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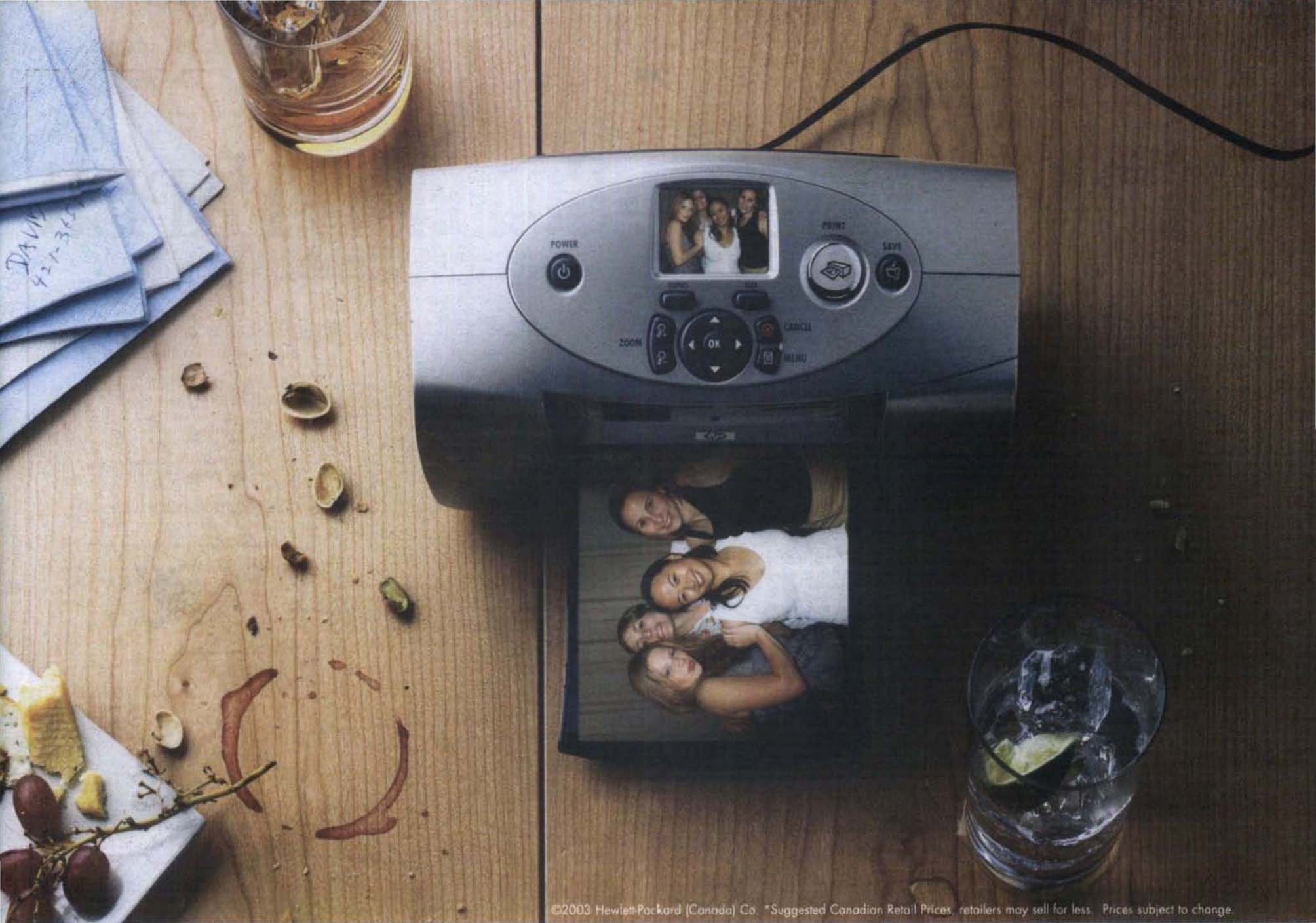
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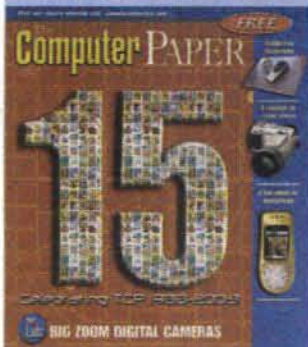
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The Computer PAPER

1988-2003 15th Anniversary

Greater Toronto
Edition
February 2003

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March 2003

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Lab Test: Colour printers

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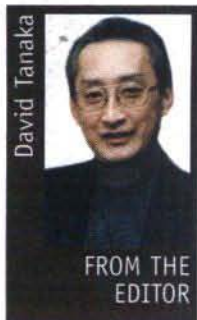
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The next big thing



David Tanaka

FROM THE EDITOR

Fifteen years is a long time to be reporting on any subject, but in covering the tumultuous personal computer business, I muse sometimes that technology years are like doggie years—seven of 'em warp into one human year. So, in the course of a human decade and a half, we've seen personal computers go from arcane curiosity to mainstream lifestyle additive.

I'm not one to wax sentimental about the good old days, however, because in spite of the remarkable technology adventure we've lived through, I impatiently await the next, next big thing. Too many comic books and too much science fiction in my youth, I suppose, but part of me is always complaining: what does it take to get some decent 24th century technology around here?

Dream job

That's why covering the digital scene as a tech journalist (I've been at it since 1989) and working at *The Computer Paper* in particular (just shy of nine years, more than five as Editor) is such a blast. There's a constant stream of new developments to talk about, some important; new technologies to evaluate, some useful; and always that lingering hunger for more that keeps the hunt going.

I'm proud of what we've been able to achieve with *The Computer Paper*. We have our share of critics; many dismiss us as mere mouthpieces for the Wintel duopoly. Some Mac users (tough crowd) have given us backhanded compliments saying our Mac coverage sucks less than it used to, and Linux fans, while generally

appreciative of any publication that furthers the open source way, patiently try to educate us about the nuances when we gloss over some fine point.

But the feedback via phone, letters, email, people coming by our booth at trade shows or even stopping me on the street, has been overwhelmingly positive. School teachers request extra copies because they find *TCP* a good teaching aid. More than a few readers have proclaimed *TCP* to be their technology bible. Perhaps the most consistent ongoing praise we receive is for delivering the story of technology and the shopping opportunities from a Canadian point of view. And whether praises or pans, it's clear that we are engaging more than a few of you who take the time to pick us up each month. That's the best part, because the mortal fear of any publication is to be judged irrelevant by its readers. So, thanks to all of you, for the encouragement and support—and criticism—all these years.

The company that publishes *TCP*—Canada Computer Paper Inc.—is a different entity than what Doug Alder and his merry band of enthusiasts created 15 years ago. Our beat is also different—much broader and continuing to overlap other sectors like telecommunications, video, music, photography, and consumer electronics. And therein lies CCP's challenge: in which direction do we grow? It's going to require some planning to ensure that the quality of *TCP* and our other titles is maintained while we explore new opportunities.

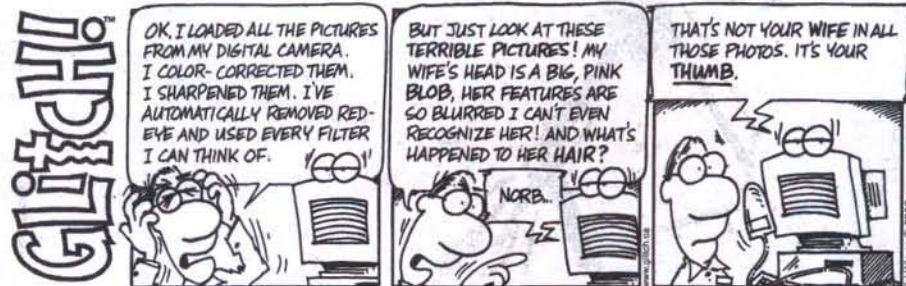
Changing of the guard

As part of the strategy to

achieve that, I have vacated my spot as Editor and am very pleased to introduce *The Computer Paper's* new Editor: Megan Johnston. Formerly *TCP's* Managing Editor and second-in-command, Megan has run the day-to-day editorial operation for the past few years. She's worked behind the scenes, somewhat out of public view, but she's been largely responsible for making the guy in the big chair look good. It's time she sat in that chair herself, so beginning next month, you'll be reading her bon mots on this page. *TCP's* Products Editor, Sean Carruthers, has also been promoted—to Senior Products Editor—and he will be taking on more editorial desk duties.

A few years ago, I was booted partway upstairs and given the additional title of Editorial Director. The boot up is now complete, and although I'll continue to be involved with *TCP*, I'll also be part of a small team trying to find new opportunities for the company. And I'll still be doing what I've always liked to do—looking for the next big thing.

Enjoy the future!
David Tanaka
Editorial Director



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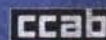
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Psion rules!

When discussing the history of the pocket computer, I do wish your feature writers would not keep giving the impression that



the only systems/players of significance have been the Palm OS and the Windows CE. Psion was successfully selling EPOC-based, brilliantly designed and featured pocket computers, with a sophisticated and highly

robust OS, well before Palm OS and Windows CE. Until very recently, Psion pocket computers were available [that] were technically competitive with, or ahead of, Palm OS and Windows CE in most respects.

I have a Psion 5mx with approximately three- to four-year-old technology, but there is still nothing on the market of comparable size, weight, and price [that] can equal its performance in all areas, [that] would tempt me to trade up. Further, the Symbian/Epoch technology is still being successfully developed by Nokia, whose Nokia 9210i etc. are every bit as good as the best of Palm OS and Windows CE, and in some areas uniquely better. Psion and Nokia products are readily available to Canadians through the Internet, and deserve more mention.

Helming, via email

TCP replies: We've been covering this platform since around the Psion 3, but since the hardware and operating systems divisions went their separate ways, there hasn't been too much to report since the Psion 5 handheld—which we did review.

But you are correct, the Symbian operating system is alive and well in cellular phones.

Firewire or USB 2?

I have a number of questions regarding the October Test Lab report on USB 2.0 and FireWire add-on

cards. At what maximum speed will a USB 2.0 and FireWire function if I install the card on an old machine, for instance a 400 MHz Pentium II?

If I install (for example) the Adaptec DuoConnect, with its three FireWire and four USB 2.0 ports, how many of the ports can I use at the same time?

Theodor Schain

TCP replies: The theoretical throughput of USB 2.0 is 480 megabits per second (Mbps) and FireWire is 400 Mbps. As long as you're plugging them into the same type of card slot, they should have the potential of delivering the same throughput. However, it should be noted that that's possible only if the rest of your system is up to the task. (In other words, if your computer runs very slowly because of the combination of hardware you use, or because there's too much software running in the background, don't count on getting full throughput.)

With the DuoConnect, all of the ports — both internal and external—should be available for use. (Some other cards with both internal and external ports may knock one of your external ports offline if you hook up to an internal port.) Again, as all seven ports here will be sharing the same PCI slot, you may not get full performance out of every single port, especially if the rest of your system is already running more slowly, as above. You would have a maximum of 480 Mbps to share

amongst the USB devices, and 400 Mbps to share amongst the attached FireWire hardware.

Jargon, what jargon?

I enjoy reading *The Computer Paper* as I have been involved with computers since before many of your readers were born. Punch cards and creating rep cards to avoid large scale rekeying were second nature to me.

But I find that reading today's computer magazines is like when I read *Le Devoir* when I am in Montreal, I understand the gist of the article but not the nitty gritty. The language of computers has expanded as rapidly as the technology, if not more widely. Those words I am confident you won't find in your *Funk and Wagnall's Encyclopedia*. Some of the terms are, of course, proprietary names, but after they have been on the market for a week or so they become a lingua franca. I am willing to bet that I am not alone. Admittedly, some of the following expressions I'm familiar with, but a book or a [Web] site would really be nice to be able to look them up when I am in doubt. I may be presumptuous but maybe you too might like to check out some of them.

Here are a few terms, expressions and tradenames that are assumed to be the cat, dog, hat, and mat of the industry I found in the current edition of your publication:

- Bluetooth,
- AirPort,
- D V I ,
- ADC,

VRAM, DVD-RAM, SODIMMs, nits (I assume you don't scratch 'em), SRS sound, DDR-equipped, FireWire, GeForce, SD/MMC card, SRS sound, GPU, CSS, 54 bit DES encryption, DDR2, NAT security, DHCP server capability, built-in 802.11b, and the differences between USB 1.1 and USB 2.0 are a mystery, etc., etc., etc.

You'll note I have not included Kbps, MHz, VGA, XGA, ms, ns. and a number of others I assume I do know, but maybe I only think so.

Obviously, context gives you some idea, but like reading *Le Devoir* do I really understand what I am reading. You don't publish an English-language equivalent do you? In Montreal I can get *The Gazette*.

Paul Prechner

TCP replies: You raise an excellent point; perhaps some monthly or online glossary would be helpful.

Hi Daniel,

Hyper-conundrum

I read your interesting article 'Say hello to Hyper Threading' (*TCP*, January 2003). I am about to purchase a computer with an ASUS motherboard model P4PE/L, which is Hyper Threading compatible, OS will be Windows XP Professional. I can't afford the new 3.06 GHz processor.

Question: If I choose a 2.4/533 512 Northwood P4 Intel processor instead of the 3.06 GHz, will I still have some performance improvement due to Hyper Threading, or is it better then to use a non-Hyper Threading regular 533 FSB motherboard?

Regards and thanks,
Daniel Schwob

TCP replies: From our understanding, you shouldn't actually receive any benefit from a hyperthreading-enabled motherboard when you're using a non-hyperthreading processor, apart from any advantage added by other newer components unrelated to the hyperthreading.

Your main advantage will be the ability to upgrade to the hyperthreading-enabled processor down the road, when it drops in price.

Hope this helps. □

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WHAT'S NEW

By TCP Staff

How many times have you been at a boring party and thought, "What this shindig needs is a lifelike, high-definition 3D character grooving on the desktop, in time to the music playing on the PC's virtual jukebox"? Well, someone at **Microsoft** was listening.

Plus! Dancer is just one element of the company's newly released **Plus! Digital Media Edition** package (www.microsoft.com/plus), which is billed as "the ultimate photo, music and movie enhancement

pack for Windows XP."

Other features of the package include Photo Story, which allows users to build stories out of photos, adding music, narration, and pan and zoom effects; Party Mode, which turns the PC into a jukebox complete with video effects, song and artist displays, and an interactive guest-book; Analog Recorder, which records music from cassettes or vinyl records to digital files, with automatic hiss and pop reduction and automatic track splitting;

and an Audio Converter to convert those music files into a range of file formats.

The software aims to make people even more dependent on their computers, with Alarm Clock to wake them up in the morning to music of their choice, and Sleep Timer, which will play them to sleep with music that gradually decreases in volume.

The package is US\$19.95 and is available online only initially. It is expected to be available on store shelves where Windows XP is sold, according to Microsoft.

Now that **Palm** handhelds have become ubiquitous, how do the truly geeky distinguish themselves from the rabble? Well, here's one suggestion: not just anyone will load up that baby with the **Palm Reader eBook** version of **Bartlett's Familiar Quotations**. The first Palm Reader version features the 17th edition of the popular reference, with a searchable database and hypertext linking added to the chronological list of more than 20,000 quotations. Sure to be impressive when fired up during cocktail party conversations, it can be downloaded from www.palmdigitalmedia.com for US\$29.95.

Spotlight

Nokia unveils MMS phones

Just when you thought you'd learned to understand SMS-speak, **Nokia** has introduced new handsets designed to take advantage of MMS (Multimedia Messaging Service) technology, which allows cell phone users to send text with images, voice and audio clips. It is the evolution of SMS (Short Message Services), which only allowed for text and required users to learn cryptic abbreviated spelling techniques.

Nokia boasts that the **6200** is the world's first EDGE (Enhanced Data rates for GSM Evolution) handset, which means data speeds of up to 18Kbps, allowing for larger files and clearer images. It also has tri-band functionality (GSM/GPRS/EGPRS 850/1800/1900 MHz networks).

Available in Canada in January 2003, the Bluetooth-enabled **3650** will be the first imaging handset available in North America. It features a built-in camera, and will send messages with video, image, text, and voice clips. It comes with a 176x208 pixel high-resolution colour display and 4 MB flash memory.

Other models include:

- The tri-band **7250**, which also incorporates a camera and has a high-resolution 128x128 pixel colour display.
- The **6100**, which is meant primarily for voice functions, but has a colour



Nokia 3650

screen, and is compatible with Nokia's Camera Headset.

- The **6800**, which has a full QWERTY keyboard that, when accessed, automatically reorients the screen for easy viewing while typing.
- The tri-band **5100** has a more durable design than Nokia's other models, and includes a flashlight, calorie counter and thermometer, and speakerphone. It is also compatible with the Camera Headset.
- Compatible with Nokia Pop-Port Connector-enabled phones, the Camera Headset allows for hands-free calls and image sharing via MMS. Images can be previewed on the phone screen and saved in the Photo Gallery before being sent. Users can also listen to music through handsets equipped with an FM radio.

Your Web site designer might not want you to know this: **Macromedia** (www.macromedia.com), makers of the popular **Dreamweaver** Web site development software, has introduced **Contribute**, which it says "enables anyone to easily update, add, and publish Web content to existing Web sites without needing to learn HTML."

Macromedia says the software, which offers integration with Microsoft Word and Excel, will allow users to edit Web pages as if they were using a word processor, then publish the updated page to the live site. Contribute also maintains a history of page changes, allowing users to revert to a previous version of a page.

Macromedia says Contribute works with any HTML site, regardless of whether it was built with Dreamweaver. It is currently only available for Windows, but a Mac OS X version is in development, according to Macromedia. It can be downloaded from the company's Web site for US\$99.

Dreaming of a future in computer animation? **Alias|Wavefront** (www.aliaswavefront.com) is offering self-motivated learners a hand-up with the release of **Maya 4.5 Personal Learning Edition**, available from the company's Web site at no charge.

Spotlight



Splashpower recharger

Tired of losing your rechargeable gadgets in the mass of wires and chargers on your desk? Well, a U.K.-based company, **Splashpower** (www.splashpower.com), has a solution with its wireless recharging technology. The system, which comprises a **SplashPad** wireless recharging platform and a **SplashModule** receiver module, uses inductive power transfer to recharge any device with no risk of shock or discharge, according to the developer.

The Splashpower system is similar to one announced recently by **MobileWise** (see "What's New," *TCP* December 2002), but uses inductive power transfer rather than the direct current used in the MobileWise product. The 6 mm thick SplashPad plugs into an outlet and can power several devices at once provided they are equipped with the SplashModule, which is less than 1 mm thick and can be customized to fit devices such as mobile phones, PDAs, digital music players, and handheld game units, according to the company.

U.K.-based Splashpower is currently focused on licensing its technology to original equipment manufacturers (OEMs), and there is no word on when a Splashpower-based product might hit store shelves.

The software is for non-commercial use only, which is enforced by a special file format and watermarking of images. The latest version allows users to import files of different data types, including files from the commercial version of Maya. It also offers features found in Maya 4.5, including new modeling tools, subdivision surfaces, and integrated 3D paint.

Along with the software, **Alias|Wavefront** offers a Web-based resource centre with video tutorials and user forums, as well as a gallery for users to exhibit their creations. □



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Fifteen years ago

By Douglas Alder

Fifteen years ago, in early December 1987 (I am writing this before Christmas for a February issue deadline), I arrived back in Vancouver from Toronto. I had a freshly minted MBA, a wife and three kids, a Mac Plus and LaserWriter, and no job. A friend of mine had just been to San Francisco and brought back two free newspapers dedicated to computers, *Microtimes* and *Computer Currents*. They were newsprint, with full-colour covers, and over 100 pages each. Looking at them, I thought, "We could do this here in Vancouver." So we did.

The marketplace we entered had already seen a few efforts at computer publishing. An annual directory called *CHIP* had come and gone. There was a Victoria-based software newsletter called *Inside Software. Canada Computes*, based on *Toronto Computes!*, was being circulated in small numbers and had no local advertisers. David Chalk's Doppler Computers had a glossy magazine for a



while called *Doppler's Computer Buyer Magazine*. It was primarily based on ad co-op dollars from the company's sup-

We started in the right place at the right time and rode an incredible wave of enthusiasm and growth in the computer marketplace. The speed, power and capabilities of the computers and software have jumped light years ahead since that time.



pliers and did not last long because of its lack of appeal to other competitive dealers. There was another publication circu-

lating at the time, called *Computer Consumers Guide*, published by a computer dealer, but it soon dropped away.

The first issue of *The Computer Paper* came out in February 1988. It was 16 pages, with a black, blue and yellow cover, contained 21 advertisers and articles about Canadian payroll software, Newsbytes syndicated articles, and a Macworld Expo report. A full-page ad could be purchased for \$690.

In retrospect it was not very impressive, but it proved to be a foothold and *The Computer Paper* evolved rapidly over the next decade, had five offices across Canada, distribution in most major cities, and a monthly readership of half a million.

Some of the hardware featured in that first issue of *The Computer Paper* included a 10 MHz 286 CPU with a high-resolution TTL monitor and a Roland dot matrix printer for \$1,988. For another \$325 you could add a 20 MB hard drive to the basic floppy-only system. On the back cover is a 9.54 MHz notebook that weighed 4 kg (9
Continued on page 14

The first great decade of personal computing

By Graeme Bennett

In many ways, the years 1987 and 1988 were a time of transition. Eight- and 16-bit computers suddenly seemed outmoded, as more powerful 32-bit processors from Motorola and Intel powered a new class of machines. The first CD-ROMs were bringing a new level of sophistication to software titles and computer-based reference libraries.

It was an exciting time to be in the computer business. In February 1987, Commodore had just released the Amiga 500 and Amiga 2000. At the time, I was the president of a software development company, enjoying brisk sales of a range of products for the Motorola-based Atari ST and Commodore Amiga computers. One of our products became a top-10-selling Amiga title, making us quite a lot of money.

Around this time, in the parking lot behind my recording studio, we collected the sound effects for *Accolade's* still-in-development game, *Hardball II*, with a

young Don Matrick (now president of Electronic Arts Canada). *Hardball II* subsequently won a Software Publishers Association award for best sports game of the year.

In March 1987, Apple released its first colour Macintosh. Suddenly, the Amiga and Atari ST didn't seem so advanced. Atari and Amiga owners had to console themselves with the fact that their machines were considerably less expensive. The Mac II, with its millions of colours and open architecture, cost several thousand dollars—an Atari or Amiga could be had for a few hundred.

Sensing the shifting tide, I paid a great deal of money for a Macintosh II and 13-inch AppleColor monitor around this time. A part of me still craved "power without the price," but HyperCard, released by Apple that August, reassured me that the Mac was the platform with the best software.

Although the Mac II's 24-bit colour
Continued on page 14




I remember walking into a scene of pandemonium at a local computer store, where sales people were horrified to discover that every Amiga on the sales floor was infected. They even found viruses on the write-protected floppy disks inside shrink-wrapped packages on the store shelves!





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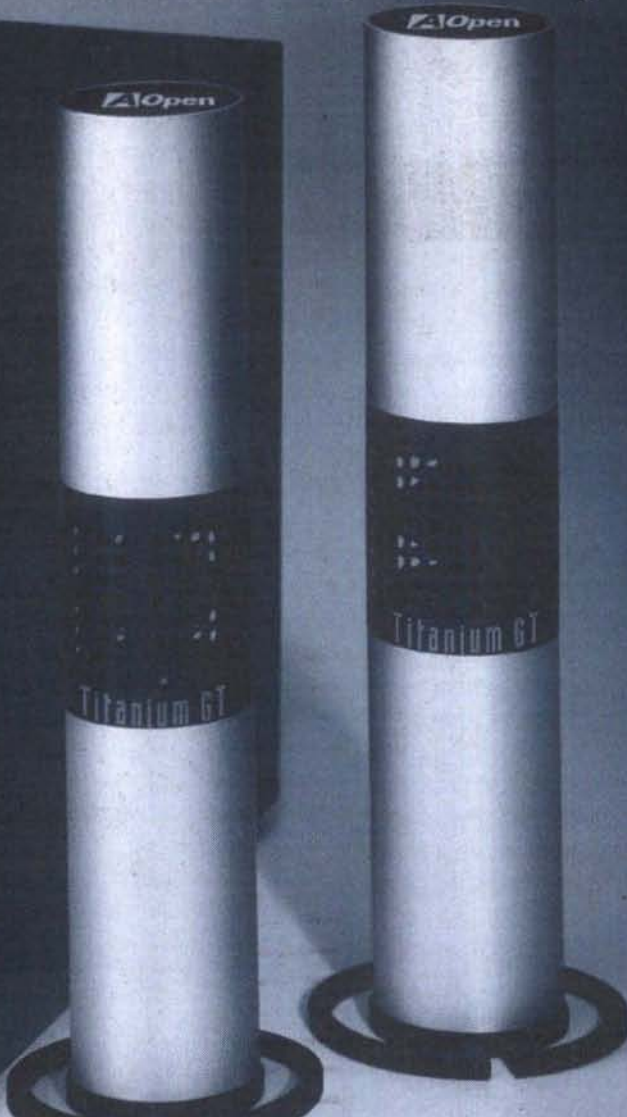
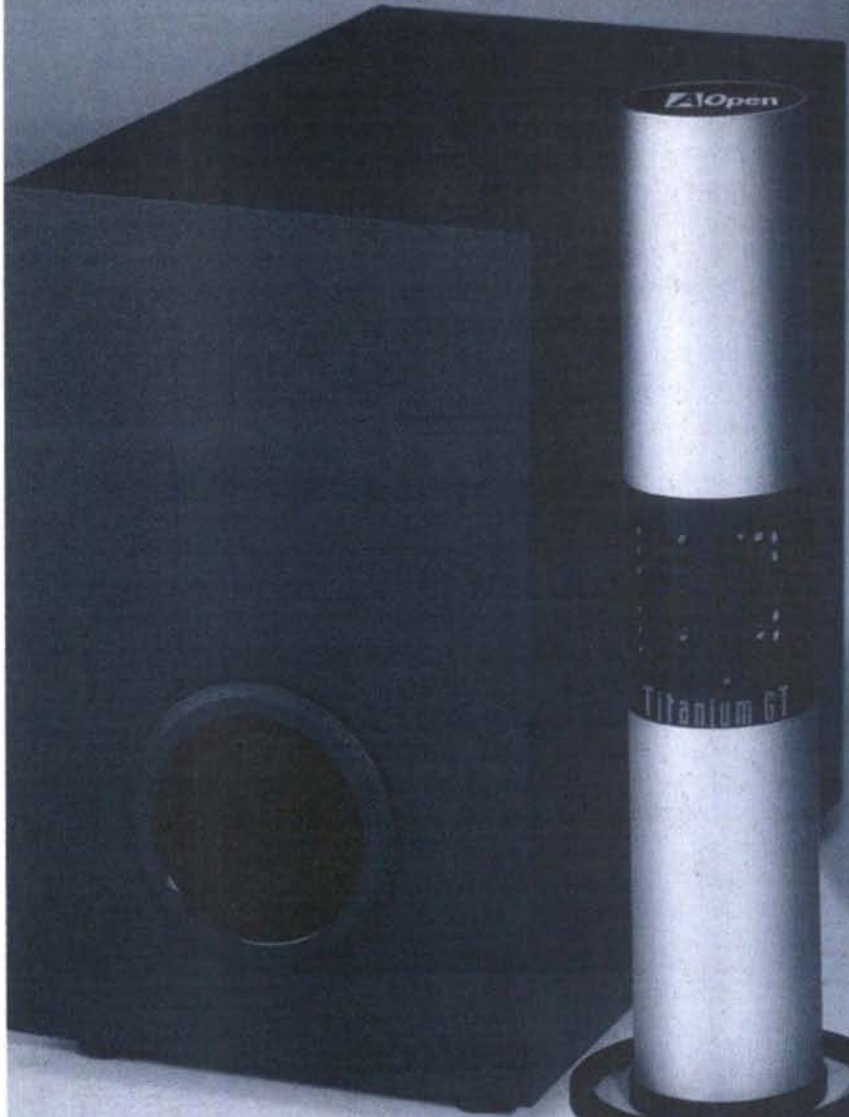
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The first great decade

Continued from page 12

(which, ironically, HyperCard didn't exploit) set it far ahead of the primitive PC graphics of the day, things were moving quickly in the PC world. In April 1987, the VGA standard and a higher-resolution 8514/A display adapter were announced by IBM. By the fall, VGA adapters were a hot commodity. A rapidly growing Canadian company called ATI, founded in 1985, couldn't seem to make enough of them.

A few years earlier, Apple had touted the Macintosh as "The computer for the rest of us." Suddenly, that slogan seemed like an anachronism, as the burgeoning market for PC clones was rapidly driving down the cost of IBM-compatible components—a step that would, over the coming years, ultimately render Atari and Commodore irrelevant.

By the autumn of 1987, the PC market was really gaining momentum. Microsoft released Bookshelf, its first CD-ROM application in September, and a month later, shipped Excel for Windows, the first PC-compatible version of the spreadsheet it had shown to a reportedly unimpressed Steve Jobs back in 1985.

The first Amiga virus emerged in November 1987 and, within the next few months, affected almost every Amiga user who swapped floppies with others. I remember walking into a scene of pandemonium at a local computer store, where sales people were horrified to discover that every Amiga on the sales floor was infected. They even found viruses on the write-protected floppy disks inside shrink-wrapped packages on the store shelves!

Less than a month later, the first widely distributed virus affecting IBM PCs was discovered. The PCs of the day were running Windows 2.0. IBM shipped its millionth PS/2 and, that December, launched

OS/2 1.0. Microsoft stock hit \$100 per share. Microsoft had already sold half a million computer mice and, by the end of the year, a million copies of Windows.

All at once, it seemed that the next era of computing was upon us. The time had come for the PC. A few months later, I picked up the rather thin first issue of a new publication called *The Computer Paper* and watched its progress closely in the months ahead. I visited *The Computer Paper's* Vancouver office one day and was offered a job. I soon became the resident PC expert—my distaste for command prompts notwithstanding. It seemed immensely ironic to me at the time that the employees at *TCP*—widely perceived as a PC-centric publication—were almost exclusively Mac users.

By October 1988, even the exciting innovations of 1987 weren't looking so advanced anymore, as Apple chief Jobs, always thinking a few steps ahead, had just announced the long-awaited NeXT Cube, sporting a 17-inch monitor (and Display PostScript!), Unix-based operating system, a high-capacity rewritable optical drive—and no floppy drive. It's amazing that, 15 years later, this feature set can still be considered forward-looking.

I am tempted to draw parallels between 2002 to 2003 and that pivotal 1987/1988 era. In each case, a new, more powerful generation of processors is poised to emerge. Piracy still threatens smaller software developers, and pen computing—now repositioned as "tablet computing"—is still being touted as the next big thing.

Jobs is probably still thinking 15 years in the future. However, the world today is a much different place. I'll probably never see another "gold rush" as dramatic as the one of those early days, or the first years of the dot-com boom.

Some say the real golden age—the third

great age of computing—will be when our computers, handhelds, and networks "just work." I see glimmers of this possible future from time to time, when I run Mac OS X, Windows XP, or some of the friendlier Linux distributions on my various computers, but it's clear there's still plenty of room for improvement.

The trouble is not everyone wants the kind of system design(s) that may be required for appliance-like functionality and industrial-strength security. Fewer options mean fewer potential conflicts.

Fifteen years ago

Continued from page 12

(lb.), featured 640 KB of RAM and a "super readable" 80-character by 25-line screen. The unit sold for \$1,825 sans hard drive. A deluxe model with a 20 MB hard drive was available for \$3,950.

In those days we circulated 30,000 copies of the paper in the Vancouver area, thinking that perhaps five percent of the population might be interested in computers. It was still a pretty nerdy thing to show interest in.

In looking at my old files from this time period, I found a family newsletter talking about *The Computer Paper*. It is dated April of 1988: "The response from advertisers and readers has been great. Things are starting to come together well. Just yesterday, I got a call from a representative of Aldus, the developer of PageMaker. He wanted me to do a review of the company's new product. You feel that you are getting somewhere when the big companies will send you their products for review. Despite the long hours, I am having fun and the money is coming in."

Of the 21 original advertisers who bought ads in that first 16-page edition, only two are still listed in the online yel-

low pages. Interestingly, both of these survivors are service sector businesses, not hardware resellers. That said, I dropped by Comdex Vancouver last year and met a number of people from those early years, still active in the business. The names may change but the same faces keep showing up.

We started in the right place at the right time and rode an incredible wave of enthusiasm and growth in the computer marketplace. The speed, power, and capabilities of the computers and software have jumped light years ahead since that time. As I tell my kids, "Back in those days we had to walk to the Internet, uphill both ways through snow drifts."

The rate of change may be at a momentary lull, but I believe that the next 15 years will bring more remarkable change within the industry. No doubt *The Computer Paper* will be there to monitor the changes. □

Douglas Alder was the original publisher and editor of *The Computer Paper* for 10 years. He is president of HomeBase Internet Publishing Ltd. in Vancouver. HomeBase Internet specializes in FileMaker database application development. He can be reached at HomeBase Internet www.hbase.net, 604-961-1069, or by email at doug@hbase.net.

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Working on the horizon

By Hari Singh Khalsa

In its early years, the fledgling publishing company that produced *The Computer Paper* was a lean operation. Our marketplace advantages included very low advertising rates, low operating cost, and, above all, being in the right place at the right time. In other words, TCP was just another publishing startup, searching for ad sales.

Why did success smile upon us?

One of the key answers may be that the staff lived and breathed the communication/technology revolution that was being documented in the paper. TCP's mission was to provide information about emerging PC technology. Figuratively, we were scanning the horizon for new tools and techniques to present to our readers. In order to keep us current, Doug Alder set up shop out on that horizon—out there on the leading and bleeding edge of publishing, where new technologies could be used to our advantage.

Throughout TCP's early years, desktop publishing tools radically altered the steps that prepared information to go "on the press." Part of our advantage was that we were early adopters of those pre-press tools. We walked our "print," so to speak. Whereas in 1986 I could not find a career counselor in Toronto who knew what desktop publishing was, by 1989 DTP was becoming mainstream. For the TCP staff, the consequence of early adoption was often living purgatory; just when we

Why did success smile upon us? One of the key answers may be that the staff lived and breathed the communication/technology revolution that was being documented in the paper.



would integrate one process into our repertoire, a new technology would come along, forcing us to adapt to it.

We often stumbled. But like children learning to walk, we would always get up after a fall and try again. Through trial and error, we chose the tools that worked. Our difficult experiences became source material for numerous TCP articles. Sometimes our readers learned of the rough terrain out on the horizon after we had recovered from some production nightmare.

Popular fascination with the whole gamut of emerging computer technology grew geometrically during those years. We were fortunate at TCP to hire staff for

tasks other than pre-press who also loved learning the ways of the new tools. For example, our sales staff attempted to stay up-to-date with the changing world of desktop publishing. By doing so, they were able to advise or even coach our clients as they incorporated desktop publishing into their own businesses. Our advantages continued to increase.

It was in sales that technology gave us our greatest edge. Following the advice of some savvy telemarketers, TCP conducted advertising sales as a telemarketing operation. In those days cell phones, email, or even computer networks were far from ubiquitous, so our most important telemarketing tools were our home-

grown database and the fax machine.

After Doug got the original database working, it became almost a collective development effort. Sales staff followed his lead by learning the inner workings of the database, collaborating on the changes required for TCP's expanding business.

Fax technology, while it seems old hat today, was far from universal in 1988. This simple technology of transferring graphic information over phone lines enabled TCP sales staff to communicate ad concepts with clients using a modest amount of the client's prime business time. We employed fax communication to a greater degree than other publishers of the day. The sales efficiency gained from the use of the database and fax allowed TCP sales staff to sell most of the publication's pages plus take on other tasks in administration, distribution, and even pre-press. We were a small group doing many jobs.

Work out on the horizon was not all hardship and trial. As *The Computer Paper's* influence spread, marketing departments at software and hardware vendors started to take notice. We began to receive evaluation copies and loaner units of new products on the chance we might write about them. It seemed to us as if cool new toys were ours to play with just for the asking. TCP was, at that time, a die-hard Mac shop (dictated by our tastes as well as by publishing efficiencies). As a result, we pounced on the Mac-related toys. The

Continued on page 50







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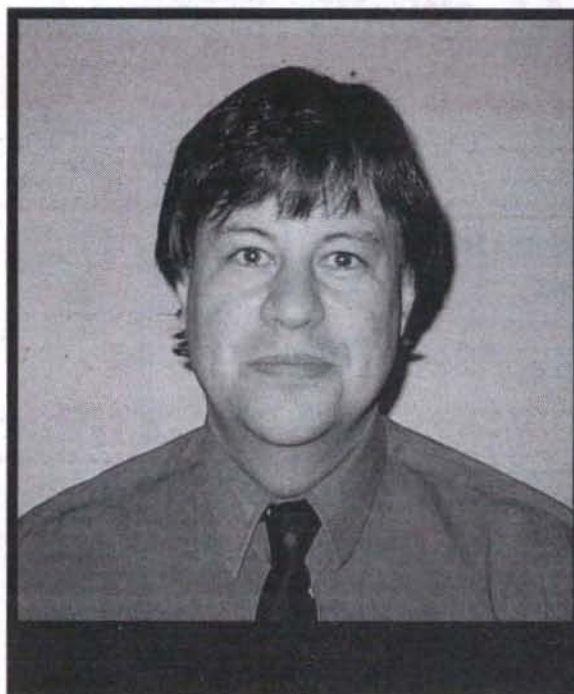
Personalities of the early PC era

By Geof Wheelwright

Fifteen years, huh? It seems like 50. When *The Computer Paper* was born, I was five years into a nine-year stint of working and living in London, England—and was involved in launching my own technology magazines and newsletters.

My father-in-law, who owned a sewing machine store on West Broadway in Vancouver, mentioned on the phone one day that this technology publishing business must be hitting the big time because a new title, called *The Computer Paper*, had just been published in Vancouver. And he knew about it because he had just sold a sewing machine to the founder of the publication, a young, amiable chap called Kirtan Singh Khalsa (a.k.a. Douglas Alder).

It was a fascinating time in the technology business. We were past the few flush of any fledgling industry and some real leaders were starting to emerge. And



It was in the U.K. at the company's then-small office just outside London. And it was me and Bill Gates in a room with a Macintosh, with him showing me around the product and answering questions as we went along.



they were real characters, every one of them. Over the years, I was fortunate enough to meet many of them.

Sir Clive
The first computer industry kingpin I remember meeting back in 1983 was a

guy called Clive Sinclair (he was later knighted and you now have to call him Sir Clive Sinclair). He produced the first popular home computer in the U.K.—(a small, black and white system with a membrane keyboard and 1 KB of memory, known as the ZX-81); one of the first U.K.-designed home colour computers (the ZX Spectrum); the first British-designed, mass-market handheld TV; a fleetingly popular monochrome notebook system (called the Z88); one of the first integrated computer/telephone systems (known as the One Per Desk); and many other lesser inventions including an electric car and a fold-up bicycle.

With his ginger hair and neatly trimmed moustache and beard, he reminded me of a well-groomed fox. His reputation for cleverness also matched that of the woodland creature, particularly the way he sold his products.

Sinclair was famous for getting a good idea to a prototype stage, making plans
Continued on page 22

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Personalities of the early PC era

Continued from page 20

for fast-track manufacturing, then taking pre-orders for the product by mail. Those pre-orders, in turn, would fund the actual manufacturing.

A product of Cambridge University and an intellectual boffin at heart (he was a leading light in the British MENSA community), Sinclair's head for business never seemed as strong as his head for innovative ideas. He has boomed and busted a number of times, but always seems to surface with new ideas.

In the beginning there was (also) Adam

Another entrepreneurial character I met during that period was former technology journalist Adam Osborne. In the early 1980s, Osborne went from being industry observer to being an active participant with the release of the world's first popular "transportable" computer, known as the Osborne One.

It was a sewing machine-sized computer that ran the old CP/M computer operating system, had a fold-down keyboard that unclipped from the base of the unit, and a 52-character screen. It also included a popular word-processor package known as WordStar.

By the standards of the day, the Osborne One was a huge success and Adam's company grew by leaps and bounds (something he later chronicled in his memoir, *Hypergrowth*). Unfortunately, Osborne did not learn the one lesson his years of observing the early years of the computer industry should have taught him: keep your eye on IBM.

While Osborne was busy enjoying his first flush of success, a breakaway group of IBM staffers in Florida developed and launched a desktop computer that became known as the IBM PC. Within two years of its launch, it was widely cloned and copied, and IBM PC-style systems dominated the market.

Osborne failed to recognize the impact of this change quickly enough. And his company faded from view within a few years. I caught up with Osborne shortly after this adventure when he launched another company called Paperback Software—on the premise that software should be sold like paperback books and just "shouldn't cost so much."

The idea was good, but the products were mediocre, and the spreadsheet was enough like Lotus 1-2-3 that the company ended up in messy and expensive litigation with Lotus Development. And Osborne never regained his former glory after misjudging the importance of the IBM PC.

The coming of Compaq

But three guys from Texas understood the impact of IBM's entry into the market. They were led by a soft-spoken former Texas Instruments engineer called Rod Canion and backed financially by another longtime computer industry watcher, Ben Rosen.

Canion and his fellow Texans famously sketched out their idea for an IBM-compatible transportable computer on a table napkin at a restaurant one night, and New York-based Rosen came up with the first \$1 million to fund the

adventure that became Compaq (which was acquired in 2002 by Hewlett-Packard). It was a busy time for Rosen, as he also put up the first \$1 million to fund Lotus Developments (creator of the classic Lotus 1-2-3 spreadsheet, and now a division of IBM).

I first crossed paths with Rosen and Canion in London in late 1982. They were fresh from showing off their wares at the Comdex trade show in Las Vegas. Rosen walked into my office carrying a Compaq transportable and a copy of Lotus 1-2-3. He and Canion demonstrated the products and then we went for an enjoyable lunch at one of London's many fine French restaurants.

I kept up with Ben Rosen for many years and would regularly have "power breakfasts" with him and his business partner L.J. Sevin whenever they came to London. Rosen stayed with Compaq until a few years ago, after more than 15 tumultuous years as chairman of the company, and helped select Michael J. Cappellas to succeed Eckhard Pfeiffer as chief executive of the company.

The man behind Microsoft

Easily the most intriguing individual I have met is Bill Gates. I first encountered him back in 1983, when I visited a then-small Microsoft campus near Kirkland, Wash.

The company had won the contract to put its operating system on IBM's PC, had a few games that enjoyed a measure of popularity (such as Olympic Decathlon and Flight Simulator), and was beginning to dabble in producing an operating system for a consortium of

Japanese home computer manufacturers (which resulted in something called MSX).

It had also announced, but was nowhere near shipping, a product called Microsoft Windows. The ideas about what Windows could or might do were quite sketchy at the time, but it was clear that they would incorporate ideas that were then recently pioneered in the Xerox Star workstation and the groundbreaking Apple Lisa.

In fact, it was when Apple launched the original Macintosh—and Microsoft developed a spreadsheet called Excel to run on that computer—that I did my first major, sit-down interview with Gates.

It was in the U.K. at the company's then-small office just outside London. And it was me and Bill in a room with a Macintosh, with him showing me around the product and answering questions as we went along.

All the classic Gates hallmarks were already there—the constant rocking back and forth in his chair as we talked, the comfy sweaters, the way he seized on each question with vigour, and the self-assured character of his replies.

Over the years, we have talked many times and the one key concept that I remember him describing—which applies as much to Microsoft today as it did when he talked to me about it 10 years ago—is the notion of "embrace and extend." □

Geof Wheelwright has been involved in the technology scene as a writer, editor and entrepreneur for more than 20 years. He is a long-time contributor to *The Computer Paper*.

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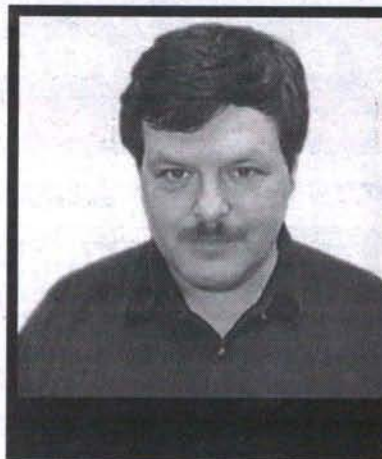


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< TCP 15TH ANNIVERSARY >



While I developed a strategy for the benchmarking reviews, Doug Alder arranged for us to rent a huge, bare room elsewhere in the building to house the new Test Lab.

15

The Computer Paper hits Hogtown

By Jeff Evans

The first time I met *TCP's* Doug Alder was in 1993, when a very tall man wearing a turban and white robes walked into the digital imaging output bureau that my wife Vel and I ran in Concord, Ont. Unlike our typical newbie desktop publishing customers, Doug—or Kirtan Singh Khalsa as we knew him then—was very knowledgeable about both PostScript output and typesetting and page layout using personal computers.

He was very calm and soft spoken, unfailingly courteous, and patient. He struck me as very smart, and ethical, and sure of what he wanted.

I only knew a little about *The Computer Paper*: I'd seen a few copies of the Vancouver edition in the early '90s and was quite impressed. When a Toronto edition of *TCP* later began to appear throughout the Metro area, it was obvious that it was going to be a real contender for the Toronto computer publishing market.

Unlike the long established, usually black and white *Toronto Computes!*, which I had occasionally written for, *TCP* regularly had striking full-colour covers, often employing 3D or vector art generated by programs such as Adobe Illustrator, or digitally manipulated photo illustrations created with Photoshop.

This Vancouver-based *TCP* crowd was

very tech savvy, and willing to push the digital imaging envelope a bit further each time a new desktop publishing tool became available.

The editorial content was also very good, with a stable of West Coast writers, such as Graeme Bennett, who were at least as technically adept as any Hogtown counterpart.

Very quickly, *Toronto Computes!* and *The Computer Paper* were furiously competing for the rich Toronto market, locked in a battle to the death for ad revenues and readers.

It was great.

TCP Test Lab is born

In mid-1993, I visited *TCP's* tiny, busy, new Toronto ad sales office, in a renovated factory building in the rundown industrial lands of West Toronto, and got a couple of freelance writing assignments, reviewing consumer software and games hardware.

For the next year, though, I was immersed in my own publication, as editor of *Computing Now!*, a glossy Canadian computer magazine I edited from late 1993 to 1994. When the publishing company went into receivership, I phoned Doug to ask if he had any advice or leads on technology writing or editing work. He paused for a moment then asked, "How would you like to start a Test Lab in the Toronto office, and be the technical editor?" I told him I'd be

Continued on page 57

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Long lookers

TCP Lab observes the world through digicams with 5X or greater zooms

By David Tanaka

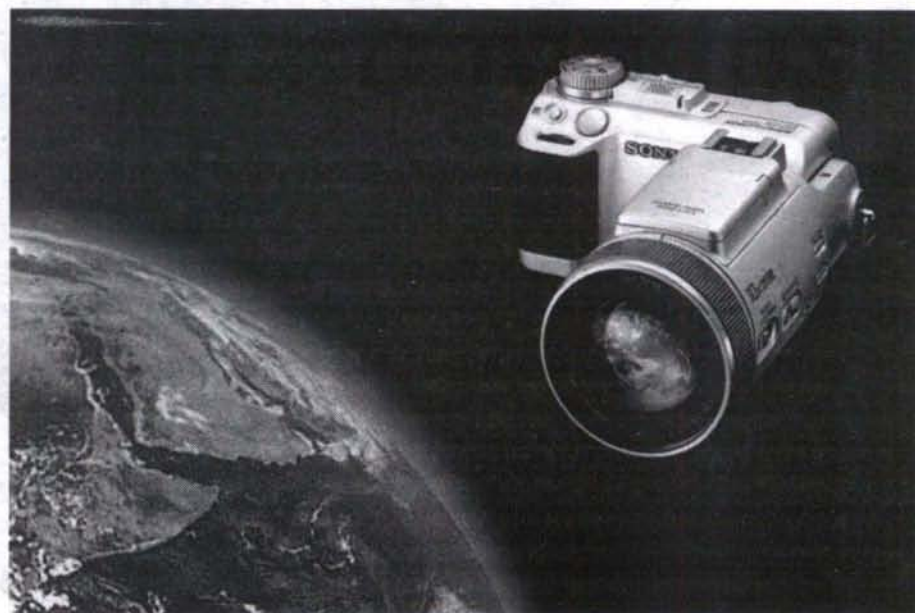
There's nothing like a telephoto lens to bring the action in close, but most digital cameras today have just 3X zooms—what's a shutter-bug to do?

In our search for an answer, TCP Lab came up with seven digital cameras with big telephoto lenses. We asked product manufacturers to send us any model that had a fixed lens with at least a 5X optical zoom range. We received three-, four-

and five-megapixel models with optical zooms ranging from 5X to 10X, with street prices between \$700 and \$2,000. Maximum telephoto for this group ranges from 190 mm to 380 mm (using 35 mm film camera equivalents). That magnifies subjects from four to eight times compared to what you would see with your unaided eyes.

Depth of the field

You can set any of these cameras on auto-automatic and expect to take very good pic-



tures—the built-in auto exposure and focusing systems are quite capable of

making intelligent decisions in that regard. But some in this group will give

TCP Lab: Big zooms all, but otherwise a varied lot

None of the cameras in this lab report should be considered pocket cameras (some will fit in an overcoat pocket if you don't mind the bulge) because even the smallest of the lot—the FinePix 3800, Camedia C730, and CoolPix 5700—form a blocky shape. Overall, these models show quite a spread in design, with considerable variation in size, ergonomics, user interface, and price.

The Fujifilm S3800 and Hewlett-Packard P850 emphasize point-and-shoot simplicity, but the others have a lot of individual buttons and knobs. So, if you're new to digital cameras or a specific brand, you'll want to study the manual to learn which button or knob does what. And if you are coming from another brand, you may be in for some serious relearning, as there does not seem to be any agreement on a common way to implement controls, other than the shutter-release button.

Nikon and Fujifilm also use a non-stand-

ard USB port, so if you damage or lose your cable, you won't be able to go down to the local office supply store and pick up a standard mini-USB cable.

Here are highlights of other commonalities and differences:

- All have an asymmetrical layout: lens at the outer edge of one side of the body and handgrip at the other.
- All have pop-up flashes and rear-mounted LCDs for composing/reviewing.
- All will record video clips. The Fujifilm S602 is unusual in that it can record 640x480 pixels at 30 frames per second up to the storage capacity of the card (about 15 minutes on a 1 GB microdrive). The others are more limited.
- All use an electronic viewfinder (EVF), which is produced on a small LCD that you look at through an eyepiece, like a video camcorder. The image differs from what you get with the ground glass screen of a 35 mm single lens reflex

camera. It can be problematic in some situations, and on some cameras the image appears coarser than on others.

- Three have articulated viewfinders that allow you to compose a shot from an angle other than eye level (say, if you want a worm's eye view). The Nikon has a swivel-twist LCD, the Minolta has a camcorder-style flip-up eyepiece, and the Sony's body pivots independently of the lens.
- Minolta Dimage is the only model with a manual zoom, which you control by turning a ring on the lens barrel—just as you would on a 35 mm SLR.
- Dimage, Sony, and Fujifilm S602 have manual focusing rings on the lens barrel in case you want to override the auto focus.
- Olympus, Minolta, and Sony implement a real-time luminance histogram as an exposure aid. When activated, it shows up as a small window in the viewfinder or LCD display, showing you the distri-

- Sony and Nikon use a proprietary Lithium Ion battery; the rest use four AA cells (nickel metal hydride recommended).
- Finepix S3800 and the Olympus Camedia use the new xD Picture Card, but the Olympus—which has dual storage slots—also accepts SmartMedia cards.
- Finepix S602 also has dual slots, accommodating SmartMedia and CompactFlash (including 1 GB microdrives).
- Nikon and Minolta models also accept microdrives, along with CF solid state memory in their CF I/II card slot.
- HP model uses Secure Digital/MultiMediaCard storage media.
- Sony, as one would expect, uses the Sony-developed MemoryStick.
- Nikon and Minolta store images optionally in a raw format, which prosumers will appreciate.

—David Tanaka

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you as much freedom over those parameters as you want. The Fujifilm FinePix S602, Minolta Dimage 7Hi, Nikon CoolPix 5700, and Sony Cybershot DSC-F717 are the cream of their respective makers' consumer crop, and are more or less competing for the same customer: the advanced amateur or someone who seriously pursues photography as a hobby. These are precision instruments that offer the user control over virtually every aspect of picture taking.

The FinePix, Dimage, and CoolPix do the least to upset the headspace of film photographers in their transition to digital. They are first and foremost cameras, with controls and actions marked in the language of photography for the most part, albeit with a ton of electronics between the eyepiece and the shutter.

Sony, on the other hand, takes a different view on how to serve a digital photographer in the 21st century. The DSC-F717 is a capable camera in the traditional sense, but also has a number of unique features. Camera traditionalists would probably scoff at some of these, but they extend photography beyond a medium for the photo enthusiast, and into a broader utility for daily living. For example, the Multi Burst mode allows you, with a single shutter click, to capture a sequence of 16 shots within a single frame—time slices of your golf swing, for example.

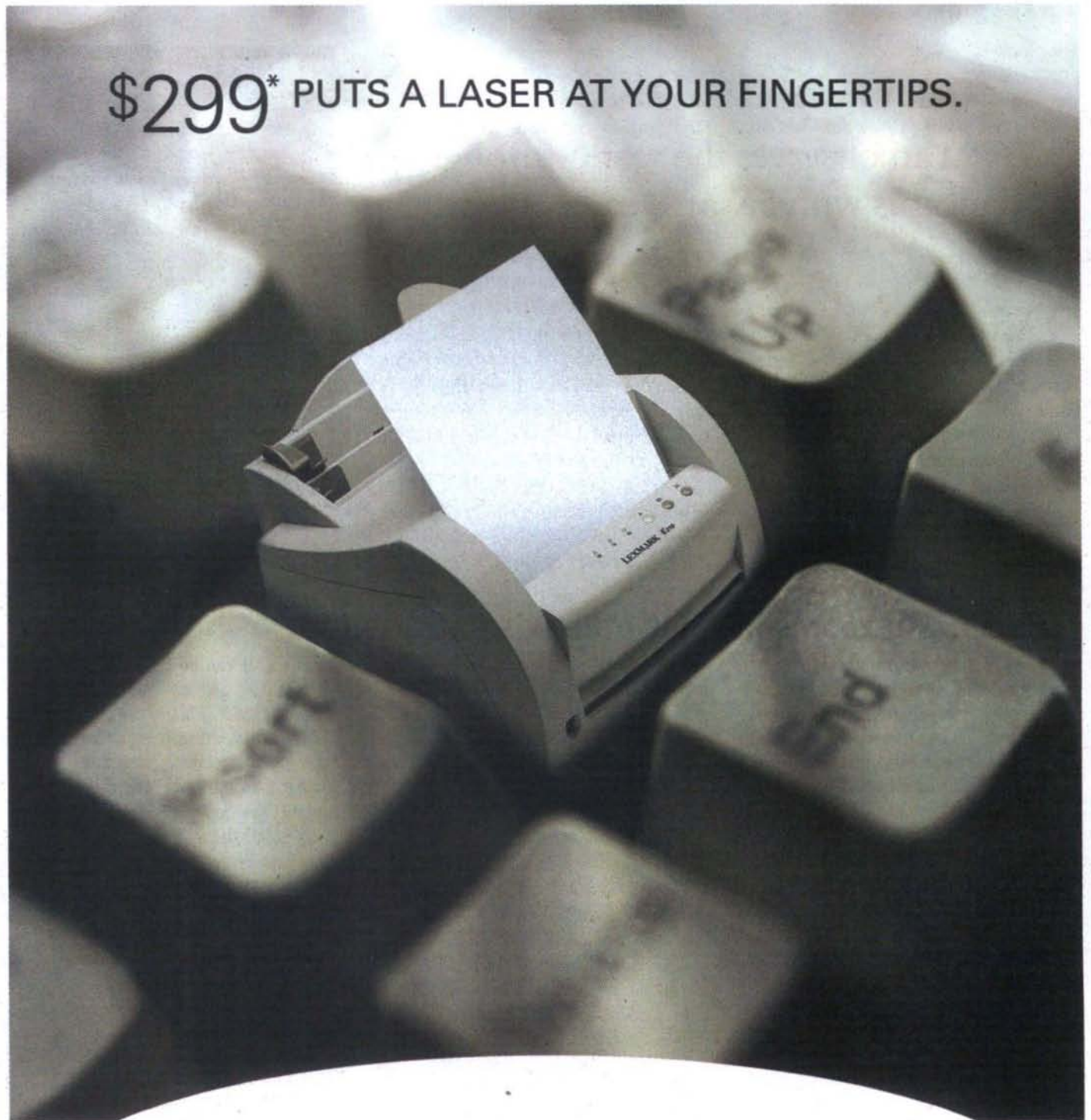
The Fujifilm S3800 and Hewlett-Packard P850 are at the point-and-shoot end of things. They offer users the ability to override some of the automatic settings, but neither offers a fully manual mode. However, both offer generally accurate automatic exposure systems that shield the user from having to think about f-stops and shutter speeds, which is precisely what they should do, given their target user.

The Camedia C730 is in the mid-band of Olympus's camera lineup, but the 10X zoom lens makes it a rare find in this product class. Like the four high-end models in this roundup, it includes advanced exposure modes like shutter and aperture priority, as well as full manual control.

Noticeable by its absence is Canon, which informed us that the PowerShot Pro 90IS, which has a 10X optical zoom, has been discontinued, and it currently doesn't have a model with a 5X or greater optical zoom.

One manufacturer to keep an eye on is Panasonic. At a photo trade show last

Continued on page 30



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Long lookers

Continued from page 29

fall, it introduced the Lumix DMC-FZ1 that has a 12X optical zoom—but we don't know if or when the camera will be coming to Canada.

How we evaluated this lot

We spent about three weeks with these cameras, taking as many pictures as we could under a variety of conditions. The weather in Southern Ontario was so grey and overcast for much of this period that we went to the Royal Botanical Gardens in Burlington to look for some colourful subjects to shoot. As a result, most of the test prints were of flowers.

For an informal picture quality test, we printed out the best two or three pictures from each camera at 8x10.75 in. onto letter-size Epson Premium Glossy

photo paper with an Epson Stylus Photo 925 printer. Without identifying the cameras, we passed the prints around TCP's art department for comments.

Interestingly, although people definitely had their favourites, it was not obvious to anyone which pictures were taken with which camera. The pictures from the Sony, Minolta, and Nikon were correctly identified once each as from the highest-resolution camera, but a shot from the Fujifilm Finepix 3800 blew most people away.

The conclusions we take from this is that the three-megapixel cameras have what it takes to make gorgeous 8x10 glossies—of flowers at least. The higher-end cameras give enthusiasts room to grow in their hobby, and for printmaking larger than this, are the way to go for non-compromise imaging.

FinePix 3800

From: Fuji Photo Film-Canada, www.fujifilm.ca

Price: \$700

Pros: Very compact, clean design with just a few easy to understand controls. Lens bezel is threaded to accommodate filters or auxiliary lenses.

Con: USB connector is non-standard. Position of power switch makes it easy to inadvertently turn camera on.



Its simple controls make the FinePix

3800 a good candidate for someone who isn't into photography as a hobby and just wants to take pictures in a fuss-free way. There is a manual setting, which allows exposure compensation, a shutter priority mode, and customized white balance settings.

That's probably as complicated as the typical user of this camera wants or needs to get. Most of the few buttons and knobs the camera does have are clustered on the right side of the camera, and easily accessible with your thumb and index finger. We didn't care for the placement of the power switch, which is embedded on a rotating ring that surrounds the shutter. On several occasions, we accidentally turned the camera on as we put it back into the camera bag.

But on the plus side, it has a big hand-

Continued on page 32

TCP Lab: Tips for shooting long

1. Use a tripod

A good way to improve the sharpness of your images overall is to use a tripod. When using any of these cameras at the longer focal lengths, a tripod becomes all the more important because any camera movement will be magnified, creating blurred images. A rule of thumb in 35 mm photography is that the minimum shutter speed to ensure a clear handheld shot is the inverse of the focal length. So at 200 mm, you should use a shutter speed of at least 1/200 second—or use a tripod.

2. Use exposure and focus lock

Digital cameras have gained a bad reputation for shutter lag. You press the shutter

button and then, after what seems like an eternity, the camera captures the tail end of the precious moment. Shutter lag is especially frustrating when you are trying to take a picture of a moving object at full telephoto, since the action quickly slips in and out of the frame—say you're on the sidelines watching your son or daughter closing in on the goal.

Using manual focus and AE lock or manual exposure control can go a long way to shortening the time it takes for the digicam shutter to fire. A lot of shutter lag is created by the camera calculating the correct focus and exposure. When you attempt to photograph a moving subject, the light levels and subject distances are

constantly changing so the AE and AF systems are continually recalculating the correct value.

Turning to manual focus will bypass the auto focus system, and setting the distance to infinity (or the hyperfocal distance if you know about that) will put most of the scene from 3 m or 4 m and beyond in focus.

Likewise, taking an exposure reading and then locking it in using AE lock, or setting the shutter speed and aperture yourself in manual mode, will bypass the AE system. You may find you still need to keep the shutter button partway down, but when you depress it all the way, the shutter should fire immediately.

3. Mind the focus

Depth of field (the zone of sharp focus) can be quite shallow on long telephotos. This can be used to good artistic effect (e.g., main subject in focus and background softly out of focus), but it also means you need to be aware of what part of the photo is in focus and make adjustments either by using a manual focusing option, or picking the correct autofocus zone if your camera supports adjustable zones.

Picking a small aperture will increase depth of field, but will also force you to use a slower shutter speed to maintain the correct exposure.

—David Tanaka

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< HANDS ON >

Long lookers

Continued from page 30

grip incorporated into the right side of body, which makes the camera very easy to hold comfortably. Rubber inserts on the back and front of the handgrip, where your thumb and fingers come in contact with the camera, also enhance the feeling of comfort. Interestingly, the front ring surrounding the lens has an inner thread to take an adapter extension (which ships in the box). With the extension, you can add an optional wide-angle or telephoto adapter, or filters—nice touch.

FinePix S602

From: Fuji Photo Film Canada, www.fujifilm.ca
Price: \$1,100

Pros: Manual focusing ring. Dual memory slots support SmartMedia and CF II, including 1 GB microdrive. Convenient placement of exposure compensation and AE lock controls

Con: Large handgrip may be uncomfortable for some. Requires non-standard USB cable.



The S602 is at the top of Fujifilm's consumer line, and though built on a design that's now a couple of years old, it still feels modern. The largely plastic body, while probably just as durable, doesn't have the built-like-a-tank feel of the CoolPix 5700 or Dimage 7Hi. One very welcome feature on the S602 is a microdrive-compatible CF II slot in addition to the SmartMedia slot.

One area where the S602 might seem to be falling behind is in pixel count: Sony, Nikon, and Minolta have five-megapixel models at the top of their consumer lines, while the S602 has a three-megapixel sensor. An argument can be made that the S602's SuperCCD chip offers higher resolution than orthodox CCD designs of the same pixel count—and the camera will save six-megapixel images. Plus the S602 is a few hundred dollars cheaper than the premium models from the other manufacturers.

The S602 handgrip feels big, but in extended use, the bigger dimensions allow a more comfortable grip with your

Continued on page 34

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< HANDS ON >

Long lookers

Continued from page 32

fingers curling less as you grasp the unit. But I felt less confident using the camera without a strap, because the portion of the body where your thumb rests is hard, slick plastic.

I liked the control layout on the S602 a lot. The exposure compensation button is right next to the shutter, so you just move your trigger finger over slightly, depress the button, and dial in the correction with the conveniently placed thumb wheel. Likewise, the macro but-

TCP Lab: What about digital zoom?

If you're thinking you could get a 15X zoom because a camera has a 3X optical and 5X digital zoom, don't put too much faith in that equation. A digital zoom is actually just an in-camera crop of the central part of an image. The resulting pictures are either of poorer quality or of a smaller dimension than the camera's maximum size capability.

Most of the cameras in this Lab Test offer a digital zoom, and used in moderation, they can give you even greater reach, but the camera makers themselves (at least some of them) warn of degraded image quality when you use a digital zoom. I find it somewhat puzzling that manufacturers would go to the considerable effort of putting big optical zooms on these models, but then offer users a way to fuzz it all up with a digital zoom.

The Sony labelling is particularly odd in this respect. It has "10X Precision Digital Zoom" marked on the F717, but makes no mention of the very fine Carl Zeiss 5X optical lens it uses—yet, the manual cautions about image degradation when the digital zoom is used.

HP's P850 is labelled as having a 56X zoom, which is technically accurate but glosses over the important distinction between optical and digital zooming. The P850's 8X optical zoom, which gives the equivalent of a 300 mm telephoto on a 35 mm film camera, is noteworthy in itself.

The rest in this group thankfully label the camera's optical zoom properties.

—David Tanaka

ton and manual focus switch are on the right side of the lens barrel, easily accessible with the thumb of your left hand.

As we were wrapping up this report, Fujifilm announced an upgrade to this model. Called the FinePix S602ES, the mild refresh adds a threaded manual cable release socket and a PC Sync socket for external flash—and it's all black (the model we tested is black and a metallic grey-bronze).

PhotoSmart P850

From Hewlett-Packard of Canada, www.hp.ca

Price: \$800

Pro: Good price for a four-megapixel camera, especially with the impressive 8X optical zoom. Menu and interface simple, easy to understand.

Con: Autofocus preview, 56X zoom label misleading.



Hewlett-Packard's mission is to bring digital photography to the masses, and the PhotoSmart P850 is its top tool to fulfill that goal. Extreme photo hobbyists will find little to get excited about with this camera, but for those who just want to capture special moments without having to become a technician, this camera is worth a look.

Like the Fujifilm S3800, it is definitely aimed at the point-and-shoot crowd, with a few controls that let users adjust exposure and other settings—but without overwhelming them with choices. Further catering to the ease-of-use crowd, the P850 has a built-in utility called Instant Share, which allows you to select photos to be printed. The P850 can also be directly connected to an HP DeskJet or PhotoSmart printer, bypassing a computer altogether.

The Instant Share utility also allows you to load email addresses into the camera from a computer, and tag them to images. When you connect the camera to a computer (with an Internet connection) emails are sent to the appropriate addresses notifying them that you've sent them a picture, giving the URL (HP's picture hosting site) where the images can be viewed.

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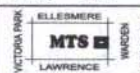
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This model implements the autofocus preview in an annoying way. As with other cameras, you push the shutter button part-way down to activate the autofocus. But unlike others, which sharpen the view in real time as the focus is established, on the HP you have to release the shutter button before the focus is updated in the viewfinder.

We don't think much of digital zooming, which is actually just an in-camera crop of a smaller portion of the scene, so didn't like that HP labels the camera as having a 56X zoom. The 8X optical zoom is unusual enough to allow HP bragging rights without glossing over, and possibly confusing the consumer about, the important distinction between optical and digital zooms.

CoolPix 5700

From: Nikon of Canada, www.nikon.ca

Price: \$1,750

Pro: Solid feel, 8X zoom gives versatile wide-to-telephoto range. Clear electronic viewfinder.

Con: Awkward location of power switch. Non-standard USB plug.



The CoolPix 5700 has a lot that will satisfy and not much to disappoint the prosumer. When the review unit arrived, I was surprised at how small it is. More than the others, it has the feel of a finely crafted instrument; the solid metal case contributes to that impression.


As with the Fujifilm units, I didn't care for the placement of the power switch on the tip of the handgrip: I accidentally turned it on when putting it in a camera bag many times. Initially the placement and grouping of controls didn't make sense to me. It took only about 10 minutes of fiddling with the various controls and a quick read of some of the manual before I felt settled. Still, of the high-end cameras in this report, I liked the control system the least.

Chalk it up to personal preference, because once you get down to the business of taking pictures, the controls you are most likely to use are conveniently

Continued on page 36

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Long lookers

Continued from page 35

placed.

Exposure compensation is the same procedure as on the Fujifilm S602—press the compensation button near your trigger finger and adjust with the thumbwheel. Likewise, exposure and focus lock is a single button, near the thumb of your left hand—very handy. The 8X optical zoom gives a good range, from a respectable 35 mm at wide angle to 280 mm at full telephoto. The elec-

tronic viewfinder is very clear, and the LCD screen is a flip-and-twist design that allows you to compose a shot when the camera is above or below your eye level—or facing you, for self portraits.

Dimage 7Hi

From: Minolta Canada, www.minolta.ca

Price: \$2,000

Pro: Manual focus and zoom rings on lens barrel.

Widest wide angle of this group. Locking mode dial. Clear viewfinder.

Con: Most expensive camera in this roundup.



The Dimage 7Hi was the big surprise in this group for me—I liked it far more

than I thought I would, and I found myself reaching for it often. The other cameras have a rear surface that's more or less flat, but on the Dimage the section that houses the lens extends backward from the body. It holds the viewfinder (a very clear one), LCD screen, and the four AA cells, which are on the bottom of the camera, running parallel to the lens. It's an unusual design that I thought would be ungainly until I started using it. I found it to be well balanced, but the big plus was that moving the handgrip forward in relation to the

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(Retail version, 3 years warranty by Intel)
ECS P4VMM2 All-In-One Board
256MB SDRAM PC133 Memory
30GB 7200rpm hard drive
17" 1280 .27 monitor
Integrated Savage 3D Video
Mini Tower Case with Pentium® 4 Power Supply
LG IDE 52X CD Drive, 1.44M Floppy drive
Build-in 10/100BT LAN, 2 USB Ports
AC97 Audio with Amplifier Speaker
AOpen 104 keys keyboard,
Logitech Wheel mouse

SPRING SPECIAL



e-Station 3204 \$1309

Intel® Pentium® 4 Processor 1.8 GHz
Intel® D845GLADL Desktop Board
256MB DDR PC266 Memory
Seagate 40GB 7200rpm hard drive
NEC AS75F 17" .25 monitor
Intel® Extreme Graphics Video
Med. Tower Case with Front USB & 300W Power Supply
LG IDE 48X16X48 CD-Rewriter, 1.44M Floppy drive
Build-in 10/100BT LAN, Maximum 4 USB2.0 Ports
SoundMax 2.0 with Altec Lansing AVS200W Speaker
Keytronic 104 keys keyboard
Logitech Wheel mouse
Microsoft Windows® XP Home

SPRING SPECIAL



Serious Station 3203 \$1709

Intel® Pentium® 4 Processor 2.53 GHz
Intel® D845PESVL Desktop Board
256MB DDR PC333 Memory
Seagate 40GB 7200rpm hard drive
NEC AS75F 17" .25 Flat Screen monitor
Geforce4 MX440SE 64M DDR Video Card
Med. Tower Case with Front USB & 300W Power Supply
LG 48X16X48 CD-Rewriter, 1.44M Floppy drive
Build-in 10/100BT LAN, Maximum 4 USB2.0 Ports
SB Live 5.1 sound with Altec Lansing AVS500W Speaker
Microsoft Multimedia keyboard
Microsoft Optical mouse
Microsoft Windows® XP Home

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With Intel® Hyper-Threading Technology
Efficiency Multithreading and Multitasking
Supermicro® P4DCE+ Workstation Board
512MB RAMBUS Memory, Intel® 10/100 LAN
Chenbro® SR10403 Chassis with 460W Power Supply
WD 120GB 7200rpm ATA/100 8MB cache Hard Drive
NEC AS95F 19" .25 Flat Screen monitor
ATI® FireGL 8800 DDR 128MB 4X AGP Graphic card
LG 16X DVD Drive and LG 48X24X48 CD-Rewriter
1.44M Fl. drive, Microsoft Multimedia KB & Opt. Mouse
Microsoft Windows® XP Professional



\$4169

Real-Server 3209

Dual (2) Intel® Xeon® Processors 2.4 GHz
With Intel® Hyper-Threading Technology supports
Efficiency Multithreading and Multitasking
Intel® SE7500CW2 Server Board
512MB DDR266 ECC with Register Memory
Intel® SC5200 Server Chassis with 450W Power Supply
WD 120GB 7200rpm ATA/100 8MB cache Hard Drive
Build-in Promise® RAID Controller
Dual (2) Intel® 10/100+ Server Ethernet Controller
Integrated ATI® Graphic video with 8MB
LG 52X CD-ROM, 1.44M Fl. drive, Keyboard & Mouse
O/S and Monitor are not included



\$3049 One Ultra160 SCSI channel Add \$208
RAID 1, mirroring 120GB drives Add \$310

Real-Server 3208

Intel® Pentium® 4 Processor 2.53 GHz
With 533MHz system bus and 512KB L2 cache
Intel® S845WD1 Server Board at 533MHz System Bus
256MB DDR266 ECC Memory
Medium Tower Case with 460W Power Supply
WD 80GB 7200rpm ATA/100 8MB cache Hard Drive
Build-in Promise® RAID Controller
Dual (2) Intel® 10/100+ Server Ethernet Controller
Integrated ATI® Graphic video with 8MB
LG 52X CD-ROM, 1.44M Floppy drive
Keyboard & Mouse
O/S and Monitor are not included



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WD 40 GB, 8M cache (400JB) \$ 155
WD 80 GB (800BB) \$ 184
WD 80 GB, 8M cache (800JB) \$ 195
WD 120 GB, 8M cache (1200JB) \$ 282
WD 180 GB, 8M cache (1800JB) \$ 485
WD 200 GB, 8M cache (2000JB) \$ 525
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Intel® Celeron® Processor 1.7 GHz	\$ 102
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Intel® Pentium® 4 Processor 1.8 GHz \$ 252
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Intel® Pentium® 4 Processor 2.66 GHz \$ 524
Intel® Pentium® 4 Processor 2.8 GHz \$ 672
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MONITORS

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* All desktop packages come with 1 year parts and 2 years labour depot warranty by Throne, include the systems unit, keyboard, mouse and speaker. All monitors and add-on items come with manufacturer's warranty. All upgrade package come with 9 months parts & labour depot warranty. 3 years limited warranty on all Intel® processors and motherboards by Intel®. All items below may be used as upgrade for the systems above. Intel, the Intel Inside Logo, Xeon, Pentium and Celeron are registered trademarks of Intel Corporation.

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Long lookers

Continued from page 36

eyepiece creates a shooting position that's the most comfortable.

Likewise, the control system initially mystified me, but once I read the manual and discovered the basic methodology, it made a lot of sense, and proved efficient. The surface is cluttered with lots of dials and buttons. The basic method for adjusting a setting is to turn the relevant dial to the function you want to access, press the button in the centre of the dial to activate the selection, then adjust using a separate thumbwheel. It sounds involved, but it actually works very well, once you understand it.

The Dimage has the best wide-angle coverage of this group, going to 28 mm (35 mm film equivalent). The difference between 35 mm and 28 mm is much more dramatic than between 190 mm and 210 mm on the telephoto end.

Because of its weight, size, and the manual zooming ring, it feels more like a 35 mm SLR than the others. This camera would probably give the least culture shock to a 35 mm photographer who's going to digital.

Camedia C-730

From: Olympus, www.olympusamerica.com
Price: \$900

Pro: Longest telephoto. Very compact.

Con: No manual focus. Focus lock cumbersome. At around \$900 in stores, the C-730 costs a few hundred dollars more than the other consumer-level three-megapixel cameras it might be competing with. If a long telephoto is what you're after, however, this

TCP Lab: Digital Camera Survey							
Model	FinePix 3800	FinePix S602	PhotoSmart P850	Dimage 7Hi	CoolPix 5700	C-730	Cybershot 717
Manufacturer	Fujifilm	Fujifilm	Hewlett-Packard	Minolta	Nikon	Olympus	Sony
Effective res.: megapixels	3.24	3.1	4.1	4.95	5	3.2	5
Max. image size: pixels	2,048x1,536	2,832x2,128*	2,272x1,712	2,560x1,920	2,560x1,920	3,200x2,400*	2,560x1,920
Image file formats	JPEG	TIFF, JPEG	JPEG	Raw, TIFF, JPEG	Raw, TIFF, JPEG	TIFF, JPEG	TIFF, GIF, JPEG
Optical zoom range	6X	6X	8X	7X	8X	10X	5X
35 mm equiv. focal length	38 to 228 mm	35 to 210 mm	37 to 300 mm	28 to 200 mm	35 to 280 mm	38 to 380 mm	38 to 190 mm
Closest focus	10 cm	10 cm	10 cm	21 cm	3 cm	10 cm	10 cm
Storage format	xD	SM, or CF I and II	SD/MMC	CF I or II	CF I or II	xD or SM	Memory Stick
Card included	16 MB xD	16 MB SM	16 MB	16 MB CF I	32 MB CF I	16 MB xD	32 MB
Metering	multi, auto AE	multi, auto AE	average, centre, spot	multi, centre, spot	multi, centre, spot, AE Spot	multi, spot, subject	multi, centre, spot
ISO sensitivity equivalent	100	160-1600	100, 200	100-800	100-800	100, 200, 400	100-800
Shutter speed range: sec.	3 to 1/500	15 to 1/1,000	16 to 1/2,000	15 to 1/4,000	8 to 1/4,000	16 to 1/1,000	30 to 1/1,000
Voice memo function	yes	no	yes	yes	no	yes	yes
Batteries	AA (4)	AA (4)	AA (4)	AA (4)	proprietary	CR-V3 (2) or AA (4)	proprietary
Dimensions (WxDxH): cm	10x7x7.7	12.1x9.7x8.15	11x8x7.5	11.7x11.25x9	10.8x10.2x7.6	10.6x7.6x7.7	11.9x15.1x6.89
(in.)	(4x2.8x3)	(4.8x3.8x3.2)	(4.3x3.1x3)	(4.6x4.4x3.6)	(4.25x4x3)	(4.2x3x3)	(4.6x6x2.7)
Weight: g (oz.)	380 (13.4)	600 (21)	500 (17.6)	650 (23)	530 (18.7)	400 (14.1)	660 (23.3)
Street price**	\$700	\$1,100	\$800	\$2,000	\$1,750	\$900	\$1,500

*The FinePix S602 and Camedia C-730 create in-camera images larger than the number of pixels in the sensor.

** Street prices are those we found in advertising flyers or Canadian retailer Web sites in mid-December 2002, rounded to the nearest dollar.

unit gives you the longest reach (equivalent to 380 mm) as well as the biggest range (10X) in this roundup. The C-730 uses an electronic viewfinder but its proportions are more like rangefinder cameras, and it looks less cutting edge—almost plain—compared to the others. There are no rubber insets to improve grip, but the camera body is relatively small, so that's not a big detraction.

The simplicity of design has its advantages. It has fewer buttons and dials than the five-megapixel cameras, but the most common controls are there, so less time is needed to master this camera.

And what a reach. With a maximum telephoto of 380 mm (35 mm equivalent),

objects are magnified almost eight times compared to what you see normally with the unaided eye.

One feature this camera really needs is a more accessible manual focus mode. With the extreme telephoto and a moving subject, I missed a lot of shots because the auto focus was hunting and the action passed before the camera took the shot. In order to implement manual focus, you have to hold the menu OK button down for one second, then select manual focus. On other cameras, this is a dedicated button. You can always use the focus lock, but you need to hold the shutter button down halfway, which requires a subtle touch. That 380 mm telephoto really pulls things in close, so having a manual override is quite

important to reduce shutter lag. But for static scenes, this is not an issue and you can really enjoy the long lens.

Cybershot DSC-F717

From: Sony of Canada, www.sony.ca
Price: \$1,500

Pro: Easy to use with good user interface. Innovative features.

Con: Largest Memory Stick is 128 MB, which will restrict the number of high-resolution TIFFs you can take before you need to download.

As with the Dimage, I was initially a little put off by the DSC-F717's design, but ended up appreciating all the features Sony packed into this unit. It looks unbalanced, and it is—plus the short body makes the handgrip feel too small—how

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		XP 2600	\$ 849.00	2.2GHz Celeron	\$489.00	P4 2.4GHz	\$ 719.00	PII 366MHz, 13.1" TFT, 64MB, 6GB, DVD \$719	
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Barebone System

P3 Barebone for \$119

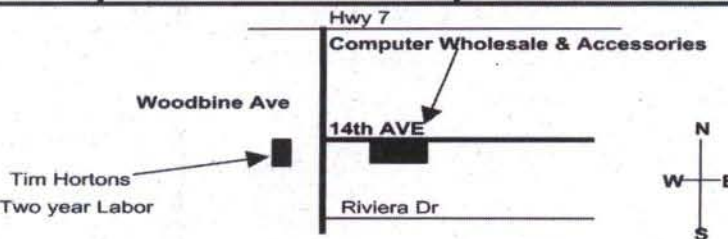
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- 32MB Riva TNT2 Video AGP
- 56K V.90 Voice/Fax Modem/USB
- 32bit 3D Full Duplex/Mid Tower ATX

AMD Barebone for \$189

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- AMD 1.3GHz Duron/32MB Video
- 32bit 3D SOUND/USB Port
- Mid Tower ATX Case

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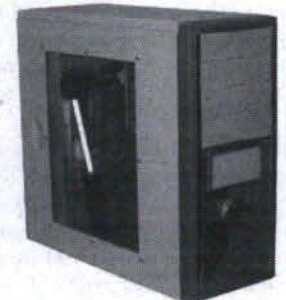
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Clip-On drive & Add On card
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Long lookers

Continued from page 38

ever, that's of little consequence when you actually start using the camera. It encourages you to rest the big lens barrel in the upturned palm of your left hand, and once in that position, everything seems to fall nicely into place. The articulated body allows you to hold the camera above or below eye level and still have a clear view of the LCD on the back.



The main control is a jog switch that combines the functions of a rotating thumbwheel and a button switch. Spin the wheel to highlight one of several available menu items, for example exposure compensation, then push down on the wheel to activate that function. This brings up the relevant sub-

menu—the exposure compensation gauge in this case. You spin the wheel one way or the other to dial in the compensation, then push the wheel down again to make the selection. I found it took me no time to get used to this spin-click navigation—it's simple and gives you control over a large number of functions using just one wheel. But the menu system uses white letters that turn yellow when highlighted. These two colours are sometimes hard to discriminate, especially under bright conditions. We would have preferred more contrast, say reversing the text on the active selection, or using a colour like blue or green.

Some key controls are on the right of the lens barrel, where your thumb falls when you cradle the barrel in your left palm. The zoom control is a two stage switch—push slightly and the lens slowly zooms in or out. Push all the way and the zoom rate is accelerated. And it's very smooth.

Sony is pushing digital photography into different directions, and the camera has a few unique features. One is Clip Motion, which is intended for Web work. The mode allows you to capture

up to ten 160x120-pixel images and save them for use as animated GIFs. Another mode, called Multi Burst, captures 16 consecutive images in a single 1,280x960-pixel frame with a single

shutter click. When you play it back in the camera you see an action broken into 16 freeze frames. Sony suggests this is a tool for studying your golf or tennis swing. □

TCP Lab: Tele-extenders

Some manufacturers and third-party filter makers, like Tiffen, offer auxiliary lenses for some models. These typically screw over the camera's existing lens system using a separate extension tube, and extend the reach of the existing telephoto by one and a half to five times.

I've been using a 1.5X tele-extender on my Canon G2 for the past six months, and the results have been a mixed bag. It brings the telephoto up to about 150 mm, which is decent, but most of wide angle portion of the main lens is unusable because of serious vignetting—with the tele-extender mounted and the camera set to wide angle, you get a black frame and just a circular portion in the middle that's the active image area.

A mechanical annoyance is that the threads on the plastic extension tube are starting to wear down, which makes it easy to cross-thread it when attaching it to the camera. Also, even though the auxiliary lens and extension tube are from Canon, and designed for the G2, not much has gone into their aesthetics: they look cheap compared to the camera. Function over form, I suppose, and it does offer that extra reach when it's impractical to move physically closer to a subject.

Taking tele-extenders to the extreme is an interesting subculture of birdwatchers using the Nikon CoolPix 9xx generation of cameras. Because these cameras have internal zoom mechanisms and a relatively small lens diameter, someone hit on the idea of adapting the eyepiece of a telescope to the CoolPix to produce a really long telephoto—and the digi-bird was born.

—David Tanaka

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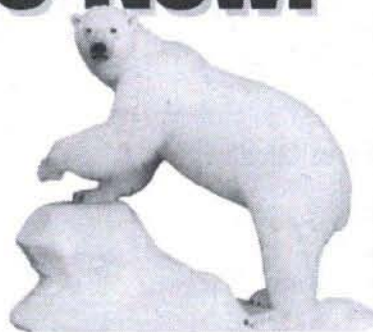
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Take a few tablets and call me in the morning

TCP Lab looks at five pen-based computing options

By Sean Carruthers

With the introduction of the Tablet PC edition of Windows XP, Microsoft is making a bold bet that mobile users are interested in pen-based computing. The market for handheld devices like Palm and Pocket PC has been fairly strong, so why wouldn't people want to add a stylus to their notebook-sized computer?

It's a sticky question. Most notebook computers users have learned to interact with them reasonably efficiently; throwing a pen into the equation is bound to be disorienting, at least for a while. This disorientation is compounded when you choose a slate-format Tablet PC, which eliminates the keyboard altogether. The question that a lot of people will surely ask is, "why do I even need a pen when the keyboard works just fine?"

It's a fair question. In the short term,

only users with very specific needs may want to pursue the Tablet PC.

One such obvious use would be for any user who needs a portable machine for taking notes, that consist of a mix between diagrams and text (flowcharting, mathematical equations, chemical diagrams, or prototype sketches, for example).

Another use would be for inventory-taking applications. And, of course, there are those who just prefer to write things down instead of typing.

The case for the Tablet PC

- Devices run full version of Windows XP with Tablet PC enhancements, which means they can be used as fully functional portable computers.
- Stylus input is a more natural method of input for a lot of users.
- Screen is not touch-sensitive like those found on PDAs. Instead, it uses magnetics to sense the stylus so your finger will not move cursor.

- A Tablet PC screen is designed to switch between portrait and landscape orientation to suit the way you work, with just a touch of the the screen orientation button.
- Tablet PCs can often be docked and used with external equipment like CD drives, keyboards, mice, and monitors, which means your portable "notepad" can also function as your workstation.
- The OS allows you to save files with "ink" titles: just handwrite the names of files, then search for them later by your handwritten titles.
- Handwriting recognition has improved; the system is able to understand cursive handwriting more routinely, even on strange angles.
- "Ink" capabilities will be bundled into future versions of Microsoft Office products. An update pack is already available for Office XP.

The case against Tablet PC

- Tablet PCs are almost identical to notebooks, so they are much heavier than PDAs. Carrying one under your arm could get tiring over the course

of a whole day.

- If you choose (or get stuck with) a slate format Tablet PC, you'll have to relearn how to input data—and quite possibly relearn penmanship. Alternately, you can hunt and peck using a small on-screen keyboard, which isn't ideal if you need to enter data with any speed.
- If you've done any pen-based computing in the past, it may be a bit hard to get used to the fact that you can lay your hand against the screen without affecting the cursor position.
- Because the pen/screen interface uses magnetics, you lose the on-screen input capability if you lose the stylus. It is also more expensive to replace than the type of plain plastic stick that comes with a PDA.
- Generally speaking, battery life is still an issue (as it is with notebooks)—and that's problematic for a device that's meant to be carried around all day.
- Tablet PC's still have a price premium compared to notebooks, and even then you'll probably have to make do with a smaller screen and a

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smaller keyboard—or no keyboard at all!

If you're still interested in checking out the Tablet PC, read on. We've taken a look at some of the first models to hit the market!

Acer TravelMate C100 (TMC102Ti)

From: Acer Inc., global.acer.com

Estimated price: \$3,499

Pro: Both keyboard and slate in one. Very light.

Extra battery. External CD drive.

Con: Keyboard and screen very small. Not much horsepower.



Acer's TravelMate C100 was one of the

first Tablet PCs we laid eyes on, a few months before Microsoft officially launched the Tablet PC. We've seen a few other manufacturers' tablets since, but the C100 continues to impress. It's a convertible model, which means it has a keyboard and can be used like a notebook, or with the click of two tabs where the screen meets the body, spun and folded into slate mode. In either orientation it's very compact—at least 2 cm smaller (both in width and height) than most other models we've seen—which

makes it very easy to carry around.

That said, there are some relatively minor design issues worth note. The convertible 10.4-inch screen is nice, but we found the tabs that are supposed to keep the screen in place are fairly easy to "pop out" while the unit is being carried in a notebook bag. Also, while the clip that fastens the screen to the body of the unit (when closed or in slate mode) is very innovative, it's a bit difficult to use and may actually be broken off accident-

Continued on page 44

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<p>Plasma</p> <p>42" 42MP3 (853 x 480) \$6,990</p> <p>42" 42MP4 (1024 x 768) \$9,330</p> <p>50" 50MP2 (1365 x 768) \$11,890</p> <p>61" 61MP1 (1365 x 768) \$19,060</p> <p>LCD</p> <p>15" 1550V (Analog) \$455</p> <p>15" 1550M (Multimedia) \$580</p> <p>15" 1550X (Digital) \$738</p> <p>17" 1700V (Analog) \$750</p> <p>17" 1700NX (Digital) \$799</p> <p>17" 1720M (Multimedia) \$868</p> <p>18" 1850E (Analog) \$930</p> <p>18" 1850X (Digital) \$1,458</p> <p>18" 1880SX (Digital) \$1,618</p> <p>19" 1920NX (Digital) \$1,198</p> <p>20" 2010X (Digital) \$2,109</p> <p>20" 2010X-T (Touchscreen) \$3,050</p> <p>LG</p> <p>15" 1511S (Analog) \$448</p> <p>17" 782LE (Digital) \$815</p> <p>17" 786LS (Analog) \$645</p> <p>18" L1800P (Digital) \$1,045</p> <p>18" L1810B (Digital) \$1,175</p>				<p>Plasma</p> <p>42" SPL4225 (852 x 480) \$5,845</p> <p>42" SPM4227 (852 x 480) \$7,325</p> <p>50" HPL5025 (1366x768) \$9,380</p> <p>63" HPL6315 (1366x768) \$21,925</p> <p>LTM LCD TV</p> <p>15" LTM1555 LCD TV/XGA \$1,488</p> <p>15" LTM1525 LCD TV/XGA \$1,568</p> <p>15" LTM1575W LCD TV/WXGA \$1,728</p> <p>17" LTM1755X LCD TV/SXGA \$2,178</p> <p>17" LTM1775W LCD TV/WXGA \$2,338</p> <p>29" LTM295W LCD TV/WXGA \$8,778</p> <p>40" LTM405W LCD TV/WXGA \$10,988</p> <p>LCD</p> <p>15" 151S IVORY/BLACK (Analog) \$429</p> <p>15" 151S SILVER (Analog, Pivot) \$439</p> <p>15" 151N (Analog) \$445</p> <p>15" 152B SIL/BK (Multimedia) \$499</p> <p>15" 152T (Digital) \$578</p> <p>15" 151P (Digital) \$628</p> <p>15" 150MP (LCD TV) \$668</p> <p>15" 151MP (LCD HDTV) \$838</p> <p>17" 171S IVORY/BLACK \$716</p> <p>17" 171S SILVER (Pivot) \$726</p>				<p>17" 171N (Slim Bezel) \$758</p> <p>17" 171P (Digital) \$955</p> <p>17" 170MP (LCD TV) \$958</p> <p>17" 171MP (LCD HDTV) \$1,190</p> <p>17" 172B (Multimedia) \$798</p> <p>17" 172T (Digital) \$868</p> <p>19" 191N (Slim Bezel) \$1,095</p> <p>19" 191T SIL/BK (Digital) \$1,260</p> <p>21" 210T (Digital) \$2,328</p> <p>24" 240T (Digital) \$3,588</p> <p>SONY</p> <p>15" SDMS51 (Analog) \$586</p> <p>17" SDMX72 \$1,089</p> <p>18" SDMS81 (Analog) \$1,499</p> <p>VIEWSONIC</p> <p>15" VE500 (Analog) \$486</p> <p>15" VE155 (Analog) \$515</p> <p>15" VX500 (Digital) \$763</p> <p>17" VX700 (Digital) \$998</p> <p>18" VG800 (Multimedia) \$908</p> <p>18" VX800 (Digital) \$1,079</p> <p>18" VG181 (Digital) \$1,248</p> <p>19" VX900 (Digital) \$1,339</p> <p>19" VG191 (Digital) \$1,338</p> <p>22" VX2000 (Digital) \$2,198</p>				<p>NEC/MITSUBISHI</p> <p>17" AS70 (1280) \$192</p> <p>17" AS75F (Reconditioned, 1yr wrty) \$165</p> <p>17" AS77F (1280, Flat) \$215</p> <p>17" FE770 (1280, Flat) \$242</p> <p>17" FE70M (1280, Multimedia) \$293</p> <p>17" FE71SB (AG 1820 Flat) \$245</p> <p>17" FE791SB (AG 1800 Flat) \$292</p> <p>19" AS80 (1600) \$286</p> <p>19" AS90F (1600, Flat) \$336</p> <p>19" FE980 (1600, Flat) \$376</p> <p>19" FE91SB (AG 1792 Flat) \$399</p> <p>19" FP955 (AG 1920 Flat) \$520</p> <p>19" FP955S (AG SpectraView) \$1,128</p> <p>19" FP912SB (AG) \$919</p> <p>21" AS120 (1600) \$650</p> <p>21" AS125F (AG 1600 Flat) \$650</p> <p>22" FE211SB (AG 1920 Flat) \$885</p> <p>22" FE2141SB (AG 2048 Flat) \$1,095</p> <p>22" FE1355 (AG 2048 Flat) \$1,095</p> <p>22" FP1375 (AG 2048 Digital) \$1,280</p> <p>22" FP1375S (AG SpectraView) \$1,675</p> <p>19" Pro 930SB (AG 1920 Flat) \$600</p> <p>21" Pro 2070SB (AG) \$215</p> <p>SAMSUNG</p> <p>17" G70F (AG 1280 Flat) \$234</p> <p>17" G70F (AG 1280 Flat) \$253</p> <p>17" E70F (1600 Flat) \$179</p> <p>17" G70F (AG 1600 Flat) \$202</p> <p>17" P75+ (AG 1792 Flat) \$236</p> <p>19" E90F (1600 Flat) \$269</p> <p>19" G90F (AG 1600 Flat) \$309</p> <p>19" P95+ (AG 2048 Flat) \$279</p> <p>19" P95DF (1600 Flat) \$325</p> <p>22" P22J (AG 1600 Flat) \$379</p> <p>22" P22J (AG 2048 Flat) \$478</p> <p>LG</p> <p>17" 700S (1280) \$449</p> <p>17" E700B (1280 Flat) \$748</p> <p>17" F700B (Falcon 1280) \$898</p> <p>17" F700P (Falcon 1600) \$898</p> <p>19" E900B (1600 Flat) \$655</p> <p>19" 996FT (Falcon) \$695</p> <p>21" E540 (AG 1920 Flat) \$835</p> <p>21" G820 (AG 2048 Flat) \$1,178</p> <p>VIEWSONIC</p> <p>17" G70F (AG 1280 Flat) \$234</p> <p>17" G70F (AG 1280 Flat) \$253</p> <p>17" E70F (1600 Flat) \$179</p> <p>17" G70F (AG 1600 Flat) \$202</p> <p>17" P75+ (AG 1792 Flat) \$236</p> <p>19" E90F (1600 Flat) \$269</p> <p>19" G90F (AG 1600 Flat) \$309</p> <p>19" P95+ (AG 2048 Flat) \$279</p> <p>19" P95DF (1600 Flat) \$325</p> <p>22" P22J (AG 1600 Flat) \$379</p> <p>22" P22J (AG 2048 Flat) \$478</p>			

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From	LTM1575W \$ 1,725	172T \$868	50" Plasma HPL5025 \$9,380	1850E \$930	FE991SB \$399	786 LS \$645	VX 900 \$1,339	SDMS51/B \$585
SAMSUNG	LTM1775W \$ 2,338	191T \$1,260	1550V \$455	1920NX \$1,198	FE2141SB \$1,095	L1800P Digital \$1,045	VX 2000 \$2,198	G420S \$595
								SDMX72 \$1,089

Take a few tablets

Continued from page 43

tally if you're not careful. Lastly, while the keys are laid out on a five-degree curve to maximize usability in this small form factor, some are still very small and may pose problems if your fingers aren't used to the scale (we kept hitting Page Up or Page Down when trying to use the cursor keys during our evaluation).

A more serious problem is with the overall performance of the C100. Though the machine comes with an 800 MHz Mobile Pentium III processor and 256 MB of RAM, it tends to choke when you hit it with anything really demanding, like serious image processing in Photoshop to give just one example. It should be stressed that for general use, the C100 should be just fine, and that it isn't any different from similarly configured models from other manufacturers. So, take note if you're a power user.

The C100 comes with a few very nice extras. Although a compact stylus tucks into the top of the screen, there's also a larger stylus included in the box. It's one of the few models we've seen that comes with an external CD drive, which means

you don't have to invest extra money in an optical drive.

Even better, the TMC102Ti model comes with an additional battery and built-in 802.11b wireless networking, which are not included on the TMC102T model. (The TMC102Ti also bumps the hard drive capacity up from 20 GB to 30 GB, which is even nicer.)

Electrovaya Scribbler

From: Electrovaya, www.electrovaya.com

Estimated price range: \$3,499 to \$4,399

Models available:

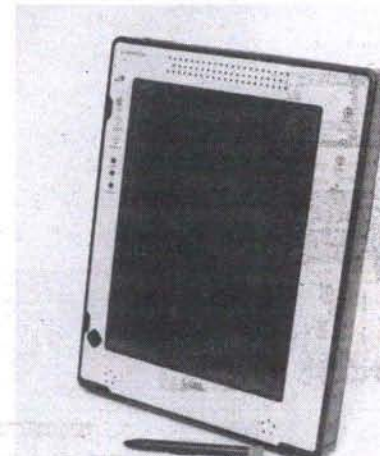
Model	CPU (PIII)	RAM	HD	Battery life	Price
PC-SC300	766 MHz	256 MB	20 GB	96 Wh	\$3,499
PC-SC500	866 MHz	512 MB	30 GB	96 Wh	\$3,999
PC-SC800*	866 MHz	512 MB	30 GB	120 Wh	\$4,399

**Comes with fingerprint reader.*

Pro: Exceptionally long battery life. Recessed buttons.

Con: Heavy. Not very stylish. Port covers awkward. Canada's own Electrovaya has made a name for itself in the battery business, thanks to its line of long-life PowerPad batteries for notebooks. On the surface, the Tablet PC would seem like an odd category for Electrovaya to get into, but it actually makes sense—one of the

biggest concerns with mobile computing is how long the battery will last.



That's the tack Electrovaya has taken with its Scribbler line of slate-format Tablet PCs, building in a rechargeable battery designed to provide anywhere between eight and 12 hours of runtime between charges: which means you could theoretically walk around with your Scribbler for the entire work day before having to plug it in again.

Because this is the company's first foray into the world of computers, it's probably understandable that the design of the Scribbler is, well, on the basic side. That's a polite way of saying it's functional but it's not going to win any beauty contests. The casing is very functional, and the controls are definitely innovative: to operate any of the "buttons" along the front of the Scribbler, you actually have to insert the tip of your stylus into a little hole, which means you can't accidentally depress any buttons during regular operation.

It also has a launch button specifically for Windows Journal, and a thumb-cursor for easy scrolling and selection. The design has a couple of drawbacks, though; the rubberized strips covering the ports are a bit awkward when you

have anything plugged in (Ethernet, PC Card, or headphones, for example). If you use this as a desktop replacement



you'll probably want to just rip the strips off altogether. Because floppy and CD are not included, you'll need to get them separately if you'll require external drives to do your work.

Another potential issue is the battery. The Scribbler uses one of electrovaya's thin long-life cells, but it's sealed inside the unit behind a panel that's screwed down. It's not really user-serviceable, and you can't just flip another battery in if you're out of juice, like you can with most other Tablet PC or notebook models. Because the battery is designed to run for up to 12 hours, that shouldn't be a huge concern. If you do require a longer runtime than the internal battery will provide, you can always team the Scribbler up with electrovaya's external PowerPad.

(One note with regards to the benchmarking: The unit we looked at was actually a pre-production sample that contains the same functionality as the shipping units, but which had slightly different specs from those models. We have listed the breakdown of the different models' specs above.

The review model included an 866 MHz Pentium III processor, but only 256 MB of memory and a 20 GB hard drive. Because of that, you can expect slightly slower performance from the SC-300 model and slightly better performance out of the SC-500.)

Continued on page 82

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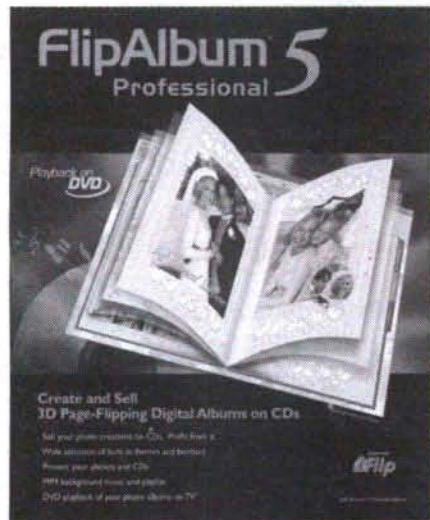
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FlipAlbum creates virtual photo albums

By David Tanaka

You have a growing collection of digital pictures, so wouldn't it be neat if you could show them in an album, as you would your regular prints? That's the main premise behind FlipAlbum, an application that lets you place images in virtual album pages, then flip through them on your computer screen at the click of a mouse button.



Flip Album 5
From: eBook Systems, www.flipalbum.com
Price: US\$24.95 (Standard), US\$69.95 (Suite), US\$169.95 (Professional)

The albums you create are 3D visual representations of a photo album, with a cover, table of contents, and album pages. Clicking on the left or right "page" turns it over, or flips it (hence the name), with an animated sequence that looks like you are flipping through the pages of an actu-

al book.

The album also permits quick access to the table of contents, or specific pages. Pages can be bookmarked, and a slideshow feature lets you sit back and view images while the software automatically turns the pages.

Albums can be posted to various Internet sites, including one managed by eBook Systems.

A FlipBook viewer is needed, but a basic one can be downloaded for free from the FlipBook site.

With the Suite and Professional editions, a CD creation utility is also included. You need to use separate CD recording software to actually burn the CD, but the FlipBook utility assembles the images, a FlipBook viewer, and an autorun program, so anyone can just pop the disc you've created into the CD drive of a Windows-based computer and view the album.

Additional features of the Professional version are aimed at commercial applications. You can prevent people from printing images from the CD, something that photographers might want to implement: they could send images to prospective clients on spec and still protect their images against unauthorized use. The CD can also be set to "expire" after a certain date.

The Professional edition also allows commercial distribution of FlipBooks, which means the program could be used to create and distribute product catalogues, for example.

FlipAlbums can be customized using "themes" that consist of coordinated covers and interior pages of various designs. Some themes are included for common

events (weddings, graduation, vacation, and birthdays, for example) and you can buy more themes or learn how to create your own on the FlipAlbum community site.

Building a basic album is very simple: select a suitable theme, open a folder of images, and FlipAlbum automatically creates thumbnails, table of contents, index, and as many pages as necessary to show the images, with one photo per page. You can change themes at any time, and add images from other folders by selecting each folder in turn, then picking the images you want to import.

The program places small thumbnail images on the first pages of the album, followed by the table of contents. It automatically generates an index that is placed on the last pages of the album. You can change the order of the images by either dragging a thumbnail or a table of contents listing to a new position.

The thumbnails, table of contents listings, index, and images themselves are linked, so a change to one updates the others—for example, reversing the order of two thumbnails causes the order of the actual images to change, with the contents and index orders updated as well.

You can also add annotations to the page, as well as multimedia components such as video or music clips, or a voice comment.

The program supports a number of still image (including GIF, TIFF, JPEG, and BMP), motion (AVI), and sound (WAV and MP3) file formats.

The program allows you some flexibility to manipulate the layout—for example, resizing images and placing multiples of

them on the page—in much the same way you'd lay out a page using desktop publishing software.

However, we found this confuses the table of contents and index. If pictures X and Y were on separate pages and you move them to the same page, the contents page doesn't have the intelligence to adjust for this: the new page with the two images retains the name of one of the original images, while the reference to the second image stays with the original, now-blank page.

The program uses the existing name of the image files to create the album, so if you want meaningful labels like "Frank and Jean," rather than DSC00034, it's best to rename the image files before importing them into FlipAlbum.

Also, while the program will resize the images to fit onto the pages, it doesn't actually alter the file size.

If you populate your album with a lot of high-resolution images, the FlipAlbum will become unnecessarily bloated. We found that reducing images to 640x480 kept the albums small, while providing more than enough quality for onscreen viewing.

FlipAlbum includes a competent image editor that allows you to correct minor image defects like red-eye, alter brightness and contrast, and add effects.

Overall, FlipAlbum makes very attractive virtual albums. The program is easy for anyone to use, but also adds some advanced features and allows customizations that make it a good tool for commercial applications, too. This one will definitely stay on my hard drive for a while. □

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Web accessibility hits the mainstream

By Todd Coopee and Jeff Horne

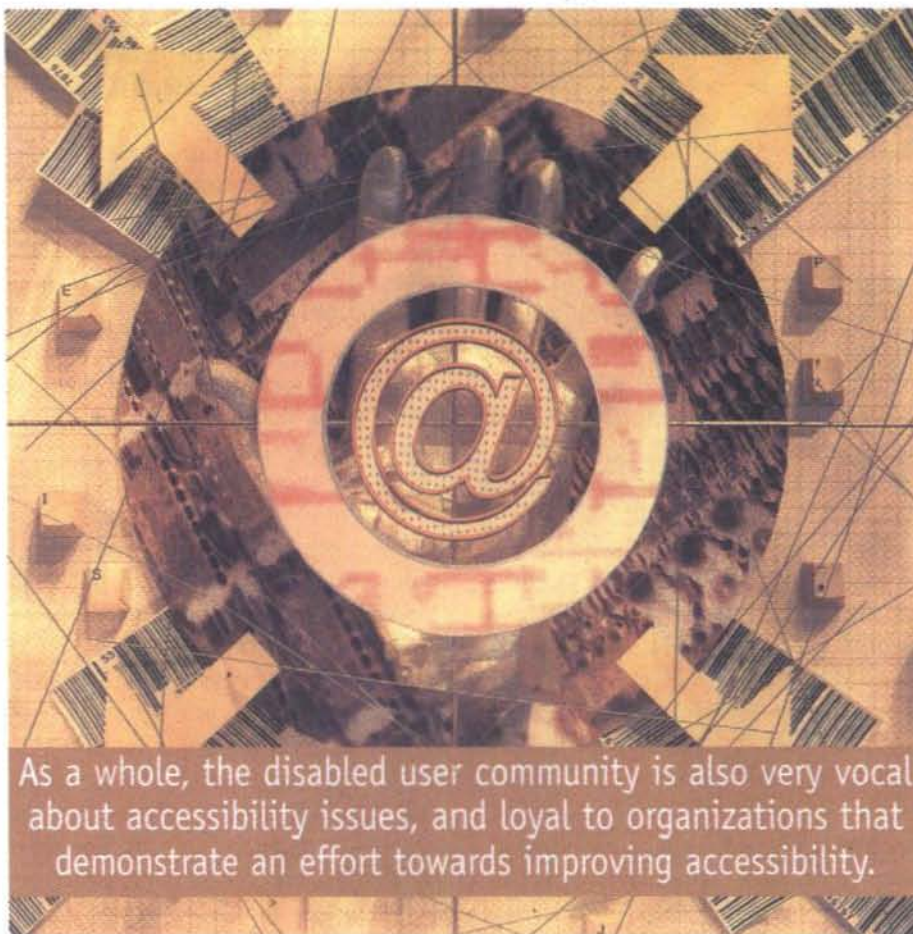
Despite the ubiquitous nature of the Internet and wholesale advances in technology, the World Wide Web still represents a barrier for people with disabilities.

Numerous studies have shown that at least 10 percent of the online community uses assistive technologies to access the Internet, while at the same time 95 to 99 percent of all Web sites are functionally inaccessible to the visually, hearing, and/or mobility impaired.

From a business perspective, the statistics are even more compelling: consumers with disabilities have an estimated US\$175 billion in discretionary income. This is a chronically underserved online audience with immense buying power.

In addition to a positive potential impact on the bottom line, developing or redeveloping an online presence to meet accessibility standards offers a variety of other benefits. Foremost is that accessible Web sites are much better for viewing in alternative formats, as their content is more easily converted into other Internet protocols, such as WAP. In this case, an organization could roll out access to online information from non-PC-based user agents, such as PDAs and cell phones, at a much faster pace and at a much lower cost.

Accessibility also goes hand-in-hand



As a whole, the disabled user community is also very vocal about accessibility issues, and loyal to organizations that demonstrate an effort towards improving accessibility.

with creating a positive customer experience. Research shows that accessible Web sites generate more repeat visits from users than their inaccessible counterparts. As a whole, the disabled user community is also very vocal about accessibility issues, and loyal to organizations

that demonstrate an effort towards improving accessibility—giving credence to the old adage that the best (and cheapest) form of advertising is word of mouth.

Finally, an accessible Web site can help reduce an organization's legal liability.

South of the border, the passage of the American Disabilities Act (ADA) in 1990 has resulted in a number of high-profile lawsuits against multi-national corporations that have a Canadian presence. In 1999, the National Federation of the Blind sued America Online, forcing it to make its integrated Web browser compatible with mainstream adaptive technology. Similar lawsuits were initiated against Intuit and H&R Block. Many experts feel that it is only a matter of time until Internet accessibility is universally mandated in the private sector on a global basis.

Assistive technologies

So, what exactly makes a Web site inaccessible? Common accessibility problems include:

- images without ALternative text;
- uncaptioned audio;
- video without textual context;
- pages with poor colour contrast;
- improper use of structural elements (like HTML tables) on a page;
- and/or the lack of an alternative for users who are incapable of executing specialized scripts or accessing frames.

Typically, a combination of these factors can make even the most common Web tasks, like reading, searching, and purchasing goods and services much more challenging or even impossible for someone with a disability to carry out.

Continued on page 50

W3C standards and Canadian look and feel guidelines

A major proponent of universal access to information on the Web is the World Wide Web Consortium (W3C), an international, vendor-neutral consortium consisting of more than 400 members that promote the growth and interoperability of the Web. The lack of formal accessibility guidelines for Web developers and designers spurred the W3C to develop the Web Accessibility Initiative (WAI), giving them the task of focusing on Web accessibility in five areas: technology, guidelines, tools, education and outreach, and research and development.

The WAI released an initial set of Web Content Accessibility Guidelines (www.w3.org/TR/WCAG10-TECHS/) in May 1999. The specification contains 14 guidelines that provide general principles of

accessible Web page design and corresponding "check-points" that outline how to implement the guidelines in HTML. Guideline 1, for example, states the necessity to "provide equivalent alternatives to auditory and visual content." This ensures text-equivalents are available to users who cannot view images or hear audio.

In addition to the specification, the WAI also drafted an accessibility checklist to serve as a tool to review Web sites. Checklist items are broken down into one of three priorities, based on their overall impact on accessibility. The checklist is comprised of 17 high-priority, 33 medium-priority, and 16 lower-priority rules.

The complete specification and accompanying check lists are available on the W3C Web site at: www.w3c.org/TR/WCAG10/.

Version 2.0 of WAI's Web Content Accessibility Guidelines is currently in working draft format. Currently, no release date for the updated guidelines has been set.

A Canadian perspective

In Canada, the federal government's Web sites are leading the accessibility charge. Leveraging the recommendations of the WAI, the Treasury Board of Canada Secretariat approved the Common Look and Feel (CL&F) Standards and Guidelines (www.cio-dpi.gc.ca/clf-upe/) for Government of Canada Internet sites in May 2000.

These guidelines were designed to make any federal government Web site accessible to anyone with a computer that has access to the Internet.

All federal Web sites are slated to conform to CL&F standards by the end of December 2002.

Canadian private-sector companies are also getting into the accessibility act. Ottawa-based Watchfire Corp. (www.watchfire.com), a developer of Web site management solutions, recently acquired Bobby—a popular online tool for measuring accessibility—from the Center for Applied Special Technology (CAST). Bobby is slated to be integrated into WebXM, Watchfire's Web site management platform and WebQA, its Web site testing tool for Web developers. Bobby is one of many commercial and freeware software applications available for gauging the accessibility of a Web site.

—Todd Coopee and Jeff Horne

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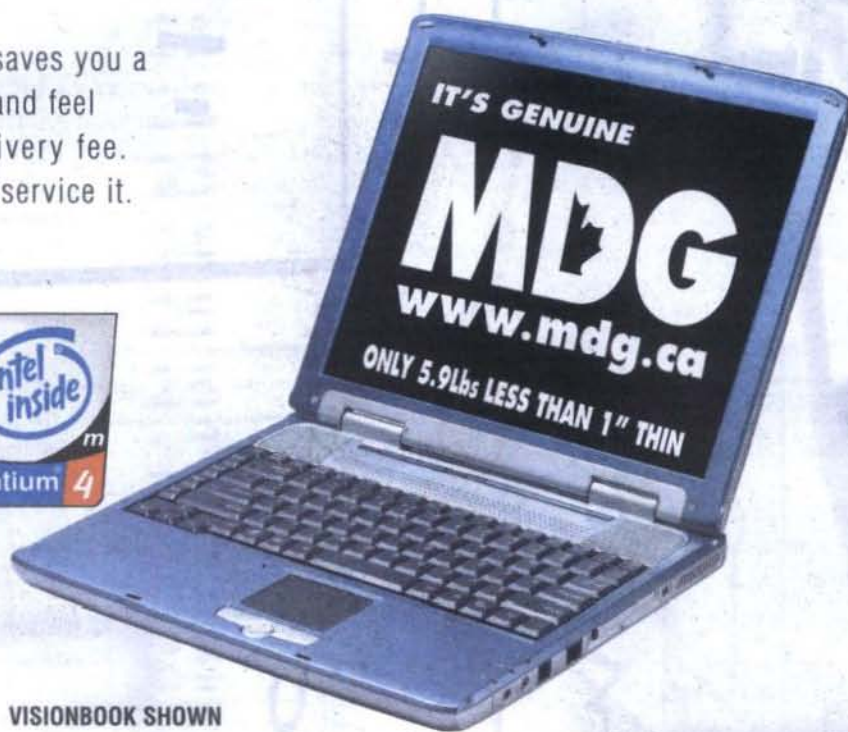
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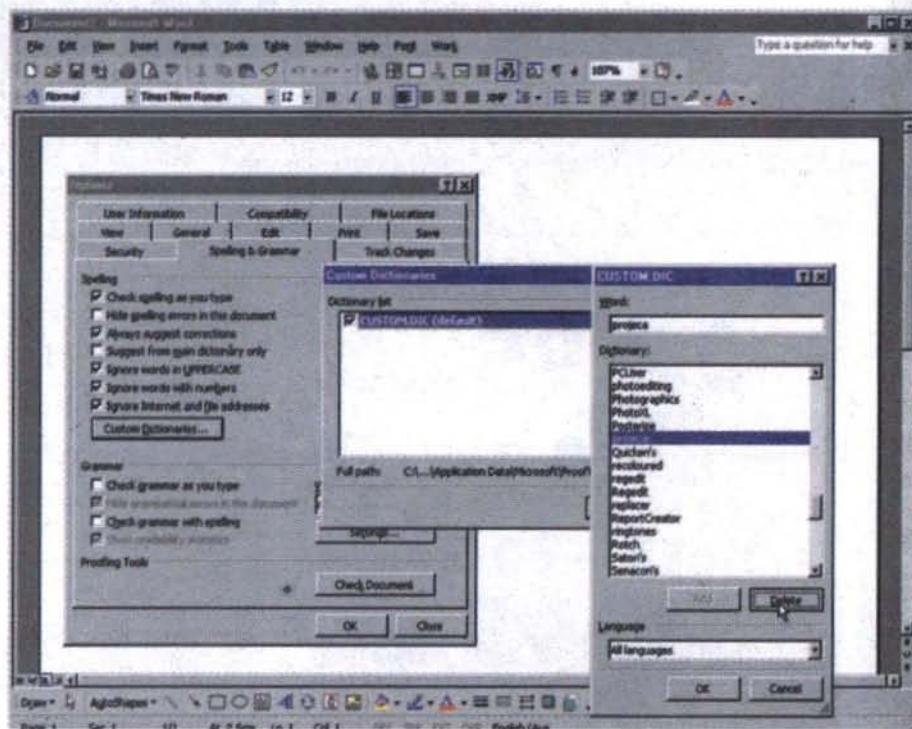


Helen Bradley
OFFICE SUITE
TRAINING

If you're like me, using a spell checker to proof documents makes life a lot easier. It's not that we're bad spellers, many of us just hit keys, type too quickly, or find it difficult to spot errors when viewing a document on-screen. Though the spell checker is a "must use" tool in Word, few people use all of its features. This month, we do just that.

Spell check as you type

Though some users disable it, the Spell Check As You Type option points out potential spelling errors with a red wiggly underline as you type. Right-clicking on the underlined words opens the Spell Check shortcut menu, which offers a range of options including alternate spellings for the word. You can select one of the options and the menu closes, letting you continue to work on your document. Or, you can



If you add a wrongly spelled word to your dictionary, it can be removed easily.

press Alt + F7 to move to the next error.

If you don't have this option enabled, you can turn it on by choosing Tools,

Options, Spelling & Grammar, then select the Check Spelling As You Type checkbox. You can also select the Check Grammar As You Type checkbox, which will underline grammar glitches in green as you go.

However, if you're colour blind, red and green are just about the worst choices of colours possible! You can change them, though, by running one of the macros included with Word. To find it, choose Tools, Templates and Add-Ins, click Add, then browse to find the file support.dot (it will be in your program files\microsoft office\office10\macros folder). Click OK twice to add it. If you can't find the file, you'll need to install it from your original CD (see Knowledge Base article 284845 at support.microsoft.com/?kbid=284845).

Run the macro by choosing Tools, Macro, Macros, then select Support.dot (Global template) from the Macros dropdown list. From the Macro Name list choose RegOptions and click Run. Choose the SpellingWavyUnderlineColor option, click Choose Color, select the colour you want to use, click OK, then Change. You can repeat this for the Grammar checker's wavy lines too. When you're done, click Close and restart Word for the changes to appear.

Working with the dialogue

When you're spell checking your document by pressing F7 (or choosing Tools, Spelling and Grammar) you are activating

Continued on page 54

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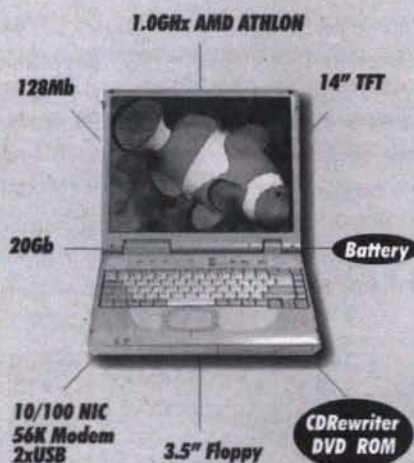
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< SMALL OFFICE TECHNOLOGY >

Master spell checking in Word

Continued from page 52

the Spelling and Grammar dialogue. You can move between this dialogue and the document you are editing by pressing Control + Tab. When you're done, click the Resume button in the dialogue to continue with your spell check.

After you've spell checked a document once and chosen Ignore Once or Ignore All for reported errors, you'll find they won't be reported again during the current editing session. However, they will be reported again if you close the document, reopen it, and rerun spell check. If you want Word to recheck a document in full (including reporting previously ignored errors), you don't have to close and reopen it. Instead, choose Tools, Options, Spelling & Grammar, and click Recheck Document to clear the list of ignored words and spell check as if you hadn't checked the document previously.

Removing misspellings

It happens to everyone occasionally: you click the Add to Dictionary button instead of the Change button and add a misspelled word to your dictionary. The result

is that the typo won't be flagged as a potential error unless you remove the misspelling from the dictionary. To do this in Word 2002, choose Tools, Options, Spelling & Grammar, click Custom Dictionaries, select the Default Dictionary, and click Modify. A list of words you've added to the dictionary will appear on the screen. To remove one, simply select it, and click Delete. When you're done, click OK three times to exit.

With earlier versions of Word, the process is a little different. Choose Tools, Options, Spelling & Grammar, click Dictionaries, select the dictionary you want to modify (there's probably only one in this list), and click Edit. You'll see a new Word document appear that contains a list of the words you've added to your dictionary.

Find the misspelled word, select it, and press the Delete key to remove the word and the paragraph marker (there should be no blank line in place of the removed word). Save the file by choosing File, Save, and answering Yes to any prompt that appears warning about possible formatting losses (that's OK). Close the file by choosing File Close. If you had

Automatic Spell Checking enabled before you edited this file, you'll have to enable it again by selecting Tools, Options, and the Spelling & Grammar tab.

Selecting what to check

You can set up your document so that a selection of text won't be spell checked (macro or HTML code, for example). To do this, select the text you don't want checked, choose Tools, then Language. Enable the Do Not Correct Spelling Or Grammar checkbox and click OK. The spell check will now skip the selected text.

If you frequently type text you don't want to be checked, you can create your own Style so you won't have to go through all of the above steps each time. To do this, select a paragraph that has spell checking disabled, click in the Style list box on the Formatting toolbar, and type in a name for your style (SpellCheckOff, for example), and press Enter. Now choose Format, Styles and Formatting to display the task pane, right-click on your new style and choose Modify. Enable the Add to template checkbox and click OK. This adds the style to your current template (which is most probably normal.dot) so it is available to all new documents based on this template.

You can also specify the language used to spell check a document; for example, you can use English (U.S.) or English (Canada), depending on your spelling preferences and the needs of your readers. To do this, select the text you want to change the spelling language for, choose Tools, Language, and pick a language. If the requisite language support is not available, you'll be prompted to install it at this point. Once installed, Word will swap from one language to another as required by the options you've set for each piece of text.

Add your own dictionary

When you're spell checking a document and you click the Add to Dictionary button, Word adds the currently selected word to a user dictionary. If you haven't specified otherwise, this dictionary is called Custom.dic. It is really a simple list of words added to the user dictionary, which can be edited.

You can also have more than one custom dictionary. If you work in a legal practice, for example, you can buy a dictionary of common legal words to use with your spell checker. You can also build your own dictionary as you work by adding correctly spelled words every time

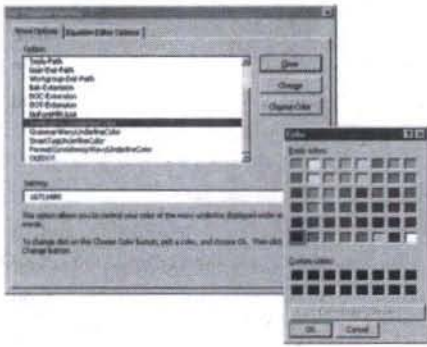
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If you're colour blind, you can alter the colours of the wavy lines under misspelled words and grammar errors.

they are reported as errors. It'll take some work to build, but it doesn't cost anything more than your time.

To create or add a new dictionary, choose Tools, Options, Spelling & Grammar, and click the Custom Dictionaries button. Click New to create a new dictionary or click Add to import one you have purchased or downloaded from the Internet.

If you're creating your own dictionary, make sure you regularly back it up so you don't lose it if your hard drive crashes. It is also possible to share a dictionary you've created with others in your office.

To do this, copy your dictionary file to their computer and then "install" it as detailed above.

To ensure your custom dictionary is used when Word spell checks your document, choose Tools, Options, Spelling & Grammar, and check that the Suggest From Main Dictionary Only option is disabled. This ensures your custom dictionary will be used as a source of correctly spelled words.

There are a couple of ways you can add words to a custom dictionary. One is to type the word in a document, run a spell check and click Add to Dictionary when it is reported as a possible error. You can also add words using the same process you used to remove misspellings: instead of removing a word, though, you add one. It's very easy to do with Word 2002's custom dialogue. For Word 2000 or 97, just type the word at the top of the list. While the list appears in alphabetical order, you don't have to add the words alphabetically—Word will reorder them when you next add a word to this dictionary using the Add button.

As dictionaries are only plain text files, you can also open any .dic file and add words by typing them or by copying and

pastings from another file. Just make sure you save the file with its .dic extension and as a Text Only (*.txt) file—again, don't worry about putting the words in alphabetical order, Word will do that for you.

Excluding words

Although you can edit your own custom dictionaries, Word's own dictionary can't be edited. This can be frustrating if, for example, you frequently use a word in the wrong context but use a correct spelling of the word: typing stationary instead of stationery, for example. It would be nice to be able to remove a word (in this example, we'd want to remove "stationary") from the dictionary so we'd be prompted to change it whenever it was encountered.

While you can't remove the word, you can exclude them from the dictionary by creating an exclusion file. An exclusion file is simply a list of words you want flagged as misspellings when encountered in a spell check.

Before you can create an exclusion file, you need a filename and location for the file. To do this, choose Start, Find, Files or Folders, and search for Mssp*.lex. The results will be a list of all the lexicons (word lists) you have installed, any of

which may be being used by Word. You will need to have one exclusion file (with the extension .exc) for each .lex file you find.

In Word 2000/2002, the exclusion (.exc) files must appear in the same folder as your custom.dic file. If you're using Word 97, the .exc files must be saved in the same folder as your .lex files. If you are using Word 2000/2002 and you're not sure where your custom.dic is, use Start, Find, and Files or Folders to locate it. If you find multiple versions, choose the one with the most recent date.

Your .exc file is a plain text file you create using Word, Notepad, or WordPad—the resulting file must be saved as Text Only (*.txt). Type each word, one to a line, in this file, then save the file with the correct name and location. If you have multiple .lex files, save this file multiple times with different names so you create one .exc file for each .lex file.

When you're done, close and restart Word and type one of the excluded words. Spell check the document and you'll find the word will be flagged as a potential spelling error.

This allows you to check the word each time you type it to ensure you've used it

Continued on page 57

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PowerPoint presentation tips

View it in miniature • View the current slide show in miniature (not taking up the whole screen), by holding the Control key as you choose View, then View Show. A smaller version of your show will appear in the top corner of the screen. You'll be able to step through it, and review your presentation design on the screen in an easy-to-read size. Switch between the two, making your edits in the edit area and immediately seeing the changes in the playing version.

Smarter editing • If you have an Intellipoint mouse or one with a scroll wheel that controls zooming, you can use it to zoom in and out of a slide when editing to see more or less of it on screen. In Normal view, with the slide visible, simply hold the Control key while you roll the mouse wheel to make the slide larger or smaller as required.

Doodle in a presentation • When making a presentation, you can draw on the

screen—you may, for example, want to circle a number or an important point. To do this, click Control + P while making your presentation to turn your mouse pointer into a pen that you can use to draw on your presentation. To turn it into an arrow to use to point to items, click Control + A. Your drawings will not be saved with the presentation, and will disappear as soon as you move to the next slide.

Erase pen marks • To remove the pen marks from the slide without advancing to the next slide, click the Slide controls at the bottom-left of the screen and choose Screen, then Erase Pen.

Saving timing • When you're rehearsing the timing of slides, you can save them as the presentation timings and use them to automate the presentation. You can even switch between the two by choosing Slide Show, Set Up Show, and select the Use Timings If Present option or Manually for advancing slides.

Hide the slide menu • When making a presentation, you can remove the menu indicator in the bottom-left of the screen by choosing Tools, Options, View tab, disabling the Show Popup Menu Button checkbox, and clicking OK. The indicator for the popup menu will be removed, but you can still display it any time by right-clicking the screen and choosing the menu option you want.

Finish off with a blank • When you've finished your presentation, it will look more professional if it ends with a blank screen—not the inside of PowerPoint—if you are running it from here. To ensure all you see is black when you're done, choose Tools, Options, View tab, and enable the End With Black Slide checkbox.

Paper-based shows • One way to fully document a PowerPoint show and make it available to people who weren't there or don't have access to a computer, is to

print it out. To do this, choose File, Send To, and Microsoft Word. Choose the layout you want (with or without Notes), and click OK. The entire document will then appear in Word, where you can edit it or print it out as is.

Taking a break • If you need to pause your slide show midway, you can press B (black screen) or W (white screen) to clear the current slide and display an empty screen. Or, if you are happy to leave the current slide on the screen while you pause, choose Screen, then Pause from the popup menu.

View a hidden slide • If, when presenting a slide show, you choose to display a slide that is hidden (and if it is the next slide in the queue), you can do this by pressing H. Or, you can use the Go option on the popup menu to get there (hidden slides appear in the list with their slide number in brackets).

—Helen Bradley

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The Computer Paper hits Hogtown

Continued from page 24

happy to give it a go.

On returning to *The Computer Paper's* Toronto offices a year after my first visit, I felt as though a revolution had taken place while I was away.

The tiny sales office had been replaced by a much larger editorial, production, and ad sales machine, which was crammed to the gills with both *The Computer Paper's* people, and the *Toronto Computes!* crowd, since Doug had bought out his Toronto rival several months before, and moved both teams into the same space.

While I developed a strategy for the benchmarking reviews, Doug arranged for us to rent a huge, bare room elsewhere in the building to house the new Test Lab.

I put in a bunch of long wooden tables, power bars and a phone, and started calling all the major computer, monitor, and printer companies in the Toronto area and across the country. In fact, the Test Lab had been located in the new Toronto office, rather than the Vancouver head office, because about 90

percent of the major PC hardware and peripheral brand head offices were located in the Toronto region.

PC mania

Doug's timing in his Ontario expansion was perfect: the early to mid-'90s, when he entered the Toronto market, battled and absorbed his main competitor, and started the Test Lab, was the Golden Age of the personal computer as a mass market phenomenon.

Every year, PC sales soared 15 to 25 percent higher than the previous year. Moore's Law chugged along, and computer processors doubled in speed every 12 to 18 months, and all the other components of PC systems—monitors, printers, hard drives, graphics, audio and memory—increased in capability and dropped in price.

The readership for *TCP*, the *Computes!* titles and our French language title, *Québec Micro!*, skyrocketed to over a million each month, as more and more Canadians got into home and small business computing for the first time, and searched for accurate, Canada-specific product reviews and retail ads.

Back to work

With the long hangover of the dotcom bubble's bursting, and the uncertainty post-Sept. 11, *The Computer Paper* has become a more sober publication in a more sober industry. It has always tried to be useful to its readers, offering editorial content of objective, accurate stories about how to use technology to make a better life, and at the same time to provide a range of vendors' ads, that is both a reflection of the very competitive Canadian retail industry, and an up-to-date, easy-to-use buying guide for the consumer.

The hot spots in the tech industry in 2003 are different than they were a

decade ago.

Instead of the PC-centric market in 1993, the focus is now on mobile computing, wired and wireless data and voice networking, digital entertainment media, new user interfaces and form factors, ease of use, and increasing productivity in learning, doing business, and communication. □

Jeff Evans, *The Computer Paper's* first technical editor, set up the Test Lab in 1994, making *TCP* Canada's first tech publication to provide made-in-Canada comparative benchmarks for computer hardware. He was also the founding editor of Canada Computer Paper's award winning Web site, www.canadacomputes.com.

Master spell checking in Word

Continued from page 55

in the correct context. You should note that, when an excluded word is flagged as an error, you can only choose Ignore Once (Ignore All isn't an option) and the Add to Dictionary button is disabled, too.

If you change your mind about having a word in your exclusion file, open each .exc file, remove the word, and save it

again. As you can see, there's more to Word's spell checker than meets the eye. It's a great tool and, while you can never totally do away with the need to proof-read your documents, there are ways to make better use of this tool. □

Helen Bradley specializes in writing hands-on tutorials. Her columns appear regularly in a number of publications in Australia, the U.K., and U.S. Contact Helen at helen@helenbradley.com.

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Slim IceKey, Samsung widescreen LCD welcome add-ons for any Mac



Justin Siemens

APPLE NEWS

This column is being written in late December, so news is slow in the Mac universe as most companies wait anxiously for Macworld Expo San Francisco. As usual, Macworld will see

the announcement of hundreds of new software and hardware products for the Mac platform, and possibly some new gear from Apple as well. In the meantime, here is some news from the end of 2002.

(Note: TCP Editor, David Tanaka, attended Apple chief executive, Steve Jobs' keynote address and filed a story as we went to press. See page 74 for the latest from Macworld. Justin will give us his analysis in the March issue.)

Samsung unveils new widescreen LCD

Since the release of the 17-inch iMac, many have wondered when a widescreen 17-inch display would be released for Power Macs. Although Apple has not announced one yet, we expect it will in the next six months. In the meantime, Samsung has stepped up to the plate with the 172W, a Mac OS- and PC-compatible 17-inch widescreen LCD.

Though the 172W has a different resolution than the iMac G4 display, its aspect ratio is the same, roughly 16:10. Samsung (www.samsung.ca) manufactures the screens Apple uses in its Studio Display line, so the 172W is similar to the current 17-inch Studio Display, but is slightly shorter and wider. The 172W resolution is limited to 1,280x768, as opposed to 1,280x1,024 on

the current 17-inch Studio Display.

The iMac G4 screen has a higher resolution, resulting in smaller on-screen text, whereas the 172W has about the same resolution as the Studio Display. As far as performance, the display uses one of the newer panels with a low refresh of 25 milliseconds or better, as well as 400-to-1 contrast. This should help eliminate the ghosting and murkiness seen on some older LCDs.

The specs aren't quite as good as the Studio Display or Formac Gallery lines, but then this display is aimed more towards consumers than graphics professionals. Having a widescreen LCD would be perfect for watching DVDs or playing games that support widescreen mode. It's also handy for Web browsing since you can have two windows open side by side. However, the resolution is a bit low for serious Photoshop or page layout work.

The 172W can connect to your computer via the VGA connector, which gives you an analogue connection, or via DVI, which will result in a cleaner digital connection. Digital displays tend to have sharper text, more vibrant colours and better detail overall than their analogue counterparts, but it's still nice that Samsung gives the option of both types.

If you have a Mac with ADC built in, you can purchase an ADC-to-DVI adapter for about \$50 to \$60 from several companies, including Dr. Bott (www.drbot.com/). The 172W is reasonably priced at US\$699, and we expect the street price to be under \$1,000 here. The display was set to ship before the end of December, but we expect it will in mid-January. The Samsung 172W features Samsung's standard three-year warranty, which is good

for a product in this class. In comparison, the Apple Cinema and Studio Displays offer only a one-year warranty (unless purchased with a computer and an Apple Care policy). At press time, Samsung Canada hadn't added the 172W to its Web site, but it did have specs for the 172T, which is the same model but with a standard aspect screen.

Real Player One final release

After several months in beta, Real Player One (www.real.com) is now final for Mac OS. The OS X-compatible Real One Player is available in paid (Gold) and free versions. As usual, you really have to dig around the Real Web site to find the free copy, but trust us, it's there.

The Real One player features a much improved interface over Real Player 8 for Mac, and if you're running OS X, Real Player is now much more stable. Under Classic or OS 9, Real Player frequently either locked up the Finder or just crashed in the middle of streaming content. The OS X version doesn't appear to have any of these problems, and the final release fully supports OS X 10.2. Although we still find QuickTime to have the best quality for streaming, there will always be content that's only available in Real Video format.

MacAlly IceKey

The Macally IceKey (www.macally.com/) was first unveiled several months ago, but we have now seen the first units to enter Canada and they are pretty much as cool as we'd hoped.

Available for about \$89, the IceKey is designed to be a perfect match for iBooks, eMacs, and iMacs. The white IceKey won't be a perfect match with Apple's Power

lines, though there is no reason beyond aesthetics that it can't be used with any USB-equipped Mac.

Like Apple's Pro model, the IceKey has a standard extended keyboard layout with full-size arrow keys, F1 to F15 keys, plus the volume and mute controls and eject keys Apple has added to its newest keyboards. A driver is required for the eject and sound control keys, and both OS 9 and OS X versions come with the included CD (they can also be downloaded from the Macally Web site).

Unlike Apple's standard keyboard, the IceKey uses scissor action keys with a very short travel distance, like iBook and PowerBook built-in keyboards. The result is a key feel with well defined action and a good tactile click with each key press. People who like quiet keyboards may find the IceKey a bit louder than a normal Apple keyboard, but it's not the loudest keyboard out there. It's like using a laptop keyboard on your desk, and has the same firm feel, unlike the the spongy or soft action of many extended keyboards.

The IceKey is also significantly thinner than a standard desktop keyboard. It is also very light, making it better for travelling or fitting on a keyboard tray.

Having used the IceKey for several days, the difference in feel is enough for this writer to make it my new permanent keyboard. I have no doubt that in time more companies will be offering keyboards using a laptop key technology for desktop users. While the feel of the IceKey may not be for everyone, it's always good to have more choices, especially with something as personal as a keyboard.

Continued on page 60

<h1>LA Computer Centre</h1> <p>3850 Finch Ave. East, Unit G01A, Scarborough lacomp@sympatico.ca Tel: 416-321-8868 416-708-9936 Fax: 416-291-4949</p>		<p>MON-FRI: 10:30-19:30 SAT-SUN: 11:00-6:00</p> <p>Government & Corporate purchase orders welcome, Lease Available. Prices subject to change without notice</p>	<table border="1"> <tr> <td>Steels</td> <td>LA</td> <td>Finch</td> </tr> <tr> <td></td> <td></td> <td>Kennedy</td> </tr> <tr> <td></td> <td>HW 401</td> <td></td> </tr> </table>	Steels	LA	Finch			Kennedy		HW 401		<p>Special Corner for Parts (Wholesale Price)</p> <table border="1"> <tr> <td>HD Maxtor 7200 30G/40G/60G/80G/120G</td> <td>\$99/119/129/149/229</td> </tr> <tr> <td>Western Digital 7200 20G/40G/60G/80G</td> <td>\$99/129/139/149</td> </tr> <tr> <td>Western Digital 8M Cache 40/60G/80G/120G</td> <td>\$130/160/180/280</td> </tr> <tr> <td>RAM PC-133 128MB/256MB/512MB</td> <td>\$29/44/85</td> </tr> <tr> <td>RAM DDR PC266 128MB/256MB/512MB</td> <td>\$49/85/175</td> </tr> <tr> <td>DDR PC333 256MB/512M</td> <td>\$99/189</td> </tr> <tr> <td>Rambus 128/256</td> <td>\$69/129</td> </tr> </table>	HD Maxtor 7200 30G/40G/60G/80G/120G	\$99/119/129/149/229	Western Digital 7200 20G/40G/60G/80G	\$99/129/139/149	Western Digital 8M Cache 40/60G/80G/120G	\$130/160/180/280	RAM PC-133 128MB/256MB/512MB	\$29/44/85	RAM DDR PC266 128MB/256MB/512MB	\$49/85/175	DDR PC333 256MB/512M	\$99/189	Rambus 128/256	\$69/129																																								
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GUI: The next generation



Dee-Ann LeBlanc
LINUX

Few software projects ever rest, so it should be no surprise that both the GNOME and KDE teams are working hard on their next generation GUIs. New GUI releases tend to be a combination of bug fixes, feature enhancements, and new tools. Let's take a look at where GNOME and KDE are going in their next incarnations.

GNOME's 2.2

It seems that GNOME 2.0 was just released, and yet here we are talking about GNOME 2.2. No, this isn't a major jump in numbering. GNOME follows the same method of numbering releases that the Linux kernel team does, having all odd-numbered items (GNOME 2.1, for example) be the experimental versions and the evens (such as 2.2) being the "trustworthy" versions.

If you use GNOME often, you probably get frustrated at times with its ability to render fonts. To the non-programmer it doesn't seem that throwing text onto a screen should be a big deal, but it's quite a complicated process, and the GUI-building world is always looking for the next revolution in this area.

While it might not be revolutionary, GNOME's font support in 2.2 will improve through a combination of adding fontconfig (www.fontconfig.org), which will help you to automate font management, a traditional headache, and Xft. Xft is somewhat of a middleman, selecting fonts using fontconfig, then rendering them on the screen using the X Window System protocols.

A number of "look" improvements are coming, too. GNOME's Accessibility Project received the 2002 Helen Keller award, but that hasn't made the developers lazy. There are high contrast themes coming for those who need visuals to really stand out, or change everything to extra large fonts. On the other end of the

spectrum there are the ultra-snazzy multi-monitor (multi-headed) setups, which will have more features in the GNOME 2.2 panel.

The gedit text editor continues to grow and get new features. While this may seem a bit silly for a text editor, remember that some people still like to build and edit HTML in a text editor, and new items like auto-indentation will definitely help for that use.

Folks who like a little play with their work will also enjoy the new multimedia features, and we'll all like the improved GNOME performance.

KDE's 3.1

At the time of this writing, KDE 3.1 is already in its second release candidate phase, so by the time you read this it's probably already been released. That doesn't mean that many people have switched to it, however. Changing your entire GUI environment is a bit daunting, so let's take a look at the new features and you can decide for yourself whether

you think it's worth it or not.

The KDE browser, Konqueror, is getting an update. In 3.1, this tool will offer the ability to have multiple Web pages open, each under its own tab in the same browser window. Konqueror also gains the ability to search on more than just Web page text content, adding metadata and multimedia searches to its arsenal. Better support for common Microsoft-specific Web items, like "smart quotes," is also included.

Other KDE applications, like Kview, get new features as well, such as new plugins and mousewheel support. KFile gets a load of new items. Almost 20 new plugins will allow this program to do things such as add and access comments within JPEG files, get a list of file statistics in C++ code files, and get word and line counts for a file.

The KDE PIM (personal information manager) also has a host of updates coming. LDAP support, a more fully featured address book, updated Pilot support, and

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Slim IceKey, Samsung widescreen LCD

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Also, Apple's Pro Keyboard sells for \$99 (black key version) and \$109 (white key version), so at \$89 the IceKey is a good value. If you're looking to replace your keyboard, it's worth giving the IceKey a try. All it takes is five minutes to tell if you're going to love it or hate it.

Apple intros FireWire over IP

Though it seems more like a technology demo than anything else, Apple's new TCP/IP over FireWire software surely hints at something interesting to come. Originally released to the public via Apple's software downloads site, the installer was pulled after 24 hours and is now only available from the Apple Developer Connection site.

In its current version, the software installs a kernel extension that allows you to set up an IP address over the FireWire interface. You can share files between two Macs by simply plugging a six-pin FireWire cable into each Mac, then using the IP address to connect and mount the drive of the other machines.

Another possibility would be to share a high-speed Internet connection between

two Macs without having to buy a firewall or router. Just connect the Internet to one Mac via Ethernet, and then connect the second Mac over FireWire. In the sharing preference pane turn on Internet sharing, and the Mac that's connected over FireWire would grab an IP and be able to surf at full speed.

All of this could be done with regular Ethernet, but there is the added confusion of needing a crossover cable, or a regular cable if you have a hub. Also, since FireWire has a maximum data transfer rate of 400 Mbps and most Macs are limited to 100 Mbps Ethernet, FireWire over IP does

offer the possibility of moving more files more quickly between two machines.

Why bother putting the effort into this though? Well, for Apple there is the future possibility of running Rendezvous over FireWire, allowing devices to automatically discover each other over a FireWire-connected network. You could connect to a friend's machine and their hard drive would automatically appear on your desktop, much like using FireWire Target Disk mode, but without having to reboot one of the Macs while holding the T key.

Another possibility is that there might be a new device in the works—an updat-

ed iPod or a PDA—that will be able to use this technology. You could have a device that works autonomously but needs to be connected to a Mac via FireWire to connect to the Internet for updates.

Either way, at this point it's not something you'd want to install on your work machines because it's only a preview release and may hamper stability. If you want to try it out you need to register at the Apple Developer Connection site—it's free and you also get access to update developer tools for OS X. □

Justin Siemens, a Mac IT specialist based in Vancouver, can be reached at jsiemens@mac.com.

GUI: the next generation

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around 20 new organization features will definitely give you something new to try out.

VNC server and client support, a much-enhanced KMail, and a suite of new and enhanced multimedia features are also on their way. My favourite is the ability to look up the lyrics for the song you're currently playing.

If you're a customization nut, then you'll love the ability to customize your

main GUI menu. Also, KDE started in Europe and its strongest base continues there, so it's not surprising that internationalization is high priority, and KDE 3.1 moves further ahead in this regard. There's even a Japanese language learning and reference tool.

Conclusion

Both GNOME 2.2 (www.gnome.org) and KDE 3.1 (www.kde.org) have a lot to offer. Their new feature sets are too long to list here, especially KDE's, which is quite impres-

sive. As a project that is closer to being finished, it has more to list. If you're a GNOME user with font or accessibility issues, then updating to GNOME 2.2 should be a priority.

In KDE, it's the folks who work with images, multimedia, are crazy about KFile, or like the PIM who should consider updating. □

Dee-Ann LeBlanc has written more than 10 computer books, many articles, and taught classes mostly involving Linux and its programs. You can reach her at dee@renaissoft.com.

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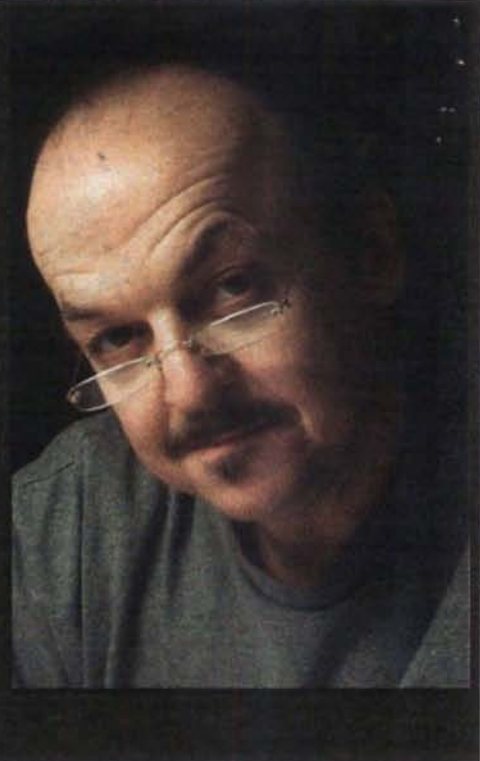
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< TCP 15TH ANNIVERSARY >

In the very near future, computer and communication tools for the automobile will finally begin coming on stream big time, as a new car/computer network interface—long a sore point with TCP readers—takes hold.



Fifteen years ahead

By Christopher Blythe

Hard to believe this is the 15th anniversary issue of TCP! I remember drooling over a multi-thousand dollar 386-based PC XT "clone" in these pages back then. Get "386 performance at 286 prices," blares one ad I found recently from June, 1988.

But what about five, or maybe 15 years ahead? What might readers expect to see gracing the pages of TCP in 2017?

Intelligent Transportation Systems (ITS)

In the very near future, computer and communication tools for the automobile will finally begin coming on stream big time, as a new car/computer network interface—long a sore point with TCP readers—takes hold.

But this is far more than downloading mileage and fuel-use statistics into your PC. The ITS is a family of global standards initiatives begun late last century (around the time TCP hit the streets) to provide various transactional services to moving vehicles—"telematics," for short.

One component of this grand plan is Dedicated Short Range Communications (DSRC), the standardization of a wireless platform for

electronic toll payment, emergency services functions, and other transactional functions within ITS. But the DSRC standards committee recently surprised the entire ITS industry by choosing the next-generation wireless LAN standard 802.11a as the link for vehicle-powered, high-speed, wireless, two-way communication (www.itscanada.ca).

The market potential for DSRC devices alone—billions of units over 10 years—may well exceed that of the existing conventional PC and PDA markets combined, some experts predict.

Nanotechnology

You may have heard of nanotechnology already. If not, you are about to: Hollywood movies, science magazines, and television shows—the whole nine yards! Even *Jurassic Park* author, Michael Crichton, is onto nanotech in his latest scare-tech novel, *Prey*, a story of nanotech gone mad.

The *Oxford Canadian Dictionary* defines nanotechnology as "the branch of technology that deals with dimensions and tolerances less than 100 nanometres, especially," and, "the manipulation of individual atoms and molecules."

Don't laugh. It's been at least two years

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Fifteen years ahead

Continued from page 62

since well-known Sun Microsystems futurist Bill Joy shocked the world by loudly drawing attention to the potential negative impact nanotech can have on mankind, warning of the "extreme evil" that could be unleashed should nanotechnology get loose and become a "self-replicating mechanical 'virus.'" So the big guys are taking it seriously.

Nanotech is about bacteria size machines. That's right. Little devices, replete with moving parts, built atom by atom and small enough to be deployed into microscopic places. A syringe full of little machines, designed to detect and destroy specific viruses or cancer cells upon injection into the body, is a commonly painted image.

Now there are signs of nanotech soon unlocking the secrets to a working computer/body interface. Science, I'm told,

defined the basic chemical, electrical, and mechanical requirements for a body/machine link-up some years back. The mechanical specs, however, remain problematic in that they are impossible to implement using current technology. Could nanotech be used to build the microscopic connectors necessary to bring such a vision forward?

New phones

Back down to earth, cellphones and PDA makers have been on tour lately filling us in on a plethora of devices coming your way over the next several months. I noticed two surprising trends.

First, a strengthened commitment to the cellphone form factor. The phone that does everything, say the experts, is far more popular than the PDA that does it all.

The second surprise? The GSM/GPRS wireless networks in Canada (Rogers

and Microcell) are already showing signs of trouncing North America's darling CDMA/IX technology (Bell and Telus) on its own turf.

Of the handsets I look at from Nokia, Panasonic, Sanyo, Siemens, Sony/Ericsson, and several other manufacturers, GSM most often takes the focus while offering the most compelling new devices. And wherever I see three or four new CDMA handsets on display, closer to a dozen new GSM designs sit right alongside.

But, as I was saying, the phone appears to be the form factor of preference, and Nokia's spring lineup makes a great example: hardly a PDA in sight. In fact, several of the company's newest offerings remind me instantly of my old Nokia workhorse. They provide the same familiar user experience, but in a more modern package and on the newer GSM/GRPS networks. Several added

features, such as MP3 playback, Bluetooth connectivity, and advanced messaging, provide plenty of reason to upgrade.

But new ideas in phone-style handsets abound as well. Nokia's 3650, while still obviously a phone, sports a round "dial" pad, a high-resolution colour display and a built-in, high quality, colour digital camera. The more traditional looking 6800 flip-phone, on the other hand, turns out to be a complete departure from cellphones of old, boasting a full QWERTY keyboard and automatic display reorientation when quickly flipped open, revealing a decidedly non-phone-like game pad shape.

Exciting stuff, I'd say. And somewhat more appealing than plugging my car into my cerebral cortex! □

Chris Blythe is a broadly published writer and info-com analyst. Send correspondence to connect-ed@xris.ca.

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Coalition gears up to battle Canadian media levies

By Christine Walewski

Representatives of the retailers and software manufacturers that comprise the Canadian Coalition for Fair Digital Access (CCFDA, at www.ccfda.ca/) gathered in Toronto in mid-December to announce a joint campaign to inform consumers of the hidden levies applied to recording media.

When the private copying of music was legalized in December 1999, a charge was imposed on certain computer and electronic products as a result of a proposal made by the Canadian Private Copying Collective (CPCC, at www.cpcc.ca/), a collective of recording companies, publishers and performers. The proposal was passed and made part of the federal Copyright Act. The levy is currently applied to audio cassettes, recordable and rewriteable data

and audio CDs, and mini discs.

The CCFDA is asking that the federal government repeal the law that created the original levy. In addition, it wants the Copyright Board of Canada (www.cb-cda.gc.ca/) to deny a new CPCC proposal, which is scheduled for review beginning Jan. 21.

That proposal, announced in March 2002, seeks to increase the cost of the current levy and broaden its scope to include items like MP3 players, blank DVDs, and flash memory cards.

The CCFDA says the new levy would also be applied to digital cameras and PDAs—regardless of whether or not these items are used for copying music.

Paul Tsaparis, president and chief executive of Hewlett-Packard Canada (www.hp.ca/), says that even the current levy casts too wide a net.

Levy too heavy?

Approximate retail price of	
100-pack blank CD-Rs before levy	\$29
Current levy per 100-pack blank CD-Rs	\$21
CPCC's proposed levy per	
100-pack blank CD-Rs	\$59
Increase over existing levy	181 %
If approved, approximate retail price of 100-pack blank CD-Rs (plus tax)	\$88

Source: CCFDA Web site

"Fewer than half of blank CDs are used to copy music," Tsaparis said. "Those who do not copy music actually subsidize those who do."

According to the CCFDA, a 100-pack of blank CDs currently includes a \$21 levy in its \$50 price tag. If the new proposal is approved, the levy could be as high as \$59, creating an \$88 retail price tag for the CDs before tax.

The CCFDA says that other consequences of the passing of the new levy may include a decrease in the number of emerging technologies in Canada as a result of software and hardware manufacturers' reluctance to develop products for an unstable market, the development of a black market, and an increase in cross-border U.S. shopping.


The U.S. equivalent of the levy falls under the Audio Home Recording Act, established in 1992, which applies a three percent levy to the wholesale price and encompasses only digital recording media.

The CCFDA says \$28 million in levies have been paid in the past two-and-a-half years, none of which has been dispersed to the copyright holders entitled to it.

The coalition's campaign will take the

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< TCP 15TH ANNIVERSARY >

The sands of time

By Sean Carruthers

Fifteen years ago, I was partway through my first year at university. My experience with computers up until at that point was a mixed bag, partly educational and partly home-based. At the time, computers were not quite so integrated into my life, but were still an exciting novelty.

When I was about 12 years old, I took a summer course at Brandon University called Computers for Kids; they led us into the computer lab and plunked us all down in front of Commodore PETs. In a way, they were the iMacs of their day: they were found in schools all over the place, they had an all-in-one design, and the floppy was optional (instead, we did most of our file storage with a cassette deck). The graphics were pretty bad and the screens glowed a slightly chilling green, but at the time I thought I had discovered nirvana. In follow-up courses I learned that the computers could be networked together (some of us spent more time sending each other messages than actually listening to the teacher), and that you could use the computers for serious mathematical work. I was hooked.

Of course, it wasn't long before we got a computer at home to keep my interest going. My dad ordered the Sinclair ZX81, one of the first computers aimed at the consumer: it was easy to assemble (if you chose to go that route), it was fairly easy to use, plus it was inexpensive. It hooked up to the TV, too, which meant we didn't have to buy a whole lot of equipment to get started. The keyboard was innovative, featuring a number of soft-touch keys that not only acted as a standard keyboard, but were also pre-programmed to give you an entire word or command in the appropriate places, making it easier than ever to write your own programs. It came with only 1 KB of memory onboard—thankfully my dad sprung for the weighty 16 KB RAM module, which clamped onto an edge connector on the rear.

While the ZX81 was a great way to start out, it was certainly limited—the



It came with only 1 KB of memory onboard—thankfully my dad sprung for the weighty 16 KB RAM module, which clamped onto an edge connector on the rear.



I was actually so happy with the TI-99/4A that I didn't pay much attention to the Vic-20 or the Commodore 64, even at the height of their popularity.



graphics were black and white only, and the sound quality was very limited.

Shortly afterwards, I stepped up to the Texas Instruments TI-99/4A, which had polyphonic sound and a colour display. Even better, you could also attach joysticks or insert program cartridges, just like the Atari 2600. While the Sinclair was fun to goof around on, the TI-99/4A actually felt like real computing to me: it came in a brushed metal casing, the keyboard felt good to type on, and there was 16 KB of RAM already onboard, with room for even more expansion. I was actually so happy with the TI-99/4A that

I didn't pay much attention to the Vic-20 or the Commodore 64, even at the height of their popularity. Again, I could use the TV in our basement for both the picture and the sound, and I spent hours and hours programming primitive driving games, graphics displays, and simple musical numbers. But alas, even this was not to last.

Through my junior high days, I supplemented my at-home computer explorations with semi-regular visits to the

SuperPET machines located in the school's main office. (Part of this was for the fun of learning, but I have to admit that a big chunk of it was the fact that someone had figured out a way to get the SuperPETs to play a fairly faithful version of Space Invaders.)

When I finally headed to high school, even that became kid stuff when I discovered how fun it was to play around on a VAX system; I even stayed after school in order to spend time trying to

hack around the school's network, only leaving when the janitor finally hoofed us out.

When the first issue of *The Computer Paper* hit the streets, I was most likely sitting in a class at Brandon University, taking my first computer science course from an instructor who kept referring to himself as "your old uncle Gwynfor." At that point, I was still at least a year away from buying a Commodore Amiga 500 (complete with 1 MB of RAM and no

< TCP 15TH ANNIVERSARY >

hard drive). I was even further away from buying my first IBM-based PC, which was the first of my Windows-based computers.

I've gone through so many machines and learned so much since then, but it's all been a blur. I can only imagine what will be on my desk when *The Computer Paper* celebrates its 30th anniversary.

Happy 15th, TCP! It's been great to spend part of that time with you. □

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few problems. You'll have to make a judgment call on that. And that brings us to the next option.

Option 2: Dedicate it to a single task

Unlike almost any other kind of device, we expect our computers to do a huge number of different things every day: from email to Web browsing to spreadsheet work to playing MP3 files and DVD movies. But it doesn't have to be that way.

If your old computer is capable of doing a single task extremely well, you may just want it to continue doing that. Word-processing is a perfect example of such an application. Most older computers are highly functional as slightly enhanced typewriters—provided that you have a compatible printer (and you can still get the ribbons, ink cartridges, or toner cartridges for them).

Similarly, your old computer may end up becoming a dedicated device for receiving faxes (many systems sold between 1994 and 1999 came with built-in fax modems and fax software), or the system you dedicate for printing invoices, menus, or flyers.

I guess the main point here is that the old system could take some of the demand and burden off your new computer if there is a job that it can still do well—and that that job is done by someone else. If you are the only user of the computer, you will almost certainly want to use the newer system instead of the old one. In that situation, it may make sense to get rid of the old system.

Option 3: Give it to a friend

If you are going to give your old system to a friend, make sure he or she is a really good friend—and your friend knows something about the care and maintenance of older computers. Also, be clear about whether or not you are giving or “loaning” the system to your friend.

I'll tell you why I say all of this. Late last year, I was out walking my dog on a cold, November day when I spotted an old Toshiba notebook computer lying discarded in an alley near my house. The computer and the “brick style” power supply that went along with it were covered in morning dew, but otherwise seemed to be in good shape.

I picked up the computer and we went

back home and plugged it in. It ran perfectly, and had Windows 95 and Microsoft Office loaded on its hard drive.

I did all this because I was concerned that the abandoned computer may have been the result of a burglary that had perhaps been interrupted. It turned out to be nothing nearly as dramatic as that.

In an effort to figure out who owned the computer, I ran Microsoft Office to see who the software was registered to. A name came on the screen and I then looked the person up in the phone book and called him to find out if he had been the victim of a botched burglary.

Unfortunately, all I did was strain an old friendship. It turned out that the computer was owned by a fellow in another part of town who had loaned his old notebook to one of my neighbours. As it turned out, my neighbour was not able to get much use out of the notebook, so took it to a computer consultant who informed him that it was of little use. So he ditched it in the alley. He later told me that he figured someone would pick it up and get some use from it.

Instead, after my call to the guy who actually owned the notebook, my neighbour had to march over to my house, pick it up, then return it to his friend—with apologies for having thrown it out.

So consider whether or not you want to give your old computer to a friend. It just might not be worth it.

Option 4: Selling your old computer

Selling your old computer is a tricky business. There's a lot that can go wrong with old systems—and you want to make sure that if you do sell it, the buyer is totally aware that you do so without any guarantees or warranties. It should be sold entirely “as is.” You do not want to have to continue to provide support for it once it leaves your hand.

Also remember that resale prices are only going to be a tiny fraction of what you paid for your system. To get an idea of prices, drop into a local used computer shop and you'll see what I mean. The fact is that the \$1,000 or so charged for a new entry-level system buys far more computer than the \$500 or so you'll be lucky to get for your old machine.

Continued on page 70

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Five ways to leave

Continued from page 69

And that new system will come with the latest operating system, enough memory to support all the latest applications, and so on. So the long and short of it is that you are unlikely to make much money at all by selling your used system.

Option 5: Donating your computer

This is probably the most sensible option of all. There are a number of charities that specialize in taking in old computers, and refurbishing and repurposing them.

The Computers for Schools (cfs-ope.ic.gc.ca/) program is probably the most comprehensive and best-known such scheme in Canada. It boasts that it has found new homes for more than 395,000 computers since it started in 1993. In British Columbia alone, the group estimates that it redirects more than 250 tons of computer equipment from landfills each year.

The program is designed not only to encourage the further use of old computers, but it also helps train students in the repair and refurbishment of old systems,

which could help them find technology-related work when they graduate.

And a number of government departments are participants in the scheme. Human Resources Development Canada (HRDC, at www.hrdc-drhc.gc.ca/), for example, has been involved since the creation of Computers for Schools and boasts that its youth employment strategy provides the funds to provide work terms refurbishing computers to young college graduates.

Of course, this is by no means the only charitable group or agency that can make use of older computers. It is, however, one of the few that actually devotes and cultivates resources to refurbish and service older systems.

One caveat to any of the computer donation plans is that you shouldn't expect a whole lot in the way of a tax receipt for your donated system. Canada Customs and Revenue Agency (CCRA, the new name for Revenue Canada) only allows the issuance of receipts for a reasonable resale value for your old system—not the price you paid for it new six years ago.

In other words, the tax receipt (if the

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donor receiving it is registered to issue such a receipt) is only going to be written for the kind of sum you would reasonably expect to receive if you were to sell it to a used computer shop. You may even need to go to a used computer shop and get them to make a written offer for your equipment in order to have the paperwork to even qualify for receiving such a receipt.

At any rate, donating your old computer should ideally come from a desire to help the individuals or organization to whom you are donating—and not just to get yourself a tax receipt for giving away something you couldn't use anyway.

But hey, if that's your reasoning, I am sure most charities will be happy to accept it anyway. □

Coalition gears up to battle

Continued from page 65

form of in-store signs posted by participating retailers, Web messages and newsletters, as well as labels on CDs indicating what percentage of the cost is the result of the existing levy (up to 42 percent).

Sixteen Canadian retailers and software and hardware manufacturers are currently members of the coalition, including Best Buy Canada/Future Shop, Costco Wholesale, Hewlett-Packard Canada, Intel of Canada, and Staples Business Depot.

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TCP—If you worry that your PC may be playing host to some type of spyware (any software that covertly gathers information through a user's Internet connection without his or her knowledge, usually for advertising purposes), you can check out a utility from Lavasoft. The company says Ad-aware is a free multi-spyware utility that scans your PC's memory, registry, and hard drives for known spyware components and lets you remove them safely. The software is compatible with Windows 98, 2000, NT 4.0, XP, and Me operating systems.

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Thera combines 1X phone, Pocket PC

By David Tanaka

Most of the phone/handheld computer combos we've seen thus far have used the Palm operating system, but Bell Mobility recently sent us a Pocket PC-based phone to try. The Audiovox Thera doesn't look all that different from other Pocket PC devices (an Audiovox spokesperson told us the unit is actually made by Toshiba), save a stubby antenna on the top-left side, and three extra buttons dedicated to phone functions. Buttons on the front of the unit marked with green and red handset icons launch the Watcher telephone application or end the phone call. A sliding switch along the left edge of the unit turns the telephone circuit on or off.

Watcher is the main telephony application and has two tabbed windows, one for voice and the other for data. The voice window shows a likeness of a cell phone display, along with an onscreen dial-pad and other buttons you'd typically find on a cell phone: volume, send, end, mute, and clear.

There is also an address book icon, and clicking on it with the stylus brings up the Pocket PC's address book application. Once you find your contact and highlight the phone number, you can complete the call by tapping the "dial" menu selection at the bottom of the screen. This type of integration, which we also see on Handspring's Treo, is one of the best reasons to consider a combo phone, in our opinion. If you already manage your contacts using a Palm or Pocket PC device, why maintain a sec-



Audiovox Thera

From: Audiovox Communications Corp. (offered by Bell Mobility, www.bell.ca)

Price: up to \$999 (varies depending on plan)

Pros: Good Internet and email performance through CDMA 1X data network. Phone/data modem portion well integrated with Pocket PC's address book, Web browser, and email client.

Cons: Other party hears echo when speaker phone is used (phone audio quality is better overall with included hands-free earphone). Default blue on blue screen theme hard to read. Battery life is about a day with light use.

ond database in your phone?

The Thera seems to default to speaker phone mode, and we had to turn down the volume if we wanted to use it as a handset. One person we called commented that our voice sounded a bit hollow, and another party complained that she could hear her own voice being fed back like a faint echo. At our end, the reception was acceptable.

The data window has a drop-down menu for data services (if you subscribe to more than one), a setup button that takes you to a screen where you enter your user name, password, phone number, etc., for the services you want to set up, and a button marked "connect." Once the service is set up (in our case, we merely had to type in the user name and password provided by Bell

Mobility), the data service can be accessed by clicking on the connect button.

We found the unit connected very quickly: in about 10 seconds, we went through authentication and were online. Once connected and with Pocket Internet Explorer launched, we found surfing to a number of sites was simple and about as responsive as using a desktop computer with a dial-up connection.

Of course, the biggest limitation to the Internet experience was the Thera's small screen. On the 320x240-pixel window, most Web sites did not display properly, requiring lots of side and downward scrolling. However, this was somewhat mitigated by the colour screen, and overall, it was significantly better than surfing with the Treo (which sports a 160x160-pixel monochrome screen).

We found the Pocket PC Inbox also worked well with the built-in data connection. Setting up a POP email account we have with another service provider (the Inbox also supports IMAP) was quite straightforward. We had to type our email address and password, and the POP and SMTP addresses of our service provider in the appropriate boxes, and once done we could download mail.

The Pocket PC portion of the unit is powered by a 206 MHz StrongArm processor, and comes with 32 MB of RAM and 32 MB of ROM. In typical office lighting the reflective TFT screen is quite dim without the front lighting, improving as the ambient brightness increases. The front lighting definitely makes the screen more readable, but

draws more battery power. The unit includes a SD/MMC card slot for expansion and a voice recorder. It uses Pocket PC 2002 operating system, and thus includes the usual application set: Pocket PC versions of Word, Excel, Internet Explorer, and Media Player, and a mail client.

Overall, we were more impressed with the device than we initially thought we'd be. Taking the limitations of the screen dimensions into account, Internet surfing on the Thera is actually pleasant, thanks in no small measure to the 1X service. Likewise, setting up an email account was straightforward. Although we didn't try it, Bell Mobility offers an additional service called Motivus Mobile Desktop Enterprise Edition, which allows the Thera to be used to access corporate email and Outlook data.

This is definitely a handheld with phone capability, which means the phone portion is an ergonomic and audio quality compromise compared to a dedicated phone. For someone who uses a cell phone constantly, the larger size and blocky shape of the handheld may become tiresome after extended use, and the audio quality of the phone portion isn't as good as a good cell phone.

Battery life on Pocket PCs has never been great, and the Thera is no different. However, the unit ships with a hands-free ear piece and a charger that plugs into a vehicle's cigarette lighter socket (in addition to a standard AC adapter), both of which will help offset the limitations of the device. □

Surfin on your PocketPC: Part 2

Bell Mobility (www.bell.ca) recently announced it would be adding 802.11 wireless networking products and services to the existing network cabling services it offers to businesses. Included in the products it had on display during the news conference was a Symbol Technologies Wireless Networker 802.11b card in a Type I CompactFlash format, which sells for about \$285.

With a lot of talk going on about "hot spots," a comparison between handheld plus WiFi versus handheld plus high speed datacomm like 1X or GPRS seems in order.

So we asked Bell to loan us the Symbol card for a week.

Hot spots, in case you haven't heard, are zones within publicly accessible areas where people with wireless network-enabled devices can borrow or rent broadband service—to send and receive email or go onto the Internet.

Some areas ripe for hot spot development are airport lounges, latte bars, and conference centres, and such services are in fact showing up in these locations. Perhaps the most publicized of these is latte nabob, Starbucks, which got a lot of

press about the surf-and-sip service being rolled out in some of its U.S. outlets (none in Canada yet, according to the hot spot locator on Starbucks' Web site).

We plugged the Type I Symbol card into an HP Jornada 545 PocketPC and tested it at home where we have a wireless access point connected to our high-speed service. The Thera had been sent back at this point, so we couldn't make direct comparisons, but we can make a couple of observations. First, as you might anticipate, the WiFi connection seemed faster loading pages, although the loading times on the

Thera were not objectionable. Second, overall the experience was very similar, even though the Jornada was an older model using Windows CE 3.0, in contrast to the Thera, which used PocketPC 2002. Of course with WiFi you're restricted to one area, while the coverage area is much larger with the data phone.

So what's next? Maybe a device that has both. Is it coincidental that the Audiovox Thera is made by Toshiba, which also makes the e740—a PocketPC with integrated WiFi?

—David Tanaka

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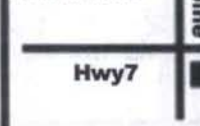
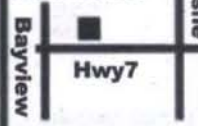
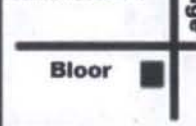
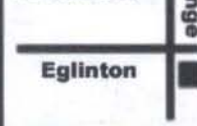
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Powerbook gains 17-inch display

By David Tanaka

SAN FRANCISCO—Declaring 2003 as the “Year of the Notebook” for Apple, CEO Steve Jobs unveiled the biggest and smallest PowerBooks ever during his keynote address here, in early January. The 17-inch display on the latest PowerBook G4 is an industry first, but it’s not just the screen size that will have Mac users drooling; the unit is stuffed with the latest in connectivity and performance components. For connectivity, the new system includes built-in Bluetooth, gigabit Ethernet and a new version of wireless Ethernet called AirPort Extreme, based on 802.11g and running at up to 54 Mbps (802.11g will interoperate with the more common 802.11b). Apple has also implemented a faster version of Firewire called Firewire 800, and one of the two Firewire ports on the 17-inch PowerBook is the faster version. It also includes a slot-loading SuperDrive.



The PowerBook comes with a 1 GHz G4 processor with 1 MB of Level-3 cache and 512 MB of DDR RAM. The 17-inch 1,440x900 pixel display is similar to the one used on the new iMac, and gives a



16x10 aspect ratio. Driving the display is an nVidia GeForce 440 Go graphics processor with 64 MB of RAM.

One of the features that had the audience ooh-ing and ah-ing is the keyboard

backlight system that lights up the spaces around the keys and the keycap letters themselves. As the ambient light falls, the keyboard backlighting increases (and the screen brightness is also lowered).

A couple of years ago, IBM announced the ThinkLight on its line of ThinkPad notebooks, which cast a pale light on the keyboard. While it sounded like a gratuitous design feature, anyone who used a notebook in a dimly-lit environment appreciated it. The PowerBook’s backlit keyboard is bound to prove itself equally useful, plus it makes the unit look very cool.

Interestingly the 17-inch PowerBook at about an inch thick is actually slightly thinner than the original PowerBook Titanium that Apple introduced two years ago. On the new model the case is made of an aircraft grade aluminum alloy, and even with the big glass of the screen, the unit weighs a reasonable 3 kg

Continued on page 76

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PowerBook gains 17-inch display

Continued from page 74

(6.8 lb.). Apple estimates the lithium prismatic battery will last up to 4.5 hours.

The 17-inch PowerBook G4 will come with Mac OS 10.2, and an integrated digital media suite called iLife, which includes rewritten versions of iPhoto, iMovie, iTunes and iDVD. The big PowerBook is scheduled to start shipping in February. Apple Canada has set the suggested retail price at \$5,299.

The littlest PowerBook

At the other end of the scale is the 12-inch PowerBook, which Jobs proclaimed as the smallest full-featured PowerBook ever. The unit is barely wide enough to accommodate the full-size keyboard. It is 1.2 in thick, weighs 1.89 kg (4.2 lb.) and is powered by an 887 MHz G4 processor. It comes standard with 256 MB of DDR RAM and an nVidia GeForce4 420 Go graphics chip 32 MB of RAM. Apple claims battery life of five hours. Airport and SuperDrive are optional. The unit is scheduled to ship in February, and Apple Canada has set the price at \$2899.

Get an iLife

Apple has rewritten and repackaged its digital media tools into an integrated suite it calls iLife, which will ship with all new Macs. "It's going to do wonders for our new digital lifestyle," said Apple chief executive officer Steve Jobs during his keynote address. "We live in an incredible time—it's an inflection point," he said of the convergence of personal music, still photography and video into a digital form.

Jobs said over the past 18 months

Apple rewrote iTunes, iPhoto, iMovie and iDVD into an integrated suite so that the individual components work seamlessly with each other. A new version of iTunes has been out for some time, but updated versions of iPhoto, iMovie and iDVD were announced during the keynote. The resulting bundle, iLife, will do for digital media what Microsoft Office did for office productivity, said Jobs, providing a common working environment for creating and enjoying personal mixed media productions.

For example, someone creating a slide show of vacation photos in iPhoto 2 or a video in iMovie would be able to see a list of music stored in iTunes and select some music to accompany the visuals without having to leave the iPhoto or iMovie application.

Beyond the integration, the applications themselves have been enhanced with new or improved features. Jobs demonstrated a one-click enhance tool in iPhoto, for example, that optimizes brightness levels, contrast and white balance and a smart retouch brush that heals and smooths areas—good for removing minor blemishes in skin for example.

One impressive new feature in iMovie is what Apple has named the "Ken Burns Effect," after the documentary filmmaker that enlivened Civil War still photos by panning across them to create the illusion of motion. Other improvements in iMovie include support for chapters, and an audio levels control.

New in iDVD are pre-built themes and the ability to create DVD scene menus from iMovie chapter markers.

iLife will ship with all new Macs. The latest versions of iMovie and iPhoto will be available for downloading at no charge from Jan 25. Apple Canada says a packaged version including iTunes, iMovie, iPhoto and iDVD will cost \$75.

Jaguar does a Safari

In addition to revising its "digital lifestyle" applications into an integrated suite called iLife, Apple also announced three new software applications at MacWorld here: Safari, a new Web browser for OS X; Keynote, a presentations software application; and Final Cut Express, a light version of Final Cut Pro.

Jobs said one of the reasons Apple chose to develop "the first major new browser in five years" was to improve performance. He said Safari is the fastest browser on the Mac, and claimed it was up to three times faster than Internet Explorer.

He said another reason Apple developed Safari was to innovate, and then proceeded to show off some of the new features in the browser. Google is integrated into the interface so a user doesn't have to first open to Google in order to perform a search. A snapback button works within the Google search area and the general URL address line: clicking it takes the user back to the original starting page of that session, helping the alleviate the "back-back-back" ritual everyone goes through when retreating from an unproductive branch. A bookmarks bar allows the user to add favorite sites (and using simple names or acronyms) on the browser face for one click access to them.

Safari is based on an Open Source

code base, and Jobs got appreciative cheers and hoots from the audience when he declared "we think OpenSource is great." The availability of a beta of Safari was announced at the show.

Keynote for keynotes

"Keynote was built for me," said Jobs, explaining that all of the slide shows that accompanied his keynote addresses in 2002 were built using Keynote. "It lets you create presentations that look like you have a graphics department working for you," he said.

The creation interface is a slide sorter, and the application comes with a dozen pre-built themes that create a unified look to the presentation. A photo cutout feature on some slides allows the user to drop their own photos into a pre-designed page. Keynote includes a number of gee-whiz transition effects including fades, wipes and flips—and it exports to PowerPoint, QuickTime and PDF. In Canada Keynote has a retail price of \$159.

Final Cut for the rest of us

At approximately \$1,600, Final Cut Pro is a video editing suite that caters to only the serious videographer (or hobbyist with lots of cash). A welcome announcement for video producers of more modest means is Final Cut Express, selling in Canada for \$449.

Apple says Final Cut Express is similar to Final Cut Pro, but without some of the high-end features that would only be of interest to professionals. Users will be able to import iMovie productions into Express, and also move Express files into the full-featured Pro version. □

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Getting a grip on spam

By David F. Skoll

Widespread use of email has revolutionized commerce. Access to very cheap, very fast electronic communication has greatly expanded the reach of businesses, allowing even small businesses to have global success. Over the last few years, however, we've seen more and more of this in our inboxes:

- ">>>THE ULTIMATE BULK EMAIL SOLUTION!"
- "Look Younger and Lose Weight in 3 Weeks!!!!"
- "FREE 30 day supply of HGH 9469mbw-7"
- "dfs, \$5.00 per 100MG dose for Gen*ric V*agra. Limited Time Free Doctor Consultation"

I'm talking about unsolicited commercial email, junk mail, spam.

Spam has become more and more troublesome as spammers realize they can mass-market their wares at practically no cost. According to some studies,

spam now accounts for 38 percent of all email traffic. IDC says 31 billion junk email messages are sent every day, with projections that the number will double by 2006.

Spam isn't merely an annoyance, it costs businesses time and money. Employees waste valuable time cleaning out their mailboxes. Worst of all, spam is lowering the business value of email. What promised to be a fast, efficient means of business communication is turning out to be an exercise in junk-sorting and time-wasting.

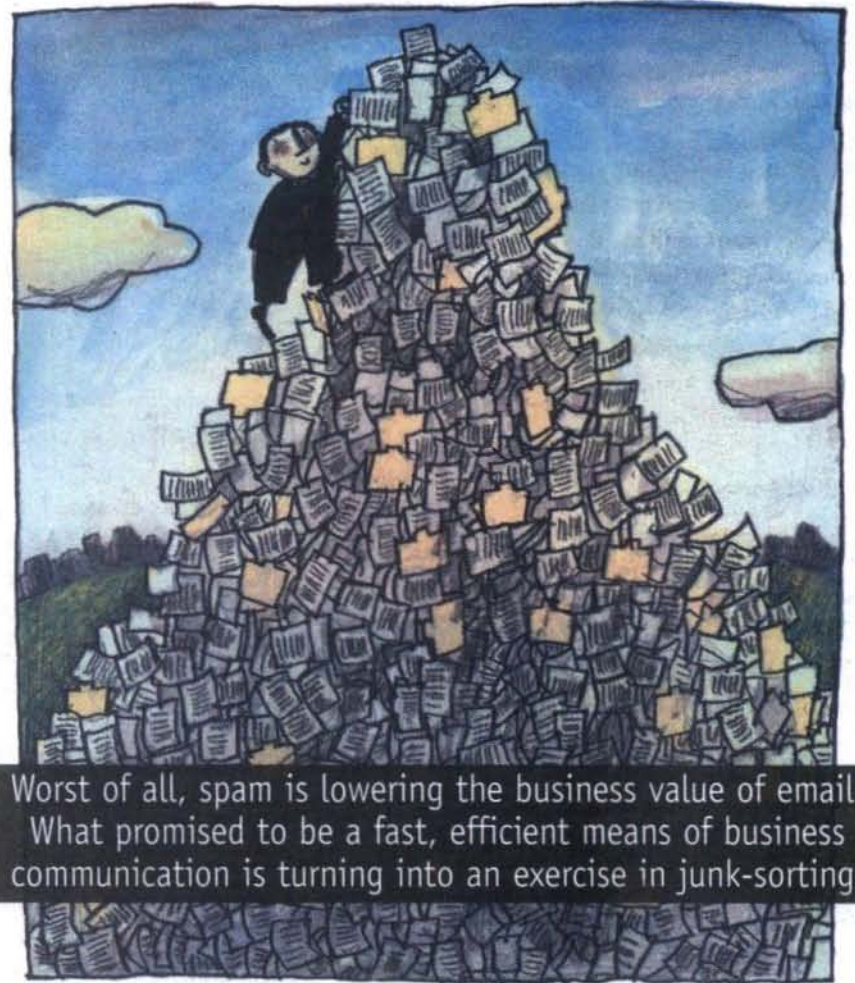
In this article, we'll look at the issues at the root of the spam problem, learn what spam-fighters are doing about it, and offer concrete tips for reducing the cost and risk of spam in your business.

The nature of spam

Several factors conspire to increase spam's prevalence and make spamming attractive to spammers:

- SMTP—the ubiquitous Simple Mail

Continued on page 78



Worst of all, spam is lowering the business value of email. What promised to be a fast, efficient means of business communication is turning into an exercise in junk-sorting.

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Getting a grip on spam

Continued from page 77

Transfer Protocol used on the Internet—provides no way to authenticate the email addresses of senders. Anyone can fake an email address. (This has implications not only for spam, but also for the latest crop of viruses, which pretend to come from someone other than the real sender.)

- Sending an email message across the world is as cheap as sending it next door. Spammers can take advantage of this by spamming from servers in countries with weak or nonexistent anti-spam laws.
- People still rely heavily on email, so spam is likely to reach its target. While the Mozilla Web browser allows blocking of pop-up Web ads, and some proxies block other Web and instant-messaging ads, no-one is willing to close off email, because that would defeat its purpose.

As long as spamming continues to be cheap, reliable and non-traceable, it will continue to be a problem. Attacking spam requires addressing one or more of those three factors.

Thinking like a spammer

To really understand how to stop spam, we need to think like spammers. Let's put on our mass-mailing black hats and become evil spammers for a moment.

The first thing we need is protection from consumer backlash. We can easily achieve this by either faking the sender address completely, or using a disposable Hotmail or Yahoo email address as the sender address. Statistics show that a disproportionate amount of spam claims to come from free email services.

Next, we want to minimize our cost. If we're on a dialup line, we really don't want to send thousands or millions of individual messages. It's much cheaper to find a so-called "open relay" that will forward messages for us. (An open relay is a misconfigured email server that accepts messages from anyone and relays them to anyone.)

This lets us batch up the messages, sending one message to perhaps hundreds of recipients, and leaving it up to the open relay to redistribute them to individual recipients.)

To further lower our cost, we don't want to deal with bounced messages or

errors. Our goal is to blast messages at as many people as possible; we don't particularly care about reaching every single recipient reliably. So we use special software that ignores errors, and we fake the sending address so no bounced messages come back.

Although we don't care about the reliability of an individual message, we do care that, on the whole, the messages get through. So we keep our message short to avoid size restrictions, and we don't use any attachments, preferring plain text or HTML mail.

In order to evade content-scanners, we might use tricks like encoding our message or splitting words with HTML comments: some<!-->thing like this. We'll avoid unpopulated content filters by writing V*agra instead of Viagra, or using g a p p y text.

Thinking like a spam fighter

Now, let's put on the white hats of spam fighters. What tools do we have at our disposal?

- Spotting faked sender addresses is, in general, impossible. However, if a message comes from a nonexistent

domain, it makes sense to reject it. Most mail server software can be configured to reject messages from non-existent domains. Unfortunately, these messages account for a vanishingly small proportion of spam.

- Blocking messages from free email providers is likely not feasible. There are simply too many legitimate users of these services to block them without negative business effects.
- Blocking open relays may be a little more promising. There are databases of open relays, updated in real time, that let you look up a machine with a simple DNS request. We can block mail from machines in these databases. Unfortunately, of course, there are many more lazy administrators (and hence open relays) than are listed in open-relay databases.
- Blocking "dialup" IP addresses can help. This prevents spammers from sending email directly from dialup or DSL PCs, forcing them instead to use their ISP's mail server and (presumably) be more accountable for their email. The downside, of course, is that you may block legitimate email, or

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forget to update your database when network addresses are reassigned.

- Detecting special spamware is a hit-and-miss proposition. Some spamware adds special headers to email messages, and can thus be detected. But most spamware tries very hard not to be detectable, precisely in order to seem legitimate.
- Our last spam-fighting tool is content-scanning, and this is probably the most fair and reliable method. Spammers are usually not particularly sophisticated, and although they may use silly tricks to try to avoid content-scanners, most spam email has (to put it kindly) a certain literary style.

The two most promising content-scanning techniques are rule-based techniques and statistical techniques. With rule-based techniques, email messages are examined for certain characteristics. For example, do they mention the word Viagra? Do they have ADV: in the subject? Do they contain g a p p y text or a WHOLE LINE OF YELLING? How about many exclamation marks in a row!!!!? Or embedded HTML comm<!-->ents?

Each rule is given a score, and messages

that score higher than a specified level are considered more likely to be spam. Assigning the scores, of course, is a tricky business, and there are sophisticated algorithms for coming up with scores that detect most spam while minimizing false positives. SpamAssassin is probably the most effective rule-based filter.

Statistical techniques rely on learning what is spam and what isn't. In "training mode," the filtering software is told which messages are spam and which aren't. The software looks at the messages and builds probability tables that messages containing certain words or phrases are or aren't spam. Eventually, the tables become complete and accurate enough to, separate spam from non-spam without further training.

Trainable software can even be taught to classify messages as spam, business-related, hobby-related, etc. While statistical techniques work well for individuals, they are probably not well suited for organizations, because different people in the organization might have different ideas about what is or isn't spam, and no trainable filter is likely to work well for everybody.

Fighting back

So far, the spam-fighting techniques noted focus on detecting likely spam. But what do we do after detection?

Simply disposing of suspect messages is a non-starter for most businesses, because no automated technique, however good, can guarantee not to block legitimate email. For companies that depend on email for leads, this is unacceptable. So most spam-fighting software simply marks suspect messages with a special subject, or redirects it to a special folder. However, someone still has to wade through the junk to pull out useful nuggets. This is not much of a time-saver.

Some (expensive) services have legions of spam editors who manually examine messages and set up a database of which messages are spam. This database is readable by content-scanners on mail servers, which then reject spam messages.

Distributed checksum services operate on a similar principle; once a message has been identified as spam by some number of volunteers, it is added to a database and everyone else can reject it

automatically.

To fight back effectively, you need a multi-pronged approach:

- If you run your own mail server, consider using real-time blacklists and distributed checksum databases. Run content-scanning software on your server to identify spam.
- If you use an ISP for your email, choose one that offers an anti-spam service, preferably one that allows you to create custom blacklists and whitelists. Avoid running anti-spam software on on your desktop if you can, because you still have to waste time downloading and analyzing spam. Anti-spam scanning belongs on the mail server.
- Never reply to a spam message. Any reply simply confirms that your address is valid and invites new spam.
- If you want to complain, never do so to administrators of the sender's domain, because the sending address is likely to be faked. Instead, look for the IP address of the mail relay and complain to network administrators for that address. You can find good

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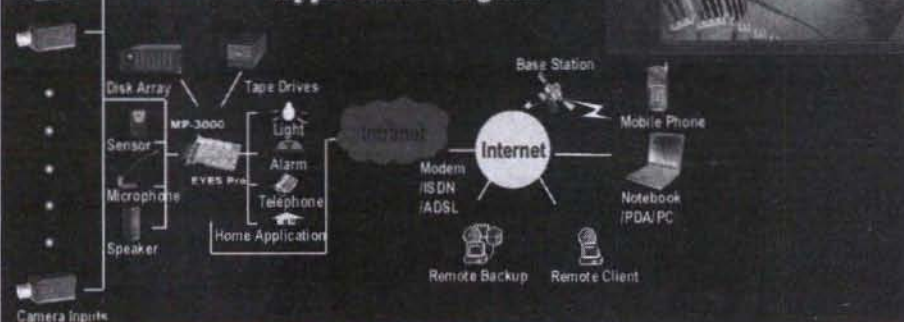
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Weaving your own Web site

CSS selectors: Part 2

By Keith Schengili-Roberts

In the last article, we looked at some basic selectors: contextual, child, and adjacent sibling selectors. But there are other types of selectors available that allow for a greater range of selective formatting. In this article, we look at the set of selectors that lets you format attributes under a number of different conditions.

Attribute selectors

The set of attribute selectors greatly extends the functionality of the class and id attributes. The basic idea of these selectors is that they let you format Web objects utilizing attributes on a conditional basis—so you can select a particular combination of elements to be formatted when it appears within a Web page.

The Cascading Style Sheet 2.0 (CSS2) specification added four of these attribute selectors. In each case, an attribute value is enclosed within square brackets, and is then followed by further CSS code that does the actual formatting. Here are quick descriptions for their use and purpose:

- **element[attribute]**—Matches the name of the attribute contained within square brackets.
- **element[attribute="value"]**—A match is made when the attribute equals the value of "value."
- **element[attribute~="value"]**—A match is made when the attribute roughly matches the value of "value," in cases where the text "value" may be part of a larger word.
- **element[attribute|= "value"]**—A match is made whenever the attribute matches the first few letters of a value

whose first few letters match the text "value."

The initial example is pretty simple: wherever you have a particular type of attribute appearing against a specific element, the browser formats it accordingly. For example, take a look at the following code snippet:

```
<style>
h2[class] {color: red}
</style>
```

In this case, any <h2> header in the page that uses class—whatever its value—will be coloured red. So a header like <h2 class="header">This header is in red</h2> matches the criteria, whereas <h2 id="header">This header is not</h2> is not because it uses the id attribute instead.

You can see how this can be a powerful tool, allowing you to rapidly add some further modifying CSS code to further format existing CSS code on your Web page—in this case, any <h2> header that uses the class attribute.

Things get more interesting when you come to the second example, which is where you can start adding further conditional statements to the selector, allowing you to be more choosy about what gets formatted. Consider the following code snippet:

```
<style>
h2[class="header"] {color: red}
</style>
```

In this case, only <h2> headers containing a class attribute set to the value "header" would be formatted red. If there's an <h2> header on the page with a class value set to anything else, it won't be considered a match, and therefore won't

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be turned to red. You can even use a "null" value with this particular arrangement, which can be quite useful in some circumstances. Let's say you have a dynamically generated Web page, and occasionally you get elements that are automatically generated but are empty, such as a "Next" link at the end of a slideshow Web presentation for example. What you could do is insert the following code in the header of your Web page:

```
<style>
a[href=""] {visibility: hidden}
</style>
```

In this case, whenever you get an anchor tag that doesn't contain any content—in other words, when it doesn't actually link to anything—this particular attribute selector will render it invisible.

The third type of attribute selector allows you to choose a particular value within an attribute whenever there is more than one value present. This is available because there are certain times when you may wish to call upon more than one type of class or id attribute formatting within a page.

You can, in fact, have a single Web element on a page formatted by more than one class attribute for example, with each value separated by a comma. The "~=" in

the third type of attribute selector tells the browser to select against a particular value whenever it appears, whether it be the first, second, or third (or more) value that appears within the value for a given attribute. The following sample Web page code should help make this concept clear:

```
<html>
<head>
<title>Attribute Selector Example</title>
<style>
p.goldilocks {font-weight: bold}
p[class~="gold"] {color: gold}
</style>
</head>
<body>
<p>The story of Goldilocks and the Three Bears</p>
<p class="goldilocks">Once there was a little girl whose name was Goldilocks.</p>
<p class="goldilocks gold">She ran into some trouble with a trio of bears.</p>
</body>
</html>
```

In this case, the first paragraph is formatted normally, the second is rendered in bold, and the third is displayed in bold and is a gold colour, with the gold formatting coming from the p[class~="gold"] {color: gold} matching the "gold" value in

```
<p class="goldilocks gold">
```

The fourth type of attribute selector is for use when you are trying to match a particular type of hyphen-separated (instead of space-separated) values contained within an attribute. It uses "|=" and tells the browser to look and match against a given value only when it first appears in a given sequence of hyphen-separated values contained within an attribute. Again, a look at some actual code may help make things more clear:

```
<html>
<head>
<title>Untitled</title>
<style>
p[class="hum"] {color: white; background-color: red}
</style>
</head>
<body>
<p class="hum-bug">hum-bug</p>
<p class="bug-hum">bug-hum</p>
<p class="hum-bug-hum">hum-bug-hum</p>
<p class="bug-hum-bug">bug-hum-bug</p>
</body>
</html>
```

In this case we have a Web page where we have the attribute selector looking for matches to p[class="hum"], which uses

{color: white; background-color: red} to turn the text white against a red background. In the paragraphs contained within the body of the page, only two paragraphs meet this condition: those beginning with <p class="hum-bug"> and <p class="hum-bug-hum">, because the value "hum" appears at the beginning of the sequence of hyphen-separated values. The other two paragraphs are not matched, since "hum" does not appear at the beginning of the hyphenated sequence of values.

As with many of the selector types from the last article, support for attribute selectors is not yet implemented within Internet Explorer. However, you will be able to see these code examples work the way they were intended if you are running a current edition Netscape Navigator, Mozilla, or Opera browsers. □

Next Time: What CSS3 has in store for selectors. Keith Schengili-Roberts welcomes any comments, questions, suggestions, or HTML tips you may have. Email Keith at: robertsk@rogers.com. He teaches a course on CSS and Dynamic HTML at the University of Toronto's Faculty of Information Science (www.fis.utoronto.ca) and his latest book on CSS, *Core CSS, 2nd Edition*, is due out in 2003.

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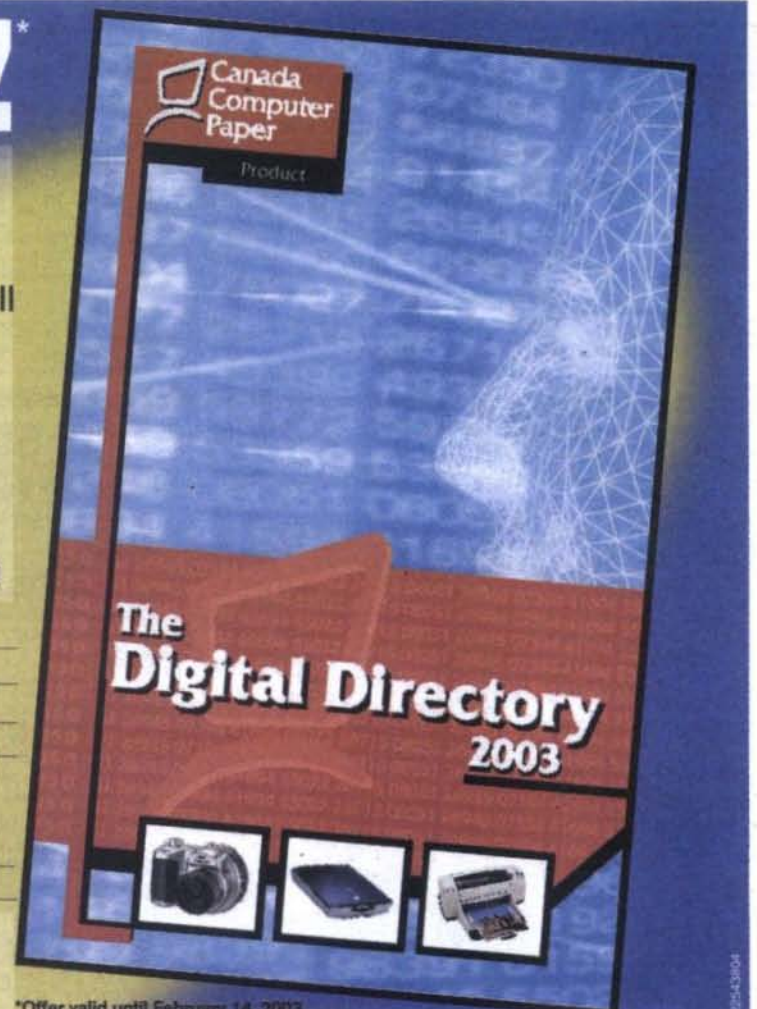
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Take a few tablets

Continued from page 44

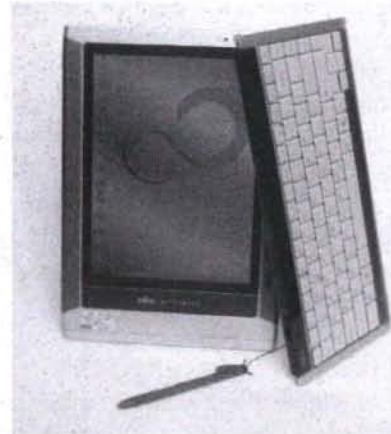
Fujitsu Stylistic ST4110B

From: Fujitsu Canada Inc., www.fujitsu.ca

Estimated price: \$3,699

Pro: Slim design. Large hard drive. Integrated wireless networking. Wireless keyboard.

Con: Performance a bit slow. Using wireless keyboard a bit awkward. Strange headphone placement.



Fujitsu's participation in the world of Tablet PC was to be expected, as the company has offered pen-based units with touch-screen capability for a dozen years. The company's Tablet PC, the

Stylistic, is very aptly named. It's one of the most stylish models we've looked at, and having to send it back was heart-breaking.

The reason we liked it so much is because it's extremely compact and elegant—it's less than 2.5 cm (1 in.) thick, but still manages to include a 40 GB hard drive, USB and FireWire ports, a PC Card slot, and integrated 802.11b wireless networking to supplement the 10/100 Ethernet and 56Kbps modem.

The screen is a bit small at only 10.4 inches, but it's very crisp. The whole thing fits into a sturdy magnesium alloy case. The battery makes up the bottom part of the bezel, which is a really nice design touch, because it will allow Fujitsu to bring out physically larger and longer-lasting batteries down the road without compromising the overall design.

The inclusion of a wireless keyboard is a very nice touch, because it means the slate format isn't quite so limiting. The only real concern about the keyboard's usability is that it uses a line-of-sight infrared connection to a sensor on the front of the Tablet bezel, so you'll have to

tilt the Stylistic into a vertical position to use the keyboard comfortably. Because of this, you may want to consider the docking station option to make sure the unit is held upright properly; it's \$399 with a CD-ROM drive, and \$639 with a DVD/CD-RW combo drive. (Fujitsu also offers a leather portfolio case and a nylon attaché case, both of which double as stands for the Stylistic.)

If you don't want to go through that hassle, the unit is still perfectly usable with stylus input. The included pen can be tethered to the tablet so you won't lose it. Because the end of the pen is a tethering loop, the erase function on the stylus has been moved down to the two-way button (push down for right-click, push up for erase).

Even though there's a lot to like about the Stylistic, there are a few potential problems worth noting. First, the headphone jack is located along the top of the screen, which means your headphone cord will drape down over the screen when you're using the unit in portrait mode. More problematic is the machine's overall horsepower: with an 800 MHz mobile Pentium III processor

and only 256 MB of RAM, it may choke a bit if you throw anything really demanding at it (like multimedia); for general use it's just fine.

If you want to save a few dollars, take a look at the Stylistic ST4110A, which omits the 802.11b wireless component and has a 20 GB hard drive instead of a 40 GB model. This version will run you \$3,399. All of these models can be ordered directly from Fujitsu.

Toshiba Portégé 3500

From: Toshiba Canada, www.toshiba.ca

Estimated price: \$3,749

Pro: Fast processor. Big screen. Integrated wireless networking. Convertible design. Competitively priced. Both CF and SD slots.

Con: No floppy or CD drives. Potentially battery hungry.

Other manufacturers have gone with reasonably modest Tablet PC configurations, but Toshiba's having none of that. The Portégé 3500 is set up with enough processing power to do a lot of desktop PCs proud—a 1.33 GHz mobile Pentium III processor backed up with 256 MB of RAM (16 MB of which are

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Take a few tablets

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used for video) and a large 40 GB hard drive.

This particular model is convertible, allowing you to use it in notebook or slate mode. Unlike the Acer model above, it doesn't use side clips to keep the 12.1-inch screen in place. Instead it has a heavy-duty hinge that clicks into place internally at the extremities (it takes enough of a push to get it turning that it won't likely be knocked out of the proper orientation accidentally).

The design was well thought out for the most part. The screen is held tightly against the body with a tab-and-buckle-style fastener that flips into the right position depending on your orientation. The screen automatically reorients into portrait mode when you switch into slate format. There's even a lock button next to the power switch, so you won't power off the tablet by mistake when you grab the Portégé by the bottom edge. If there's a complaint about the design, it's that it's slightly thicker on the hinge side, which may feel awkward.

The overall design is very elegant, and manages to cram in a lot of features.



There are slots for both SecureDigital and CompactFlash removable media, right next to the PC Card slot. It also has three choices for networking: 10/100 Ethernet, a 56Kbps modem, and built-in 802.11b wireless, which you can easily turn off using a small switch on the side, when you want to save battery power. The two biggest omissions here are the lack of FireWire and the fact that there's no floppy or CD drive, even though the Portégé is a notebook-style Tablet.

It's possible that the Portégé's

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The big and small of portable computing



Just when you thought that the personal computer market had run out of steam, there are machinations that it's about to reinvent itself in the secret labs of Silicon Valley. First let's give the surfer dude pitchmen the pink slip, nix the cow hide on the boxes, and merge the companies that market the last letter of the company name. The new PC is not just new because some moron marketeer says it's new—it's new because it is changing shape.

And these new processing machines are not your father's iMac. Bulbous fruit boxes are not going to save the day. What's going to win the computer wars for the newly shaped computers is more different than thinking different.

First off, the desktop is all but dead and that's because we want to take our computers with us wherever we go and a beige box is not going to fit in pocket. However, there are two companies working away in the secret labs of Silicon Valley to achieve a pocket-sized computer. Now, I'm not talking Palm and Pocket PC here. That's yesterday's news. Tomorrow's computer is about the size of a trashy romance novel.

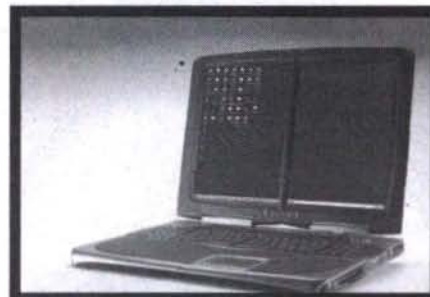
I wandered over to San Mateo the other week to get a glimpse of this book-sized future and there, in the shadow of Oracle's campus, was this little office in a low-slung complex with nine engineers

floating around in it.

The company is called Tiqit (www.tiqit.com) and its pride and joy is the eightythree, a 570 g (20 oz.) computer that runs a full version of Windows XP. The pocket computer—which looks like a RIM BlackBerry on steroids—has a 300 MHz National Semiconductor Geode processor. It sports 256 MB of non-expandable memory, and a 10 GB or 20 GB hard drive. It runs on a lithium-ion battery that stores about four hours of power. It's got geeky guts and fashion maven appeal. The bookish computer comes in multiple colours like steel blue and burgundy.

What's cool about this new product is that it's a desktop computer replacement. It is highly portable and can be used autonomously away from the restraints of a desktop, thanks to an integrated thumb-driven keyboard and mouse stick. Plus it has an integrated 4-inch, 18-bit LCD touch-screen capable of displaying more than 262,000 colours.

The device is named after the atomic weight of bismuth, the densest non-radioactive element. In the spirit of anti-product monikers like Unix, it was designed and named by a bunch of Stanford University engineers. The machine's most desktop-like quality is that it runs a full version of Windows XP, yet it's a quarter of the size of an average laptop. To connect it to the world outside your pocket or purse, it has integrated PC Card and SD card slots and one USB port. The company wanted connection agnosticism, so eschewed integrated Bluetooth and Wi-Fi. The designers



Xentex's split-screen FlipPad Voyager.



The petite eightythree from Tiqit.

argue that the customer should make that decision and choose the connection

technology that fits them.

Tiqit, which stands for Tiny ubiquitous Technology, figures sales-people, field workers, and ultra-mobile dweebs will be hot for the device. So that it can be used in the veal pen cubicles of North America, the device can attach to a monitor and keyboard, turning it into a full-fledged desktop computer. There's no outboard CD burner or floppy drive, but you could tote an external one with you and connect it through the USB port.

I think it could revolutionize what we think of as a portable computer. It will be available next year, likely branded by a yet-to-be-named mainstream computer company, at a price of around US\$1,000 to US\$1,500.

Of course, computer mutations are not all about small. Expect to see a new category of notebook computer called the desktop replacement. Like an aging supermodel, expect it to be heavier and more sophisticated. The weight of the pork-top is going to balloon to between 3.8 and 4.5 kg (8.5 and 10 lb.) and screens will be super-sized to 16-inch to 21-inch.

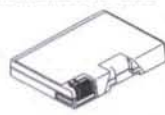
Features on these beasts will one day turn them into personal entertainment systems. They'll have CD or DVD drives, an MP3 player, and FM radio and TV tuners, along with high-quality speakers. Manufacturers will remove the keyboards and offer outboard mice, though perhaps these command-and-control devices will clip on when they need to travel.

The portly portables will also be chock

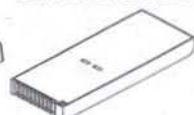
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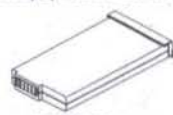
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full of new-fangled connectors like USB 2.0 ports (40 times faster than traditional USB ports) and IEEE-1394 ports. The latter, also called FireWire by Apple and iLink by Sony, is now the standard way to transfer video between digital camcorders and computers.

The seemingly backward trend toward robust luggables will likely appeal to students and those who don't travel much with their gear, but want the option, without the need for heavy machinery.

"Their power will be equal to what you can do on your desktop today," explained Canadian Danny Lee-Yow, one of four directors responsible for worldwide research and development at

Toshiba.

They will also cost about the same as a desktop computer. The new machines will start to arrive in 2003 and become mainstream by 2005 or 2006—or so hopes the laptop industry.

One of the first to make good on this promise is the Xentex Technologies (www.xentex.com) Flip-Pad Voyager. This US\$5,000 mobile computer is an address-tag shy of luggage. At 5.4 kg (12 lb.) including batteries and two filled drive bays, the computer is going to frighten off the lip-gloss iBook set, but attract manly men who want big iron to go.

The Voyager, currently powered by a

1.6 GHz AMD chip, has the same footprint as your average laptop but is perhaps three times as thick. Like high-tech origami it unfolds into a double-sized laptop with acres of keyboard and a touchpad. Here's the kicker though: this baby has two LCD screens that flip up side by side to produce 21 inches of screen real estate. Xentex has integrated controls to pre-installed copies of Microsoft Office and Windows XP (or 2000) for seamless and snappy positioning of windows between monitors.

One of the screens is also on a gimbal so it can both flip up and down as well as rotate by 360 degrees so two people sitting on opposite sides of a table can view

screen content. A future model may contain dual processors and have the ability for two people to work on the system at the same time.

Eventually, the Flip-Pad Voyager will work with an optional outboard keyboard, and perhaps dual processors. Then there's a stylus for electronic signatures and eventually—in future versions—a touch-screen function in folded mode, which, of course, will give it Tablet PC functionality.

In mobile computers, as it turns out, size does matter. □

Andy Walker recently moved from Toronto to California. He can be reached at andy@cyberwalker.net.

Getting a grip on spam

Continued from page 79

instructions for spam reporting at www.spamcon.org.

- Use anti-spam software that does not automatically dispose of messages, but that traps spam while at the same time offering an efficient way to review and select valid messages. Software that sorts by a filter's spam score, for example, makes it much eas-

ier to pick out valid email. Software that lets you create blacklists and whitelists of known spammers and friends can go a long way to reducing your workload.

- If you live in jurisdictions that allow it (sadly, none in Canada do), take legal action against spammers. Technical means can help reduce the reliability and increase the cost of spamming, but a lawsuit really hurts a spammer.

Conclusions

Spam will always be with us, regardless of the technical tools or legal steps used to combat it. As content-scanners become more widespread, we'll see an arms race between scanner authors and spammers.

Content-scanning, real-time blacklists, and other technical measures will succeed in blocking most spam, and are worth implementing.

Leading-edge spammers will always be a step ahead, but the vast majority of unsophisticated, semi-literate spammers will be stopped cold. □

David Skoll is president of Roaring Penguin Software Inc. (www.roaringpenguin.com), creator of the open-source MIMEDefang email scanning software and CanIt Spam Trap (www.canit.ca), a commercial anti-spam and anti-virus solution. You can email David at dfs@roaringpenguin.com.

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Picture book documents history of computing

First and foremost, this is a picture book—a guide through the history of computers as seen through the camera lens.

The publisher, Taschen, is better known for books on the visual arts: typically on subjects like Impressionist painters, archi-

ecture, modern art, and industrial design. But, whether you are looking for a good history of computational development or a trip down computer-memory lane, this provides a good, illustrated tour.

A few pages in, you realize this is not your typical book. The text accompanying

the numerous pictures is laid out vertically (parallel to the spine), so it has to be viewed sideways, like the centerfold of a magazine—something that might earn a few stares while reading it on the bus.

The text by Christen Wurster offers an adequate history of the development of

computer systems, ranging from Charles Babbage's Victorian difference engine to the latest in Web-surfing cell phones.

But the text really serves as background to the hundreds of pictures of computer systems that are the real heart of the

Continued on page 87

Blogging guide lacks detail

I knew I was in trouble when I noticed this slim book was written by six people. *Essential Blogging* is the first book I've seen on the subject of Weblogs—or "blogs."

With blogs, users essentially make the Web their own personal soapbox, speaking out on events and issues both personal and private. But while *Essential Blogging* covers the basics well, its scattered approach to the subject matter will disappoint those looking for something more in-depth.

This book covers four types of blogging software: Blogger/Blogger Pro, Radio Userland, Movable Type, and Bloxom. And

therein lies the problem: so many programs are included that none gets the kind of detailed coverage users are likely to want.

I mean, would you buy a book that just looks at "word processing programs" instead of a more focused title on Word or WordPerfect?

As well, the quality between chapters varies, with different levels of coverage for each program—likely a result of the number of authors.

The basic structure of the book provides an introduction to each program, followed by a chapter detailing more advanced features. I use Blogger Pro for my blog

(www.captmondo.com), and while this book provided me with a few new tricks, I don't think they were worth the price of admission.

The information on the other blogging programs was interesting, but I would have preferred a more in-depth look at the program I use—a complaint I suspect users of the other programs would also express.

Two truly useful chapters for \$47 isn't a bargain in anybody's book.

An OK start for what is undoubtedly a 1.0 version, though I'd wait for 2.0.

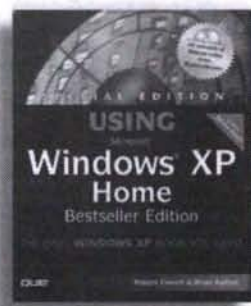
—Keith Schengili-Roberts



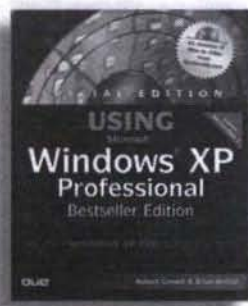
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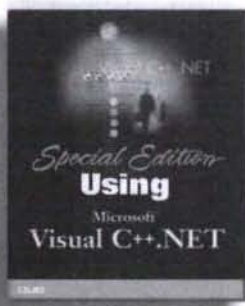
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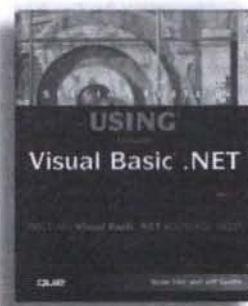
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Bell Canada launches free WiFi hot spots

By Jeff Evans

Canadian telco giant Bell Canada (www.bell.ca) is launching a new, free-of-charge test deployment of wireless high-speed Internet service in selected locations across Canada. At a Dec. 10 ceremony at Toronto's venerable Union Station rail terminal, Terry Mosley, president of Bell Ontario, declared the new AccessZone service proof of "Bell Canada's commitment to meeting the evolving needs of mobile professionals and business travellers who are becoming increasingly reliant on wireless technologies for high-speed Internet access while away from home or office."

According to Bell representatives, "seven or eight" prototype terminals have been built and put into service. These "hot spot" devices are about the same size and shape as a traditional public pay phone, connect to a high-speed (3 Mbps) DSL line, and contain a wireless



The company rushed to stake out its claim to public access WiFi at least in part as a response to a similar, \$6 million WiFi access program announced by its archrival Telus in early December 2002.

802.11 access point that can support up to 30 wireless PC or handheld computer users located within 9 m (30 ft.) of the installation simultaneously.

The first group WiFi hotspot access points have been installed in a variety of locations across the country: Toronto's Union Station, the Via Rail Panorama

lounge in Montreal's Central Station, the departure area at Montreal's Dorval International Airport, Kingston's Confederation Park and Marina, and Kingston's St. Lawrence College.

Other installations are planned or available at the Air Canada Maple Leaf Lounges (business class) at Pearson International Airport (Terminal 2), Dorval International Airport, and Calgary International Airport. (Eventually they will be in all other Air Canada Maple Leaf Lounges). Other AccessZone installations will be opened at Mount Sinai Hospital in Toronto and Frontenac Public Library in Kingston.

The free test phase will last until mid-March, according to Bell.

The company rushed to stake out its claim to public access WiFi at least in part as a response to a similar, \$6 million WiFi access program announced by its archrival Telus in early December 2002.

The two Canadian telecom giants both
Continued on page 88

Picture book documents history

Continued from page 86
book.

For the historically minded, there are fascinating black-and-white pictures of earnest-looking scientists pouring over results from early machines like the Univac, Mark I, and the Whirlwind.

Enter the age of commercial computing, with the likes of IBM, DEC, and Honeywell, and you see how computers were originally marketed (one wonders how computers ever got their geeky reputation with all the pictures of lovely models draped over their keyboards in

the '60s).

Those who were around during the advent of the personal computer revolution will fondly remember the pictures of and advertisements for such classic machines as the ZX81, Apple II, and TRS-80, among others.

This book was simultaneously published in German and English. While you couldn't tell this by the quality of the translation (which is excellent), it does explain a curiously German-centric view on the development of computing history, which contains more European contributions to the field—Konrad Zuse's Z

machines, the British Sinclair computers—than you find in American histories about computers.

Sprinkled throughout are glimpses of how computers have been seen in popular culture, primarily from movies where computers played a role, like HAL in *2001*, or machines that played potentially lethal games in *Tron* and *WarGames*.

This book offers a fun pictorial romp through computing history.

—Keith Schengili-Roberts

COMPUTERS
An Illustrated History
Authors: Christen Wurster
Publisher: Taschen,
www.taschen.com/
ISBN: 3-8228-1293-5
Hardcover 327 pages 2002
Price: \$48

Rating (out of ★★★★★)
Information content ★★★★★
Readability ★★★★★
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< NEW & NOTABLE >

Bell Canada launches free WiFi hot spots

Continued from page 87

see a big market in public access WiFi hot spots. According to a November 2001 study by the U.S.-based Analysys research firm, up to 21 million people will make use of a projected 41,000 public WiFi hot spot access points by 2007, generating up to US\$3 billion in revenue for the phone companies. This figure could amount to US\$9.5 billion globally by 2007, if all forms of public Internet access services are included, with wireless local area networks making up the largest part of the worldwide services revenues.

When asked how much the service would cost after the end of the free test period, Bell representatives were vague. However, a Bell email access terminal elsewhere in Union Station had a posted rate of \$2 for 10 minutes of Internet access time.

According to Intel Canada's Doug

Cooper, as many as 30 percent of new laptops are being sold with WiFi capability. This figure could rise to 70 percent in 2004, and 90 percent in 2005, as Intel's WiFi technology, called Banias, is built into notebook motherboards, making 802.11b networking inexpensive and universal.

Other companies are also getting into the public access wireless Internet game. Coffee shop giant Starbucks has deployed WiFi hotspots in a few hundred of its U.S. locations (point your browser to www.starbucks.com/retail/default.asp to locate Starbucks hotspots in major U.S. cities).

Even the Rolling Stones—currently on the road with their Forty Licks tour—are getting into the WiFi act: they are travelling the world with a portable WiFi network that enables the crew's 140 laptop users, including tech-savvy Mick Jagger, to have constant, effortless Internet connectivity. □

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Take a few tablets

Continued from page 83

strengths could become a weakness out in the field: the larger screen, the faster processor and the integrated wireless are all features that will suck back battery power. It's easy enough to adjust your usage to minimize problems, though (by turning off the wireless component, for example), and the very fact that Toshiba is offering a very powerful version of the Tablet PC around the same price as the competition's more modest units more than makes up for that.

ViewSonic Tablet PC V1100

From: ViewSonic Corp., www.viewsonic.com

Estimated price: \$3,249

Pro: Company's expertise in display tech. Compact design. Included USB keyboard. Integrated wireless networking.

Con: Modest performance. Keyboard must be carried separately. Small hard drive.

Though ViewSonic is definitely not one of the usual gang of suspects when it comes to computer manufacturing, it definitely makes sense that the company is in on the ground floor with Tablet PC, as the format is all about the screen, after all.

And it's not exactly a cold start, either:

Continued on page 94

	Tablet PC survey				
	Acer	Electrovaya	Fujitsu	Toshiba	Viewsonic
	TravelMate C100 TMC102Ti	Scribbler	Stylistic ST4110B	PortGé 3500	Tablet PC V1100
Form	convertible	slate	slate	convertible	slate
CPU (all Pentium III) speed	800 MHz	866 MHz	800 MHz	1.33 GHz	866 MHz
Memory	256 MB	256 MB	256 MB	256 MB	256 MB
Hard drive size	30 GB	20 GB	40 GB	40 GB	20 GB
Screen size (in.) with 1,024x768 res.	10.4	10.4	10.4	12.1	10.4
USB ports	2	2	2	2	2
FireWire port	yes	yes	yes	no	yes
Expansion slots	PC Card, Smart Card	PC Card, CF	PC Card	PC Card, CF, SD	PC Card, CF
Ethernet/modem included	yes / yes	yes / yes	yes / yes	yes / yes	yes / yes
802.11b wireless networking	yes	no	yes	yes	yes
VGA out	yes	via dongle	yes	yes	via dongle
Input method	stylus / Touchpad	stylus	stylus	stylus / Touchpad	stylus
Eraser functionality on stylus	other end	no	button	other end	NA
External peripherals included	CD, extra battery	none	wireless keyboard	none	USB keyboard
Removable battery	yes	no	yes	yes	yes
Dimensions (WxDxH, cm)	25.1x2.94 x 20.8	22.3x3x 27.5	22x2.23x30.12	29.5x3x23.4	25.3x28.8x2.9
Weight (kg)	1.4	1.93	1.45	1.85	1.55
Sandra CPU Arithmetic benchmark					
Dhrystone ALU (MIPS)	2,180	2,386*	2,189	3,653	2385
Whetstone FPU (Mflops)	1,073	1,161*	1,072	1,785	1160
Sandra CPU Multimedia benchmark					
Integer (it/s)	4,249	4,603*	4,239	7,074	4605
Floating Point (it/s)	5,160	5,585*	5,142	8,590	5586
PCMark 2002 benchmark					
CPU	2,520	2,694*	2,493	3,840	2680
Memory	1,464	1,661*	1,571	1705	1716
Hard drive	313	374*	313	455	362

*Non-standard pre-production model tested (see article).

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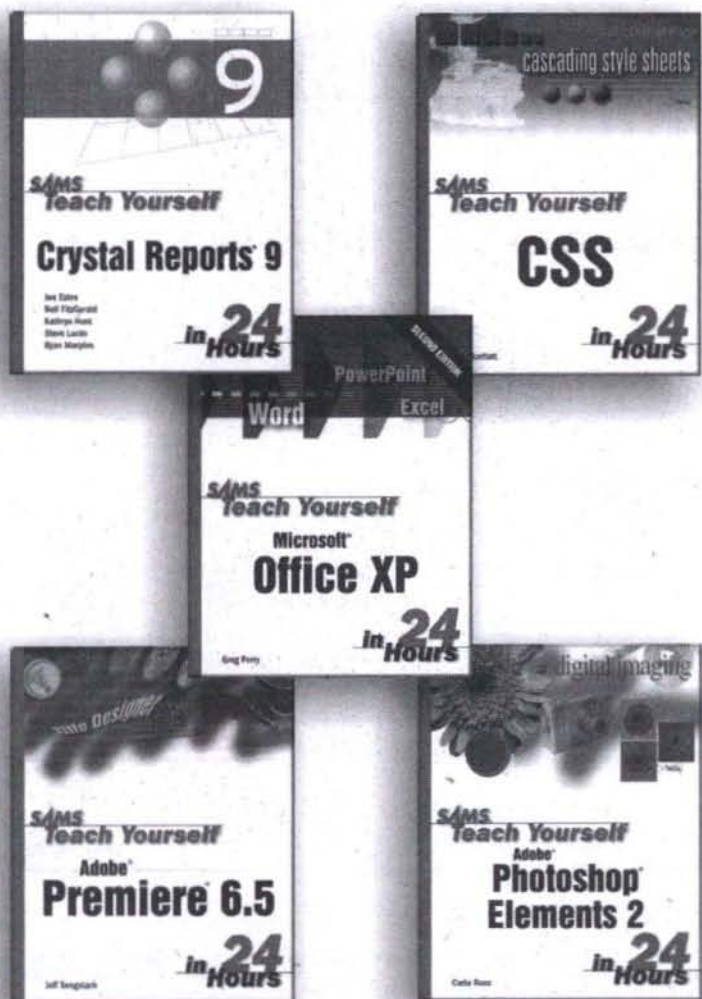
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< NEW & NOTABLE >

The 2002 holiday shopping season: Online spending report

By Christine Walewski

According to the eSpending Report, a U.S. study conducted by Goldman Sachs Group, Harris Interactive and Nielsen/NetRatings, spending online over the 2002 holiday season grew 24 percent since last year, not including travel. Consumers spent almost \$13.7 billion online, in comparison to \$11 billion total reached in the 2001 holiday season.

Those surveyed said they designated 16 percent of their holiday spending budgets to online purchases, in comparison to the 14 percent who said they had done so in 2001. The study found that the most popular time to shop online fell at opposite ends of the spectrum. Spending patterns revealed that most shopping was done either earlier in the season or the week before Christmas.

"With each holiday season, e-commerce becomes more of a mainstream activity," Lori Iventosch-James, director of e-commerce research at Harris Interactive, said in a release.

Jupiter Research has predicted similar growth. A study released by the organization forecasts that final figures for the 2002 online holiday shopping season, to be released in March, will exceed the \$13.1 billion originally estimated—a 17 percent growth compared to 2001.

"Widespread free shipping promotions are the primary reason that the 2002 holiday shopping season was such a good one," said Ken Cassar, senior analyst at Jupiter Research, in a release.

Iventosch-James also attributes the surging popularity of online shopping to an early November push by e-tailers for big discounts and free shipping.

Chapters.indigo.ca is one such example. Their holiday offer included free shipping for orders over \$39—with the post-holiday offer shifting the spending limit to a less appealing \$75.

She says the high volume of online purchases made right before Christmas are an indication that shoppers now feel more comfortable waiting until the last minute.

This also seems to be the case where the security of their financial transactions are concerned.

A U.S. study conducted by the Consumer Internet Barometer revealed that Internet users have demonstrated increased levels of trust when making financial transactions online, compared to a year ago.

Over 33 percent feel their online financial transactions are safe, up from 27.5 percent last year. Also, one-fourth of those surveyed trust that their personal information is safe when purchasing products online, compared to around 22 percent a year ago.

Internet use also increased. Almost 61 percent of consumers go online at least once a month, up from 58 percent last year. Thirty-seven percent of users go online daily, an increase from 33.7 percent a year ago.

According to the eSpending Report, the most popular category for online purchases was books, music and video/DVD. Consumers spent over \$3.1 billion on these items. Compared with the 2001 online holiday shopping, this category saw a 40 percent increase. Also experiencing an increase, 20 percent more consumers shopped online for apparel—this category ranked second and saw \$2.7 billion in sales.

The fastest growing categories were toys and video games and consumer electronics—both experienced increased spending by more than 72 percent. Online consumers spent almost \$2 billion on consumer electronics and \$1.8 billion on toys and video games.

Spending across gender was relatively stable year-over-year. Fifty-one percent of online shoppers were women; 49 percent were men. This compared with an even 50/50 split in 2001.

Where age was concerned, the total online shopping population consisted of seven percent more 18- to 24-year-olds since the 2001 holiday season. This category is the only one that experienced growth over the past year.

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