

OSU learns Web lessons as it gears up intranet to serve student Web pages

BY JOHN MIKULENKA ■ When Oklahoma State University (OSU) began beefing up its Web presence two years ago, the public-information office had a fairly simple goal: to ease its workload by provid-

ing a one-stop resource for prospective students. Now OSU has an intranet that not only attracts students to the campus but also functions as its Web application-development platform.

"This whole thing has grown so quickly in the past two years — it's just amazing," says Tom Johnston, a broadcast coordinator in the school's public-information office.

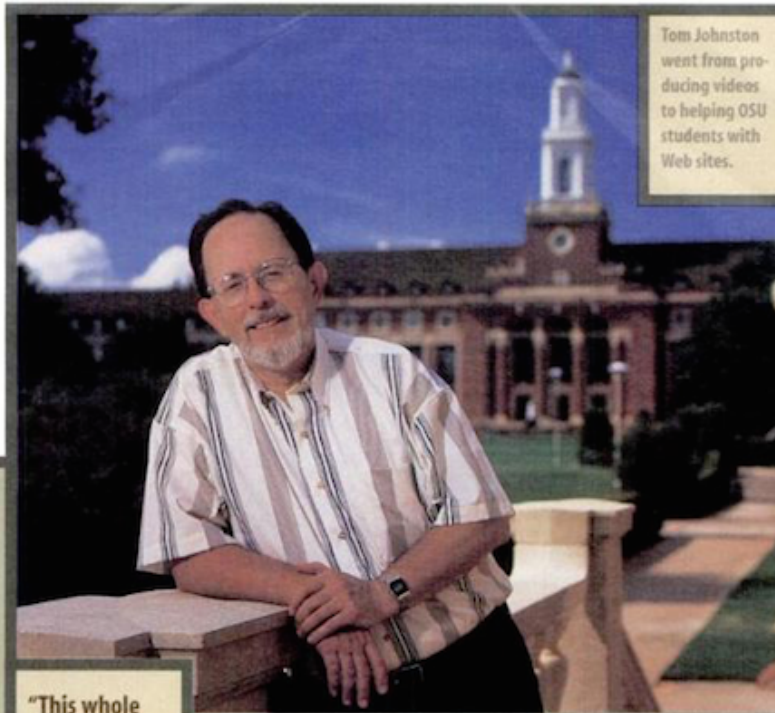
In a relatively short time, Johnston has gone from producing student-recruitment videos to managing the OSU e-mailbag, which averages a dozen new messages per day. Many of the messages are from would-be transfer students in other countries.

The Web site also has become the primary source of information for the 19,000 students at OSU's main campus, in Stillwater. Among its myriad features are maps highlighting the locations of classrooms and dormitories, as well as news announcements.

Johnston and his colleagues are responsible for the content and administration of the OSU home page, which typically gets 40,000 hits per day. As for the 6,100 Web pages that have been created so far by 2,200 students, the page administration is mercifully a built-in feature of the current database server. But that has not always been the case.

INITIAL BABY STEPS. The early implementation of student Web pages at OSU was about as graceful as a toddler in high heels.

"The systems in place at that time were rudimentary," says Dennis Whiteman, presi-



Tom Johnston went from producing videos to helping OSU students with Web sites.

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dent of FastPipe Media, in Stillwater. Whiteman was brought in as a consultant, and he promptly steered OSU's Web site away from the Unix server in the university's Computer and Information Science division to a Macintosh server located in the public-information office.

Whiteman's work snowballed when OSU decided to give students the tools to create their own home pages. With a budget of \$2,500, Whiteman set up a system using an Apple Internet Server Solutions 6150 server bundled with StarNine Technologies' Web-Star software. Whiteman added Maxum Development's NetForms and NetCloak software as CGI's. But the toddler he had created had difficulty remaining on its feet.

"Business professors assigned [Web page-building] as a class project, and within hours, we had 300 students trying to create pages at the same time," Whiteman says. "The server was overwhelmed."

LONGER STRIDES. Whiteman sought help from Wayne Walrath, a software developer and head of Acme Technologies, in Ridgefield, Conn. The two had met online on CompuServe. For the OSU job they were eager to implement PageFactory, a program developed by Walrath that serves Web pages out of a database rather than a file system, allowing students to maintain multiple-page Web sites.

According to Walrath, PageFactory reduces administration time while offering more control to university officials.

"PageFactory is very decentralized," Walrath says. "You've got your account, and you can do whatever you want. But at the same time, there's a monitoring capability."

During the fall of 1996, Whiteman installed PageFactory at OSU by adding a Power Mac 7600/132 server, dedicated to hosting a Butler SQL database, in the public-information office. Since then, student accounts have tripled, and server crashes have all but ceased. In March of this year, Whiteman added another Power Mac 7600/132 server and, using PageFactory, brought all faculty and staff home pages online.

"I've always thought [PageFactory] was a good, easy environment for someone who's

new to the Web," says Kleven Bingham, an electrical and computer engineering student who was among the first Web-page builders at OSU.

"The new user application has been automated, so PageFactory pretty much runs itself now," Bingham says. "There are very few administrative details to deal with, except for answering e-mail — usually questions related to HTML and programming. There's also a large volume of questions about how to upload image files, but that's not a function of this software."

Walrath and Whiteman are working on that. In fact, PageFactory 2.0, which they hope to implement by year's end, will support image uploading via HTTP and offer a hierarchical file system.

Whiteman says the new version also will allow users to create forms. This will enable graduate students to conduct online surveys, and professors will be able to give the ultimate take-home test.

"All of the lessons we learned in 1.0 have been heeded," Walrath says. "With all humility, this is really turning into a Web operating system."

John Mikulenk is a free-lance writer in San Francisco.

One-stop resource

■ **Challenge** To give students the ability to create their own home pages on OSU's increasingly popular Web site.

■ **Solution** A new software application that served student Web pages off of a database rather than a file system.

■ **Benefits** Server crashes all but eliminated, administration time reduced to minutes, and tripled student accounts in one year.

■ **Surprise** Created a Web application-development system for a large group of users with an investment of about \$30,000.

■ **Key to success** Shifted oversight of the OSU Web site to the public-information office, which trusted its best ideas to a consultant.

■ **Advice** Build for growth.

■ **Web site** <http://www.okstate.edu>

■ **Score** 739