

Wallflowers of the Web



development and consulting company in Malvern, PA.

Zarrinlla estimates that in a typical Web project, about 10 percent of the dollars go to programming work in Hypertext Markup Language (HTML), the Web's document structuring language. By contrast, 45 to 50 percent of resources are expended on marketing efforts, which include designing the page, writing copy and creating the architecture. The rest of the budget pie buys the server and pays the Internet service provider (ISP).

Even the programming dollars, measly as they may be, often don't go to the internal IS group. Because off-the-shelf desktop packages and extensions can automatically generate HTML, the programming is often accomplished by staff within marketing communications.

Designers, Not Programmers

For example, when the National Association for the Advancement of Colored People (NAACP) was creating its Internet page, it used popular desktop publishing and graphics packages from Adobe Systems of Mountain View, CA: Illustrator, PhotoShop and FrameMaker, which now automatically generates HTML code. As a result, the association needed few technical people on the Web project. "We wanted the same kinds of people who develop attractive magazine ads that draw people to read them to develop our Web pages. We needed designers, not programmers," says Walter Wilson, chair of the NAACP Internet project committee as well as regional technology chair of the association, who is based in Campbell, CA.

Wilson's attitude is instructive. When a Web site merely replicates a magazine ad or a brochure—which is the function of the majority of sites today—IS may be bypassed. But as sites become more com-

By Larry Stevens

As marcom departments drive Web site funding and development, core IS professionals may feel left out. But the whole organization can benefit from their involvement.

All too often when a company throws a party to celebrate going online with its new World Wide Web home page, the IS department stands on the sidelines—or isn't even invited. Surely something is out of whack when computer professionals aren't involved in putting the hottest IT to their firm's strategic advantage. What's going on?

This awkward situation arises from the nature of IT use today and of the Web in particular. On top of its technology base ride the marketing and advertising concerns that are attracting many user organizations in the first place. "Influence follows money, and marketing is spending most of the money [in Web development] these days," says Steve Zarrinlla, managing partner at U.S. Interactive, a Web

plex, graphic artists will reach the limits of their computing capabilities and will be calling on IS. For example, the NAACP site currently houses historical data, sign-up forms for classes and lectures, and schedules of events. When it begins to provide links to the association's membership lists for authorized users and connections to e-mail systems, or sells merchandise online, IS will get involved. "Once we go beyond the basics, we'll make heavy use of our programmers and technical people," says Wilson.

Forward-thinking companies that will want, like the NAACP, to take their Web sites beyond rudimentary functions are finding it advantageous to include IS in some capacity during the initial development. Even those without immediate plans for expansion of their Web functions may find IS to be a valuable consultant. For its part, whether invited to the Web partly early or late, IS has to stand ready to offer its skills and experience. To be in position to do so, it's important to know how those technical skills and experience can be utilized most effectively in different types of projects and on varying levels of development.

The Earlier the Better

By virtually all accounts, the best way for IS to contribute is to manage to get involved in the project early on. Even if phase one merely involves putting up an attractive logo and a few product pictures, IS should try to attend meetings and offer advice when appropriate.

"It may be deceptive because currently marketing is such a large part of it, but the Web, after all, is a computing environment," says Michael Nanfito, senior project manager at Free Range Media, a Web consultancy based in Seattle. He points out that technology ultimately determines what can and can't be put online. Those who choose to forget this obvious fact are heading for trouble. For example, few marketing people are aware that bandwidth determines the type of graphics that can be displayed and accessed. "Someone has to tell marketing people if the current technology they're employing can support video or even full-color, full-screen graphics. That means evaluating 56kbps networks, T-1 lines or other high-speed networks," Nanfito says.

Accordingly, even relatively simple

Web sites may benefit from early IS input. Roy Gattinella is vice president of marketing and business development at Windham Hill Records, a new-age music publishing company based in Menlo Park, CA. Because of its small size, the company farmed out most of its early Web development work. In retrospect, Gattinella wishes he had made better use of in-house resources during the development process. "A perfect scenario would be people from IS making our learning curve easier. They could have briefed us on new applications such as Netscape and Java. That would have saved us time in fending for ourselves and making the inevitable errors," he says.

A Conservative Bent

IS can also offer its naturally conservative viewpoint as a counterbalance to marketing's sometimes incautious exuberance. Ray Graber is senior consultant at the Bank of Boston and head of the bank's applied technology group, which is made up of IS and marketing managers. He remembers when the group was planning the bank's initial Web site. "The marketing people wanted to get things up as fast as possible; that's an attitude which marks a successful marketing operation," he says. "But we needed IT to say, If we do this we may have a security risk, or if we do that we could anger our customers

because our site would be over-utilized for its capacity and people would have trouble getting through."

Graber adds that IS's influence grew stronger as more business units at the bank clamored to get their services or products depicted online. For example, the consumer lending department asked about posting a loan application, which customers can print and then mail or bring to the bank. The department hopes to follow this quickly with an online application that could be sent electronically to the consumer lending database. Yet that application requires knowledge of bandwidth as well as security—issues that lie in the province of IS. "Currently we have proposals for our Web site from 15 out of our 35 business units," says Graber. "We need IT to evaluate what is possible and what resources we'd need to make others things possible in the future."

As Graber's team is learning, while phase one of a Web site may be more artistic than technical, any advance beyond that level does require a good deal of IS involvement. The *Wall Street Journal's* Interactive Edition is another case in point. The *Journal's* IS group was heavily involved when the Interactive Edition was first planned for a proprietary system rather than the Web. But after about a year of development work, the company determined that the cost and



Different stages of Web site development and deployment require different mixes of nontechnical and IS personnel. As indicated above, the IS role should increase as projects become more ambitious.

time to create the client software for a proprietary system would be prohibitive. By shifting gears and placing its Interactive Edition on the Web, the company could take advantage of the free browsers that its customers are likely to have already.

As the plan to move to the Web was instituted, IS gradually became less important to the project. "I learned to program in HTML," says Neil Budde, editor of the Interactive Edition, based in New York City. In fact, at the time the site was being developed, IS itself didn't have HTML programming skills. Budde created a series of templates for every page. These have references for paragraphs, graphics and formatting. All editors and artists have to

do is create the work and send it electronically to the pages. The code is generated automatically and transparently.

But things will soon change at the *Journal*, and those changes will require IS involvement. The Interactive Edition is now free. But beginning some time this year, readers will have to subscribe to it and possibly pay for each article downloaded (the exact pricing structure hasn't been decided yet). In any case, the most common means of payment will be through credit cards. That process will require security features. Additionally, because the payments will be automatically posted in the firm's accounting system, the Web project will have to be inte-

grated with other systems. "Using a commerce server and creating firewalls are not things editorial people can easily learn to do. Those are things we need IT for," Budde says.

BBN Corp., a networking products and consulting company based in Cambridge, MA, faced a somewhat similar experience in developing its Web site. The initial BBN site was developed entirely by the marketing communications department. A year after the site was up and running, the company hired IS professionals who spent a good deal of their time on Web page development. According to Catherine Miller, manager of interactive marketing at BBN, "We were able to get the structure in place without IT, although they would have been helpful as advisors in the beginning. But for projects we have on the drawing board now, they're essential."

For example, the company is planning a sales order system, which will enable customers to send orders over the Internet. IS is also working on ways to allow authorized customers to upload files to the corporate database. Finally, IS at BBN is looking into the possibility of creating an intranet Web site solely for the internal users.

Side by Side

The development of the Web page of Symantec Corp., a software vendor headquartered in Cupertino, CA, provides a good example of how IS on one side and marcom on the other can work in partnership to develop an effective Web page.

The idea to develop the company Web site originated with IS but not because that department was tasked with developing new marketing ideas. "Those were the people who knew about the Internet and were using it on a daily basis to get information," says Vicki Ziegler, business development manager at the Toronto office of Symantec.

Once the idea was hatched, the spotlight shifted to a group of marcom people that included technical writers. The group, which eventually became the online business development team and is now headed by Ziegler, was tasked with determining content for the Web site. Team members fanned out over the company, meeting with business managers to find what they wanted to communicate in the new Web medium. Among the responses were these: The support department wanted to post technical information sheets; product groups wanted to showcase their products; marketing people asked to make press releases available; and human resources hoped to use the Web for job postings.

At the same time, IS began boning up on the technical side of Web development. "We made a clear distinction between the people who run the servers and the people who develop and publish the content," says Ziegler. She believes that a dangerous pitfall is "too much blurring of the line between IS's responsibilities and marketing's responsibilities."

Now that Symantec has begun to do electronic commerce in a limited pilot project, IS will soon be more heavily involved in the site. Currently, the company is selling only one software product online. Users enter their credit card information and then are allowed to download the software they have purchased.

To get this pilot up and running quickly, Ziegler opted to hire a third-party service company. Because of the success of the pilot, all product managers at the company now want to put their products on the Web. So shortly Symantec will bring that function in-house, and IS will have to shoulder the responsibility of installing and maintaining secure commerce servers. "Basically we'll have the third-party supplier do a brain dump with our IT department," says Ziegler. After that, the company will be on its own, but almost everyone will have a stake in the results.

How to Prepare

Given the likelihood that eventually IS will get an invitation to the company Web party, it's a good idea to ask in advance whether your department is ready to assume its role. In many companies, the answer is no. "It is fair to say that many IT departments don't have the skills needed for Web development," says Jason Teitler, director of marketing at ANT Internet Corp., an ISP and systems integrator in Westbury, NY. HTML coding experience may be rare, although the language is easy enough to learn that skills usually can be acquired quickly. And without experience, many IS departments don't know the components needed to set up a Web site.

But if programming HTML is not so tough, customizing and integrating the Internet server with the internal network can be. According to William Gafford, division vice president at recruiting firm Romac International of Philadelphia, while packaged solutions are available, even for creating firewalls and encryption systems, they often work only in small, relatively uncomplex sites. In general, the more the

internal systems were customized, the more the Web server also must be tweaked. "If you bought Microsoft Mail and installed it out of the box, you can connect it to your Web server using standard off-the-shelf tools. But if you've customized the heck out of the e-mail system, you'll probably have to do an equally arduous customization job on your Web server," says Gafford.

Another pitfall is that IS departments that want to be involved in Web development may have to get used to working with software that isn't as stable as they prefer. In fact, many IS departments have a policy against turning loose beta versions of products. This is certainly reasonable, since no one wants to be constantly rebooting after program crashes. But with the current state of Web technology and the pressure to produce a working site, you can't be so rigorous.

"With many of the Web development tools we work with, we never see a true release," Teitler says. "If you wait for the final release version, your competition will get the edge."

IS may also be called upon to maintain the Web servers, which may be a new and time-consuming duty. "The department should think long and hard about whether it wants that kind of responsibility," says Zarrinlla of U.S. Interactive. The answer depends partly on the kind of work IS is accustomed to doing. If virtually all IS functions are in-house, and the company has a major data center with staff on call 24 hours a day, it may be able to accommodate the additional tasks of maintaining the Web server. But companies in which there are no critical activities that require always available or fault-tolerant systems should realize that going to the Web might require greater expendi-

tures of time and responsibility than ever before.

Besides technological considerations, companies have to consider issues of corporate culture. In some cases there is a historical gulf between IS and the business units. That condition sometimes was fueled by a perception in the business units that IS takes too long and spends too much on projects. And many business units that have gradually weaned themselves from IS by bringing in desktop systems don't want to reconnect. On the bright side, most experts say the Web can be the right place where IS and business functions can find common ground. In fact, this could be the beginning of a beautiful friendship. ■

***Larry Stevens** writes about business and technology from Monson, MA. He can be reached at 71412.631@compuserve.com.*