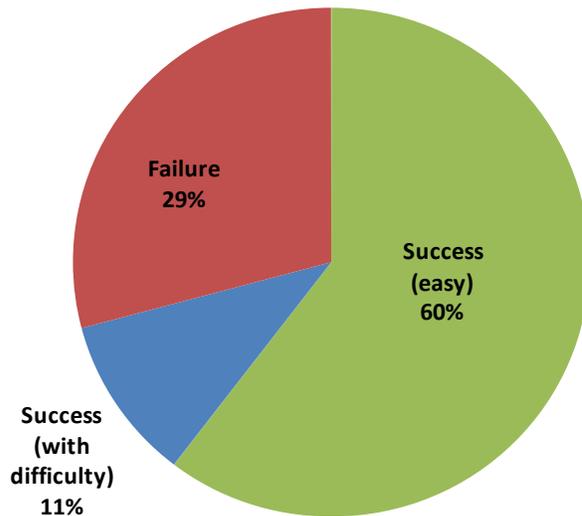
SITE	WORDS PER SCREENFUL
The Knot	248
Citysearch	172
Scholastic	153
Marriott	113
iRobot	86

The five least dense site maps were:

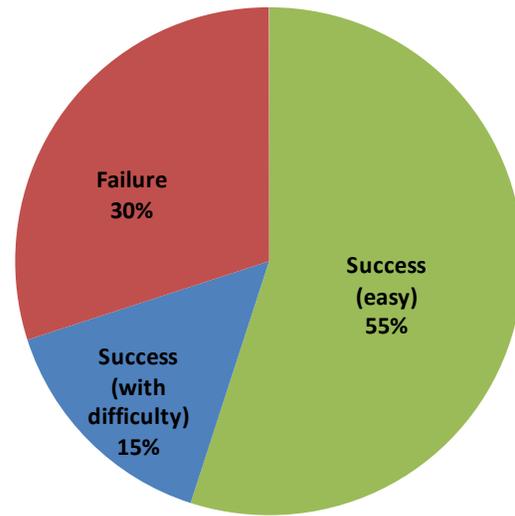
SITE	WORDS PER SCREENFUL
Tivo.com	82
BMW USA	68
Texas Roadhouse	59
Administration on Aging (AOA)	55
Harvard Pilgrim	27

We defined “less dense” screens as those with 85 words or less per screenful and “more dense” as those with more than 85 words per screenful. We then compared this with user success rates on the site maps. There was no difference between less dense and more dense site maps in cases where users were unsuccessful (gave up or were stopped by the facilitator). There was also no difference in instances where users found the answer, but had major difficulties. There was a slight tendency toward higher task success (no or minor difficulty) for sites that were less dense, but this was not a statistically significant difference.

Less Dense Site Map



More Dense Site Map



Less dense site maps were marginally easier to use than more dense site maps, with 60% vs. 55% of users finding the answer with no or minor difficulty, and 29% vs. 30% who gave up, were stopped by the facilitator, or found the wrong answer. However, this difference was not statistically significant.

Our objective measure of page density did not yield differences. We then considered other factors that might make a page seem more dense or cluttered. We found that if two sites had the same words per screenful, but one had smaller fonts, odd font type, and crammed spacing, that site usually had lower task completion and subjective ratings. The following sections explain this finding in more detail.

ATTRIBUTES OF SITE MAPS THAT WERE POORLY RATED AND HAD LOW TASK SUCCESS

Site maps with lower ratings and low task success usually had one or more of the following qualities (in no particular order):

- Difficult to find the site map
- Extremely long, linear list to scroll through
- Dense, with extraneous words to filter out or redundant content
- Cluttered, with inadequate spacing between sections or words
- Small, illegible text or poor background contrast
- Little distinction between section headings and subcategories or sublinks
- Additional manipulation required to disclose information
- Failed to include content from major website sections

We discuss each of these aspects in the report's *Design Guidelines* section.

ATTRIBUTES OF SITE MAPS THAT WERE HIGHLY RATED AND HAD HIGH TASK SUCCESS

The site maps that were most highly rated and yielded the highest task success are listed below, along with their successful attributes. Although none of the sites were perfect—and we discuss their usability issues throughout this document—the traits outlined here made for a better user experience.

In Study 2, the three best site maps were:

- 1. TheKnot.com.** This site contained a vast amount of information about preparing for weddings, as well as pre- and post-wedding activities such as showers and honeymoons. The site index consisted primarily of an alphabetical index, but contained some categorical information as well. Among the things that worked best about the site index were:
 - It was accessible from every page of the site
 - It compensated for the overall site's poor organization (information was tucked away in various places, and the site index gave order to the chaos)
 - Its alphabetical index was supplemented by some categorical information (this style doesn't fit all sites, but it worked well here)
 - It made good use of spacing and dividers
 - It made good use of icons to represent links to photo galleries and slide shows
 - It required some scrolling, but not so much as to be excessive or cause users to lose their place
- 2. TexasRoadhouse.com.** Although this site map's use of graphics was sometimes perceived as "hokey," most people thought it worked well overall given the site's particular goals and scope. And, because the site did not contain a great deal of information, the designers had more liberty to play with the site map's graphical look. Specifically, each site category heading had a vertical pole extending from it that had signs listing all subcategories. Things that worked best about this site index included the following:
 - The *site map* link image was easy to find and appeared on most pages
 - The site map's major categories mapped exactly to the site's primary navigation, using the same order and horizontal layout
 - Most of the site map fit onto one screen, requiring minimal scrolling
 - Although the page took time to load, it loaded each section or pole in its entirety before loading the next one
- 3. Tivo.com.** The TiVo website offered products and services centered on digital video recording technology. The site map contained categories and subcategories in a bullet format. Despite some of the website's usability and IA problems, the site map offered a good experience for users because of the following attributes:
 - The *sitemap* link was the last in a short list of links in the utility navigation at the bottom of every page, making it easy to spot and access
 - The site map was in a well-known, standard format (categorized links, with no graphics)

- The headings were clearly differentiated from each section's links
- The use of spacing and visual separators made each category clean and distinct
- The use of bullets within each category made the hierarchy clear
- The fonts were of adequate size and offered optimal contrast against the background
- Most of the site map fit within two screens, requiring minimal scrolling

We discuss all of these positive attributes throughout this report.

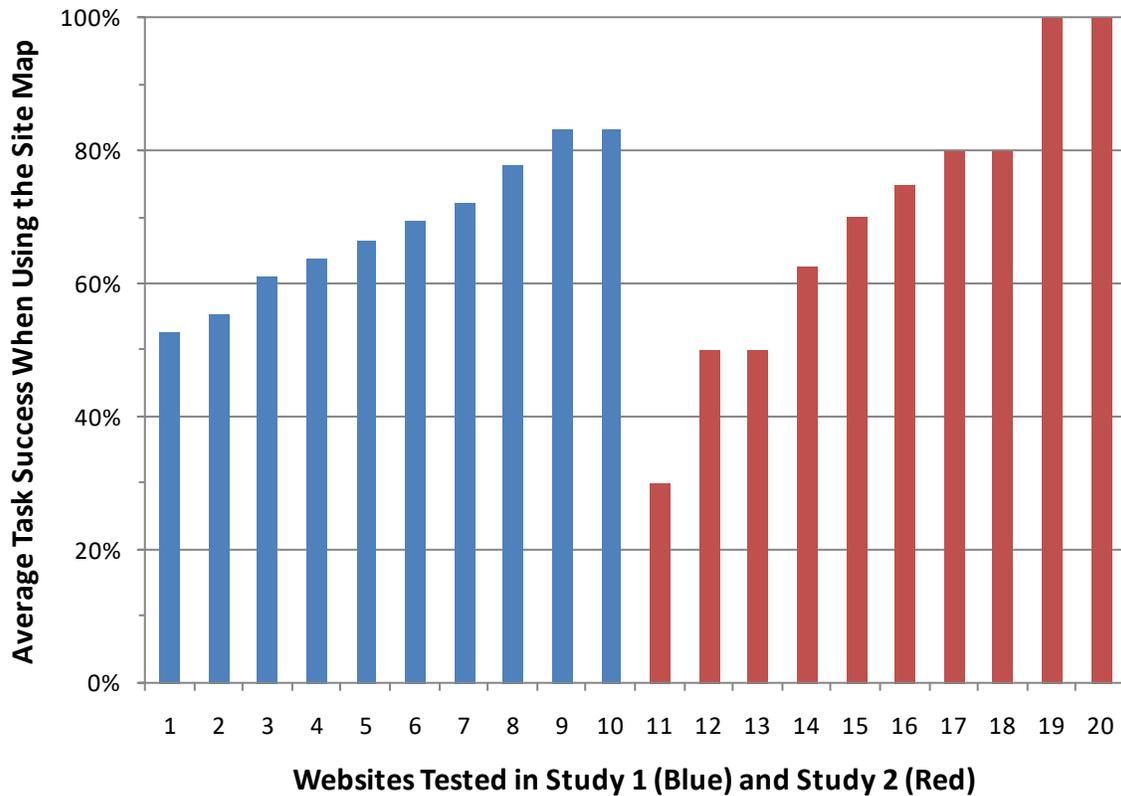
Despite coming out strongly in both task success and user ratings, Harvard Pilgrim, an insurance benefits company, didn't make our success list because its site map misled most users. The site map received high ratings on clarity and its reflection of the site's structure. However, the site map had only four main categories, and most users didn't realize that they could expand the categories to see more content. So, even though it yielded high task success, it did so because users were essentially forced to go to the landing page for each category and navigate from there. We discuss the Harvard Pilgrim site map in detail under guideline #26: *If progressive disclosure is necessary, ensure that the method of disclosure is intuitive.*

In Study 1, the top three site maps were:

1. **MoMA.org.** The MoMA map mimicked the homepage, using small square graphics to indicate the site's main sections. The site map's structure was clearly related to the site's structure.
2. **CDNOW.com.** CDNOW's site map was simple and clear. It had no extraneous graphics, and the information was clearly laid out.
3. **NJTransit.com.** The New Jersey Transit site map was thorough and included all site areas.

The following figure compares the three best site maps from each of the two studies.

The graph below shows task completion across the sites.³ Websites with a task success of 80% or better were The Knot, Harvard Pilgrim, Texas Roadhouse, and BMW USA in Study 2, and New Jersey Transit and the Museum of Modern Art in Study 1.

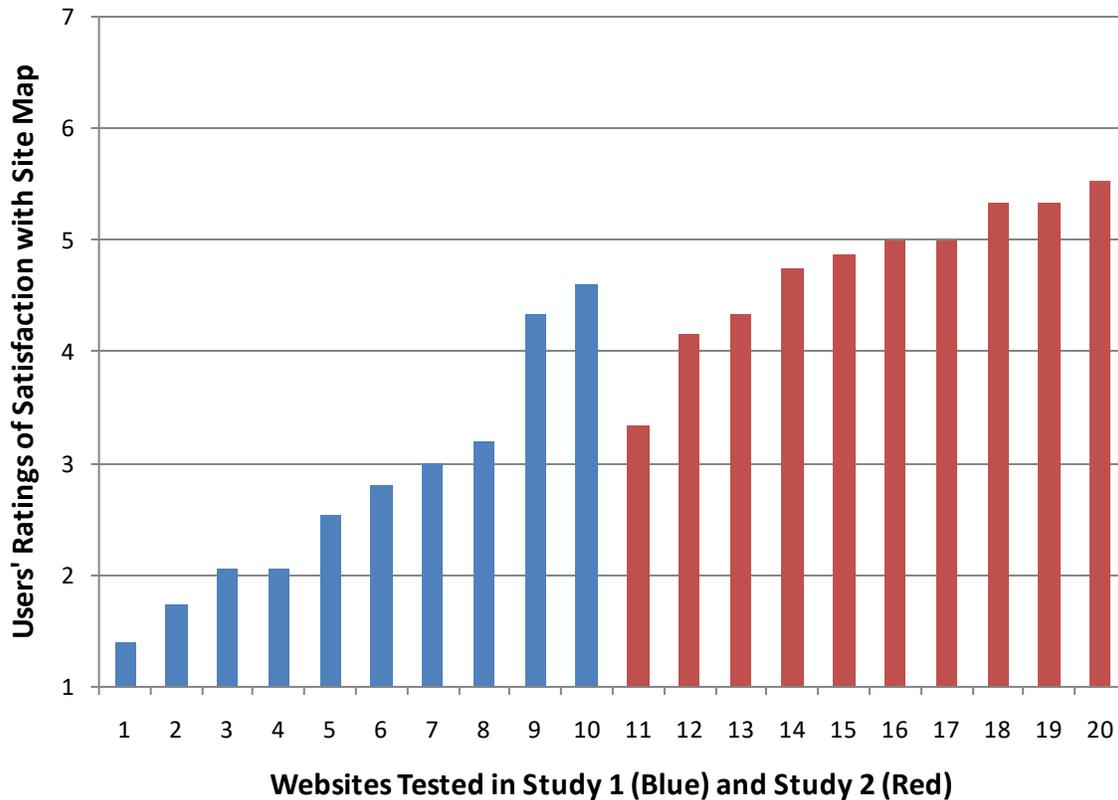


The success rates for task completion from the site map for the 20 sites tested in Study 1 (blue bars) and Study 2 (red bars). Site numbers were assigned to sites and are therefore arbitrary.

There was more variability among the sites in Study 2, but the average success rates were about the same across the two studies (69% vs. 70%).

We also asked users to rate the site maps on various aspects (the specific questions are listed in the *Methodology* section of this report on page 126). Below are the average user ratings for all 20 website site maps.

³ In the graph, we list websites anonymously, because we don't consider this a competition. The graph is meant to show where various sites fell in a range.



The users' average subjective satisfaction ratings for the site maps in both studies on a 1–7 scale, where 7 is best. Blue bars represent sites tested in Study 1 and red bars represent sites tested in Study 2. Site numbers were assigned to sites and are therefore arbitrary.

In Study 1, the average subjective satisfaction was a miserable 2.8 on a 1–7 scale (with 7 being the best). In Study 2, we recorded a more respectable average satisfaction of 4.8. Site maps do seem to have improved during the seven years between the two studies; users didn't encounter as many atrocious site maps in the new study as they did in the original study.

So, given that site maps were better and that users liked them more, why didn't the success rates improve more than the minute change from 69% to 70%? The answer probably lies in the tasks we chose. In Study 1, the tasks were fairly basic; in Study 2, they were relatively difficult. This change in task difficulty reflects the Web's growth: people are now doing much more sophisticated things than they did in the past, so we think it's reasonable to get representative insights into site map usability, which was the goal of our research. However, the change in difficulty level makes it harder to do an apples-to-apples comparison between the success rates in the two studies.

Also, we don't recommend that you automatically model your site map after any of the sites that faired best in task success and user satisfaction. In fact, each of the three sites described earlier have very different content, audiences, and user goals. Therefore, their models might not fit your site exactly. Although some of the guidelines are universal, others merely help to outline when to use certain site map attributes.

HOW PARTICIPANTS DEFINED SITE MAPS

After some participants had completed their tasks, we asked them to describe what they thought a site map was.

Some participants described the site map as a visual representation of the site:

- “[A] visual representation of the relationships of pages as they relate back to the homepage.”
- “A site map is a simple graphic representation of the organization of the information on a site. A simplified graphical representation.”
- “A diagram or an ordered listing of how the pages in the site are linked.”

Other participants described the site map as a list:

- “[It’s] where you go on a website to see a list of everything that is on the site.”
- “[It] tells you everything that they’ve got there on the site.”
- “A bare-bones directory for all the information contained on the various pages of a corporate website, or any website.”
- “Every component of the website. The map of the whole site.”

Still other participants drew comparisons between websites and books:

- “[It’s] like an index of a book or a table of contents in a magazine, where the chapters are.”
- “A table of contents, a glossary.”

Finally, one participant described the site map as a set of instructions: “The information of how to use a site, where to go, what to do.”

Design Guidelines

You can use the following guidelines to improve your site map's usability and thus make it easier for people to find the information they need. Because site map styles vary, all guidelines might not apply to all site maps.

SITE MAP LINK: NAME AND PLACEMENT (34)

1. Provide a site map, especially on complicated and cluttered websites. 34
2. Do not bury the link to the site map deep within the site. 34
3. Ensure that the link to the site map is in an adequate (scalable) font size. 37
4. Ensure good contrast between the site map link and the page or menu background. 37
5. Do not hide the site map link among too many other links. 38
6. Do not bury the site map link in the site's regulatory or "legal" area. 39
7. Do not make the site map link too prominent. 40
8. Name the site map link *Site Map*. If you offer a variation of a site map, name its link something that users will easily understand and recognize. 42
9. If users might confuse the word "map" with other maps on the site, place the site map link with other navigational elements so the context can help users understand the feature's function. 43
10. Refer to the site map by the same term throughout the site. 43
11. Do not combine the site map link with another functional link. 44
12. Provide a link to the site map on every page of the website. 45
13. Place the primary link to the site map in the same place on every page. 47
14. Prominently feature site map links in help-related website areas, as well as in areas for users with special needs who might benefit from using the site map. 47
15. If the site map link is not visible from a search results page, then offer a link to it. 49

SITE MAP NAVIGATION (50)

16. Make links within the site map visually apparent. 50
17. Make links within the site map legible, using high contrast against the background and adequate font size. 51
18. Do not use a dynamic or non-standard approach to the site map. Stick with a listing of links. 53
19. A site map design should not require instructions for how to use it. If you must include instructions, ensure that they are clear. 54

- 20. If you offer hints on how to better use the site map, ensure that those hints do not detract from users' primary way of using the site map. And, make the relationship between the two approaches clear. 55
- 21. Offer within-page links only if there are multiple screens of content that cannot be neatly consolidated, and clearly indicate what the links will do..... 56
- 22. If you include within-page links, place them together, and away from other navigational links..... 59
- 23. Avoid forcing additional clicks to get to content. If extra clicks are necessary, make them worth the effort. 60
- 24. Give all links precise names. Do not offer links with similar names that take users to different information. 61
- 25. Keep all site map content on one page, offering a quick site overview. 62
- 26. If progressive disclosure is necessary, ensure that the method of disclosure is intuitive. 63

RELATIONSHIP OF THE SITE MAP TO THE SITE (65)

- 27. Use a hierarchical site map when the site content follows a strong categorization scheme. 65
- 28. Make the site map's hierarchy clear to help users understand both the overall site structure and the structure of the site map itself. 68
- 29. In the site map, include information at levels only as deep as you can clearly and legibly display it. 70
- 30. Do not truncate useful content from your site map for the sake of brevity. 72
- 31. Provide an overview of your site and its content. Do not focus on representing the relationships between pages. 72
- 32. Offer only one site map or index. 74

DESIGN (79)

- 33. Ensure that the site map works across platforms and browsers. 79
- 34. Change the appearance of visited links in the site map to something that is easily differentiated. 80
- 35. Minimize graphics, using only those that aid users' understanding of the site map. 82
- 36. Make it obvious if the site map's content is more than one page long. 85
- 37. Minimize scrolling and balance it with information density. 86
- 38. Minimize the site map's load time, and make the most important information load first. 87
- 39. Design scalable site maps. 90
- 40. Keep the design clean and simple. 92

- 41. Simply list links on the page, and use category headings that are clearly distinguishable from the category links. 95

CONTENT (97)

- 42. Include all areas of the site in the site map and keep the site map up-to-date. 97
- 43. Make it clear when a link will take users to another site..... 99

ALPHABETICAL INDICES (100)

- 44. If you offer both a categorized site map and an alphabetical index, ensure that all content is accessible via both navigation methods. 101
- 45. If you offer an alphabetical index, specify what it includes (such as categories or keywords, for example). 102
- 46. Cross-reference alphabetical lists with synonyms so users can find their own particular terms. 103
- 47. Provide context for less-specific terms in alphabetical indices. 104

SITE MAP LINK: NAME AND PLACEMENT

1. Provide a site map, especially on complicated and cluttered websites.

While not many people automatically use a site map, some look for it when they need it. It's therefore worthwhile to create a simply formatted site map of the site's primary information.

In our study, even participants who had never heard of or used a site map before found it to be a useful tool—if it was well designed. One participant stated, “Well, now that I know that it's a tool I can use to locate info, I will use it in the future. But it's obvious that some are easier than others.” After another person had used a site map for the first time, he said, “I should always go to the site map. I can see everything offered on there.” Once users got a taste of site maps, they saw them as another helpful resource to use in their future browsing.

2. Do not bury the link to the site map deep within the site.

A link to the site map should be readily accessible, not buried inside your site. Having to dig for the site map defeats the purpose of having a readily available resource to aid users when navigation fails.

Finding the Scholastic website's site map proved quite challenging for users. The link was not available on the homepage. Participants first had to find the *Customer Service* page and then find the link to the site map under the *Useful Links* section. Because of this design issue, two of the four participants who used Scholastic didn't find the site map at all, and the other two found it only after major difficulties. The two that did find it each took more than a minute and a half to do so. One even resorted to typing “site map” into the site's search feature.

All users commented on how cumbersome it was to find the site map. One participant said, “At this point, it should have been easier to find. I wouldn't be sure if they have one... It's hidden somewhere in the site. You shouldn't have to dig to find the site map.” Another shared that sentiment. She interpreted *Customer Service* to be a section for people who had already established a relationship with the company or bought a product. “It's a useful link, but not that useful when you cannot find it. ‘Customer service’ to me means that if I bought something through Scholastic, I would get contact info. *Useful Links* under *Customer Service* is ironic because it's not useful there.” A third user also felt that it was an illogical place for the link. “Yeah, I would have never found it. I wouldn't have gone to *Customer Service* to find the site map. *Customer Service*—I would think is a number to call, or something like that.” By hiding the site map link under the *Customer Service* section, users are unlikely to find it when they need it.

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- Kids: Flashlight Readers
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The Scholastic.com homepage. The footer offered a link to Customer Service, which was where some users finally found the Site Map link. The homepage should have offered a direct site map link from this utility bar.

SCHOLASTIC Teachers ▾ Parents ▾ Kids ▾ More ▾ Welcome to Scholastic.com Sign In ▸ Shopping ▾ My Account ▸

SEARCH

Customer Service

Customer Service Home
Request a Catalog
Contact Us

Find an Answer

Enter keyword or phrase Select Topic

Browse by Topic

- Registration/Account Information
- Online Stores
- Book Fairs
- Book Clubs
- Scholastic At Home
- Booksellers
- Products and Programs
- Scholastic Company Info
- Customers Outside the U.S.
- General Information

Frequently Asked Questions

1. How do I find my customer number to sign up for a User Name and Password?
2. How do I check the status of an order?
3. How do I register for a Scholastic account?
4. How do I update my Scholastic registration information?
5. How do I retrieve my username or password for my Scholastic account?

Useful Links

- Check Your Clubs Order Status
- Register for a Scholastic Account
- Update Your Scholastic Registration Information
- Forgot Your Password?
- Pay your Scholastic At Home Bill Online with Easy Pay
- Scholastic.com Site Map

PRIVACY POLICY | Terms of Use | Scholastic Inc. | Customer Service | About Scholastic | Careers | Investor Relations | International | Scholastic en Español

Scholastic.com's Customer Service page. The Scholastic.com Site Map was listed as the last bullet under Useful Links.

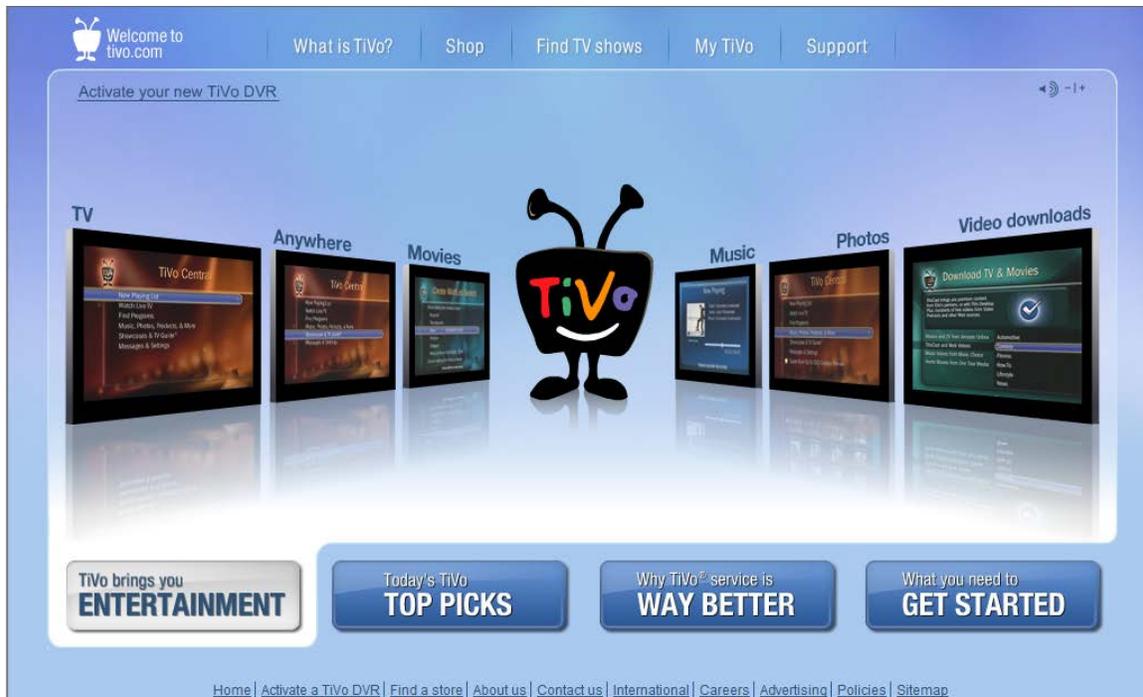
Not only should the site map be directly accessible from the homepage, it should also be available from every page on the site. (See guideline #13: *Place the primary link to the site map in the same place on every page.*)

Place the site map link in the utility navigation at the bottom of the page. For sites with too many options at the bottom, provide a link to the site map in the global navigation or in the upper utility navigation.

When people look for the site map, they should be able to locate it easily, but there's no need for it to flashily announce itself. After all, it's a secondary feature and shouldn't intrude on users unless they want it.

Users who were familiar with site maps immediately looked for it at the bottom of the screen, in the footer navigation. One user reinforced this with the comment, "I know they're generally located down here [at the bottom]." Another user offered a similar sentiment, "I usually find the site map on the bottom. Not sure if many people know that." Although somewhat out of sight, the link's placement at the bottom of the page has been cemented as a standard for many years.

An example of a well-placed site map appears on the TiVo homepage. Although the site map link is at the bottom, the homepage is simple and the links fall above the virtual fold (the point at which users need to scroll to see more content). The links have decent contrast and are visible without getting in the way of the main content. The site map is also the last link in the list, which makes it easy to spot.



The TiVo site map is located at the bottom right of the homepage, but the clean design allowed users to easily find it.

Some participants had a hard time when site map links weren't prominent enough and/or blended into the legalese at the bottom of pages. This didn't totally impede users from finding the site maps, but it sometimes took them a little longer when they weren't sure where to look.

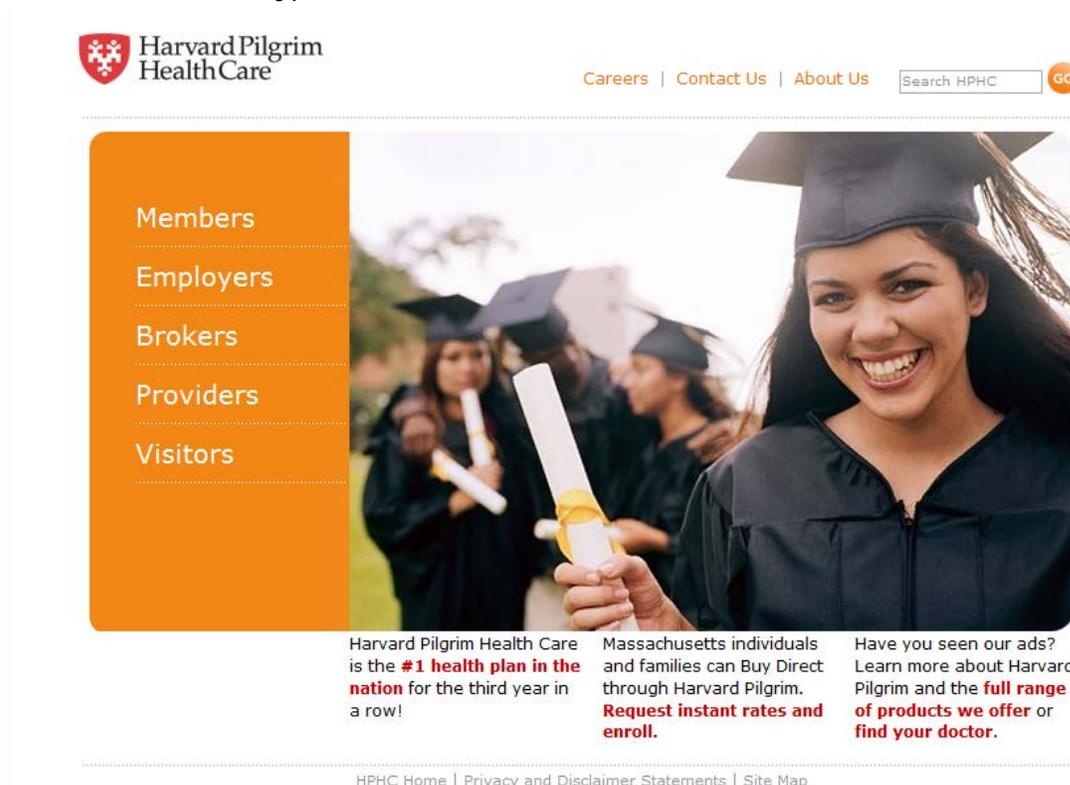
We first recommend that you place the site map link in the footer utility navigation. However, if the link will be lost among various options in the utility bar, you can

make the site map more visible by including it in global navigation options at the top of the site. That said, it's important not to make it stand out too much. (We discuss this further under guideline #7: *Do not make the site map link too prominent.*) If this might be a problem on your site, you can place the site map in an upper utility nav if you have one.

3. **Ensure that the link to the site map is in an adequate (scalable) font size.**
4. **Ensure good contrast between the site map link and the page or menu background.**

In all cases, users found the site map link much more easily when it was a legible font size (on par with other text on the page) and offered good contrast with the page background. Small links with poor contrast are hard to read and often overlooked.

On the Harvard Pilgrim site, the footer contrast was so poor that users rarely saw it. The fact that it was among privacy and disclaimer information contributed to it being overlooked. (See guideline #6: *Do not bury the site map link in the site's regulatory or "legal" area.*) The font size was also very small compared with other fonts on the page. One user commented, "I have to squint because the font is so small. It looks like it's not even a hyperlink."



The Harvard Pilgrim homepage was uncluttered, but the site map link on the bottom right was still difficult to see due to its size and lack of contrast.

5. Do not hide the site map link among too many other links.

Although sorting out the site's menu structure is one of the more difficult challenges for most Web designers, it is necessary to do it, and do it well. If there are too many menu choices, users will have a hard time finding anything, site map included.

Not surprisingly, participants took more time finding the site map when it was lost among many links on the page—and sometimes they missed it altogether. For example, the Citysearch website presented too many links in the bottom utility navigation. Not only were these links presented in a small font size with poor background contrast, but also there was no apparent priority to the listing order and the links were separated by very little space. Too many links make reading or scanning very difficult.

The screenshot shows the Citysearch website for Boston, MA. The top navigation bar includes the Citysearch logo, the location "Boston", and a search bar. Below the search bar is a horizontal menu with links for Home, Restaurants, Bars & Clubs, Hotels, Shopping, Spa & Beauty, Movies, Events, and More Categories. The main content area is divided into several sections: "Browse" with a list of categories like Restaurants, Pizza, Desserts, etc.; "Today in Boston" featuring a restaurant photo and "6 New Dining Destinations"; "Popular Places Near You" listing restaurants like No Name Restaurant and The Beehive; "Boston Insider" with a "It's the Finals!" article; "People Are Reviewing ..." listing local businesses; "Relaxation Central" with a "Boston Yellow Pages" section; and "Top Searches in Boston" listing popular search terms like nightlife, pizza, and spa. The page is cluttered with many small links and advertisements, such as SixFlags and Coca-Cola promotions.



Site Links:
[About Us](#) | [Advertise with Us](#) | [Contact Us](#) | [Help](#) | [Press Center](#) | [Site Guide](#) | [List Your Business on Citysearch](#) | [Job Opportunities](#) | [Other Cities](#) | [Privacy Policy](#) | [Terms of Use](#) | [About the Best of Citysearch](#) | [Boston Neighborhood Guide](#) | [Boston Yellow Pages](#) | [Boston Editors' Picks](#)
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The Site Guide on Citysearch.com was nestled among the many crowded, difficult-to-read links at the bottom of the page.

6. Do not bury the site map link in the site’s regulatory or “legal” area.

Users will typically disregard any text that appears to be in the site’s regulatory or legal area as it’s usually of no use to them. This relates to the issue of background contrast: legal items and links (such as privacy policy, disclaimer, terms and conditions, and copyright) tend to have low background contrast so that users are less likely to click on or be distracted by them. But designers often blur the line between utility navigation features and legal items. They sometimes lump them all together, and present the links in small text with poor contrast against the background. Site map links should not be visually associated with legal links; instead, separate them out to another tier, side, or area of the page.

In the example of the Harvard Pilgrim website shown earlier, the site map link was next to a *Privacy and Disclaimers Statements* link in a light gray font on a white background. Users were unlikely to look there due to the section’s low contrast, legal look. The iRobot website offered another example: Although the homepage provided clean, well-spaced links at the bottom of the page, there is a separation between two tiers of footer links, with the site map appearing in the less prominent tier next to the *terms & privacy* and *copyright* information. As such, the link was easily associated with legal information and users sometimes overlooked it.



Home Robots

Store

Government & Industrial Robots

About iRobot

Search Our Site

Father's Day is June 15
Give Dad gifts he'll love, plus FREE Shipping*




More Father's Day Gift Ideas ▶

iRobot Dirt Dog® Shop Sweeping Robot iRobot Looj™ Gutter Cleaning Robot

*Restrictions apply.

What kind of robot interests you?

Home Robots

Tactical Robots

Robots for Developers

Your own personal cleaning staff...
Get 3 cleaning robots for the price of 2



Value Packs include:
 ✓ iRobot Roomba®
 ✓ iRobot Scooba®
 ✓ iRobot Dirt Dog®

2 ways to Shop:
 Call **1.800.727.9077**
 or Visit
<http://store.irobot.com>

Be sure to check out our Web Specials & Clearance Center

Service & Support	Careers	Company Information
<ul style="list-style-type: none"> > Find Answers > Find Manuals > Get Use Tips 	<ul style="list-style-type: none"> > Search Jobs > Rewards & Recognition > Benefits 	<ul style="list-style-type: none"> > Investor Relations > Press Room > Photo Gallery

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[site map](#) | [terms & privacy](#) | © 2008 iRobot Corporation

Compared with links higher on the page, the site map link on the bottom of the iRobot homepage was a lighter color and offered less contrast. It was also grouped with terms, privacy, and copyright information.

7. Do not make the site map link too prominent.

It's important to make the site map link visible without making it too prominent.

On the Documentum website, the *Site Map* link appeared in a dark bar in the upper right-hand corner of the screen, above and more prominent than the site's main navigation. It was grouped with links for *Home*, *Contact Us*, *Careers*, and *Downloads*. This seemed to overly elevate the site map, and users felt that the link was too prominent on the page, taking up prime real estate. One person commented, "I would put the top bar at the bottom of the screen. I would probably expect to have to look for it, because it does take up a lot of space at the top. It's not the most efficient use of space." Although site maps are useful navigational devices and should be visible, they are mostly used only after search and primary navigation, and should not detract from those navigational elements or more important site content. It is better to spend the real estate on more important menu commands.

Products	Services	Support	Developers	Partners
<ul style="list-style-type: none"> ■ 4i Platform ■ 4i WCM Edition ■ 4i Portal CM Edition ■ 4i B2B CM Edition ■ 4i Compliance CM Edition ■ Product Integrations ■ Tours ■ Starter Kits ■ Reviews ■ Customer Success ■ Product Glossary ■ Industry Solutions 	<ul style="list-style-type: none"> ■ Consulting <ul style="list-style-type: none"> ● Web Content Management ● Core Applications ● Platform Technology ● Deployment Management ● Success Stories ■ Education <ul style="list-style-type: none"> ● Planning for Training ● Training Schedule ● Locations ● Course Descriptions ● How to Register ● Customized Training ● Curriculum Paths 	<ul style="list-style-type: none"> ■ Logon ■ Standard ■ Mission Critical ■ Premier Account ■ Extended ■ Developer ■ Support Centers ■ Support Site Feedback 	<ul style="list-style-type: none"> ■ Sample Code ■ Support Options ■ Resources ■ Pre-Releases ■ Tip Collection ■ Partner Gallery ■ Product News 	<ul style="list-style-type: none"> ■ Signature Program <ul style="list-style-type: none"> ● ASpire Program ● Services Program ● Technology Program ● Partner Application ■ Solutions Catalog <ul style="list-style-type: none"> ■ Showcase <ul style="list-style-type: none"> ● ASpire Showcase ● Services Showcase ● Technology Showcase ● Simple Search ● Advanced Search ■ Events ■ Education ■ Logon
	<ul style="list-style-type: none"> ■ News & Events <ul style="list-style-type: none"> ■ Contact Information ■ Press Kit 	<ul style="list-style-type: none"> ■ About Us <ul style="list-style-type: none"> ■ Fact Sheet ■ Management Team 		

The site map link on the Documentum homepage appeared in a dark bar in the screen's upper right-hand corner above the main navigation. Users felt this was too prominent, as it occupied prime real estate and took attention away from the primary navigation bar.

In contrast, the Marriott site offered a good example of placing the site map link in a utility navigation area at the top of the page. The choice didn't distract people from doing the tasks they were focused on, but still offered a logical placement in the red navigation bar in the upper left. Although most people first scrolled to the bottom of the page to find the site map, when they didn't see it there, they usually scrolled all the way back to the top and found it quickly.



Find & Reserve | Deals | Destinations | Shop Marriott | Events & Meetings | Marriott Rewards

Find a Hotel Search by Keyword Upcoming Reservations

Our Best Rates, Guaranteed. [Learn more](#)

City or Airport Code

State (USA only) Country

Check-in date (mm/dd/yy) Check-out date (mm/dd/yy)

No. of rooms Guests/room Marriott Rewards number

Use Marriott Rewards points

Special Rates
 AAA Senior discount Government & military Corporate/promotional code

[More search options](#) [Select a brand](#)

Stay at Marriott for the weekend and get a \$25 Visa GIFT CARD.

BOOK NOW >>



VISA
*Terms and Conditions apply

Member Assistance
[Forgot password?](#)
[Set up online password](#)
[Join Marriott Rewards](#)

Email/Marriott Rewards No. Password

Remember me - Recommended for private computers only

Pluses of booking on Marriott.com

Reasons to reserve on Marriott.com add up. [Learn More](#)

News

"...these are terrific examples of [going] 'global' -- thinking globally and acting locally."
 Bill Marriott's Blog

Marriott Launches Green Meetings for Groups To Address Climate Change. [Green Marriott](#)

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 Honeymoon Gift Registry. Sign up or give Gifts

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 \$79 to \$129 at participating Courtyards. [Book now >>](#)

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Although the Marriott homepage contained a lot of information, the Site Map link was clearly presented at the top left of the screen along with other utility navigation.

8. Name the site map link *Site Map*. If you offer a variation of a site map, name its link something that users will easily understand and recognize.

Many participants were familiar with the standard “site map” term. And most participants had no difficulty finding the correct link to the site map feature, regardless of its name. However, most sites that offer a site map label it as such,⁴ so users are accustomed to looking for a link by this name. Sites do vary, however, in whether they make it a single word or two separate words. For example, “site map” was used on most of the sites we tested (AOA, BMW, Harvard Pilgrim, Marriott, Scholastic, iRobot, and Texas Roadhouse); only TiVo chose “sitemap.” Some sites also used all lowercase letters, but this typically related to the visual style of the website and site map.

⁴ *Homepage Usability: 50 Websites Deconstructed.*

The slight differences in one word or two did not affect participants' performance on the tasks, nor did they elicit any comments. That said, "site map" does appear to be the emerging standard.

In any case, the name of the link and the feature should reflect what is offered. "Site map" is a standard term, and you should use it to refer to any site map content. However, if you offer a significant variation on a site map, you can deviate from this standard term and name it something more appropriate. For example, if you offer an index of alphabetical links, call it *Site Index*.

As always, consider your audience and usage context. If your users are particularly novice with the Web, the term "site map" might not be intuitive for them. One user who was unfamiliar with site maps, said, "'Site map' is more of a computer terminology. Most people would recognize [a site map] as a website outline."

Still, because "site map" continues to be the most standard term, we don't recommend that you try other names unless you have good reason to do so. As always, test your site to see what works and what doesn't.

9. If users might confuse the word "map" with other maps on the site, place the site map link with other navigational elements so the context can help users understand the feature's function.

On the New Jersey Transit website, the term "site map" was confusing because the site itself is about transportation and offers transportation maps. One user was expecting to literally see a map of the transit system.

In situations where users might confuse the word "map" with other maps on the site, place your site map link with other navigational elements to highlight its function. Although not ideal, another option is to use a different term, such as the *Site Guide* on the Citysearch website. One user commented, "It didn't occur to me to look for the words 'site guide,' but when I found it, everything seemed to fall into place." Although users typically looked for a "site map" link, after some searching, they were usually able to find and identify the *Site Guide* as what they wanted.

As we noted above, another common term is "site index," which was used by both Novell.com and TheKnot.com. Users could relate to this term and found the features without a problem. Some users commented that the term "index" reminds them of a book index, which appropriately describes alphabetical content.

10. Refer to the site map by the same term throughout the site.

The name of the site map should be consistent across the site. If the name is different across various site sections, users might get confused and have trouble finding it.

The U.S. Treasury site used two different names for its site map. The link on the homepage was called *Sitemap*, but the heading on the actual site map page was *Alphabetical Index*. Thus, if users want to return to the *Alphabetical Index*, they may get lost looking for that specific term, when the link name is really *Sitemap*. Likewise, the iRobot site used *Site Index* on some parts of the site, and *Site Index A-Z* on other parts. Some participants hesitated before clicking the latter link, because they wondered if it would be different. To avoid confusing people, you should use one consistent term for the feature throughout the site.

11. Do not combine the site map link with another functional link.

People scan links in menus and on pages. When they see that a link doesn't seem to match what they are looking for, they move on, even if the last part of a link seems to be what they want. Thus, it's important that the site map link—and every link on your site—stands alone.

The Mercedes Benz USA site offered a link called *Search/Site Map* in the top right-hand corner of the page. Combining the commands was confusing, as users were not always sure what to expect. For example, users clicked the link looking for a site map and instead found themselves in the search function. In addition, users could not determine whether clicking on the left half of the dual link would take them directly to the site map.

In fact, clicking the *Search/Site Map* link took users to the search page, which contained only a clickable alphabet and instructions. To get to the site map, users had to first realize that they were in the site's search area, which wasn't obvious since it didn't look like a standard search. Then, they had to use the left-hand navigation to go to the site map. Several users had trouble with this and commented on it. One user said, "It wasn't evident that this was the search, not the site map... okay, now I'm on the site map." Another user said, "Is this a dual link here? That's a little confusing. It should be 'search' as one link and 'site map' as another."

The screenshot shows the Mercedes-Benz USA homepage. At the top left is the Mercedes-Benz logo and name. To the right, in the top right-hand corner, is a navigation menu with the following links: SEARCH/SITE MAP, MB WORLDWIDE, LOCATE A DEALER, and CONTACT US. Below this is a horizontal navigation bar with links for Models, Starmark Pre-Owned, Owners, Accessories Store, and Mercedes in Depth. The main content area features a large image of a blue Mercedes-Benz sedan. Below the image are four columns of promotional content: 1. 'Register for your Online Portfolio and enjoy a personalized Mercedes Experience' with a 'JOIN NOW' button. 2. 'Model Selector' with images of various cars and the text 'Find the Mercedes model that's best for you based on body style, price and performance.' 3. 'Purchase Tools' with a diagram of a car and the text 'All the tools and resources you need to make an informed and intelligent purchase decision.' 4. 'Special Features' with three sub-sections: 'C-Coupe.com' (Fall for the new C230 Kompressor Sports Coupe), 'C320 Sport Wagon' (Discover the all-new 2002 C320 Sport Wagon), and 'Owners Online' (Enhance your ownership experience).

The Mercedes Benz USA homepage offered a link to Search/Site Map in the screen's upper right-hand corner. Combining the commands in one link was confusing for users.



When they clicked Search/Site Map, users landed on the Mercedes Benz USA search page. The link to the site map appeared on the screen's left-hand side. Clicking the Site Map link took users to the Site Map page.

12. Provide a link to the site map on every page of the website.

If you offer a site map, a link should appear on every page of the site; the homepage is not the only place that users might get lost or confused. Study participants often had to use the *Back* button to return to the site map, or returned to the homepage to find the site map link.

The Texas Roadhouse website misled users in that it only linked to the *Site Map* from most pages. Most users didn't detect the pattern: that the site map was missing only from pages within the *Investors* part of the site. One such user commented, "Once you go into something, it takes away the *site map* icon. I would like that to be available more." We've seen from many studies that users rarely see the logic behind such inconsistencies, which often leads them to superstitious behaviors to get the results they want. When users didn't see the site map on some pages of the Texas Roadhouse website, they automatically went to the homepage first for all subsequent tries. This was especially problematic because the homepage had some Flash elements that took a long time to load. Furthermore, returning to the homepage sometimes triggered a prompt asking users to choose either a high-speed or dial-up connection; this led to more unnecessary frustration.



Most—but not all—TexasRoadhouse.com pages offered a site map link. As this screen shows, the Site Map link appeared at the top of the About Us page (to the left of the company logo).

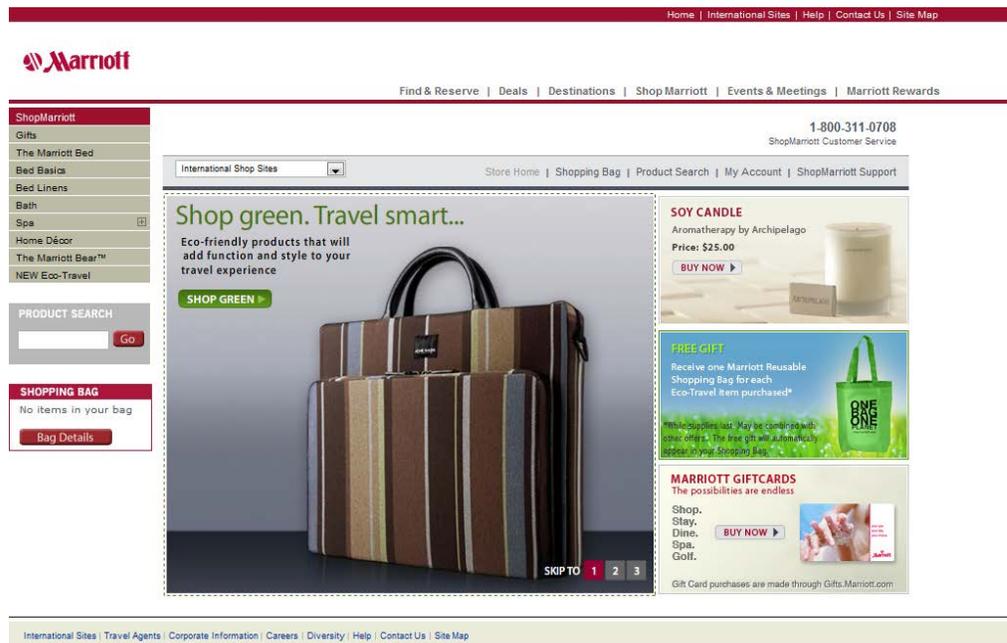


The Investors section of the Texas Roadhouse website was the only section that didn't offer a site map link at the same place at the top of the page. Further bedeviling users, the section kept the same graphic in the same location, but used it for something else.

13. Place the primary link to the site map in the same place on every page.

Not only should a link to the site map be available on every page, it should be in the same place on every page as well. Just as an inconsistent name can confuse users, so, too, can inconsistent placement.

On the Marriott website, a link to the site map appeared only in the upper left-hand area of most pages. On the *Shop* page, however, it appeared instead in the upper right, as well as in the footer utility navigation.



In the Marriott website's ShopMarriott section, a Site Map link appeared in the upper right part of the page (in the red bar), as well as in the footer utility navigation at the bottom. All other pages of the site featured a single Site Map link in the upper left part of the page.

Ironically, the links on the *ShopMarriott* pages took users to a site map that excluded the shopping content. (We discuss this further in guideline #42: *Include all areas of the site in the site map and keep the site map up-to-date.*)

14. Prominently feature site map links in help-related website areas, as well as in areas for users with special needs who might benefit from using the site map.

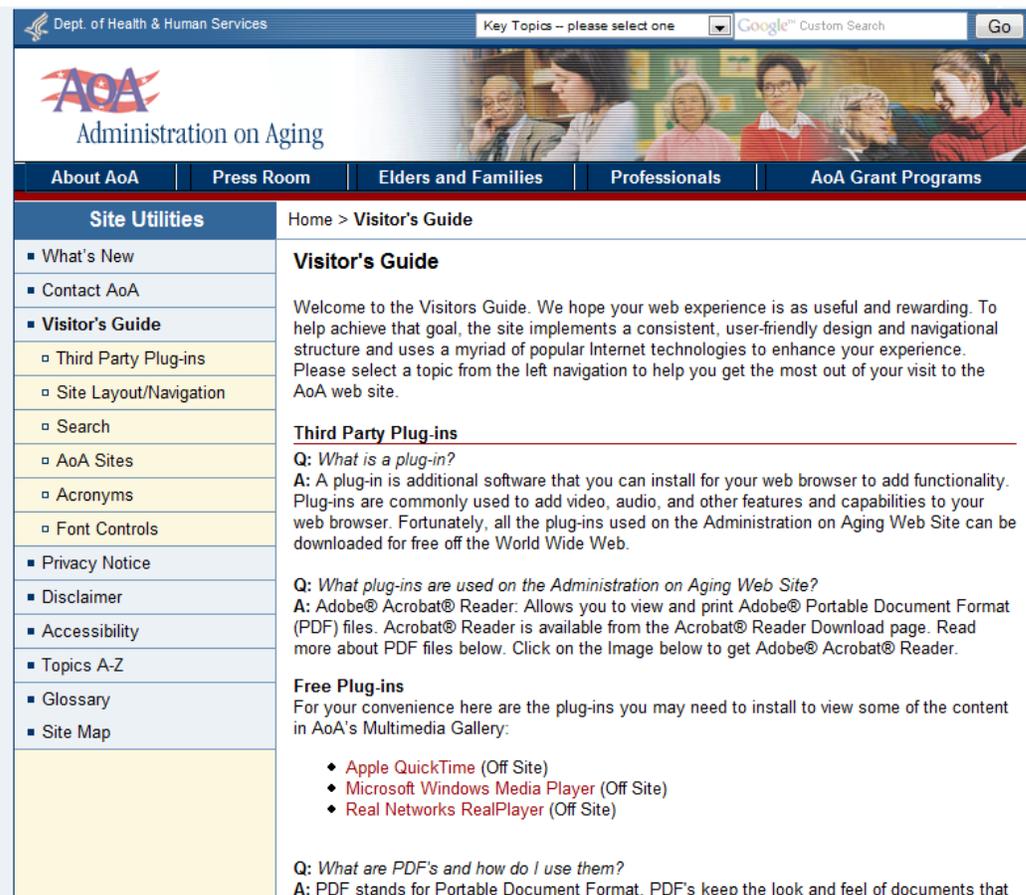
In the first edition of this report, this guideline was: "Offer a link to the site map from other help-related or site information areas of the website, such as Help and About Us."

Given that people use site maps mostly when they're lost, it's useful to link to the site map directly from any areas where users might seek assistance. When users were trying to find information about the site and what it offered or were having difficulty with a task, they sometimes went to areas such as *Help* and *About Us*. The reason this guideline has changed is that, if you followed the last guideline (#13: *Place the primary link to the site map in the same place on every page.*) there's

usually no need to include a redundant link on most pages. This will just clutter your website, giving users more to filter out when they're seeking information.

The exception is on help pages, where prominently recommending the site map can be helpful, even though the link is also available elsewhere on the page (in the footer, for example). This is particularly important if your general site map link is not visible from help pages.

Another exception here was illustrated by the Administration on Aging (AOA) website. This site had a page called the *Visitor's Guide* that explained the site and various sections, including navigation and layout, search, file types, and other functionality. On many sites, such information might be unnecessary, but could be useful here given that one of the site's primary user types is older adults. While many seniors are Web savvy, some are new to the Web and might benefit from website tips. (For more information, see Nielsen Norman Group report [Senior Citizens \(Ages 65 and older\) on the Web](#).) For this reason, in addition to offering a consistent global site map link at the bottom of each page, it might be helpful to also include a site map link in the left-hand secondary navigation if your site serves seniors or users with special needs.



The top of the Visitor's Guide on the Administration on Aging (AOA) website. The left-hand navigation included a link to the Site Map. Although this kind of redundant link isn't typically recommended, it might be helpful here, because older adults are one of the website's primary audiences.

F. Site Utilities

Featured in this section you will find the site utilities for the Administration on Aging web site. From left to right they are:

- What's New - New information found on AoA's web site (weekly).
- Contact AoA - Key contact information for AoA.
- Visitor's Guide - Where you are now. Help with the site.
- Site Map - Hierarchical listing of the site
- Privacy Notice - Legal and Privacy Act information.
- Accessibility - Web accessibility for handicap patrons, Section 508 information.
- en español - Spanish information found on AoA's web site.
- FOIA - Freedom of Information Act - How to make a FOIA request.
- Topics A-Z - Alphabetical listing of the site.

TOP▲

A description of the site map appeared further down the AOA Visitor's Guide page. The description would have been more useful for users if "Site Map" had been a link.

Aside from seniors, other user types that might benefit from a redundant site map link include Web novices, small children, and some types of physically disabled users (such as visually impaired people who use a screen magnifier, which shows only small portholes of the page at one time). Consider your primary user types and weigh the pros and cons of including an additional link.

15. If the site map link is not visible from a search results page, then offer a link to it.

In the first edition of this report, this guideline was:

Offer a link to the site map from search results pages, and a link to the search from the site map.

Most websites today have an open field for searching in the site's navigation and on every page. As a general rule, we recommend an open field in the upper right of all pages. This has become a standard. We've therefore changed our guideline accordingly; if you have an open search field on every page, you don't need redundant links or functionality. Likewise, assuming that you've followed the guideline to place a site map link on every page, you don't need to add another link to the site map on your search engine results pages.

However, if for some reason the site map link is not visible from a search results page, then you should offer a link to it. In general, users will turn to a search engine before they'll use a site map or even sometimes before they'll use the site's primary navigation menus.

Having the search readily available would help people employ the strategies that would work best for them in the moment. As noted under the *Hunting Strategies* section, some users jumped from searches to site maps to navigation in random order. They essentially used the site map and search tools indiscriminately throughout the session, trying anything they could when looking for information. Offering a persistent search box and site map link will help your users jump to the strategies they need.

If your default page design violates this general guideline and doesn't include a search box, then the old guideline continues to hold: Add a search box on the site map page.

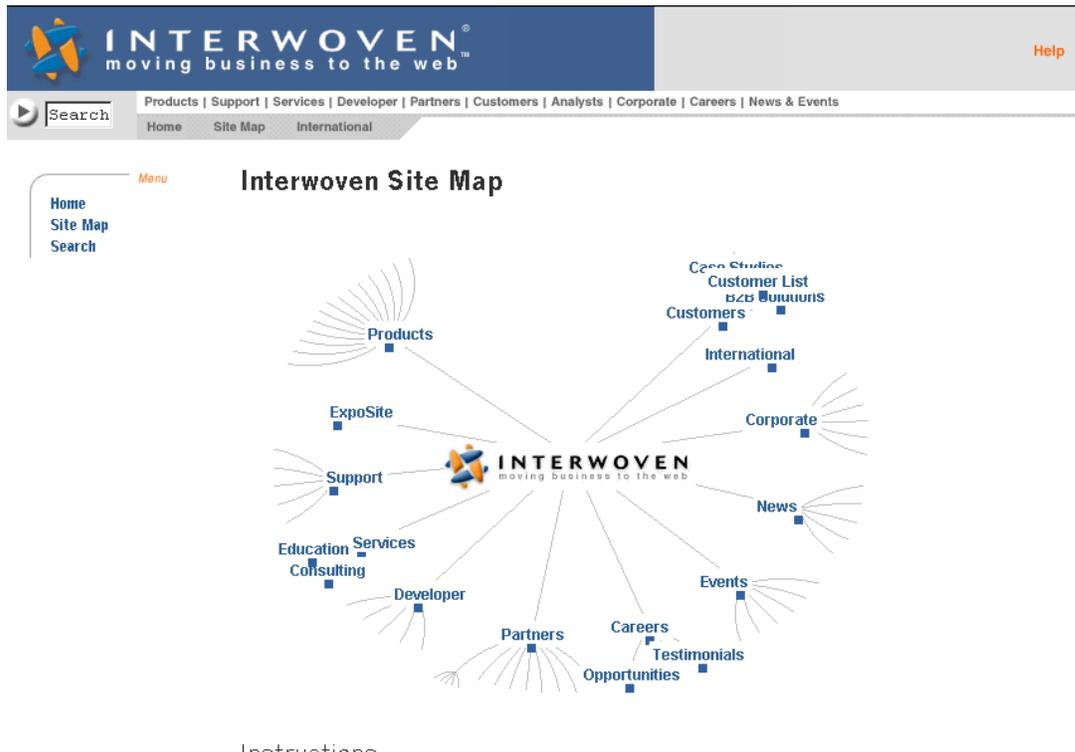
SITE MAP NAVIGATION

16. Make links within the site map visually apparent.

As on all pages, links should be obvious. This is especially important since there is no standard design for site maps (or link treatments, for that matter). As a result, site maps often stray from the traditional blue-bold-underlined indications for text links. This is okay in some cases, such as when your site has a different color scheme for the link treatment. But links should always show the hand icon on rollover, and if it's not blue and underlined, it should have a different state or color on rollover to indicate that it's a link.

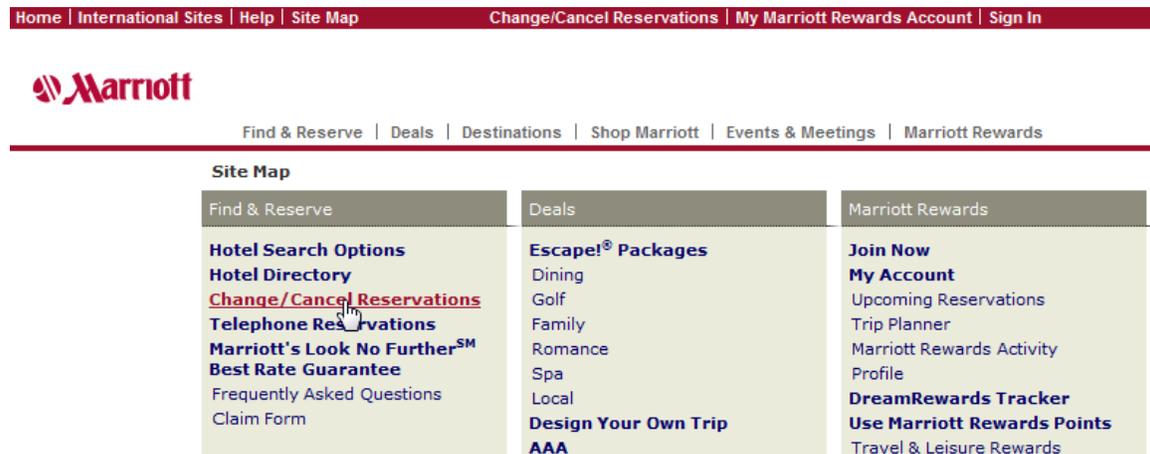
On the Interwoven site, the standard pointing-finger icon that usually appears when the mouse is over a link did not appear at all. This made participants think that the *Site Map* had no links. One such user said, "I would think these [text labels] are links, but they don't appear to be. The hand with the finger doesn't show up, so you can't tell what's a link." Another participant thought, erroneously, that the small blue box next to the link was the actual link. She clicked on that rather than on the word itself, and it did nothing.

Because the Interwoven site dynamically clustered links, words also overlapped each other, making it very hard to read and distinguish one from another.



A cluster of links on Interwoven's Site Map. Depending on how users clicked and dragged links on the map, links would appear in a cluster. The standard pointing-finger icon, which denotes a link, didn't appear when users moused over a term.

The Marriott.com site map offered a good example, using both the pointing finger and a different link treatment on rollover. The text was blue to indicate a link. Although we usually recommend using blue and underlines, the text here was further reinforced as a link because it turned red with an underline on mouseover.

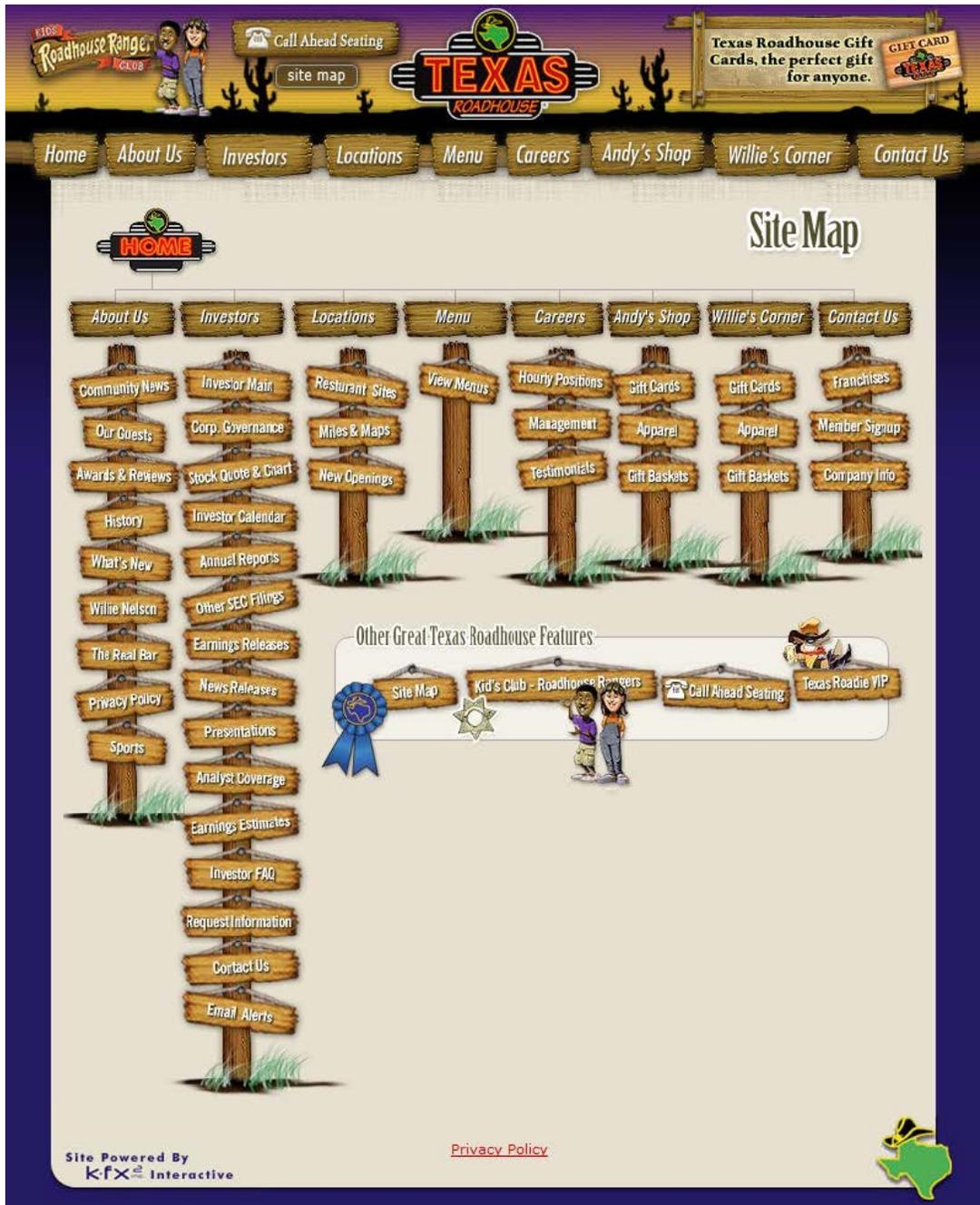


Blue links were indicated on Marriott.com's site map with red, underlined text on mouseover (as with the Change/Cancel Reservations link under the Find & Reserve section). The cursor changed to a hand, which also indicates a clickable item.

17. Make links within the site map legible, using high contrast against the background and adequate font size.

The links within a site map should have adequate contrast and font size. Poor contrast and small font size can cause eyestrain and general discomfort. Designers sometimes use small fonts as a way of getting everything onto one screen. Stuffing as many links as possible in one screenful defeats the purpose of making the page usable and accessible for everyone. As long as the text is legible and screen real estate is used wisely, people are willing to scroll a bit to find what they're looking for.

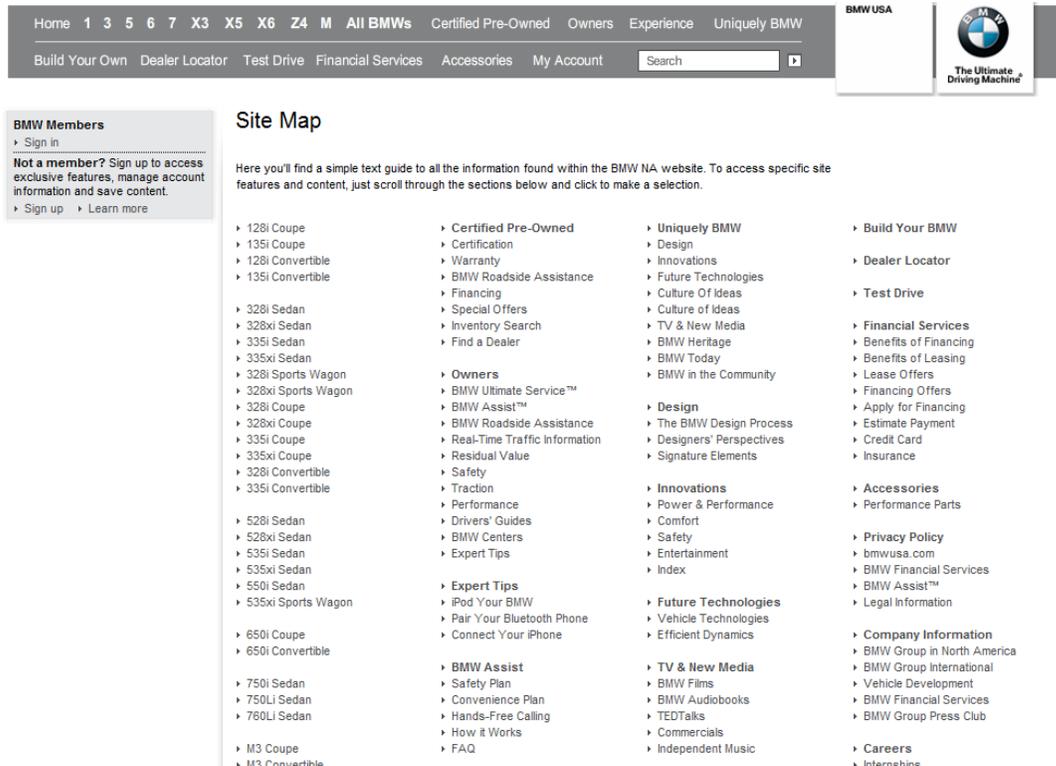
The Texas Roadhouse site map was very difficult for some users to read. Each item was an image of a wooden sign nailed to a post. Although many users thought this was cute and creative, the crowded font style and low contrast on the background image made some words illegible. While one user was looking at the *Investor* categories, she uttered, "Is that Investor *main* or *mail*? I can't tell." Another user expressed concern over the small font after completing a task. She said, "When I went to the site guide, the writing was really small. I had to squint a bit, someone with bad eyesight would have problem."



On the Texas Roadhouse site map, the entries were difficult to scan because the graphic signs featured crouded fonts and poor background contrast. One user couldn't tell whether the first sign under Investors said "Main" or "Mail."

The BMW USA website also had poor contrast against the background (gray on white) and a small font size, leaving users squinting and sometimes frustrated. Two users acknowledged that the designers were probably trying to maintain a sleek brand image, but it took a toll on the legibility. One said, "This is hard for me to read... it looks soft, but it's hard to read...They should get rid of the gray on white. The fonts are too small... it could be bigger." The other had a similar sentiment, "A lot of these sites have a neat, tidy, plush site, but it shouldn't just be about neat and

tidy. I don't want to look at this for too long because it hurts my eyes to squint and find what I'm looking for." As the users suggested, usability should never be sacrificed for aesthetics or image. Always use at least a 10-point font.

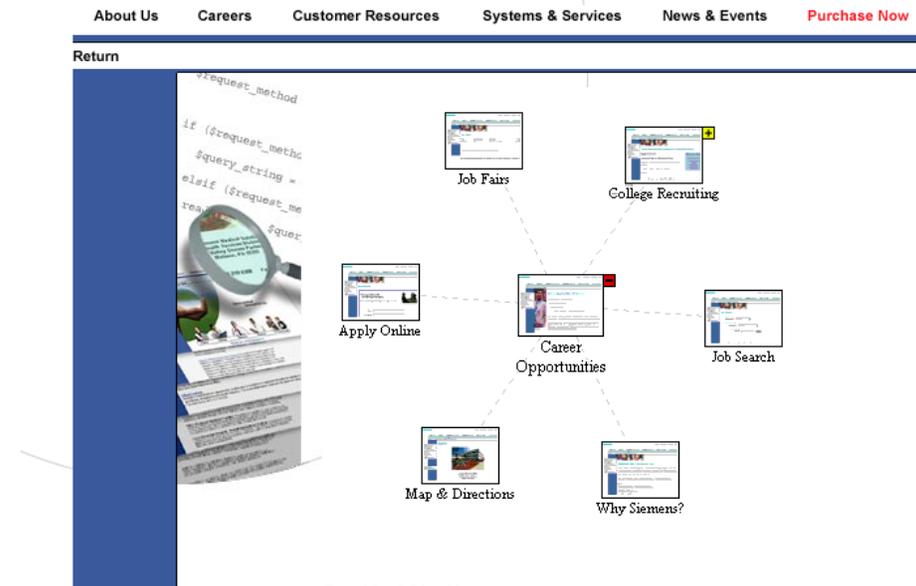


Although the BMW USA site map might look sleek, it sacrificed legibility for aesthetics. The font was small and the contrast was low.

18. Do not use a dynamic or non-standard approach to the site map. Stick with a listing of links.

Some site maps we studied were not self-explanatory and presented information in non-standard ways. One non-standard presentation was a dynamic site map with categories that moved and changed as users hovered or clicked. Because these site maps didn't include the standard list of links, participants were confused about how to use them. People typically went to the site map because they were confused or wanted quick access to information. They didn't want to read documentation before they could get help.

The Siemens Medical site contained the instructions, "Click on the page icons to visit the Web pages. Click on the + icon to expand the designated map area or the – to return to the previous view." One user experimented with the site map while reading the instructions, but never used the site map's full functionality again. She didn't understand why clicking sometimes returned another structural diagram, and sometimes returned actual content pages. She expressed her confusion, "Now it's punched in something different. I have no idea what just happened. I got to two different places." The experience became more frustrating for her than helpful.



Siemens Medical's *SMED.com* site map offered miniature images of each page that users could access through the site map; clicking on any page took users directly to that page. Some pages were further broken down into additional pages; to access them, users had to navigate the site map using the + and – symbols attached to the small page images. Instructions below the site map told users how to use the site map.

The popularity of dynamic site maps has declined in the years between the first and second study. By Study 2, two of the sites in Study 1 that had dynamic site maps—Siemens Medical and Interwoven—no longer had site maps at all. When analyzing websites to test for Study 2, none of the 150 websites we surveyed had a dynamic site map. This is a step in the right direction; designers are realizing that what was once considered fancy and interesting simply created confusion and poor usability. Generally, users resort to the site map when they're desperate to find information; it's not the right time to offer entertainment or leisurely browsing.

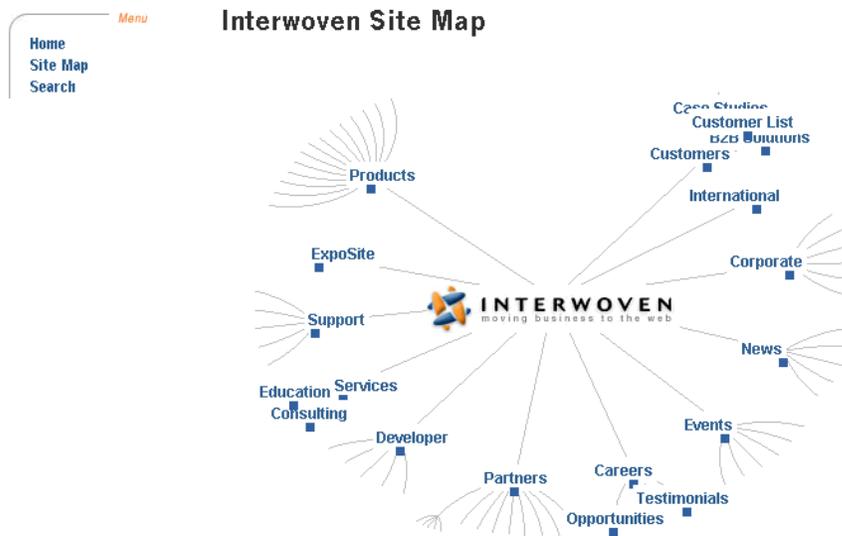
19. A site map design should not require instructions for how to use it. If you must include instructions, ensure that they are clear.

Some sites offered instructions for how to use the site map, either because the map involved interaction other than simple clicking or because designers were trying to make their tool easier to use. As in the last section, if documentation for using the site map is necessary, we recommend reexamining your design. As we've documented repeatedly, users tend to scan pages and skip instructions, so anything requiring instructions on a page like a site map is likely to be confusing.

If you choose to keep a complex design and need or choose to offer instructions, make sure the writing is concise and clear.

The Interwoven site offered the most complex instructions for use. The instructions told users: "Click, Hold and Drag on any given part of the map to focus on that area. Double-click on any touchpoint in the map to go [sic] that specific page within interwoven.com."

These instructions were unclear to users, who were confused by the map interactions. The instructions not only had a typo (which reduced credibility), it used jargon that most users didn't understand such as "drag" and "touchpoint." Using a dynamic site map in the first place was a sure way to intimidate users, but these instructions just made it all the more alienating. In fact, one user wanted to leave the site after reading the site map's instructions. He said, "You've got to be joking. At this time, I would exit from the site. It's too complicated for me—not my style. I tried to drag and it didn't drag very well. I'm not looking forward to using this site." So, a site map that was perhaps intended to impress instead tainted this user's attitude toward the whole website.



Instructions

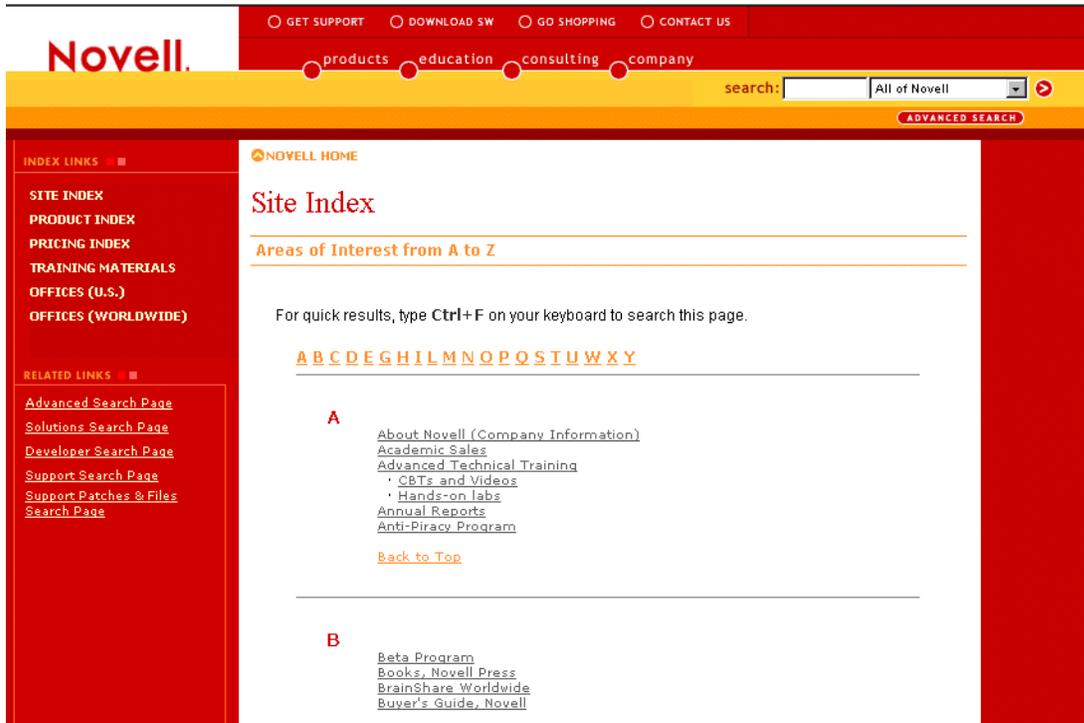
The Interwoven site map included instructions to click and drag areas around the screen. Participants had difficulty using this site map, were surprised by the results of their actions, and did not understand the instructions.

- 20. If you offer hints on how to better use the site map, ensure that those hints do not detract from users' primary way of using the site map. And, make the relationship between the two approaches clear.**

If you decide to offer helpful tips, present them in a way that doesn't detract from the standard way of using the site map. You might, for example, encourage people to use the browser's *Find* function (with the keyboard shortcut of *Control+F*) to find a word anywhere on the page. In our study, participants used the *Control+F* browser feature several times to search site maps. It's a generally useful function, and one that some users don't know about.

The Novell site map offered an alphabetical *site index* that users could navigate via the alphabetical intra-page links. The page also offered users an extra tip on *Control+F* for faster searching. The instructions at the top of the index read: *For*

quick results, type Ctrl+F on your keyboard to search this page. One user said she didn't understand the instructions. "I don't know what that would give me that clicking on a letter or scrolling wouldn't do," she said. "Would that bring me to a page where I could type in my question?" She was unsure about the relationship between pressing the shortcut and clicking on a letter, and was hesitant to try it. If the site had explained more clearly—without getting in the way of the site map's typical usage—that it was simply suggesting that people use their browser's Find function, it might be more helpful. Also, this tip would be more helpful in the context of a categorized list, as opposed to an alphabetical list; in the latter case, if users are looking for a specific term, they can easily jump to the appropriate letter.



The Novell Site Index offered an alphabetical list of topics available on the site. At the top of the list, instructions told users to use Control+F to search the list quickly. It wasn't clear that this command simply activated their browser's Find feature.

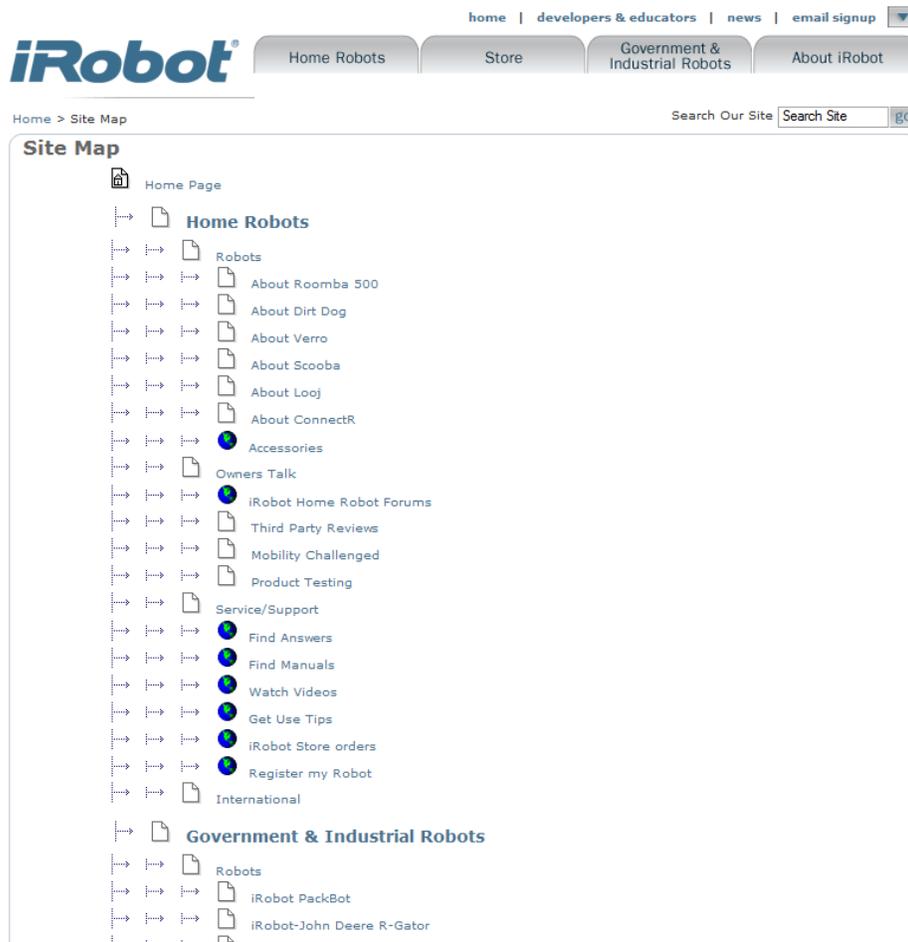
21. Offer within-page links only if there are multiple screens of content that cannot be neatly consolidated, and clearly indicate what the links will do.

We usually recommend avoiding within-page links (also called "anchor" links) in site design. Such links often confuse users because they violate the mental model of clicking on a link to navigate away from one page to the top of another page. There are some obvious cases where within-page links make sense, such as offering a clickable alphabet above an alphabetical index so users can quickly click to a specific letter's listings.

Also, while we didn't see many examples of it during our testing, within-page links might be helpful on some site maps. You should include within-page links only if the design truly needs it, such as when your site map spans multiple screens and you can't neatly consolidate the information. If you use these types of links, provide a

brief explanation of what will happen, such as: *Clicking a link will take you to that section.*

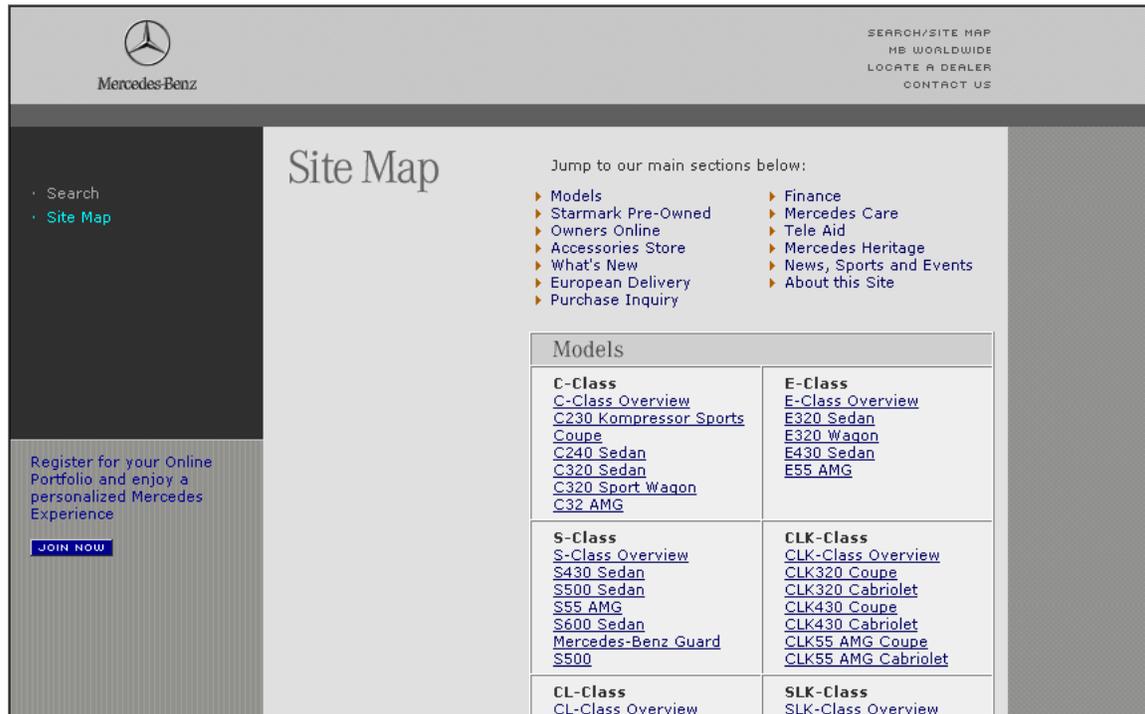
The iRobot site map, for example, spanned four screenfuls and users easily became lost in the scroll. Designers might take this as a cue to add within-page links at the top of the page, but in this case, it's unnecessary. The site map made poor use of real estate because its icons added little value. (See guideline #35: *Minimize graphics, using only those that aid users' understanding of the site map.*) Also, there was wasted white space on the right of the page. Designers could easily condense this content vertically by moving to a two-column format and eliminating some icons, all while keeping the look clean and legible. Doing this would make the four or five major categories viewable with minimal scrolling. Thus, because its site map's length was related to design problems, iRobot was probably not a good candidate for within-page links.



Because it didn't use screen real-estate efficiently, the iRobot site map forced users to scroll four screenfuls. Rather than including within-page links, this page should have been redesigned.

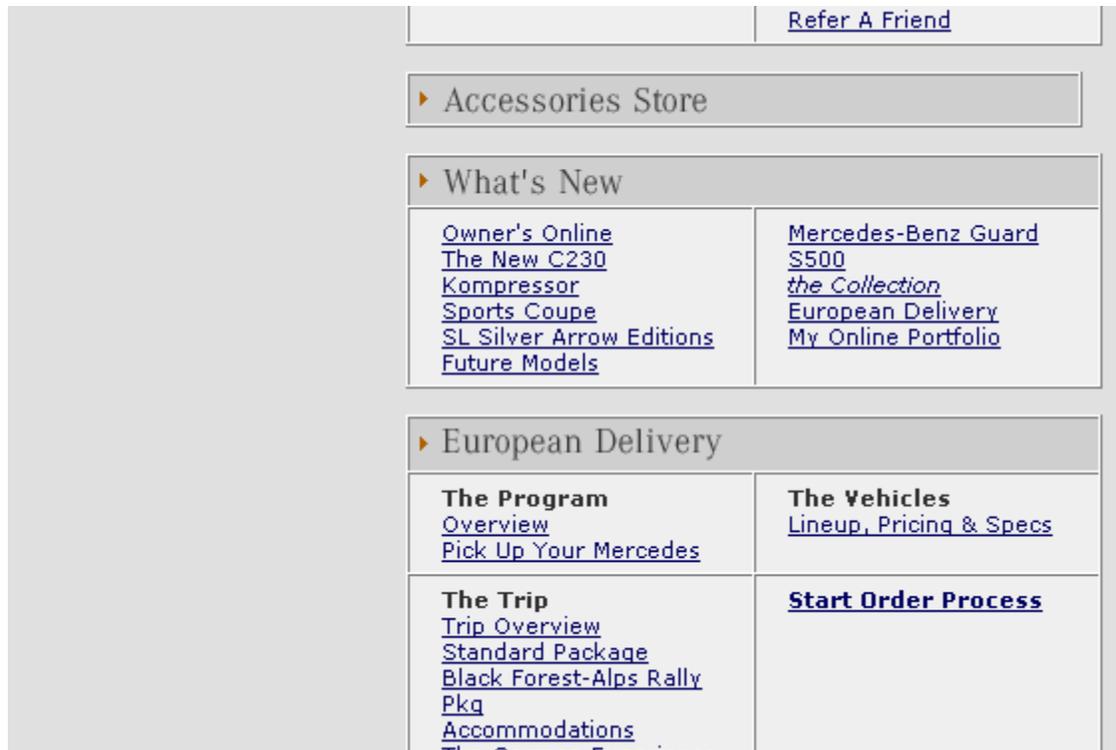
The Mercedes Benz USA site map also failed to make the most efficient use of real estate. The page's multiple categories and subcategories made it taxing to scroll through no matter how you sliced it. In this case, within-page links at the top linked users directly to the site map area they wanted. This minimized the actual scrolling required to get to a specific section, and made users aware of the content available

below the fold. One user was very pleased with this. He said, “The design is easy. One can easily find a main section without scrolling.”



The Mercedes Benz USA site map was a rare case: Its within-page links actually helped users. The map had multiple categories and subcategories to scroll through, but the within-page links took users directly to the section they needed.

That said, within-page links that simply move users down the page but don't offer any additional choices are useless. For example, the *Accessories Store* link on the Mercedes Benz USA site took users to one choice—the same choice they had already clicked, *Accessories Store*. One user found this extra step to be superfluous. “There’s no secondary link, so I have to hit *Accessories Store* again to get there.” She was hoping that clicking the *Accessories Store* anchor would take her to a section with subcategories.



Upon clicking the Accessories Store within-page link at the top of the map, users were moved further down the page. This eliminated scrolling, but the map's Accessories Store area offered only one option: clicking on Accessories Store again.

If you're considering within-page links on your site map, make sure to test it to validate whether it's right for your site map—and whether it will be more helpful than confusing for users.

22. If you include within-page links, place them together, and away from other navigational links.

If you offer within-page links to various site map sections, make sure to place all the links together. A typical location is at the top of the page so people won't confuse it with a secondary navigation mechanism, as they might if it's on the left side of the page.

The Boston Citysearch *Site Guide* included within-page links on the left-hand side, which was bad enough. There were also links across the top that took users to other pages, which only compounded the problem. Users might have mistaken the top links for within-page links, and the left links for secondary navigation, because that's the expected use of these two areas.⁵ The site map further mixed metaphors with its left-hand links, as the bolded links took users to a separate page, whereas the plain links were within-page links. The purpose of the left-hand navigation was unclear and distracting. Altogether, it was a site map that did more harm than good.

⁵ Remember *Jakob's Law of the Web User Experience*: Users spend most of their time on sites other than yours, and so they build up their expectations for how your design elements should work based on the aggregate experience of how most other sites work.

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The Citysearch Site Guide had links across the top and left, most of which were redundant with content in the page. Some links were within-page links, while others (such as Boston City Guide and Boston Yellow Pages on the left) took users to other pages of the site.

23. Avoid forcing additional clicks to get to content. If extra clicks are necessary, make them worth the effort.

People use a site map either to get a site overview at a glance or to quickly locate information they can't find through other means. Given this, clicks from the site map to the content should be as direct as possible. (This excludes within-page links, if they're useful for your particular site map. The two previous guidelines discuss this in more detail.)

The Salon site map offered users a list of the site's main categories, with select subcategories listed beneath each. There was also an alphabetical index, which users could access by clicking on a letter in the alphabet listed above the category listings. Clicking on a letter returned a page of topics starting with that letter. Clicking a topic took users to a page with listings of articles related to that topic. The list was organized by date, and sometimes spread out over multiple pages. Because users couldn't sort the list, they had to click through each page until they found what they were looking for. One user who had difficulty with this said, "I don't like going to the next page—I'd rather see one long scroll rather than go to a new page, especially when the site takes a long time to load, or on days when the computer is dogging."

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Movie Reviews Page [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [13](#) [14](#) [15](#) [16](#) [17](#)
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David Lynch's latest tour de force "Mulholland Drive," the ultraweird director's horror-show look at Hollywood, has a malevolent movie industry, debauched actresses and lots and lots of steamy lesbian sex.
 By Stephanie Zacharek [10/12/01]

"Fat Girl" Two teen sisters seek lovers in Catherine Breillat's sexual -- but not sexy -- shocker.
 By Stephanie Zacharek [10/10/01]

"Baran" Iranian boy meets Afghan girl in a Middle Eastern film that might make it out of the cat house...

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This Salon.com page shows the results of clicking on the Movie Reviews link from the M section of the alphabetical index. The user got a list of 38 pages of movie reviews, in chronological order. There was no way to sort the list or quickly find a specific title.

One user wanted to stop using Siemens Medical's SEMD.com site map because he knew additional pages would have to load each time he used its + and - features. He didn't want to have to wait for the pages to load. He said, "The site map needs to load a new page for each click."

24. Give all links precise names. Do not offer links with similar names that take users to different information.

Some sites offer content that is accessible through multiple site areas or paths. Offering more than one path to the same information can be useful. However, problems arise when similar link names link to different areas of the site.

The Mercedes Benz USA website was a good example of how to use multiple paths effectively. One user explored two different paths to *Future Models*, and got the same information from both. He first explored the G-class area of the site, following the link under *Future Models* in the site map's *Models* area. He then returned to the site map and looked again, finding *Future Models* listed again in the site's *What's New* section.

On the TiVo site, however, two similar links took users to different content. There was both a *How To...* link under the *Support* section of the site map and a *How to...* link under the *My TiVo* section of the site map. The former took users to a landing page that instructed them about how to use certain features; the latter took them to a support page with various articles to read. For one task, the information users

were seeking was under one of the *How to* links, but not the other. As a result, users often failed to find the information they needed, because they assumed that both links went to the same place and so only clicked on one of them.

My TiVo	Support	About us
<ul style="list-style-type: none"> • My TiVo • My account <ul style="list-style-type: none"> • Billing history • Order history • DVR preferences • Change credit card • Change contact info • Change login info • Change service number • Activate a TiVo DVR • What's new <ul style="list-style-type: none"> • tivo.com • Movie & TV downloads • TiVo Desktop software for PC • Rhapsody music service • Free music videos • Online photos • Home movie sharing • How to... <ul style="list-style-type: none"> • Get the most out of TV • Get TiVo anywhere • Download movies & more • Listen to music • View photos & home movies • Get connected • Interact with advertising • Manage TiVo emails 	<ul style="list-style-type: none"> • Support • Activate TiVo Service • My Account and Billing • Activate or Transfer Service • TiVo Store Orders • Returns, Exchanges, Warranty • Set up my TiVo • Messages on my DVR • Program Guides and Channels • Networking • HD and CableCARD • Help Forums • Contact Support • How To... 	<ul style="list-style-type: none"> • About us • Investor Relations <ul style="list-style-type: none"> • Management Team • Board of Directors • Corporate governance • SEC filings • Press releases • Earnings results • Event calendar • Analyst coverage • Stock quote & chart • Historic price lookup • Questions • Information request • Email alerts • Contact IR • Press room <ul style="list-style-type: none"> • TiVo in the news • Press kit • Upcoming executive speaking engagements • Industry analysts • Contact PR • Reviews • Resource center <ul style="list-style-type: none"> • Brochures & graphics • Product shots • Screen shots • Logos

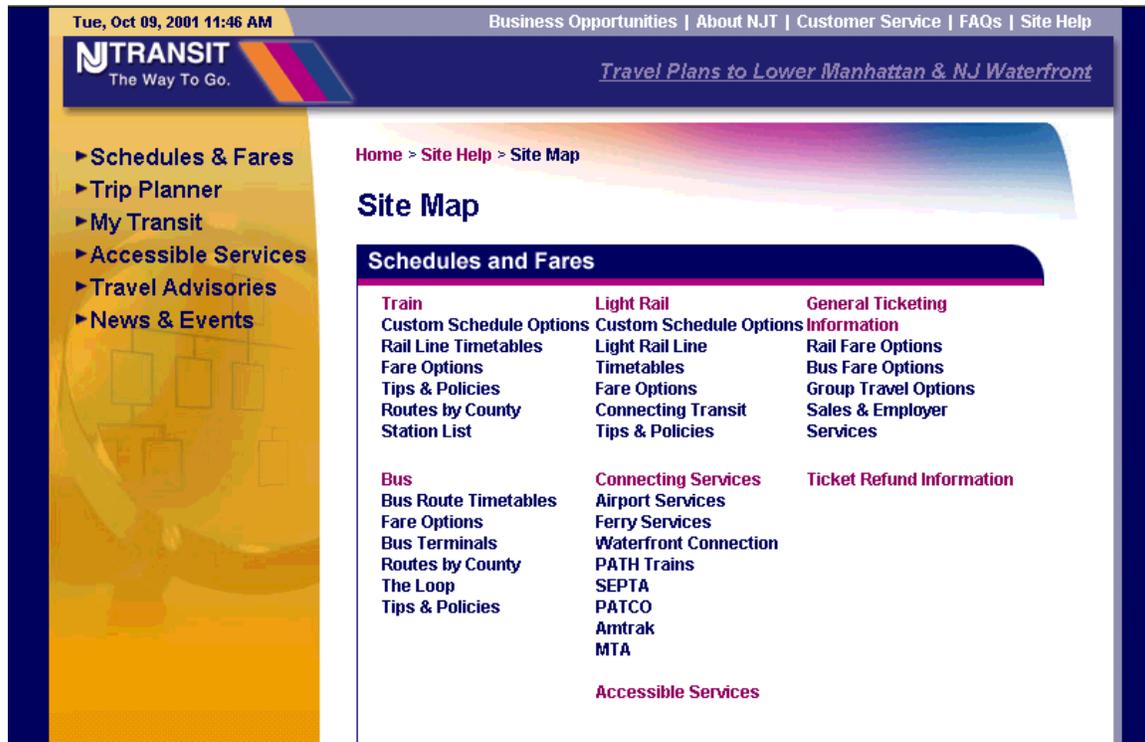
On the Tivo.com site map, the How to... link under My TiVo and the How To... link under Support took users to different content. Other similar links on the site map took users to different content as well, such as Movies & TV downloads and Download movies & more.

When such a discrepancy exists in a site map, it usually indicates a problem with the site's IA.

25. Keep all site map content on one page, offering a quick site overview.

Some site maps slowly revealed the site's deeper levels as users clicked on links. Such progressive disclosure essentially defeats the purpose of a site map. People typically visit site maps because they haven't found the information they need through the navigation, or because they want one-click access to specific information.

One participant liked the New Jersey Transit site map because all of the choices were available on one page. She said, "New Jersey Transit was easy because I could see it all at once." Another participant also found it useful to access everything in one click. "It encompasses everything I might need to know—everything that's on the homepage, but a quick, easy button to get to it," she said. "It's clearly a more direct way to get exactly what I need."



The New Jersey Transit site map listed all of the site's content on one scrolling page.

Site maps tend to be more useful when everything is available up front. As long as the information presented was legible and didn't appear overwhelming, users in our studies were willing to scroll through it. Disclosing all content up front is also useful for people who use the browser's in-page *Find* shortcut to search for a particular word. You will, however, need to decide how many levels deep to go with your information. For more information, see guideline #29: *In the site map, include information at levels only as deep as you can clearly and legibly display it.*

26. If progressive disclosure is necessary, ensure that the method of disclosure is intuitive.

If your IA demands progressive disclosure, be very careful to ensure that you implement the methods in an understandable way. Not only might users be frustrated that information isn't disclosed up front, but they might have trouble accessing the deeper levels of information if it's not intuitively presented.

The Harvard Pilgrim site map contained expandable and collapsible folders, similar to tree menus in certain browsers and operating systems. Although the intent was likely to make the site map simple, the result was confusing and rendered the site map useless for participants. Most people couldn't figure out how to use it.

Each section folder on the Harvard Pilgrim site map contained + and - icons to the left of the labels, and a *View* link to the right of the labels. Clicking on each item did something different. Clicking on the folder expanded a subsection, whereas clicking on the *View* link took users to that section's landing page. Most users either didn't realize that the folder was clickable or assumed that the folder and *View* link did the same thing. In the latter case, users clicked on the *View* link because it was more obvious. As a result, they didn't realize they could drill down into the content further.

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-  [Providers \(View \)](#)
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The Harvard Pilgrim Site Map contained folder icons that expanded and collapsed categories when users clicked them. However, users rarely realized this because they were drawn to the View links, which brought them directly to the landing pages for those categories.

Furthermore, users who did try to click the folders had an inconsistent experience. Some folders did nothing when clicked on, while others expanded to show sub-content. If users happened to try only one that didn't expand, they automatically assumed that none of the icons were functional. One user who was misled by the folder icons said, "This site map looks funky, like a browser where you organize folders. There is a plus and minus to expand folders, but it doesn't do that. It just links to another page, not expand...It's kind of deceiving." Another participant also expected to see content underneath each folder, and didn't understand its relationship with the *View* link. He said, "By clicking on the plus I would have expected it to open up like a traditional [menu]. On other ones, you have the other content underneath. ...And then *View* takes you to another page, which is not that great. It doesn't seem like it's super laid out easy."

Finally, some folders were expanded by default, depending on which part of the site the user came from. Designers likely added this functionality to help users, but the site map's inconsistent appearance instead led to confusion. Users didn't detect a pattern as to when a section might expand or not. This, combined with a misunderstanding of how the icons worked, confused users and caused them to second guess themselves. The site map was different each time they entered it—and they didn't know how to return it to a previously seen state.

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The Harvard Pilgrim site map defaulted to an expanded Members/Visitors section when users entered from the Members part of the site. When coming from the Visitors part of the site, however, all folders defaulted to a collapsed state.

Those few users who did figure out how to use the Harvard Pilgrim site map typically avoided drilling through the categories because they could go to the sections and navigate from there. Thus, for this site, progressive disclosure was unnecessary: The page had enough real estate to expand most of the site's content, and the confusing folder icons simply added to users' frustration and difficulties.

RELATIONSHIP OF THE SITE MAP TO THE SITE

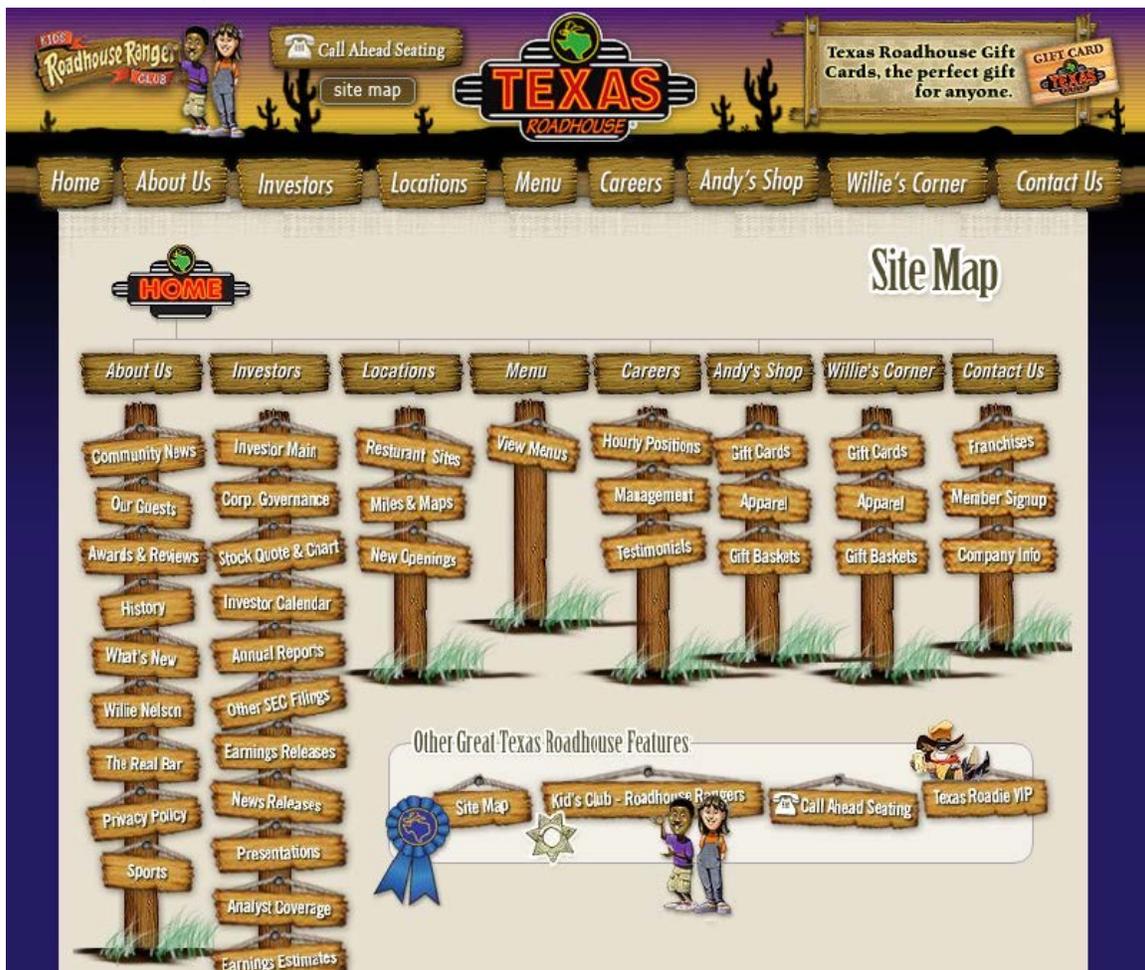
27. Use a hierarchical site map when the site content follows a strong categorization scheme.

In the first edition of this report, this guideline was: "Design the site map to complement the main site navigation, and follow the site's navigation hierarchy. Make it immediately clear how the site map relates to the site navigation."

Users can benefit from websites that offer a hierarchical site map that matches the website's actual content hierarchy. However, in Study 2, participants successfully used some site maps that weren't organized to reflect the site hierarchy. We therefore no longer make it a guideline to follow the site's hierarchy unless the content lends itself to a strong categorization scheme.

There are many merits to reflecting the site hierarchy in a site map. One is that it helps users understand how content areas in the site's navigation and IA relate to one another. One participant expected the site map to reflect the menu structure. She said, "I'm going to check out the site map to see how everything relates."

Using a hierarchical site map can also help users understand the site's main navigation. For example, the Texas Roadhouse site map laid out the primary navigation categories across the top, and exposed each of the subcategories beneath them. It mapped exactly to the site's navigation and hierarchy. Users found this helpful; as one noted, "This was the easiest site map I've seen today." When we asked users to rate the site maps based on how much they helped them understand the overall website's structure, they rated the Texas Roadhouse, TiVo, and Harvard Pilgrim site maps the highest, give them each a score of 4.8 out of 5.



The Texas Roadhouse site map categories, laid out across the top of the poles, exactly matched the site's main navigation. This further reinforced the site's organization and hierarchy.

Using hierarchy also gives form and structure to the site map itself, making it look less like an intimidating page filled with links and more like a guide that can help people find what they want.

However, it's not always necessary for the site map to mirror the site's navigational structure. In Study 1, the site maps that didn't have a hierarchical scheme were problematic for users. This was because they were typically non-standard, dynamic maps such as those at Siemens Medical and Interwoven. We didn't see any successful examples of non-hierarchical site maps until Study 2.

Mirroring the site's IA might lead people to learn the IA better, but it doesn't necessarily help people use the site map or get their tasks done more easily.

After using each website, we asked users how well they understood the site's structure from each site map. While on the site index for The Knot, one user commented, "I don't necessarily understand the structure of the website from the site map... But that was okay because I got where I was going easily. It was a little different from site maps I've seen where you can see structure, but in this case you more needed to know where to go than the way it was put together." She was happy to just find the information in a logical way, and didn't concern herself with understanding how the website was laid out.

The Knot's Site Index was neither hierarchical nor reflective of the site's navigational structure. The site offered information, products, and links to services for everything related to weddings. The site information was so vast that users needed a more efficient way of navigating it than simply using hierarchical categories. Having the ability to navigate it either alphabetically or categorically was useful in this case. One participant acknowledged that The Knot lent itself well to both formats. "Alphabetical works on some sites and not on others," she said. "It is good to have some options for the site map because this is such an extensive site." Another user was very excited with the functionality, feeling like it led him exactly where he wanted to go. He stated, "It's not so much a site 'map,' but more of a site 'GPS.'"

Salon also had a relatively flat structure. The site map contained categories, but the content itself also consisted of names of people or title-related articles. In this case, it was also useful to offer an alphabetical listing of choices to complement the categories. Strictly following this site's hierarchy would have been ineffective given the user goals and the nature of the content.



[Search](#) [About Salon](#) [Table Talk](#) [Newsletters](#) [Advertise in Salon](#) [Investor Relations](#)

The screenshot shows the salon.com website interface. At the top, there's a navigation bar with categories: ARTS & ENTERTAINMENT, BOOKS, COMICS, MOTHERS WHO THINK, NEWS, PEOPLE, POLITICS, SEX, TECH & BUSINESS, and AUDIO. Below this is an 'ARTICLE FINDER' section with a search box and a list of 'SALON.COM SITES' including Arts & Entertainment, Books, Business, Comics, Health, Mothers Who Think, News, People, Politics, Sex, Technology, Letters, and Columnists. The main content area features a 'Complete alphabetical listing of directory topics: 1 2 3 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z'. Below this, there are three columns of links: 'Arts & Entertainment' (Woody Allen, Kevin Smith, Big Brother, Clear Channel, Joyce Millman on TV, Movie Reviews, Belle and Sebastian, DVD Reviews, Buffy the Vampire Slayer, Lucinda Williams, Britpop), 'Audio' (Amy Reiter Audio, Michael Sragow Audio, J.K. Rowling, Politics Audio, J.R.R. Tolkien, Paris Review Audio, David Sedaris, Bomb Magazine Audio, Audio by Genre: Biography, Fiction, Nonfiction, Poetry, Self-help), and 'Books' (E-Books, Nick Hornby, Garrison Keillor, J.R.R. Tolkien, Dave Eggers, Henry Kissinger, Harry Potter, Salman Rushdie, Michiko Kakutani, Book Bag, Book Reviews). On the right side, there's a 'Disaster Relief Funds' section with a list of organizations like American Red Cross, NY Firefighters Fund, etc., and a 'Save 40-75% on Great Books' promotion from Powell's.com.

The Salon site map offered categories as well as alphabetical navigation of article topics.

Designers should consider which goals they most want to achieve with their site map: 1) to teach people the site IA, 2) to get tasks done through the site map, or 3) some combination of the two. When deciding how to design a site map, take the content and IA into account. If a hierarchical structure is not working on your site map, the problem might lie in your IA.

28. Make the site map's hierarchy clear to help users understand both the overall site structure and the structure of the site map itself.

When using a hierarchical site map, making the site map hierarchy clear helps users understand how content areas relate to one another. It gives form and structure to the site map itself, making the site map look less like an intimidating page filled with links and more like a guide that can help them find what they want.

The Documentum site map was listed hierarchically, but the page layouts and the icons used to designate structure confused some participants. One user said, "The bullets that are here, some have sub-bullets. It makes me think I have to click the big bullets to get the sub-bullets here. But that may not be the case. I still get the impression that the bullets... some are expanding and some aren't expanding. The shape of the bullets looks like something that needs to be expanded." Another was also frustrated by the layout. He said, "I guess it lists everything. This is frustrating to look at. It's more like a map. It's just the menus, laid out. I don't know if it's too much, having it all in one place. At first, it looked like too much, because there wasn't enough of a distinction. It looks like it's all just thrown up there. If I saw that site map, I wouldn't use it."

Products	Services	Support	Developers	Partners
<ul style="list-style-type: none"> ■ 4i Platform ■ 4i WCM Edition ■ 4i Portal CM Edition ■ 4i B2B CM Edition ■ 4i Compliance CM Edition ■ Product Integrations ■ Tours ■ Starter Kits ■ Reviews ■ Customer Success ■ Product Glossary ■ Industry Solutions 	<ul style="list-style-type: none"> ■ Consulting <ul style="list-style-type: none"> ● Web Content Management ● Core Applications ● Platform Technology ● Deployment Management ● Success Stories ■ Education <ul style="list-style-type: none"> ● Planning for Training ● Training Schedule ● Locations ● Course Descriptions ● How to Register ● Customized Training ● Curriculum Paths 	<ul style="list-style-type: none"> ■ Logon ■ Standard ■ Mission Critical ■ Premier Account ■ Extended ■ Developer ■ Support Centers ■ Support Site Feedback 	<ul style="list-style-type: none"> ■ Sample Code ■ Support Options ■ Resources ■ Pre-Releases ■ Tip Collection ■ Partner Gallery ■ Product News 	<ul style="list-style-type: none"> ■ Signature Program <ul style="list-style-type: none"> ● ASpire Program ● Services Program ● Technology Program ● Partner Application ■ Solutions Catalog <ul style="list-style-type: none"> ■ Showcase <ul style="list-style-type: none"> ● ASpire Showcase ● Services Showcase ● Technology Showcase ● Simple Search ● Advanced Search ■ Events ■ Education ■ Logon
	<ul style="list-style-type: none"> ■ News & Events <ul style="list-style-type: none"> ■ Contact Information ■ Press Kit 	<ul style="list-style-type: none"> ■ About Us <ul style="list-style-type: none"> ■ Fact Sheet ■ Management Team 		

On the Documentum site map, the layout, icons, and bullets that were used to convey structure collectively confused some users.

The U.S. Treasury site map offered an alphabetical list, but occasionally deviated from the alphabetical organization and added some hierarchical groupings. For example, they offered a bold heading of *Internet Policy* that was not a link, and listed *U.S. Treasury* as a link underneath the heading. Two users followed the *U.S. Treasury* link, unaware that it was under the heading *Internet Policy*. They did not realize they were headed toward a page describing the Treasury Department's Internet policy rather than the Treasury Department itself. One participant commented as he clicked the link. He said, "Maybe they'll have a complete list of options for me."

[Information Technology Workforce Improvement Program](#)
[Inspector General for Tax administration](#) , Treasury
[Inspector General](#) , Office of

Internet Policy

[U.S. Treasury](#)

Insurance, Health

[Children's Health Insurance Program \(CHIP\)](#)

[Medicaid for Children](#)

[International Monetary Fund](#)

[Inflation Index](#)

[Information Technology Operational Plans for FY 1998-2004](#), Treasury Bureau

[IRS](#)

[IRS Criminal Investigation Division](#)

[Information Locator \(GILS\)](#)

[International Trade Data System \(ITDS\)](#)

J

[Jobs](#)

K

Kids Pages

[U.S. Treasury](#)

[Bureau of Engraving and Printing](#)

[Simplified Tax and Wage Reporting System](#)

[IRS Tax Interactive](#)

[OCC BankSchool](#)

L

The U.S. Treasury site map was an alphabetical index. However, some parts of the site map listed a category, in alphabetical order, in bold, then listed related categories beneath it that didn't follow the alphabetical order. In this image, U.S. Treasury is a link under the bold heading Internet Policy. Users didn't understand that the link would take them to the U.S. Treasury's Internet policy.

29. In the site map, include information at levels only as deep as you can clearly and legibly display it.

IA differs from site to site, so there is no good rule on how many levels to drill down, or whether to include a link to every page on the site. For instance, if you have an e-commerce site that sells thousands of products, you won't want to include a link to every unique product in your site map. Instead, you could offer a link for every type of product; people are usually happy to navigate from there to exactly what they want.

Carefully consider the tradeoffs between adding levels of links and information density. On the Marriott site, there was plenty of space to include information another level deep, which may have resulted in higher task success on the site.

The Knot website offered a solid example of converting an enormous amount of content into a *Site Index*. The feature offers both an alphabetical list of content areas, as well as specific topics such as *gifts & registry*, *wedding supplies*, and services by locale. Although it was a lot to look through, users generally navigated it well and found what they were looking for. Many users had a good experience on the *Site Index*. One such user said that, in addition to alphabetical index, there was

“some stuff thematically laid out, too. Nice they have the two ways of looking at it.” Although it was a dense page, another user was impressed with its organization. “They did an excellent job of taking an insane amount of info and setting it up in an easy way to look at any piece of it,” he said, adding that having a lot of information “can be really intimidating. It seems that a lot of thought was put into making it so that it can be navigated in a couple of different ways.”

All that said, this site index did have a usability problem: some of the things in the alphabetical list weren't in the categorized lists, and vice versa. We discuss this issue in more detail later in the report. (See guideline #44: *If you offer both a categorized site map and an alphabetical index, ensure that all content is accessible via both navigation methods.*)

The screenshot shows the top navigation bar of The Knot website with links for MY KNOT, PLANNING, GOWNS, IN YOUR AREA, TALK, TV, REGISTRY, WEDDING SHOP, and THE NEST. Below the navigation bar, there are several sections:

- index a-z**: A section with a bride image and text: "Everything you need for weddings: [wedding dresses](#) to [wedding cakes](#), [Engagement rings](#), [wedding favors](#), [wedding gifts](#)... we have it all!"
- photo galleries + slideshows**: A grid of 12 categories with images: Wedding Gowns, Bridal Hairstyles, Invitations, Bridesmaid Dresses, Tiaras & Veils, Wedding Cakes, Mother of the Bride Dresses, Bridal Bouquets, Table Settings, Tuxedos, Rings & Jewelry, and Honeymoon Resorts.
- gifts & registry**: A list of categories including Create Registry, Registry Guide, register by category, Fine China, Everyday China, Everyday Glassware, Stainless Flatware, Fine Crystal Stemware, register by lifestyle, Kitchen Appliances, Cookware & Cutlery, Barware, Bedding & Bath, and Home Accents.
- wedding supplies**: A list of categories including Shop by Boutique, On Sale, New Items, Clearance, Apparel for Her, Apparel for Him, Apparel for Kids, Beauty, Books and Videos, Bracelets and Charms, Bridal Shower, Bridesmaid Gifts, Cake Servers, Cake Tops, Candy Favors, Child Gifts, Decorations, Favor Decorations, Favor Holders, Flower Girl Baskets, Footwear, Garters, Groomsmen Gifts, Guestbooks, Hats, Intimates, Men's Accessories, Necklaces & Earrings, Parent Gifts, Pen holders, Place Card Holders, Ring Pillows, Stationery, Table Centerpieces, The Knot Wedding Collections, Tiaras, Toasting Glasses, Unique Favors, Unity Candles, Wedding Bells, Wedding Bubbles, Wedding Cameras, Wedding Keepsakes, and Womens' Accessories.
- content areas**: An alphabetical index with sections for 'a', 'b', 'c', and 'd'. Each section lists various wedding-related topics such as Accessories, Afrocentric Weddings, Bachelorette Parties, Bands (Music), Beach Weddings, Beauty (All Areas), Best Man (For the Groom), Bridesmaid Gifts, Budget (Advice), Budget (Tool), Cultural Weddings (Real Stories), Customs, Destination Weddings, and Dresses (Wedding).
- local resources**: A list of regional links for various states including AL, AZ, AZ - Phoenix, AZ - Sedona/Northern Arizona, MO - Kansas City, MO - St. Louis, NC - All Areas, NE - Lincoln, and NE - Omaha.

The Knot's Site Index generally aided users in their tasks, offering both alphabetical (bottom left) and categorized (top right) ways to navigate through the site's voluminous content.

30. Do not truncate useful content from your site map for the sake of brevity.

When deciding how many levels deep to take your site map navigation (see previous section), be careful not to unnecessarily truncate useful content in order to keep the site map brief. Consider the goals that users are bringing to your site, and how much site map detail they need to accomplish those goals. If users rarely seek content at the third or fourth level of your hierarchy, or content is implied in its parent category, there might be no need to include it.

Some of the information that participants tried to find on the Marriott site was available just two levels deep on the site's main navigation, but wasn't present at all in the site map. One user couldn't find what he was looking for because the content on the site map didn't dive to a deep enough level. He was disappointed that he couldn't find the information, but made excuses for the site map, saying that, to keep it useful, "it's been somewhat abbreviated." Users often blame themselves, not the interface, when they have problems. But in the Marriott site map's case, the information was perhaps too abbreviated.

If you're designing a site map for an extremely complicated site that has more important content than you can approachably put on one page, then—and only then—progressive disclosure might be a solution. If so, choose a method of disclosing information that is intuitive for users.

31. Provide an overview of your site and its content. Do not focus on representing the relationships between pages.

Some of the site maps in our study offered a structural approach, using diagrams to highlight relationships and links between pages or site areas. Although users commented on their interesting appearance, these site maps didn't actually help them understand the site's available materials or how to find them.

Users were impressed with how Interwoven's site map looked, but it wasn't easy to use. One participant didn't think that showing relationships was very useful. "What's it doing? Unless it's trying to show me what things are connected to what," she said, adding that, "if that's what it's doing, I don't think it's that effective." Another likened it to an org chart: "Usually, on a site map, when you click on something, it takes you there. This just seems to show how things are related. It's more an org chart than a site map." She said she would have rather been taken directly to the content. A third user was simply repelled by it. "Although it's clearly a sophisticated website, I'm not that sophisticated, so I'm immediately turned off," she said. "I'd rather have it delineated."

- Menu
- Home
 - Site Map
 - Search

Interwoven Site Map

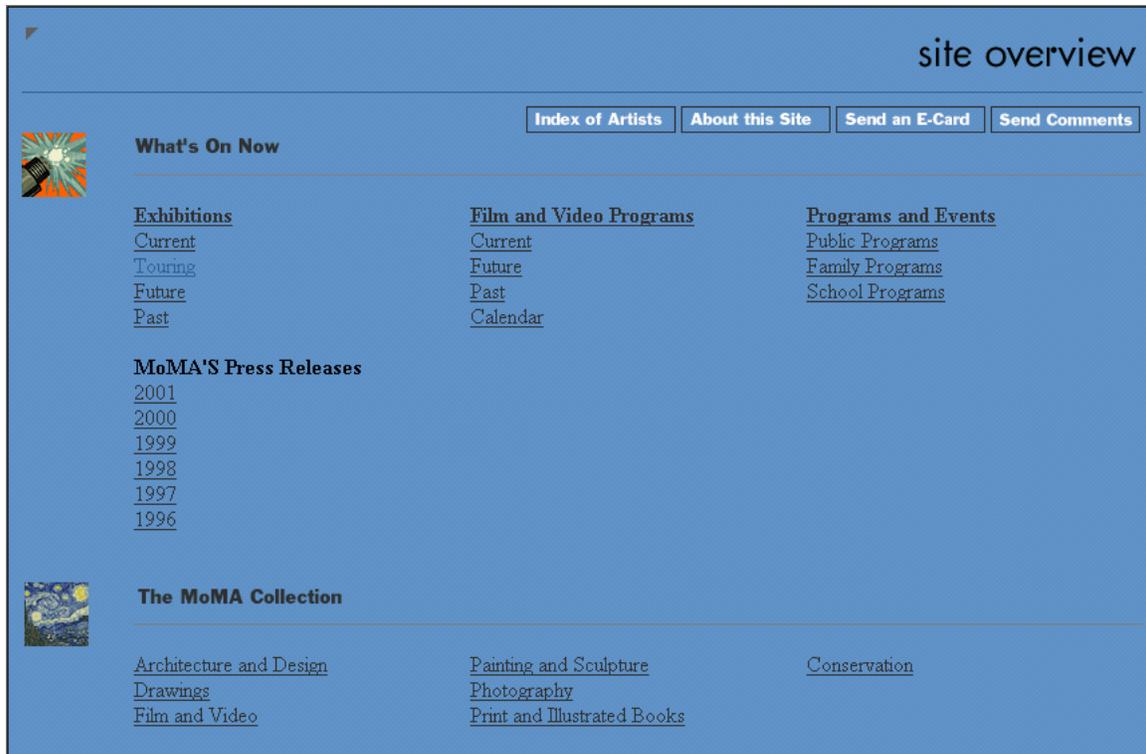


Instructions

The Interwoven Site Map was meant to show page relationships to users, but they were confused rather than impressed.

On Siemens Medical's SMED.com, participants didn't like the site map's circular shape. One said, "I didn't like the circle at first." Another said, "I guess it gives all the categories and what surrounds them. It seems strange to have it in a dial."

One user preferred the MoMA site map's structure because it was simple. "The site map was easy to understand because it was in a straight line," he said. "It was basic in nature. I prefer basic, straightforward."



MoMA's Site Overview site map was a simple text list of the site's main sections and subsections, with a small graphic that tied the map's structure to the homepage design.

This guideline goes hand-in-hand with the earlier guideline to use a standard presentation for site map information. To show relationships, designers typically use a dynamic or non-standard user interface. Avoid that, and instead choose a standard presentation of links to minimize confusion.

32. Offer only one site map or index.

Some of the sites we studied offered more than one site map or index. Others offered separate indexes for specific site or content areas. These multiple approaches are confusing to users, who aren't clear what each index or option offers. They also run counter to a site map's main purpose: to give an overview of the entire site.

The iRobot site had two site maps, one for the site in general, and one for the iRobot *Store*. The iRobot site map excluded the *Store* section's content altogether. Furthermore, for both sections, users accessed the site map in the same exact location on the bottom of the page via the same *site map* link. If users clicked that link while on the *Store* tab, they'd get the *Store* site map; if they clicked it from anywhere else on the site, they'd get the general site map. Many users didn't realize that there were different site maps, and they were unable to complete tasks with a limited site map. Others were really confused when returning to the site map, expecting one page and getting another. One user said, "Wait, this is different..." She wasn't sure how she'd gotten there—or why the page differed from the last site map she'd viewed.

Site Map

- Home Page
- Home Robots
 - Robots
 - About Roomba 500
 - About Dirt Dog
 - About Verro
 - About Scooba
 - About Looj
 - About ConnectR
 - Accessories
 - Owners Talk
 - iRobot Home Robot Forums
 - Third Party Reviews
 - Mobility Challenged
 - Product Testing
 - Service/Support
 - Find Answers
 - Find Manuals
 - Watch Videos
 - Get Use Tips
 - iRobot Store orders
 - Register my Robot
 - International
- Government & Industrial Robots
 - Robots
 - iRobot PackBot
 - iRobot-John Deere R-Gator

The top of the main iRobot site map, which was linked to from most sections of the website.

Site Map

<p>Cleaning Robots</p> <ul style="list-style-type: none"> Vacuum Cleaning Floor Washing Pool Cleaning Shop Sweeping Gutter Cleaning Robot Value Packs Programmable 	<p>Accessories</p> <ul style="list-style-type: none"> Roomba <ul style="list-style-type: none"> 500 Series 400/Discovery Series Original Series Scooba Verro Dirt Dog Looi Create iRobot Gear 	<p>Account Management</p> <ul style="list-style-type: none"> My Account My Wish List My Cart
<p>Home Robot Customer Service</p> <p>Product Reviews</p>		

The iRobot's store-related site map, linked to only from the Store section. In addition to having the same name as the main site map, the link was also accessed from the same location: the footer utility navigation.

The Knot's website also had two site maps. The site's *Wedding Shop* had a slightly different page footer than all other pages. The footer included both a *Site Index A-Z* link to the main site map, and a *Site Map* link that took users to the *Wedding Shop* site map. In situations like this, users are unlikely to take the time to understand why there are different site maps and when each type might appear. Often, they just find it annoying. When one participant finished her task, for example, she noted with irritation that "there wasn't a consistency in the site map, and at one point I tried to get back and the layout wasn't the same."

Although many of these sites make a distinction between the main site area and the shopping areas, users just see everything as part of one website and don't make such delineations. Forcing these delineations upon them detracts from the flow and usability of the site.

SAVE 20 – 50% come see what's on sale: [click here to see today's savings](#)

SEARCH SHOP GO >

*Bonus savings offers before tax & shipping. Discount coupons do not apply to American Express Gift Cards, PhotoWorks development fee, PhotoWorks photo gifts and cards, Zazzle stamps or digital items including frames, key chains and camcorders.

Bridesmaid Gifts | Groomsman Gifts | Personalized Wedding Favors | Wedding Reception | Wedding Cameras | Photo Invitations
 Wedding Ceremony | Wedding Apparel | Personalized Stamps | Wedding Jewelry |

Home | My Knot | Wedding Ideas & Advice | Wedding Gowns | Local Wedding Resources | Wedding Shop | Wedding Gift Registry | Wedding Talk
 Site Index A-Z | HELP | About Us/PressRoom | Advertise With Us | Knot Jobs | Privacy Policy | Terms of Use | Log In

Knot Store Directory | Shopping Cart | Customer Service | Site Map

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PARTNER STORES: [ShopForWeddings.com](#) | [TheNestBabyShop.com](#) | [PartySpotShop](#)

NICHE KNOT SITES: [ChineseWeddingsByTheKnot.com](#) | [BeachWeddingsByTheKnot.com](#)

Unique Wedding Favors - Unique Personalized Wedding Favors - Unique Wedding Favor Ideas

The footer navigation on TheKnot.com's Wedding Shop pages. The link to the main site map, Site Index A-Z, appeared in the darkest blue band. The band below it held the shopping area's Site Map link.

The screenshot shows the top portion of the Wedding Shop site map. At the top, there is a navigation bar with 'the knot' logo and menu items: MY KNOT, PLANNING, GOWNS, IN YOUR AREA, TALK, TV, REGISTRY, WEDDING SHOP, and >> THE NEST. Below this is a secondary navigation bar with 'WEDDING SHOP' and a search bar. The main content area is titled 'The Wedding Shop - Site Map' and lists various product categories and sub-categories, such as 'wedding reception', 'wedding favors', 'bridal party gifts', and 'photo cards'. A search bar is also present in the top right of the main content area.

The top portion of the Wedding Shop site map on TheKnot.com. This site map was organized very differently than the main Site Index.

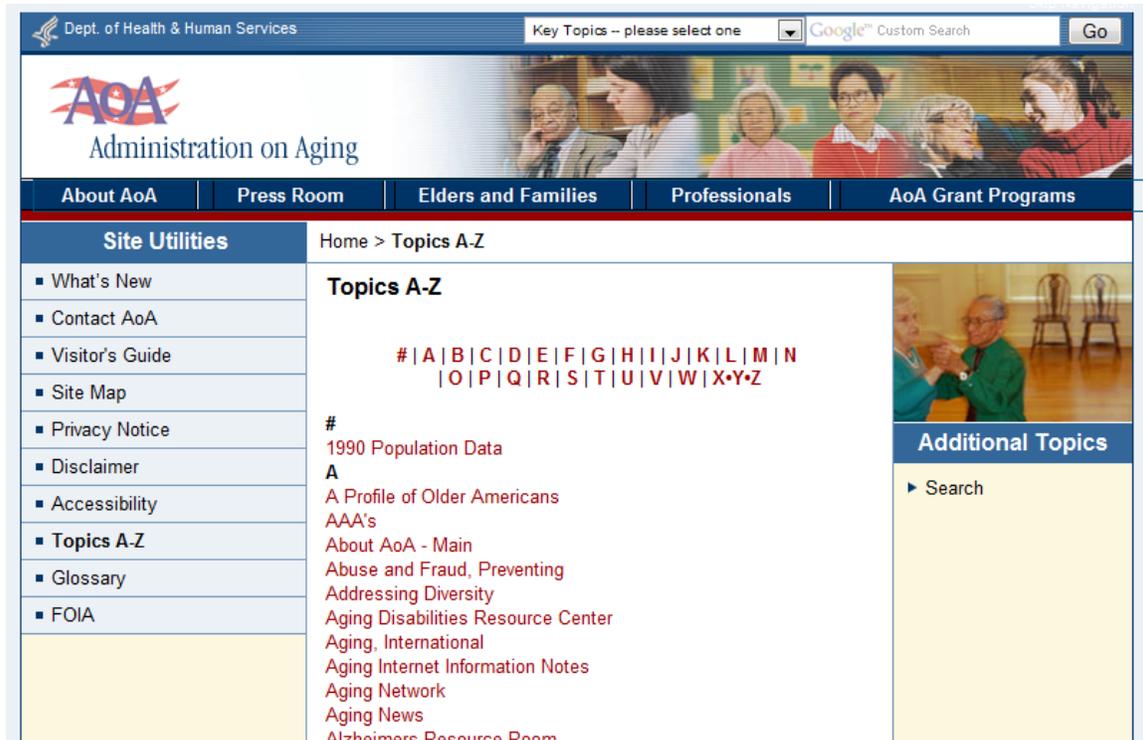
On the Novell site, a left-hand area of the main *Site Index* page listed other available indexes. It wasn't clear, however, whether these indexes were subsets of the main index or completely separate indexes. Like the iRobot site, Novell also offered different site indices depending on the user's location on the site. One user in the *shopNovell* area clicked on the *Site Index* link on the shop page, which appeared in the same location as the *Site Index* link on other pages. Instead of linking to the main index (which he'd already seen and used), it linked to the *shopNovell* index. "Oh, this isn't the *Site Index*, this is a product index. I think. It must have sent me to a separate index for shopping," he said. "The index appears to be just products... the site index is totally different from the one from the Novell main page. ...I didn't expect I was going to a different site. When I initially clicked on *Site Index*, I expected the same as when I clicked from the homepage."



The shopNovell section had its own shopping-specific Site Index. The link name and placement were the same as on all other Novell pages, leading users to believe that the Site Index would be the same as well.

The AOA website had three similar types of pages, a *Site Map*, a *Topics A-Z* list, and a *Visitor's Guide*. Some users went to one without seeing the others, or were confused as to which to look at for an overview of the site. One participant had just visited the *Topics A-Z* page and then stumbled across the site map. He noted, "I guess I would find the *Site Map*, which is located at the bottom. Although the page I just came from had a lot of info...?" He appeared confused and didn't know which page to look to.

The footer navigation on the AOA website had links to Visitor's Guide, Site Map, and Topics A-Z. All sounded and looked similar, making users unsure about when to use each feature.



The Topics A-Z page on the AOA website was an alphabetical index of the site by topic.

One useful element on the AOA site was that on each page, the left-hand navigation bar included links to the other pages as well, making all pages cross-referenced.

If a shopping site map or site index is too large to incorporate into the main site map, consider whether you can collapse any of the information and offer it via progressive disclosure. If not, at least link the site maps to each other and make it visually obvious that there are two distinct maps.

DESIGN

33. Ensure that the site map works across platforms and browsers.

Site maps should be accessible to all users of your site, and should work across platforms and browsers.

Because some of our studies were conducted at participants' homes, we saw compatibility issues first-hand. For example, the Java site map on the Interwoven website was not accessible to a participant using an Apple computer due to a Java error. Another Apple user had to switch browsers to view Interwoven's site map. A third, who was using a PC, had to switch to Internet Explorer because after he'd used

the site for a few minutes on his native browser, the site map appeared on every page that loaded, no matter what he clicked.

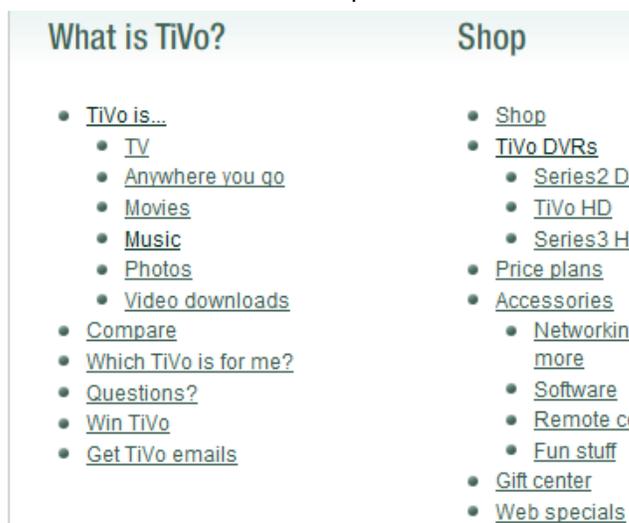
Also, mobile devices are becoming more pervasive and offer another platform to test on and consider when designing your site.

34. Change the appearance of visited links in the site map to something that is easily differentiated.

Often during testing, users returned to a site map more than once within the same task. Changing the color of visited links lets users know which site areas they have already explored. Knowing this, users can avoid wasting time revisiting pages that don't have the information they need.

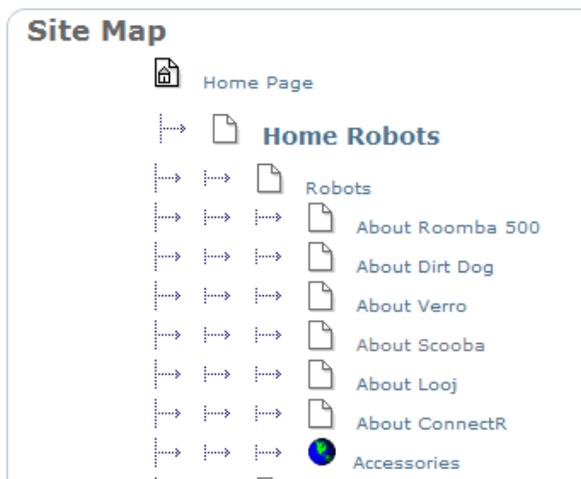
It was surprising to find that out of the 10 sites tested in Study 2, six didn't distinguish visited from unvisited links, and three made the visited link color almost unnoticeable. One site map, at Scholastic, did a decent job of showing a different color for visited links. Although distinguishing visited links might seem like an unfashionable trend, it's an important aid in effective way finding for users.

Changing the link color to something easily differentiated is also very important. On the Tivo.com website, the visited link color changes were barely visible. They changed from a light shade of green to a slightly darker shade of green. This change was unnoticeable to all users—let alone to people who have trouble distinguishing colors—and thus wasn't helpful.



On the Tivo site map, the visited links (TiVo is..., Music, and TiVo DVRs) are virtually indistinguishable from the other links.

iRobot's visited links were also too subtle. The text was small and offered poor contrast with the background to begin with; it then changed from a subtle blue color to gray.



The iRobot site used too subtle a color change to illustrate visited links, as the About Scooba link shows.

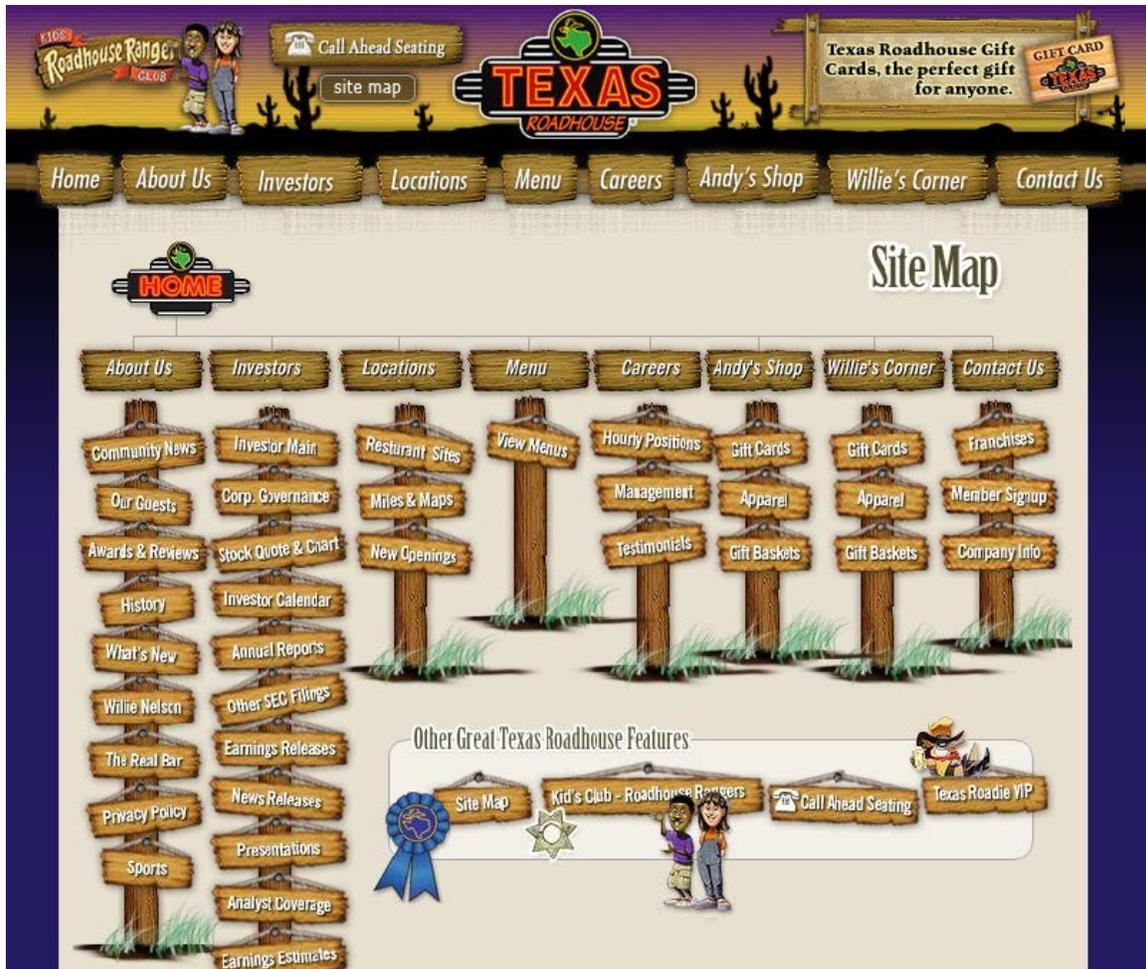
The Texas Roadhouse site map used images for the links. Because there were no visual cues to indicate visited links, users were sometimes unsure of which categories they'd already clicked on. One such user was pondering whether she'd been to a category before: "Was I already at restaurant sites?"

Years of usability studies of websites in general—not just site maps—have shown that users get lost more often when all links look the same, whether or not the user has already visited a link's destination.⁶ Because people visit site maps when they're lost or otherwise confused, it's particularly important to ensure that the links within the site map clearly signal that they're leading to a place that users have already visited.

If all site map elements look the same, users will frequently click the same item multiple times. This creates additional confusion and reduces the probability of their giving up before they hit the correct site area.

Usually, the best way to differentiate links is to employ different colors for visited and unvisited links. The traditional guideline was blue for unvisited links and purple for visited links, but we now simply recommend a brighter or more saturated color for the unvisited links and a duller or less saturated color for the visited links. In this way, the "new" links will beckon more invitingly, whereas links that have already been clicked will look a bit "used."

⁶ For more information about the importance of using different colors for visited and unvisited links, see Jakob Nielsen's article, [Change the Color of Visited Links](#).



Because the Texas Roadhouse site map consisted of images that didn't show a visited state, users didn't get cues on what they'd already seen on the site.

35. Minimize graphics, using only those that aid users' understanding of the site map.

Graphics should be used only if they enhance users' understanding of the site map. The Knot had a section at the top of the *Site Index* for photo galleries and slide shows, with clickable pictures associated with each category. Not only was the user able to scan the different categories visually for what they wanted, but the thumbnails cleverly suggested the fact that the user would be taken to pictures and slideshows.



At the top of The Knot's site index, users could click into various categories to view pictures and slideshows.

On the AOA site map, users often didn't understand the numbered icons next to each section and subsection. Some realized that they were just showing the hierarchy, but still found it visually distracting. Others tried clicking on the icons or looked for a legend to understand their purpose. The icons therefore tended to distract and confuse users rather than aid them. As one user said, "I liked the number and color coding in the site map, but did not know what they stand for. Is there a legend?" Another participant thought that using bullets would achieve the same purpose. "I don't understand the 1, 2, 3 icons. Bullets would have been more clear." Another user agreed that the icons were unnecessary. "They don't need to use all these numbers," he said.

The screenshot shows the Administration on Aging (AoA) website. At the top, there is a navigation bar with the text "Dept. of Health & Human Services" and a search box labeled "Key Topics -- please select one" with a "Go" button. Below this is the AoA logo and the text "Administration on Aging". A horizontal menu contains links for "About AoA", "Press Room", "Elders and Families", "Professionals", and "AoA Grant Programs".

The main content area is titled "Home > Site Map". On the left, there is a "Site Utilities" sidebar with a list of links: "What's New", "Contact AoA", "Visitor's Guide", "Site Map", "Privacy Notice", "Disclaimer", "Accessibility", "Topics A-Z", and "FOIA".

The "Site Map" section features a list of links, each preceded by a numbered icon in a colored box:

- 1** About AoA - Main
 - 2** Welcome
 - 3** Mission
 - 3** History
- 2** Organization
 - 3** The Assistant Secretary
 - 3** Headquarters
 - 3** Regional Support Centers
 - 3** Organizational Chart
- 2** Legislation & Budget
 - 3** Older Americans Act
 - 3** Budget Info
 - 3** Performance Plans
- 2** Program Results and Evaluation
- 2** Contact AoA
 - 3** Location Map
- 2** Jobs at AoA
- 2** Annual Report

On the right side of the site map, there is a small image of two elderly people shaking hands, and below it, an "Additional Topics" sidebar with links for "Search" and "Topics A-Z".

Although the AoA site map attempted to clarify hierarchy for users, the prominence of the numbered icons led people to click on them or look for some type of legend that would explain their meaning.

On iRobot's main site map, there were images of various arrows to show hierarchy, similar to the numbered icons on the AoA site. Once again, users didn't understand the images, which served to distract rather than aid their search for information. The graphics even made one user view the site map as too technical. "This is very 'MIT,'" he said. "It's very techy looking." Another person was just baffled, saying, "I'm not sure what's going on with all of these arrows."



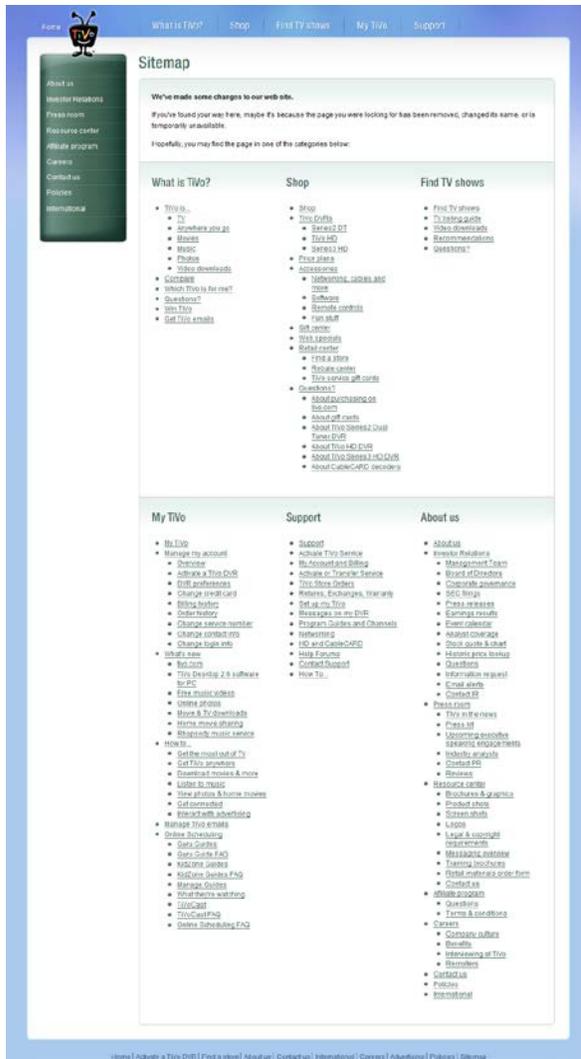
The arrows and icons on the iRobot site map had no meaning to users.

36. Make it obvious if the site map's content is more than one page long.

Because site maps offer so much information, they often fill more than one screen and require scrolling. In such cases, make it obvious to users that they have more options below the virtual fold, or they might think the site map is incomplete or misunderstand its structure.

The Tivo.com site map had a “false bottom”—what our colleague Bruce “Tog” Tognazzini has dubbed the “illusion of completeness.” The bottom three categories were aligned horizontally, and just near the virtual fold there was a good deal of padding between the top three and bottom three sections. Together, this created the illusion that the page was complete, even though it contained more content. As a result, many users missed the content below the fold and failed tasks that required them to navigate to the bottom part of the site map.

One user thought that the page had ended, but slightly scrolled and found the rest of the page by accident, uttering “Oh, there's more”



Many users never saw the bottom three sections of TiVo's site map. The sections were all aligned horizontally, creating a great deal of space between the site map's top and bottom halves. At a 1024 x 768 screen resolution, this gap happened to fall near the page's virtual fold, exacerbating the problem.

37. Minimize scrolling and balance it with information density.

Some site maps scroll on for four or five screens, which is far too much. We recommend limiting necessary scrolling to two screens, or three at most. As we discussed earlier, there are design alternatives that can keep site maps uncluttered and cut down on the number of screens users must scroll through to see all the available information on a site.

The AOA site map was a linear list that spanned at least four screenfuls. Even though it didn't have many more categories than other site maps we studied, the list's linear nature and bulleted icons gave the illusion that it contained more content than some of the other sites. One person was completely overwhelmed with the amount of content, abandoning it right away and noting that there were "a lot of categories in the site map, so that's not working." Another user had a similar first impression, saying, "It isn't going to be a quick read." One user was bothered by the scrolling

demands, and said the designers should “make the site map easier... so you don’t have to scroll all the way down to see all the things.”

On the iRobot site map, users similarly got lost in the scroll, as it was hard to distinguish sections from each other and understand what they’d already scanned through. All the content looked very similar and consumed the page. As one user put it, “I’d like to see it condensed.” Another claimed, “It doesn’t really have a clear outline of what area you might want to be searching for.” To her, all of the categories just meshed together, making for a cumbersome search strategy.

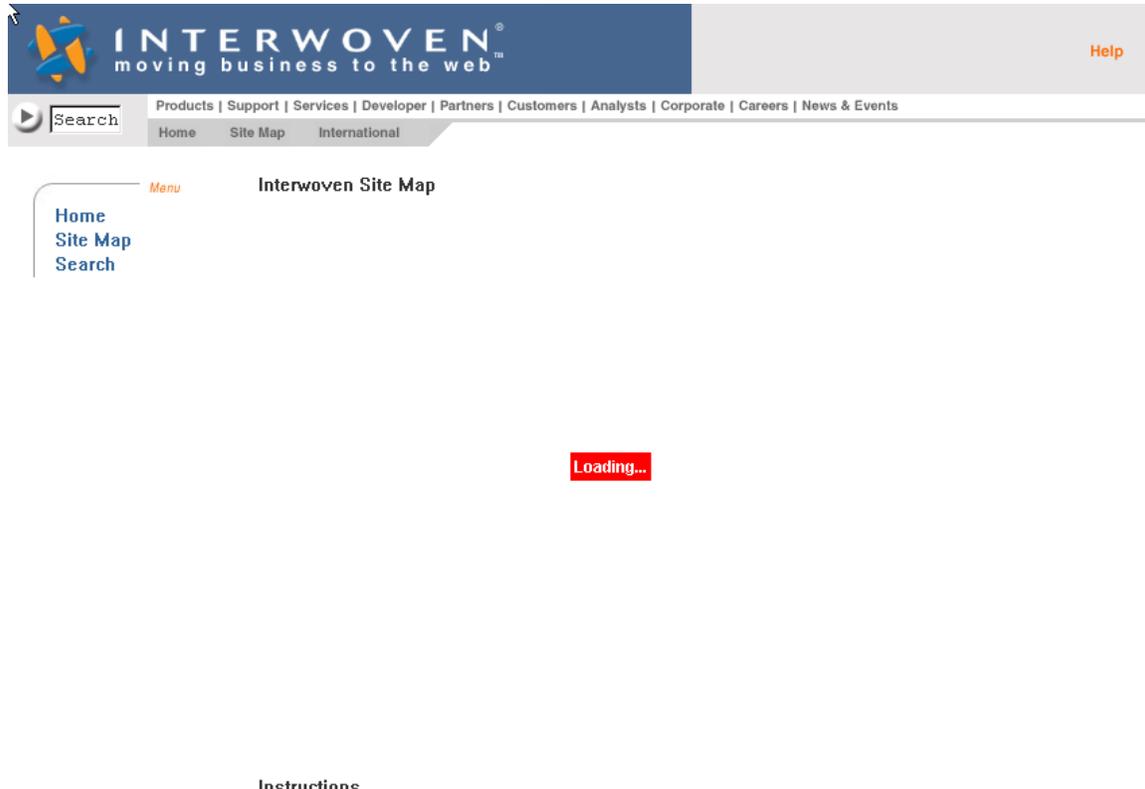


The full site maps for four sites: AOA, iRobot, Marriott, and Scholastic. Each dotted line marks off a screen of content on a 1024 x 768 screen resolution. The AOA and iRobot sites filled four screens, Marriott and Scholastic filled two.

38. Minimize the site map’s load time, and make the most important information load first.

Site maps should load quickly. Users are often frustrated or in a hurry when they decide to use a site map, and they don’t want to wait a long time for it to load. The Interwoven map took longer to load than the other pages on the site. It also reloaded completely if the window was resized. One user didn’t want to have to wait for the page to load. He said, “I would probably use the drop-down menu. It’s always

there and doesn't take so long to load." One thing that was helpful was that a red *Loading* graphic appeared on the screen as the map loaded, which let users know that something was going to fill the page and that there was not an error. One participant almost moved on before he saw it. He said, "I'm probably going to go to—oh, it's still loading." If your page has to load, showing an indicator is helpful.

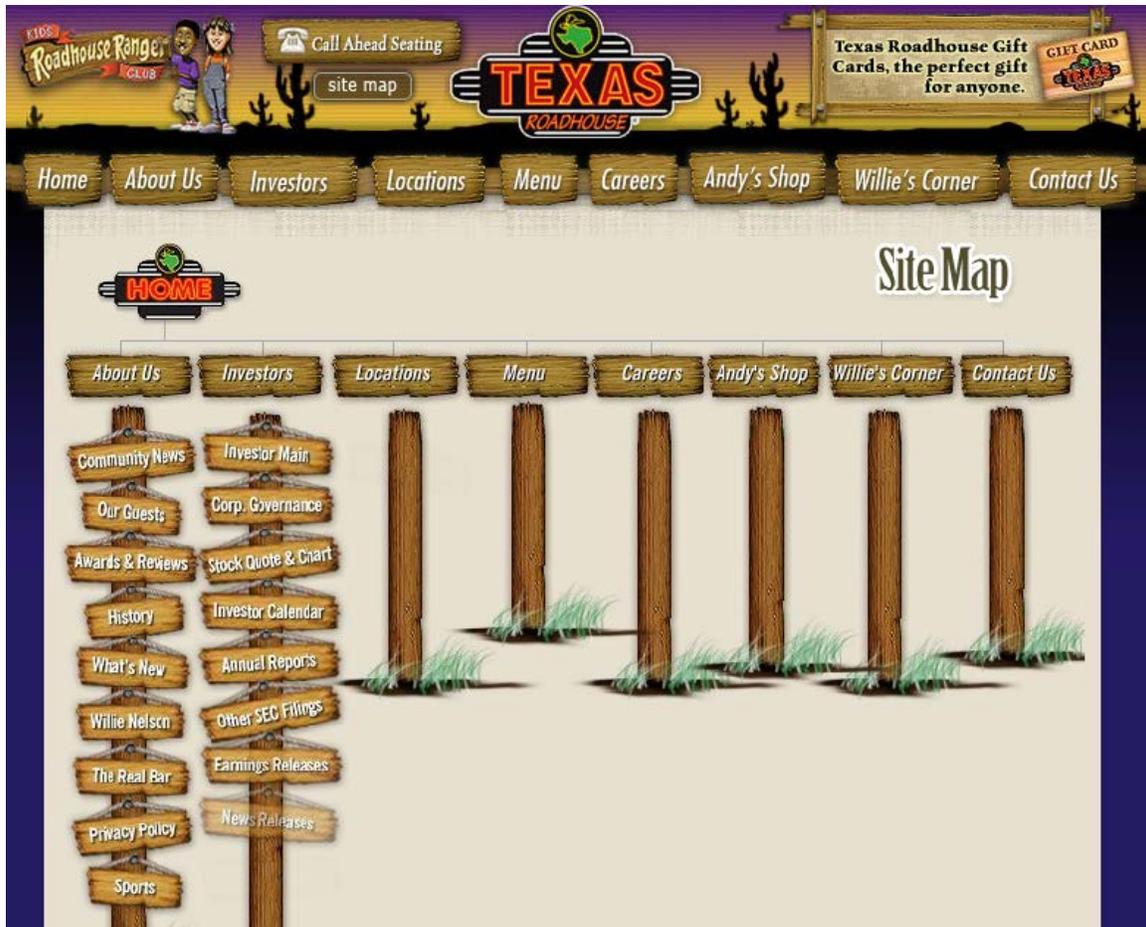


When users clicked Interwoven's Site Map link, the page took longer to load than other pages on the site. A red graphic, labeled "Loading" appeared in the center of the page before the map filled the screen.

Users also had to wait for the Texas Roadhouse site map to load (in addition to the previously mentioned homepage load time). There was an initial loading period for the site map, and then additional loading time for each vertical "pole" of content to load. When users returned to the site map a few times to look for a piece of information, they became less tolerant of the loading each time. One frustrated user commented, "It takes so much time. I was getting antsy waiting for all these little signs to appear." One thing that helped, however, was that each category loaded completely before the next category started, so users could begin to scan their options.



The Texas Roadhouse site showed a "Loading site map" progress indicator before the site map page appeared.



Once the site map page appeared, users still had to wait for each section to load. One saving grace was that the page loaded complete categories from left to right, so users could begin scanning (as opposed to top-down loading or haphazardly loading various elements).

39. Design scalable site maps.

As a site grows, the site map must reflect that growth. Some of the site maps in our study were illegible because of the number of links crammed into a non-scalable design. In all likelihood, the text was legible when the site was originally designed.

The BMW USA site map was hard to read because so much information was crammed into a screen at a small font size and poor contrast. Rather than appreciating the amount of information, users felt overwhelmed by it. One such user said, "This is like—overwhelming. Comprehensive, but overwhelming. It's just really text heavy." Another user suggested cutting back on content. He said, "Maybe they don't have to have all these subcategories under the headings... save some room to make these headings a lot bigger."

Attempting to limit all information to one screen contradicts the scalability goal, forcing designers to shrink font size and spacing to accommodate more information in the same amount of real estate.

BMW Members

› Sign in

Not a member? Sign up to access exclusive features, manage account information and save content.

› Sign up › Learn more

Site Map

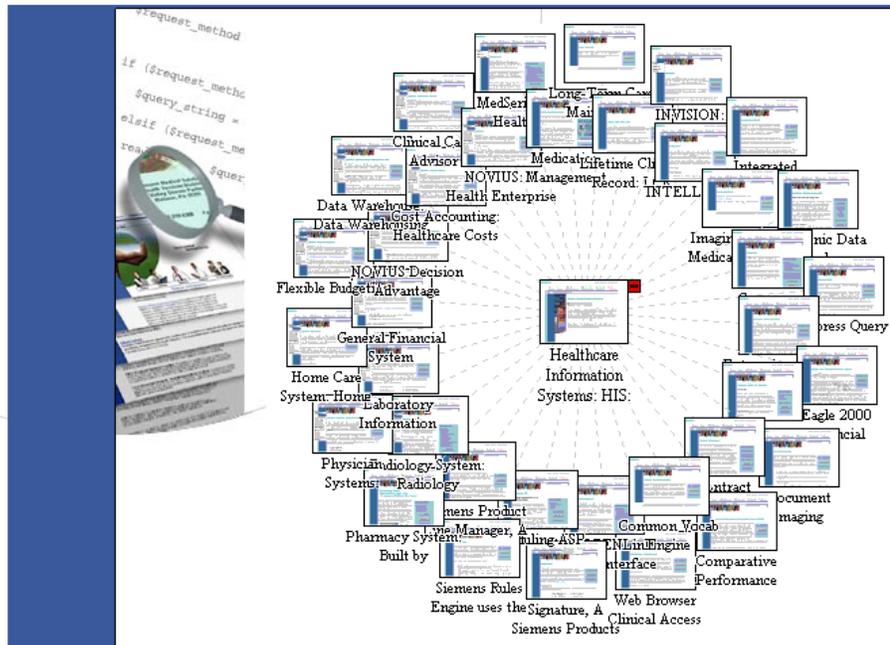
Here you'll find a simple text guide to all the information found within the BMW NA website. To access specific site features and content, just scroll through the sections below and click to make a selection.

- › 128i Coupe
- › 135i Coupe
- › 128i Convertible
- › 135i Convertible
- › 328i Sedan
- › 328xi Sedan
- › 335i Sedan
- › 335xi Sedan
- › 328i Sports Wagon
- › 328xi Sports Wagon
- › 328i Coupe
- › 328xi Coupe
- › 335i Coupe
- › 335xi Coupe
- › 328i Convertible
- › 335i Convertible
- › 528i Sedan
- › 528xi Sedan
- › 535i Sedan
- › 535xi Sedan
- › 550i Sedan
- › 535xi Sports Wagon
- › 650i Coupe
- › 650i Convertible
- › 750i Sedan
- › 750Li Sedan
- › 760Li Sedan
- › M3 Coupe
- › M3 Convertible
- › M3 Sedan
- › M5 Sedan
- › M6 Coupe
- › M6 Convertible
- › X3 3.0si
- › X5 3.0si
- › X5 4.8i
- › X6 xDrive35i
- › Z4 M Coupe
- › Z4 M Roadster
- › Z4 Coupe 3.0si
- › Z4 Roadster 3.0i
- › Z4 Roadster 3.0si
- › All BMWs
- › Future Vehicles
- › Compare Vehicles
- › Certified Pre-Owned
- › Certification
- › Warranty
- › BMW Roadside Assistance
- › Financing
- › Special Offers
- › Inventory Search
- › Find a Dealer
- › Owners
- › BMW Ultimate Service™
- › BMW Assist™
- › BMW Roadside Assistance
- › Real-Time Traffic Information
- › Residual Value
- › Safety
- › Traction
- › Performance
- › Drivers' Guides
- › BMW Centers
- › Expert Tips
- › Expert Tips
- › iPod Your BMW
- › Pair Your Bluetooth Phone
- › Connect Your iPhone
- › BMW Assist
- › Safety Plan
- › Convenience Plan
- › Hands-Free Calling
- › How it Works
- › FAQ
- › Experience
- › BMW Community
- › Performance Driving School
- › Facilities
- › Schools
- › Testimonials
- › Delivery
- › FAQ
- › Gift Certificates
- › Video Gallery
- › Ultimate Driving Experience
- › Programs
- › Image Gallery
- › European Delivery
- › Optional Driving Adventures
- › Delivery & Drop-Off
- › Cost Savings
- › Airfare Programs
- › Image Gallery
- › FAQ
- › Uniquely BMW
- › Design
- › Innovations
- › Future Technologies
- › Culture Of Ideas
- › Culture of Ideas
- › TV & New Media
- › BMW Heritage
- › BMW Today
- › BMW in the Community
- › Design
- › The BMW Design Process
- › Designers' Perspectives
- › Signature Elements
- › Innovations
- › Power & Performance
- › Comfort
- › Safety
- › Entertainment
- › Index
- › Future Technologies
- › Vehicle Technologies
- › Efficient Dynamics
- › TV & New Media
- › BMW Films
- › BMW Audiobooks
- › TEDTalks
- › Commercials
- › Independent Music
- › BMW Heritage
- › A Legendary History
- › Nuerburgring
- › 3 Series Heritage
- › Build Your BMW
- › Dealer Locator
- › Test Drive
- › Financial Services
- › Benefits of Financing
- › Benefits of Leasing
- › Lease Offers
- › Financing Offers
- › Apply for Financing
- › Estimate Payment
- › Credit Card
- › Insurance
- › Accessories
- › Performance Parts
- › Privacy Policy
- › bmwusa.com
- › BMW Financial Services
- › BMW Assist™
- › Legal Information
- › Company Information
- › BMW Group in North America
- › BMW Group International
- › Vehicle Development
- › BMW Financial Services
- › BMW Group Press Club
- › Careers
- › Internships
- › Service Technician Education

The BMW site map was text dense and visually overwhelming for users.

On Siemens Medical's SMED.com, the *Healthcare Information Systems* site map had close to 40 links, all overlapping and impossible to read. One user said, "Whoa! This isn't it! The overlap makes it impossible to differentiate."

Return



The SMED.com site map for Healthcare Information Systems listed close to 40 links on one page, which followed the site map's circular design. The overlap made it impossible to read many of the links.

40. Keep the design clean and simple.

Site maps should both demonstrate the breadth of available information and be simply structured. The first time users see a site map, they will determine whether it is useful or not. In our study, a clean design increased users' confidence in a site map. Although "clean" can be interpreted many ways, by our definition it uses a good balance of white space and visual separators (bullets, dividers, and so on), as well as adequate font size, type, and contrast.

Some participants said they liked the Interwoven site map's appearance, which was a circular diagram with topics that users could drag around the page. However, they didn't immediately understand how to use it. One user said, "At first, I thought it was neat. But my visual of the site map was more difficult to understand, to get an idea in my head. But it was a very neat visual." Some others were put off by the site map's appearance. One user said, "I understand the Web is their product, but I'm not impressed." Another said, "I don't like the site map. It's scaring me."

One user said she preferred CDNOW's site map to the company's homepage, because the site map had a simple and straightforward design. She said, "The site map looks a lot more thorough and to the point than the homepage does. I guess if I wanted to find something, I'd use the site map, because it's more clear than the homepage."

Search by: Artist [Search Classical](#)

CDNOW [music](#) [video/DVD](#) [gifts](#) [myCDNOW](#) [Help](#) | [Account](#)

Never miss a beat!TM
[Shopping Cart](#)
 contains 0 items

> [Top 100](#) > [Downloads](#) > [Music Beat](#) > [Music News](#) > [Gossip](#)

Store Spotlight: [Kracker Kicks It Hard Rock Style!](#)

Who Are The Best Rhymers In Hip-Hop?

Find out at CDNOW's tribute to The Essential Hip-Hop Lyricists. Discover why every true fan MUST have Jay-Z's *Reasonable Doubt*, KRS-One's *By All Means Necessary*, Slick Rick's *The Great Adventures of Slick Rick* and more. The reasons may surprise you.

SHOP ::

- [Rock](#)
- [Alternative/Indie](#)
- [Pop](#)
- [Jazz](#)
- [R&B](#)
- [Hip-Hop](#)
- [Electronic/Dance](#)
- [Country](#)
- [Folk](#)
- [Blues](#)
- [Reggae/Ska](#)
- [World](#)
- [Latin](#)
- [Classical](#)
- [Vocal/Instrumental](#)
- [New Age](#)
- [Christian/Gospel](#)
- [Soundtracks](#)
- [Cast Recordings](#)

Jay-Z
 Dynasty-Roc La Familia 2000
 CD: SALE
Add to Cart \$14.99
[Save to Wish List](#)

Welcome! CDNOW Welcomes

- Stay connected. Sign up to receive CDNOW email.
- See your [Order History](#)

IN ROCK

On the Rise Interview: Big rock, hit singles, and hard-rocking Canadians: The members of **Nickelback** are ready for their close-up.

GOING ON NOW

STOREWIDE SALE
 Shop Early & Save
Up to 30%!

SALE ENDS MONDAY, NOVEMBER 5, 2001 @ 9AM, EST

One user found the CDNOW homepage to be cluttered with images, text, and promotions.

Search by: Artist [Search Classical](#)

CDNOW [music](#) [video/DVD](#) [gifts](#) [myCDNOW](#) [Help](#) | [Account](#)

Never miss a beat!TM
[Shopping Cart](#)
 contains 0 items

At CDNOW: [Shop FAST with Express Checkout. Turn it on now!](#)

::sitmap

<p>new customers</p> <ul style="list-style-type: none"> • New Visitors Guide • First time at CDNOW? • Create an Account • CDNOW Privacy Guarantee 	<p>account info</p> <ul style="list-style-type: none"> • Your Account • Address Book • Order History • Express Checkout 	<p>top questions</p> <ul style="list-style-type: none"> • Can I cancel an order? • Looking for a specific song? • What are the shipping costs? • What is the return policy? • When will my order arrive?
<p>help desk</p> <ul style="list-style-type: none"> • Account Updates • AOL Quick Checkout • CDNOW Wireless • Contact CDNOW • Digital Music Downloads • First Time Buyers • Gifts and Gift Certificates • Help Desk • CDNOW Message Boards • New Visitors Guide 	<p>my cdnow</p> <ul style="list-style-type: none"> • myCDNOW • Preferences • Favorite Artists • CDNOW Recommends • Rewards • Rewards Catalog • Wish List • Rate Your Music 	

:: Music **:: Video/DVD** **:: About CDNOW**

The same user preferred the site map to the homepage, because it was cleaner and thus easier to understand.

Although Ace Hardware was not one of the sites we planned to test, one user stumbled across its site map and found it to be very easy to use. He said, “The Ace site map was very well organized—better than the homepage. It is perfectly laid out, and compartmentalized in a nice way.”

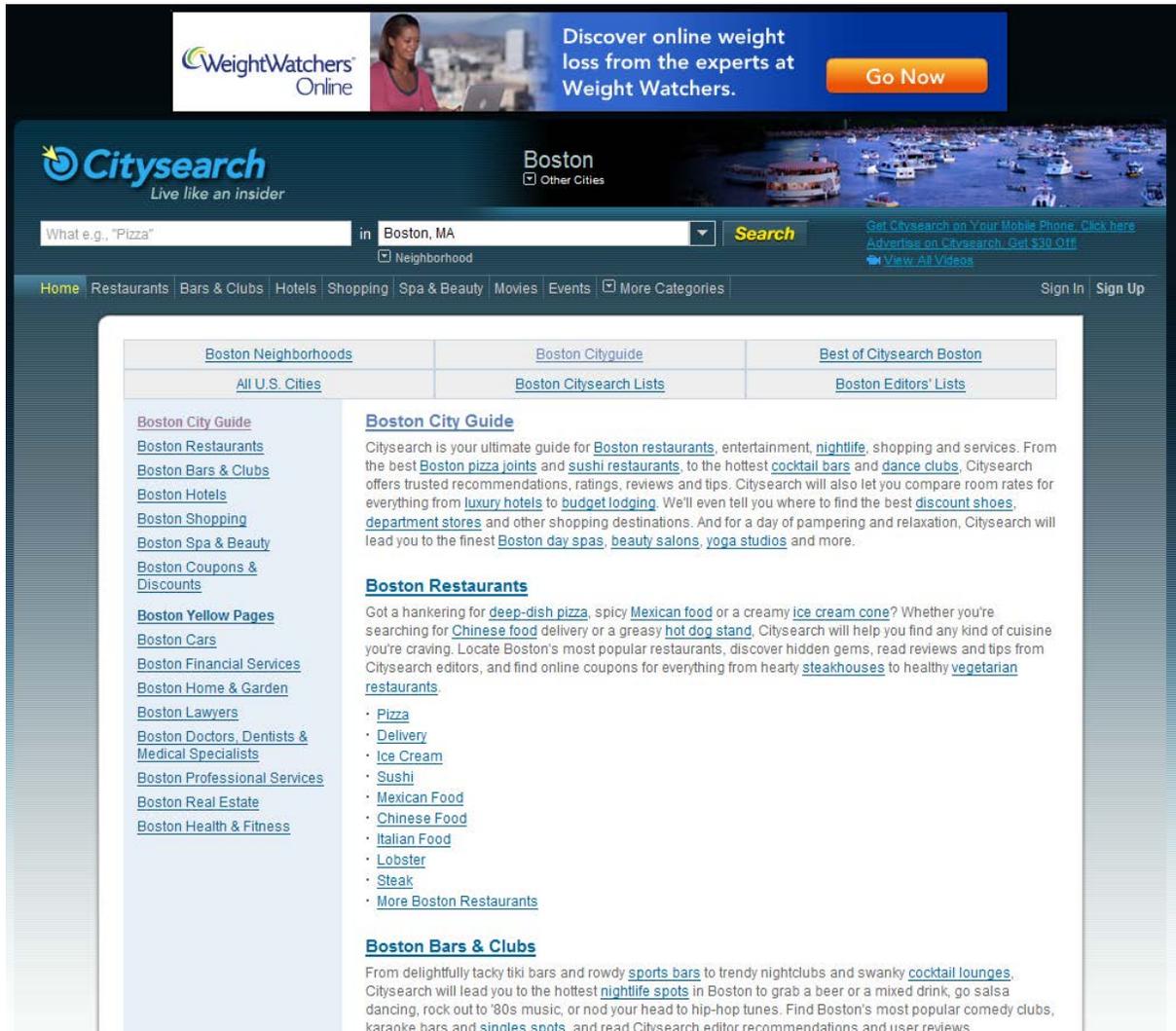


The first portion of the Ace Hardware site map. Although the contrast was poor, the use of alignment, spacing, separators, and categorization helped make this a clean and simple site map. The site map also included Back to top links at the end of each section to anchor users to the head of the page.

41. Simply list links on the page, and use category headings that are clearly distinguishable from the category links.

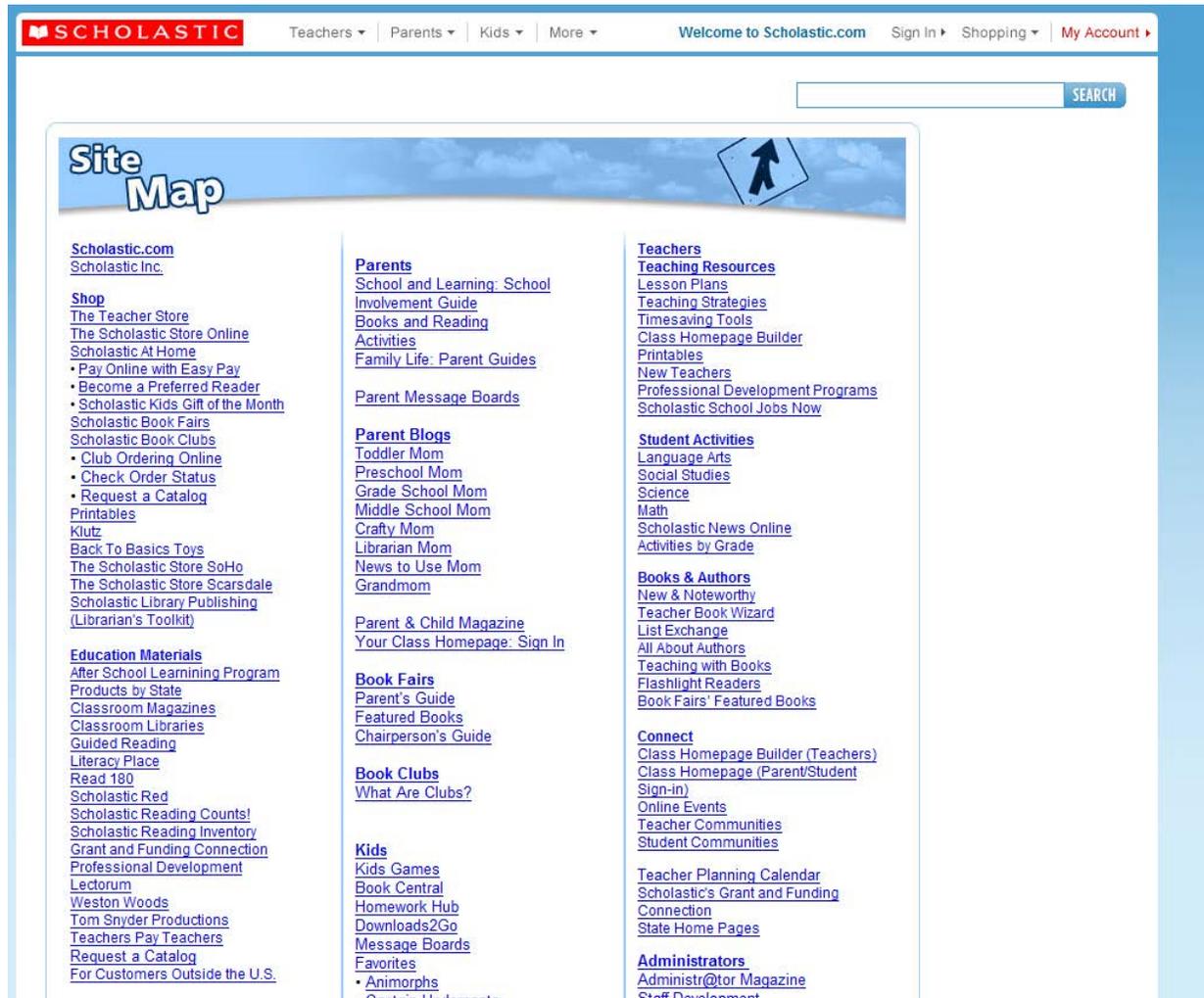
In keeping with the previous guideline, one way to keep a site map clean and straightforward is to simply list the links on the page and use headings that are easily distinguished from their subcategories.

The Citysearch website's *Site Guide* contained multiple paragraphs of text throughout the page, with links interspersed throughout. For users, this defeated the purpose of a site map, which should be a quick, scannable reference point. Users often overlooked information they needed to complete tasks because they had to filter out much of the text to get through it quickly. As one participant described, "I think it's confusing because you have to read every single line. For people who are going fast, it has to pop off in five seconds. At the very least, the main titles were helpful. But there is too much information—paragraphs under each title."



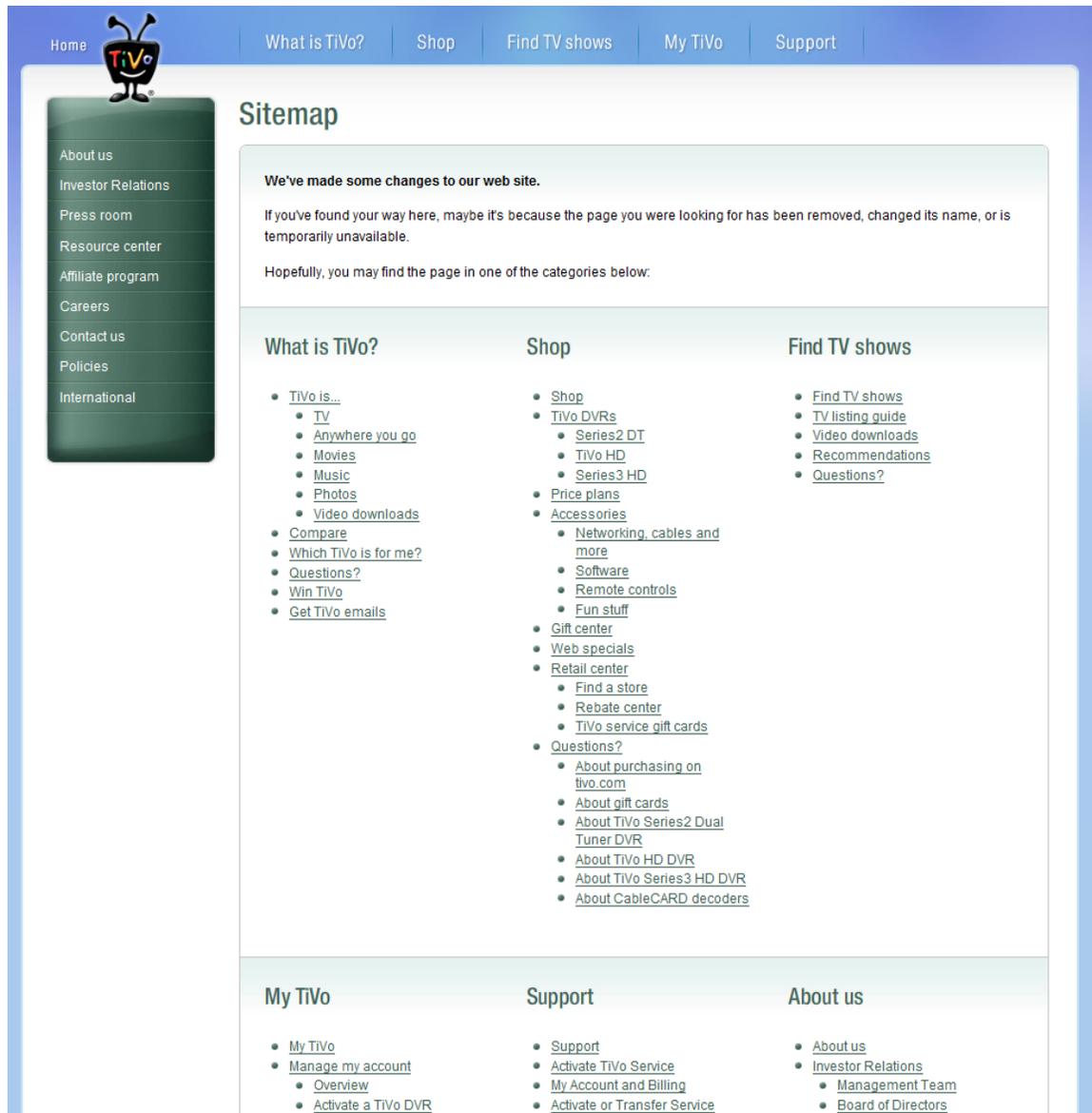
The Citysearch Site Guide was not clean and simple. Participants had to wade through extraneous text to accomplish their tasks. Additionally, some links were unnecessarily redundant in both the paragraphs and the lists below them, such as Mexican Food under the Boston Restaurants section.

Users also found the Scholastic.com site map difficult to get through. One user commented, "It kind of all blends together. It seems like categories are a little bit bolder, but it takes a lot of reading to find what you are looking for." Although the page simply offered a list of links, the font was relatively small, the spacing was tight, and the bolded category links were the same font size as the subcategories, making it hard to visually parse the page at a glance.



The top portion of the Scholastic.com site map. The lack of adequate spacing, font size, and visual hierarchy made it cumbersome for users to navigate.

Aside from the false-bottom issue we described earlier, the TiVo site map was well received and easily navigated; users found it both thorough and manageable. The headings were distinct from their sections, which helped users parse the page at a glance. As one user put it, "It's organized well. I like that there are only six headings. The six headings is nice, keeps it simplified."



The top of the Tivo site map. Distinct headings, bullets, spacing, and colors all contributed to a clean, easily navigable look and feel.

CONTENT

42. Include all areas of the site in the site map and keep the site map up-to-date.

A site map should include all of the site's main sections and all content, including *About the Company* and *Contact Information*. Users find it disconcerting when site maps exclude information. Site maps should also contain the site's most relevant and up-to-date information.

One participant, who said he often looks for contact information about companies on their websites, tried to find contact information through the U.S. Treasury website. Although the information was offered through a link on the homepage, he couldn't find it through the site map. "Pretty user friendly, except I'm looking for a *Contact Us*

link. I don't see one," he said. "I see *CFO* and *Counsel*. No email information. I'm going to go *Home* and see if they have a *Contact Us* on the homepage...They do, under *Contacts*."

On Marriott.com, the site map showed every main category from the primary navigation bar except one—the *Shop Marriott* section. At a glance, users assumed that the site map covered all of the site's categories, but it did not. When one user tried using the site map to find and buy a comforter, she said, "Using just the site map I'm pretty stumped right now." Another caught onto this as well, finding it unacceptable. She said, "*Shop Marriott* was not included in the site map, but was in the bar above. So, I do think it's missing some components of the website. If I was confident that the site map contained all the pages of their site, I would think they didn't have something and I would move on."

Home | International Sites | Help | Site Map | Change/Cancel Reservations | My Marriott Rewards Account | Sign In

Marriott

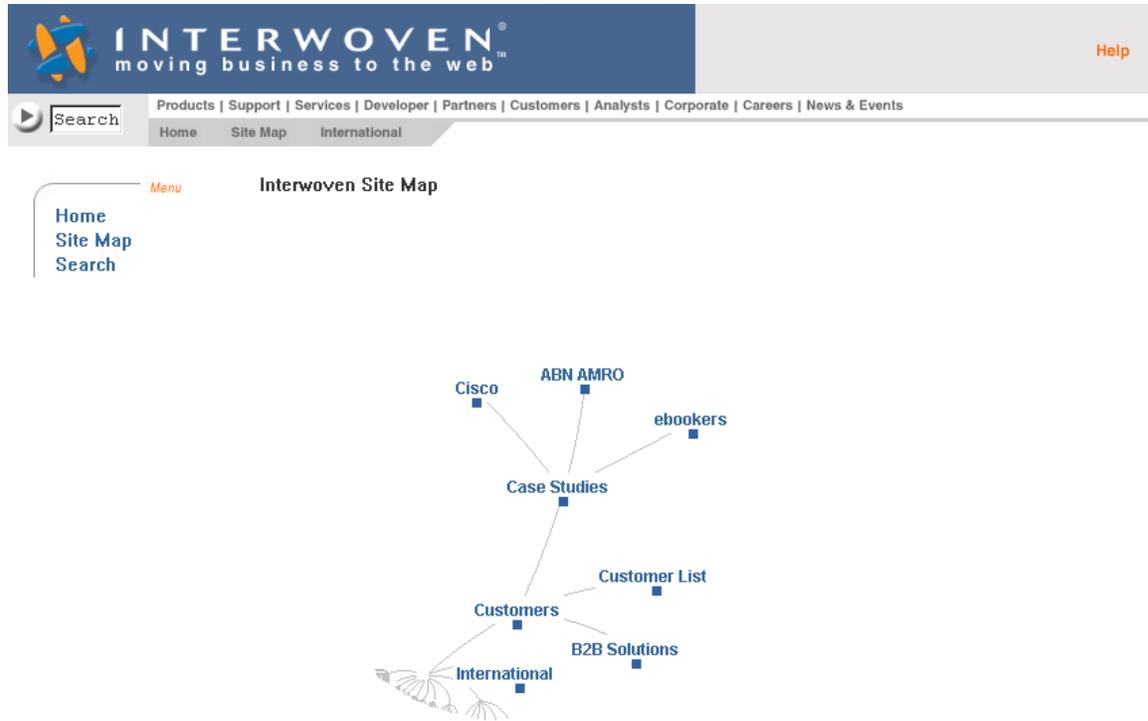
Find & Reserve | Deals | Destinations | Shop Marriott | Events & Meetings | Marriott Rewards

Site Map

Find & Reserve >> Hotel Search Options Hotel Directory Change/Cancel Reservations Telephone Reservations Marriott's Look No FurtherSM Best Rate Guarantee Frequently Asked Questions Claim Form Hotel Rates	Deals >> Escape![®] Packages Dining Golf Family Romance Spa Local Design Your Own Trip AAA Senior Hotel Discount Government & Military Hotel Discount Sign Up to Receive Email Offers Hotel Deals Weekend Getaway Packages	Marriott Rewards >> Join Now My Account Upcoming Reservations Trip Planner Marriott Rewards Activity Profile DreamRewards Tracker Use Marriott Rewards Points Travel & Leisure Rewards Browse Hotel Rewards Buy, Transfer or Convert Points Tips for Redeeming Points Charitable Donations Earn Points or Miles Marriott Rewards Offers Program Information How it Works Program News Membership Benefits Silver Gold Platinum Elite Benefits Guarantee Be Here Faster Customer Support
Destinations >> Featured Cities Anaheim Hotels Atlanta Hotels Austin Hotels Baltimore Hotels	Events & Meetings >> Calculators and Checklists Budget Calculator Step-By-Step Guide Weddings Search for Hotel Weddings	Bill Marriott's Blog Vacation Ownership Gift Certificates Corporate Incentives Affiliate Marketing

The Marriott site map included all major categories from the primary navigation bar (top) except Shop Marriott.

Interwoven also offered only select content in its site map's *Case Studies* section. Although the site included seven case studies, the site map listed and linked to only three. One participant was looking for a particular case study, but he gave up on the site map path when he saw that it listed only three.



Interwoven's site map offered links to only three case studies. However, the site's actual Case Studies section offered seven different case studies.

43. Make it clear when a link will take users to another site.

People were confused when they clicked a link on a site map and it took them to a different site. It was also confusing when a link took them to a site subsection that offered its own navigation—and even its own site map.

The New Jersey Transit site's link to *Career Opportunities* took users to www.jobs.com. One user didn't realize she had left njtransit.com until she clicked a link to return to its site map and was taken to the jobs.com site map.

BLAST YOUR RESUME TO
1000s OF RECRUITERS
CLICK NOW >>



myownjobs.com Sunday, October 28, 20



Job Search | myownjobs | Online Resume | Communities | Resources | Events



Company Profile

JOB POSTINGS ← Click for company job listings

NJ Transit

Company Profile:

NJ TRANSIT is New Jersey's public transportation corporation. Our mission is to provide safe, reliable, convenient and cost-effective transit service with a skilled team of employees, dedicated to our customers' needs and committed to excellence.

Created by the Public Transportation Act of 1979, NJ TRANSIT was established to "acquire, operate and contract for transportation service in the public interest".

Covering a service area of 5,325 square miles, NJ TRANSIT is the nation's third largest provider of bus, rail and light rail transit - linking major points in New Jersey, New York and Philadelphia.

COMPANY

Ownership: Gov't
Industry: Transportation
Employees: 1,000 or more
Medical Plan: Yes
Dental Plan: Yes
Retirement Plan: Yes
Paid Holidays: Yes
401K: Yes
Paid Overtime: Yes

Clicking on the Career Opportunities link on the New Jersey Transit site map took users to a new site: www.jobs.com. The site opened with New Jersey Transit employment information, and users were not aware that they had left the original site.

As discussed earlier, problems can also occur when multiple parts of the same site have their own site maps. Users can get stuck in a site map without ever realizing that they're in a section-specific one. Our guideline is to avoid having multiple site maps. However, if multiple site maps are necessary for some reason, make it clear to users where they are at any given time, and when they'll be taken to another section of the site.

ALPHABETICAL INDICES

In some cases, users have a difficult time using alphabetical indices. For example, a website that lends itself more to hierarchy than keyword searching will be more successful with a hierarchical structure. However, some information is better navigated via an alphabetical index.

Theknot.com offered useful alphabetical indices to supplement its category listings. Certain keywords associated with weddings—such as "guestbook," "bridesmaid," and "shower"—are rarely referred to using any other words. It was therefore easy for users to jump to an alphabetical list for such items. In this and other cases, an alphabetical list can better suit the user's mental model or their task when they're searching for a specific command. If, for example, a user were looking for articles by a specific author, say, "David Sedaris," it would be easier to go directly to articles under his name on Salon.com, rather than having to drill down through the *Books* and *Authors* categories first.

For both salon.com and theknot.com, having an alphabetical index to supplement the categorical map was useful. Another good candidate for an alphabetical index was the Citysearch website, which served as a catalog for a vast amount of information about the Boston area. Users often spent a great deal of time looking through this site's categories; an alphabetical list may have better suited the content.

That said, you should always ensure that your design doesn't suffer confusion and clutter for the sake of offering multiple navigational methods. If you use both a categorical and alphabetical site map, make sure to present them in a clear way that makes the options obvious to users.

If you offer only an alphabetical site map, make sure that users can easily find all of your content using keywords. Also, know that users won't understand the website's structure when you list content only in this way.

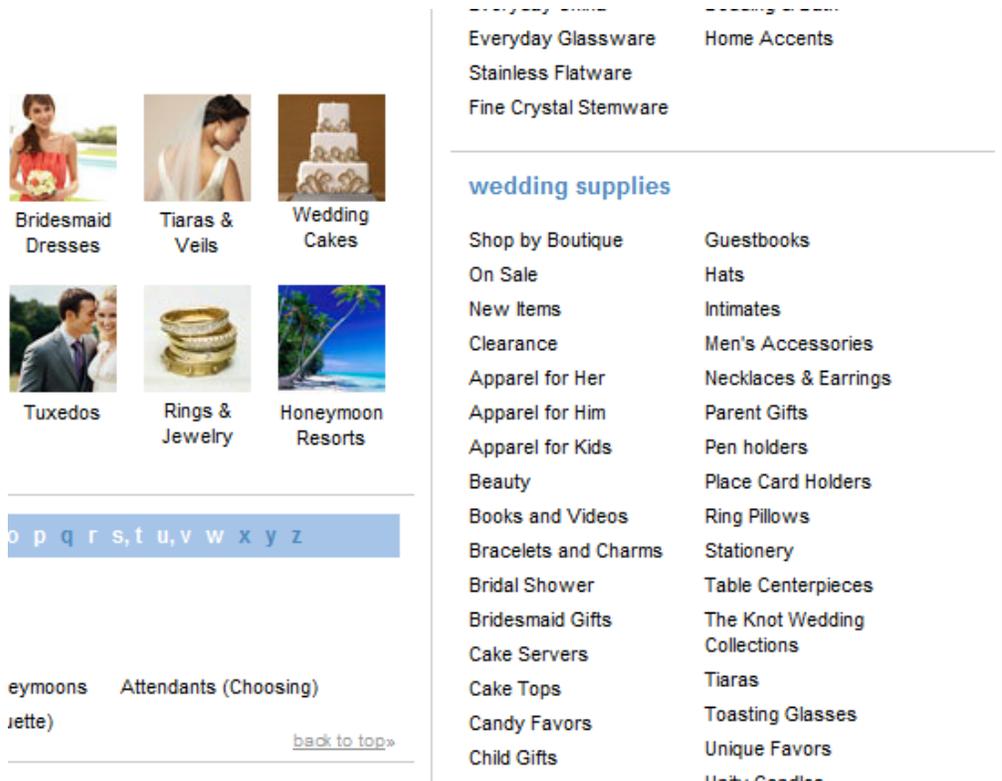
44. If you offer both a categorized site map and an alphabetical index, ensure that all content is accessible via both navigation methods.

The freedom to choose which method to use is meaningless if some site content falls within one index and not the other. All content that is included in an alphabetical index should be available within a categorized index, and vice versa.

Participants had problems using The Knot website when we asked them to use the main site index to buy a wedding guestbook for under \$30. Because the alphabetical index was so helpful for other tasks, users automatically looked under *g* for "guestbook," but they didn't find it there. In fact, "guestbooks" was on the right side of the page, under the *wedding supplies* list. After looking around, some users found it there. Others assumed that anything that wasn't available in the alphabetical list was also missing from the site. One user was confused by this inconsistency, saying, "It was fairly easy once I got to the site map. Although, I don't understand why it wasn't listed under the alphabetical list; [it was] only on the far right. That wasn't consistent. I thought it would have everything in the site listed by alphabetical order."

Favors	Flower Girls (Your Role)	Formalwear
First Dance, etc.	Flowers & Decor	
back to top»		
g		
Getting in Shape	Groom Style	Guest Info/Etiquette
Gowns/Gown Shopping	Grooms (All Areas)	Guest List (Tool)
Green Weddings (Eco-friendly Weddings)	Groomsmen (For the Groom)	Guests/Guest List
Groom Details	Groomsmen (Your Role)	
back to top»		
h-j		
Hairstyles	Honeymoons (Real Stories)	Jewelry

The Knot's Site Index didn't list "guestbook" under the g section.



However, users found “guestbook” on the right side of the page under wedding supplies.

Most likely, the designers put physical supplies on the right, rather than incorporating them into the *content areas* links, which offered information about various aspects of a wedding. Again, users won't pick up on such subtle delineations when they're quickly searching for what they need.

45. If you offer an alphabetical index, specify what it includes (such as categories or keywords, for example).

Participants said that they liked the alphabetical lists of site information. Still, some also expressed frustration at having to guess at terms and scroll through the whole list. Users were also unclear about which terms a list might include.

One user on the U.S. Treasury site had trouble finding what she was looking for. “I would use site indices again,” she said. “They’re alphabetical and more specific. You can locate keywords and find what you’re looking for. But I was impatient and wasted time anyway. I should have scrolled down to *T*. I usually just click around.” Indeed, on this site, she found herself browsing the list rather than going directly for what she wanted.

The participants who tested Salon.com didn't know what to expect from its alphabetical list. It wasn't clear what the alphabetical list would offer compared to the more structural list that appeared when users clicked the *Directory* link. The alphabetical list presented lists of article topics, but mixed proper names with broader categories. One user said, “Sorting by keyword topic is interesting, but I'm not used to it. It was a little confusing, but okay once I got used to it. It's not really by category. If you weren't familiar, it's harder to know where to go.” He was looking to find things by category, as alphabetical didn't come naturally to him in this context. Another user thought the alphabetical listing worked okay. “Well, it's

alphabetized," he said. "It's kind of... I don't know how comprehensive it is. It's organized like a book index, so you can find a topic. I'd rather try to find something alphabetically than have to search through categories."

46. Cross-reference alphabetical lists with synonyms so users can find their own particular terms.

If you use an alphabetical listing for your site map, be sure to include cross-references within the site map. On various sites in our studies, for example, users looked for job-related information under *Jobs*, *Employment*, *Work*, and *Careers*. Users spent a lot of time guessing which terms might appear on the alphabetical list. As one user observed, "Basically, every individual thinks of a different word to look up."

Participants also looked under multiple categories to find information in the U.S. Treasury's alphabetical list. One user said, "I'm looking for 'executives.' There's no deputy. I'll look for 'Secretary of the Treasury' ...there's nothing. Now I'm just looking alphabetically. 'Executive officers'...I'm not finding anything." Another participant was happy to find information cross-referenced. She said, "Oh, there's 'employment opportunities.' That's nice. It's under different things that take you to the same place." Other people were frustrated with the list. One user said, "That was incredibly difficult. I look at websites every day to see who executives are and that was very difficult. I would go under *Executive Officers* or under *T* for 'treasury.' Another commented, "They might alphabetize in a way I didn't think of it. I was kind of lucky to find the officer's name. It wasn't obvious and it should be."

People using Novell's site map experienced similar problems. One user said, "One of the problems with Novell was that I didn't know how something was listed. But that problem can be worse with a search because it takes longer to keep trying different words. It's easier to scroll and look for alternatives." Another user also found frustration with trying multiple words. She said, "If I want to shop, I can press *S* and see. If that wasn't the word to take me there, I'd have to look under 'gifts' or 'products' or something. You definitely need to know the right words or the whole thing is going to take longer." And another tried multiple listing possibilities, including "*N* for 'nonprofit'? Nope. *V* for 'volunteer'? No *V*. How about under *E* for 'employee'? No. 'Community?' 'Community relations?'"

Unless your site has very unique identifiers for main topics, such as an author's list or U.S. States, cross-referencing will help make browsing the alphabetical index easier for users.

Extensive research at Bell Laboratories in the 1980s documented the "verbal disagreement phenomenon" which basically says that different people tend to use different terms for the same item. The Bell Labs scientists were trying to improve the usability of printed yellow pages books, but ended up concluding that it would be impossible to design such books in a manner such that everybody would turn to the correct page in the book on their first attempt—no matter how well chosen the category names. We essentially replicated this same finding many years later in the very different domain of online site indices. When a human factors result is this robust, there is no hope that it's going away.

So, how can you find candidates for synonyms to cross-reference? Try using:

- Any keyword research your marketing team has already conducted for search engine optimization (SEO) purposes or for search advertising
- The vocabulary your customers use when you bring them in to user test your site
- Terminology used in the trade press or on websites (especially on blogs written by your customers)
- Keywords that show up frequently in your website search engine's log files (if customers go to the trouble of typing a term into a search box, you can be sure it's something they're looking for)

47. Provide context for less-specific terms in alphabetical indices.

While structured site maps can give users context for an unclear link name, alphabetical lists provide no context. Unclear link names simply appear in the list without giving users any additional information.

Two participants commented about unclear terms on the U.S. Treasury site. One of them said, "*eTreasury?* What's that? I don't know." Another was annoyed by this. "This is more government ignorance than computer ignorance on my part," he said. "I have no knowledge of these terms."

It's generally a good rule of thumb to use simple terminology on your site. But if you have to use special terms that can be interpreted ambiguously, make sure to provide context around them, and cross-reference to them from terms that might be more widely understood and searched upon.

Participants' Site Diagrams

After participants completed tasks in Study 1, we asked them to close their browser windows. We then gave them a blank piece of paper and asked them to: "Draw a diagram of the structure of the website you have just been using. Note any categories or structure that you recall from the site. Note: Do not try and draw each page, just diagram the way the entire site is organized." We did this exercise to get a glimpse of which elements and structures users remembered about the site after using the site maps.

Participants produced a variety of drawings. Some drew the homepage. Some drew the site map. Others drew page templates for the site. Others interpreted the site structure and drew their own unique site map, which didn't reflect the site's own map or any of its specific pages. Only five out of 30 drawings depicted the site's actual site map, which could mean that participants didn't get an idea of the site structure from the site maps they visited.

All three participants who drew Interwoven's site structure drew page templates. This might indicate that Interwoven's navigation was more meaningful to the participants than the dynamic site map.

All three participants who drew the New Jersey Transit site drew the homepage, and one of them also drew the site map. The New Jersey Transit homepage was simple and clear; it had very little content, but highlighted the different areas available on the site. The homepage offered a clear presentation of the site's content.

Five participants drew a site map from one of the following sites: Documentum, Mercedes Benz USA, New Jersey Transit, Salon, and Siemens Medical Solutions. Of these sites, all but Siemens offered site maps that were a structured list of site categories and subcategories. The drawing of Salon's *Directory* did not include the alphabetical index. The Siemens site map included thumbnail images of each page arranged in a circular design, which might be what made it memorable.

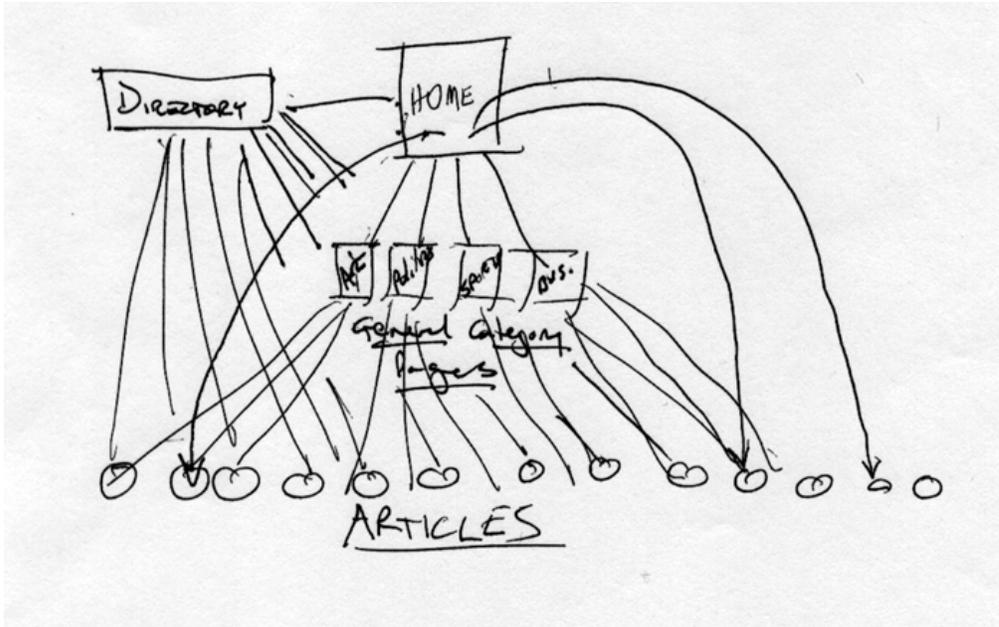
Two sites in the study, Novell and U.S. Treasury, offered alphabetical indices as their site maps. No participants drew anything about an alphabetical index, except to reference the link to the index.

Few participants added elements to their diagrams that did not actually appear on the sites. Many participants included the areas they had explored either on their own or while carrying out the site tasks.

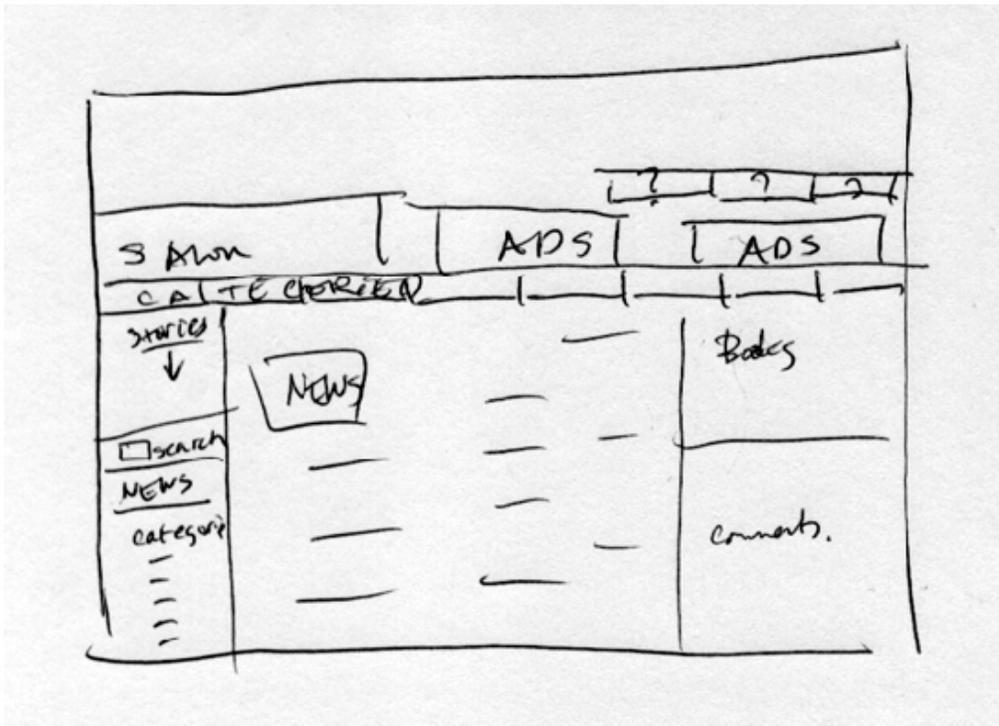
SALON.COM

Below are two users' drawings for Salon.com. The first is a structural view of the site. The second is a rendering of the homepage.

In the picture below, the user drew Salon.com's site structure. He noted that there were three ways to access the site's articles: from the homepage, from the "general category pages," and through the *Directory*. This is, indeed, the way the site's navigation worked. The drawing included the sections *Arts*, *Politics*, *Sports*, and *Business*. *Sports* does not appear on the Salon.com site.

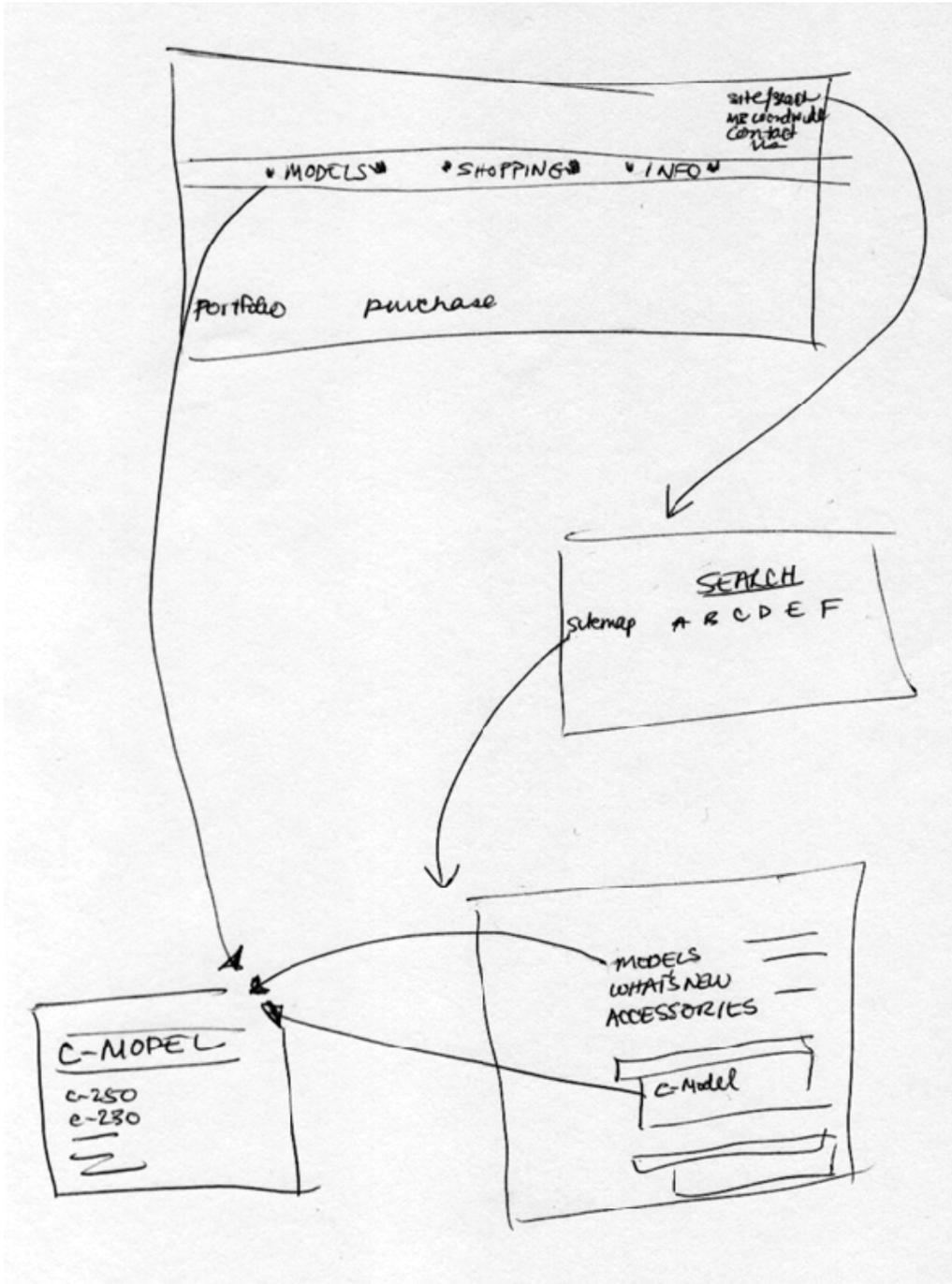


In another picture for Salon.com below, the participant drew the homepage. Although he didn't list the specific categories on the page, he indicated where they were located. He noted "ads," and he also noted a *Comments* section, which doesn't appear on the homepage.



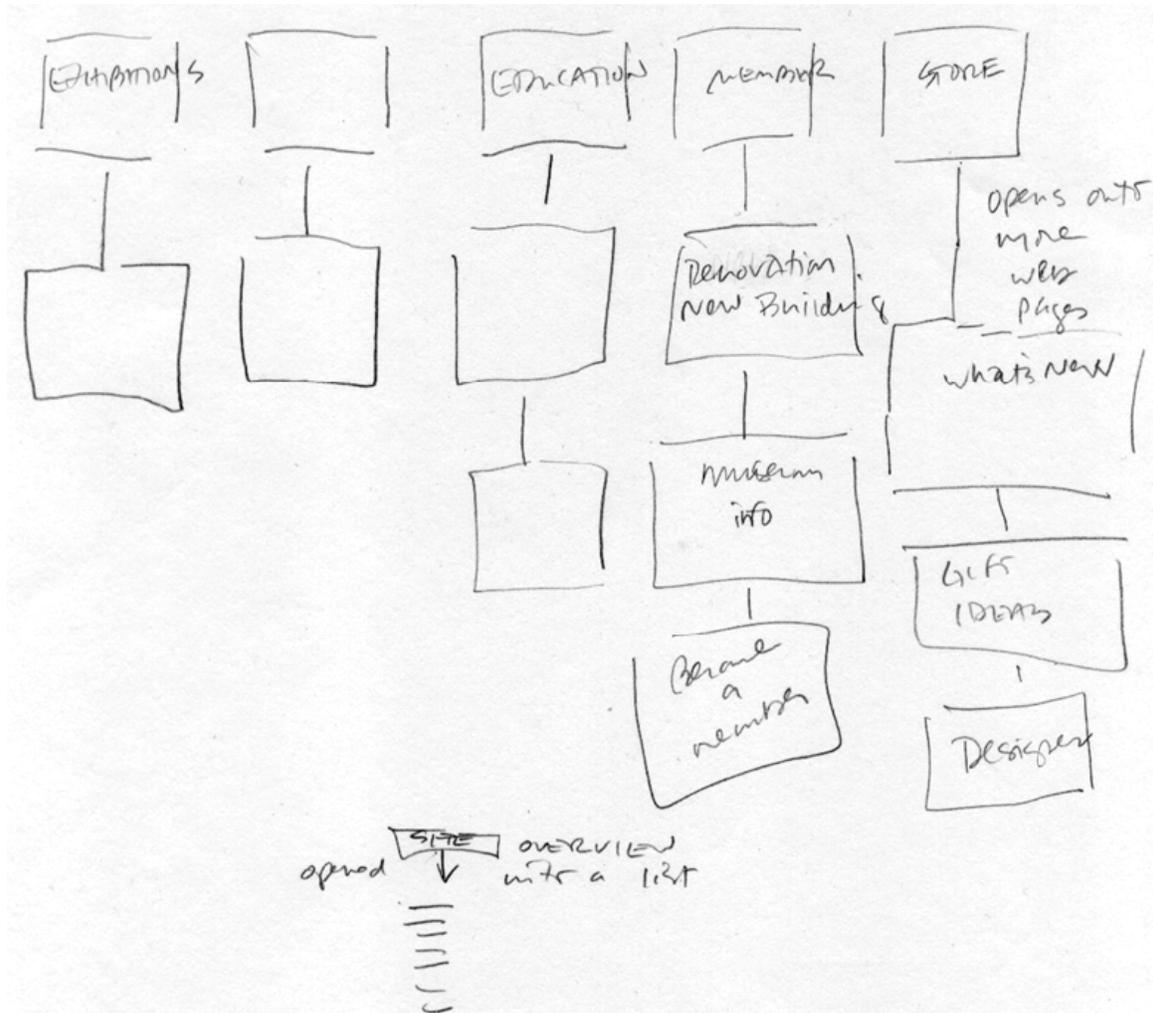
MBUSA.COM

One participant drew a series of boxes representing pages of the Mercedes Benz USA's site structure. The diagram highlighted the relationships among the site's pages. The drawing included the dual *Search/Site Map* link, as well as a diagram of the search page. His site map drawing included the anchor links that moved users down the page to the appropriate section of the site map.



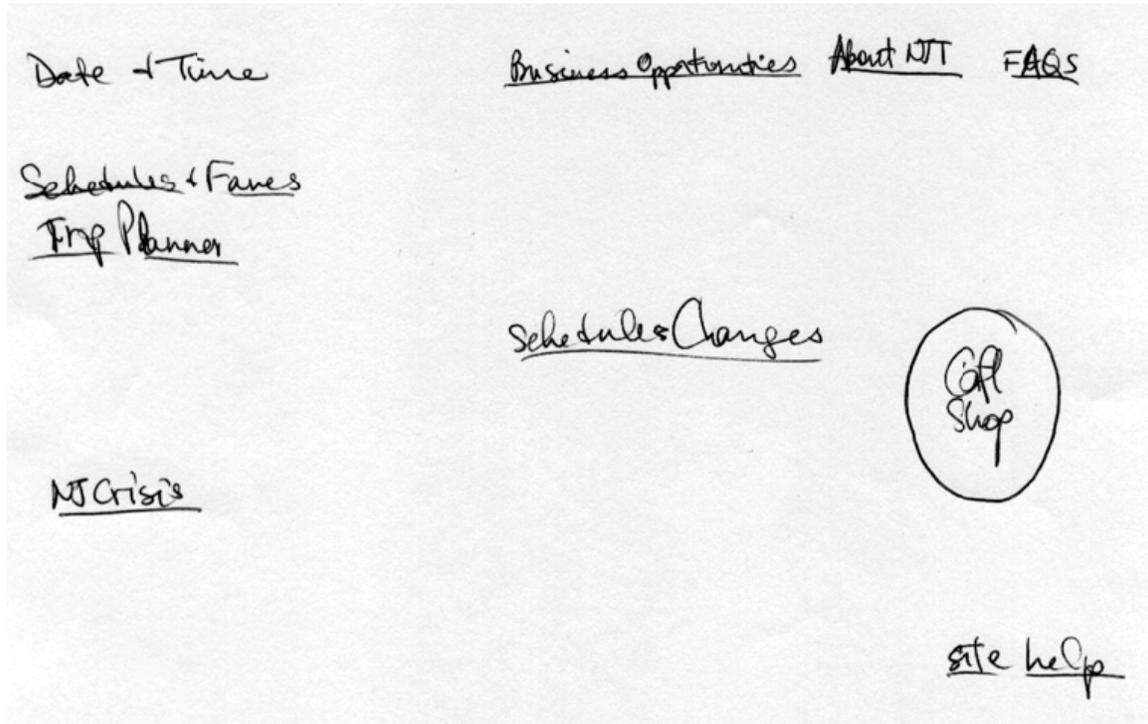
MOMA.ORG

This MoMA site diagram included the individual site pages and their relation to the main navigational categories. The user recalled *Exhibitions* as its own main category, but it actually appeared under *What's On*. She also put *Museum Info* under *Member Information*, but it was actually under *Visit the Museum*. She included the *Site Overview* at the bottom of the page, with the notation "Opened with a list," which referenced the fact that the MoMA site map was a list of categories and subcategories.



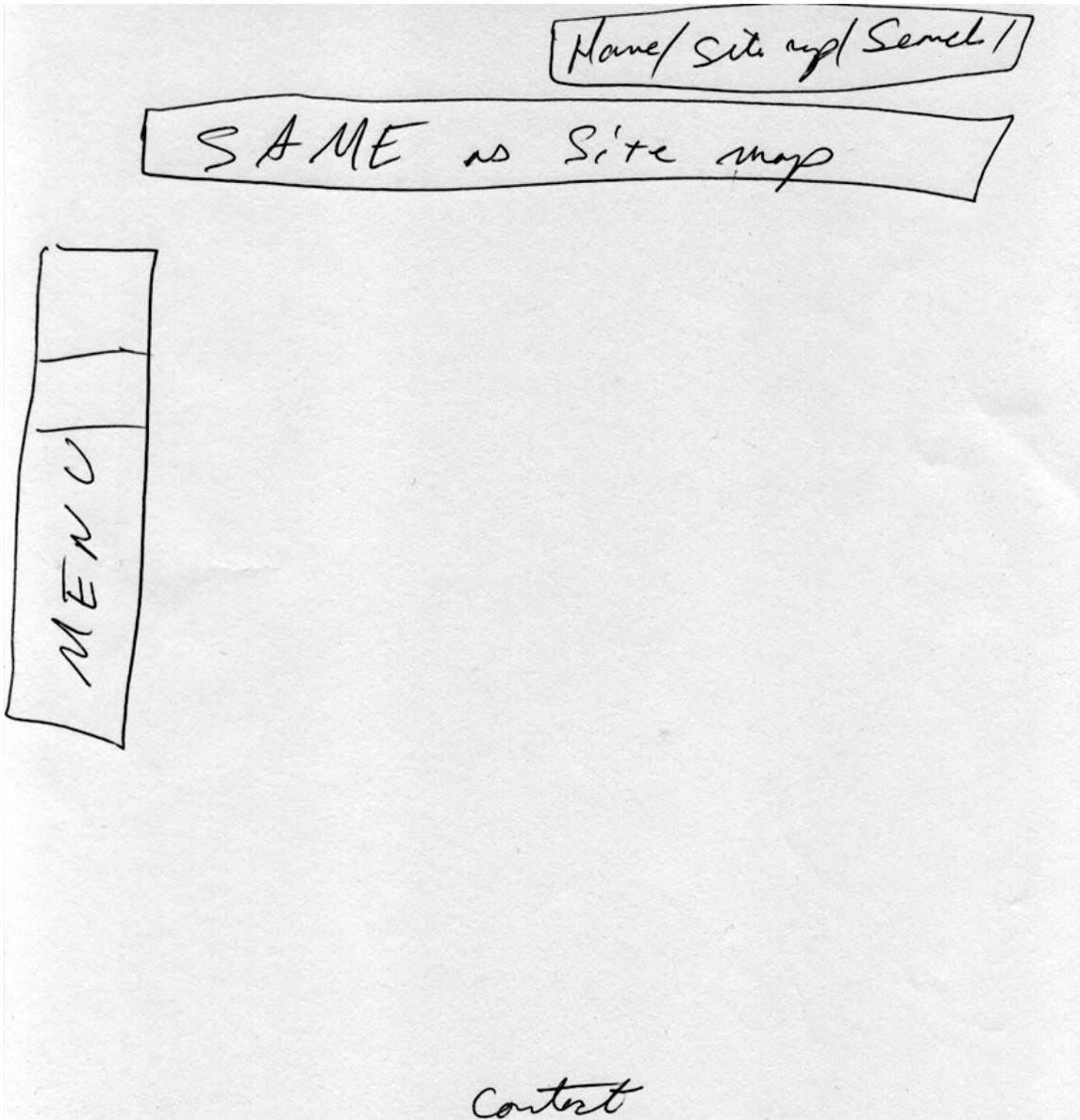
NJ TRANSIT.COM

The picture of the New Jersey Transit's homepage listed the categories the participant could recall and followed the homepage's design. The user remembered 10 of the 15 homepage links, missing only *My Transit*, *News and Events*, *Accessible Services*, *Customer Services*, and the fine print *Legal Disclaimer* at the bottom of the screen. She included *Site Help* in the drawing, which was the link she took to the site map.



SMED.COM

The drawing of Siemens Medical's SMED.com site highlighted the participant's belief that the navigation could get him anywhere he needed to go. Note that he labeled the navigation "SAME as Site map." The site offered a circular site map that included the main navigational headings, as well as additional content areas. He drew the menu for the side of the page, and drew the links at the top of the screen, including *Home*, *Site Map*, and *Search*. However, he put the *Contact* link at the bottom; it actually appeared at the top with the other links.



Other Sites Participants Visited

At the conclusion of each session in Study 1, we asked the participants to go to a site they had recently visited or that they were planning to visit. Once participants arrived at the site, we asked them to explain why they visited the site, and either how they normally used the site, or—if it was a site they hadn't previously visited—how they would go about finding the information they wanted. We then asked them whether the site offered a site map.

Participants visited a total of 29 different sites. Of these, only 13, or 45%, offered any sort of site map. And, all but one of our participants were totally unaware of these site maps.

The one user who was aware of site maps on two sites she had visited—the American Museum of Natural History and the Metropolitan Museum of Art, both in New York City. She knew of these site maps because she'd been to both sites looking for employment, and was accustomed to going to the site map to find employment information quickly.

The sections below describe some of the site maps that were available on the sites participants visited. Please note that these descriptions are based on what was available at the time of Study 1, and therefore some have likely changed since then.

IWON.COM

iWon.com (www.iwon.com) offered a site map through either a *Site Overview* link on the homepage or a *Site Map* link on other pages. It was unclear why there were two names for the same feature. The site map was an almost alphabetical listing of site areas, all of which were accessible either through the top navigation, a comprehensive link list at the bottom of the screen, or both. In this case, the alphabetical list did nothing to supplement the existing navigation on each page. In addition, putting areas that the site was promoting at the top of the alphabetical list made the list more difficult to understand and use. One user said, "They have a site map. That's totally unhelpful. The navigation is the equivalent of the site map."

Existing Members Sign In | Win \$10K SuperPages.com | Chances for \$10,000 CLICK HERE! | Chances for 100x\$1,000 CLICK HERE! | Chances for \$25 Million CLICK HERE! | Reward Points --- | Cash Back ---

5 > iWon | 5 > My iWon | 7 > Email | 9 > Shopping | 7 > Reward Pts | 7 > Casino | 5 > Prizes | 5 > Today's Survey | 5 > iWon Today

5 > **Make Waves** Join our interactive patrol

iwon Site Map | 7 > [Search] | Web | Stock Quote | Shopping | Domains

5 > iWon : Site map | iWon Features

- 7 > **Get an American Flag** - Show your pride!
- 7 > **New!** [Prize Bonanza Sweepstakes](#) - Spread the word... you could win \$25,000 cash!
- 6 > **New!** [Ask Edna Sweepstakes](#) - Set advice seekers on the right path and you could win up to \$10,000.
- 5 > **Spin for chances to win the Progressive Jackpot!** Here's your chance to win cash or prizes instantly! And with the Progressive Jackpot, there's no limit to how high the total can grow!
- 5 > [Home Page](#) - Start here!
- 5 > [Animation](#) - Watch weekly animated mini-shows.
- 6 > [Autos](#) - Buy or sell a new or used car, plus Kelley Blue Book values.
- 6 > [Bargains](#) - Where everyday deals are always just a click away!
- 3 > [Boards](#) - Post your thoughts on everything from current events to entertainment to health tips.
- 4 > [Business Tools](#) - Professional services, trade shows and more.
- 4 > [Calendar](#) - Access your daily schedule from anywhere on the Web!

FREE SHIPPING & HANDLING on almost every product on our site. I want a pair of Skechers®. Find it all at FINGERHUT.com. Click here and

The iWon.com site map was simply a list of links to the site's main areas, which were always accessible through navigation. The list was generally alphabetical, but at the top it included links to featured content: Get an American Flag, Prize Bonanza Sweepstakes, Ask Edna Sweepstakes, and Spin for Chances. After Animation, the links were alphabetical.

- 5 > [TV](#) - Local primetime listings, Nielsen ratings, Picks & Pans.
- 5 > [Weather](#) - Current conditions, extended local forecast, maps.
- 4 > [White pages](#) - Look up an old friend anywhere in the country... or the world!
- 4 > [Winners](#) - Meet all those lucky iWon members who are now iWon winners!
- 4 > [Yellow pages](#) - Business addresses and phone numbers from coast to coast!



7 > [Search](#) Check out these iWon features:
 5 > [Casino](#) 5 > [Computers](#) 4 > [\\$8.95 Domain Names](#)

5 > Auctions	5 > Computers	5 > Games/Casino	5 > Lottery	5 > News	5 > Sports
6 > Autos	5 > Co-Pilot	5 > Greeting Cards	5 > Love & Advice	4 > Parenting	6 > Travel
6 > Bargains	5 > Entertainment	5 > Health	7 > Money	5 > Prizes	5 > Weather
5 > Celebrity Gossip	5 > Fashion	6 > Home & Garden	5 > Movies/TV	6 > Real Estate	4 > Winners
4 > Communicate	4 > Food & Drink	5 > Horoscopes	5 > Music/Radio	3 > Search/Tools	5 > Site Map

3 > [How iWon works](#) 4 > [Make iWon my home page](#) 1 > [My entries](#) 1 > [My profile](#) 1 > [Sign out](#) 1 > [Help & Feedback ?](#)

1 > [Advertise on iWon](#) 4 > [Affiliate Network](#) 1 > [Sweepstakes Rules](#) 3 > [Prize Payout](#) 1 > [Terms of Service](#) 1 > [Privacy Policy](#)
 5 > [Voted #1 Portal - Again!](#) 10 > [Register for iWon](#) 1 > [Lost Password](#) 5 > [Site Overview](#) 1 > [iWon Quick Tour](#) 4 > [Submit a Site](#)
 3 > [Earn Entries with iWon VISA](#)

1 > [Copyright @ 1999, 2000, 2001 iWon, Inc. All Rights Reserved.](#)
 "iWon", "iWon.com", the iWon logo, "why wouldn't you?", "Best Search on the Web" and the "iGuy" logo are trademarks of iWon, Inc. Patent pending.

On the iWon site map, the links were always available, in small type, at the bottom of each page.



About Harvard

- **General information:** addresses, phones, maps, bus schedules
- **Online tours**
 - [Virtual Tour of Harvard](#)
 - [A College in a Yard](#)
- **Facts about Harvard**
 - [Harvard Guide](#)
 - [Harvard Fact Book](#)
- [Alphabetic index of Harvard University web sites](#)
- [Calendars of events](#)
- [Harvard news offices](#) (press contacts)
- **Harvard Square resources:** food and

The top of the Harvard site map didn't indicate which content areas were listed below, requiring users to scroll to see all of their options.

AMERICAN PSYCHOLOGICAL ASSOCIATION

The site map at the American Psychological Association (www.apa.org) was an alphabetical index of the site's topics. The link to the site map itself was very small, and was incorporated in the graphic containing the APA's logo.

Although the link name and placement were good, the link itself was slightly too small. Also, the alphabetical index didn't provide any explanation as to what it was offering and the map scrolled for too many pages.

APA ONLINE
HOME | SITE MAP | CONTACT

site map
American Psychological Association

SEARCH
Website Help

MEMBERS ONLY WEBSITE
Join APA

APA Office of the President
Norine G. Johnson, Ph.D.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

A

- [About APA](#)
- [Accreditation Program](#)
- [ACT: Act Against Violence](#)
- [Advertising](#)
- [Aging Issues](#)
- [AIDS Issues](#)
- [American Psychological Foundation](#)
- [American Psychologist](#)
- [Anger Information](#)
- [APAGS \(American Psychological Association of Graduate Students\)](#)
- [APA Insurance Trust](#)
- [APA Style](#)
- [APA-Style Helper](#)
- [Archives/Library](#)

B

- [Books](#)
- [Brochures](#)

PSYCHOLOGISTS

STUDENTS

PUBLIC

Inside APA

- [About APA](#)
- [Education](#)
- [Practice](#)
- [Public Interest](#)
- [Science](#)
- [Membership](#)
- [Divisions](#)
- [State Psychological Associations](#)

Products

- [Books](#)
- [Children's Books](#)
- [Journals](#)
- [Videos](#)
- [Merchandise](#)

Electronic Products

- [APA-Style Helper](#)
- [PsychINFO](#)
- [PsychARTICLES](#)

The American Psychological Association's site map was an alphabetical list of the site's topics. The site map link appeared on each page in the upper left-hand corner in very small print beneath the APA Online logo. It was the center link, between Home and Contact.

CRAIG'S LIST

One participant visited Craig's List (www.craigslist.com), which acts as a sort of classified ad site with various listings, such as *Housing* and *Jobs*. The site doesn't offer a site map, but as the participant explained, "Craig's List is essentially a site map in itself, so you don't need a site map."

The amount of detail on this highly structured site made the addition of a site map unnecessary.

The screenshot shows the Craigslist New York City homepage. At the top, it says "craigslist" and "new york city". There is a search bar and a "go" button. The page is organized into several columns of categories and subcategories, each with a count of listings. The categories include:

- 9/11 resources**
- community & events**
 - artists / musicians (302)
 - general community (236)
 - events / entertainment (60)
 - ridesharing (109)
 - activity partners (90)
 - nyc open forum (7838)
 - nyc housing forum (1574)
- housing**
 - apartments (509)
 - apts - broker/fee (1130)
 - rooms / shared (1113)
 - sublet / temp (995)
 - swap (277)
 - apts wanted (540)
 - room / share wanted (537)
 - sublet / temp wanted (596)
 - office / commercial (77)
 - parking / storage (12)
- sale / wanted**
 - general for sale (1138)
 - computer / tech stuff (134)
 - tickets (375)
 - items wanted (218)
- jobs**
 - accounting / finance (48)
 - business / e-biz / mgmt (42)
 - computer / engineering (122)
 - design / media / multimedia (30)
 - marketing / advertising / PR (48)
 - office / admin / cust-serv (41)
 - sales / biz-dev (111)
 - writing / editing (17)
 - et cetera jobs (74)
- personals**
 - women seeking men (60)
 - women seeking women (32)
 - men seeking women (212)
 - men seeking men (83)
 - missed connections (120)
- services**
 - resumes (670)
 - freelance / 1099 (500)
 - small biz ads (559)

On the left side, there is a search bar, a "search craigslist" button, and a "community" dropdown menu. There are also links for "place a free classified listing on craigslist", "FAQ", "subscriptions", "wishlists for schools and nonprofits", "nyc@craigslist.org", "1.800.664.0633", and "about craigslist".

The Craig's List site listed events, personals, housing, items for sale, jobs, and services. The page was all text and simply listed main categories and their subcategories. A site map on this site would be redundant.

About the Sites Studied

SITE SELECTION

Study 1 and Study 2 each tested 10 different websites from companies of various sizes in a variety of industries. The site maps differed in name, content, and design, including alphabetical lists, graphic diagrams, and tiered lists. As noted, some websites or site maps from Study 1 no longer exist.

For images of the site maps, see *Appendix: Gallery of Sites Tested* (page 132).

SITES STUDIED

STUDY 1		
COMPANY NAME / URL	INDUSTRY / TYPE	COMPANY DESCRIPTION
CDNOW www.CDNOW.com	E-commerce	Online music site selling CDs, movies, and downloads. At present, acquired by Amazon; no longer has a site map.
Documentum www.documentum.com	High Tech	Content management solutions. At present, acquired by EMC.
Interwoven www.interwoven.com	High Tech	Content infrastructure systems and services. No longer has a site map.
Mercedes Benz USA www.mbusa.com	Automotive Company	Automotive retailer.
Museum of Modern Art www.moma.org	Educational	Museum. Non-profit educational institution.
New Jersey Transit www.njtransit.com	Transportation	Public-service company. Provider of bus, rail, and light-rail transit linking New Jersey, New York, and Pennsylvania.
Novell www.novell.com	High Tech	Provides software and solutions for extranets, intranets, and the Internet. No longer has a site map.
Salon www.salon.com	Online Publication	Internet media company with content sites. No longer has a site map.
Siemens Medical Solutions Health Services Corporation www.smed.com	Health Care	Health care information technology and equipment.
United States Treasury www.ustreas.gov	Government	Federal department that manages federal finances, collects taxes, produces postage stamps and currency, and protects the President.

STUDY 2

COMPANY NAME / URL	INDUSTRY / TYPE	COMPANY DESCRIPTION
Administration on Aging www.aoa.gov	Government	Provides information on programs and services related to aging.
BMW USA www.bmwusa.com	Automotive	Automotive retailer.
Citysearch Boston boston.citysearch.com	Informational	Provides information about Boston area businesses, services, and events.
Harvard Pilgrim www.harvardpilgrim.com	Insurance	Provides health benefits to residents of Massachusetts, New Hampshire, and Maine.
iRobot www.iRobot.com	High Tech/ E-commerce	Manufactures and sells robots to individual consumers, educational institutions, and government agencies.
The Knot www.theknot.com	Informational/ E-commerce	Provides information, products, and services related to engagements, weddings, and honeymoons.
Marriott www.marriott.com	Travel	Provides Marriott hotel bookings, as well as information, services, and shopping.
Scholastic www.scholastic.com	Publisher of Children's Books	Provides information, materials, and services related to educational technology and children's media.
Texas Roadhouse www.texasroadhouse.com	Restaurant	Provides information on the restaurant and business franchise, including investor information.
TiVo www.tivo.com	High Tech	Sells digital video recording equipment and services.

SITE MAP DESCRIPTIONS

Each website offered a different approach to site maps. The chart below lists each site, the name of its site map, and what that site map offered.

For images of the site maps, see *Appendix: Gallery of Sites Tested* (page 132).

STUDY 1	
COMPANY NAME, URL, AND THE SITE MAP'S LINK NAME	SITE MAP DESCRIPTION
CDNOW www.CDNOW.com <i>Site Map</i>	<p>(No longer exists) Listed sections of the site that didn't appear in site navigation, including <i>Departments</i>, <i>Accessories</i>, <i>Affiliates</i>, <i>New Customers</i>, and <i>Top Questions</i>. Top navigational links (<i>Music</i>, <i>Video/DVD</i>, <i>Gifts</i>, and <i>CDNOW</i>) appeared in the bottom half of the site map. Help-related areas, including <i>New Customers</i>, <i>Account Information</i>, <i>Top Questions</i>, and <i>Help</i>, appeared at the top of the map. Category headings were not links, but subcategories were.</p> <p>A <i>Site Map</i> link appeared on the bottom of each page, as well as in the left-hand navigation on the homepage. There was also a link to the site map from the <i>Help</i> section.</p>
Documentum www.documentum.com <i>Site Map</i>	<p>Listed the site sections from main navigation, and repeated subcategories from drop-down navigation. Also included an additional content level for some areas. Both categories and subcategories were links. Categories were listed according to their order in the main navigation.</p> <p>A <i>Site Map</i> link appeared in the top right-hand corner of every screen, grouped with <i>Home</i>, <i>Contact Us</i>, <i>Careers</i>, and <i>Downloads</i>.</p>
Interwoven www.interwoven.com <i>Site Map</i>	<p>(No longer exists) Java-based dynamic diagram that listed most of the main navigational categories except for <i>Analysts</i>. Broke the main navigation's <i>News and Events</i> category into separate sections. The site map also included an additional link, to <i>ExpoSite</i>.</p> <p>Categories and subcategories were links. Only two site sections had a third—and incomplete—level of detail. Site map subcategories did not match navigation subcategories, and the site map categories appeared in a different order.</p> <p>A <i>Site Map</i> link appeared in the top left, underneath the main navigation.</p>

STUDY 1

COMPANY NAME, URL, AND THE SITE MAP'S LINK NAME	SITE MAP DESCRIPTION
Mercedes Benz USA www.mbusa.com <i>Site Map</i>	<p>Listed main navigational categories as anchor links across the top of the site map, with subcategory listings below. Categories appeared in the same order as in the main navigation. <i>Mercedes In Depth</i> was broken out into nine main categories in the site map. Category headings were links, except for <i>Models</i>. Areas were broken down by subcategory, then into more specific links.</p> <p>A <i>Site Map</i> link appeared in the upper right-hand corner of the screen along with the site search, which was an alphabetical index of site information.</p>
Museum of Modern Art www.moma.org <i>Site Overview</i>	<p>Listed categories that matched homepage navigation. Categories appeared in the same order as on the homepage, but subcategories did not all match of the homepage subcategories. Both category and subcategory names were links.</p> <p>A <i>Site Overview</i> link appeared on the homepage only.</p>
New Jersey Transit www.njtransit.com <i>Site Map</i>	<p>Listed categories from main navigation, as well as from additional areas, like <i>Help</i> and <i>About NJT</i>. Categories were listed in the same order as in navigation. Site map subcategories matched subcategories in navigation. Categories, subcategories, and third-level details were all links.</p> <p>A <i>Site Map</i> link was accessible through <i>Site Help</i>, which appeared on every page.</p>
Novell www.novell.com <i>Site Index</i>	<p>(No longer exists) Alphabetical list of <i>Areas of Interest</i>; didn't include main navigation categories. The site map also offered links to <i>Product Index</i>, <i>Pricing Index</i>, <i>Training Materials</i>, and <i>U.S. and Worldwide Offices</i>. Some of these links were further broken down into subcategory links.</p> <p>A <i>Site Index</i> link appeared at the bottom of each page.</p>
Salon www.salon.com <i>Directory</i>	<p>(No longer exists) Listed the site's main navigational categories, with subcategories for each area. Categories were not links; subcategories were. Clicking a subcategory returned a page with the subcategory name and a list of relevant articles. The page also offered an alphabetical listing of <i>Directory</i> topics, listed as links to letters of the alphabet. Links in the alphabetical list returned a list of relevant articles as well.</p> <p>A <i>Directory</i> link appeared on the homepage.</p>

STUDY 1

COMPANY NAME, URL,
AND THE SITE MAP'S
LINK NAME

SITE MAP DESCRIPTION

Siemens Medical Solutions
Health Services
Corporation
www.smed.com
Site Map

(No longer exists) Circular diagram that offered thumbnail images of actual site pages. The diagram listed navigation categories in order, counter-clockwise. The page also included other links (such as *Privacy* and *Legal*), and three additional areas: *HIPPA*, *eSolutions*, and *Case Studies*. Each thumbnail was a link to a specific page. Each section had varying levels of detail, which users could access using the + and – symbols next to some pages.

A *Site Map* link appeared on the upper right-hand side of each page.

United States Treasury
www.ustreas.gov
*Called Sitemap on the
homepage, but actual
feature is called
Alphabetical Index*

Alphabetical list of the site's topics that included some categories from homepage navigation, but not all. List was not reliably alphabetical. Some links were further broken down into subcategory links.

A link to the site map appeared on the bottom right of homepage and in various places on some pages accessible through the site map.

STUDY 2

COMPANY NAME, URL AND LINK NAME FOR THE SITE MAP	SITE MAP DESCRIPTION
<p>Administration on Aging www.aoa.gov <i>Site Map</i></p>	<p>Linear, hierarchical menu that listed navigation categories in order. Each item in the list had a "1," "2," or "3" icon representing its information level. Main navigation was also available at the top. Listed other <i>Site Utilities</i> on the left-hand navigation, including links to the <i>Visitor's Guide</i> and <i>Topics A-Z</i>.</p> <p>A <i>Site Map</i> link was available at the bottom right of every page in the footer navigation.</p>
<p>BMW USA www.bmwusa.com <i>Site Map</i></p>	<p>Contained most categories from the main navigation, along with additional content categories. Presented as four columns of bullets, with section headers in bold. All car models listed out on the left.</p> <p>A <i>Site Map</i> link appeared on every page as the last link in the footer navigation.</p>
<p>Citysearch Boston boston.citysearch.com <i>Site Guide</i></p>	<p>Various large, bolded categories appeared on the left-hand navigation as intra-page links. Major categories followed those on the primary navigation; the guide also included additional categories. Each category started with a paragraph with various linked terms, followed by a bulleted list of links that were sometimes redundant with those in the paragraph.</p> <p>A <i>Site Guide</i> link appeared in the middle of the footer navigation on each page.</p>
<p>Harvard Pilgrim www.harvardpilgrim.com <i>Site Map</i></p>	<p>Included four main categories—<i>Members/Visitors</i>, <i>Providers</i>, <i>Employers</i>, and <i>Brokers</i>—each of which had an expandable/collapsible folder. The folders were expanded by default, depending on which part of the site users entered from. Each category also featured a <i>View</i> links that took users to that section's landing page.</p> <p>A <i>Site Map</i> link appeared in the footer navigation on every page.</p>
<p>iRobot www.iRobot.com <i>Site Map</i></p>	<p>Covered all site information except for the <i>Store</i>, which had its own site map. The main site map had a linear list of categories that followed the main tabbed navigation at the top, with subcategories indented beneath them. Arrow graphics showed indent, and paper and world icons served as bullets next to various items.</p> <p>A <i>Site Map</i> link was available at the bottom of every page; if users clicked that link from the <i>Store</i> page, it took them to a separate <i>Store</i> site map.</p>

STUDY 2

COMPANY NAME, URL AND LINK NAME FOR THE SITE MAP	SITE MAP DESCRIPTION
<p>The Knot www.theknot.com <i>Site Index</i></p>	<p>One page with multiple sections. The left-side section started with categories for various photo galleries and slide shows, accessed by clicking an image. Underneath it was an alphabetical index for content areas with anchors to letters. On the right, there were categories for gifts and registry types, as well as for wedding supplies (in alphabetical order). Below that were links to local resources by state. The <i>Site Index</i> did not match the site's navigation.</p> <p>A <i>Site Index</i> link was available at the bottom of every page; the <i>Wedding Shop</i> site map was called <i>Site Index A-Z</i>.</p>
<p>Marriott www.marriott.com <i>Site Map</i></p>	<p>Six sections enclosed by colored boxes. The first five sections followed the main navigation, but did not include <i>Shop Marriott</i>. Each box included categories and subcategories. All listings were links, and categories were in bold. The main navigation appeared across the top of the page.</p> <p>A <i>Site Map</i> link was on the upper left of every page.</p>
<p>Scholastic www.scholastic.com <i>Site Map</i></p>	<p>A three-columned list, with bolded links for categories, sublinks, and bulleted third-level categories. The main categories were the site's three subsites: <i>Teachers</i>, <i>Parents</i>, and <i>Kids</i>. The additional categories' location on the site was not clear.</p> <p>A <i>Scholastic.com Site Map</i> link was available under the <i>Customer Service</i> section within <i>Useful Links</i>.</p>
<p>Texas Roadhouse www.texasroadhouse.com <i>site map</i></p>	<p>A flash-implemented map that appeared beneath the site's main navigation items. Each category had a pole extending beneath it, with signs for each of its subcategories aligned vertically down the pole.</p> <p>A <i>site map</i> link was available from the homepage, and appeared at the top of most interior pages.</p>
<p>TiVo www.tivo.com <i>Sitemap</i></p>	<p>A three-column list, with six main topics (two in each column). The first five topics followed the primary navigation exactly; the final topic was <i>About Us</i>. Bulleted categories and subcategories appeared beneath each topic.</p> <p>A <i>Sitemap</i> link appeared in the footer navigation for all pages.</p>

About Participants

A total of 30 people participated in Studies 1 and 2, with 15 in each study. All participants were employed and between the ages of 20 and 55. We screened people to exclude those working in the fields of Web design and development, Internet marketing, software programming, and usability research.

The study included a total of 18 women and 12 men:

- Study 1 had 10 women and five men
- Study 2 had eight women and seven men

In Study 1, all participants lived or worked in New York City; participants in Study 2 were from the greater Boston area.

Participants' occupations included:

- Actor/Waiter
- Administrative Assistant
- Advertising Sales
- Alumnae Relations Program Assistant (Educational Institution)
- Assistant Director of Admissions (Educational Institution)
- Artist/Educator
- Arts Administrator
- Attorney
- Business Development Consultant
- Child Psychologist
- Development Associate
- English Tutor/Reading Tutor
- Financial Consultant/Advisor
- Gallery Attendant
- Graphic Designer
- Jewelry Designer and Salesperson
- Music Journalist
- Printing Sales Representative
- Psychologist
- Public Relations Associate
- Research Scientist
- Research Statistician
- Sales Account Executive
- Self-Employed Cooking Teacher
- Self-Employed Entrepreneur
- Urban Planner

Most participants had been using the Internet for at least three years. In Study 1, 11 participants used the Internet every day, three used it several times a week, and one used it a few times a month. In Study 2, we recruited according to hourly usage: eight participants used the Internet at least 10 hours a week (excluding email), five used it five to 10 hours a week, and two used it less than five hours a week.

All participants used a PC, except for three participants in Study 1 who used Apple computers for the study.

Methodology

In both studies, facilitators gave users tasks to perform and the URL of a website to use (or a link from the browser's *Favorites* menu). Each user attempted tasks for two (Study 1) or three (Study 2) different websites. After each task, the facilitator asked users to rate their level of satisfaction, frustration, and confidence, as well as to rate the site map features they'd just used. After the users completed all site tasks, the facilitator discussed Web usage and site maps with the users. In Study 1, participants also showed the facilitator sites they had recently used or sites they planned to use in the near future.

The facilitator sat next to or slightly behind users, observing and taking notes as they completed the tasks. In Study 1, the same facilitator conducted all sessions. In Study 2, two facilitators took turns conducting the 15 sessions (both facilitators were present for every session, but only one facilitator spoke with the user during the session).

Usage Order

Each site was tested a total of three times in Study 1, and four to six times in Study 2.⁷ The order of the site usage was rotated between being used first, second, and third (in the case of Study 2) in a session. Each site was the first site used at least once.

Session Location

We conducted the studies in two different metropolitan areas.

- Study 1: In users' homes or offices in and around New York City. Participants used their own computers and Internet connections.
- Study 2: In an office in a central location in downtown Boston. Participants drove or took public transportation to the location.

Test Tasks and Discussion

We gave users tasks to perform and asked them to think out loud. The general tasks for Study 1 included:

- Take a minute to understand how the following website is organized. When you feel you have a sense, tell me what you think.
- Find a place to shop on the site.
- Use the site map to find as much information as you can about jobs at the company.
- Use the site map to find [a piece of information not directly accessible via the site map].

The tasks varied slightly across the sites selected, depending on each site's available content. We selected tasks related to shopping and jobs as they were areas common across many of the sites studied. If sites did not offer these areas, we altered the

⁷ The only exception was Marriott.com, which was tested only three times due to time constraints in one testing session.

task to suit a similar site area. In addition, the fourth task was different for each site: We asked participants to find an area of the site that we knew wasn't directly accessible through the site map, but that would be easy to find if users clicked the correct link from the site map. In other words, we asked them to find an area accessible not through the site map itself, but through a page easily accessed through the site map. For example, the CDNOW.com task asked users to "Use the site map to find information about comedy DVDs that you can order before they are released."

Study 2 tasks included:

- A general task that required a significant amount of looking. The task's goal was to see whether, after struggling to find something, users would turn to the site map. Because we didn't want users to feel nervous or intimidated by this first task, we warmed them up with easier tasks on other sites.
- On the first test site only, we asked each user the following question: "Take a minute to look at this website. How would you figure out how the website is organized or structured?" The goal of this task was to see whether users considered the site map in answering this question.
- A direct task; the goal was for users to find the site map. "Find a page that lists every part of the website."
- A general task that required users to start at the site map. If users didn't find the site map in the previous task, we took them to it at the start of this task.
- A general task in which users started on another page, and once they were working on the task, we gently interrupted them and asked them to restart the task at the site map.

For the last few tasks, some answers were directly attainable through one click off the site map, and some were not.

In both studies, after users finished testing a site, we gave them a written questionnaire. The questionnaire attempted to evaluate users' confidence, satisfaction, and frustration in attempting and completing the tasks on each site. In the questionnaire, we asked users to rate the following statements on a 1 to 7 scale, with 1 being least positive and 7 being most positive:

- The site map is easy to find.
- The information on the site map is helpful.
- The site map is easy to use.
- Using the site map, it was easy to find the information I was looking for.
- From the site map, I understand the structure of the website.
- From the site map, I understand what content is available on the website.

We then asked participants general questions about the site map and website usability (in Study 1, they answered these questions in writing; in Study 2, they answered verbally). One such question was:

“What, if anything, was easy to use and understand on the site map?”

At the conclusion of the study, we asked users to discuss their experience using the site maps and offer any additional thoughts that came to mind.

For Study 1, we also asked them to close or minimize their Web browsers and complete a final task: “Draw a diagram of the structure of the website you have just been using. Note any categories or structure that you recall from the site. Note: Do not try to draw each page, just diagram the way the entire site is organized.”

Authors

Donna Tedesco is a User Experience Specialist at Nielsen Norman Group. Prior to joining NN/g, Tedesco was a User Experience Specialist for Fidelity Investments, where she consulted on a variety of internal, B2B, and customer-facing websites. She has years of experience working with financial applications, focusing on various user segments including novice users, the senior market, customer service associates, and high-net-worth individuals. Among the applications Tedesco has improved are products for retirement services, call-center productivity, workforce management, and HR and benefits administration. She has conducted a wide array of user research on topics such as older adults on the Web, authentication methods, eyetracking, and user-centered design methodologies. She has published and presented on these topics at national and international conferences, as well as given presentations on best design practices, and usability and design research methodologies. Tedesco has a master's in human factors in information design from Bentley College and a B.S. in human factors engineering from Tufts University.

Dr. Jakob Nielsen is a Principal of Nielsen Norman Group. He is the founder of the "discount usability engineering" movement, which emphasizes fast and efficient methods for improving the quality of user interfaces. Nielsen, noted as "the world's leading expert on Web usability" by *U.S. News and World Report* and "the next best thing to a true time machine" by *USA Today*, is the author of the recent book *Prioritizing Web Usability* (2006) and the best-selling book *Designing Web Usability: The Practice of Simplicity* (2000), which has sold more than a quarter of a million copies in 22 languages. His other books include *International User Interfaces* (1996), *Usability Inspection Methods* (1994), *Usability Engineering* (1993), and *Homepage Usability: 50 Websites Deconstructed* (2001). Nielsen's Alertbox column on Web usability has been published on the Internet since 1995 and currently has about 200,000 readers. From 1994 to 1998, Nielsen was a Sun Microsystems Distinguished Engineer. His previous affiliations include Bell Communications Research, the Technical University of Denmark, and the IBM User Interface Institute. Nielsen holds 79 United States patents, mainly on ways of making the Internet easier to use.

Amy Schade is a User Experience Specialist at Nielsen Norman Group. Schade has researched and co-authored several NN/g reports, including those on intranet usability, intranet IA, and email newsletters. She also conducted user research with people with low vision for the NN/g accessibility report and with older Web users for NN/g's report on usability for senior citizens. She works with clients large and small in a variety of industries, including music, government, telecommunications, banking, publishing, e-commerce, and education, and has done extensive work on corporate intranets. She has conducted worldwide user research, including longitudinal studies and eyetracking research, in the United States, Canada, Europe, Asia, and Australia. She regularly presents tutorials on user testing, intranet usability, writing for the Web, and email newsletter usability. Before joining NN/g, Schade was an information architect at Arc eConsultancy, where she created and revised architectures for sites ranging from a family-related content site to a transaction-based sponsorship marketplace. Schade has also held various positions in Web production and advertising. She has a master's degree from the Interactive Telecommunications Program at New York University and a bachelor's degree in communications from the University of Pennsylvania.

Kara Pernice is the Director of Research at Nielsen Norman Group and heads the company's East Coast operations. Pernice has worked in the field of usability for more than 17 years. Since joining NN/g, Pernice has led several intercontinental research studies and wrote associated reports about topics such as intranets, the Web and accessibility, senior citizens, public relations, and site maps. She has developed and taught numerous seminars about these topics and about a variety of usability methods, such as the product life cycle, field studies, emotion and design, usability testing, and eyetracking. Before joining NN/g, she established successful usability programs at Lotus Development; Iris Associates, an IBM subsidiary; and Interleaf. Pernice chaired the Usability Professionals' Association conferences in 2000 and 2001, was presentations chair for UPA 1999, and was conference advisor for UPA 2002. She has an MBA from Northeastern University and a BA from Simmons College.

Acknowledgements

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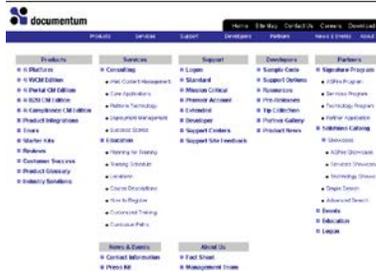
We'd also like to acknowledge Jen Cardello and Susan Pernice for contributing to the planning and execution of the second study, Elizabeth Franko and Hoa Loranger for their contributions to the first study, and Keri Schreiner for her contribution to this report.

Appendix: Gallery of Sites Tested

This appendix shows screens captured from all site maps tested in Studies 1 and 2, taken at the time of each study. The first two sections show small thumbnail overviews of each site map, while subsequent pages show closer views of the upper portions of each site map.

THUMBNAILS: STUDY 1

Documentum



(Truncated; Full screen unavailable)

Interwoven



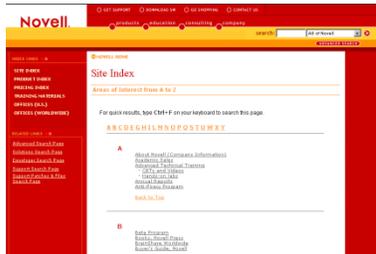
(Truncated; Full screen unavailable)

New Jersey Transit



(Truncated; Full screen unavailable)

Novell



(Truncated; Full screen unavailable)

Salon



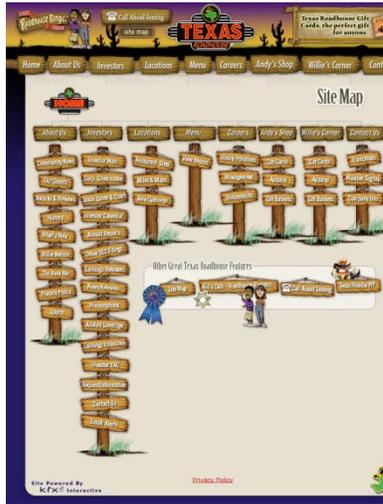
(Truncated; Full screen unavailable)

Siemens Medical Solutions Health Services Corporation



THUMBNAILS: STUDY 2

Texas Roadhouse



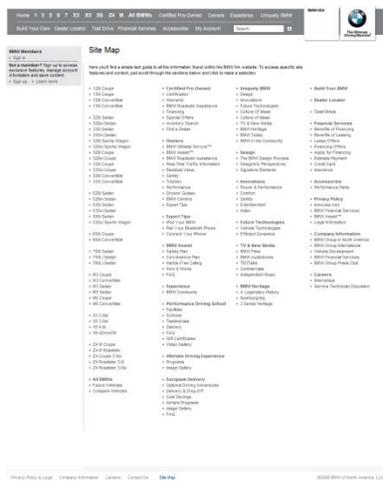
Marriott



Harvard Pilgrim



BMW USA



LARGER VIEWS (TRUNCATED): STUDY 1

CDNOW

www.CDNOW.com

Site Map

The screenshot shows the CDMOW website's site map. At the top, there is a search bar with a dropdown menu set to 'Artist' and a 'go' button. Below the search bar are navigation tabs for 'music', 'video/DVD', 'gifts', and 'myCDNOW', along with 'Help | Account' links. A shopping cart icon indicates 'contains 0 items'. A promotional banner reads 'At CDMOW: Shop FAST with Express Checkout. Turn it on now!'. The main content area is titled '::sitemap' and is organized into several sections:

- new customers**
 - [New Visitors Guide](#)
 - [First time at CDMOW?](#)
 - [Create an Account](#)
 - [CDNOW Privacy Guarantee](#)
- account info**
 - [Your Account](#)
 - [Address Book](#)
 - [Order History](#)
 - [Express Checkout](#)
- top questions**
 - [Can I cancel an order?](#)
 - [Looking for a specific song?](#)
 - [What are the shipping costs?](#)
 - [What is the return policy?](#)
 - [When will my order arrive?](#)
- help desk**
 - [Account Updates](#)
 - [AOL Quick Checkout](#)
 - [CDNOW Wireless](#)
 - [Contact CDMOW](#)
 - [Digital Music Downloads](#)
 - [First Time Buyers](#)
 - [Gifts and Gift Certificates](#)
 - [Help Desk](#)
 - [CDNOW Message Boards](#)
 - [New Visitors Guide](#)
 - [Order Status](#)
 - [Placing an Order](#)
 - [Policies](#)
 - [Promotions & Sales](#)
 - [Rewards Programs](#)
 - [Searching and Browsing](#)
 - [Shipping Charges](#)
 - [Sound Clips](#)
 - [Special Features](#)
 - [Terms and Conditions](#)
 - [Video Store](#)
- my cdnow**
 - [myCDNOW](#)
 - [Preferences](#)
 - [Favorite Artists](#)
 - [CDNOW Recommends](#)
 - [Rewards](#)
 - [Rewards Catalog](#)
 - [Wish List](#)
 - [Rate Your Music](#)

At the bottom of the site map, there are three main category links: **:: Music**, **:: Video/DVD**, and **:: About CDMOW**.



Products

- [4i Platform](#)
- [4i WCM Edition](#)
- [4i Portal CM Edition](#)
- [4i B2B CM Edition](#)
- [4i Compliance CM Edition](#)
- [Product Integrations](#)
- [Tours](#)
- [Starter Kits](#)
- [Reviews](#)
- [Customer Success](#)
- [Product Glossary](#)
- [Industry Solutions](#)

Services

- [Consulting](#)
 - [Web Content Management](#)
 - [Core Applications](#)
 - [Platform Technology](#)
 - [Deployment Management](#)
 - [Success Stories](#)
- [Education](#)
 - [Planning for Training](#)
 - [Training Schedule](#)
 - [Locations](#)
 - [Course Descriptions](#)
 - [How to Register](#)
 - [Customized Training](#)
 - [Curriculum Paths](#)

News & Events

- [Contact Information](#)
- [Press Kit](#)

Support

- [Logon](#)
- [Standard](#)
- [Mission Critical](#)
- [Premier Account](#)
- [Extended](#)
- [Developer](#)
- [Support Centers](#)
- [Support Site Feedback](#)

About Us

- [Fact Sheet](#)
- [Management Team](#)

Developers

- [Sample Code](#)
- [Support Options](#)
- [Resources](#)
- [Pre-Releases](#)
- [Tip Collection](#)
- [Partner Gallery](#)
- [Product News](#)

Partners

- [Signature Program](#)
 - [ASPIre Program](#)
 - [Services Program](#)
 - [Technology Program](#)
 - [Partner Application](#)
- [Solutions Catalog](#)
 - [Showcase](#)
 - [ASPIre Showcase](#)
 - [Services Showcase](#)
 - [Technology Showcase](#)
 - [Simple Search](#)
 - [Advanced Search](#)
- [Events](#)
- [Education](#)
- [Logon](#)

Interwoven

www.interwoven.com

Site Map

 Help

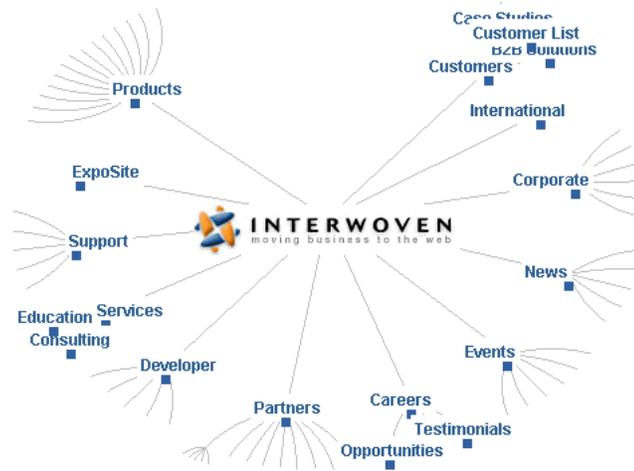
Products | Support | Services | Developer | Partners | Customers | Analysts | Corporate | Careers | News & Events

Search

Home Site Map International

- Menu
- Home
 - Site Map
 - Search

Interwoven Site Map



Instructions

Mercedes-Benz

SEARCH/SITE MAP
HB WORLDWIDE
LOCATE A DEALER
CONTACT US

· Search
· Site Map

Register for your Online Portfolio and enjoy a personalized Mercedes Experience

[JOIN NOW](#)

Site Map

Jump to our main sections below:

- ▶ Models
- ▶ StarMark Pre-Owned
- ▶ Owners Online
- ▶ Accessories Store
- ▶ What's New
- ▶ European Delivery
- ▶ Purchase Inquiry
- ▶ Finance
- ▶ Mercedes Care
- ▶ Tele Aid
- ▶ Mercedes Heritage
- ▶ News, Sports and Events
- ▶ About this Site

Models

C-Class C-Class Overview C230 Kompressor Sports Coupe C240 Sedan C320 Sedan C320 Sport Wagon C32 AMG	E-Class E-Class Overview E320 Sedan E320 Wagon E430 Sedan E55 AMG
S-Class S-Class Overview S430 Sedan S500 Sedan S55 AMG S600 Sedan Mercedes-Benz Guard S500	CLK-Class CLK-Class Overview CLK320 Coupe CLK320 Cabriolet CLK430 Coupe CLK430 Cabriolet CLK55 AMG Coupe CLK55 AMG Cabriolet
CL-Class CL-Class Overview	SLK-Class SLK-Class Overview

Museum of Modern Art

www.moma.org

Site Overview

site overview

[Index of Artists](#) [About this Site](#) [Send an E-Card](#) [Send Comments](#)

 **What's On Now**

Exhibitions
[Current](#)
[Touring](#)
[Future](#)
[Past](#)

Film and Video Programs
[Current](#)
[Future](#)
[Past](#)
[Calendar](#)

Programs and Events
[Public Programs](#)
[Family Programs](#)
[School Programs](#)

MoMA'S Press Releases
[2001](#)
[2000](#)
[1999](#)
[1998](#)
[1997](#)
[1996](#)

 **The MoMA Collection**

[Architecture and Design](#)
[Drawings](#)
[Film and Video](#)

[Painting and Sculpture](#)
[Photography](#)
[Print and Illustrated Books](#)

[Conservation](#)

Tue, Oct 09, 2001 11:46 AM Business Opportunities | About NJT | Customer Service | FAQs | Site Help

NJ TRANSIT
The Way To Go.

Travel Plans to Lower Manhattan & NJ Waterfront

Home > Site Help > Site Map

Site Map

Schedules and Fares

Train Custom Schedule Options Rail Line Timetables Fare Options Tips & Policies Routes by County Station List	Light Rail Custom Schedule Options Light Rail Line Timetables Fare Options Connecting Transit Tips & Policies	General Ticketing Information Rail Fare Options Bus Fare Options Group Travel Options Sales & Employer Services
Bus Bus Route Timetables Fare Options Bus Terminals Routes by County The Loop Tips & Policies	Connecting Services Airport Services Ferry Services Waterfront Connection PATH Trains SEPTA PATCO Amtrak MTA	Ticket Refund Information
	Accessible Services	

Novell

www.novell.com

Site Index

The screenshot shows the Novell website's Site Index page. The header is red with the Novell logo on the left and navigation links (GET SUPPORT, DOWNLOAD SW, GO SHOPPING, CONTACT US) on the right. Below the header is a yellow bar with a search box and a dropdown menu set to 'All of Novell'. The main content area is white with a red sidebar on the left. The sidebar contains 'INDEX LINKS' with categories like SITE INDEX, PRODUCT INDEX, PRICING INDEX, TRAINING MATERIALS, OFFICES (U.S.), and OFFICES (WORLDWIDE). Below these are 'RELATED LINKS' with various search pages. The main content area has a 'NOVELL HOME' link and a 'Site Index' heading. Underneath is a section for 'Areas of Interest from A to Z' with a search tip and an alphabetical index. The 'A' section lists links for About Novell, Academic Sales, Advanced Technical Training (with sub-links for CBTs and Videos, and Hands-on labs), Annual Reports, and Anti-Piracy Program. The 'B' section lists links for Beta Program, Books, Novell Press, BrainShare Worldwide, and Buyer's Guide, Novell.

Novell

GET SUPPORT DOWNLOAD SW GO SHOPPING CONTACT US

products education consulting company

search: All of Novell

ADVANCED SEARCH

INDEX LINKS

SITE INDEX
PRODUCT INDEX
PRICING INDEX
TRAINING MATERIALS
OFFICES (U.S.)
OFFICES (WORLDWIDE)

RELATED LINKS

[Advanced Search Page](#)
[Solutions Search Page](#)
[Developer Search Page](#)
[Support Search Page](#)
[Support Patches & Files Search Page](#)

NOVELL HOME

Site Index

Areas of Interest from A to Z

For quick results, type **Ctrl+F** on your keyboard to search this page.

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#)

A

- [About Novell \(Company Information\)](#)
- [Academic Sales](#)
- [Advanced Technical Training](#)
 - [· CBTs and Videos](#)
 - [· Hands-on labs](#)
- [Annual Reports](#)
- [Anti-Piracy Program](#)

[Back to Top](#)

B

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Salon

www.salon.com

Directory



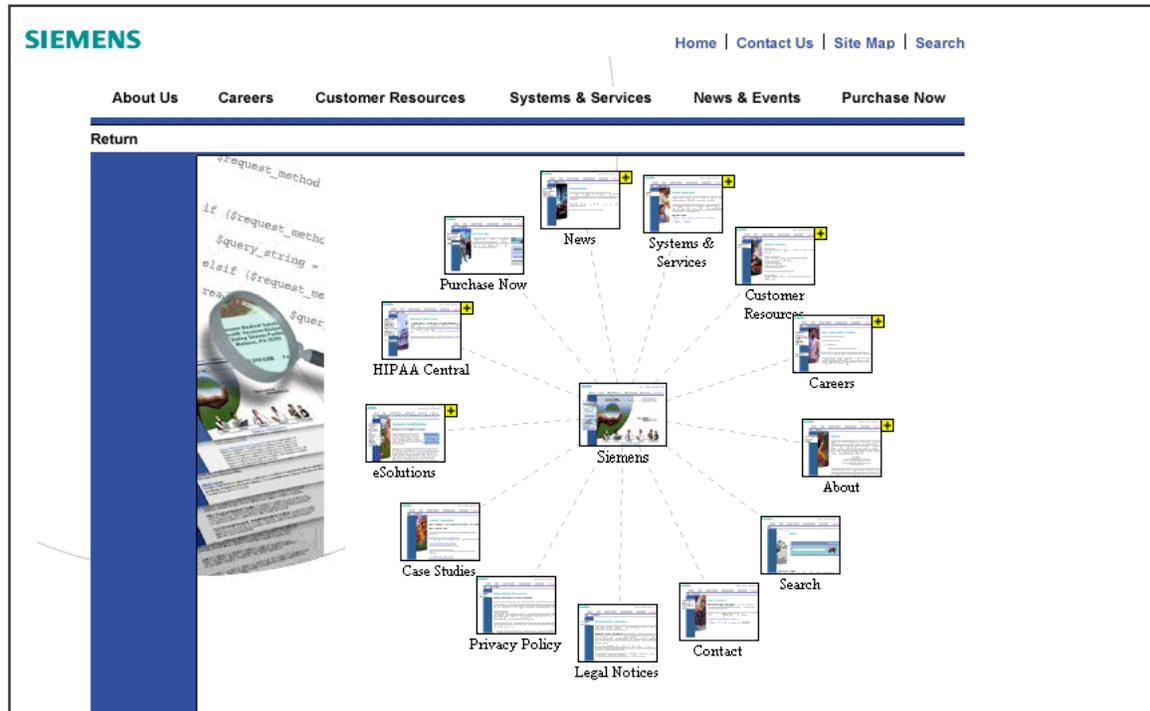
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Siemens Medical Solutions Health Services Corporation

www.smed.com

Site Map



United States Treasury

www.ustreas.gov

Sitemap / Alphabetical Index

Alphabetical Index

A

[Asset Management](#), Office of

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LARGER VIEWS (TRUNCATED): STUDY 2

Administration on Aging

www.aoa.gov

Site Map

The screenshot shows the Administration on Aging website. At the top, there is a navigation bar with the Department of Health & Human Services logo, a search bar, and a dropdown menu for "Key Topics". Below this is a banner with the AoA logo and a photo of several people. A secondary navigation bar contains links for "About AoA", "Press Room", "Elders and Families", "Professionals", and "AoA Grant Programs".

The main content area is titled "Home > Site Map". On the left, there is a "Site Utilities" sidebar with links for "What's New", "Contact AoA", "Visitor's Guide", "Site Map", "Privacy Notice", "Disclaimer", "Accessibility", "Topics A-Z", and "FOIA".

The central "Site Map" section is titled "HOME" and lists various site sections with numbered icons (1, 2, 3) indicating their position in the hierarchy:

- 1 About AoA - Main
 - 2 Welcome
 - 3 Mission
 - 3 History
 - 2 Organization
 - 3 The Assistant Secretary
 - 3 Headquarters
 - 3 Regional Support Centers
 - 3 Organizational Chart
 - 2 Legislation & Budget
 - 3 Older Americans Act
 - 3 Budget Info
 - 3 Performance Plans
 - 2 Program Results and Evaluation
 - 2 Contact AoA
 - 3 Location Map
 - 2 Jobs at AoA
 - 2 Annual Report

On the right side of the main content area, there is a small photo of two elderly people shaking hands, followed by an "Additional Topics" sidebar with links for "Search" and "Topics A-Z".

BMW Members

› Sign in

Not a member? Sign up to access exclusive features, manage account information and save content.

› Sign up › Learn more

Site Map

Here you'll find a simple text guide to all the information found within the BMW NA website. To access specific site features and content, just scroll through the sections below and click to make a selection.

- › 128i Coupe
- › 135i Coupe
- › 128i Convertible
- › 135i Convertible

- › 328i Sedan
- › 328xi Sedan
- › 335i Sedan
- › 335xi Sedan
- › 328i Sports Wagon
- › 328xi Sports Wagon
- › 328i Coupe
- › 328xi Coupe
- › 335i Coupe
- › 335xi Coupe
- › 328i Convertible
- › 335i Convertible

- › 528i Sedan
- › 528xi Sedan
- › 535i Sedan
- › 535xi Sedan
- › 550i Sedan
- › 535xi Sports Wagon

- › 650i Coupe
- › 650i Convertible

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- › 750Li Sedan
- › 760Li Sedan

- › M3 Coupe
- › M3 Convertible

- › Certified Pre-Owned
- › Certification
- › Warranty
- › BMW Roadside Assistance
- › Financing
- › Special Offers
- › Inventory Search
- › Find a Dealer

- › Owners
- › BMW Ultimate Service™
- › BMW Assist™
- › BMW Roadside Assistance
- › Real-Time Traffic Information
- › Residual Value
- › Safety
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- › Expert Tips
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- › Pair Your Bluetooth Phone
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- › Convenience Plan
- › Hands-Free Calling
- › How it Works
- › FAQ

- › Uniquely BMW
- › Design
- › Innovations
- › Future Technologies
- › Culture Of Ideas
- › Culture Of Ideas
- › TV & New Media
- › BMW Heritage
- › BMW Today
- › BMW in the Community

- › Design
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- › Designers' Perspectives
- › Signature Elements

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- › Future Technologies
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- › Company Information
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- › BMW Group International
- › Vehicle Development
- › BMW Financial Services
- › BMW Group Press Club
- › Careers
- › Internships

The screenshot shows the Citysearch Boston website interface. At the top, there is a WeightWatchers Online advertisement. Below it is the Citysearch logo with the tagline "Live like an insider" and the location "Boston" with a dropdown for "Other Cities". A search bar contains the text "What e.g., 'Pizza'" and "in Boston, MA". A navigation menu includes links for Home, Restaurants, Bars & Clubs, Hotels, Shopping, Spa & Beauty, Movies, Events, and More Categories. The main content area is divided into three columns: Boston Neighborhoods, Boston Cityguide, and Best of Citysearch Boston. The Boston City Guide section is expanded, showing a list of categories on the left and detailed text for "Boston City Guide", "Boston Restaurants", and "Boston Bars & Clubs".

WeightWatchers Online Discover online weight loss from the experts at Weight Watchers. [Go Now](#)

Citysearch Live like an insider **Boston** Other Cities

What e.g., "Pizza" in **Boston, MA** Neighborhood [Search](#) [Get Citysearch on Your Mobile Phone. Click here](#)
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[View All Videos](#)

[Home](#) [Restaurants](#) [Bars & Clubs](#) [Hotels](#) [Shopping](#) [Spa & Beauty](#) [Movies](#) [Events](#) [More Categories](#) [Sign In](#) [Sign Up](#)

Boston Neighborhoods	Boston Cityguide	Best of Citysearch Boston
All U.S. Cities	Boston Citysearch Lists	Boston Editors' Lists

Boston City Guide
[Boston Restaurants](#)
[Boston Bars & Clubs](#)
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Boston Yellow Pages
[Boston Cars](#)
[Boston Financial Services](#)
[Boston Home & Garden](#)
[Boston Lawyers](#)
[Boston Doctors, Dentists & Medical Specialists](#)
[Boston Professional Services](#)
[Boston Real Estate](#)
[Boston Health & Fitness](#)

Boston City Guide
Citysearch is your ultimate guide for [Boston restaurants](#), entertainment, [nightlife](#), shopping and services. From the best [Boston pizza joints](#) and [sushi restaurants](#), to the hottest [cocktail bars](#) and [dance clubs](#), Citysearch offers trusted recommendations, ratings, reviews and tips. Citysearch will also let you compare room rates for everything from [luxury hotels](#) to [budget lodging](#). We'll even tell you where to find the best [discount shoes](#), [department stores](#) and other shopping destinations. And for a day of pampering and relaxation, Citysearch will lead you to the finest [Boston day spas](#), [beauty salons](#), [yoga studios](#) and more.

Boston Restaurants
Got a hankering for [deep-dish pizza](#), spicy [Mexican food](#) or a creamy [ice cream cone](#)? Whether you're searching for [Chinese food](#) delivery or a greasy [hot dog stand](#), Citysearch will help you find any kind of cuisine you're craving. Locate Boston's most popular restaurants, discover hidden gems, read reviews and tips from Citysearch editors, and find online coupons for everything from hearty [steakhouses](#) to healthy [vegetarian restaurants](#).

- [Pizza](#)
- [Delivery](#)
- [Ice Cream](#)
- [Sushi](#)
- [Mexican Food](#)
- [Chinese Food](#)
- [Italian Food](#)
- [Lobster](#)
- [Steak](#)
- [More Boston Restaurants](#)

Boston Bars & Clubs
From delightfully tacky tiki bars and rowdy [sports bars](#) to trendy nightclubs and swanky [cocktail lounges](#), Citysearch will lead you to the hottest [nightlife spots](#) in Boston to grab a beer or a mixed drink, go salsa dancing, rock out to '80s music, or nod your head to hip-hop tunes. Find Boston's most popular comedy clubs, karaoke bars and [singles spots](#), and read Citysearch editor recommendations and user reviews.

The screenshot shows the Harvard Pilgrim HealthCare website interface. At the top left is the logo. To the right is a search bar with the text "Search HPHC" and a "GO" button. Below the search bar are navigation links: "Provider Home | Contact Us | Provider Directory".

On the left side, there is a vertical menu with the following items: "HPHConnect" (with a "Login" button), "Learn more.", "Sign up for HPHConnect.", "Medical Management", "e-transactions", "HPHConnect", "Pharmacy", "For Your Patient", "News & Information", "Research & Teaching", "Education", "Resources & Links", and "Provider Manual".

The main content area features a banner image of a doctor and a child with the text "For Providers". Below the banner are "Email", "Print", and "Text Size" icons. A breadcrumb trail reads "Home > Providers > Site Map".

The site map is a list of links, each preceded by a folder icon: "Member/Visitors (View)", "Providers (View)", "Medical Management (View)", "e-transactions (View)", "HPHConnect (View)", "Pharmacy (View)", "For Your Patient (View)", "News & Information (View)", "Research & Teaching (View)", "Education (View)", "Resources & Links (View)", "Provider Manual (View)", "Privacy Disclaimer (View)", "Employer (View)", and "Broker (View)".

At the bottom of the page, there is a footer with the text "HPHC Home | Privacy and Disclaimer Statements | Site Map".

iRobot

www.iRobot.com

Site Map

home | developers & educators | news | email signup ▾

iRobot® Home Robots Store Government & Industrial Robots About iRobot

Home > Site Map Search Our Site

Site Map

- Home Page
- Home Robots
 - Robots
 - About Roomba 500
 - About Dirt Dog
 - About Verro
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 - About Looj
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 - Register my Robot
 - International
- Government & Industrial Robots
 - Robots
 - iRobot PackBot
 - iRobot-John Deere R-Gator

the knot

[Photo Gallery](#)
[Dress Gallery](#)

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SEARCH

[GO >](#) [Log In](#) | [Join Free](#)
[Investor Relations](#)

MY KNOT
PLANNING
GOWNS
IN YOUR AREA
TALK
TV
REGISTRY
WEDDING SHOP
» THE NEST



index a-z

Everything you need for weddings: [wedding dresses](#) to [wedding cakes](#). [Engagement rings](#), [wedding favors](#), [wedding gifts](#)... we have it all!

photo galleries + slideshows


[Wedding Gowns](#)


[Bridal Hairstyles](#)


[Invitations](#)


[Bridesmaid Dresses](#)


[Tiaras & Veils](#)


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Afrocentric Weddings	Ask Carley (Etiquette)	back to top»

b

Bachelor Parties	Best Man (Your Role)	Bridal Showers
Bachelorette Parties	Bouquets	Bridesmaids (For the Bride)
Bands (Music)	Bridal Beauty	Bridesmaids (Your Role)
Beach Weddings	Bridal Hairstyles	Budget (Advice)
Beauty (All Areas)	Bridal Party Fashion	Budget (Tool)
Best Man (For the Groom)	Bridal Salons	back to top»

c

Cakes	China Patterns	Cultural Weddings (Real Stories)
Caribbean Honeymoons	Chinese Weddings	Customs
Ceremony	Commitment Ceremonies	back to top»

d

Dancing	Destination Weddings	Dresses (Wedding)
-------------------------	--------------------------------------	-----------------------------------

gifts & registry

Create Registry	register by lifestyle
Registry Guide	Kitchen Appliances
register by category	Cookware & Cutlery
Fine China	Barware
Everyday China	Bedding & Bath
Everyday Glassware	Home Accents
Stainless Flatware	
Fine Crystal Stemware	

wedding supplies

Shop by Boutique	Guestbooks
On Sale	Hats
New Items	Intimates
Clearance	Men's Accessories
Apparel for Her	Necklaces & Earrings
Apparel for Him	Parent Gifts
Apparel for Kids	Pen holders
Beauty	Place Card Holders
Books and Videos	Ring Pillows
Bracelets and Charms	Stationery
Bridal Shower	Table Centerpieces
Bridesmaid Gifts	The Knot Wedding Collections
Cake Servers	Tiaras
Cake Tops	Toasting Glasses
Candy Favors	Unique Favors
Child Gifts	Unity Candles
Decorations	Wedding Bells
Favor Decorations	Wedding Bubbles
Favor Holders	Wedding Cameras
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AZ - Phoenix	NC - All Areas
AZ - Sedona/Northern Arizona	NE - Lincoln
Arizona	NE - Omaha

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INFO@NNGROUP.COM

48105 WARM SPRINGS BLVD., FREMONT CA 94539-7498 USA

Marriott

www.marriott.com

Site Map

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[Find & Reserve](#) | [Deals](#) | [Destinations](#) | [Shop Marriott](#) | [Events & Meetings](#) | [Marriott Rewards](#)

Site Map

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Scholastic

www.scholastic.com

Site Map

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SEARCH

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Texas Roadhouse

www.texasroadhouse.com

site map

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site map

TEXAS ROADHOUSE

Texas Roadhouse Gift Cards, the perfect gift for anyone.

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HOME

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