

Web sites made easier

Mini SQL builds databases; PageMill 3.0 makes HTML work a snap / **Simson L. Garfinkel**

COMPUTERS ARE great for organizing large amounts of data. But if you've ever tried to build a Web site to do it for you, you've probably had a rough time.

The simplest way to publish information on the Web is to give each item its own page. But this approach quickly gets out of hand if you are building a site that has information about thousands of different items. Even with advanced search systems, it's hard to navigate through thousands of pages looking for the precise item that you want. And if you're the Webmaster for such a site, good luck with the updates!

Large Web sites such as Amazon.com and CDNOW solve this problem by using databases. When you click "Search" at Amazon.com, a database running on the company's Web server scans through a million virtual index cards, searching for the one that matches your criteria. The program then takes this information, formats it to look like a Web page, and sends it back to your browser.

Two of today's most popular databases are Oracle and Microsoft SQL server. But they're also very expensive. Netscape bundles a version of Oracle with its SweetSpot server for \$3,000; Microsoft SQL server costs \$1,800 for a 10-user license and \$10,000 for the

50-user "Enterprise Edition."

On a Web server, the number of "users" translates to the number of simultaneous connections that your server can handle. For a popular Web server, the cost of the software frequently can exceed the cost of the hardware on which it is running.

If you are trying to build a reasonably powerful Web site without spending a powerful amount of money, another option is to use a program called Mini SQL, developed by David J. Hughes of Australia. It's free for noncommercial use, costs \$250 per machine for businesses, and runs on most versions of Unix as well as Windows 95, NT, and OS/2.

I've been using Mini SQL for about a month, and I'm quite pleased. Over the past few years I've built a number of applications for myself and my family. One program stores every fax that our fax machine has ever received, and puts each archived fax on its own password-protected Web page. Another program is a Web-based address book for personal and business contacts. Until now, all of these systems have just stored their data in files – and they've gotten slower and slower as the information has increased. As I've moved each system into Mini SQL, I've seen them get substantially faster.

Installing Mini SQL is pretty straightforward. If you are using

Unix, just download the program from the Web (www.hughes.com.au), compile it, and run the program. If you are using Windows, buy Hughes's book (\$44.99, recently published by Wiley):

There's a precompiled version of Mini SQL 2.0.1 on the CD-ROM.

There's no graphical user interface for Mini SQL. Instead, you store and retrieve information from the database using tiny programs, or scripts, that run on your Web server. To make this all work you'll need to know a scripting language (perl is my favorite) as well as a little SQL. Fortunately, it's not that hard to learn.

SQL, for the uninitiated, is the Structured Query Language. Originally developed by a researcher at IBM in 1975, SQL uses simple English-like statements to let database programs do fairly complicated things. Since Mini SQL uses the same SQL language as the larger databases, you can theoretically develop an application using Mini SQL and then move it to an Oracle system.

On the other hand, you may find that Mini SQL is powerful enough for most Web-based applications. According to Hughes, Mini SQL 2.0 should be able to handle roughly 500 search operations per second on a database table containing 100,000 records – and do it on average PC hardware such as a 100 Mhz Pentium. The program gets its speed by doing away with many of the advanced features that slow down Oracle and Microsoft SQL.

Adobe's PageMill 3.0, an HTML editor for Web pages.

Mini SQL isn't for everybody. If you have an aversion to programming and you've already bought Microsoft Access, you can cobble something together using Microsoft's Active Server Pages. But if you learn even a bit of SQL, you'll have a skill that's becoming increasingly valuable.

Adobe PageMill 3.0

Adobe recently brought out the new version of PageMill, an HTML editor for Web pages. I've never been a particularly big fan of HTML editors – they rarely do what I want – but PageMill 3.0 might just change my mind.

The big draw of HTML editors is that you are supposed to be able to stop thinking about the Web's arcane "markup" language and concentrate on your information. To help deliver on that promise, PageMill 3.0 feels a lot more like a word processor than a Web editor. You can change margins, change fonts, create tables, and spell check. But there's lots of Web stuff

as well: You can create frame sets, drop in links, and even build complicated forms.

PageMill 3.0 fixes a lot of problems I had with earlier versions of the program. You can now download a whole Web site and have the program draw a map. You can preview Java and ActiveX applets. You can publish to a local hard drive or over the Internet using the FTP protocol. And unlike Microsoft's FrontPage, there's no need to run special software on your server to make everything work.

That's why I'm using PageMill 3.0 for simple HTML work. Unfortunately, the program still doesn't have support for doing complicated server-side scripting – the kind you need for Mini SQL applications. For those jobs, I'm still using EMACS, the free text editor developed by Richard Stallman at the Free Software Foundation.

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