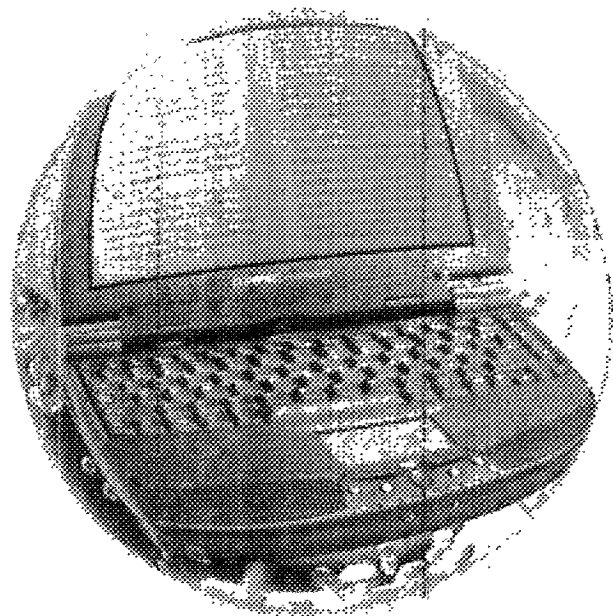


It's the kind of thing that could kill a library. Your organization is acquired by another company. There's massive reorganization. Budgets are slashed. Upper management decides the doors to the information centers will be closed—permanently.



Virtual

by Thomas Pack

But when the library staff at Digital Equipment Corporation faced that situation, they not only survived, they thrived. Now known as WebLibrary at Compaq Computer Corporation in Littleton, Massachusetts, the library is a virtual service that excels in content integration, user-based system design, and the development of a high degree of synergy between library and IT functions.

GOING VIRTUAL

WebLibrary began in March 1996 as a modest online service that consisted of an implementation of First's intranet news product. It was a pilot project in Digital's Corporate Library Group, a large, traditional library organization with multiple information centers. In June 1998, Compaq acquired Digital and soon the site-based information services were eliminated or spun off to other business units. The lending library collection was put in storage.

"That definitely was a painful period," said WebLibrary Development Manager Andy Breeding. "We didn't have much choice. Compaq had a

different attitude toward what it would support as a central corporate service."

Of course, the closures were painful for many of the library's users, too. "The most unhappy ones were the technical researchers, for whom the hardcopy resources were important," Breeding said. "We surveyed them after the closure and got some great feedback. They told us that having the materials helped contribute to a culture of technical excellence, how it helped them develop better products, how it helped them support customers and solve customer problems. So that was a key collection of findings that helped build a case to bring the service back in a Web-based format. Now people can browse the catalog via the Web, and they can request items to be sent to them."

Breeding also noted that during the acquisition, there was a danger the library would lose visibility among the company's employees, but the online service did get a few lucky breaks. "One way in which we were fortunate," Breeding said, "was that the other parts of Compaq didn't have a Web-

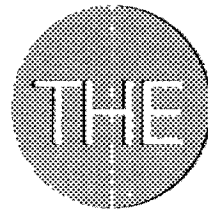
based service comparable to what we had. So it was fairly easy to say. 'Look, this is the way to go. This is the way of the future.'"

FROM REFERENCE LIBRARIANS TO INFORMATION ANALYSTS

Gradually, the scope of WebLibrary grew, but the transition to virtual services wasn't always smooth. There were staffing issues to deal with, for example. Breeding said, "There's a certain set of skills necessary to work on the Web that's a little different than the skill set required before. Some people took to the Web and were interested in it; others were not as thrilled. They preferred the direct, personal interaction of being an information intermediary.

"At one point, we had information consultants who put a lot of value-added analysis into reports. After the acquisition, that type of research was deemed to be an activity that should take place within the business units. So some of our consultants left to work for other firms, while others successfully made the transition to working within the units. We now index their

Fulfilling



vision

OF
THE

library

THE CUTTING-EDGE
WEBLIBRARY AT COMPAQ
COMPUTER CORPORATION

primary research and make it available on WebLibrary.

"We still emphasize client contact, but our information analysts now are really subject-area specialists who publish Web sites. We have nine staff members who, in the previous environment, may have been information analyst consultants that did research for people or they may have been reference librarians. Now their responsibilities are to publish sites, stay connected with key people in the business units, assess needs, and get feedback. They still do some intermediary research for people, but the emphasis on this activity has been much reduced.

"Our analysts provide a customized view of all the WebLibrary content that's pertinent to their area, whether it's news or market research. They also integrate links to other resources within the company. There's an information repository where a lot of internal literature goes so we set up canned queries to tap into it. A user can click a link that takes them to all the documents related to, say, ecommerce from that repository

"So the analysts constantly are on the lookout for new content, and a lot of them have newsletters they email to people in their interest areas. We rely on email a lot. We use push technology to make people aware of the content, and that's also a key way to get people to use the site."

So are the disaffected library users happy with the online approach? "Yes, we've gotten a lot more services on the Web, a tremendous amount of content, and the system has had some continuity over time. It has developed and expanded so that we have a loyal user base, and I would say the satisfaction level is very high, even for a lot of the technical employees. We added services like IEEE Digital Library, and users now have online access to most of the information they went to the physical libraries for. So, generally, people have been

pleased. Then there's all the remote people who never had access to the physical libraries anyway, so their access and services have just been getting better and better."

Overall, Compaq employs about 65,000 people and there are another 40,000 contractors. Per month, WebLibrary gets more than half a million



The staff at WebLibrary. 3rd row: Kathy Kessler, Charla Jensen, Beth Phillips, Andy Breeding, Stephen Dougherty (overall group manager). 2nd row: Tracey Storey, Roberta Tullis, Carol Griffin, Joan O'Brien, Cynthia Wolfe. First row: Dave Barbrie, Rob Rummell, Richard Coles



page views and about 25,000 unique users. The library serves employees across the company, but Breeding said the staff pays special attention to key groups: "Primarily we're targeting marketing and product managers, business planners, the engineering and technical staff, and the sales force."

LEVERAGING IT EXPERTISE

WebLibrary is a product of Compaq's Information and Research Services group, which has a staff of twenty-one. Breeding manages the group's Web technology team. "We're responsible for the infrastructure, the indexing, the publishing processes, dealing with the vendors, and anything else required to integrate the content and to make it functional," Breeding said.

He added, "One of the critical success factors for our group has been the ability to have IT professionals and the library folks in one group, working together as a team. We've had a lot of other companies in to look at our site [Allied Signal, GTE Internetworking, Abbott Labs, BellSouth, and Arthur Andersen are a few of the organizations that have benchmarked WebLibrary] and a lot of times, the issue they ask about is 'How can we get IT to help us do this or that?' But, in our case, we have the resources reporting to us and under our control.

"We work with the central IS organization. They provide the basic infrastructure, but when it comes to dedicated resources for our applications and our custom Web development, we have them. In my group, we've got a programmer, a database administrator, and a system administrator. We have an MLS librarian who is our editorial Webmaster and basically manages all the authoring activity of the analysts. She also does site information architecture and usability work. We also have an MLS librarian who is the program manager for our Web-based OPAC.

"In the other group, the analyst group, some of them are MLS librarians; others are folks who have worked in market research and done analysis. My manager, the overall group manager, comes from a market intelligence background. I come from a library and engineering background.

So we can draw on a mix of backgrounds and skills."

APPROACHES TO CONTENT INTEGRATION

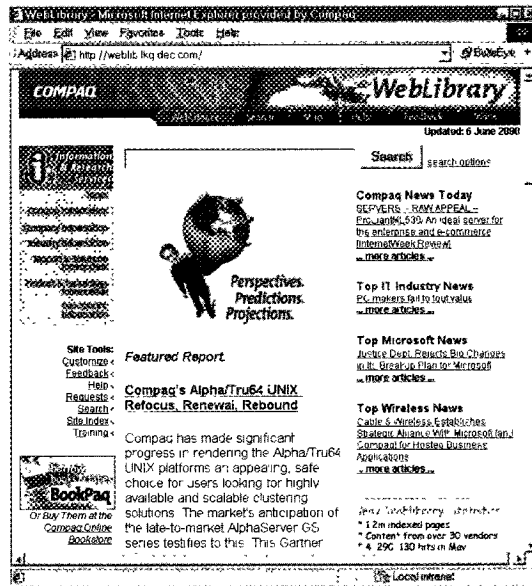
Overall, the WebLibrary staff has created a collection of more than 1.2 million fully indexed online documents—over 18 gigabytes of data. The library site hosts and delivers integrated access to content from more than 20 vendors, most of which are market research suppliers and IT advisory services. WebLibrary's tagline is

"Compaq's intranet source for information on IT markets and technologies."

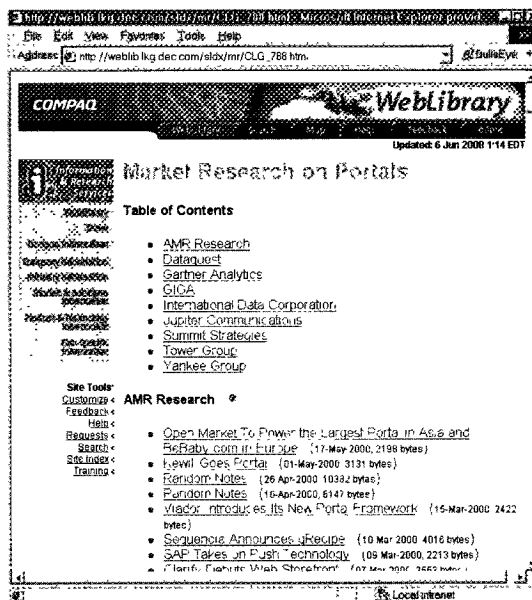
"We integrate content from vendors like the GartnerGroup, Dataquest, IDC, Datapro, and the Yankee Group," Breeding said. "We try to get the vendors to deliver content into our intranet. There are certain metatags we require, and we have a requirements document. We try to set up automated delivery as much as possible. We have scheduled FTP jobs that pull the content as well as scripts that load the files onto the file system, create browsable indices, and index the content for the search engine for full-text retrieval and agent profiling.

"When there are negotiations with vendors, we have somebody who will talk with them about the technical delivery issues. The larger, more sophisticated vendors with dedicated IT staffs are eager to make their product intranet-friendly. Some of the smaller IT market research firms, the more boutique-type firms, have much less in the way of IT resources. In some cases, the analysts themselves are actually loading the content. In other cases, we manually take delivery of content via email, or sometimes a vendor will send us a CD-ROM and we'll copy it. So there definitely is a lot of work involved in integrating all this content. I think that's a key part of the value we add."

The WebLibrary staff also adds value by making much of the content available through a common interface that provides Yahoo!-style topic browsing and cross-vendor searching. "We have what I would call online gateway pages to Internet services—online vendors that are big self-contained services in their own right, IEEE Digital Library, for instance. It's impractical to pull that in [to the common interface], but for the ones



WebLibrary's home page



Example of topic-based market research page (aggregates content from multiple vendors)

we do pull in—by virtue of having consistent metadata—we create index page templates that provide the same look and feel as all the other pages. We make that consistent so the user isn't confronted with a different interface for each vendor."

USER-BASED DESIGN

Breeding's staff designs many of its services based on the results of usability testing. "Essentially, we recruit five or six users each time we have something to test. Then we have our usability person sit down with them, pose some problems, and watch what they do.

"About a year ago, we did a major redesign where we recategorized all the content on the site. We got a representative sample of different users. Then we printed out sixty or so pages of representative site content and asked the users to sort the pages into piles and label them. We asked, 'What would you call this type of information?' We did a couple iterations of that and then created some labels and categories based on how the users perceived the information.

"We're also doing things like looking at our search logs. We see if there are certain themes people are searching for and then elevate that content to the top of the site. We're making some changes to the search engine now so we're looking at the logs to see which features people use and which searches are clearly unsuccessful. For instance, we recently made a decision to disable case-sensitive searching because we could tell from the search logs that a lot of people were entering searches that essentially wouldn't succeed because the case-sensitive searching blocked lots of hits. The alternative case, where case-sensitive searching actually helped, happened much more rarely. So the search log data is very helpful to us."

Also helpful have been findings from WebLibrary's spot surveys. "We've used JavaScripts that let us put little surveys out there—just a couple of questions people could answer quickly. We used them when we were considering changing a newsletter from ASCII to HTML, and we wanted to let people vote on it.

"Recently, we've connected with an outside firm that's going to do the surveying for us. We include a little bit of

JavaScript on a number of our key pages, and a box will pop up; every hundredth user will get surveyed. We'll use cookies to ensure that people don't get resurveyed for at least six months.

"It's going to be an ongoing survey that will give us benchmarking information because the outside firm, cPulse, also is working with other companies. We'll be able to see, for instance, how our intranet site stacks

up with others relative to some very specific things like navigation and search and user satisfaction."

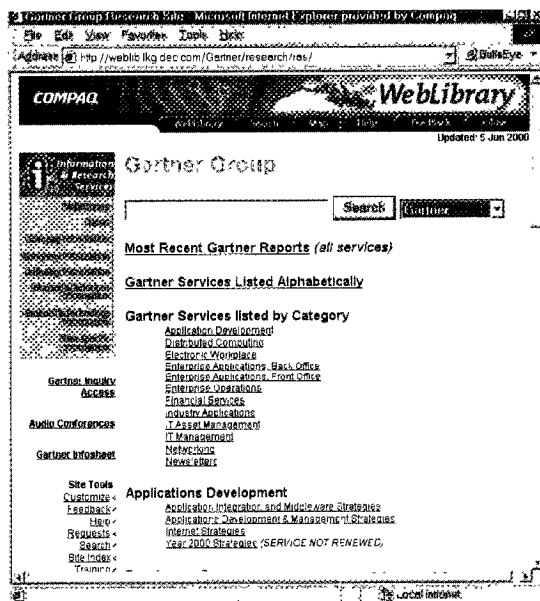
MAINTAIN SATISFACTION AND RAISE AWARENESS

Despite the obvious popularity of WebLibrary, the staff continually tries to increase awareness of its services through internal marketing programs. Breeding noted that "too many times people have come to us and said, 'This is a great service. How come I never knew about it?' So there's been a big push to raise awareness. One of the key things we've done has been working to be pervasive via link placement on the intranet.

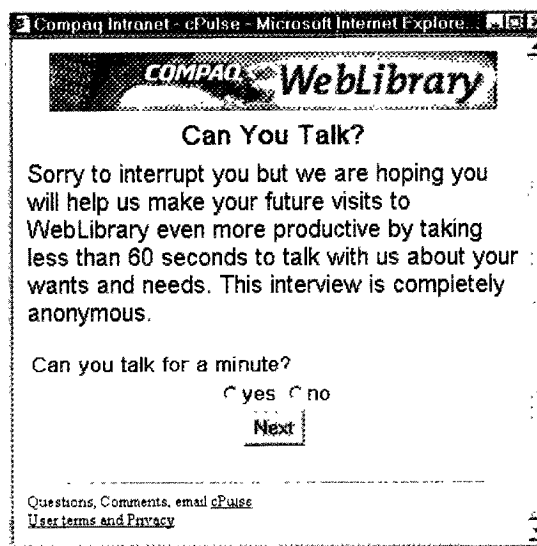
"Unlike some other library organizations, we don't have a privileged intranet position. The people who control the intranet are in the communications and the sales and marketing arenas, so we have to work closely with them to ensure that our stuff gets good visibility, and to work within their standard framework.

"We also have worked with Webmasters and publishers all across the company because there literally are scores, if not hundreds, of relevant Web sites that serve various business units or groups, and we don't necessarily care that people come through the front door and access the main WebLibrary interface. If we can get groups to link to specific content pertinent to their needs or interests directly from their Web site, that's great. We track the usage. We track the referring Web site in our log so we can see where usage is coming from, and we actually task the information analysts and, to some extent, measure them on their ability to generate traffic.

"Also, one of our analysts is almost entirely devoted to training, so that's another



An example of how a vendor page looks on WebLibrary—this standard look and feel is carried across all the vendor pages



Opening screen to pop-up survey that queries every hundredth user on WebLibrary (cookies prevent repeat surveying)

key way we connect with users. In the past, we gave lip service to training, but now we have somebody totally devoted to it. We recruited Ran Hock, a search expert and author of *The Extreme Searcher's Guide to Web Search Engines* (and frequent contributor to *ONLINE* and *EContent* magazines). He and our analyst co-presented some seminars covering general, technical, and competitive searching. This year over a thousand employees have already attended these seminars, so they've been a big success—more successful than we originally thought they would be.

"A lot of people say a Web site should be so easy to use it shouldn't need any training, but we definitely have found otherwise. Our site has a lot of functionality and a lot of content, and it really helps people to have somebody take them through it."

AN INTERNAL SYNDICATOR OF EXTERNAL CONTENT

Besides technical information, WebLibrary enables users to receive customized news services. "We get a feed from NewsEdge and from Dow Jones, and we've created our own profiling tool and news environment. There's a site tool we call Customize that users can click to set up a profile. Then they can select from a large list of topics and companies for news updates."

Breeding said one WebLibrary initiative involved providing customized news to Compaq's top officers. "As a service to the executives, and in sort of a proactive way, we set the profiles up for them. It's an agent-based system, and once a day the executives will get an email with titles and URLs to full-text articles."

Was this an effort to maintain visibility for the library among key executives? "We definitely thought it was important that they be aware of the service and use it and know the value of it. So that was a conscious decision, but I would say the lion's share of our efforts have been more broad-based—to actually getting the users out there aware of WebLibrary and the business unit managers aware of it."

But, Breeding added, the library recently has focused some of its efforts on services for Compaq's sales and marketing division. "Our group

recently was moved into worldwide sales and marketing. In the past, we've reported up to technical services organizations. Now we're focusing a lot of energy on the sales force. Many portal initiatives have been springing up to serve facets of the sales force, so we're looking to work with those folks to serve as an internal syndicator of external content and get it embedded in those portals. We know there isn't going to be just one portal for the company, or even necessarily just one for the sales organization. There are a number of these efforts.

"We've been tasked with going to these folks and finding out what's going on with their portal initiative and saying, 'Okay we've got all these feeds. We've got all this content. We have our own IT expertise. We can help embed these feeds—whether they're market research, or news—into your portal.' Typically, a lot of these folks are looking for good, compelling content customized for their target audience, so we can help them. That's a new direction for us."

DIVERSE DIRECTIONS

Another new direction involves electronic books. "We're doing an ebooks trial," Breeding said. "We're finding that—particularly for the remote geographic regions—it's not all that cost-effective to circulate books, so we're evaluating a couple of different ebook vendors. We think that has a lot of possibilities because some of the vendors are getting a lot more content." [For more on ebooks, consult Don Hawkins' article on page 18. —Ed.]

Breeding said a big technical project for his staff is to provide improved user-tracking so the library will be able to measure content usage by business unit and cost center. "Our first attempt to capture user IDs for all our users—via an NT authentication requirement—failed because the environment proved to be too heterogeneous. The burden of helping people with technical logon issues proved too great to support the scheme for all our users. Presently, we're evaluating a cookie-based scheme to provide a less burdensome way of harvesting employee ID information for user-tracking purposes. So when renewal time comes for some of the big ticket items, we can go to the VPs or the

business unit people and say exactly how much their business unit used the content."

The information is important, Breeding said, "because we have a funding model where we have a base budget that will buy content of general interest across the corporation, but we look to business units to fund content specific to them."

Another new direction for WebLibrary involves "looking at intranet toolkit options for better integrating certain content with the site. An example is the company information area. We have news on about 600 companies. We have market research. We have various links to company information set up in a template. But we're finding that it's a lot of work to maintain that information. In addition, we have services like OneSource and Dun & Bradstreet for people who want even more detail, but the researchers have to use separate interfaces. That's confusing to them. So we're looking at some vendors who can provide company information that will reside on their servers, but it will look and feel like it's on our site.

"The company area is really targeted at the sales force, and we also are in the process of defining which of the key data elements they need. As information professionals, we tend to equate richer, deeper content with better content, but, in some cases, what the users want is something very simple. If that's the case, we're going to give it to them and, ideally, it all will be within one interface."

Giving users what they want is just one way WebLibrary fulfills the vision of a virtual library that manages mission-critical information throughout an organization. "In a nutshell, our mission is to enable Compaq decision-makers to make informed business decisions," Breeding said. "As I see it, we're leveraging some very large company expenditures in external content, including market research and IT advisory services. We're increasing the usage and accessibility of the information via a one-stop shop. And we're saving a lot of employee time."

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Comments? Email letters to the Editor to editor@onlineinc.com.