

tools of the trade

New Ways to Save

First it was the CD burner and thumb drive replacing the standard floppy drives in desktops and laptops, and now it's the DVD pushing out the CD player/burner. It's just a matter of capacity—the DVD can store about five times as much data, music, or even movies (4.7GB and higher). The external drive sitting on the desk is now more likely to be a DVD player/burner. If it's the **Plextor PX-716UF** external drive, it might be sitting flat or vertically alongside the computer to save space. As to the interior space, you

can achieve high-capacity storage of up to 900MB on a 700MB CD-R CD with GigaRec™. The DVD double/dual layer allows you to record up to four hours of high-quality MPEG-2/DVD video on an 8.5GB disc. The drive can achieve 16X speed CAV performance on recommended 8X DVD+R media, burning a 4.7GB DVD in less than six minutes (that's 9.28-22.16MB per second). Connections can be high-speed USB or IEEE 1394 FireWire. Operating systems supported include Windows 98SE/ME/2000/XP and Mac OS 9.1 or above. For more information about the product, visit www.plextor.com.

With the MP3 format becoming the universal language for computer audio, the **iMic USB Audio Interface** from **Griffin Technology** serves as a low-cost translator both for live feeds and material you'd like to

record on your hard drive, CD, or iPod. Its connection to your PC or Mac is USB, and you can connect virtually any microphone or sound input device to your computer and have CD-quality speech or music to listen to or output for recording. The USB connection isolates the audio signal from the internal electronic noise in the computer. A slide switch on the side of the iMic lets you select line devices (CD players, tape decks, synthesizers, etc.) or a microphone. With it in place, you can create sound files for your website or Podcast, or you can convert your old LPs, CDs, or tapes to a computer-playable format. The Mac version includes Griffin's audio recording software Final Vinyl. For the PC version, you will need your own recording software, and, fortunately, there's a good freeware program called Audacity available at <http://audacity.sourceforge.net/>.



Griffin iMic Audio Interface

forge.net/. Audacity is free open-source software for recording and editing sounds, available for Mac OS X, Microsoft Windows, or GNU/Linux. For more information on the iMic, go to www.griffin-technology.com.

You can have an Internet service provider (ISP) offer a group of security additions, but the Sereniti home network support system has most ISPs beat, covering everything from the hardware for your wireless network to identity theft insurance. Subscribers to the Sereniti system receive \$25,000 in identity theft



Plextor External DVD Burner

Evolutionary Code ◆ Michael Castelluccio, Editor

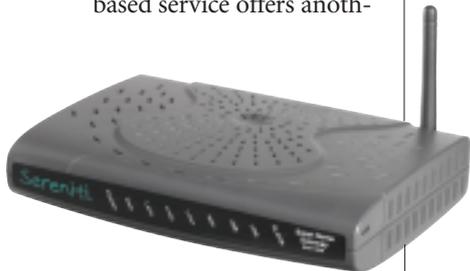
■ **ORIGINALLY, SOFTWARE WASN'T DELIVERED**, it was created at the home of the code's patriarchal partner—the mainframe. If an institution or business owned the hardware or leased time, they usually had their own programmers writing the instructions for the trailer-size machines. In the earliest days, programs existed **ON CARDS**.

The next stage in hardware development introduced the much more manageable personal-size computer. While many programmers at this point still shared their work with others, free of cost, entrepreneurs like Gates and Allen decided to commercialize their software. They rented it out and then began to sell it **ON DISKS**.

After years of boxed floppies with fat, printed manuals providing the only weight in the box, the next step proved to be more environmentally friendly (no paper or plastic) and much less expensive. A general term used to describe the model of this period was push technology. You got your software, information, and mail pushed out to you from a particular type of computer—**ON SERVERS**.

And now, at a time when the network is the computer, all manner of software travels over the Web. Some of it is just delivered, and some of it is managed remotely on your machines by the service delivering it. Freeware, shareware, commercial *continued on next page*

insurance and \$1,000 of virus damage insurance underwritten by member companies of American International Group (AIG). The subscription-based service offers another



Sereniti Security Suite

er kind of assurance—unlimited remote technical support to the home, 24 hours a day. The latest addition to the Sereniti Smart Home Network Service is the Smart Home Server (model SHS-2000), which has an integrated 80GB hard drive for automatic data backups and which serves as a central shared drive for every

computer in the home network. The software in the system includes firewalls, virus and spyware protection, and sophisticated parental controls. There's automatic updating of the anti-spyware and anti-virus software. The home server can be configured for wired and wireless connections, and the Command Center provides a graphical interface to view and control the system. Visit www.sereniti.com for terms.

As you find yourself logging on to many more secure accounts and depending on more computers than just your desktop, the problem of passwords multiplies. Unfortunately, the temptation to uncomplicate your life with simpler

passwords or by using the same one for many situations just makes things worse. The **American Power Conversion Corp. (APC)** has a simple solution that fits in the palm of your hand—or, rather, under it. The **APC Biometric Mouse Password Manager** does exactly what its name implies. A good password looks like OB8mzSw5, but how many of these can you remember? With APC's mouse, you just type the password in once and link it to your fingerprint, which you swipe over the AuthenTec TruePrint Sensor on top of the mouse. Whenever you visit the site or access the program you have passworded, swipe your finger and the device will recognize you as the creator of the very strong password it has

stored. The Biometric Mouse is bulkier than the average mouse at 4.7 × 2.7 × 1.6 inches, but it does have a three-step Plug and Play setup, it's self-powered, and there's no ball to clean. If the mouse doesn't appeal to you, there's also a desktop fingerprint scanner and a PC card version for laptops that provide the same security barrier. Visit www.apc.com for details and purchase information.



APC Biometric Mouse

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programs, and virus updates, all swimming alongside the songs, e-books, and rented movies through copper, fiber, and even out in the winter air—ONLINE.

This long slog out of the primordial swamp has liberated software as it progressed in stages from paper, to plastic, to copper circuits, to light in fiber, and waves of invisible energy in the air. But what about the design of the instruction lists for computers? How has the architecture of programs changed along with the delivery systems?

Lego Code

One of the most revolutionary developments in the process of composing programs has been object-oriented programming. If you're using a language designed to handle these modular pieces, you can write a paragraph of instructions, save it as an object, and then keep it in a library to plug it into other programs as needed. When you buy an object-oriented program, you get a box full of these objects, and coding can be as simple as dragging and dropping them into your longer list of instructions. A programming language like Delphi could present either a graphical work page or the actual Pascal-based code that looked like the expected hieroglyphs of conventional computer programming languages.

Software as a Service

An interesting development in software management online began during the push era with companies like Marimba promising to deliver, maintain, and manage the programs you need. As part of BMC Software today, Marimba not only offers application management, but the product line also includes content distribution, OS

management, and remote administration. (www.marimba.com)

Other companies have specialized their software-as-a-service offerings, tailoring them for specific markets. One of the more interesting of these is a group called ScribeStudio operating out of New York City. ScribeStudio's niche is e-learning, and the group offers educators and trainers a toolkit for creating online educational content, events, and forums. Actually, to call it a toolkit is kind of narrow because the service will help you create print content, tests and quizzes, surveys and polls, and live Web seminars. You can upload material in conventional PowerPoint presentations, or you can make videotaped events and audio recordings of lectures to be played back online or downloaded as Podcasts that students or trainees can take anywhere. (www.scribestudio.com)

Marion Janic, an account manager at ScribeStudio, sums it up this way: "Our goal in creating ScribeStudio was to provide an all-in-one e-Learning toolkit to enable subject matter experts to quickly and easily author and publish online courses and training programs and to manage and communicate with learners online."

Now when you consider what an effort it is for subject matter experts to create other subject matter experts (the job of the educator), the last thing you would want to do is force that teacher to revert to an earlier stage of software evolution. That is, have the subject matter expert buy a copy of the software and then begin as a rank novice as they spend months learning to use the programs they need to convert their chalkboard and mimeo course content for the online world. Even if they're learning

FrontPage or DreamWeaver instead of HTML coding for Web design, the process is just too time-consuming for most to bother with.

When you sign up for ScribeStudio, the experts are already lined up behind you. Programmers have created the interfaces you will use to add content, and none of it requires coding on your part. Before you begin, one of the first screens you see after signing on for the first time is a list of demos of how to create various kinds of content. For the most part, each of the procedures involves not much more than just uploading what you have to the site you're creating. Besides the programmers, there's online support and an account manager to help you.

You don't download any software—you just use it to create websites that are password protected. And as trainees or students log on and use your content, you can keep track of their progress a number of ways, including exams and quizzes, for which there are 17 different question types. The network you create can include seminars, Web forums, and bulletin boards for communications. And all the processes are managed with wizards that are very simple to use. In fact, the most complicated step might be setting up the site hierarchy with chapters, lessons, sections, and pages. The ScribeStudio service is rented on a monthly basis at \$29 per month.

We've certainly traveled quite a way from the punch-card tray to ScribeStudio's complex offering, but if there's anything we can be certain of, the journey isn't over. The package of directions we call software (more like airware today) is going to continue to evolve, and, as hardware shrinks and becomes wireless, you wonder how software will follow. ■