

PHYSICS NEWS FEATURE

Professor's Hobby Brings Technology to the Public

By Ashley Yeager

Navigating the Internet in the 1990s was like sailing the seas without a compass—the language of the World Wide Web was as foreign to the public as a sense of direction was to early ship captains. But as with all technology, the few geniuses who could master the seas and the Internet devised gadgets and programs to help anyone navigate.

Mike Guidry is one such mastermind, who found inspiration for Internet programming in his wife's work with local fifth-graders. In 1992, Jo Ann Guidry was awarded a \$20,000 grant to buy technological hardware for Farragut Intermediate School, and she wanted to integrate the Internet into the school. Her students were able to create a Web page for the school and for the town. Each year they updated and added to the sites.

In teaching students to design Web pages, the Guidrys realized they could help other teachers and students learn how to design content and navigate the Web. Working together, they developed a program, called [webTeacher](#), as an instructional resource.

"The program was state-of-the-art and got teachers online and showed them how to use the Internet to teach," said Guidry. "It showed K-12 teachers how to do basic things, like put their knowledge onto a Web site."

In its beginnings the Internet was used strictly for educational and governmental purposes, linking universities and high-profile agencies to exchange research ideas and information. But as the National Cable Television Association (NCTA) became more involved in linking up schools and private consumers, the need for Internet information and navigation instructions became obvious.

NCTA offered its cable modem to schools for free as an educational initiative in an attempt to expose students to the Internet. The goal was to have the kids influence their parents to install a similar system at home. But the World Wide Web needed information.

"The Internet needed content," said Guidry. "The schools would just hook up."

Programming was one of Guidry's hobbies. Computer navigation was not foreign to the theoretical astrophysicist—he was accustomed to using supercomputers at Oak Ridge National Laboratory to study and mathematically calculate and predict cosmic events. Developing Internet programs, therefore, was not a hard skill to acquire.

In the early-to-mid '90s Guidry developed software for the Web as a teaching tool. This beginning in educational programming led to other instructional programs, most notably his introductory astronomy course and partner Virtual Astronomy Lab, which stemmed from his role as an introductory astronomy professor.

“Astronomy is well-suited to the Internet because it is a lot of visual information,” Guidry said. “I could see the possibilities for interactive, and so I started paralleling the online information with my regular course.”

Guidry considered creating an online course after he offered the resource to his students. “I asked if anyone had gone on the site and almost every hand went up,” he said. The course became entirely Web-based in the fall semester of 1997.

Once the popularity of the online course grew, textbook publishers began contacting Guidry in an attempt to release the program nationally for other schools and educational facilities. Companies such as Brooks-Cole and Prentice Hall made offers. Brooks-Cole won the bid for [the astronomy program](#), but Guidry developed an interactive biology program that Prentice Hall now distributes.

The programs are available today, and Guidry employs a staff to keep the Web-based programs current. “In principle, the Internet has a lot of potential because it can be updated on a daily basis,” he said. “The Web has changed how and when we access information, and in this period is as important as the printing press.”

Because of the immediacy of the Web, Guidry believes that the Internet is having a much larger influence than people realize. Staying current with information in research is one example of how the Internet has revolutionized scientific study. Guidry and other researchers have access to the most recent articles and preprinted papers.

"As little as 10 years ago, we (scientists) had fewer communication options, and so we often found out about other research ideas and information through reading printed journals, but the papers still being revised were not readily available unless you knew the person writing the paper or heard about it at a conference," he said. "Now I can go to what is called the preprint archive and pull up papers that have been submitted, but not yet printed in the journals."

Guidry believes that this access to new articles and information keeps scientific research current and relevant and links professionals in a diversity of fields.

As he explained, the importance of the Internet lies in its ability to provide access for people to share ideas and information. Through his programming, he introduced the potential of this new technology to the public. Thanks to his Web content and design, more teachers and students are able to use the World Wide Web for instruction and learning and have the opportunity to continue using the Internet for educational purposes.

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