

# The Computer PAPER

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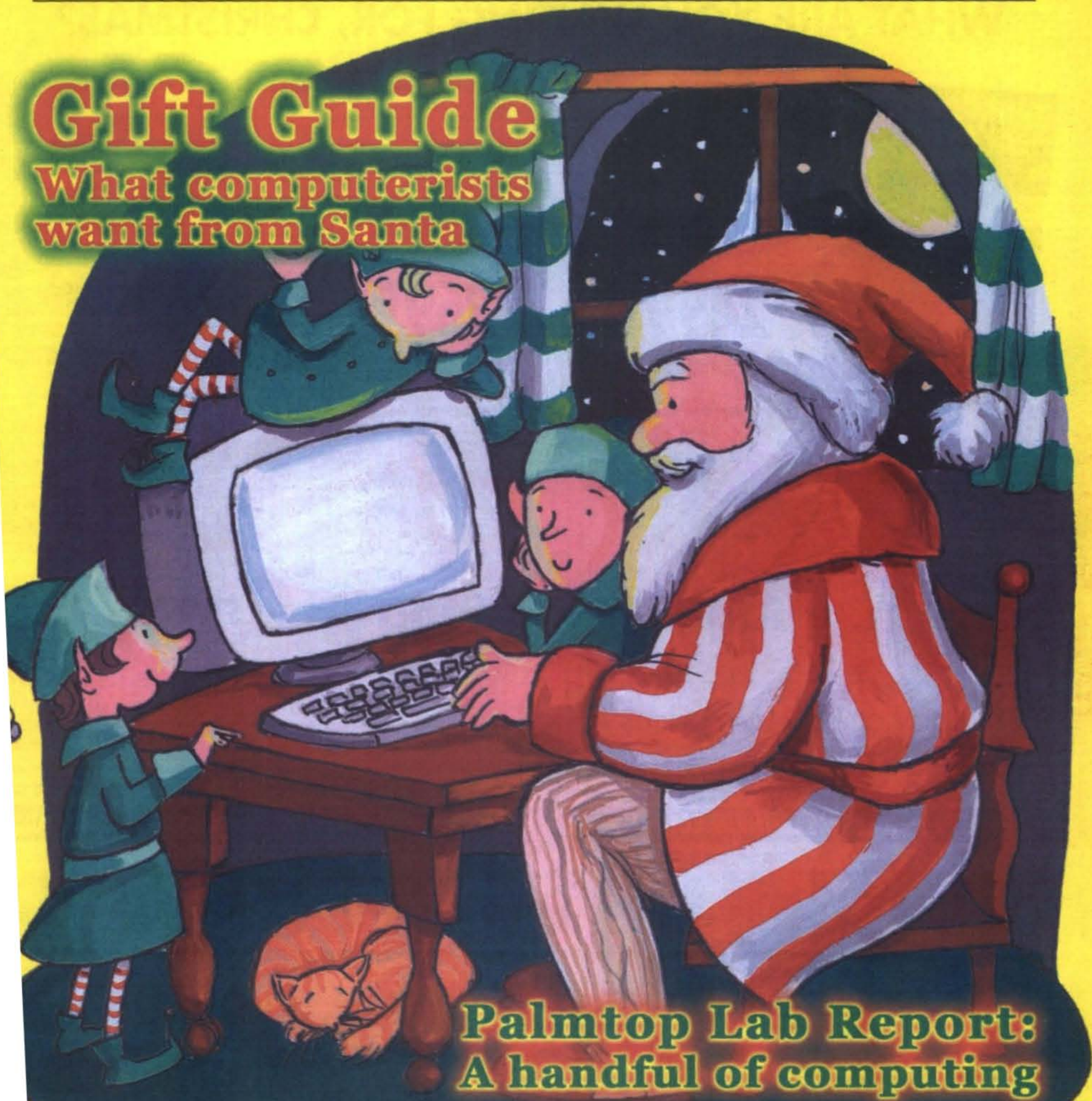
Canada's Computer Information Source

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B.C. EDITION (LOWER MAINLAND) DECEMBER 2000 VOLUME 13 NO. 12

## Gift Guide

What computerists  
want from Santa



**Palmtop Lab Report:  
A handful of computing**





# We're Getting Pushy!



## New Laser Printers

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Here's another button you're going to love. It's called Cancel/Reprint. Push it to reprint the last page of your print job, without re-spooling. Or push it to instantly cancel printing in progress. You'll save paper plus toner and time. So remember, next time you're in the market for a laser printer, push and save with Samsung.

# The Computer PAPER

*Canada's Computer Information Source*



BCE EDITION  
DECEMBER 2000



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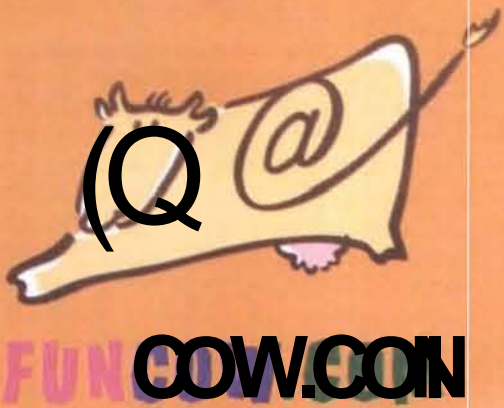
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## The Online Family Network

A user friendly net environment with a wealth of information and services

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# Will you buy gifts online this year?



FROM THE EDITOR

A year ago, many pundits were predicting that e-tailing would be a huge force during the 2000 gift-buying season. Bricks and mortar retailers that did not have e-commerce capability were told to beware they would surely be pummeled by the invading horde of dot-com merchants.

What a difference a year makes. First, there was a general dot-com meltdown mid-year (blame it on that darn bubble-bursting reality called revenue generation), then reports started trickling in that some of the darlings of the new economy were running on empty, having blown the IPO wad. A retail e-commerce report commissioned by Microsoft Canada earlier this fall pulled the reins a little tighter on the previously unbridled optimism toward e-commerce about the bags of cash to be made simply by listing some merchandise on a Web site and adding a shopping cart. Canadian businesses, it seems, were in no hurry to jump into the e-commerce fray.

At the business-to-consumer retailing level, this shouldn't be too surprising on some reflection. When you switch on the Internet and try to set up shop there, what do you have? A business-to-consumer e-commerce simply mail order in a spilly new suit. Historically, mail-order retailing has not been nearly as successful in Canada as it has south of the border—the U.S. there was a thriving mail-order economy with small and big businesses selling everything from shirts to music long before the Internet or personal computers, for that matter. If you are a Canadian of a certain generation, the Eaton and Sears catalogues were part of your growing up, but those are just two Canadian examples compared to the scores of mail-order catalogues that were available to Americans.

In fact, Canadian retailers, especially those selling specialized product lines, often saw mail order as their biggest threat. They could always have tried setting up a Canadian mail-order division (and some did) to serve a relatively small market of Canadian consumers who liked shopping that way. But the big barrier to success was that those Canadians who liked to shop by mail order already believed that the sales were made elsewhere—and usually, the prices were lower across the line.

With e-tailing, you have an even smaller pie of Canadian sales to fight for with a penchant for mail-order shopping who also have a

Internet access. About 60 percent of Canadian households has a PC at home, but less than half of that group has Internet access. But just a minute, you might say. E-commerce is not about doing business locally, regionally or even nationally. It's about having access to a global market.

I think that any bricks and mortar retail business panicking because it doesn't have an e-tailing strategy in place should take a seltzer and a deep breath...

For a company that already has a global outlook, the Internet will only help by making the shopping and buying process simpler. Dell Computer is a case in point. It was already a successful mail-order computer company with an international outlook, and was able to use the Internet to improve all the things it was already doing.

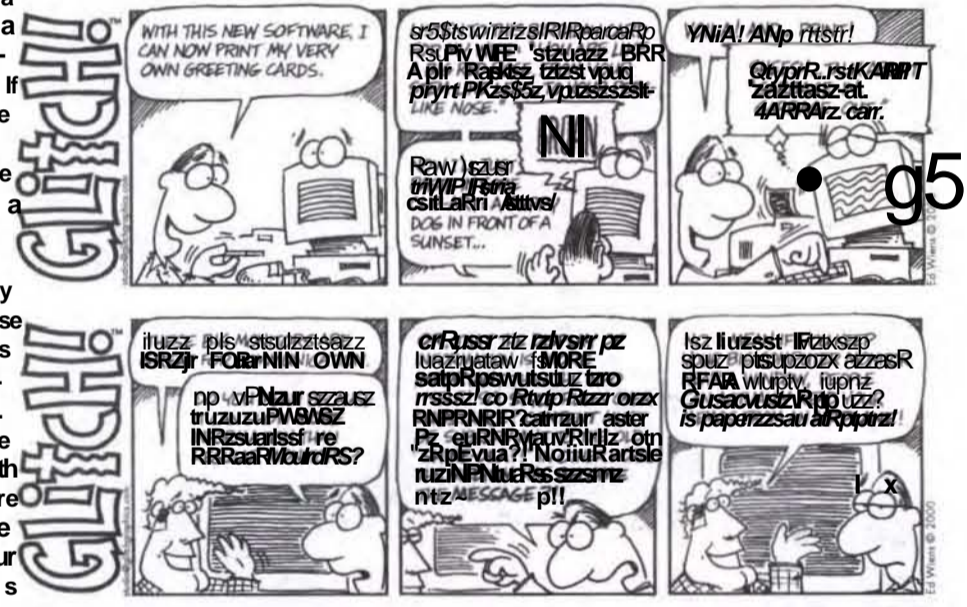
I think that any bricks and mortar retail business panicking because it doesn't have an e-tailing strategy in place should take a seltzer and a deep breath, then try to build a business case for adding a mail-order or catalogue division to its existing business. If that plan makes sense, the kinds of efficiencies introduced by the process are a glorious prospect, then an Internet store may be too.

There are, of course, many ways a business can use the Internet to improve its existing activities, from marketing to customer service. The biggest promise is the global marketplace and a path to expansion. But if you are selling goods, making sure they get from your warehouse to the customer's

hands is a fundamental requirement. You've got to get the product right, whether selling goods face-to-face or online. As we get into the shopping season, more of us will continue to know. I will. But I went to mall at the end of October, just when the Christmas decorations were being installed. And I have to admit, I found the tinsel and goofy Santas a cheerful sight. In the coming weeks, I'll complain as loudly as anyone about the crass commercialism of it all, and about the crowded stores. But I'll be out there jostling with you for that perfect gift. For better or worse, the bricks and mortar shulge is still part of the seasonal experience.

On behalf of everyone at The Computer Paper, I would like to extend the best of the season to our readers, and to our advertisers who supported us during the past year. Our organization underwent some change this year, but what didn't change was the constant feedback from you, our readers. The feedback tells us that you are reading us, and for a publication that's a tremendous reward.

Best of the season to you,  
David Tanaka, Editor



## The Computer PAPER

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### COMING UP

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Lab Test: Digital cameras  
Tech Enterprise: Business wirelessly

**February 2001**  
Cover story: The portable computerist  
Lab Test: SOHO networking  
Tech Enterprise: E-commerce and the small business

**March 2001**  
Cover story: Graphics toolkit  
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Copyright: **ghet freedom** **stey**  
 It was certainly pleased to read an article indicating that *The Computer Paper* has the courage to tackle the complex and dangerous manner of copyright ("Copyright tales beating on Net," November issue). However, I disagree with almost all the opinions reported in the article.

Your writer, Tom Venetis, described the problem in a nutshell. He wrote (regarding the Napster situation and the widespread habit of sharing of music): "they simply download it onto a PC without even having to pay a cent to the copyright holder." Only an idiot would not realize that someone is being

ripped off by this common procedure. The examples of piracy on the Internet reveal that the problem is a widespread lack of simple ethics.

Richard Stallman, "a proponent of the free software movement," has an anarchist's view of the problem. He apparently does not agree with the idea that in order to make money, you must restrict people's rights to copy the work and send it to friends. Just because a person is willing to work hard, does not entitle them to take away your freedom." By that he means your "freedom" to steal. How can copying an artistic work against the author's wishes be considered a "freedom"? Mr. Stallman is

applying "newspeak" to the 21st century. In the present controversy of music downloading on the Net, the perpetrators are not just copying for themselves and sending the copyrighted material to thousands of total strangers. Mr. Stallman claims to have given away programs that he's written that were "years of work." He and all other authors, composers and artists certainly have that right, but none of them can justify the theft of intellectual property from the other authors, composers, and artists who want to be more protective of their labours.

George Dunbar

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**I'm not going to take any more**

I infer from Sean Carruthers' article "Windows on another OS flavour" (SEP October) that he is resigned to frequent crashes and instability in his Windows 98 OS. Not only does my system crash in the same manner, but manages to cut off my printer at the same time, even after reloading the printer driver.

This situation has gone on far too long. Microsoft counts on the users of its operating systems to be meek, placid, accepting and uncomplaining. My solution? Refuse to buy any further "new and improved" OSes. Millions of copies of a newly released OS gathering dust on store shelves should catch someone's attention. So ware developers certainly won't write code for an unpopular OS. At present, we are being enticed by a "bigger and better" OS from Microsoft, the Millennium Edition. This edition will be no different from Microsoft's previous OSes.

There will be interminable upgrades, downloads, and patches to fix bugs, virus portals, and other assorted faults. I say, leave it on the shelf.

I fervently hope that Linux becomes more and more mainstream. I'll certainly jump on that bandwagon.

Warren Ngo

**Palm rrest**

I've read too many articles *The Computer Paper* (and elsewhere in the free press) by uninformed journalists on Palm computers. For example, Jacques Surveys' article in the August issue of *Pocket PC* had third time charm: he didn't even get memory specs right for the Palm models.

So here goes a typical day in the life of my "limited" Palm...

6:30 am Palm wakes me.

6:55 am I have a good breakfast (rice) and use my tower pickup drive.

7:50 am I have a good breakfast (rice) and use my tower pickup drive.

7:55 am I check calendar and To Do list in the day.

8:00 am I meet my client in Palm email. Typing and waiting notes.

8:40 am I touch up minutes, Hal's send just three minutes after each of me!

9:00 am I pull up latest statistics spreadsheet and review with boss. Set new targets, show boss's view. Quick-bit

9:30 am I fire up ProjectRH and show featured project management real-time. I share that with Mom. I played. Review progress with boss.

9:45 am I have a good breakfast. Quick-bit updates. End. Project@Hand updates M5 Project. Email both notes to boss.

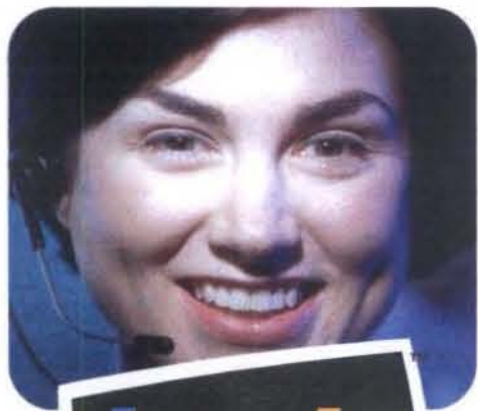
10:00 am I take a break. Read news in Avsico, read email, show avmiker's family photos Album@Co (free).

10:30 am I meet with supplier. I read to 85-page truss. da Resai know what he's talking about. (doc reader, free)





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**Briefs**

Continued from page 0

11:43 am Back at desk I fire up Map Blast on AventCo and put in address and HotSync Minutes later I have map and detailed directions to supper.

12:13 pm Ray a few hands of FreeCell. Plug in modem surf on ProxWeb, get updated company page, fire up Prommail (free) to check on mail/home mail, Fire up CO (free) to catch up with my online buddies. Fire up Palm IRC chat on myve IRC channel.

1:00 pm Check voice mail, jot phone messages in Diddlebug (free) set alarm for on message.

1:30 pm I write to my supplier following die for from Mapblast. Duoss contract details and make notes in MemoPad Boss calls, waris details to send legal department. Suppress fax down, plug in modem, connect and send MemoPad contract details using land Fax.

3:00 pm Conduct presentation using SideShow Commander to remotely control my Powerpoint presentation while referring to speaker notes in ESC.

4:00 pm Rambo office. HotSync to update Notes. Set up new meetings and ToDos for following day.

4:50 pm Pull expense Zens from Palm to Excel and print expense statement.

6:55 pm Arrive home and HotSync to update Outlook. I've updated the shopping list in MemoPad sons football practice for 6:30pm. While at practice I take notes word processor and integrated thecaus. Words search to write this letter.

10:00 pm Catch the Ty news. Can't find the remote. No problem I have OmniRemote on the Palm.

11:00 pm Get to bed. Lights out. No problem. With the Palm's backlight, I read one of the thousands of free texts of classic literature without disturbing anyone.

Yes, it really is too bad the Palm is just a pricey, limited use electronic organizer instead of a real computer like Windows or Pocket PC [device]. It'll challenge any Windows CE/Pocket PC user any day and I'll Larry Charters

run circles around them!

Why does the Palm hold 70 percent of the market? It's fast, simple and can accomplish in a single line as 12 MB of memory 16MHz processor what a Windows CE or Pocket PC needs 8MB and a 133MHz plus processor to do! Why? Pocket PC (Microsoft's try!) is still too much memory overhead and screen clutter on a small handheld. Consider also that there are thousands of software [applications] for the Palm versus hundreds for Windows/Pocket PC!

For even more potential, check out the Handspring Visor at <http://www.handspring.com> and the Springboard expansion technology.

I'm also tired of reading about how hard Graffiti is to learn. My nine-year-old son entered 10 friends' names and phone numbers into my Palm after only 6 minutes of instruction. He made infrequent references to the Graffiti chart. I rest my case.

Brian Stavert

**Another Windows 95 graphic Mp**

Good article that Sean Carruthers wrote (see "Tune it up for performance," October issue). I avoid, at all costs, the dreaded System Tray devils that get installed there. One good tool I am surprised Sean didn't mention is included in Windows 98 and MS-DOS 95 (Sorry Windows 95 users, you'll have to copy the file from a Windows 98 or Me machine or follow Sean's guide-line). From there you can prune the culprits with a few quick clicks as well as some that you may not be aware of in the Startup Tab of msconfig. I like it better than sysedit. You can get to it by typing msconfig. Bum the

Larry Charters


## Almost free software gifts



While these are free software, by buying the CD-ROM version, you will be saving your giftee a long download and giving a backup of the application, as well. These tools have been recommended before but are so good, we have to recommend them again:

- Sun's Star Office 5.2, <http://www.sun.com>, \$60, comes on CD, with documentation, and is a real bargain. This office suite can read and write Microsoft Office format files (including Word, Excel and PowerPoint) and adds its own fifty features and capabilities. And now programmers can get the source code and see how it is done. This is great software for free.
- Copernic's Copernic 2000 Plus <http://www.copernic.com>, \$60, is a meta search engine par excellence. Copernic allows you to look up ideas through about a dozen different search engines. Copernic has more than 500 groupings of engines and searches. You also get a copy of the Copernic Shopper, which allows you to look up the best price on dozens of sites for many online goods.
- Lech's Luke 3.56 <http://www.idnet.com/downloads>, free, is a jukebox for audio or video that allows you to create, play, and exchange albums.
- ACDSystem's ACDSee 3.1 <http://www.acdnet.com>, \$96, is an image browser and viewer that allows you to drag and drop thumbnail-size images from an album into programs that accept images, like Word, Photoshop, PhotoPaint, Pagemaker, Quark, Front Page, GoLive, and more. Lots of extras.

— Jacques Survear



**GLITCH!**

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CHAPTER ONE: INTERNET: 2sczscw/vn /sspsiaf tran munxu.

WHAT'S WRONG WITH THAT?

CHAPTERS 2-26: ARZCW wusyvc 00sxytar Butycurtzsztr 1GQ!

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# THIS IS IN



Canon's new line of CanoScan flatbed scanners is stylish and thin, some almost as thin as the height of a tennis ball. But it's what's in that makes them really exceptional. All feature 42-bit input capability, allowing them to recognize over 4 trillion possible colours for richer, more robust scans. Their optical resolution ranges from 300 x 600 dpi to 1200 x 2400 dpi and models are available with either a USB or parallel interface. There are even models to accommodate film scanning and others with Canon's unique Z-Lid™ Expansion Top for easy scanning of bulky materials. CanoScan scanners - giving you the power to do so much more. That's Canon Know How.

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# WHAT'S NEW

## US Robotics rids us again

ROLLING MEADOWS, ILL.—Just because 3Com acquired US Robotics (<http://www.usr.com>) then pulled out of modems, ditching the company's name in the process, doesn't mean it is dead. The name and factory resources have been acquired by several of its senior staff and a new series of modems has been launched.

The first modem from the newly independent company, the 96Kbps Internet Call Modem, is now shipping, and others are in the pipeline. The new modem was co-developed with Net2Phone, the Internet telephony

carrier, and as the name implies, supports Internet telephony functions as well as the more usual datacomms facilities.

The PC modem supports the Net2Phone VoIP service and, US Robotics says, all Internet telephony calls routed via the modem to standard phone numbers in Canada and the U.S. are free.

With the new modem, users can avoid the need to use their PCs microphone and speakers to make Internet telephony calls. Instead, they can use a phone connected to the USR modem, and dial their Net2Phone calls using their standard keypad. This,

says, allows users to experience the sound quality of a telephone.

Ian Landi, USR's product line manager, said the Internet Call Modem is the first of several USR Robotics products designed to make the Internet experience less intrusive and more user-friendly.

Where available, the new USR modem supports extended telephony features such as Call Waiting and Caller ID, supporting these facilities on waiting calls while a user is online to the Internet. The Internet Call modem will cost US\$99.95.

—Newsbytes

## 30,000 sites sign on to Click2Talk

NEWARK, N.J.—Internet telephony carrier Net2Phone (<http://www.net2phone.com>) said its fledgling e-commerce division has seen more than 30,000 Web sites sign up to its Click2Talk service since it was launched in June.

Under the Click2Talk deal, Web site operators can install a single set of HTML routines on their site, allowing users to place voice calls across the Internet.

Once this is done, users of the site can place PC-to-phone calls to a given U.K. or Australian phone number on demand. For personal Web sites, the carrier said, it means that friends and family can make calls to people free of charge.

Click2Talk is billed as a few simple lines of HTML embedded into the Web site. By clicking on the Click2Talk icon, a visitor initiates a call via their PC directly to a specific phone number.

Since the HTML code is associated with a specific telephone number that the Web site operator selects, a customer visiting a site can click on the Click2Talk icon and Net2Phone's Java applet initiates a free phone call from their PC.

The success of Click2Talk in the U.S. has prompted Net2Phone to expand the availability of the product fully to Canada, U.K. and Australia.

Click2Talk calls are free, with voice calls being routed from the Web host's site across the Net to the regular phone line in the relevant countries free of charge.

—Newsbytes

## Dulphi, Palm develop sleek assistant



NEW YORK—Delphi Automotive Systems (<http://www.delphiauto.com>) and Palm Inc. (<http://www.palm.com>) have created a new company, MobileAria Inc. to develop hands-free, voice-activated mobile wireless service for motor vehicles.

The subscription-based service will be available in new cars, as well as vehicles equipped with the Delphi Communicator NPC (mobile productivity centre, pictured), the

Palm handheld device and a cellular phone, MobileAria co-founder Tom O'Gara said. The service will be available in the second quarter of 2001.

The service provides voice-activated wireless Internet access to email, news, weather, stock quotes, flight information, directions/routing, and traffic information, and to synchronize data with a desktop PC. Voice playback goes through the car's audio system, and all content can be stored on board. O'Gara said. The company aims to expand its service to include streaming audio and video, mobile commerce, stock trading, rich messaging and more location-based services.

—Newsbytes

## Fujifilm unveils holiday lineup

Fujifilm Photo Film Canada Inc. has announced a digital photography focus to its offerings for the 2000 Christmas gift-buying market.

One of Fujifilm's principal consumer digital camera offerings in Canada is the FinePix 40i.



With an estimated street price of about \$999, the FinePix 40i can capture both high-resolution (up to 3.3 megapixels) digital still images or up to 80 seconds of AVI digital video, with sound.

As well, the 40i can store downloaded MP3 audio files, and play them back with the help of a tethered (cable-connected) remote control. The remote can be used for snapping and viewing pictures and zoom control, as well as MP3 playback.

Like other Fujifilm digital cameras, the 40i comes with a USB port for fast, simple image transfer, and the camera supports removable SmartMedia memory cards. It also comes bundled with Adobe ActiveShare image editing software, and RealTimebox MP3/digital audio software.

Other cameras in Fujifilm's Canada's holiday lineup include:

- FinePix 4900 ZOOM: 4.2 megapixel digital camera, with 6x optical zoom, for about \$1,499.
- FinePix 11300: 1.3 megapixel entry-level camera, for about \$445.
- FinePix 11200: 2.1 megapixel mid-range camera, with 8 MB SmartMedia removable memory card, for about \$799, plus a \$100 mail-in rebate.

—CanadaComputers.com

## Motorola ships sleeker laptop devices

MINNEAPOLIS, Minn.—Home-gadget maker Honeywell International Inc. (<http://www.honeywell.com/youhome/>) has joined the wave of portable wireless developers with the release of its WebPad Internet access device.

The company's keyboard-optional WebPad, which is about the size of an Etch-A-Sketch, can be held like a book or propped on

Continued on page 4

## Intel unleashes wireless peripherals

Intel Corp. has introduced a family of wireless PC peripherals for the home PC. Called the Intel Wireless Series, the lineup includes a gamepad, mouse, and keyboard. At the heart of the lineup is the base station, which allows users to connect up to wireless devices to their PC.

"Today, adding wireless devices to your home PC can be installing multiple receivers, with each receiver supporting one or two devices at best," Don Whiteside, general manager of the Intel Connected Product Division, stated in a press release. "Our family of products is designed to connect to a single base station, leaving the option for consumers to expand their PC and Internet experience without creating a tangle of messy cords."

Intel says the devices allow PC users to stand up or walk around "without breaking the flow of work or play." And with the gamepad users can "get physically involved in the game without tripping over wires." Up to four gamepads can be linked to the base station simultaneously.

### Meet the gang

Intel says the base station utilizes a sophisticated radio-frequency technology, and connects to a PC via USB. Setup requires installation of Intel Wireless Series Software, after which users plug in the base station, press a button on the gamepad, mouse, or keyboard, then press a button on the base station. The base station has lights that notify users of the system's battery, connection, and activity status.

The gamepad has a full set of controls including a directional pad, six programmable action buttons, two triggers, and a shift button that doubles the functionality of the buttons and triggers. The included Gamepad Profile Editor and Profile Software lets users customize up to 28 moves.

The Wireless Series keyboard features a palm rest that folds neatly into the body of the keyboard for typing away from the desk. The keyboard includes four instant access buttons—to launch Internet access or other applications—and has multimedia controls, including CD volume and tracking, and system audio.

Rounding out the series is the mouse, which includes a scroll feature and can be used in both left and right hands.

### System requirements

To use the Intel Wireless Series products, users need a PC minimum of Windows 98 or a CD-ROM drive, and an available USB port. The gamepad and mouse each require three AAA batteries, while the keyboard requires three AA batteries.

The base station has a suggested retail price of US\$59.99; the mouse is priced at US\$39.99; the keyboard at US\$79.99; and the gamepad at US\$64.99. Bundles are also available for US\$179.99 (base station, mouse, and keyboard) or US\$109.99 (base station and mouse only). Intel is offering US\$30 rebates for both bundles, and a US\$20 rebate for the base station until March 30.

—Megan Johnston



Intel's Wireless Series (clockwise from left) mouse, base station, gamepad and keyboard.

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**WebPad New**

Continued from page 2

own vertical stand. Users can surf wirelessly as long as the device is within 46.5 m (150 ft.) of the base station that links the device to the Internet.

Honeywell said that a single base station—which is linked to an always-on Internet source such as a cable or DSL service—can serve up to eight WebPads. The wireless link to the base station supports data transfer speeds of up to 1.5 Mbps, fast enough for typical cable modem or DSL Internet connections.

The US\$995 WebPad is based on the Geode



WebPad reference design from the National Semiconductor Corp. Other companies that have announced plans to launch Geode WebPad-based products include U.S.-based Viewonic and Asian PC manufacturers Quanta and Proview.

Honeywell said its WebPad weighs less than 1.35 kg (3 lb.) and measures 2.54 cm (1 in.) thick. The machine uses Microsoft's Windows CE operating system and comes with Internet Explorer Web browser. Users can navigate and enter information using a 10-inch touch-screen display, or attach a keyboard or mouse to the device's USB ports.

Honeywell said the device also works with its home-automation technology, allowing the WebPad to become a control centre for setting room temperatures, lighting and security devices.

—Hwsbyts

**Stats unveils Audrey**

SANTA CLARA, Calif.—Also entering the crowded Internet appliance marketplace recently was 3Com Corp., with a new product called Audrey.

Eric Benhamou, 3Com's chairman and chief executive officer, said, "Audrey marks 3Com's entrance into a virtually untapped high-growth consumer market and represents 3Com's strategic focus on providing radical simplicity to the consumer."

Audrey is the first in 3Com's Ergo line of what it calls "lifestyle centered connected appliances." The company said Audrey offers one-touch access to email, Internet channels, a household calendar, addressbook, and Palm HotSync technology. Audrey works with multiple Internet service providers (ISPs), and, according to 3Com, allows users information access, communication, and organization.

The device comes with pre-selected Internet content that can be accessed by turning a channel selector knob. Audrey has five basic channels built-in: news comes from ABCNEWS.com; weather comes from AccuWeather.com; sports is delivered by ESPN.com; stock quotes and other financial news can be found on CBSMarketWatch.com; and entertainment info is available on Mr. Showbiz.

The basic channels can be customized to bring specialized information like local weather or specific stock quotes. Users will also be able to select additional channels that offer specific e-commerce opportunities.

According to 3Com, email on Audrey will be quick and easy, and accessible by pressing a button on the screen.



Mail button on the screen. Messages can be sent by typing, speaking, or by writing on the screen with a stylus.

Audrey comes with a combined household calendar function that can be synchronized with two different Palm datebooks. For those who live in areas where weather makes an impact on planning, Audrey can generate daily weather forecasts right on the calendar, according to 3Com.

The new device is available for purchase at a price of US\$499, according to 3Com. Audrey can be ordered via the Web at <http://www.3com.com/ergo>.

—Hwsbyts

—Newsbytes

Berue\* XRB supports WebTV  
Lexmark Canada Inc. (<http://www.lexmark.ca>) has announced that its Lexmark 212 Colour 3epriener is now compatible with Microsoft's WebTV platform. The company  
Continued on page 22

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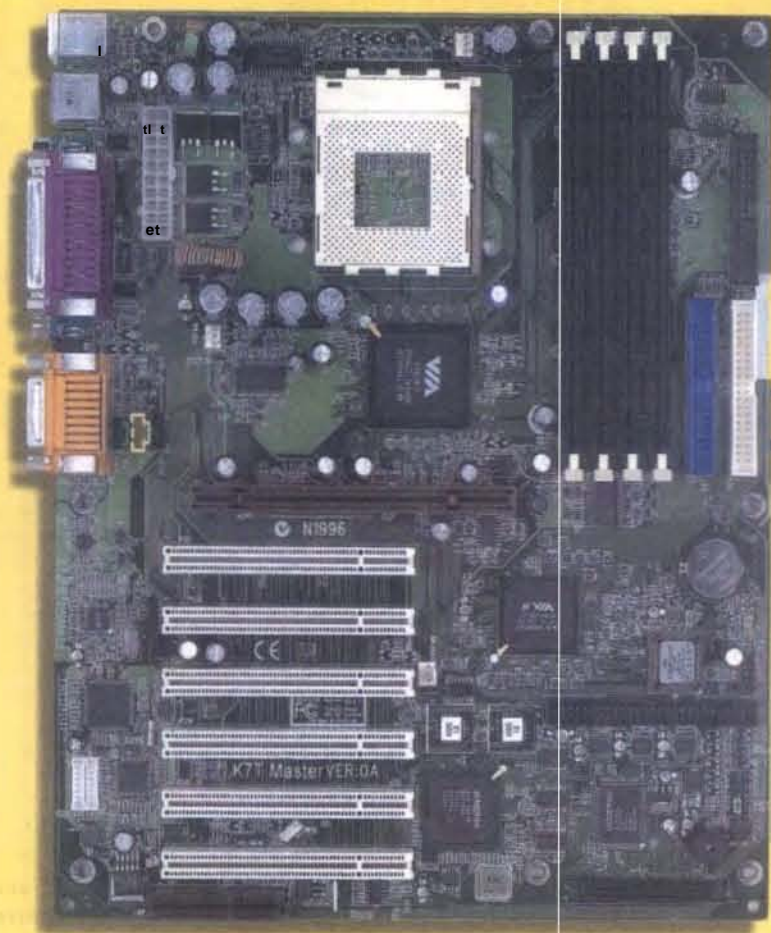


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## Pentium III ~ MediaMax

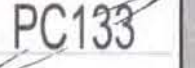
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i1230	Cel500	64MB	6GB	24X	13.3" HPA56K	\$1,500
i1250	Cel500	64MB	6GB	24X	12.1" TFT 56K	\$1,590
51260	Cel550	64MB	6GB	24X	13.3" TFT 56K	\$1,825
i1251u	Cel600	64MB	10GB	DVD	12.1" TFT 56K	\$1,870
5140	Cel500	64MB	6.0GB	24X	12.1" TFT Combo	\$1,685
i1370	Cel550	64MB	12GB	24X	13.3" TFT Combo	\$2,340
i1361u	Cel600	64MB	10GB	24X	12.1" TFT Combo	\$2,200
i1391u	P3450	64MB	20GB	24X	13.3" TFT Combo	\$2,115
A21e	Cel500	64MB	10GB	24X	15" TFT 56K	\$3,685
A20m	Cel550	64MB	12GB	24X	15" TFT 56K	\$3,085
A20m	P3-500	64MB	6.0GB	24X	12.1" TFT 56K	\$2,715
A20m	P3-600	64MB	12GB	DVD	15.1" TFT 56K	\$3,600
A20m	P3-700	64MB	12GB	24X	14.1" TFT 56K	\$3,555
A21m	P3-700	64MB	10GB	DVD	14.1" TFT SSK	\$3,160
A21m	P3-750	64MB	20GB	24X	15" TFT 56K	\$3,835
A21m	P34N	64MB	20GB	DVD	18.1" TFT 56K	\$4,115
A20p	P3-700	128MB	18GB	DVD	15" TFT 56K	\$4,675
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A21p	P3450	128MB	32GB	DVD	15" TFT 56K	\$6,170
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T20	P3-750	128MB	20GB	DVD	14.1" TFT SSK	\$5,060
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3480CT	P3400	64MB	21GB	11.3" TFT	\$3,650	
4270xmo	Cel500	64MB	6.0GB/DVD	18.1" TFT	\$2,8N	
4260xovo	P3450	64MB	21GB/DVD	14.1" TFT	\$3,230	
43340	P3450	64MB	12GB/DVD	14.1" TFT	\$3,525	
0100	P3450	128MB	18GB/DVD	18.1" TFT	\$4,495	
0100	P3700	218MB	12GB/DVD	14.1" TFT	\$4,1HO	
8100	trb750	128MB	20GB/DVD	15.1" TFT	\$5,540	

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M300	P3400	64MB	6GB	13.3" TFT	\$3A45	
M300	P3400	64MB	12GB	12.1" TFT	\$3,790	
M700	P3450	64MB	6GB/24X	14.1" TFT	\$4,205	
M700	P3-700	64MB	12GB/DVD	11" TFT	\$4,815	
M700	P3-750	64MB	12GB/DVD	11" TFT	\$5,120	
M700	P3450	128MB	20GB/DVD	11" TFT	\$5,900	
5500	Cel550	688	5GB/24X	12.1" TFT	\$2,530	
KSN	Cel550	64MB	5GB/24X	13.3" TFT	\$2,810	
5500	P3450	64MB	12GB/DVD	11" TFT	\$3,845	
5500	P3450	64MB	12GB/DVD	11" TFT	\$4,3N	
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## Message from the Editor

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Our mix of news, reviews, how-to's and product information has been created by over 100 of Canada's top technology writers, and is updated daily to give you the information you need to make technology work for you.

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special notes to readers of The Computer Paper and the Computes! titles (Toronto Computes!, Vancouver Computes!, Ottawa Computes! and Quebec Computes!). The Publications button takes you to the archives of the print titles.



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## Today's Poll

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**Apple's New**

Continued from page 14

says the Z12's ease of use makes it ideal for WebTV—which, effectively, turns television sets into Net appliances with the addition of a set-top box (STB) allowing users to print photos, images, and text from the Web. The Z12 currently supports the WebTV Classic Internet and WebTV Plus services, and is compatible with most STBs from Philips, RCA, Samsung, and Sony.

Lexmark also announced that the Z12 now supports the Mac OS. The Z12 has an estimated retail price of about \$100.

—TCPSuff

**Netscape says 'Goodbye, Netscape'**  
MOUNTAIN VIEW, Calif.—American Online (AOL) subsidiary Netscape Communications has done away with the Netcenter moniker for its home base on the Web, relaunching as Netscape.com with a new look that coordinates with the interface of its latest browser software.

The company also announced, in early October that it has made available the third and last preview release of what will be Netscape 6. The new browser, expected to be launched in final form before the end of the year, will replace the current version 4.x

browser, completely skipping 5.x. The release in the race to keep pace with Microsoft's Internet Explorer browser.

Netscape said the new test version of its browser offers more bug fixes than feature enhancements when compared to the second preview release launched in the spring. However, the company said it has streamlined the look and feel of the browser's interface, just as it has attempted to better organize its busy Web destination.

"With the release of Netscape 6 PR3 and the redesign of Netscape.com, we are providing a more productive way for professionals to manage their increasingly converging

work and personal lives with online tools tailored to their needs," said Jim Marti, senior vice president and general manager of Netscape.

Netscape said its Web site boasts 34 million registered users, many of whom use sites Web-based mail service and gateways to news, online shopping, and stock market information.

New with the launch of the renamed Netscape.com is the Netscape Netbusiness area, which targets small-business owners and the home-office crowd with a package of information and communication services targeting their industry.

The latest version of the Netscape browser promises better support for adopted HTML and style sheet standards, as well as support for XML. Like the second preview release, the latest version includes better integration of AOL's instant messaging application, AIM.

The Netscape 6 preview releases also added the ability to customize the software's interface with Netscape themes, often referred to as "skins." On the Netscape Web site, true skins fans can find a beta version of a tool from Collaborative, Inc. that they can use to create their own themes.

The Netscape 6 preview release can be downloaded at <http://www.netscape.com/download>.

—Newsbytes

**Information age pioneers win Nobels**

STOCKHOLM, Sweden—Six scientists who played instrumental roles in bringing about the information revolution were recognized in October with Nobel Prizes in physics and chemistry for their contributions to a series of ever-smaller and faster PCs, pocket calculators, cellphones, CD players, improved TV screens and Gameboys.

The physics prize was awarded to Jack Kilby, inventor of the first integrated circuit while at Texas Instruments in 1959, and two physicists whose work contributed to satellite and cellphone technology: Herbert Kroemer of the University of California Santa Barbara and Zhores Alferov of the A.F. Loys Physico-Technico Institute in St. Petersburg, Russia, according to an Associated Press report. The chemistry award was won by Alan Heeger, 64, of the University of California Santa Barbara, Alan MacDiarmid, 73, of the University of Pennsylvania and Hideki Shirakawa, 64, of the University of Tsukuba in Japan. The trio worked to modify plastics to conduct electricity. The so-called "brilliant plastics" could someday lead to computers as small and light as a wristwatch, Heeger said.

The prizes awarded by the Royal Swedish Academy of Sciences are each worth US\$915,000. AP noted that the chemistry prize will be split three ways, while Kilby will receive half of the physics award and his co-winners the rest.

—Newsbytes

**Napster for Inac**

REDWOOD CITY, Calif.—Napster (http://www.napster.com) is evidently applying to itself the same logic with which it hopes to sway a combative music industry: if you can't beat 'em, join them.

Napster, which produces the legally besieged peer-to-peer file-sharing system for the exchange of MP3 music files, announced in late October that it is finally adapting its software to the Macintosh computing platform. To do that, it is working with the producers of an "unofficial version

Continued on page 24

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**What's New**

*Continued from page 22*

of Napster for the Mac, known until now as "Macster."

It is unclear if the official version, "Napster for the Mac" is simply the same program, as at least one news organization has reported. A Napster spokeswoman who was tracking down that information did not reply by press time.

There are, however, strong suggestions on the Web site of Macster creators Black Hole Media (<http://www.blackholemedia.com/>) that users will find the similarities rather striking.

"We're proud to let you know that Macster is now the official Napster client for the Mac," the Web site says. "We've been working with Napster to guarantee that this latest release is up to their standards. Now that we've reached that goal, we're changing names and joining the company that is changing the world. We hope you come along with us."

Macster has worked very much like Napster, albeit with several different functions. Like Napster, the Mac program enables users to download MP3 files. But users can listen to the downloaded songs only if they have a Mac-compatible music player.

Macster users will find several new features in the new Napster for the Mac program, the Black Hole Media Web site indicates. "First and foremost, Napster for the Mac can now more easily stay up to date with the Windows client," the site says. "We're not completely up to par with our Windows brother, but we'll be there very soon."

The makers also promise better customer service as a result of the Napster partnership.

The Napster for the Mac announcement comes one day after release of a study that indicates Napster software is present in 30

percent of PCs.

Napster's official announcement of the development states that Napster for the Mac users will be treated to some features not available yet for the PC platform.

The Mac version includes new tool bar "flavours" that match the iMac colors, and a history feature that allows users to keep track of their last 10 searches, the company said. Mac users also may customize list views, hide chat windows in the toolbar and use "drag-and-drop" functionality to move music files between folders or the desktop.

—Newsbytes

**IBM sells workstations at PC prices**

In the global computer market, where sales of personal computers in 2000 may top the 130 million mark, the workstation market is a fairly small component, numbering 1.4 to 1.5 million systems.

However, those systems have a disproportionate role in high value industries such as finance, banking and stock trading, engineering, science, Web development, digital video, 3D animation, CAD, and medicine.

IBM is a leader in the workstation market, with its R 6000 RISC workstations, and Intel Pentium-based personal IntelliStations in competition with Sun Microsystems, Hewlett-Packard and Silicon Graphics, among others.

In mid October, IBM Canada Ltd. announced a new IntelliStation E Pro series of workstations that offers high-powered capabilities at a PC price. Starting at \$2,599, the IntelliStation E Pro is available in two basic configurations, a rack-mountable minitower and a compact desktop version. The IntelliStation E Pro is intended to offer workstation power, reliability, connectivity and scalable storage access at a bargain price.

The new E Pro models are based on Pentium III processors with speeds up to 1.05 GHz, graphics options based on Matrox or Nvidia technologies, and comprehensive IBM support and three-year warranties. As well, all IntelliStation customers have online 'Ask Engineering' response team access during business hours.

According to IBM representatives, the combination of IBM's quality reputation, brand name and three-year warranty support, online Ask Engineering, ultra high speed, copper based graphics processing hardware, and extremely affordable prices, is driving the IntelliStation line into new markets at a rapidly accelerating rate.

IBM's project management capability makes it a safe supplier for customers ranging in size from large (IBM moved a customer's 1,400-workstation installation over a weekend, "with virtually no loss in productivity") to small.

—CanadaComputes.com

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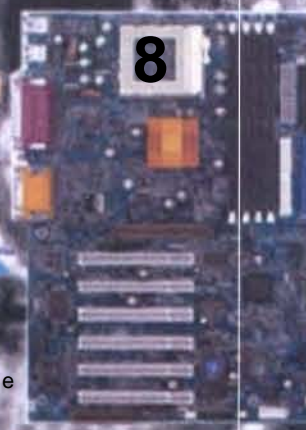
Magazine	Issue	Country	Motherboard	Remarks
PC	September 2000	Italy	GA40XMTE	"Recommended"
CHIP	September 2000	Germany	GA7ZX	"Editor's Choice"
PC World	August 2000	China	GA40LITE	"Meal's Choice"
ASCII	August 2000	Japan	GA40XMTE	"Recommended"
DOSV Power Report	August 2000	Japan	GA4VX7.130C	"Recommended"
PC World	August 2000	Russia	GA7IX	"Editor's Choice"
Overclocker's World	July 2000	USA	GA40XMTE	"Recommended"
PC Ghah	July 2000	Germany	GA4VX7.130S	"Recommended"
Computer World Moscow	July 2000	Greece	GA7VX	"Editor's Choice"
PC Phoenix	June 2000	Italy	GA4VXUX	"Recommended"
Personal Computer World	June 2000	VX	GA44XT	"Recommended"
Tom's Hardware	May 2000	USA	GA4VXTUX	"Perf. Winner"
Vtr-Hardware	May 2000	USA	GA7VX	"Recommended"
HotHardware	May 2000	USA	GANCXC	"Recommended"
Overclocker's Workbench	May 2000	USA	GA7VX	"Recommended"
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WUWA's Hardware	April 2000	Russia	GA6CX	"Editor's Choice"
PC Magazine	April 2000	Tokyo	GA4IXTr	"Editor's Choice"
Hardware Info	April 2000	USA	GA4VXTUX	"Editor's Choice"
Chip Central	April 2000	Italy	GAACX	"T.M.I. Winner"
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# Best of B.C.'s electronic media honoured at eWorld

Members of B.C.'s high-tech sector were honoured during a dinner at the eWorld Exhibition and Conference held Oct. 24-26 at the Vancouver Convention and Exhibition Centre.

In all, 116 Marshall McLuhan Awards were handed out to recognize the best Web sites, Web site creators and industry leaders.

Vancouver's reactor8 Communications won two awards for best end-to-end e-commerce Web site and best new entry on the Internet by a bricks and mortar company for its design of 1010tires.com's site.

"It is about time B.C. received some recognition for a growing, and very important, industry," said eWorld director Sonny Wong. "We are very pleased with the representation from our high-tech community and hope that an event like this will increase the profile of our region's Web site and e-commerce companies."

According to event representatives, nearly 10,000 people attended for the tradeshow portion of the inaugural eWorld at 5,300, which met organizers' targets.

Plans are in the works to hold the next

eWorld in the fall of 2001, but the exact location and dates have not been confirmed (see <http://www.eWorld.com> for updates).

A sold-out house was on hand to witness the Marshall McLuhan presentations. The award winners and their categories are:

- Best application designed for the Internet: ThoughtShare Communications (<http://www.thoughtshare.com>)
- Best e-commerce application Web site: 2uz (Canada) (<http://www.helpoverip.com>)
- Best B2B Web site: MyCityMarket.com Inc. (<http://www.mycitymarket.com>)
- Best end-to-end e-commerce Web site: reactor8 Communications Inc. (<http://www.1010tires.com>)
- Best resource Web site: WebHot Tomali Communications (<http://www.sportfishing.bc.ca>)
- Industry Leadership award for a corporation: PMC Sierra (<http://www.pmc-sierra.com>)
- Best financial Web site: Columbus Group

- Best non-profit Web site: Lonny Communications Group Inc. (<http://www.careersconstruction.com>)
- Best education Web site: Brainium.com (<http://www.brainium.com>)
- Best tourism Web site: VRX Studios Inc. (<http://www.maxvr.com>)
- Industry Leadership award for an individual: Norm Francis, Pivotal Corp. (<http://www.pivotal.com>)
- Best entertainment Web site: Vycast Entertainment (<http://www.suite218.com>)
- Best retail Web site: Bayleaf Software Inc. (<http://www.ayottiedrums.com>)
- Best small business Web site: Ncompass Labs (<http://www.ncompasslabs.com>)
- Best new entry on the Internet by a bricks and mortar company: front End Lone Star Posse Interactive Inc. (<http://www.canforpd.com>)
- Best new entry on the Internet



And the Marshall McLuhan award for industry leadership by an individual goes to... **Norm Francis**, chief executive of Pivotal Corp.

by a bricks and mortar company: overall reactor8 Communications Inc. (<http://www.1010tires.com>)

—Megan Johnston

## MediaMetric Web usage study: Teens and women gaining ground

August stats for home Internet use in Canada show women and teens spending more time online, with 7.7 billion minutes spent surfing from coast to coast in that month.

Recent figures on Canadian Internet usage were released by Web analyst firm MediaMetric Canada. Highlights of the *Web Use Report for August, 2000* Web traffic include the following facts:

- Over 122 million Canadians used the Web at home in August.
- About 22.7 million of those connected Canucks were French-speaking Canadians, indicating that while Web use by Francophones remains less prevalent than in English-speaking Canada, the gap is closing.
- On average, a connected Canadian home Internet user had active access to the Web at home for 647.8 minutes (10.79 hours) per month in August, up from 559.3 (9.32 hours) in July and 547.5 (9.125 hours) minutes in June.
- This works out to a total of 7,826,000 minutes (130,433.33 hours) spent online at home by Canadians in August—

further justification, if needed, for the description of the Internet as the "world wide waste of time."

### Canada's Top 10

According to the same MediaMetric report, the top 10 Canadian sites and their unique visitor numbers for August were:

Rank	Site	Unique visitors
1	Mixmaxsystem	6,745,000
2	AOLNetwork	5,815,000
3	Yahoolsites	6,696,600
4	SympaticoLyondc	6,090,000
5	Exde@hmc	4,090,600
6	AllzrisuNetwork	2,300,000
7	Aboutthuman	2,185,000
8	CoNetwork	2,124,600
9	RealnmNetwork	1,811,600
10	CANOE	1,712,600

Of the top 10 sites for French-speaking households, seven were the same as those listed for Canada overall (Microsoft, AOL, Sympatico, Lycos, Yahoo, Canadian women online, CANOE and Altavista). The other three were Infiniti, as the gap in minutes per month between men and women narrowed from 68.77 minutes in July, to 21.9 minutes in August.

—ConedeComputes.com

## Handspring adds colour, power to its Visor lineup

A month after unveiling the VisorPhone cellphone attachment for its line of PDAs, Handspring Inc. has introduced two new products: the Visor Prism, which has a colour display and the Visor Platinum, which the company says is the "fastest Palm OS handheld computer on the market today."

Both new models are powered by Motorola's DragonBall V1 33 MHz processor. For the 16-bit colour Prism, the snail is faster rendering of images for use in multimedia applications such as games, mapping, and video playback, according to Handspring. For the monochrome Platinum, it helps speed up everyday tasks, such as finding data in the address book and memo pad applications, sorting records and accessing and deleting items from the applications launcher.

Both new models come with 8 MB of RAM and include the basic features of the Visor line of products, such as USB support, Mac OS compatibility out of the box, and the Springboard expansion slot. Both are based on a version of Palm OS 3.5 that Handspring has optimized for fast performance, Springboard compatibility, USB connectivity, and 16-bit colour support. Handspring says the Prism can run for nearly two weeks of normal use on a single charge of its lithium-ion battery. The Platinum runs on two AA batteries, which provide four to six weeks of performance with standard use.

Both will be available in November from Handspring's online store (<http://www.handspring.com>): the cobalt blue Prism for US\$449 and the metallic silver Platinum for US\$299.

### Springboard software

Also available through the Handspring site are several new Springboard modules. (The Springboard is the expansion slot built into the Visor, including the new Platinum and Prism models allows users to add memory, software, hardware to their handheld devices.)

The new modules include a GPS (global positioning system) add-on from GeoDiscovery, an MP3 player from Good Technology, and a colour game pack from Pocket Express. IDEO has announced that, with the addition of a free software update, its eye module, digital camera, mvi supports and Platinum Visors.

Handspring has announced that will also be selling the innovative GameFace joystick, which turns handhelds into gaming devices. The snap-on accessory is currently exclusive to Visor handhelds, according to the company. GameFace joystick for Visor standard, Solo, Deluxe and Platinum editions will ship later this year for an estimated US\$59.95 and will be bundled with Asbap Zap!2000 arcade game. The GameFace joystick for Visor Prism is scheduled to ship in early 2001. Handspring says the joystick supports most Palm OS-enabled games.

—Megan Johnston



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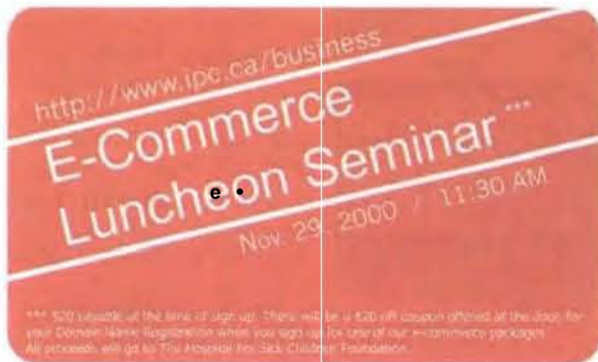
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# Gifts for small business operators

## Suggestions for tools to hone that competitive edge

By Curtis Cook

It is the holiday season again—a time for visiting with family and friends, taking a break from work (hopefully), and exchanging gifts. If many of the people on your gift list operate a small business, dream of starting their own business, or even work for a small business, you are in luck—The Computer Paper's Gift Guide can remove some of the guesswork and help to set your mind at ease. The products listed below range from \$25 to \$2,000, and are taken from the author's personal wish list. Happy shopping!

### RIM Blackberry 5058

Who wouldn't want a BlackBerry for Christmas? This wireless handheld device does just about everything you need a personal digital assistant (PDA) to do, and more. The BlackBerry shines where others lag behind—it operates remotely, enabling you to send or receive mail from virtually anywhere in North America at any time.

As well, you can remotely retrieve Web-based information like stock quotes, news, phone directories, driving directions, weather reports, and travel information. Similar to other PDAs, the BlackBerry links to a desktop or notebook computer so you don't have to retype information. It comes complete with full email capacity, a search tool to find that missing email, an address book, calendar, task list, memo pad, calculator, and an alarm.

The BlackBerry has a 160x160-pixel backlit screen, rechargeable battery that lasts about one week per charge, 5 MB of flash memory, a QWERTY-format keyboard, and a black holster that attaches to a belt.

Plus, it has Research In Motion's (RIM's) always-on, always-connected wireless technology. Developed by a Canadian company, BlackBerry retails for \$795, plus cost of wireless emailing, messaging, accounts.

Both Rogers AT&T and the some members of the mobility group of telcos (for example, Bell Mobile) are offering BlackBerry units as part of a service package, the prices for which range from about \$30 to \$50 per month, plus the cost of the BlackBerry.

Alternatives: Two-way paging is hot this season, and Bell Mobility announced its iPage service in Ontario and Quebec in October, with plans to extend it to Western Canada by the end of the year.

Among the devices used to access this service is the Motorola PageWriter 2000X, which is about twice as big as a standard pager but has a small QWERTY keyboard.

Like the BlackBerry, this device goes always-on connectivity so you can send and receive pages or email any time as long as you are in the coverage area. It also contains the usual suite of personal organizer applications such as contact manager, task list and calendar. BlackBerry's advantage is that it also allows Internet access.

### Stkbook/PPr 1000

What small business person could survive in business without up-to-date and accurate books? Bookkeeping may be the dreaded activity of any businessperson and only done out of necessity. QuickBooks Pro 2000 can not only simplify this task, but because you don't have to fill your head with



Among the latest features these packages include support for multiple currencies, more reports, and simplified and more visually attractive interfaces.

### World Travel Connection Kit

Do you have someone to buy for who frequents the sky? Try the World Travel Connection Kit from Targus. This kit of 18 phone adapters and five power adapters allows travellers who use notebook computers to connect to phone and power in more than 150 countries. Instead of running around unfamiliar cities looking for obscure piece of equipment, the recipient of this gift can simply open Targus' travel pouch and organizer and select the necessary adapter. He or she will thank you for many sleepless nights and headaches. It retails for approximately \$95.

### Belkin Surge Master

When you are looking for a fill-in stocking, consider the Belkin Surge Master. This surge protector (which should take up most of the space in a stocking) protects against harmful surges and spikes, and spares computer equipment from lightning as well. For the speed-minded person, it has a 5 amp circuit breaker, energy dissipation of 485 Joules, response time of less than a nanosecond, and an electrical rating of 1.25 A, 615 VA, 60 Hz and 1875 Watts.

For people who care about their computer equipment, the US\$10,000 Connected Equipment Warranty and a Lifetime Product Warranty should enable the recipient of this surge protector to sleep a little more soundly during the next thunder and lightning storm. It retails for approximately \$25.

### Auto/Air power adapter

If the person you are buying for never seems to be at home, perhaps he or she would benefit from an adapter that provides power to notebook computers, phones, or portable printers in the sky (or on land, and, at least in some airplanes and vehicles). Targus makes a Universal Auto/Air Power Adapter that, in addition to plugging into an airline connector, also plugs into a vehicle's cigarette lighter socket.

If the object of your gift-giving is more earthbound, Belkin and Targus offer auto power adapters that plug into a cigarette lighter socket. Not only do they work on the go, much easier, they provide a much healthier way to use a car cigarette lighter. Marlboro claims you come a long way baby, but with an auto and/or air adapter, you'll go much further. The Targus Universal Auto/Air Power Adapter retails for \$170. The Belkin CA Anywhere Auto Adapter sells for \$70.

### Contest manager

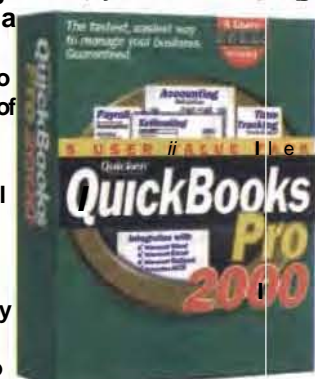
It is often said that the customer is always right, but it helps to remember who that customer is. If the person you are buying for has or wants many customers, that might not be as easy as it sounds. ACT! 2000 can help that person remember, not just the customer's name, but his or her birthday, spouse's email and Website addresses, and all different ways to reach him or her.

### Lexmark printer/copier/fax/scanner

For the small business person working from a home office, the Lexmark XE90FX all-in-one printer, flatbed copier, fax machine and scanner can accommodate his or her needs in one package. Continued on page 40

credits and other accounting jargon actually makes bookkeeping more enjoyable. Plus, you'll like the amount of time you save by using QuickBooks Pro 2000 over previous versions of QuickBooks and some of the other bookkeeping packages.

It handles online banking and bill payment, prepares all your taxes, manages payroll, prints postage and helps you create a Website, accept online credit card payments, generate direct mailings, create estimates, customize invoices, automate job costing, and track employee time. It has password protection for multi-user environments, and handles all your standard accounting functions and reporting. Plus, all the functions are suited for Canadian businesses. Data can be integrated with ACT!, Outlook, Word, and Excel. It retails for about \$250.



Alternatives: There are two other popular "shrinkwrap" accounting packages available in most retail stores: MYOB, The latest version from Sage Logix comes with D&S and Simply Accounting. While QuickBooks has a heritage from the immensely popular personal finance software Quicken, MYOB is a scaled-down version of a professional accounting package. In Canada, most small business accounting over the past years have either used or considered using AccPac Simply Accounting, which bills itself "Canada's best-selling small business accounting package."

These three will take you to roughly the same place offering the general ledger, payroll, inventory management, online banking, and more. However, they have their own distinctive features. For example, a consultant we know chose MYOB and its time-billing features.

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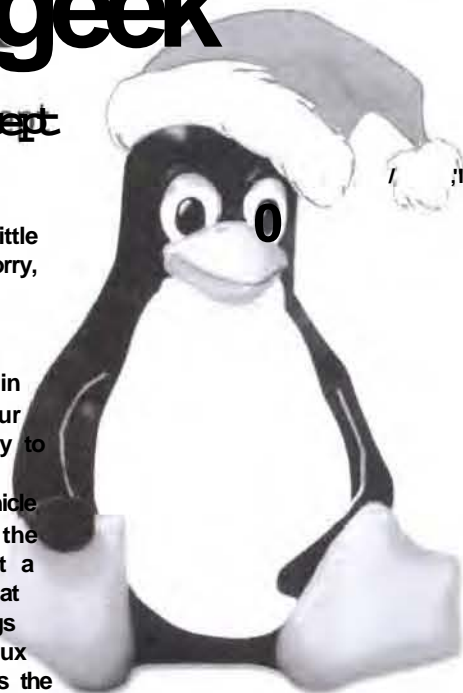
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# Gift ideas for the Linux geek

What can you buy for a dedicated Linux user when almost everything about Linux except the hardware is already free? Not too many. You just need to get creative.



By Gene Wilbusa

Attitude stocking stuffer



There are also Tux (the Linux Penguin logo) BSD devils instead of penguins. Not to worry, shirts, Tux ties, and Tux hats, not to mention ThinkGeek has those too.

Tux coffee mugs and Tux beer glasses. My personal favourite is a binary clothing digits embedded on a CD. Thoughtful gifts during those long programming or admin sessions, fuelled by Penguin mints, your life. Prices range from US\$4 for the buLinux guru needs music. No, don't even try to grok his or her taste in music might damage your mind. Instead focus on the vehicle for playing the music. In Penguin land the most popular music format is MP3. How about a spiffy new portable MP3 player to baunt at their time waging holy war against other distros (when they're not dissing Microsoft). The best standard MP3 players for Linux Here's a gift that will help your favourite geeks are the Rio units. Not because Rio is the face the reality of Linux multiculturalism. For only good player but because there are good VS\$17.95 you can order the Cheapbytes Linux drivers available for the Rio line. Rio Mondo pack, which includes the following 1 players are available at most large electronics stores. The Diamond Rio 500 64 MB player (US\$229.99 at ThinkGeek) is a good choice. Ar/miustrariou Unleashed, published by Sama Linux drivers for this unit are available at (ISBN: 0672317559, \$74.95), or Calder Opeliuux System Administrainii Unleashed published by Sama (ISBN: 0672317699, \$74.95), and written by Thomas Schenk, et As one of the "et al's" I am one of the authors — I think these are the best sysad guides available for these distributions. Min you, I'm biased.

### Music

Even though Windows people use CD-R burners, that doesn't lessen the overall value of the technology. Perfect for downloading the latest Linux or BSD distribution images and burning them to disc. And they hold a gazillion MP3s, not to mention being an inexpensive and good backup medium. Yup, right up there on the most-wanted list.

### CD-R

If your Linux guru is running SCSI, then purchase a SCSI CD-R. Otherwise pick a top-of-the-line IDE model such as Hewlett-Packard (http://www.hp.com). Prices will range from \$200 to \$350 depending on the model.

### Books

In the computer business you can never have enough books. The good ones are not just favours they're inspirational. Trouble is, every book publisher has jumped on the Linux bandwagon and the market is swamped with titles. What are good gift books? For beginners, the best choice is the classic *Running Linux*, Third Edition, by Welsh, Dalheimer, and Kaufman, and published by O'Reilly (k Associates (ISBN: 1-56592-469-X, \$51.95). There are other good starting guides, but this one does the best job of capturing the spirit of Linux while providing essential guidance.

For advanced users, locate a copy of *Unix Power Tools*, Second Edition, by Peek, O'Reilly, and Loukides, and published by O'Reilly (k Associates (ISBN: 1-56592-260-3, \$85.95). Huge, expensive and worth every cent. Your Linux geek will be thumbing this one for years.

If your giftee is just getting into Linux programming, obtain a copy of *Beginning Linux Programming*, Second Edition, by Stones and hiathew, published by Nox Press (ISBN: 1-861002-97-1, \$59.95). This comprehensive overview covers Shell, C, Perl, Tcl and X programming.

### Network stuff

It's inevitable: at some point your Linux geek is going to start a home network. Network guides include mini-hubs (around \$50) gift ideas include: mini-hubs (around \$50)

### Over silasu

Many Linux geeks get fixated on one or two Linux distributions, then spend the rest of their time waging holy war against other distros (when they're not dissing Microsoft). The best standard MP3 players for Linux Here's a gift that will help your favourite geeks are the Rio units. Not because Rio is the face the reality of Linux multiculturalism. For only good player but because there are good VS\$17.95 you can order the Cheapbytes Linux drivers available for the Rio line. Rio Mondo pack, which includes the following 1 players are available at most large electronics stores. The Diamond Rio 500 64 MB player (US\$229.99 at ThinkGeek) is a good choice. Ar/miustrariou Unleashed, published by Sama Linux drivers for this unit are available at (ISBN: 0672317559, \$74.95), or Calder Opeliuux System Administrainii Unleashed published by Sama (ISBN: 0672317699, \$74.95), and written by Thomas Schenk, et As one of the "et al's" I am one of the authors — I think these are the best sysad guides available for these distributions. Min you, I'm biased.

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- Red Hat 6.2 Source
- Red Hat 6.2 Documentation
- Installation for Slackware 7.1
- Source for Slackware 7.1
- Mandrake 7.1 Installation
- Mandrake 7.1 Installation
- OpenLinux 2.3 eServer
- OpenLinux 2A eDesktop
- SuSE 6.4 Evaluation
- Packages Galore

The Cheapbytes order site is located at <http://www.cheapbytes.com>. To make the gift even more "mondo" add in a set of CDs for Debian the-line IDE model such as Hewlett-Packard (http://www.hp.com). Prices will range from \$200 to \$350 depending on the model.

the least «ommer»ial of the distros — it embraces the philosophy of Richard M. Stallman and the Free Software Foundation. While you're at it, you may want take your favourite Penguinista down a peg or two (for his or her own good, of course). Do this including a set of CDs for FreeBSD 4.1 (US\$4.99). If it do your giftee good to try out an alternative operating system that is every bit as excellent as Linux and has a file system that actually makes sense. Who knows, by this



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Is your Linux person becoming a sysadmin? If the system is Red Hat or Caldera, let me recommend *Red Hat Linux System Administrainii Unleashed*, published by Sama (ISBN: 0672317559, \$74.95), or *Calder Opeliuux System Administrainii Unleashed* published by Sama (ISBN: 0672317699, \$74.95), and written by Thomas Schenk, et As one of the "et al's" I am one of the authors — I think these are the best sysad guides available for these distributions. Min you, I'm biased.

Don't forget to include some fiction! *Lea Harry Potter* to the Windows and Mac s. Get your Linux geek a copy of the brilliant science fiction novel *Cryptonamicou*, by Neal Stephenson (ISBN: 0380973464, \$39.50). It's not only about hacking and cryptography — Stephenson also wrote the novel on his Debian Linux system! These books are available online, often discounted, at <http://www.Chapters-a>, <http://www.indigo.com>, and <http://www.amazon.com>.

used computers One of the joys of Linux is that you can use the latest 1 GHz sportster PC or recycle old 486 lying in the corridor, both with good results. So be on the lookout for used computers that can no longer haul the load of latest behemoth software from Microsoft. Last year's buy of the year, for me, was discarded 75 MHz IBM Thinkpad portable with 1.2G hard drive and 24 MB RAM. I picked it up for \$400, loaded Red Hat Linux 6.2 from a parallel port BackPack CD player and use it all the time for writing, studying, Java, creating HTML pages etc. So watch for bargains — being a bottom feeder is fun and cheap. Watch for non-Intel platforms too, such as discarded Sun workstations, Ma«68K boxes, and used DE Alphas. You can run Linux on all of these. Your ideal gift might be someone else's throwaway.

Network stuff It's inevitable: at some point your Linux geek is going to start a home network. Network guides include mini-hubs (around \$50) gift ideas include: mini-hubs (around \$50)



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Table listing various motherboard models and prices, including AOH sp6, AOH KA7160, ABIT KT7, ASIT Seba, etc.

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Table listing various monitor models and prices, including AOC 15 SVGA, ADC 17 TFT-LCD, Amra 17 SVGA, etc.



CD ROM Drive

Table listing various CD-ROM drive models and prices, including Acer 52X, ASUS 50X, Creative Teal, etc.

DVD

Table listing various DVD drive models and prices, including Aresy 10X, Apple, ASUS, etc.

Hard Drive (IDE)

Table listing various IDE hard drive models and prices, including Fujitsu, Maxtor, Quantum, etc.

Keyboard

Table listing various keyboard models and prices, including Fujitsu, Logitech, Microsoft, etc.

Mouse

Table listing various mouse models and prices, including Logitech, Microsoft, Wacom, etc.

CD Write

Table listing various CD-write drive models and prices, including Acer, Creative, HP, etc.

Hard Drive (SCSI)

Table listing various SCSI hard drive models and prices, including Fujitsu, IBM, Seagate, etc.

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Table listing various video card models and prices, including Cix, Dni, ASUS, ATI, etc.

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Table listing various speaker models and prices, including Atec, Atec, Yamaha, etc.

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Gift ideas for small business operators... Continued from page 28

Unlike many other all-in-ones, it is a laser printer, not an inkjet, which suits the high quality printing needed for business use.

The paper tray has a 250-page capacity and the person receiving this gift won't be spending all his or her time refilling it.

impressive value at approximately \$800, especially when you include Xerox's three-year warranty.

Alternatives: Check out The Computer Lab's November Lab Test report on multi-function devices. We give the Editors' Choice award to Samsung SCX-1000 in the inkjet category, and to the Brother MFC-9600 in the laser category.

your IPDA. They claim to prevent scratching, reduce glare, and improve the handwriting accuracy of the stylus.

You wouldn't want a vehicle without a bumper, but what about a PDA? Fellowes has created a Bumper for PDA's to protect them against bumps and bruises, as well as scratches and scuffs.

It is a water-resistant case with a hinged lid to protect the surface of your PDA and its built-in loops, you can wear it around your neck or wrist.

Norton Internet Security 2001

Business operators have many of the same security issues of their larger business counterparts, yet Internet, virus, and data security are often overlooked.

Norton SystemWorks 2001 Professional Edition also comes with Norton Antivirus as well as the tried-and-true Norton Utilities to optimize system performance.

Norton Internet Security 2001 2.5 retails for \$115, and Norton SystemWorks 2001 Professional Edition 4.0 retails for \$190.

Notebook computer

If your gift-buying budget allows you to spare \$2,000, you can actually now buy a decent notebook computer in that price range.

It has a four-cell Lithium Ion Battery and comes with Windows Millennium Edition (Me), Microsoft Works Suite 2000, and a one-year next-business-day on-site service warranty.

Other notebook computers with similar features and pricing include Toshiba's Satellite 1710 series, Hewlett-Packard's N3438, IBM's ThinkPad i 340, and Compaq's 304e.

Antec Computers logo and address: 2607 Kingsway Vancouver B.C. V5R 4S4

Table with 3 columns: SAMSUNG 700NF \$395, SAMSUNG 700IFT \$375, SAMSUNG 753DF \$319. Includes details for flat monitors and hard drives.

Intel Celeron 833 \$78, Intel Pentium 800 \$1139, Intel Pentium 800 \$1599, AMD Duron 650 \$635, AMD T-Bird 800 \$1450. Includes monthly lease options and various PC configurations.

ASUS CUV4X/CUBX \$155/189, MATSONIC M754 (via iusw, Pok) \$110, MATSONIC M885 (via 894X s370 S) \$129.

INDEKAD WEEDS logo and various computer components like AGER, SPACWALKER, BEDQQ/Bb/genb, VSA100, VCA, TCA, TGA.

GIGA-BYTE GA6VXC7-4X(133 dx socket) \$128, GAZ XR(133 socket) \$125, GA EVX-1384(884X) \$178, GA 5VDC7(804X Dual 370) \$189.

Large table listing various computer components: MONITOR, VIDEO CARD, CD-WRITER, HARD DRIVE, SOUND/CDROM, INKJET, LASER, SCANNER, RAM, FAX/MODEM, SPEAKER, NETWORK, POWER SUPPLY, and various software licenses.

Ask the pet expert online

NB To relaunch its portal petcity.com has started an online Ask the Pet Expert service, allowing users to ask questions, or sign up as experts and answer questions.

Celebrating garlic in style

NB Gro, Calif., has been hosting the biggest garlic festival in the U.S. for 21 years. Of course it's not all garlic, but the town is referred to (by itself) as the garlic capital of the world.



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Scanners: Acer 640/1240/12720S \$1062/165/30, AGFA E20/ E40/ E50 \$1181/22/W2N, Canon 330N/640P \$1181/22/W2N

Modems/WebCam: Amr 56K/VN Voice/Fax/CB/W 40, USR56K/VOC/Fax/Modem/SW/HW \$55/88, 3Cam Webcam \$24.15

Digital Camera/Camcorder: Canon A50 1.3M Camera \$80.6, Canon S1021MC Smart \$71.6, Canon 02033M Camera \$69.8

Motherboards: 4llgn SSL/Va/haea \$228, Asus ATX \$228, Gigabyte 7261/TX SIM/VTO \$228

Tape Backup: HP Cobrad GIDE Para \$278/338, HP Cobrad GIDE Para \$338/398, Onslssm 30GB Firswir Cmr \$446

ZIP/JAZ/LS1205: DP 1NM IDE/Par/USB STW4/WSS \$172/182/260, ZIP 250MB/Par/USB \$172/182/260

Mouse/Keyboards: Acer 707/Fujitsu 872.5 \$13.120, Logitech QuickCam Express USB \$66, Logitech QuickCam Express \$66

Printers: V Color Printer \$5M 48/4N, Canon 21 \$5M 48/4N, Canon 21 \$5M 48/4N

\* Lease based on 36-month, 10% buyout... \*\* Lease based on 36-month, 10% buyout. All prices reflect 2.5% cash discount and are subject to change without prior notice.



# Mac wishlist 2000

Gift ideas for the Apple of your eye



By Justin Siemens

## Around \$50

### Apple's USB Base

From Apple  
Price: \$45

If you have a Mac on your wish list who has tried out this beta yet, they will love it. Only \$43 they get a whole new operating system to play with, but a new email client, Web browser, MP3 player, and many more goodies. The only downside is they need a G3 or better processor.

### SoundJam MP Xs.1

From: SoundJam  
http://www.soundjam.com/  
Price: 05/99

MP3 is in this season, and although its playback quality tends to be disappointing on a full-blown home stereo, it sounds great on a computer, and MP3 files are handy when you

want to take a lot of music with you on the road or listen to hours of tunes while you work without changing discs. SoundJam lets you create audio inputs, so you can hook up a recorder, for example, and create customizable skins, a full equalizer, and support for multiple playlists and streaming MP3. It's available as a direct download or boxed copy.

### Scanomat USB hub

From: Various sources  
Price range: \$40 to \$50

Serial is out, USB is in. So what happens when you have a printer, scanner, digital camera, game pad and Zip drive? As most computers only have two USB ports, a USB hub is the answer. Hubs are easy to find, come in lots of cool colours, and all work the same so you don't need to worry about the brand. They are the perfect gift for Mac users who have it all.

### Tar Story/Tar Story 2 DVD

From: Pixar/Disney  
Price: \$40

If you know someone with a DVD player on their Mac, then they need this two-DVD set. Both animated films were created entirely on

## Under \$100

### John Bliss

From: SpyBeds  
http://amaarpram.com  
Price: \$80

It's fun, it looks great, and it's more addictive than Tetris. It runs on most new Macs, and an iMac G4, and is appealing to non-gamers alike. Players decide on every aspect of their lifestyle: from career path, to friends and spouses, and deal with expected and unexpected consequences of those choices. The Sims expansion pack Living Large may be out in time who already own The Sims.

### Optical mice

From: Various sources  
Price range: \$30 to \$100

Optical mice are more accurate, require less maintenance, and work on almost any sur-



face. They are quickly becoming a must-have peripheral. A year ago the only game in town was Microsoft's huge, right-hand only IntelliMouse Explorer. Now there are two options from Microsoft, one from Apple, and one from Logitech. The most popular are Apple's Pro Mouse and Microsoft's IntelliMouse Optical. The Apple Pro features a single large button and very slick industrial design, in clear and grey (or white) plastic that coordinates better with new Apple hardware than Microsoft's offering. However, the IntelliMouse Optical, which is smaller than the original Explorer and works in both left and right hands, features four buttons and a scrolling wheel. Those who have used the IntelliMouse. Those who like the classic single-button Mac mice should stick with Apple's Pro Mouse.

Continued on page 3/

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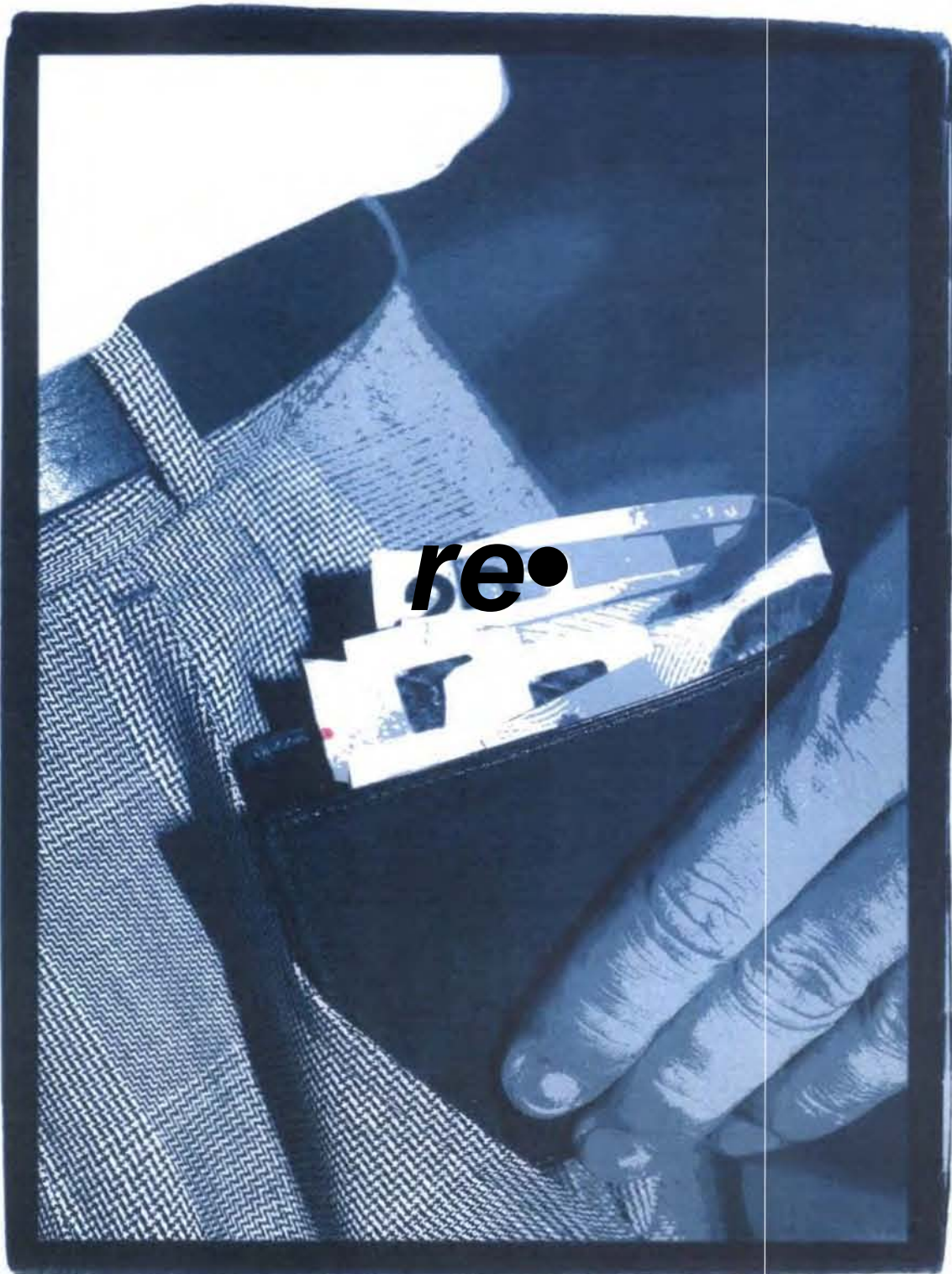


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# An encyclopedia in every stocking

Remember those leather-bound tomes your parents purchased in the hope they would help your school work and maybe get you out of their basement before you turned 30? They've gone digital.

Ry Tfun/VetêRs

The problem with encyclopedias of old was that once they were printed, much of the information they contained was already out of date. Sure, the periodic table doesn't change from year to year, but it's a bit odd to come across the entry on Canada that still has Pierre Elliott Trudeau listed as our prime minister.

The problems associated with updating began to resolve themselves when encyclopedias moved onto CD-ROMs, and now DVD-ROMs. Being tied into the Internet, many CD-ROM-based encyclopedias can now access updated information automatically, while at the same time linking to the latest articles and Web sites on specific topics.

The move to digital formats has had benefits for readers too. You no longer have to set aside a good chunk of shelf space for the 30 volumes of Encyclopædia Britannica, as a couple of CD-ROMs will now hold all of that information.

The Computer Paper decided to look at several of the most popular CD-ROM-based encyclopedias on the market: Microsoft's Encarta, Encyclopædia Britannica, IBM's World Book, and McClelland & Stewart's Canadian Encyclopedia.

To compare them, we looked at how quickly we could find information, the quality of that information, its readability, and any useful features that make organizing research easier and quicker.

However, the most important criteria was how well these encyclopedias presented Canadian information and history. One criticism of some of the most popular encyclopedias is that they give short shrift — or no coverage at all — to non-American topics, making it frustrating for Canadian students.



**Britannica 2001 CD-ROM Encyclopædia**  
From Encyclopædia Britannica, Inc.  
<http://www.britannica.com>  
Price: \$5 (rebate may be applicable)



Britannica is one of the most respected encyclopedias in the world and has in print since 1768. The story goes that two entrepreneurs in Edinburgh hired an editor to put together all of the new information and knowledge that was then being revealed through exploration and scientific discovery. That editor came up with a three-volume compendium that was the first Encyclopædia Britannica.

While the old print version became the

standard that many encyclopedia publishers emulated, Britannica was a late starter in the CD-ROM revolution. But what it may have lost in terms of time, it has made up for with a CD-ROM reference that remains true to Britannica's long history of presenting topics in well-organized, well-written and informative articles.

The Britannica CD-ROM has a clean interface that allows for quick access to all of its features, including its Spotlight, Timelines, Compass, and Research Assistant. A Web-like look and feel makes finding information easy. Simply type a topic into the Find bar and various index



appear on the left side of the screen. Clicking on a heading or index takes you directly to an article. All of the articles have hyperlinks that connect them to a variety of related articles on subjects elsewhere in the Britannica.

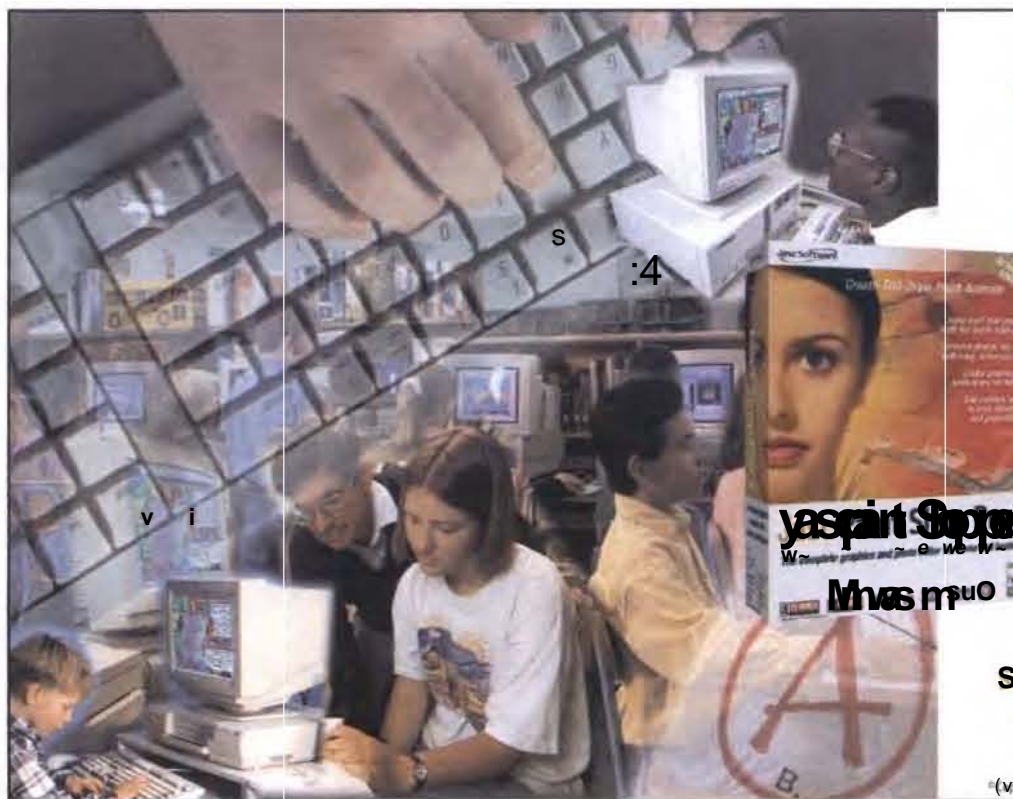
As an example, the entry on Canada's Constitution connects you to a variety of other topics, such as the history of constitutions around the world, or its American counterpart. An article on the philosopher Martin Heidegger not only gives a good summary of his ideas and complex terminology, it connects to extensive articles on existentialism, phenomenology, and related philosophers. This makes the encyclopedia useful for students doing research, as it is important to put information in larger contexts.

An especially welcome feature is the ability to connect directly to Britannica.com for access to updated information or current articles on many presenting topics in well-organized, well-written and informative articles.

The Research Assistant is especially handy in organizing the often overwhelming amount of information that can be produced when looking up a subject. This tool allows you to create folders to organize the information and attach notes or bookmarks to specific articles.

In terms of Canadian content, Britannica was pretty good. Subjects like the Canadian Constitution and the recently deceased former prime minister Trudeau were covered well, often with links to other relevant information. It had generally solid entries for Canadians you might not expect to be well known beyond our borders. The entry on Sir Sanford Fleming — the "father of standard time" and head surveyor for the Canadian Pacific Railway — covers his accomplishments well and connects to a good article on standard time.

Continued on page 49



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Plug & Play	DDC 1/2B



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**570b**

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**An encyclopedia every stocking**  
Continued from page 46

**Encarta Reference Suite \$500\$**  
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http://www.microsoft.com/encarta



Price: \$599.95  
When Microsoft first released its Encarta encyclopedia, it was criticized for the quality of the material and its SV-SW-centric focus.

With its 2001 version, Microsoft has gone a long way toward correcting some of those problems, particularly with the addition of more Canadian content and articles. It also comes with a load of extra goodies, such as an interactive world atlas, a dictionary that includes up-to-date information on Internet and Web jargon, and Encarta Africans, a two-disc encyclopedia of African history and culture worldwide.

Like the Britannica, Encarta is easy to navigate and offers quick access to information. It also links to the Web to update the content and links to relevant Web sites and articles recommended by Encarta editors. As an example, if you look up a director or movie, Encarta will provide links to relevant sites like the Internet Movie

Database.

One of Encarta's most welcome features is its supplementary materials and documents. A search for information on the Canadian Constitution will find a very detailed and well-organized history of our ongoing constitutional debates in addition to well-researched and informative sections on the Quebec Act of 1774 and the Constitution Act of 1867. Encarta also provides the texts of these documents — a useful feature for students.

This supplementary material also came in handy when looking at the life of Trudeau. Encarta provided an archive of supplementary articles that placed his accomplishments and difficulties into a wider historical context. One article detailed the May 22, 1979 election, in which Trudeau and his Liberals lost power, which Trudeau and his Liberals lost power, the political and economic events that led to the minority Conservative government, led by former prime minister Joe Clark.

Like Britannica, Encarta allows users to organize information found in Encarta or online with its own research tool,

this case Encarta Researcher. The researcher is actually part of suite of tools called the Homework Center that



teaches students how to research a paper, handle on historical persons or events, organize information, and use the Web. Entries on Trudeau, for example, even has tips for parents on helping their kids with homework.

Encarta does suffer from some strange editorial choices, though. One of the oddest: a search for articles on jazz pianist Bill Evans turned up a audio clip and brief mention of his work with Miles Davis, whereas middle-of-the-road saxophonist Kenny G who is

not even in the same league as Evans (at least in this reviewer's opinion) — was given a full article!

**Weald Roofs Millennium \$300**  
From: IBM Canada  
http://www.pc.ibm.com/us/software/wb/ Page: \$599

IBM World Book Millennium 2000 is a good reference solution for those who need to get information and facts quickly.

While not as in-depth or detailed as either the Britannica or Encarta, World Book does offer several advantages. Since its articles tend to be concise, they are ideal for fact checking, or for quickly getting a

handle on historical persons or events. Entries on Trudeau, for example, listing key governments posts he held before becoming prime minister, key

events during his time as prime minister, the oddest: a search for articles on the controversial jazz pianist Bill Evans turned up a

However, the World Book comes up short when you want more depths. As an  
Continued on page 252

**101 Ideas for the Unix geek**  
Continued from page 32

connect the PCs on the network, PCI network cards (for example, the SMC EZ around \$40), and network cables (\$10 or so for a pop) to find out the rest of the hon's list is still dialing into the Internet via telephone, give the gift of cable or ADSL high-speed services.

**Miscellaneous**

Other gift ideas? Mice have a way of dying. Give your Tuxhead a nice new Logitech mouse with a scroll wheel, Logitech devices come with PS/2 and serial adapters to fit any system. Is using a scroll wheel too radical at your site? Then substitute Logitech's three-button mouse. Logitech's range from \$20 to \$60, depending on the bells and whistles, and are available in most office supply stores.

Is your Linux geek into gaming? How about a Voodoo5 video card. This one will set you back \$500.

One final suggestion: If the person you're buying for has to dual boot the time to able to run Microsoft products due to onerous workplace obligations, then surprise him or her with a copy of VMWare for Linux, a software product that allows you to run virtual computers.

That's right, Linux and Windows at the same time, with no dual booting. The price is US\$299 (US\$99 for students and hobbyists) and you need a PC with a healthy amount of RAM (128 MB minimum) and a fast processor (400 Mhz or faster recommended). Buy online at http://www.vmware.com.

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All advertised prices reflect 3% cash discount. 2 years parts & labor depot warranty on all systems. All prices are subject to change without notice. All items are based on availability. Not responsible for typos.

**Mec wish list \$500**  
Confirmed from page 44

**Ed. Note:** At press time, Microsoft Canada released a third optical pointing device, the Microsoft TrackBall Explorer. It uses the same optical technology as the optical mice noted above and has programmable forward and



back buttons. Trackballs are ideal for small desktops where there is no room for mice. However, like Microsoft's original IntelliMouse Explorer, this model is only available for the right hand. Sorry southpaws!

**Under \$500**

**igub**  
From Apple Canada  
Price \$49

For those with slot-loading iMacs, the iSub will significantly enhance the built-in audio, adding more power and deeper bass. It's perfect for people who listen to a lot of music. MP3 files and CDs on their iMacs, or seri-

ous. The iSub requires System 9.0.4 and an available USB port.

**Photo printers**

From Epson, Hewlett-Packard, and others

Now that more people own digital cameras there is an increased demand for high quality

colour printing. Two of the best photo printers for USB-enabled iMacs are the Epson Stylus Photo 870 and the HP DeskJet 9500. Both can produce up to 8.5x4-inch prints, with results (using photo paper) that are almost indistinguishable from photo lab output. If you want to make larger (11x17 inch) prints, wide-format versions of both printers are available for about \$200 more.

**Visor**

From Handspring  
Price \$500

It works like a Palm handheld, but ships with a USB cradle, and comes in five Mac-like colours. If you're considering buying a PDA, the Palm OS currently features the most available apps and the largest installed base. The Visor Pro includes Palm OS 3.5, 8 MB of RAM storage, and runs on AAA batteries.



**Over \$1,000**

**Canon Digital Elph**  
From Canon  
Price \$580

Digital cameras are a popular gift this year now that the prices are well under \$1,000 and the resolution has improved significantly. The Digital Elph takes 2.1 megapixel images—a resolution suitable for good quality 8x10-inch prints.

CD-RW (rewriteable) is fast replacing Zip help you edit and enhance photos. Most and larger as the solution for large-capacity importantly though, this camera is tiny, backup and file transfers. Allowing you to pop it in your pocket and

But there are so many other cool things you can do with it, like backing up old LPs. Also, it has a metal case, so it can withstand

onto CD and creating multimedia presentations. The small size and great design will appeal to the iMac crowd, and it offers the quality

replaces a standard film-based point-and-shoot camera.

Since almost all new iMacs have FireWire, you can burn CDs on a FireWire-enabled burner shoot camera.

Most FireWire burners are in the \$100 to \$150 range, and can rewrite CDs in the 4x range.

The most popular models are the Sony iLink, the QPS Quepire!, and the LaCie iD2 burner. If the burner you get doesn't include Adaptec Toast software, it is a worthwhile addition.

For those who want to go all out, here is the LaCie iD2 burner. If the burner you get doesn't include Adaptec Toast software, it is a worthwhile addition.

Featuring a 450 MHz G4 processor, 64 MB RAM, a 20 GB drive, and DVD player all in an 20 cm (8 in.) cube, the G4 Cube is coolest and most original design to come out of Cupertino, Calif., since the original iMac in 1998. It will set you back \$2,700 (depending on configuration) plus an extra \$750 for the matching 17-inch display if you're gonna go all out, why not do it with class.

This Mac is perfect for all sorts of work, including digital video editing and desktop publishing.

If you get the optional ATI Radeon card from the Apple store, it's also one of the fastest gaming Macs around.

The Chocolate Lovers' Web site contains a database of 776 Web sites where people can find chocolate around the world.

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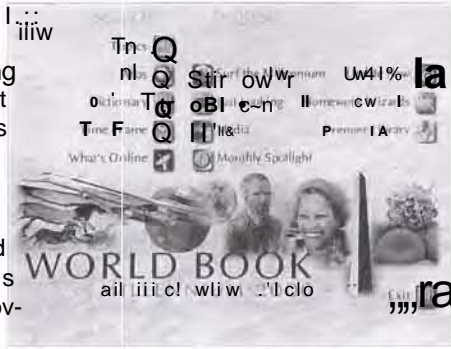


An encyclopedia in every stocking  
Continued from page 49

example, the October Crisis—a defining moment of Trudeau's leadership—is dealt with in a two-paragraph summary that is part of the larger article on Trudeau.

The same goes for finding information on the Constitution. Compared to the detail of the Britannica or Encarta, World Book gives only a short overview that is part of a larger article on the federal government.

Even famous Canadian artists are rather perfunctorily treated or not mentioned at all. While Margaret Atwood gets a short



The World Book does a bit better with

its Map feature, offering street-level data. A nice feature that comes with the World Book is a Homework Wizard. Like Encarta's Homework Center, it gives students a step-by-step guide for creating reports, charts, timelines or quizzes.

The World Book is also available in single-disc Standard Edition or in three-disc Premium Reference Library.

**The Canadian Encyclopedia Deluxe 2000**

From McClelland & Stewart  
http://www.mcs.com/

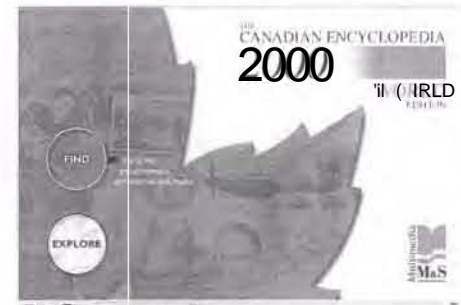
Price: \$139.99

This has been one of the best sources for Canadian information and history on CD-ROM for some time, going beyond what Britannica and Encarta offer.

By the time you read this, the 2001 version of the Canadian Encyclopedia will be released. At the time of this review, we were unable to obtain a copy, so we look at the current 2000 version.

This edition has additional CD-ROMs devoted to the Prime Ministers of Canada, the War of 1812, the Klondike Gold Rush, Masks and Cultures of the Pacific, and the Parliament Buildings—the latter takes users on a QuickTime VR tour.

However, it was not possible to review the encyclopedia part of this package as we could not get it to work correctly on two different machines, a Windows 98 Acer TravelMate 34CT notebook and a PC running Windows 95. In each case, the program froze on the highlight feature and it took a while to figure out how to shut



off. But that was a minor problem compared to the larger one encountered immediately after. We soon discovered it was impossible to scroll down any of the articles as the scrollbar would not appear—only the first three paragraphs of longer entries were visible. We spent quite a bit of time trying to find a way around this, but to no avail.

We hope this was just a glitch in the copy we received and does not reflect a general flaw, but it did make reviewing this encyclopedia frustrating. We can add that we have looked at each version of this product, and have always recommended it for its unique Canadian content. The 1999 version exhibited none of the problems we encountered with the more recent compilation.

The encyclopedia is also available in a Student Edition for \$234.99, or World Edition for \$289.99. Call

**AdCritic.com: Where ads are art**  
NB—AdCritic.com was created for those who find advertising more than just an annoyance between TV shows. As well as providing services for advertising agencies, the site is aiming to build a resource that contains practically any ad seen on TV in the U.S. Visitors will be able to vote on each ad, comment on them, and discuss the underlying messages.  
http://www.adcritic.com/

**Colobrating musicals that flopped**  
NB—This Web site features musicals that flopped big time on Broadway. As well as looking back on old flops (and tempting visitors where they can buy memorabilia from North America and Europe), the site tips some upcoming flops. Top of the pile to watch recently was an American musical version of the British movie *The Flamingo*, in which the setting is changed to Buffalo, NY.  
http://www.lostmusicals.com/

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<ul style="list-style-type: none"> <li>• AMD K6tt 500MHz CPU</li> <li>• Super7 71 Motherboard</li> <li>• 64MB PC100 RAM</li> <li>• Fujitsu 10GB Hard Drive</li> <li>• Panasonic Floppy Drive</li> <li>• SM 13D Video Integrated</li> <li>• 56K Fax Modem</li> <li>• Delta 44x CD-ROM Drive</li> <li>• PCI 3DA Audio on-board</li> <li>• 140W Stereo speakers</li> <li>• Alpha 113 Tower Case</li> <li>• 98K Keyboard &amp; Mouse</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Celeron 1160 CPU</li> <li>• Intel 810M Motherboard</li> <li>• 64MB (PC100) SDRAM</li> <li>• Fujitsu 20GB Hard Drive</li> <li>• Panasonic Floppy Drive</li> <li>• Intel 3DV Mdeocnmas</li> <li>• 56K Fax Modem</li> <li>• Delta 44x CD-ROM Drive</li> <li>• PCI 3DA Audio on-board</li> <li>• 140W Stereo speakers</li> <li>• Alpha 11S ATX Tower Case</li> <li>• Winm Keyboard &amp; Mouse</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Pentium III 800/800MHz</li> <li>• GigaByte PC133 Motherboard</li> <li>• 64MB PC133 SDRAM</li> <li>• Fujitsu 20GB Hard Drive</li> <li>• Panasonic Floppy Drive</li> <li>• SIS3053D Video 16M</li> <li>• Motorola 56K Fax Modem</li> <li>• Creative 52x CD-ROM Drive</li> <li>• 32 bit PCI 3D Surround Sound</li> <li>• 140W Stereo Speakers</li> <li>• Alpha 11m ATX Tower Case</li> <li>• 98 Keyboard &amp; Scroll Mouse</li> <li>• Norton AntiVirus</li> </ul>	<ul style="list-style-type: none"> <li>• AMD Thunderbird 900 CPU</li> <li>• Asus A7V Motherboard</li> <li>• 128MB PC133 RAM</li> <li>• Maxtor 20GB 7200 Hard Drive</li> <li>• Panasonic 144MB Floppy Drive</li> <li>• SIS3053D Video 16M</li> <li>• Motorola 56K Fax Modem</li> <li>• Creative 52x CD-ROM Drive</li> <li>• 32 bit PCI 3D Surround Sound</li> <li>• 600W Speakers w/subwoofer</li> <li>• Alpha 117 ATX Case 100W</li> <li>• 98 Keyboard &amp; Scroll Mouse</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Pentium III 666 MHz</li> <li>• Abit BX33 RAID Motherboard</li> <li>• 128MB (PC133) RAM</li> <li>• Maxtor 30GB 7200 Hard Drive</li> <li>• Panasonic 144MB Floppy Drive</li> <li>• Riva TNT2 32MD3D Video</li> <li>• Diamond 56K Fax Modem</li> <li>• Creative 253D ROM Drive</li> <li>• SB Live! Value Sound Card</li> <li>• (NT5000 speaker, sub-woofer)</li> <li>• Alpha 117 ATX Case 100W</li> <li>• 98 Keyboard &amp; Scroll Mouse</li> <li>• Win98 Keyboard &amp; Mouse</li> </ul>
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System Upgrade Options: 64bf->28MB RAM PC100 19, 64hf->128MB RAM PC/33 59, 128M->210MB RAM PC/33 11/8, 102->20GB Fast/5.1mm drive 10, 20G 541rpm ->30G 7100rpm hard drive 74, 20G 7200rpm ->30G 7100rpm hard drive 54, 10G 7200rpm ->40G 7200rpm hard drive 70, 12N CD Drive -> Panasonic CD RW 1/4 73

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HARD DRIVES & Controllers	CPU	MONITORS	CD-ROM
<ul style="list-style-type: none"> <li>• Fujitsu 102S20G 125/151</li> <li>• IBM 30G/41G ATA100/7200RPM 245/345</li> <li>• Maxtor 20/30/40(OOB)OG 1155/189/239/161/1469</li> <li>• Maxtor 1526/1044/1700rpm 115/1175/229/299</li> <li>• Quantum 72nsrpm 15/20LOG 149/179/229</li> <li>• W.D. 20/30/45G 1169/189/269</li> <li>• W.D. 15/20/40G 7200rpm 16/1189/292/29</li> <li>• SCSI Quantum 9/1G 7200rpm 3 309/499</li> <li>• SCSI Quantum 4/1G 7200rpm 499/791/1299</li> <li>• SCSI Fujitsu 1160 9/1/18 2G 10W459</li> <li>• SCSI Fujitsu 1160 9/1/18 2G 159/549/1119</li> <li>• Abn lto (RnohTATA) Ino! frrl 59</li> </ul>	<ul style="list-style-type: none"> <li>• (OEM) Pentium III 800/800MHz 67</li> <li>• Intel Pentium III 600/600E/600E B 2119/239/249/259</li> <li>• Intel Pentium III 666/700E/733 2 285/285/285/299</li> <li>• Intel Pentium III 666/700E/733 10 10 10 10 10 10 10 10 10 10</li> <li>• Coloron 566/668 11/1667/700 19/129 115/114</li> <li>• AMD K611 1100MHz 17m 19/9/Safe! fr</li> <li>• AMD K611 1100MHz 17m 19/9/Safe! fr</li> <li>• AMD K611 1100MHz 17m 19/9/Safe! fr</li> </ul>	<ul style="list-style-type: none"> <li>• 15" LCD Envision (Samsung) 5705 1049/126c</li> <li>• 15" Aru (a) G/ISSR (G/smsung) 505 179/179/195</li> <li>• 15" Sony E1001 (Mag) 570FD 502/210/9 (259</li> <li>• 15" Viewsonic Optiques Q51/Q55 219/239</li> <li>• 17" KDS/Imprassio/Envision 0.27dp 239</li> <li>• 17" Mag 1786FD 0.24dp 1600x1200 399</li> <li>• 17" AOC 7C/7A/View G7720/21dp 2 161/299</li> <li>• 17" GoldStar Fla (ron 20 24 77FT/79FT) 359/419</li> <li>• 17" NEC FE700/AS70 379/279</li> <li>• 17" FanaSync SL70/PL70 331/429</li> <li>• 17" Samsung 750s/700NF/7001FT 279/199/119</li> <li>• 17" Sony E200/G200 509/559</li> <li>• 17" Upuouect Q71/Q75 295/389</li> <li>• 17" V-cwromc EF70/PS775/FF775 119/169/119</li> <li>• 17" GoldStar 991E/Panasonic PF90 465/639</li> <li>• 19" Envision/Samtron 0.26dp 359/429</li> <li>• 19" Viewsonic G790/PF790/Q95 589/685/475</li> <li>• 19" Sony G400/E400 21Sp 789/699</li> <li>• 19" Samsung 900NF/11st 0.25dp 199</li> <li>• 21" Viewsonic Optiques Q11 0.21dp 979</li> </ul>	<ul style="list-style-type: none"> <li>• Acer 52x/48x (Asus) 54/48/62</li> <li>• Creative 52x/Actima 52UD/48x 55/50/48</li> <li>• SCSI Toshiba 40x 128</li> <li>• CDWR Goldstar LG 4432 165</li> <li>• CDWR 842 P/Pass 199/195</li> <li>• CDWR 8432 C/rauv/Soay 195/229</li> <li>• CDWR Yamaha 1424/81124 215/215</li> <li>• CDWR H/P 1910/930i 279/329</li> <li>• CDWR Ricoh/Plcx (sr) 112xtux/2 299/399</li> <li>• 17" mem 11/100mm/Soay 24x/2x/8 (NE) 269/299</li> <li>• SCSI (CDRW) Yamaha 8424: 882.4 269/279</li> <li>• Schwse farstrmvc 15</li> <li>• DVD Pioneer/LG/Panasonic (6x) 8x/5/10S119</li> <li>• DVD SCSI Pioneer 6x 19/5</li> <li>• Decoding software for DVD movie 20</li> <li>• Assn (c) 19160Tconamtra SCN (X) 8/14</li> </ul>
<ul style="list-style-type: none"> <li>• Canon LJC115/IN/OSL 47/115/79</li> <li>• Canon OH! Ifm 9/11/469</li> <li>• Canon LJC115/IN/OSL 165/119/469</li> <li>• Canon S40/1S40 (Separate mk) (7S 2) 175/82/9</li> <li>• En (an) NO/777/NO/9NU vx/14/215/149</li> <li>• Ea (a) Ph (x) 870: (770 155/6/9</li> <li>• Lexmark 5770/Op (rs) CLRJ! 175/82/9</li> <li>• Le (mark) 11/21/247/Zy 7 1149/219/265</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Pentium III 800/800MHz 67</li> <li>• Intel Pentium III 600/600E/600E B 2119/239/249/259</li> <li>• Intel Pentium III 666/700E/733 2 285/285/285/299</li> <li>• Intel Pentium III 666/700E/733 10 10 10 10 10 10 10 10 10 10</li> <li>• Coloron 566/668 11/1667/700 19/129 115/114</li> <li>• AMD K611 1100MHz 17m 19/9/Safe! fr</li> <li>• AMD K611 1100MHz 17m 19/9/Safe! fr</li> <li>• AMD K611 1100MHz 17m 19/9/Safe! fr</li> </ul>	<ul style="list-style-type: none"> <li>• 15" LCD Envision (Samsung) 5705 1049/126c</li> <li>• 15" Aru (a) G/ISSR (G/smsung) 505 179/179/195</li> <li>• 15" Sony E1001 (Mag) 570FD 502/210/9 (259</li> <li>• 15" Viewsonic Optiques Q51/Q55 219/239</li> <li>• 17" KDS/Imprassio/Envision 0.27dp 239</li> <li>• 17" Mag 1786FD 0.24dp 1600x1200 399</li> <li>• 17" AOC 7C/7A/View G7720/21dp 2 161/299</li> <li>• 17" GoldStar Fla (ron 20 24 77FT/79FT) 359/419</li> <li>• 17" NEC FE700/AS70 379/279</li> <li>• 17" FanaSync SL70/PL70 331/429</li> <li>• 17" Samsung 750s/700NF/7001FT 279/199/119</li> <li>• 17" Sony E200/G200 509/559</li> <li>• 17" Upuouect Q71/Q75 295/389</li> <li>• 17" V-cwromc EF70/PS775/FF775 119/169/119</li> <li>• 17" GoldStar 991E/Panasonic PF90 465/639</li> <li>• 19" Envision/Samtron 0.26dp 359/429</li> <li>• 19" Viewsonic G790/PF790/Q95 589/685/475</li> <li>• 19" Sony G400/E400 21Sp 789/699</li> <li>• 19" Samsung 900NF/11st 0.25dp 199</li> <li>• 21" Viewsonic Optiques Q11 0.21dp 979</li> </ul>	<ul style="list-style-type: none"> <li>• Acer 52x/48x (Asus) 54/48/62</li> <li>• Creative 52x/Actima 52UD/48x 55/50/48</li> <li>• SCSI Toshiba 40x 128</li> <li>• CDWR Goldstar LG 4432 165</li> <li>• CDWR 842 P/Pass 199/195</li> <li>• CDWR 8432 C/rauv/Soay 195/229</li> <li>• CDWR Yamaha 1424/81124 215/215</li> <li>• CDWR H/P 1910/930i 279/329</li> <li>• CDWR Ricoh/Plcx (sr) 112xtux/2 299/399</li> <li>• 17" mem 11/100mm/Soay 24x/2x/8 (NE) 269/299</li> <li>• SCSI (CDRW) Yamaha 8424: 882.4 269/279</li> <li>• Schwse farstrmvc 15</li> <li>• DVD Pioneer/LG/Panasonic (6x) 8x/5/10S119</li> <li>• DVD SCSI Pioneer 6x 19/5</li> <li>• Decoding software for DVD movie 20</li> <li>• Assn (c) 19160Tconamtra SCN (X) 8/14</li> </ul>

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**Major camera buying tip**

Continued from page 55  
 advantage here, because memory cards can be inserted into the notebook's PC Card slot using a special adapter, for very fast transfers.

**Image compression**

Digital cameras typically offer three or four levels of JPEG image compression. The higher the compression, the smaller the file (and the more images you can store on the memory card). JPEG is referred to as a lossy format because data compression, which means information is discarded as part of the process.

er the compression, the more information is discarded. We prefer to shoot with the least amount of compression. You can always reduce the size of an image later in an image-editing package, for example, if you want to post smaller images on the Web. But it's hard to bring back image details that were not captured in the first place.

Some higher-end cameras allow you to save images in uncompressed format. In fact, the best method since picture information is discarded. The penalty is increased file size. For example, the Epson Photo PC megapixel-plus 4700, which both offer three-megapixel-plus resolution, allow you to save in uncompressed TIFF format. But you can save just one of these images on the 16-MB memory card that's included with the camera.

These models are easy to slip into a pocket but may take some getting used to. The majority of camera makers have stayed true to the basic size and shape of point-and-shoot 35-mm film cameras, which helps in the transition to digital.

**Backgenemix**

Here digital camera makers have shown widely varying approaches. Nikon, Minolta and Agfa have experimented with two-part assemblies where the lens can pivot up and down independently of the camera body. FujiFilm's x700 line, including the four-megapixel-plus 4700, is taller than its wide-

**Editing**

Until this year, if you wanted prints of your digital images, you had to make them yourself on an inkjet printer. Now a number of photo finishers are installing minilabs that will make prints from digital files. Blacks Photography chain, for example, is planning to have 60 of its outlets across Canada equipped by the end of the year.

If you want to make your own prints, manufacturers have photo inkjets that produce prints of excellent quality. Two manufacturers—Epson and Hewlett-Packard—have also made progress on image permanence. Inkjet prints fade more quickly than prints made the traditional photochemical way, but these two companies have ink/paper combinations that are estimated to last a couple of decades before noticeable fading occurs.

**Archiving and storage**

Once you've had a digital camera for a year or so, you will discover that storing large photos turns into a project in itself. With 61 cameras, you can tuck the prints and negatives into any old drawer and be confident that they will remain relatively safe.

Digital images, on the other hand, have to be treated like any other kind of digital data and their "lifetime" of defense is to back up regularly. If you have a hard drive crashes and it contains the only copies of a special event you photographed, you will be sad.

If we were to recommend a single storage method it would be LCD-RW (rewritable) compact disc, and the drives themselves are now quite affordable in the \$250 to \$400 range. CD-recording software has been streamlined and the technology will be around until at least the mid-decade.

Recordable DVD, with its multi-gigabyte storage capacity, is still too expensive as a single standard has been reached. Yet a Zip and LS-L20 systems will work well if you already have a drive, but diskettes remain expensive (\$3 each), and the 80-L00 to 120-MB capacity may prove inconvenient when your collection grows to gigabytes worth of images.

**RSN Science One Re-teachers' resource**

RR—According to a press release, The Futures Channel is a digital resource for math and science educators that represents a collaborative of technology specialists, curriculum experts, classroom teachers and a "multi-award-winning production team." The Channel offers video, student activities and other resources intended to help teachers show students workplace applications of math and science concepts, and to help students develop the high-tech workplace skills. The service is the product of a million research efforts involving thousands of teachers and students participating in long-term studies, focus groups and in-class testing, the company says. Among its resources, the site contains streaming video packages for preview purposes, but the company cautions that videotapes would need to be ordered for presentation in class.

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# Software for the executive who has everything



**T**his is a somewhat ad hoc category. I have grouped my Xmas gift suggestions into three sub-categories. First is the help-me-to-get-ahead software gift. This is a tough nut, but here are some nut-cracking software ideas:

- **Decisioneer**: Crystal Ball Professional (http://www.decisioneer.com, \$2,200) combined with the book *Financial Management: Advances in Financial Intelligence* (published by Amacom, ISBN: 0814405002, \$80), offers advice on doing risk assessment in a variety of financial settings.
- **Palisade**: OR (ask for Project) (http://www.palisade.com, \$1,500) plus Microsoft Project 2000 (http://www.msft.com, \$500) — even with simple models, these risk assessments are invaluable.
- **Lindo**: What's Best Professional (http://www.lindo.com, \$1,800) with the book *Optimization Modeling with LINDO* (published by Brooks/Cole, ISBN: 0534348572, \$120) solves linear and non-linear optimization problems, telling what's the best strategy in numerous situations.

**Big brain goals**  
Next is the coming-from-left-brain approach. Here we are trying to stimulate

creative impulses from the other side of the brain, to get the rising gal or guy to think:

- **Graphically** with Micrografx iGrafx Processor or Optima (http://www.mtmg.com, \$1,500 or \$1,100), which take diagramming to a new level with built-in simulations, but get the flow of ideas/design down with ease that is worth the price of admission. Go beyond PowerPoint.
- **Creatively** with Axon Idea Processor (http://web.smgnet.com/msgy-axon2000, \$200) or IdeaFisher Pro (http://www.wdsh.com, \$300). These programs will help spark fresh ideas and perspectives.
- **Numerically** with Mathsofi's MathCAD 2000 Professional (http://www.msft.com, \$600). This program is for math phobes or philes. It is such a pleasure to work on its mathpad screen, solving simple and complex math problems so intuitively, and with lots of wizards to help the phobes.

**Slow it down**  
Finally, help the up-and-comer relax with a game of Scrabble (http://www.hsb.com, \$33). Not only can you play against the computer but other Scrabbleists online.

It has wonderful word resources, like an anagram generator, and after playing against the computer named Maven, maybe our shooting star will also know the meaning of the word "humble."  
— Jacques Survever

## How to process those Christmas morning pictures

**S**o now that you have the digital camera, your dreams, and snapped a load of pictures during the gift exchange, the next project is figuring out how to manage and process all those images. Though every digital camera comes with some sort of image editing software, more often than not it is a "lite" application, easy to use, but short on user-controllable features. Here are two recommendations for inexpensive packages with significantly improved functionality.

**PhotoImpact 6**  
From Ulead Systems  
http://www.lead.com  
price \$100

PhotoImpact actually comes with three programs: GIF Animator 4, for making animations and slide shows of your images; PhotoImpact Album, for organizing your images; thumbnail albums with personal annotations for each image; and PhotoImpact 6, for processing images and making them print- or Web-ready.

The distinguishing feature of PhotoImpact is its functionality, which includes colour adjustments, masking, layering, and a complete set of image tools equal in range (but not depth) to top-end programs like Adobe Photoshop and Corel PhotoPaint.

The key feature for PhotoImpact is its Easy Palette, which allows users to drag and drop an effect or filter from the palette onto an image and quickly see the results, then undo them if required.

Very powerful.  
Very powerful.

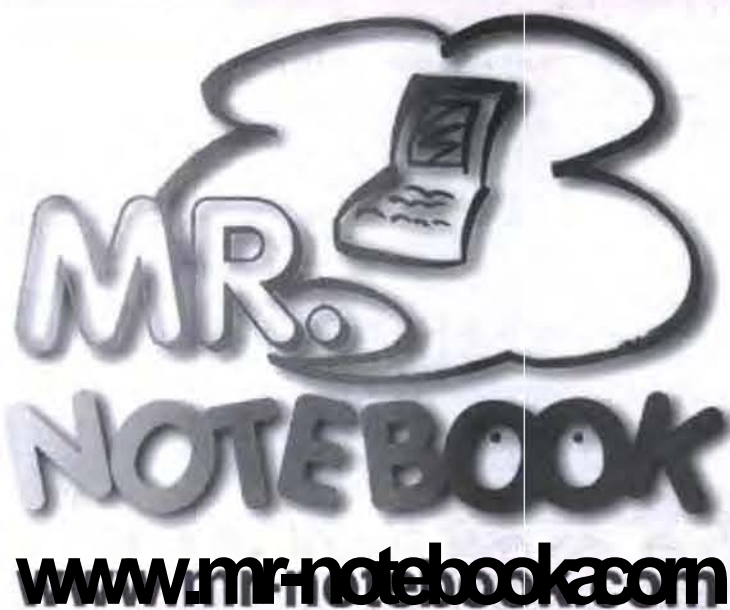
**PhotoSuite 4**  
From MGI  
http://www.mtmg.com  
price \$56

PhotoSuite 4 takes the opposite approach. It has a series of wizards that guide users through typical projects that they might do with their photos and images:

- **Calendars**: in yearly, quarterly, or monthly views, and in a variety of vertical and horizontal formats.
- **Photo correction**: wizards/tools to adjust colour, size, contrast, and composition.
- **Photo layouts**: including comic book, family tree, group photos, scrapbook, posters, and more.
- **Cards and tags**: includes bookmarks, greeting cards, gift tags, initiations, and postcards.
- **Fun stuff**: includes magazine covers and fun backgrounds.
- **Business**: includes business cards, labels and signs, certificates, stationary, and promotional items.
- **Frames and edges**: provides dozens of novel or formal frames and edges for your photos.

And the best part of PhotoSuite is that for everyone of these uses, the program not only provides at least half-a-dozen templates, but also guides you through the process step by step. It is a bit pokey on transitions (unless you added all 350 MB-plus of the support files), still PhotoSuite will really help you make the most of your images.

— Jacques Survever  
— Jacques Survever



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# Be your own Big Brother

Webcams allow you to watch or be watched

By Sean Camrighesa

Anyone who has gone through the Canadian high school system has probably read George Orwell's 1984. Having a video camera trained on you—Big Brother watching day or night—is a chilling prospect. But all it takes is a few years and everything you need to get a personal Webcam up and running, and more.

Watching and being watched are now fashionable. It started with a few online pioneers training cameras on themselves and streaming the video over the Web. Their sites became some of the most popular destinations on the Web. Then came the popularity of voyeuristic TV shows like Big Brother and Survivor which are designed to make you feel as if you are looking over the shoulders of complete strangers.

Now, more people want their own Webcams, so friends, family members, and complete strangers can see what's going on in their personal space.

And for those who want to be the star of their very own show, a few companies have developed products to make this happen, by providing easy-to-install Webcam hardware. Just plug it into your PC's USB port, load the software, and away you go.

Here are three gift ideas for the budding star on your list.

## Logitech QuickCam Web

From Logitech  
<http://www.logitech.com>  
 Estimated street price: \$105 to \$125

The QuickCam "eyeball" cameras were originally introduced by Connectix, but Logitech acquired the line and has started to take it in new and funky directions. Originally, it was assumed that QuickCam hardware would be used primarily for business purposes (in conjunction with a program like NetMeeting, for example). It quickly became clear, however, that many people

were using these cameras to spy on friends and family and to create personal Webcams. The QuickCam Web model is aimed squarely at the first-time Webcam owner, with a ton of software and an attractive price. Included with the hardware is a photo album software, video greeting software, and a snapshot button on the top of the camera, which will take a still image and send it back to the PC.

One of the most interesting pieces of software included in the bundle is Digital Radar II, which acts like a motion detector, turning the camera on when movement is detected (you can adjust the motion threshold). This is useful in a number of cases: if you want to see if anybody comes into your room when you're away; if you want to find out which of your cats keeps snacking from the fish tank; or if you want to catch kids (or parents) who've restarted.

The QuickCam Web works with Windows 98 and 2000. It may have the whiff of Big Brother, but many people could probably think of 4 uses for this software.

On the hardware side, the QuickCam Web comes in the orb design people associate with Logitech. Some associate with the QuickCam line (some previous models have home-oriented models that deviated somewhat). The USB camera rests on a rubber base, which allows limited repositioning. It also comes with something called the SmartClip, which allows you to hang the camera off the edge of a notebook or desktop (for example) if you have the room to spare.

As with other members in the QuickCam family, focusing is done by turning a ring on the front of the camera. For

moments when you want privacy, a flip cover is built into the camera module for use with networking applications. And for those moments when you just want to point and click, there is a snapshot button on the top of the camera, which will take a still image and send it back to the PC.

Because the QuickCam Web uses a CMOS image sensor, the picture is a bit fuzzy compared to the CCD-based cameras (the QuickCam Pro, for example). Although some noise is introduced into the image, the picture is still good enough for most casual users. For someone who wants to get into the world of Webcams, this is an inexpensive package with everything you need to get started.

The QuickCam Web works with Windows 98 and 2000.

## Logitech QuickCam Pro USB

From Logitech  
<http://www.logitech.com>  
 Estimated street price: \$125 to \$149 (\$139)

For those who want slightly higher picture quality, the QuickCam Pro is available, and for not much more than you would pay for the QuickCam Web. This model is called "Pro" for a reason: it has a much better picture, and a more versatile mounting dip.

Although both cameras are capable of picture resolutions of up to 640x480 pixels, the Pro has a better image because it swaps the CMOS sensor for a CCD sensor. For a CCD sensor, you get a much better picture, and a more versatile mounting dip.



# Taking photo film on a pixel ride

Usability glitches near HP's versatile \$20 slide scanner

By Jacques Surveyer

More and more photographers want to get their images into digital format for post processing and delivery to clients who are demanding digital and/or Web-ready images. Despite the explosive growth of digital photography, the majority of images still produced are slides and negatives. Of course there is an enormous backlog of slide prints and negatives sequestered away in shoeboxes, photo albums, and slide horns and carousels. Given the still prohibitive price of really good digital cameras (the 35mm equivalents can cost \$6,000 to \$20,000), many artists and consumers are looking for ways to get their film and print images onto a computer effectively and affordably.

## Polmosmak Nat Scanner SBO

From Hewlett-Packard  
 Estimated street price: \$199  
<http://www.hp.com>  
 Minimum system requirements: Mac OS 9 or Pentium 0 processor, 16 MB RAM, Windows 95/NT/SP4/2000, and 64 MB of memory.  
 Overall rating: 5.9 out of 5

Continued on page 63

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HP PhotoSmart S20

Continued from page 60
Enter HP which dominates the printer and scanner markets with the PhotoSmart S20 61m scanner...

install guide and using the setup wizard strip, and print mode. HP's software is compliant, which means that using the import...

HP has priced the PhotoSmart unit at a fair-minded sequence of instal steps are the same as the same...

I was not too optimistic because the recommendations in the PhotoSmart dialogue, including corrections for dpi, slide type, and positioning...

With a brand name like HP my expectations were too high. Disappointment started when I was reassured by the salesman that the PhotoSmart S20 would run on my Windows 98...

Being desperate to scan some slides I needed to scan some slides I needed to scan some slides...

I then switched to my 200 MHz-based Pentium system running Windows 98, and the PhotoSmart was easy to operate...

Scanning zoobers

Buy your own Big Brother

(higher-res CCDs are typically found in newer digital cameras)

Essentially, the picture is less grainy, crisper, and is not as susceptible to flicker and static. The internal hardware required for the better picture means less room inside the camera housing...

The QuickCam Pro's innovative mounting clip is undoubtedly one of the best selling points of the whole package. Many tethered cameras simply rest on a surface or have a very limited range of motion...

The QuickCam Pro ships with the same extensive software bundle that comes with the Web model, including software for setting up your own Webcam site...

The QuickCam Pro works with Windows 95 (rev. B1.N), and 2000.

3Com HomeConnect PC Digital Webcam
3Com HomeConnect PC Digital Webcam
From 3com Corporation
http://www.3com.com/homeconnect
Estimated street price \$219

With its recent sale of the US Robotics modem line, 3Com is now focusing on other forms of connection, most notably network-B, 9k and 2000, making it a good choice for the business and home environments.



The HomeConnect line features a number of Ethernet-based solutions for the home office network, as well as a USB Webcam. The QuickCam Pro is a sleek black camera with a base that swivels 360 degrees and a more modest tilt range of about 60 degrees. There is a focus ring on the front of the camera that allows you to get within a few millimeters of an object. The camera ships with a reasonably good bundle of software, including Microsoft NetMeeting, PictureWorks Live, PictureWorks NetCard, and RealNetworks. The package also includes Webcam32 software for uploading images to your Web site, though it should be noted that this software is a demo version that expires after each hour of use. You can restart it immediately but a bit of a hassle, especially since the Logitech model comes with software that uploads your captured images without restrictions.

The picture quality on the camera is very good, but is limited to 640x480 pixels.

All of the Webcams reviewed automatically adjust for low light conditions, but this camera is the best of the bunch under low light, returning crisp pictures that look as if they were taken with the lights fully on. For use in dim environments, this one wins hands down. The camera works with Windows 95 (rev. B1.N), and 2000, making it a good choice for either home or the office. f J

HP's software is compliant, which means that using the import processing programs (Adobe Photoshop, Corel Draw, Deneba Canvas, Jasc PaintShop Pro, MGI PhotoSuite, Micrografx PicturePublisher, ULead PhotoImpact, etc.) will be successful.

After inserting a slide or print, PhotoSmart does a prescan of the image, which takes about 10 seconds. Then users make adjustments to the image.

What is particularly vexing is that PhotoSmart software does not provide a way to bypass prescanning. When doing dozens of slides, you have to prescan every one and reset the scanner.

The PhotoSmart scanner also had the nagging habit of randomly refusing to take in slides and prints appears to be a hardware glitch—a refusal to read media, or hardware hangs up in about one out of 10 tries seems high to me.

When it is ready to load the image, other than exposure and scan controls, but turning off the as generating an old credit card into an ATM prescan to speed up processing would be a desirable feature.

In sum, the HP scanner has some uncharacteristic sloppiness that mars an otherwise fine product.

Fortunately the results of the scans are pretty good. I found the colour fidelity to vary with the media used.

Prints were best, colour slides and negatives were sometimes a bit light or colour shifted, but not by much. Image quality was not bad at 2,400 dpi, but some colour Sds lower resolutions would exhibit grain patterns, especially with prints.

As with all photo processing, you must be careful about lint and dust. HP provides both small whisk brush and rubber balloon to blow dust out of the way, which was very effective.

Summary

With this unit, the HP design people got the product bundle right—slide negatives, and prints with 2,400-dpi resolution and good, if not great colour accuracy and low to medium graininess. The price is very competitive with other 61m scanners with fewer features and comparable accuracy. The USB connection works well.

However, the HP engineers have uncharacteristically left a few rough edges. The installation process was disconcerting despite the clear manual instructions and good multimedia introduction. Perhaps my troubles at loading the software was a bit of bad luck.

The scanner software provides all sorts of exposure and scan controls, but turning off the as generating an old credit card into an ATM prescan to speed up processing would be a desirable feature.

In sum, the HP scanner has some uncharacteristic sloppiness that mars an otherwise fine product.

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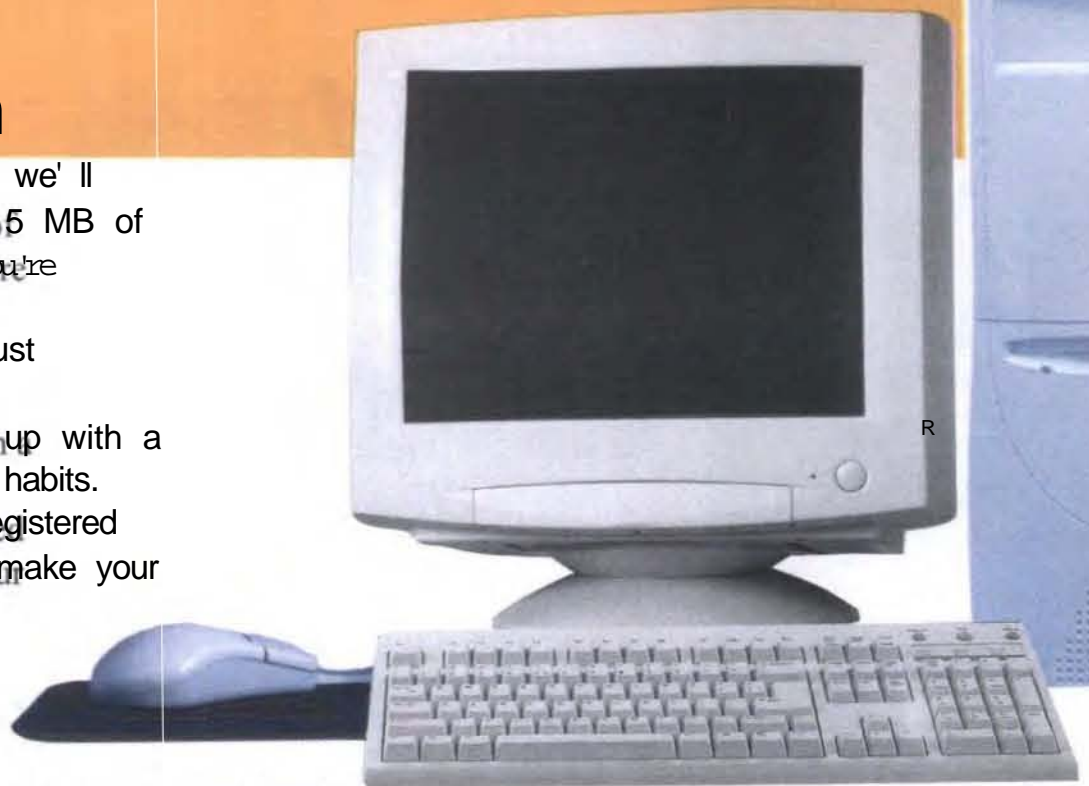
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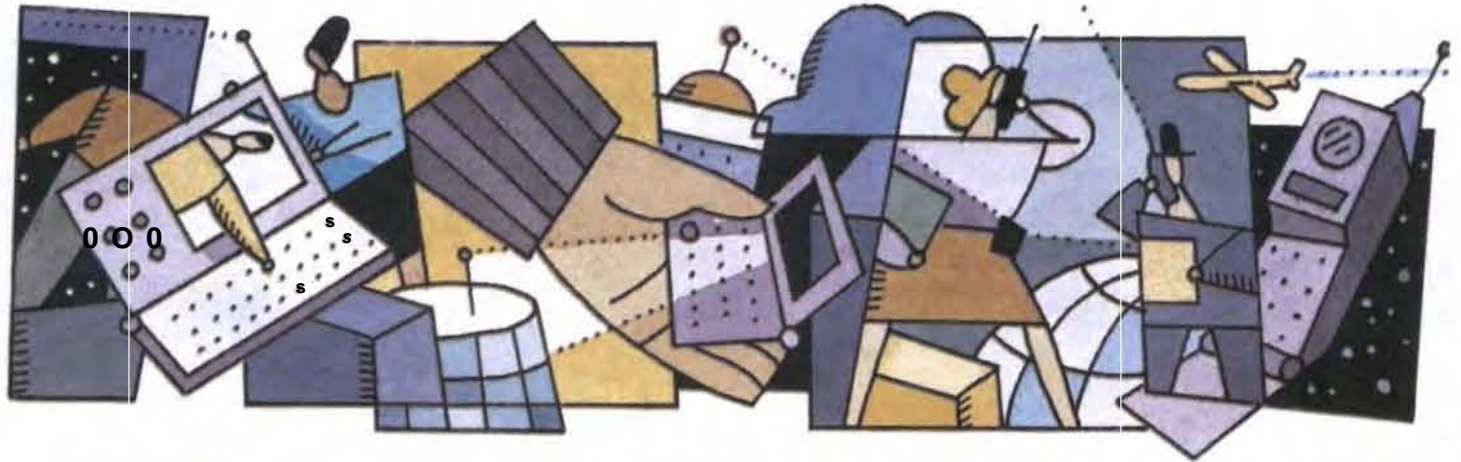
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# How handy!



While Palm Computing's handheld dynasty remains intact as we close out 2000, competitors are bringing interesting and powerful products to the

By Sean Carruthers

device running Windows for Pocket PC and Palm

immediately start using it if you have experience. The Palm has been so successful in the world of portable devices that the name has become

W elcome to the future. There's a lot to be said for Star Trek's influence on the development of technology. At a time when nobody had foreseen wireless communicators. More relevant to the Test Lab this month, however, were tricorders and data pads, the portable devices that crew members used to perform a variety of tasks while in the field.

While handheld computers come near the fictional tricorder (with its ability to diagnose illness and scan for life forms), what have made progress in the real world. Now lack of a close inspection for applications you can carry around a device that fits in the palm of your hand yet allows you to enter notes, sort through your entire contact list, alert you of upcoming appointments you shouldn't miss, compose email, beam data to other handhelds almost instantaneously, and connect wirelessly to the Internet.

You still can't scan a planet for intelligent life, but you can certainly add a wireless modem and tap into the communications network. You can't necessarily determine the exact location of a particular person somewhere else, but you can attach a global positioning system (GPS) module and determine exactly where you are. Who knows where we'll be in a few years?

Right now, most handheld technology falls into one of three camps, broken down by operating system. These three types are Windows-based, Palm, and Symbian.

Windows-based handheld devices now also incorporate multimedia player capable of stereo playback of MP3 files, as well as full-motion video clips. The question you have to ask yourself, though, is whether having high-powered PC multimedia device in the palm of your hand is worth the extra investment. These devices have a higher quality screen, high-quality audio components, more RAM, and more processor power, but the price is quite a bit higher than, say, a Palm handheld device for keeping your contact list up to date.

The argument for Windows-based handheld devices is that people will feel more comfortable using a handheld computer if it is similar to the desktop computer that sits on their desk, because they already know the Windows scheme used by Windows 98. Theoretically, you should be able to pick up these devices

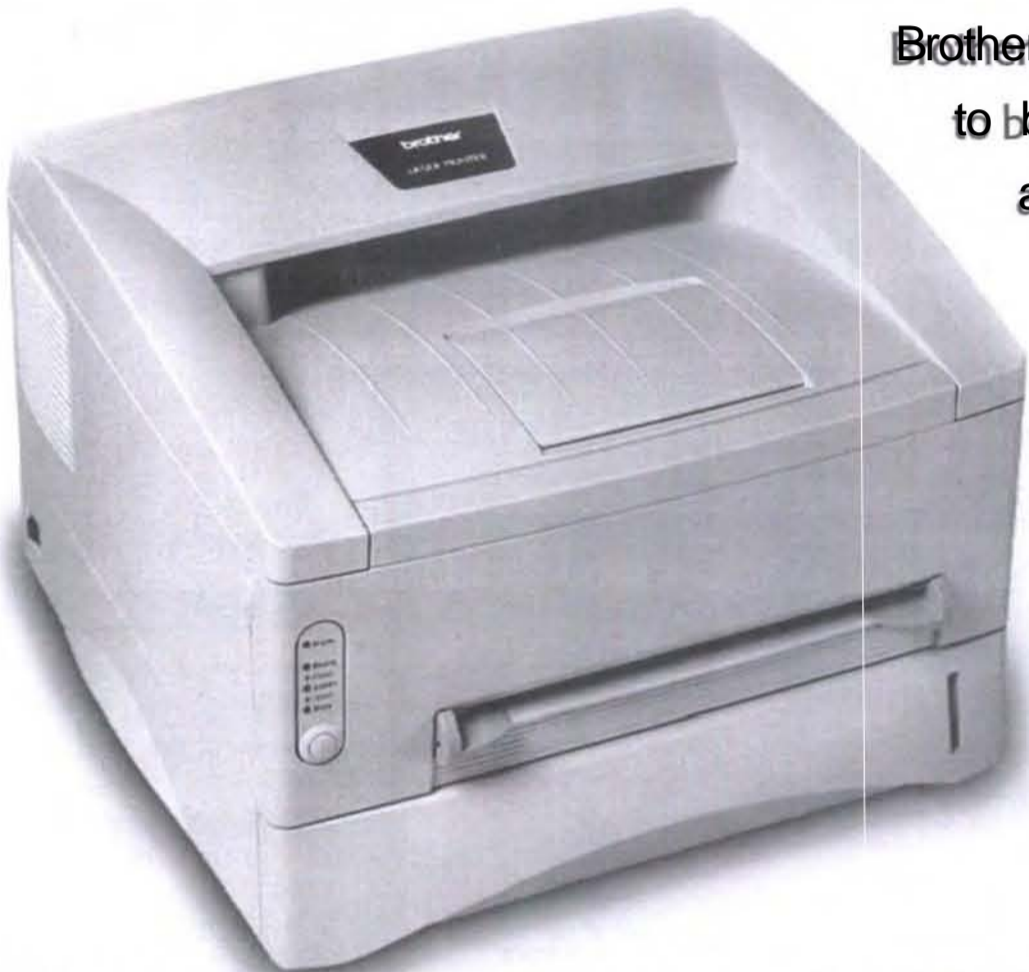
device may be overkill. It is worth the extra investment? These devices have a higher quality screen, high-quality audio components, more RAM, and more processor power, but the price is quite a bit higher than, say, a Palm handheld device for keeping your contact list up to date. The question you have to ask yourself, though, is whether having high-powered PC multimedia device in the palm of your hand is worth the extra investment. These devices have a higher quality screen, high-quality audio components, more RAM, and more processor power, but the price is quite a bit higher than, say, a Palm handheld device for keeping your contact list up to date.

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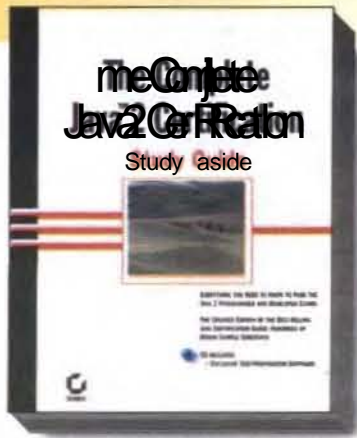
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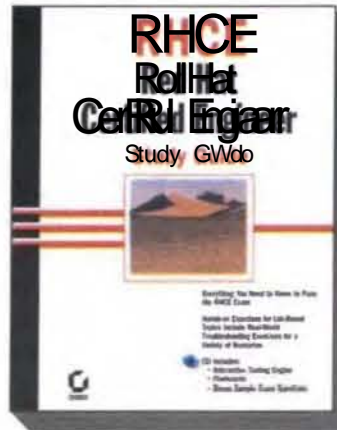
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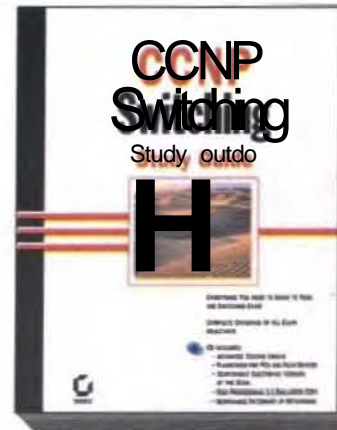
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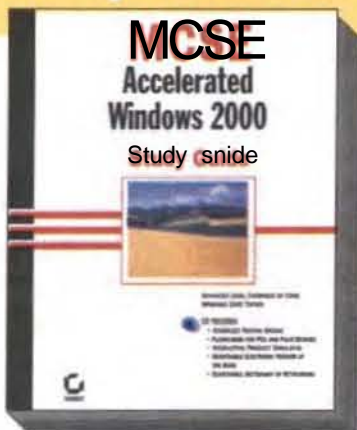
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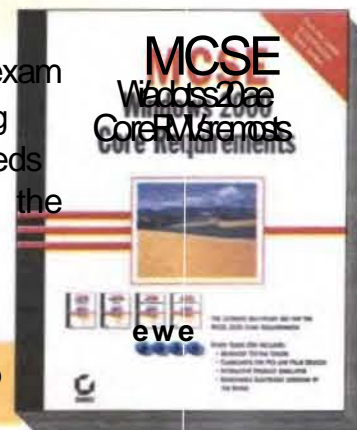
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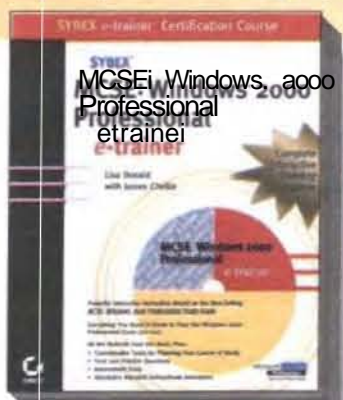
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# Windows CE/PocketPC-based handhelds

Hewlett-Packard	Casa	Casio	Compaq	Hewlett-Packard
Jornada 720	NEC Casiopea E-25 MobiKit 780	Casiopea E-115	ipaq H3650	hx454 545
Operating System	Windows CE	Pocket PC	Pocket PC	Pocket PC
Onboard memory	32MB	16MB	32MB	16MB
Screen type	64K colour TFT	64K colour TFT	4096-colour TFT	4096-colour CSTN
Screen size	240x1320	240x320	240x320	240x320
Input method	stylus	stylus	stylus	stylus
Keyboard	keyboard and stylus	keyboard and stylus		



CompactFlash	Type	no. MMC	optical attachment	Type	Type	Type
PCap	no	no	optical attachment	no	yes	yes
Infrared port	yes	yes	yes	yes	yes	yes
Modem	oc	oc	no	no	yes	yes

## Lab Test: How Handy!

Continued from page 66  
 Handspring was founded by the inventor of the original PalmPilot and former members of Palm Computing's executive team. The introduction of the Springboard slot for external hardware, Handspring moved the Palm platform into exciting new territory. Further, Handspring incorporated a microphone into the Visor, for use with third-party hardware that is audio-enabled. See below for reviews on both Handspring and some of its newer offerings from Palm itself.

It's hard to say what effect this will have on the handheld category as a whole, but it's certainly an interesting development.

the EM-500 is a new addition to the Cassiopeia Pocket PC line, and it's similar in most of the fundamental ways, but with a few key differences. First, the EM-500 doesn't use a synchronization cradle, it connects directly to PC with the included USB cable. Secondly, the device uses the new MultiMedia Card (MMC) slot for additional memory. Although this makes it a bit less flexible (no Type II devices like microdrives or modems, for a start), the smaller size of MMC memory makes it possible to shave a few millimeters off the depth of the device. This thinner design comes at the expense of a bit of memory. Most of it is the same as the larger E-125, though. The screen still features 64,000 colours and a bright TFT display. In addition to the traditional stylus input, the device has buttons with a similar layout, making it quite easy to get anything stored on the unit quickly and easily. Plus, it features high-quality stereo audio, allowing you to use the device as a portable MP3 player (of course, it pretty much becomes necessary to get some MMC memory for this purpose, because of the EM-500's limited onboard memory). Lastly, it also comes with a protective soft carrying case. The EM-500 uses a proprietary removable Lithium Ion battery, which recharges when plugged directly into its power adapter. The device can be connected to Windows 95, 98, and 2000 desktops, and to any calendar, contact list, Compaq tools, and the programs list. (In a rather elegant design, the speaker doubles as a four-directional tilt and select panel for scrolling through items then selecting the one you want.

## Symbian/Psion

One company to watch out for is U.K.-based Psion. Although it doesn't currently have a high profile in North America, it is the number one handheld platform in Europe, and its fans of the Psion technology are very devoted. Psion was making handheld computers long before Microsoft introduced Windows CE. The reason behind its success is similar to Palm's: it's a very basic operating system (Symbian's EPOC) that offers every feature you need in a very efficient manner. Adding to the Psion's appeal, however, is the fact that these devices have keyboards, making data input quite easy. Add all this to the fact that the technology uses a powerful 32-bit architecture, and you've got something that's making other manufacturers sit up and take notice. And take notice they have. Palm, the champion in the North American handheld market, has actually licensed parts of the OS from Symbian for use in its own technology. Further, Diamond Multimedia recently chose to enter the handheld category with a device that uses the Symbian OS and hardware based on the Psion Revo Plus.

First off, the EM-500 only ships with 16 MB onboard memory. Most of it is the same as the larger E-125, though. The screen still features 64,000 colours and a bright TFT display. In addition to the traditional stylus input, the device has buttons with a similar layout, making it quite easy to get anything stored on the unit quickly and easily. Plus, it features high-quality stereo audio, allowing you to use the device as a portable MP3 player (of course, it pretty much becomes necessary to get some MMC memory for this purpose, because of the EM-500's limited onboard memory). Lastly, it also comes with a protective soft carrying case. The EM-500 uses a proprietary removable Lithium Ion battery, which recharges when plugged directly into its power adapter. The device can be connected to Windows 95, 98, and 2000 desktops, and to any calendar, contact list, Compaq tools, and the programs list. (In a rather elegant design, the speaker doubles as a four-directional tilt and select panel for scrolling through items then selecting the one you want.



Compaq's iPaq brand spans both desktop and handhelds. The 32 MB H3650 model is definitely a handheld model, and with its brushed metal finish, it's one of the sleekest and most attractive models tested this month. The basic design is fairly small, with a slight bump on the upper left corner putting a record button where your thumb rests. The front of the device has one-touch buttons for desktops, and Windows NT 4.0 with any calendar, contact list, Compaq tools, and the programs list. (In a rather elegant design, the speaker doubles as a four-directional tilt and select panel for scrolling through items then selecting the one you want.

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Continued on page 70

< HANDS ON >

Lab Test 88mm ready!  
Continued from page 69

On the Pocket PC side, the iPad is the only handheld we looked at that didn't have a slot for removable storage built into the body of the device. Ultimately, this keeps the size down, and those who really need a CF for external storage can purchase the CompactFlash Jacket, which wraps around



the back of the device separately for \$59. For greater versatility, you can purchase the PC Card Jacket for \$29, which will allow you to use compatible PC Card devices including Type I CF cards.) When not in any of the jackets, the iPad H3650 can use the included soft protective carrying case.

The biggest problem with this approach is that the device becomes fairly thick with one of the jackets attached. A protective jacket world of handhelds with the Mako. Those included with the iPad which makes the Mako for a Psion and with good additional functionality. Another slight criticism under a new licensing agreement with Psion,

about the design is that the stylus only goes into its socket one way, despite its mostly symmetrical appearance, and if you're not paying close enough attention, you may end up jamming it most of the way in before you realize it's backwards.

But the handheld itself, and the USB synchronization cradle, are quite stylish. The cradle comes in the same black and brushed metal scheme as the handheld. The device is compatible with Windows 95, 98, and 2000 monochrome only, but this helps reduce desktops, and with Windows NT using the optional serial connection cable (\$42).

The iPad is powered by an internal lithium-ion battery that charges when the unit is docked in the synchronization cradle or when plugged directly into the power adapter.

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Diamond has achieved both fame and notoriety in the world of PMP3 with its popular line of players. Now, it has entered the world of handhelds with the Mako. Those familiar with Psion's product line may mistake the Mako for a Psion and with good reason. The Mako is the Brat product released under a new licensing agreement with Psion,

and is based on Psion's Revo model. As you expect, the Mako uses Symbian's KPOC operating system.

The Mako comes with 64MB of on-board memory, and a keyboard that's roughly the size of a desktop model. It's a bit hard to use at first, but gets easier once you adopt the two-thumb method of input you can actually get quite fast at this with practice. The device is compatible with Windows 95, 98, and 2000 monochrome only, but this helps reduce power consumption.

For docking with the desktop, the Mako comes with a small serial cradle. The only complaint about this is that you still plug the cradle, meaning you can't use it as a recharge station per se. The good news is that if you don't plan to sync with the desktop using it only as a standalone unit, you can keep the cradle in storage.

An infrared port is built into the rear of the unit for connection to external devices, including a travel modem or printer interface.

The KPOC operating system takes a bit of getting used to for those most familiar with the world of Windows, but then again, Symbian does Palm. In addition to the keyboard, there are a few one-touch application launchers located around the outside of the screen including contacts, agenda, email, phone, a world calendar, calculator, jotter, infrared send and receive, zoom, cut and paste, and a pull-down menu. Each application has a special bar along the right side of the screen to allow application-specific options. In addition to Symbian's own word processing, database and spreadsheet software, as well as a game. Continued on page 72

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HANDS ON

Tash How handy!  
Continued from page 77

called Cascade (which is totally addictive).

The Mako uses an internal battery that recharges whenever the unit is plugged into the power adapter. It's compatible with Windows 95, 98 or NT desktop.

Handspring Visor Deluxe

From HandSpring  
http://www.handspring.com  
Suggested retail price US\$299

Handspring is one of the first companies to go head-to-head with the Palm on Palm's own turf (using the Palm operating system, modules, MP3 players, and more).

popular handheld platform? Handspring thinks it has a number of innovations that not only feature the same ease of use that Palm OS is known for, but enhance it on the hardware side. The key hardware enhancement with the Handspring line is the Springboard slot. This slot is essentially an open-backed section on the Visor that accepts third-party hardware or software cartridges. The first Springboard use, when the module we had a chance to see, was the Tiger Woods golf game. Now, a whole range of items is available, including a cell phone reviewed below.

The Visor comes with a USB synchronization cradle, which allows you to use it with either Mac 8.1 or later, or Windows 98

(Windows Me and 2000 users can download updated drivers, but other users must purchase the optional serial synchronization cradle). The Graffiti method of stylus input is fairly quick. The Visor is particularly sturdy compared to the all-plastic models found on many other handhelds.



The Deluxe model also comes with a soft carrying case, in addition to the clip-on plastic screen guard. The Visor is available in three colours: green, blue, orange and graphite. The Visor Deluxe uses two standard AAA batteries.

(Note: Those looking for a Visor with a colour display are in luck, as Handspring

Palm, Psion and other handhelds

	Palm m100	Palm illic	Handspring Visor Deluxe	Psion Revofus	Gumond Mako	Xircom Rex5N
Operating system	Palm OS 5	Palm OS 5	Psion OS 1	Symbian I/POC	Symbian E/ROC	Starline
On-board memory	2MB	1MB	16MB	16MB	16MB	512KB
Screen type	monochrome	colour TFT	monochrome	monochrome	monochrome	monochrome
Screen size	160x160	160x160	160x160	480x160	480x160	160x60
Input method	stylus	stylus	stylus	keyboard and stylus	keyboard and stylus	button
CompactFlash?	no	no	no, Springboard	no	no	no
PC Card?	no	no	no	no	no	no
Infrared port?	no	yes	yes	yes	yes	no
Modem?	no	no	no	no	no	no
OS compatibility	Win95/NT	Win95/NT	Win98/2000/Mac OS 9+	Win95/NT	Win95/NT	Win95/NT
Connection to PC (cable)	serial	serial	USB	serial	serial	PC Card serial
Dimensions (HxWxD - mm)	79 x 118 x 17	81 x 129 x 17	76 x 122 x 18	157 x 79 x 17	157 x 79 x 17	85 x 56 x 40
Weight (g)	125	193	155	200	200	40
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### AMD

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◀ HANDS ON ▶

Lab Tech: How handy!

Continued from page 72

recently announced the Visor Prism, which is similar to the Deluxe model, but with a 16-bit colour screen. It'll cost you, though: the Visor Prism will debut at US\$449.)

Hewlett-Packard Jornada 545

From Hewlett-Packard Company

http://www.hp.ca

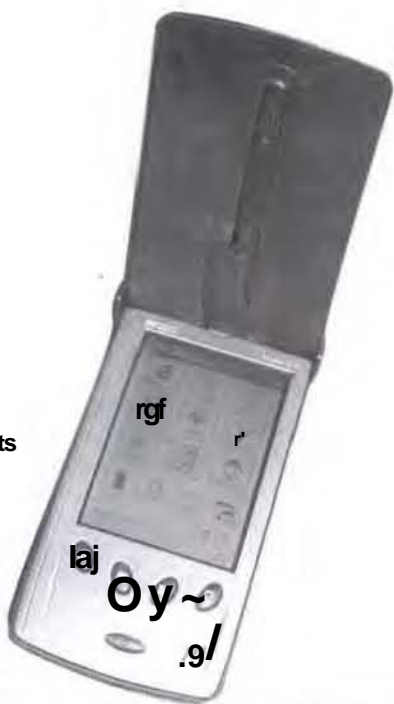
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Hewlett-Packard's Jornada line featured one of the first Pocket PC-based handhelds we had a chance to look at in the Test Lab, and its Pocket PC-based line is still going strong. The 16 MB Jornada 545 is a palm-size unit with reasonably good multimedia capabilities.

The Jornada now comes with a USB synchronization cradle, for faster data transfer. Input is via the included stylus, which is stored in a mini-pocket on the underside of the flip-up protective screen cover. As with other Pocket PC devices, the Jornada 545 has several one-touch buttons for easy data access. The front of the device has buttons to take you to the device's "home" page, to contacts and the calendar, and to your task list. The left-hand side has a jog dial for scrolling and selecting, as well as a one-touch record button.

The Jornada 545 features a CF slot, for additional data storage. This is one of the only machines featuring a CF media this month to stick with the older Type I slot, which means a thinner device at the expense of potentially higher storage capacity and functionality since some manufacturers are offering devices in CF II format.

The biggest problem with the 545 is the LCD screen, which is willfully dim, even



From Hewlett-Packard Company

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Estimated street price: \$1,399



For those looking for a larger unit, HP offers

the 32MB Jornada 720, which comes in a clamshell design and features a full keyboard—which is 75 percent the size of a standard desktop keyboard—in addition to stylus input. This keyboard allows you to do much of what can be done on a notebook. The Jornada 720 is compatible with Windows 95, 98, NT, and 2000 desktops.

While the keyboard seems fairly small, with a bit of work, you can enter data reasonably quickly, even if you touch type.

In addition to the alphanumeric keys, there are a number of one-touch keys that launch applications, including Explorer, email, record, contact list, task list, calendar, Pocket versions of Access, Excel and Word.

At the side of the screen are few additional one-touch buttons for settings, Windows Media Player, dialup connections, and backup. The 640x240-pixel screen included with the Jornada 720 makes it far more suitable for serious work than any of the palm-size devices, especially for those who need to write or take notes while on the road.

The screen features up to 64,000 colours, and the brightness/contrast control is very flexible,

with separate settings for indoor use, outdoor use, as well as power saving modes.

When the machine is at home base, it sits in its wide synchronization cradle, which has a serial connection to the PC, as well as a stylus holder. While in the cradle, the removable Lithium Ion battery will be recharged. If you don't want to use the cradle, you can connect the power supply directly to the Jornada and use the direct serial cable connection, also included in the package.

For those who travel a lot, one nice feature is a built-in 56Kbps V.90 modem, which means you won't have to haul around a lot of accessories. For expansion and backup, the Jornada 720 features both CF (Type I only) and PCMCIA Card slots.

In the end, those who want a Pocket PC handheld device will find this unit eminent. Undoubtedly, the keyboard and an excellent software bundle.

The Jornada 720 is compatible with Windows 95, 98, NT, and 2000 desktops.

Those looking for something slightly larger than the Jornada 720 may want to consider the CE-based MobilePro 780. Although it features an older version of the operating system, and slightly less in the way of updates, it has a large enough form factor to allow for a 90-percent keyboard, which makes serious work even easier. This also means that the 640x240-pixel screen is slightly larger than those on other clamshell-type devices.

Estimated retail price: \$1,399

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Adaptec 2906 SCSI Card	79
OmniMag 9300 SCSI Card	99
Adaptec 39160 Ultra 160 SCSI Card	619

## Modems

Global Village 56K Modem	139
Global Village Teleport Ext. 56K	139

## Lifetime Warranty Memory

32MB 72pin SDRAM	169
32MB 168pin DIMM	169
64MB 168pin DIMM	329
64MB SDRAM	109
128MB SDRAM	209
256MB SDRAM	429
32MB SDRAM	89
128MB SDRAM	139
128MB SDRAM	250
256MB SDRAM	409

## USB Devices

Epson Stylus Photo 1270 USB Inkjet	699
Epson Stylus Photo 870 USB Inkjet	379
Microtech USB SCSI Adapter	105
8x10x15 HL-1050 Laser Printer	599
OmniMag 9300 USB	39
Imega 250MB External USB Zip Drive	259
Macag Mouse	35
Macag Mouse	50
Macag Keyboard	65
Agfa SnapScan 1212U Scanner	139
Asante Talk Ethernet 10/100/1000	149
PowerPrint USB Parallel Cable	149
Logitech USB Wheel Mouse	55
Keyspan USB Serial Adapter	110
Wacon Graphics 4x5 USB Tablet	139
IREZ Kitter USB Camera	169

## CPU Upgrade

Cybernetics 450MHz/512K L2 G3	299
Cybernetics 450MHz/512K L2 G3	299
Cybernetics 450MHz/512K L2 G3	299
Cybernetics 450MHz/512K L2 G3	899

## Network Cards/Hubs

Asante 10/100 Ethernet Card	75
Asante 10/100 Ethernet Card	75
Asante 10/100 Ethernet Card	119
Aunts 10/100 Ethernet Card	106
Netgear 44x100 Ethernet Hub	59
Allied Telegyn &pet 10/100 Ethernet Hub	49
Apple AirPort Card	149
Apple AirPort Base Station	449

## New iMac, iMac DV, iMac DV+, iMac Special Edition

iMac	iMac DV	iMac DV+	iMac DSE
Indigo	Indigo	Indigo	Gray/Snow
350MHz PowerPC G3	400MHz PowerPC G3	450MHz PowerPC G3	500MHz PowerPC G3
512K Cache	512K Cache	512K Cache	512K Cache
64MB RAM	64MB RAM	64MB RAM	128MB RAM
7GB Hard Drive	10GB Hard Drive	20GB Hard Drive	30GB Hard Drive
CD-ROM Drive	CD-ROM Drive	DVD-ROM Drive	DVD-ROM Drive
2 USB Ports	2 USB Ports	2 USB Ports	2 USB Ports
56K V.90 Modem	2 FireWire Ports	2 FireWire Ports	2 FireWire Ports
10/100BaseT Ethernet	Video Mirroring	Video Mirroring	Video Mirroring
Apple Keyboard	56K V.90 Modem	56K V.90 Modem	56K V.90 Modem
Apple Mouse	10/100BaseT Ethernet	10/100BaseT Ethernet	10/100BaseT Ethernet
Mac OS Software	Apple Keyboard	Apple Keyboard	Apple Keyboard
	Apple Mouse	Apple Mouse	Apple Mouse
	AirPort Ready	AirPort Ready	AirPort Ready
	Mac OS Software	Mac OS Software	Mac OS Software

## New 400MHz G4, Dual 450MHz G4, Dual 500MHz G4

400MHz G4	Dual 450MHz G4	Dual 500MHz G4
1MB Backside Cache	1MB Backside Cache	1MB Backside Cache
64MB SDRAM	128MB SDRAM	256MB SDRAM
20GB Hard Drive	30GB Hard Drive	40GB Hard Drive
DVD-ROM Drive	DVD-ROM Drive	DVD-ROM Drive
16MB AGP Graphics Card	16MB AGP Graphics Card	16MB AGP Graphics Card
56K V.90 Modem	56K V.90 Modem	56K V.90 Modem
10/100BaseT Ethernet	10/100BaseT Ethernet	10/100BaseT Ethernet
2 USB Ports	2 USB Ports	2 USB Ports
2 FireWire Ports	2 FireWire Ports	2 FireWire Ports
3 PCI Slots	3 PCI Slots	3 PCI Slots
104x16 Stereo Audio In/Out	16-bit Stereo Audio In/Out	16-bit Stereo Audio In/Out
Apple Keyboard	Apple Keyboard	Apple Keyboard
Apple Mouse	Apple Mouse	Apple Mouse
Alpod Headset	AirPort Ready	AirPort Ready
Misc OS Software	Mac OS iMovie 2	Mac OS iMovie 2





# DCC Technologies

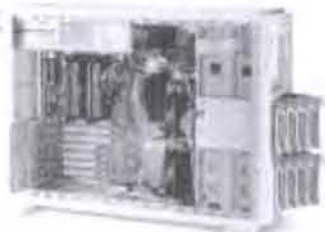


Your digital creation center

## Dual Pentium III Server

**Series Server for serious tasks**

- Intel L440G Dual Pentium III Server motherboard
- Dual Intel Pentium III 600MHz CPU (boxed model)
- 1GB 256MB 66pin EDO PC100 SDRAM DIMM
- Panasonic 1.44MB floppy drive
- ASUS 5in internal CDROM
- Integrated Video card w/4MB RAM
- Integrated Ultra 2 SCSI RAID controller
- Intel SRG21 RAID controller
- Dual Seagate Barracuda 5GB Ultra 168 non-swappable drives
- Integrated audio on board
- Intel SC5000 19" Rackmountable Server tower case
- Redundant 388W Powersupply
- Logitech 2-button mouse and windows keyboard
- Viewsonic 17" digital monitor
- Windows 2000 Server w/5 Client licenses
- 2 Year warranty (Parts & Labour)



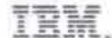
\$2199



## New Products

### IBM NOVISTA(40) All-in-one

- Intel Pentium III 600MHz CPU
- 128MB PC133 SDRAM DIMM (expandable to 512MB)
- High quality 15" TFT screen
- 6X DVD-ROM and 15GB Ultra ATA Hard drive
- Software includes Windows 98 SE, Adobe Director, Freespace II, Lotus SmartSuite Millennium, No-objects Top Page, Outlook 2000 (CEM)



\$2890

### Intel STL Dual Pentium III Serverboard

- Supports dual Intel Pentium III 100MHz 33FSB FPGAs CPU
- Supports up to 4GB SDRAM PC133 ECC SDRAM DIMM
- Support Ultra 160 SCSI drives
- Integrated video, audio and Intel Pro Ethernet on board
- 3 Year warranty



The STL is the ideal solution for dedicated function servers handling Web serving, proxy, caching, security (PC), Collaboration (email/workgroup), Network Attached Storage (NAS), and file/print.

\$899



## Dual Pentium III 933MHz Workstation

**Power workstation for Animation and 3D Graphics**

- Microrstar 694D Dual Pentium III ATX motherboard
- VIA chip set supports UDMA100 and 4MB/s
- Dual Intel Pentium III 933MHz CPU (boxed model)
- Micron 512MB SDRAM DIMM w/SPD EEPROM
- Panasonic LS120 20MB floppy drive
- Plextor UltraPlex40X internal Ultra SCSI CDROM
- 3Dlabs Oxygen GV420 w/128MB RAM and dual monitor support
- Quantum Aries V16S Ultra 160SCSI HD (7,200RPM, 160MB/sec)
- Adopted Ultra 160 SCSI controller
- In-win 24" full tower w/300W Power supply
- Fujitsu 4725 104key keyboard and Logitech 3-button mouse
- Sony Gsm 21 FD digital monitor (24" 2040x1536x75Hz)
- Windows NT Workstation V4
- 2 Year warranty (Parts & Labour)



\$3299

## Realtime Digital video editing Station

**Perfect system for video editing enthusiasts**

- ASUS CUSK-E ATX Pentium III motherboard w/ Ultra ATAIN support
- Intel Pentium III 600MHz CPU (boxed model)
- Micron 256MB Impin PC100 SDRAM DIMM w/SPD EEPROM
- Panasonic 1.44MB floppy and ASUS SOX internal CDROM
- Micron G400 Flea 3DAGP Video card w/32MB RAM
- Marrox RT2000 realtime video capture system
- Maxtor DiamondMax Plus 20GB Ultra ATA100 system drive
- Promise Ultra ATA 100 RAID controller
- Dual Master DiamondMax Plus 20GB Ultra ATA180 video drive
- Creative Labs Bl 128 Photo card
- In-win 0500 24" full tower case w/300W Power supply
- Microrsoft 2-button infrared mouse and infrared keyboard
- Windows 98 Second Edition w/CD and manual
- CIX PR90R9 flat screen digital monitor
- 2 Year warranty (Parts & Labour)



\$2290

## 3D & DV hardware

3Dlabs Oxygen GV420	205
3Dlabs Oxygen GV420 w/128MB RAM	205
3Dlabs Oxygen GV420 w/256MB RAM	210
3Dlabs Oxygen GV420 w/512MB RAM	215
3Dlabs Oxygen GV420 w/1GB RAM	220
3Dlabs Oxygen GV420 w/2GB RAM	225
3Dlabs Oxygen GV420 w/4GB RAM	230
3Dlabs Oxygen GV420 w/8GB RAM	235
3Dlabs Oxygen GV420 w/16GB RAM	240
3Dlabs Oxygen GV420 w/32GB RAM	245
3Dlabs Oxygen GV420 w/64GB RAM	250
3Dlabs Oxygen GV420 w/128GB RAM	255
3Dlabs Oxygen GV420 w/256GB RAM	260
3Dlabs Oxygen GV420 w/512GB RAM	265
3Dlabs Oxygen GV420 w/1GB RAM	270
3Dlabs Oxygen GV420 w/2GB RAM	275
3Dlabs Oxygen GV420 w/4GB RAM	280
3Dlabs Oxygen GV420 w/8GB RAM	285
3Dlabs Oxygen GV420 w/16GB RAM	290
3Dlabs Oxygen GV420 w/32GB RAM	295
3Dlabs Oxygen GV420 w/64GB RAM	300
3Dlabs Oxygen GV420 w/128GB RAM	305
3Dlabs Oxygen GV420 w/256GB RAM	310
3Dlabs Oxygen GV420 w/512GB RAM	315
3Dlabs Oxygen GV420 w/1GB RAM	320
3Dlabs Oxygen GV420 w/2GB RAM	325
3Dlabs Oxygen GV420 w/4GB RAM	330
3Dlabs Oxygen GV420 w/8GB RAM	335
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3Dlabs Oxygen GV420 w/128GB RAM	355
3Dlabs Oxygen GV420 w/256GB RAM	360
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3Dlabs Oxygen GV420 w/128GB RAM	405
3Dlabs Oxygen GV420 w/256GB RAM	410
3Dlabs Oxygen GV420 w/512GB RAM	415
3Dlabs Oxygen GV420 w/1GB RAM	420
3Dlabs Oxygen GV420 w/2GB RAM	425
3Dlabs Oxygen GV420 w/4GB RAM	430
3Dlabs Oxygen GV420 w/8GB RAM	435
3Dlabs Oxygen GV420 w/16GB RAM	440
3Dlabs Oxygen GV420 w/32GB RAM	445
3Dlabs Oxygen GV420 w/64GB RAM	450
3Dlabs Oxygen GV420 w/128GB RAM	455
3Dlabs Oxygen GV420 w/256GB RAM	460
3Dlabs Oxygen GV420 w/512GB RAM	465
3Dlabs Oxygen GV420 w/1GB RAM	470
3Dlabs Oxygen GV420 w/2GB RAM	475
3Dlabs Oxygen GV420 w/4GB RAM	480
3Dlabs Oxygen GV420 w/8GB RAM	485
3Dlabs Oxygen GV420 w/16GB RAM	490
3Dlabs Oxygen GV420 w/32GB RAM	495
3Dlabs Oxygen GV420 w/64GB RAM	500
3Dlabs Oxygen GV420 w/128GB RAM	505
3Dlabs Oxygen GV420 w/256GB RAM	510
3Dlabs Oxygen GV420 w/512GB RAM	515
3Dlabs Oxygen GV420 w/1GB RAM	520
3Dlabs Oxygen GV420 w/2GB RAM	525
3Dlabs Oxygen GV420 w/4GB RAM	530
3Dlabs Oxygen GV420 w/8GB RAM	535
3Dlabs Oxygen GV420 w/16GB RAM	540
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3Dlabs Oxygen GV420 w/64GB RAM	550
3Dlabs Oxygen GV420 w/128GB RAM	555
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3Dlabs Oxygen GV420 w/256GB RAM	710
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3Dlabs Oxygen GV420 w/2GB RAM	725
3Dlabs Oxygen GV420 w/4GB RAM	730
3Dlabs Oxygen GV420 w/8GB RAM	735
3Dlabs Oxygen GV420 w/16GB RAM	740
3Dlabs Oxygen GV420 w/32GB RAM	745
3Dlabs Oxygen GV420 w/64GB RAM	750
3Dlabs Oxygen GV420 w/128GB RAM	755
3Dlabs Oxygen GV420 w/256GB RAM	760
3Dlabs Oxygen GV420 w/512GB RAM	765
3Dlabs Oxygen GV420 w/1GB RAM	770
3Dlabs Oxygen GV420 w/2GB RAM	775
3Dlabs Oxygen GV420 w/4GB RAM	780
3Dlabs Oxygen GV420 w/8GB RAM	785
3Dlabs Oxygen GV420 w/16GB RAM	790
3Dlabs Oxygen GV420 w/32GB RAM	795
3Dlabs Oxygen GV420 w/64GB RAM	800
3Dlabs Oxygen GV420 w/128GB RAM	805
3Dlabs Oxygen GV420 w/256GB RAM	810
3Dlabs Oxygen GV420 w/512GB RAM	815
3Dlabs Oxygen GV420 w/1GB RAM	820
3Dlabs Oxygen GV420 w/2GB RAM	825
3Dlabs Oxygen GV420 w/4GB RAM	830
3Dlabs Oxygen GV420 w/8GB RAM	835
3Dlabs Oxygen GV420 w/16GB RAM	840
3Dlabs Oxygen GV420 w/32GB RAM	845
3Dlabs Oxygen GV420 w/64GB RAM	850
3Dlabs Oxygen GV420 w/128GB RAM	855
3Dlabs Oxygen GV420 w/256GB RAM	860
3Dlabs Oxygen GV420 w/512GB RAM	865
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3Dlabs Oxygen GV420 w/2GB RAM	875
3Dlabs Oxygen GV420 w/4GB RAM	880
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3Dlabs Oxygen GV420 w/16GB RAM	890
3Dlabs Oxygen GV420 w/32GB RAM	895
3Dlabs Oxygen GV420 w/64GB RAM	900
3Dlabs Oxygen GV420 w/128GB RAM	905
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3Dlabs Oxygen GV420 w/512GB RAM	915
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3Dlabs Oxygen GV420 w/32GB RAM	945
3Dlabs Oxygen GV420 w/64GB RAM	950
3Dlabs Oxygen GV420 w/128GB RAM	955
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3Dlabs Oxygen GV420 w/512GB RAM	965
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3Dlabs Oxygen GV420 w/2GB RAM	975
3Dlabs Oxygen GV420 w/4GB RAM	980
3Dlabs Oxygen GV420 w/8GB RAM	985
3Dlabs Oxygen GV420 w/16GB RAM	990
3Dlabs Oxygen GV420 w/32GB RAM	995
3Dlabs Oxygen GV420 w/64GB RAM	1000

\*\* Please call for other customized configurations.

### D500

Realtime DV editing solution

Connect both your DV camcorder and your PC to edit in real time. No need to stop editing to save. Supports all DV camcorders.

Price: \$1290

### Matrox RT2000

Realtime DV editing solution

Supports compressed or uncompressed DV. Includes real time editing software.

Price: \$1549

### intel: D815EEA

Latest Intel Pentium III 600MHz

Supports up to 4GB SDRAM PC133 ECC SDRAM DIMM

Supports Ultra 160 SCSI drives

Integrated video, audio and Intel Pro Ethernet on board

3 Year warranty

Price: \$219

### OXYGEN GV420

Realtime DV editing solution

Supports compressed or uncompressed DV. Includes real time editing software.

Price: \$2750

### Digital Origin Cinema SDV Studio

Realtime DV editing solution

Supports compressed or uncompressed DV. Includes real time editing software.

Price: \$1850

### dsRiff

Realtime DV editing solution

Supports compressed or uncompressed DV. Includes real time editing software.

Price: \$8590

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 Web: www.dcc.com email: info@dcc.com

**Office Hours :**  
 MON - FRI (10:00am - 6:00pm)  
 SAT (1:00pm - 5:00pm)



# Platform News

Macintosh • Linux • Windows • a lisa • iEmerging Trends

Apple News

## Corel gets Microsoft money Apple previews QuickTime 5.0

### And chance to take part in .Net development

By Justin Siemens

By Tim Verisus

Corel was not only given a financial lifeline from its long-time competitor Microsoft, but a doorway into the new markets the Redmond software giant expects its .Net platform to produce in the next few years.

In early October, Corel and Microsoft jointly announced that Microsoft would be purchasing 24 million non-voting convertible preferred Corel shares valued at some US\$135 million.

Along with the cash infusion, both companies would now work together to develop, test, and market new products built around Microsoft's .Net strategy, which was announced in June.

The cash infusion could not have come at a more crucial time for Corel.

The company posted a loss of \$23.6 million on sales of \$36.6 million in the second quarter, and revenues dropped by nearly half from the same time last year. Adding to the bad news was the continued drop of Corel's stock after the failed merger with Inprise/Borland.

In the wake of that failure, and in an effort to chop some \$40 million from its annual expenses, Corel laid off 320 employees, or some 21 percent of its workforce.

In the end, the continuing problems eventually led to the resignation of Corel's founder and chief executive officer, Michael Cowpland, in August.

Derek Burney, Corel's then chief technology officer, stepped in to assume Cowpland's role.

While things improved somewhat by the third quarter, with a reported net loss of only \$0.7 million on revenues of \$36.4 million, the company continued to struggle and began putting out feelers for possible investors. That was when Microsoft came knocking.

Rob Enderle, vice-president of desktop and mobile technology with the Giga Information Group in Santa Clara, Calif., says the reasons Microsoft stepped in to help Corel were personal as well as strategic.

"The old president of Corel [Cowpland] was extremely anti-Microsoft and went down the path of trying to do whatever he could to build hardware in order to take on Microsoft," Enderle says. "And we have seen with a bunch of other firms in



existing desktop applications for Windows and allow them to run on the Web or the network. From a customer's perspective, they don't really gain much of an advantage because it is very much the same application and it really does not matter where it is running. But if you were to imagine that the application was developed so that only some of it runs on the desktop and calls into services on the Web, then you start to capture some of the power of the Web. The .Net framework will allow us to develop our applications along that paradigm."

Kevin Restivo, an analyst for Toronto-based International Data Corp. (Canada), says the alliance with Corel will add greater legitimacy to Microsoft's .Net strategy since an important key to its success is whether it can bring well-known application developers on board.

"Any software platform needs developers and .Net, being as young as it is, needs to show that momentum and this is the first step," Restivo adds. "For Microsoft specifically, it

now gives them access to a development team that will help them in terms of their .Net platform. These are developers who can write the kind of code and have the abilities that will help them push the platform."

But there may be other reasons for the alliance, beyond just Microsoft wanting to up its ante in the long-term business strategy. Buried in the joint release both companies gave out to the press is a cryptic line saying that the alliance also settles certain legal issues between Corel and Microsoft.

The release did not go into any detail as to what those legal issues have been.

Giga's Enderle suggests that these issues could be related to Microsoft being accused of anti-competitive behaviour by other software developers. With the recent U.S. Department of Justice ruling against Microsoft, it has certainly given ammunition to go after Microsoft. And with the appeal of that ruling still pending, anything negative that might happen to a Microsoft competitor could come back to haunt the company.

"Microsoft was looking at two bad events," Enderle adds. "If Corel failed during the appeal process, it would not help their appeal. If Corel sued them during the appeal process, that also would not help. Both firms were looking at two bad events."

Justin Siemens is a Macintosh IT specialist based in Vancouver, B.C. He can be reached at [jsiemense@msn.com](mailto:jsiemense@msn.com)

## Apple previews QuickTime 5.0

Apple has released a preview version of QuickTime 5.0, which is available for download now from its web site (<http://www.apple.com/quicktime>). This version sports a new interface (which is the same as found in QuickTime for OS X), as well as several new codecs, including Flash 4, Cubic (QTVR) and Shoutcast (streaming MP3). A new feature called Skip Protection, which works in conjunction with QuickTime Streaming Server 3 to minimize dropped frames and speed up downloading QuickTime feeds over the Internet. The QuickTime player is still a free download, but if you want to upgrade to editing capability you need QuickTime Pro, which is available for US\$29.99 and can be downloaded from the Apple web site. If you own any previous version of the Pro 5.0 version you will automatically receive the Pro 5.0 version when you upgrade. The final version is due the new year.

**Office: Nov 2001 available**  
Office 2001 for Mac, which Microsoft has renamed Office Mac 2001, is now available at a special price for Mac users. The new version features many improvements including a more modern Mac-like interface and a full version of Microsoft's Exchange client called Entourage. Office Mac 2001 also features better compatibility with versions of Office and with older versions of Office for Mac. The file format in this new suite is fully compatible with Office 2000 for Windows without requiring translation. Also, Excel 2001 can communicate directly with Outlook for exchanging data between spreadsheet and database systems. The suite is US\$299 for an upgrade, and US\$499 for new users. <http://now.mirc.com/office>

**Powerbook and G4 Cube rebates**  
Effective until Dec 31, Apple Canada is offering rebates on 63 Powerbook and G4 Cube lines of Power Macintosh computers. If you purchase a Powerbook between now and the end of the year, you will receive a rebate from Apple. Your choices include the 400 Mhz model with 64 MB RAM, 1068 hard drive, and a DVD drive, or the 500 Mhz model with 128 MB RAM, a 20 GB hard drive, and a QVO drive. If you purchase a Power Mac G4 Cube with an Apple display before the end of the year, you will receive a rebate from Apple. The Cube will receive a rebate of \$450 back from Apple. The rebate will be available only in a 450 MHz, with 64 MB RAM, 20 GB hard drive, unless you order from the Apple store, in which case you can configure it yourself. Displays included in the rebate offer are the 15-inch LCD Studio Display, the 17-inch CRT Studio Display, and the 22-inch LCD Cinema Display.



## X'mas Special

### Duron 600+S System

- 1Gigabyte 1K Motherboard
- 64M PC133 SDRAM
- 32M AGP Video Card
- Panasonic 44M Floppy Drive
- 10G ATA66 Hard Drive
- 48X CDROM / 3D Sound
- 56K V.90 PC Voice / Fax Modem
- Keyboard / Mouse / 140W Speakers
- One year or three year labor warranty



\$709

### Networking Combo Sale

- 2x DLink 530TX + 10ft RJ45 Cable = \$45
- 2x DLink 530TX + 2x 10ft RJ45 Cable + 1x 5Port HUB = \$73



Prices are Cash / Interac discounted. Price and availability subject to change without notice. All merchandise is sold on "as is" basis. Microsoft, Intel, IBM, and other brand names are trademarks of their respective owners. We cannot be held liable for any errors or omissions. We do not accept return on special order items.

## Super Buy

- PS2 Keyboard / Mouse Combo.....\$15
- 17" 224 75V Samsung Monitor.....\$239
- 19" 225 BGLR ADC Monitor.....\$359
- 15" LCD Monitor / Proview PT500.....\$849
- Panasonic 8432 CDRW / EZ CD Creator.....\$210
- Samsung 5100 Subwoofer / Speakers.....\$49
- 5 Port 10Mbps Ethernet HUB.....\$27
- 16x Pioneer DVD.....\$169

All systems are backed with 3 years labor & 1 year parts limited warranty plus one month free Internet.

### Home Office

- Celeron-600 \$579**
- Pentium III 133mhz Motherboard
  - 64M SDRAM
  - 32M TNT2 AGP x4 Video
  - Panasonic 44M Floppy Drive
  - 10G ATA66 Hard Drive
  - 40X CDROM
  - 3D Sound for 4 channel Speakers
  - 56K V.90 Voice / Fax Modem
  - Keyboard / Mouse / 140W Speakers
  - Free Anti-Virus, WordPerfect etc.

### K7 Master

- Thunderbird 700 \$989**
- 70-800.....\$1029
  - 70-900.....\$7009
  - Asus A7V Motherboard
  - 120M PC133 SDRAM
  - 32M AGP Video Card
  - Panasonic 44M Floppy Drive
  - 20G ATA66 Hard Drive
  - 52X CDROM / 3D Sound
  - 56K Voice / Fax Modem
  - Keyboard / Mouse / 140W Speakers

### PIII Partner

- Celeron 600 \$659**
- PIII-733.....\$679
  - PIII-800.....\$859
  - Pentium III 133mhz Motherboard
  - 64M PC133 SDRAM
  - ATI SM AGP Video Card
  - Panasonic 144M Floppy Drive
  - 10G ATA66 Hard Drive
  - 48X CDROM / 3D Sound
  - 56K V.90 PC Voice / Fax Modem
  - Keyboard / Mouse / 140W Speakers

### PIII Commander

- PIII-733 \$1019**
- POI-600.....\$7059
  - POI-933.....\$7309
  - Asus CUV4X 133mhz Motherboard
  - 120M PC133 SDRAM
  - 32M TNT2 AGP Video Card
  - Panasonic 144M Floppy Drive
  - 20G ATA66 Hard Drive
  - 52X CDROM / 3D Sound Card
  - 56K V.90 PC Voice / Fax Modem
  - Keyboard / Mouse / 140W Speakers

### Dream Machine

- Thunderbird 1000 \$2579**
- Abit KT Motherboard
  - 256M PC133 SDRAM
  - Asus V7100 GeForce2 DDDR
  - Panasonic 44M Floppy Drive
  - 40G 7200rpm HDD
  - Plextor 12x10x32x CDRW
  - 16x Pioneer DVD / SB Live Value
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### PLATFORM NEWS

**Corel gets money**  
 Continued from page 7B

were looking at a set of events that were not as attractive for either one of them. So they Linux development, Microsoft gets to tap started chatting about it and the amount of money needed for Corel was not exorbitant and a platform that has been dubbed the Microsoft killer.

There may be another reason as well that Frank Glegg, president of Microsoft Canada Co. in Mississauga, Ontario dismissed such suggestions. "The .Net investment is about Windows and that is in Linux."

While Microsoft has not made any over and the common core is the XML standard. It is not about Linux, but about the growing popularity of Windows on XML. Corel can decide if they and Linux and its importance to the Internet want to go and invest in a bunch of time.

It is expected that the operating system Clegg is also surprised that much has been made out of the cryptic line in the joint release about the legal issues. He says that on the application and development software there were no outstanding or pending legal side of things. Linux will generate some issues between the company.

US\$90.2 billion in revenues by 2004. In fact, what they wanted to avoid was a will have to rely so heavily on the Internet team working together. All the alliance does is nip any such success since Linux is used to create applications the bud right away.

Microsoft is also made that since .Net problems in the future that might arise will have to rely so heavily on the Internet team working together. All the alliance does is nip any such success since Linux is used to create applications the bud right away.

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 Travel Intelligence is the world's first online publishing platform for travel writers. The platform allows travel writers to host and syndicate, both online and offline, premium travel writing from the best English language travel writers from around the world. The founder of the service is A.A. Gill, of The Times, who said that the portal has already signed up 60 respected travel journalists including William Dalrymple, Nick Caiazza, Jeremy Seal, Vitali Vitaliev, Oea Birkett, Sara W... and others.

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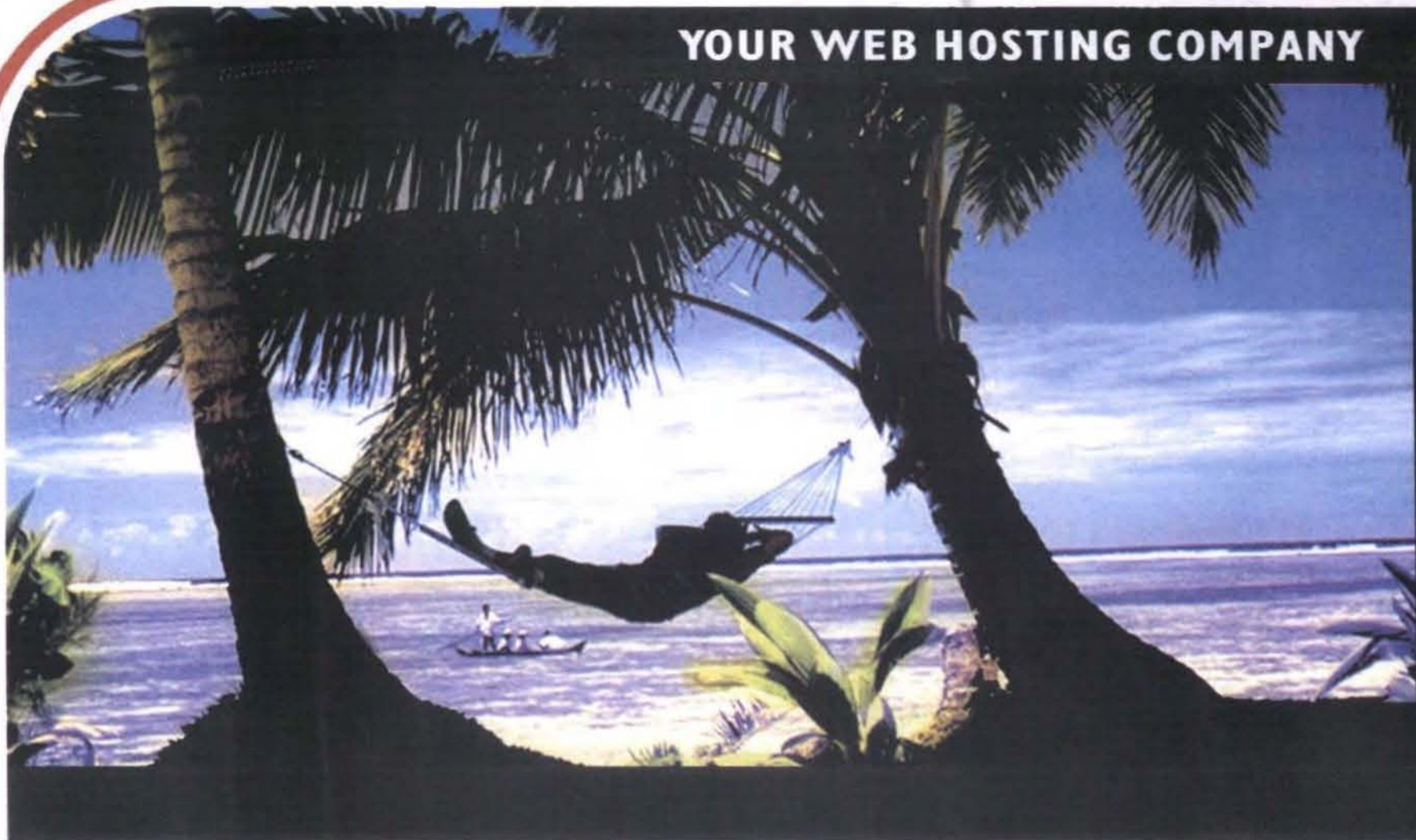
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€ HANDS ON w

**Lab Test: glacially handy!**

Continued from page 74

The 780 is well-suited for life on the road, with a built-in 56Kbps V.90 fax modem, allowing you to connect wherever you have access to a phone line. There's a PC Card slot on the right-hand side of the machine, and a Type 11 CF slot on the front, allowing more flexibility for both expansion and backup. There's also a VGA adapter, allowing you to hook it up to an external monitor for doing presentations, for example.

Although the nearly full-sized keyboard makes it easy to use, there are a few other features that make it even easier. A series of on-



touch application launch buttons will take you to email, Explorer, calendar, contacts, your task list, Pocket versions of Word, Excel and PowerPoint, as well as the voice recorder,

and calculator. There's also a jog wheel located just under the screen, though it is limited to up/down scrolling, even in cases where left/right would be more appropriate (in other words, you can't use it to scroll through all of the files in an open window, just those that are on top of each other).

The MobilePro 780 comes with a proprietary Lithium Ion battery, which recharges when the unit is plugged in. Although it doesn't have a synchronization cradle, it connects to the desktop PC with the included serial cable.

Even with the slightly older version of the operating system, the MobilePro 780 is a

**Palm m100**

From Palm, Inc.

http://www.palm.com

Suggested retail price: \$229



The price advantage of the Palm recently took a challenge from Handspring, which introduced its own Palm OS-based handheld, the Visor, at a lower price point than any of the Palm models. To counter the Visor challenge, Palm introduced the m100.

The form factor has been updated, and though it's bulkier than the Palm V, it's more stylish than the squared-off Palm m-series. Like most of its Palm siblings, the m100 has a monochrome screen, which is smaller on this unit than on other Palms. Like earlier versions of the Palm, the m100 has 12 MB of onboard memory, which should be adequate for most entry-level users. Those who want to install a lot of third-party applications, or who have extensive data-entry needs, should consider the move up to an 18 MB model elsewhere in the Palm line.

The m100 features some things not on the rest of the Palm line. In addition to a slightly redesigned button selection, it features a hinged Dip cover that protects the screen with a little cut-out window that shows the time even when the machine is off. Another feature with the m100 is the replacement of the full synchronization cradle with a serial HotSync cable, which helps to keep the cost low and doesn't substantially change the way you sync your Palm with the desktop.

One nice touch with the m100 is the inclusion of the infrared port, despite the machine's lower price point.

The Palm m100 uses two standard AAA batteries for power. It is compatible with Windows 95, 98, NT, and 2000 desktops.

(Note: Though the m100 does not ship with Mac compatibility, a PalmConnect USB kit is available for US\$39.95. It includes a USB-to-serial port adapter, Mac and PC USB software, and a Mac version of the Palm Desktop. For compatibility with older Apple hardware, a Mac serial adapter kit is available for US\$14.95.)

**Palm 100g**

From Palm, Inc.

http://www.palm.com

Suggested retail price: \$499

The Palm line of handheld computers is still sitting at the top of the heap in terms of units purchased and used. It's easy to see why: compared to Windows-based solutions, the interface is exceptionally easy to use and very responsive. Despite these benefits, one area in

Continued on page 92

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# Tech Enterprise

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## Is anybody there?

### Web vendors' service lags behind customer expectations

By Stefan Dubacki

Industry observers say IBM Corp. (<http://www.ibm.com>) is heading in the right direction with its phone-based customer service feature on its retail Web site — but our insiders wonder why others don't mimic this computer company's lead.

"I think it's ridiculous," said John Mozas, vice-president of the Toronto online grocery store, Grocery Gateway (<http://www.grocery24aie.waycom>). "The relationships you can create through ear-to-ear contact are unbelievable."

Earlier this year IBM unveiled its Call Me Now button, which it displays prominently on its product pages. Need to know more about the ThinkPad 600 notebook? Click Call Me Now, enter your name and phone number... and wait.

It takes approximately 10 minutes, by our count. IBM claims an average of 30 seconds for a return call.

"We've all been in those situations where we've done things on the Web and when we move to the phone service, we have to repeat information," said Dave Ball, an IBM.com executive. Call Me Now and other IBM initiatives were designed to reduce redundant information.

IBM wanted to bring telephone, online chat, and email customer service together. No matter how you call, you'll get an answer, Ball says.

For example, let's say you want to know about software packages for your ThinkPad. Our representative can... push you to the right page, Ball said. So long as IBM has the information at hand (read: industry watchers say By accounts it's on the Web site), its reps can send pertinent news.

IBM isn't alone — but it's part of a study commissioned by First Direct, a



U.K.-based telephone and Internet bank. Jupiter describes an abysmal online customer service landscape: Most (80 percent) online shoppers remain dissatisfied with the level of customer service they get from e-commerce.

Continued on page 86

## Microsoft, Compaq, Intel back Canadian dot-corn start-ups

TORONTO— Microsoft Canada has announced a program to help fledgling Canadian dot-com companies turn their business plans into reality, in partnership with Compaq Canada Inc. and Intel Canada Ltd. The speedstart program will revolve around a technology centre in downtown Toronto where startups will use technology from the three companies to prototype and test their ideas.

The Toronto facility is similar to one Microsoft has already opened in Boston, and Frank Clegg, president of Microsoft Canada, said at a Toronto press conference in October that he hopes to see two more such centres in Canada in the next year or so. "You should expect us, if we're re-doing this properly, cover Canada," Clegg said. "There'll be something in the east and something in the west."

Microsoft also has plans for similar facilities in Austin, Tex., and Chicago in the next few months.

The Toronto facility includes three separate work areas for dot-com companies, with computers, telephones, and network connections. These share access to a server room, and the facility can be used for load-testing prototype Web sites before they go live. The three companies will provide technical support along with consulting services and expertise to help participating dot-coms develop their businesses. The location also includes a sizable software library of off-riat said.

The facility, located in a Microsoft technology centre, is the core of the program, but "the program is a lot more than this centre," said David Booth, president and managing director of Compaq Canada. There are also a Web site (<http://www.speedstart.com>), and an assortment of services for participants.

The basic level of participation costs nothing, and includes access to a large assortment of information, Clegg said. At the next level, for \$2,000 per month, startups gain access to the Microsoft Development Network package. Additional services are available for... Continued on page 89

### Totally Wired: Part I

## E-commerce tomorrow means living in a world of intelligent, networked machines

By Jeff Evans

The keynote speech at the NCR Global Partners conference in Orlando this fall was an eye-opening vision of the future from Pattie Maes from the Massachusetts Institute of Technology's (MIT) Media Lab (<http://www.media.mit.edu>).

Maes (pronounced mawz) is touted as one of the up-and-coming talents involved in conceiving the technologies for the next generation of digital living and working. According to Maes, the real revolution has yet to start

and it'll be driven by data warehousing, personalization technologies, wireless network-

minor, fairly significant or the Sig One? The 3,000 mostly information technology professionals in the audience massively voted for the last option: we ain't seen nothing yet. Maes agreed, saying that the Internet is changing everything, levelling everything of the old world order, and allowing new structures to be built.

Privacy will be a major concern, but if the technologies are properly used, and backed up by well-drafted laws, consumers could gain their power increases relative to the power currently enjoyed by big corporations. Maes opened her remarks by asking the audience, "If the internet were an earthquake,

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Is anybody using?

Continued from page 84

- Even more (90 percent) customers say they want an "integrated service": telephone connections, email options, Web

pages that answer frequently asked questions (FAQs), all of the above, and then some.

Only a third of customers recommend e-stands within that handful of Internet commerce firms to friends and acquaintances. Good news by word of mouth

said to boost sales.

First Direct (<http://www.firstdirect.co.uk>) enterprises with all communications routes open, says Sarah Ring, the U.K. bank's public relations manager.

"If the customer is online, online is the preferred route of connections. Of course, there are always times you can't connect. It's really reassuring to know that we go beyond the Internet."

First Direct's call centre is staffed 24 hours a day, seven days a week.

"I think part of the problem is the incremental costs of going from 70 percent to 90 percent," he said, referring to the price of making sure 90 percent of customer calls are answered in a reasonable time.

Heing better bridges to customers, Mozas cost becomes very steep.

Why? Because many call centre employees would have nothing to do in the middle of the day. But for Mozas, it's worth the price.

What better way to impress your clients than by turning frowns into smiles? Headline a telephone number to your Web page, Ring said.

"You're upset and we just messed up your order. If I can hire a customer representative who can calm you down and make you happy, you'll remember that."

Ball agreed. "When you're looking to meet or exceed your customers' expectations, when you delight the customers, they come back and they buy again."

If IBM has the right idea, so does Compaq Canada Inc. (<http://www.compaq.com>). This computer builder recently said it

would hire 200 new employees for its Nepean, Ont. call centre.

Compaq says this expansion will cost \$8 million. That includes 5,000 more square feet to accommodate 1,200 customer service representatives and 110 technicians.

This centre is dedicated to Presario notebook computers.

Specialization matters too, according to Ball. ISM's reps each have a specialty, be it desktop or notebook computers, personal digital assistants or printing systems.

But it hasn't been easy, Ball said. The most difficult piece was scaling the solution.

North America has access to expert advice no matter how contact is made.

It's not just the computer people building better bridges to customers, Mozas notes.

Land's End Inc. (<http://www.landend.com>), which returns calls quickly, and Webvan Group Inc. (<http://www.webvan.com>), which has a philosophy similar to Grocery Gateway's.

Improved customer service is as easy as heading a telephone number to your Web page, Ring said.

"That's my biggest bugbear, email with no phone number. It's closely followed by being shuffled around by voice mail."

Voice mail, like email, is where customer questions go to rot, Mozas said. And queues can be even worse. He once waited 15 minutes on the phone to speak to a company representative (he wouldn't say which company). As frustrating as it was, Mozes actually lucked out. Complaints of lengthy wait-times abound, as in

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**Microsoft, Compaq, Intel.**

Continued from page 84

additional fees as needed. The plan appears to be that startups will occupy space in the speedstart facility for a fairly short time — as little as a week — their technology before launch.

The first occupant is eDrugstore.ca, a startup that hopes to launch a nationwide online drugstore this fall, that includes prescription and non-prescription products, along with access to pharmacists and other services.

Michael Burns, president of eDrugstore, said at the speedstart launch that he has been impressed with the access to expertise and technology that the program has provided his company, which has moved development staff into the facility.

He hopes speedStart will help eDrugstore avoid typical launch problems. "We're going to be able to work through and test the system before we launch to make sure that we can fulfill the promises that we make."

Brett Udashkin, regional manager of Intel Canada, said dot-coms are facing a less forgiving business climate than they did before the meltdown in Internet stocks last March. "The rules of business big business are back in vogue," he said. This means startups need to reach profitability as quickly as possible and without spending excessive amounts of cash.

Startup funding is not a central part of the program, but Booth noted that Compaq has created a US\$1.1 billion investment fund for Internet startups, and the Canadian subsidiary will be responsible for administering this in Canada.

For the three backers, the project is clearly a bid to get as many dot-com startups as possible to develop their projects using Microsoft software on Compaq hardware with Intel technology inside. "Make no mistake about it," Booth said. "This is a competitive weapon for us to go after people like Sun Microsystems Inc.]"

—Alyssa Byes

**Is anybody there?**

Continued from page 86

45 minutes to an hour.

Grocery Gateway prides itself on always answering the phone. This company even posts a number on the Web site for its chief executive officer.

We asked Ball why he thought other startups weren't following IBK's footsteps. "Bui he didn't take the bait."

"We prefer to set the bar, rather than pay attention to the industry standard."

We wanted to get Kimberly Williams' opinion on the current state of customer service for Internet shoppers.

Williams is an executive with R.R. Donnelley and Sons Co., a communications company.

We tried to contact her via email to a subsidiary, Red Rover Digital (http://www.redroverdigital.com).

"Here's a small test," we wrote like you folks get me in touch with her before 12 p.m. Eastern Time? Time is the essence and it speaks to your own customer service readiness."

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Continued from page 82

which Windows handhelds had an edge was in the world of colour. Enter the Palm III, which adds colour to the popular Palm III line.

The 8 MB Palm IIIc has the same basic configuration as other members of the Palm family, including one-touch access for calendar, contact, to-do list, and memo pad. Soft buttons along the side of the Graffiti pad access the calculator, the Palm's main page, the pull-down menu, and the search option. There are also two buttons for scrolling through documents and menu options.

So, how's the screen? To be honest, the 160x160-pixel resolution of the display puts it on the grainy side. Unfortunately, this makes items on the screen a bit indistinct and may actually be hard on the eyes for



extended use. For short bursts, though, it should be just fine for most users.

The Palm IIIc comes with a serial-port synchrocradle, which is pretty much screen, including contacts, agenda, email, standard issue with the Palm line. (As with all home, a world calendar, calculator, jotter, Palm hardware, though kits are available sep-infrared send and receive, zoom, cut and arately to expand the Palm IIIc's connectivity paste, and pull-down menu. Each application options. See note under Palm m100 review.) has a special bar along the right-hand side c

This model features an internal Lithium the screen for application-specific options. In lon battery, which is recharged while the unit addition to these one-touch items, you also is in the cradle.

Overall, the IIIc makes a nice addition to database and spreadsheet software, as well as the Palm line, and the recent price drop make it even more attractive to those who aren't prepared to jump to Windows to get a dose of colour.

**Palm Revo Plus**

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If you've looked at the review of the Diamond Mako, you've seen the Revo Plus, the model on which the Mako is based. (In fact, they're exactly the same hardware, but with different logos.) That should tell you something about the Revo Plus: it's a handheld worth a little more.

Although it ups the memory from 8 to 16 MB, the Revo Plus uses the same design as the slightly older Revo model, which is a very compact clamshell design with a miniature keyboard. Owing to an innovative sliding hinge design, the Revo actually seems quite a bit larger once opened up. The 480x160-pixel screen is monochrome, but the wide design makes it more suited to writing than the narrow palm-size models also on the market. The small keyboard may take a bit of getting used to, but you can get fairly speedy using some of TCP's readers may remember the two-thumb hunt-and-peck style of data entry. It has a number of one-touch application



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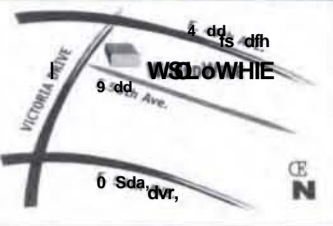
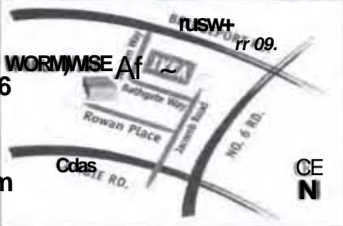
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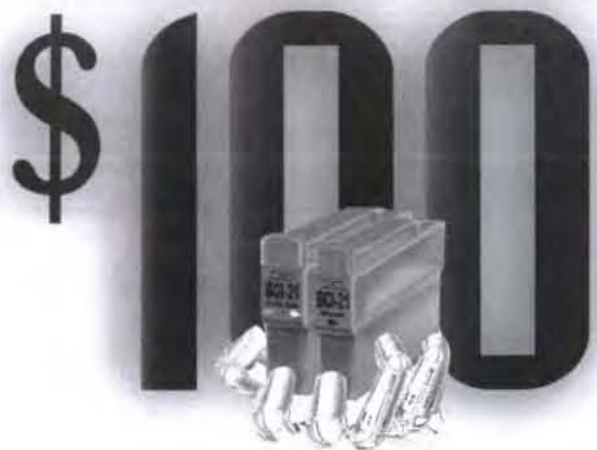
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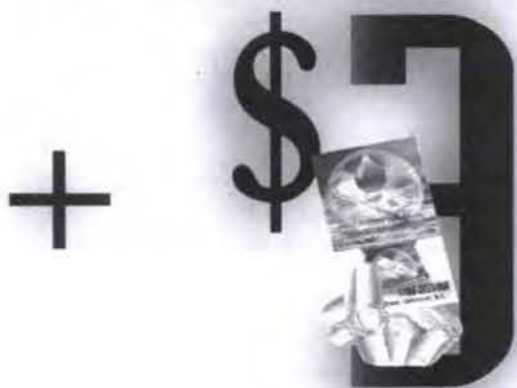
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### < HANDS ON a kab year slow handy!

Continued from page 92

ogy, and has plans to take it in a slightly different direction. In the meantime, the trusty old Rex Pro has been re-released under the Xircom banner as the Rex 5001L.

When compared to other devices reviewed this month, the Rex is the odd unit out, as it doesn't accept stylus or keyboard input. In fact, when on the road, all input is entered using a combination of six buttons, which forces the user to scroll through a series of menus, and select letters one by one. Needless to say, this is tedious if you have much data to enter.

Luckily, this isn't the way the device is meant to be used. The Rex 5001L is the size of a PC Card. It slides into a PC Card slot on a notebook computer when you need to synchronize your data. In other words, you're supposed to enter all your daybook and contact list data into your notebook, synchronize it with the Rex, then use the small device to access that information while you're on the road.

While it's not as fully featured as the other handhelds reviewed, its incredibly small size (about the size of a stack of ID to 15-business cards) makes it exceptionally easy to tuck in a pocket. It even comes with its own soft folder case, which has room for business cards. It's also less expensive than the other units we looked at this month. For those who don't require a device capable of extensive manual input, the PC Card compatible Rex could be a great alternative.

The Rex also comes with a serial port docking station, for those who don't have a notebook PC. The unit is compatible with Windows 95, 98, and NT, and should be compatible with 2000, as well.

The Rex uses two CR2025 watch battery which provides several months of use.

## Editor's Choice:



### Handspring Tizen Wense

After a slow entry into the Canadian market (a year after the product's U.S. debut), the Handspring is now ready to give the rest of the handhelds on the market a run for their money. Why? It's relatively inexpensive, simple to use, and one of the most flexible devices going, owing to the Springboard slot on the back. Even better, it uses a USB synchronization cradle, making it one of the only handhelds to sport Mac compatibility in addition to yep, oldie Windows right out of the box. It's hard to ask for more from a handheld apart from maybe a colour screen, and that's coming. CJ

### DVD for Christmas?

More and more people are upgrading or replacing their CD-ROM drives on their desktop and notebook PCs with DVD drives because of recent changes in the DVD market (and, yes, DVD drives can read all CDs). Some of the more compelling reasons to consider DVD include:



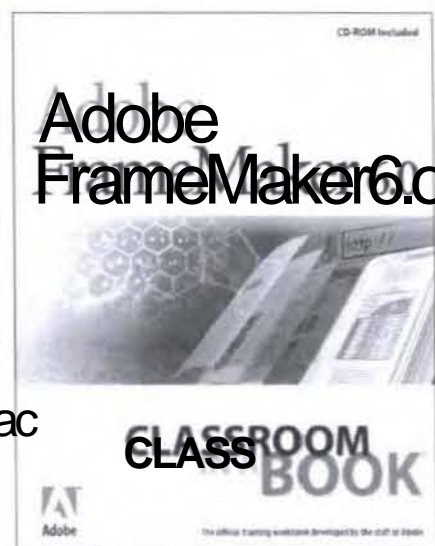
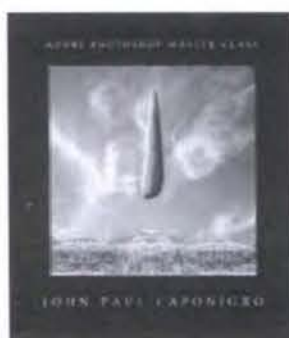
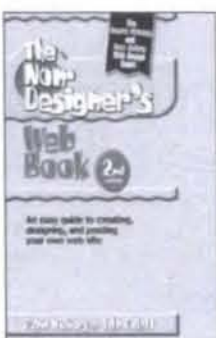
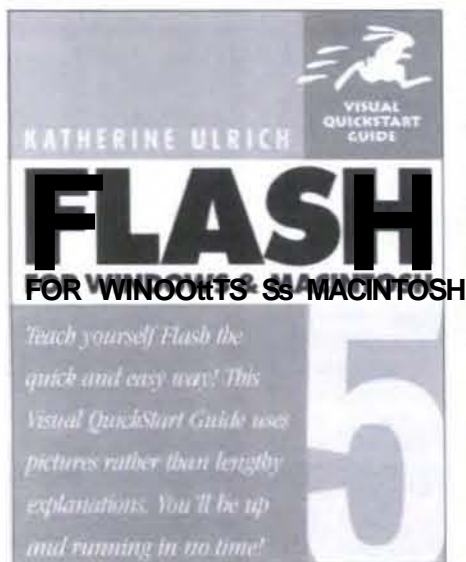
- More movies are coming out simultaneously on DVD and video, with the DVD versions offering extra goodies like directors' cuts and behind-the-scenes interviews.
- More developers are releasing software on a single DVD that used to require multiple CD-ROMs. For example, Microsoft's Works 2001 Suite on DVD (which includes the latest versions of Works, Word, Entarta, Streets 5 Trip, PictureIt, and Money) can take advantage of Windows Installer in Windows ME or Windows 2000 for dynamic loading of files and resources when needed. The CD-ROM version of the suite comes on six discs.
- As with software applications, encyclopedias which include timelines, 360-degree panoramic views with hyperlinks, other images, maps, and interlinked stories etc. become invaluable when stored on DVD rather than five to seven CDs. We can heartily recommend Encarta 2001 and World Book 7 to DVD.
- Documentation of huge systems like Visual Studio or SQL Server is now available on DVD rather than spread over literally dozens of CDs.

— Jacques Suvever

### BWanted relaunches

NB— Reverse auction site eWanted has launched a redesigned site incorporating more of what was demanded by its members: more functions and "category-specific" content. The revamped site gives members enhanced reverse auction programs and is "a more fun, colourful site with enhanced and efficiency." Changes were made to the site after several months of gathering and analyzing member feedback. The site relaunch features "easier site navigation, updated categories and sub-categories, category specific news and information, and improved customer service," the company said. eWanted also is introducing an upgraded seller tool, Early Bird Notification, which directly leads to relevant and ready-to-purchase buyers by category, subcategory, region and keyword. <http://www.ewanted.com>

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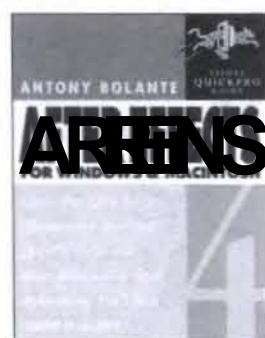
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Looking for talent to build that killer Web site? A Toronto company thinks it has the solution.

Brainbanx.com (http://www.brainbanx.com) is offering a one-stop shop to those looking for experienced Web and e-commerce site creators and designers.

Brainbanx.com has some 200 qualified companies and experts now available through an online accessible database listing everyone from Web page designers to full-service Internet shops.

"We have companies that range from individual freelancers who may already have full-time jobs elsewhere, to 100-person Web development shops who are registering with Brainbanx.com to find new projects," says Andrew White, chief operating officer for Brainbanx.com Inc. in Toronto. The skills range from consulting e-business IT services, multimedia programming, technical Web page design and everything from content management to copyediting. Pretty much anything within the realm of Internet site building and e-commerce development.

White says the goal of Brainbanx.com is to make it easier for companies to outsource the necessary skills and expertise needed to put together a successful Internet venture or e-commerce site. (It is very rare to find a company that can do everything that needs to be done on a project internally or to find a single outside company to do everything. It is more common to work with several companies in order to get a large-scale Internet or commerce project off the ground.)

"A good Web site or e-commerce site is a lot more than the HTML coding," White adds. "Therefore we are trying to make it easier for a company looking to develop their Internet presence to find a professional [copywriter], a professional artist/graphic designer or transaction processing expert."

Currently, the Brainbanx.com service is free.

The site allows people not only to search for available expertise, but also allows for companies and individuals to post information about their qualifications, examples of their work and any relevant literature or contacts that they believe potential clients would be interested in.

Brainbanx.com also offers to assist in RFP (request for proposal) services, project scoping and needs analysis. It can also take over company's administrative work in finding and coordinating the necessary outside talent, especially if a client thinks it cannot do so for itself.

"The client pays Brainbanx.com and we subcontract the necessary work to members that are in our network," White says, claiming "the cost of Brainbanx.com is much lower than one of the traditional big Web development shops."

—Tom Veneris

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# Canadian companies lead world in IT improvement plans study

By Tessie Freeman

Canada's chief executive officers (CEOs) are clear on what issues they think businesses should focus on and continue to enhance: IT and e-commerce.

According to the CompassWorld IT Strategy Census 2000, they feel more strongly about this than CEOs around the world.

"I think the conclusion drawn with regards to Canadian CEOs spells the end

of the hype around e-commerce," said Howard Davies, senior vice-president at Compass Management Consulting/CEOs are more interested in delivering e-commerce than communicating the benefits of it."

Of the surveyed Canadians, 71 percent ranked improved IT performance as a definite key to success in business, compared to 40 percent of the global CEOs polled.

Seventy-six percent of the Canadians also ranked e-commerce strategy as a primary

The average from their counterparts worldwide was 52 percent.

"That suggests Canadian CEOs are further ahead in IT. They're more familiar and more pervasive," said Davies.

Participants were also asked about the contribution of chief information officers (CIOs) today.

According to Davies, the results clearly indicate that CIOs are no longer around the simply provide information on the possibilities of IT, but instead to directly contribute to business strategy.

"The focus in Canada is not about the buzzwords surrounding e-commerce, or the marketing potential of IT anymore. Now the focus is on delivering that and getting more knowledge of customers in the marketplace."

CEOs from Australia, Canada, Denmark, France, Germany, Italy, Norway, Spain, Sweden, the United Kingdom, and the U.S. were polled in the study, conducted by the London School of Business, and commissioned by Compass.

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# E-business changing the rulebook, analyst says

NEW YORK — E-business is revolutionizing the operating model of fast growth companies according to a new report. The study, which forms part of PricewaterhouseCooper's (PwC's) *TrndSrrer Barometer*, said both employees and customers are the primary enablers of change.

For its research, PwC (<http://www.pwc.com>) interviewed the chief executive officers (CEOs) of 441 product and service companies identified in the media as the fastest-growing U.S. businesses over the last five years.

The surveyed companies range in size from approximately US\$1 million to US\$50 million in revenue/sales.

The bottom line to the report is that fast-growth service companies jumped into e-business while their counterparts in the product sector were content to wade.

The study said they took the risk that accompanying operational changes could jeopardize existing relationships with both employees and customers.

But now, just over two years later, the report said, these early adopters are beginning to enjoy the significant operational benefits from their e-business commitment, and are counting their employees and customers as their biggest supporters.

Viewed separately, PwC said that service companies expect to generate 21.8 percent of their revenue from e-business over the next 12 months, versus just 1.3 percent for their product sector counterparts, or

around 2.5 times more. H. Lee Durham, PwC's operations manager, said product sector businesses have been understandably reluctant to disrupt long-standing ties with direct customers and suppliers.

Against this, he added, service businesses have fewer of these constraints, and consequently have been more welcoming.

Interestingly, PwC's report notes that service sector CEOs say e-business has brought remarkable changes to their business, improving efficiency (cited by 64 percent), their approach to customer service (53 percent), employee skill sets (53 percent) and business processes (51 percent).

Other important changes include new delivery systems for products or services (46 percent), additional revenues generated (45 percent), increase in number of customers (45 percent) and development of new products or services (45 percent).

According to Durham, e-business has had a revolutionary impact on these service companies.

"The incidence and depth of these changes is all the more remarkable, considering the average time in operation for e-business in these particular companies is only 25 and a half months," he said.

When asked to assess factors that will have an impact, positive or negative, on their e-business projects over the next 12 to 18 months, the report found that customers and employees again play a leading role.

PwC said the majority of CEOs from

service companies cite customer or user adoption (64 percent), support (64 percent); ability to adapt new or existing products and services to the e-channel (62 percent); adoption by their own employees (58 percent); systems security (51 percent); and network performance (50 percent).

Durham describes this by saying that e-business entails a high degree of flexibility and willingness on the part of both business and the customer to experiment.

This, he noted, is a scenario where **everybody wins.**

—wsby/es

## Retail Council of Canada ensures UR digitally enabled

By Stefan Bubowsbg

The Retail Council of Canada (RCC) says it knows what it takes for businesses to go UR—and, with a new suite of services, this organization wants to share that knowledge.

Recently RCC unveiled its UR services. According to Michael Eubanks, the group's vice-president of information technology and e-commerce, RCC has heard the hue and cry of retailers trying to go digital.

"We have identified the core hurdles that online retailers must address, and we have responded with solutions that will save them time and reduce their frustration," Eubanks said in an RCC statement.

Last month, 10C Canada (<http://mvrk.ca>), a research firm, unveiled its *Hot/one* (Online Retail Study). This report said Canadian retailers were slow to adopt the ways of IT.

But Randy Scotland, RCC's vice-president of communications, took the findings with a grain of salt. "One thing has become abundantly

clear," he told *CanadaComputes.com* in an earlier interview, "If you don't do it right the first time, you're going to run into problems."

He also noted that, in a response to the IOC's research, the organization targeted privacy and security concerns, fulfilment expectations and promotional tools with UR.

To address electronic mailing options, e-commerce administration requirements, security and awareness solutions, RCC forged alliances with Canada Post (<http://www.canadapost.ca>), Scotiabank (<http://www.scotiabank.ca>), Oelotte (I. Touche (<http://www.oelotte.com>), and BigOrange808.com (<http://www.bigorange808.com>).

The idea, RCC says, is to make digitalization as easy as possible for retailers.

Minidyou, the group says these services are for RCC members only.

You'll find more information about UR at Retail Council's Web site (<http://www.retailcouncil.org>).

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# Opte@ Online & Connected

Internet Trends • Wired and Wireless • Online Services • Work It Play on the Web

## Move over wireless carriers.

### Canadian startup takes high road to broadband mobile Internet service

By Stefan Dubniski

A new Canadian company plans to unveil an orbiting high-speed mobile Internet service soon, but history suggests C-Comsat Satellite Systems Inc. should step carefully.

If this system works, C-Comsat could undercut another, oft-mentioned high-speed wireless service. Network builders and wireless carriers say 3G (third generation), the upcoming iteration of untethered high-speed Web access, describes future mobile computing.

But Leslie Klein, C-Comsat's president, seems to think otherwise. "We've had this for three years," he said during a recent interview. "We've kept it a secret, experimenting on it."

Development wasn't as thanks part to politics, Klein said. C-Comsat tested its service with the Coast Guard. Although the organization enjoyed this fast-acting Web service, the government had a bone to pick with one of C-Comsat's partners.

The company had to walk away from its first satellite as a result. "We were in the middle," Klein said. "We demonstrated to the Coast Guard, that yes, they could use this. But we didn't want to get involved in a political fruit bowl." (Read C-Comsat didn't want to be caught between the satellite operator and the government.)

Canada has had a rough run with satellites in the past. Matthew Fraser's book, *Free For All*, outlines the debacle: in 1969 the federal government created Telesat Canada, a satellite company built to withstand an invasion of U.S. television content from the sky.

"Yet Canada's technological nationalism in the skies quickly encountered less lofty realities," Fraser writes. Telesat, while a public corporation, soon fell under the control of Bell Canada and other major phone companies, which owned nearly half of Telesat's stock.

"Telesat languished, under-utilized for more than a decade." The federal government decided satellite broadcasts could carry television signals to remote cable operations, but even this "satellite-cable" system immediately began losing money, partly because it was offering Canadian signals only.

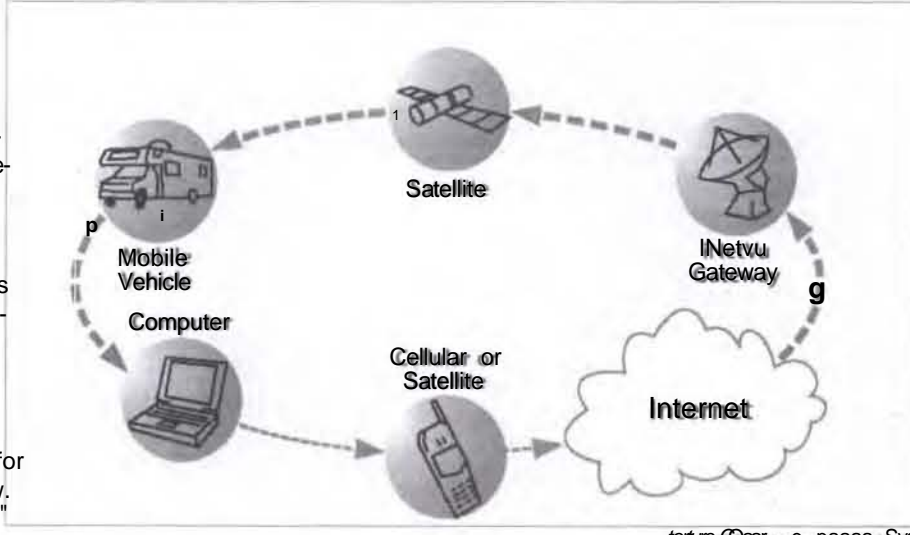


Illustration by Peter S. V. S.

According to Klein, however, the satellite broadcast landscape has changed significantly in Canada. Bell has its ExpressVu television service and Canadians can access StarChoice's digital TV signals from satellite, for example.

But nobody offers high-speed (Internet) access on the commercial side," Klein said.

Canada's Anik satellite, combined as many as 14 low-speed channels and created one fast pipe.

The trouble is, this pipe only works quickly one way: down. Klein said its commercial wireless high-speed service — for trucking companies, shipping fleets, etc. — pumps 400 Kbps.

But only one way? It's a problem, said David Ellis, an industry consultant with Omnia Communications Inc. "Sure, right now, for Web browsing and email, that isn't a big issue." But, he added, eventually, "we're all going to want upstream bandwidth... That will limit [satellite companies] in the long term if they don't have a work-around for it."

The Klein agreed that Web surfers care more about download than upload speeds. But said, "within a year, at the max, C-Comsat will have symmetric wireless broadband service — equally fast both ways."

Continued on page 04

## Two-way messaging grows up

Two years ago, there was a lot of noise about a completely wireless handheld that would allow you to connect to the Net and get information no matter where you were. It would send packets only as necessary and would feature special client programs with pre-determined HTML frameworks residing on the handheld, to further reduce the amount of information that needed to be sent back and forth. With it, you could retrieve weather information, track the status of a delivery, or check email. The fantastic device was... the Palm VIIc (before you thought it was going to say BlackBerry).


Well, the Palm VII was never released in Canada. Thankfully, wireless providers have stepped up to bat, making use of enhanced paging hardware. One device using this technology is the BlackBerry, which is manufactured by Waterloo, Ont.-based Research In Motion (RIM). The BlackBerry comes in two different models, the 950 and the larger 957 (also known as the Internet Edition because of its larger screen).

It's probably most accurate to think of the BlackBerry as a very enhanced pager. In fact, both models act as a pager, but all the paging information into the device's messaging component. When you receive email or a page, the device notifies you with an alert sound, then stores both in your messages folder. Since the device features two-way communication, you can reply to the email at your leisure using the tiny keyboard built into the device.

This keyboard is actually one of the big advantages the BlackBerry has over the Palm VII, which requires stylus input: all of the special characters you

Continued on page 05

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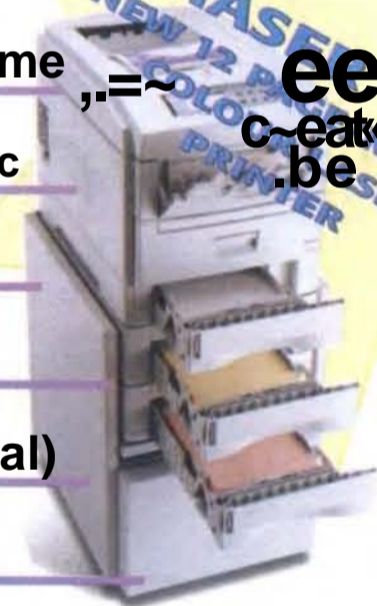
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got over us, he says.

Continued from page 200

Jim Carroll, a computer industry observer and author, took issue with C-Comsat's claimed speed. After all, 400 Kbps is fast. "My reaction is, I never believe it until I see it. Over the years, every other connection run into barriers."

Eric Rasmussen, a senior consultant with TeleChoice, a research firm, said he questions C-Comsat's entire mobile model. "They're doing wireless high-speed data...

If they're doing that right now, I'd be surprised."

Why?

"Nobody else is really doing it. And it's much harder to solve," Rasmussen said.

Mobile services via satellite require an angled dish. "If you're moving around, the dish has to move."

The upshot is, if C-Comsat's service works well, this company could be on something big. Plus it has first-mover advantage.

But mobility isn't C-Comsat's only route to profitability.

Klein said the company would take on fixed Internet carriers, like cable companies and telcos with high-speed services for the home.

But at what price? Satellites are expensive to keep and maintain, Rasmussen said.

Would C-Comsat's service reflect this premium?

Klein said fixed high-speed Internet access would be priced at \$40 per month. That's no worse than Bell Sympatico's price for dedicated subscriber line (DSL) connections. Mobile offerings start at \$50 per month.

They have to be comparable," Carroll said. "If they're not price compatible, they're not in the game."

Rasmussen notes C-Comsat's glowing opportunity: "A satellite can cover a huge

territory and overlap the U.S. market as well."

C-Comsat partnered with Hughes Network Systems to deploy its commercial product south of the border. C-Comsat won't, however, release its fixed-wireless Internet offerings in U.S. homes.

According to Klein, Hughes has its own plans.

Ellis said C-Comsat's service might speak to other satellite operators, too. Be offers a "token" Internet access through ExpressVu. "The time may come, now that companies are bundling so many things, C-Comsat might have something to offer."

Meanwhile, history repeats itself, even beyond Canada's borders.

In 1998, online reports said Hughes' own fast Internet connection, offered through its subsidiary DirecPC, wasn't as fast as promised.

Earlier this year Iridium, a satellite phone company, gave up on its orbiting transceivers.

"It took them five years to design it and six years to launch," Rasmussen said. "But they were charging \$2.50 per minute. It wasn't sustainable."

Will C-Comsat be able to overcome the curse of the bird? Klein seemed to think so. The satellite is in orbit and, thanks to the company's channel aggregation scheme, upgrades come from the ground.

This company hopes to take over as "last-mile" enabler for remote Canadian communities.

Kein said these days, high-speed Internet connections reach a far-foggy places via microwave.

Such transmissions can carry DSL connections up to 64.4 km (40 miles) away from the central office.

But consider a satellite's footprint. 64.4 km isn't far at all. Plus, with microwave transmissions, "it can become very expensive," Klein said. You have to build the towers."

Besides, Carroll has a different view of history than Fraser. Carroll had TeleSat's dish and he liked the satellite service.

And consider Globalstar, another cell phone satellite company.

According to Trent Ernst, contributing editor to CanadaComputes.com: "A sweet toy to play with and the best variation of the satellite phone theme yet, but probably not practical for most cell phone users. However, if you live or work in an area of no cell phone reception, and without landlines, this might be something to seriously consider, especially if buying the Globalstar would cost less than stringing telephone wires."

"The big caveat is Iridium, which went belly up, leaving thousands of users with very expensive bits of moulded plastic."

C-Comsat went public in August on the Canadian Venture Exchange (CDNX) in August. The company's initial public offering came in at \$1. Klein said a C-Comsat share is worth between \$.75 and \$2 the days.

—CanadaCsmprres.cdm

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<< ONLINE & CONNECTED >>

Wednesday's message gateway

Continued from page 100  
need for email and Web functionality are included on the keyboard by using the function key, and the symbol option, which means you don't have to spend a lot of time learning the special Graffiti notation for all of the special symbols for the Internet use. The keyboard is very tiny, which could cause some problems for people with larger fingers. Most people should find the setup fairly easy to use once they get used to a two-thumb method of data entry.

There is also a jog wheel on the right-hand side of the BlackBerry for quick scrolling through menu options and email messages. A back button takes you quickly to the previous menu.

The other big feature of the BlackBerry is its Web surfing capability. While it's true that the Palm VII roughly simulated the experience, it required dedicated client packages to go out and retrieve data. In other words, if you wanted to track a package you shipped, you would need a client from that courier company loaded onto your Palm VII. The BlackBerry, on the other hand, will allow you to surf anywhere you like, offering less restricted Web browser. The downside to this is that you have a limit on the size of page that can be displayed, and the Web pages you like have a lot of extraneous data, the page will be truncated. For this reason, the wireless service providers feature their own portal, with a number of Web links optimized for the wireless experience, providing quick and clean downloads that don't run into problems with page truncation.

The disadvantage? Well, at this point there are quite a few developers writing applications for the Palm platform, which means your Palm device would have a lot more flexibility in the non-wireless arena. Still, the BlackBerry comes with all the basics (calendar, contacts, calculator, email, a task list and alarm), and these third-party applications may be irrelevant to many users, anyhow.

Both Rogers and Bell Mobility offer BlackBerry devices as part of an enhanced paging service plan.

Rogers' (http://www.rogers.com) service includes Go.Web Internet access, and comes in three service plans for airtime: the occasional usage plan (75,000 characters per month) is \$25 monthly; frequent usage (250,000 characters) is \$35; and high usage (unlimited characters) is \$50. U.S. roaming adds \$25 per month to the bill.

Bell Mobility (http://www.bellmobility.ca) offers a version of the BlackBerry, with unique model numbers to indicate the frequency band each operates on (the BlackBerry 900 series operates on a 900 MHz frequency while the 800 series uses an 800 MHz frequency). The 850 comes in at \$299, and the Internet Edition 857 sells for \$399. Unlimited airtime costs \$50 per month and U.S. roaming adds \$25 per month to the total. Bell's devices make use of the Neomar web browser, with numerous content providers offering optimized content.

**Sell Moblog's e-Page**  
In mid-October, Bell Mobility launched a new two-way messaging service called e-Page, along with an enhanced paging device manufactured by Motorola. The Motorola PageWriter 2000X looks a bit like a shrunken notebook computer, with a clamshell design that opens to reveal a small monochrome screen and QWERTY keyboard.

E-Page is Mobility's brand name for two-way enhanced messaging essential services, including sending and receiving email and paging. Like RIM's BlackBerry, the PageWriter 2000X comes with a number of electronic organizer functions, including task list, address book, calendar, and memo pad. And like the BlackBerry, the PageWriter offers always-connected messaging inherited from pager technology. However, the BlackBerry service offers Web surfing in addition to two-way messaging. The e-page service operates on Bell Mobility's Reflex paging network, with U.S. roaming available. The service was initially available in Ontario and Quebec, but the company said it will be extended to major cities in Western Canada by the end of 2000.

—Sean Carruthers and David Tanaka

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# Original Digital Divas prevail in domain name dispute

By Jeff Evans

Digital Divas (<http://www.digitaldivas.com>), an online organization of women in technology, announced recently that a name dispute with Microsoft Corp. had been resolved in the Digital Divas' favour. Formed in 1997, the Digital Divas provide online help and advice to technology users. The group launched their Web site in June, 1999.

In January 2000, Microsoft boss Bill Gates offered help and advice to users of technical Divas. Introduced that company's "Digital Diva" nology — just like the Digital Divas. Stacy Bliott, who was to serve as a kind of Microsoft did not discuss Digital Diva in corporate goodwill ambassador and answer program on Web with the original Digital Divas organization, nor did it have permission to use the Digital Divas' name or a similar domain name for the corporation's diva Web site. In April 2000, Microsoft Corp. launched a Digital Divas site, hosted by Bliott, Website called Digital Diva, hosted by Bliott,

After several months of talks, an agreement was announced on Oct. 6, in which Microsoft withdrew its Digital Diva site. Som the URL was changed to <http://www.microsoft.com/digitaldivas.asp>, replacing it with a notice that the site was to be renamed and improved. Following the agreement, the Digital Divas declared victory, thanking those who supported their David's Goliath stance and claiming that Microsoft had been persuaded of the justice of the Digital Divas' claim, without the need for a resort to the courts. Microsoft, which has vigorously defended its own intellectual property rights ever since Bill Gates' famous "Open Letter to Hobbyists" dated Feb. 3, 1976, which urged respect for copyright law, found itself between a rock and a hard place.

Coming a few months after a similar case by Coca Cola to demands by Greenpeace that Coke stop using environmentally unfriendly refrigeration technology, the Digital Diva dispute shows how even small organizations can leverage the Web to shape the largest corporations in the court of public opinion, and win. For our readers' benefit, we have included the announcement of the settlement, with Microsoft posted at the Digital Divas Web site. After several months of talks, an agreement was announced on Oct. 6, in which Microsoft withdrew its Digital Diva site. Som the URL was changed to <http://www.microsoft.com/digitaldivas.asp>, replacing it with a notice that the site was to be renamed and improved.

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Microsoft posted at the Digital Divas Web site. After several months of talks, an agreement was announced on Oct. 6, in which Microsoft withdrew its Digital Diva site. Som the URL was changed to <http://www.microsoft.com/digitaldivas.asp>, replacing it with a notice that the site was to be renamed and improved. Following the agreement, the Digital Divas declared victory, thanking those who supported their David's Goliath stance and claiming that Microsoft had been persuaded of the justice of the Digital Divas' claim, without the need for a resort to the courts. Microsoft, which has vigorously defended its own intellectual property rights ever since Bill Gates' famous "Open Letter to Hobbyists" dated Feb. 3, 1976, which urged respect for copyright law, found itself between a rock and a hard place. Although Microsoft could conceivably have waged a deft campaign against the Digital Divas, such resistance to a pretty obvious instance of violation of copyright, domain name, and intellectual property could only have cost the company a great deal of bad publicity, as well as possible legal and financial penalties. The Digital Divas were obviously in the right, and were so obviously unafraid of a legal tussle with Microsoft that the best resolution to the conflict appears to have been for Microsoft to quietly and graciously throw in the towel, and move on. One is left wondering why Microsoft didn't do due diligence on the Digital Diva name, which was well known, and how when the company rolled out its Digital Diva program at the Consumer Electronics Show (CES) on Jan. 6, it could have had such a high profile consumer relations campaign on such a Sim-When we did a search on the Google search engine (<http://www.google.com>) for Digital Diva, we found more than 42,000 references, with the original Digital Divas and the Microsoft version hopelessly tangled and enmeshed with each other. This situation must have been obvious right from the beginning of Microsoft's ill-fated diva project. The rollout of the Digital Diva program is detailed on the Microsoft site, in a press release that can be found at <http://www.microsoft.com/presspass/press/2000/jan00/dig>

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# International press council ratifies markup language for news

NEW YORK— Reuters (http://www.reuters.com), the international news wire, has taken the wraps off a specialized version of XML (extensible markup language) called NewsML, short for news markup language.

The new Web language has been ratified by the International Press Telecommunications Council (IPTC) and has already been embraced by a number of online news wire organizations. As the acronym implies, NewsML is a special version of XML designed for the online news industry.

Nancy Bobrowitz, Reuters corporate communications director, said the new Web presentation language will change the face of online news irrevocably.

NewsML, she said, is not a competitor to XML, but is based on the Web markup language. "Basically, it allows Reuters to present a variety of news data, including text and pictures, in a standardized format. Because it's based on XML, it's platform independent, which means it allows for greater flexibility in the way news is presented to people online," she said.

Because XML is extensible, Web pages coded with this markup language can be viewed in a variety of formats, including standard full-colour PC-based Web browsers, right through to small WAP (wireless application protocol) screens on mobile phones.

This is important for news content providers as it means they only have to create one set of Web pages that can be viewed on different Internet terminals, whether wireless or not.

From a Web users' perspective, this is trans-

parent of course, but XML does mean that more standard Web pages can now be viewed using a mobile Internet device, without the information providers having to create a second set of Web Pages—especially for WAP users.

NewsML does the same for online news organizations as XML does for Web page creators—it makes their lives easier.

Bobrowitz said that, since the IPTC has just ratified the NewsML standard, it will mean that the growing number of online news organizations will embrace the new standard.

"The IPTC is itself comprised of news media professionals. They've agreed to the new standard, so it will take off," she said, adding that Reuters is now in the process of working out how its systems will be streamlined as a result.

"For us, it means that we can get our news, pictures and sound out to our subscribers and viewers more quickly. A newspaper may subscribe to our newsfeed, and maybe our picture service. With NewsML, they can get all of their news data from one single source," she said.

Alongside Reuters, the Agence France Presse (AFP), Business Wire, the Press Association, Screening Media API, and Bow Jones's WSJ.com have also agreed to support the NewsML standard.

From a consumers' viewpoint, it will mean that more online news will become multimedia—provided the news organizations support the new standard of course. The IPTC's Web site is at [hgprn.com/iptc.org](http://hgprn.com/iptc.org).

—Newsbytes



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ONLINE & CONNECTED a

# Lycos voice portal recognizes speech

WALTHAM, Mass.—One day after Web portal Yahoo Inc. unveiled suite of voice-powered information services in early October, competitor Lycos Inc. (Nasdaq:LYOS) has raised the stakes with the launch of phone-in web surfing that includes voice recognition technology.

Lycos, based in Waltham, Mass., boasts that subscribers of its telephone service can access email and other Internet information hands-free, using voice commands to navigate instead of keying in touch-tone signals.

Santa Clara, Calif.-based Yahoo had launched Yahoo By Phone, a service that uses Internet telephony technology from NetPhone Inc. and text-to-speech software from SpeechWorks International Inc. to serve up audible email along with other Yahoo content. The Yahoo service also offers users a free voice mailbox that can be accessed by telephone or Web browser.

Like the Yahoo service, the voice-powered offering from Lycos supports text-to-speech transformation of waiting email as well as headlines, news, stock quotes, weather and horoscopes. At both Yahoo and Lycos, subscribers configure their cache of news and information by visiting personalized Web pages on the companies' MyLycos and MyYahoo sites.

Lycos, which is offering its voice service under a Lycos Anywhere label that also encompasses wireless delivery of content to cell phones and handheld computers, said phone-in surfing will be available initially in just five markets: Boston, New York City and northern New Jersey, Chicago, San Francisco and Los Angeles.

Ron Saga, executive vice president of Lycos, said the company could expand its Lycos Anywhere services potentially around the globe with the help of telecom carrier partners. The company first announced voice plans in May, when it said its partner in such a venture would be Quack.com Inc., which develops voice portals with technology from SpeechWorks.

However, in August, Lycos announced that its Web-to-phone efforts would be backed by Boston-based Mobilee Inc. (formerly America Online) announced it was acquiring Quack.com.

—Newsbytes

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LEASING AVAILABLE

## Microsoft SideWinder Force Feedback Wheel

From: Microsoft Corporation  
 http://www.microsoft.com/sidewinder  
 Estimated street price: \$209.99

So you like racing games, eh? If you're really serious about racing, you've probably already looked at a steering wheel. If you're into racing, you may have even looked at a wheel that incorporates force feedback technology. Microsoft feels your longing, and has added a Force Feedback steering wheel to its SideWinder line of game controllers.

The wheel comes with a nice clamp and lock mechanism for attaching it to a desktop. This setup is nice, because you don't have to spend much time messing around with the clamp; you tighten it most of the way then spin down the lock. Voila, it's done! Then you just have to plug in the power, plug in the pedal, and plug in the USB. After you install SideWinder software, you're ready to go. Well, as soon as you have a racing game with force feedback support, that is.

Luckily, the wheel ships with the full version of Microsoft's Monster Truck Madness 2. During the test, we used Mad Truck Championship, from Beonnic Arts (\$49.99, or \$39.99 with a discount code, about \$40). We drove our car in a variety of weather conditions and on different types of terrain to give the force feedback component a healthy workout. Getting used to the handling of the car was a bit strange at first, but once you get used to driving sideways, it's full speed ahead.

We found that the wheel handled very well for the most part, with a lot of buttons within reach. Force feedback was mostly a matter of personal preference; some of our test drivers thought it was quite mild, while others weren't so convinced. I thought it was borderline. The wheel is capable of 100 different types of reactions, which gives programmers a great deal of latitude in creating a realistic simulation.

What is more troublesome overall is the fact that when you really get into the action, the pedals tend to slide around a bit, and the wheel may also move a bit. Short of gluing them down, it's bound to happen with most wheels, though.

—Sean Connors

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## Two very sweet digital camera offerings from Canon

In the digital camera market Canon has been sort of the underdog but predictably metoo with its PowerShot line of digital cameras in comparison with digital cameras down to the power user. more compelling offerings from Kodak, Nikon, Olympus and Sony. But just in time for Christmas, Canon has come up with two showstoppers stand out cameras at the low and high ends.

The Canon PowerShot S100 Digital Elph



may be big name but it is also a mighty mite in size, weight, and compact form. The Elph which gets lost in a shirt pocket at 8.6x5.6x2.8 cm (3.4x2.2x1.1 in.) metering and eight operating modes, and only 190 g (6.7 oz) will be the delight of hikers, travelers, and camera lovers in general for its superior engineering.

This is a 2.1 megapixel digital camera with 35-70mm equivalent optical zoom lens, which records on CompactFlash (CF) cards in three modes: 1,600x1,200 pixels at low JPEG compression (super fine mode); 1,600x1,200 pixels at four times compression (fine mode), and 640x480 pixels at four times compression (small mode).

Did I mention the Lithium ion batteries, white balance settings, exposure correction, built-in flash, self timer, USB cable output, macro shooting, black and white imaging, and continuous shooting capabilities? Given very good image quality, it is no surprise the price at about \$750, is starting to creep up to the original suggested retail price of \$899 with demand.

### For the purist

At the top end, prices typically reach \$10,000 to \$15,000 for SLR digital cameras that matching 35mm SLRs in features, like the Nikon FFS and the Canon EOS. But, no more.

Nikon's D1, which sells for \$8,000 to

Researchers are hoping for the success of the Seti@Home project, in which idle computers are put to use scanning data from the heavens, with their new Fold@Home project, designed to unravel the mystery of protein folding. Why do we want to know how proteins fold? Researchers say the way they fail to fold causes such diseases as Alzheimer's, cystic fibrosis, even Mad Cow disease to develop. It's a complex and computationally demanding subject, which is why volunteers are needed in this mass distributed computing project. Over time on Windows and Linux machines (sorry, no Macs) are needed by the researchers at Stanford University. <http://www.fold@home.org>

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< HANDS ON > W

# Dazzling the video crowd, sort of

We put Dazzle's latest video capture and editing package through its paces, and offer you the director's cut

By Jacques Surveyor

Out of box

If a picture is worth 1,000 words, then an interesting video clip may be worth a million. And more savvy Web sites are using video clips than ever before, taking advantage of this medium's ability to explain and demonstrate.

Even better, video technologies like high-resolution digital video cameras, streaming video, and Mac OS 8.6 software, and Adobe Premiere and Macromedia's Flash and Director applications—help move putting a rim on the Web within reach of serious amateurs as well as small- to medium-size businesses.

In this review, we look at Dazzle's digital capture card, Dazzle, to see if its quality and speed of operations match up to our Web/video needs.

**Bezle Photo/Video Stage**  
 From Dazzle Multimedia, Inc  
<http://www.dazzle.com>  
 Street Price: \$300  
 Minimum system requirements: Pentium III 300 MHz-based PC or similar Mac, with 64 MB of RAM, Windows 98/Me or Mac OS 8.6.  
 Overview: Dazzle's video capture combines video/TV snapshot and film clip capture capabilities. Out of the box, setup and operation after reboots is problematic. Documentation is weak. Pros: Able to capture snapshots and video clips with a variety of options/settings. Quality of images is pretty good. Cons: Requires lots of memory and processing power—even Pentium III system bags down in recording.  
 Summary: Versatile capture software requires hefty computing resources.  
 Overall rating: 2 out of 3

Out of box experiences are getting more interesting these days as the Windows desktop OS now spreads over six editions (95, 98, Me, NT), and 2000. Dazzle's support for these platforms zeros in on only the current mainstream consumer. It bypasses support for Windows 95 (too old?), and Windows NT/2000 (too business-focused?), concentrating instead on Windows 98, Me, and Mac OS 8.6. Unfortunately, it is easy to miss these restrictive requirements as other Dazzle products support the other Windows versions. In the multimedia and graphics card world, OS and hardware incompatibility are starting to peak again, buyers beware.

The immediate out-of-box experience is also disconcerting. Dazzle's user manual quality and speed of operations match up for four products. These situations are always an adventure in figuring out what applies where. There is a special quick start guide, but it is fairly terse and does not have a good set of troubleshooting instructions. And if my experience is typical, you will need some help.

The software installs easily enough and the USB plug-in with built-in power supply is truly plug and play. But that so quickly when you get constant messages like "video capture device not found." With no FAQ (frequently asked questions) documentation or troubleshooting available in the manual or help, it was to the debugging merry-go-round:

- Check all the connectors, still no good.
- Reboot the machine, still no good.
- Turn the video on after starting up program, still no good.
- Make sure no other programs are running, still no good.

Continued on page 11d

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Dazzling in town! This sort of  
Continued from page 172

- Check the connectors again. Houston, we have lift-off.

After several more starts I learn the following is the winning sequence:

- Make sure no other programs are running.
- Have the video recorder running.
- Break and restore the USB to Dazzle device connection just after starting the Dazzle Capture software.

Once this sequence is followed the snap-

shot and capturing of video clips was successful.

**Performance**

Having used Play's Snappy device for TV and video capture, Dazzle had to be some pretty good hardware and software to impress this reviewer. And Dazzle does better than Snappy by offering more snapshot capture modes and five more file-out options (two more JPEG settings, as well as TGA, PCX, and TIFF). And it's able to power up directly through the USB port without the need for two double AA batteries, which are required by

Snappy. In addition, Dazzle offers more video clip capture capabilities.

But the bottom line is image quality and tuning; (we had several crashes when any Dazzle matches Snappy's 3.0 very well. At 640x480, Dazzle snapshots were clearly better in colour fidelity right out of the box; i.e., without image correction.

However, the image graininess was the opposite of what we'd expected. Lower quality TV and video sources were much better from Dazzle relative to Snappy, but high quality video images were slightly worse in graininess for Dazzle. Moreover, Dazzle requires all of your computing power. Dazzle recommends 32

MB of memory—in actual use, even 64 MB is low. No other programs should be running; (we had several crashes when any other program was running at the same time as Dazzle). And even with a 200 MHz Pentium III with MMX-based system, 640x480 snapshots took three to 20 seconds to process. Video clips at 320x240 and longer than 30 seconds would freeze the system. Switching to a 483 MHz Pentium III with 96 MB of RAM resulted in much longer video recordings and faster snapshots, possible to a degree.

However, some of Dazzle's problems are clearly not with the hardware, but rather with its photo album display software. As more than 10 to 15 pictures are collected in the album, Dazzle software took longer and longer to refresh the album. This is a problem because you can't capture another picture until the album finishes refreshing. Trying to capture Olympic event images proved very frustrating. Either you had to stop, download, and clear the album after 10 to 15 snapshots, or wait 20 to 45 seconds between snaps. I could find no way to turn off the photo album.

In addition, we found Dazzle software tended to freeze if taking movie clips of long duration or with any other programs running. Balancing off these software glitches, Dazzle provides a bit of good free software to manage your snapshots and clips including Ulead's excellent PhotoExpress, Real IDVC (DirectMPEG) Video Library, Microsoft Media Player 6, Front Page Express, and NetMeeting. In addition we tried the MPEG output with Adobe Premiere 5.1 and Macromedia Flash 5.1 and found both equal to the task of editing and using Dazzle snapshots and video clips effectively.

In fact, Dazzle will have users looking for good video editing software (MGI VideoWave 4 (<http://www.mpsoft.com>) at \$120, and Adobe Premiere (<http://www.adobe.com>) at \$720, are two products at either end of the price spectrum that are worth consideration.

In summary, at \$130, Dazzle is cheaper than Play's video image capture stalwart, Snappy, yet its images are as good, if not better, in colour quality. These images and video clips are not broadcast quality, but, depending on the quality of the video source, can easily be used as video for personal or small business Web sites.

Dazzle's documentation shortcomings and hefty computing resource requirements are the only blots on an otherwise solid entry-level product into the world of video snapshots and clips. JJ

Jacques Sneyer imagines himself to be a respectable photographer. See if the Dazzle impressed at his Web site: <http://www.wtorax.net/~lbsucv/pass/muslec>.

**Tipmans join Enhom portal**  
NB—Three of the most well known museums in the world have joined Enhom, the online knowledge and education portal. Visitors to the site are now able to access the Natural History Museum's collections of plants, minerals and zoological finds; view the world's greatest collection of decorative arts from the Victoria and Albert Museum; and marvel at the Science Museum's collection of objects tracing the entire history of Western science, technology and medicine.  
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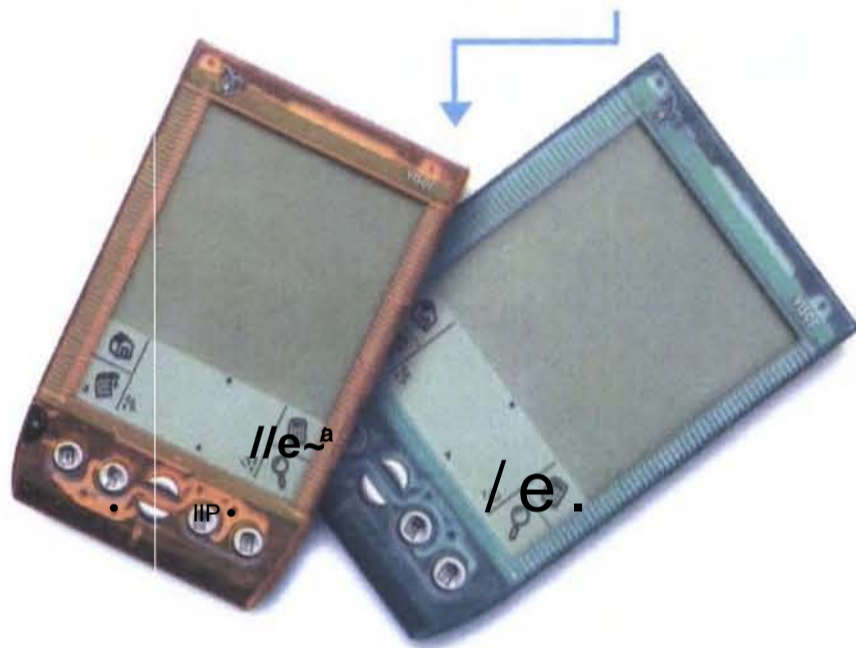
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## Get creative with screenshots



**Helen Bradley**  
OFFICE SUITE TRAINING

Chances are that sooner or later you'll need to include a shot of a computer screen in a document. You may want it to illustrate how to complete a task or to use as a record of how your screen looked when something went wrong with your PC. Screenshots are pretty easy to take and they can give documents some visual clarity. This month, I'll show you how to grab screenshots and manipulate them to get some great effects.

**Tools**  
You don't need special software because Windows can take screenshots and allows you to paste them into documents. However, if you want to do more than use the occasional screenshot, using graphics software would be helpful.

Something like the shareware application PaintShop Pro lets you gather screenshots and includes tools for cropping and adding text and lines to draw attention to various parts of the image. Using these tools, you can create a composite image from a number of screenshots, allowing you to show your reader a number of steps at a once.

**Taking a screenshot**  
Taking a screenshot is as simple as setting the screen up as desired, then pressing the Print Screen key on your keyboard. When this key is pressed, an image of the screen is placed on the Windows Clipboard. You can paste the image into any document by selecting Edit, then Paste.

While pressing Print Screen takes a shot of the entire screen, you don't always need such a large image. If you only want to capture the current window, hold the ALT key as you press Print Screen. Depending on what is on the screen at the time you take the shot, the image you get will be a dialogue box or the entire window.

**Cropping in Word**  
Once you have pasted the image into a Word document, you can size it to suit your needs. You can also crop it to remove any portion of the image you don't want to display.

To do this, select the image and, from the Picture toolbar, select the Crop tool. (If the Picture toolbar isn't visible, choose View, Toolbars, then Picture to display it.) Hold the mouse pointer over one of the sizing handles on the edge of the image and watch as the pointer changes to the shape displayed on the Crop button on the toolbar. Drag any of the image handles toward the centre of the image to crop it. Don't worry if you make a mistake; you can simply drag the handle in the opposite direction to reinstate the portion you

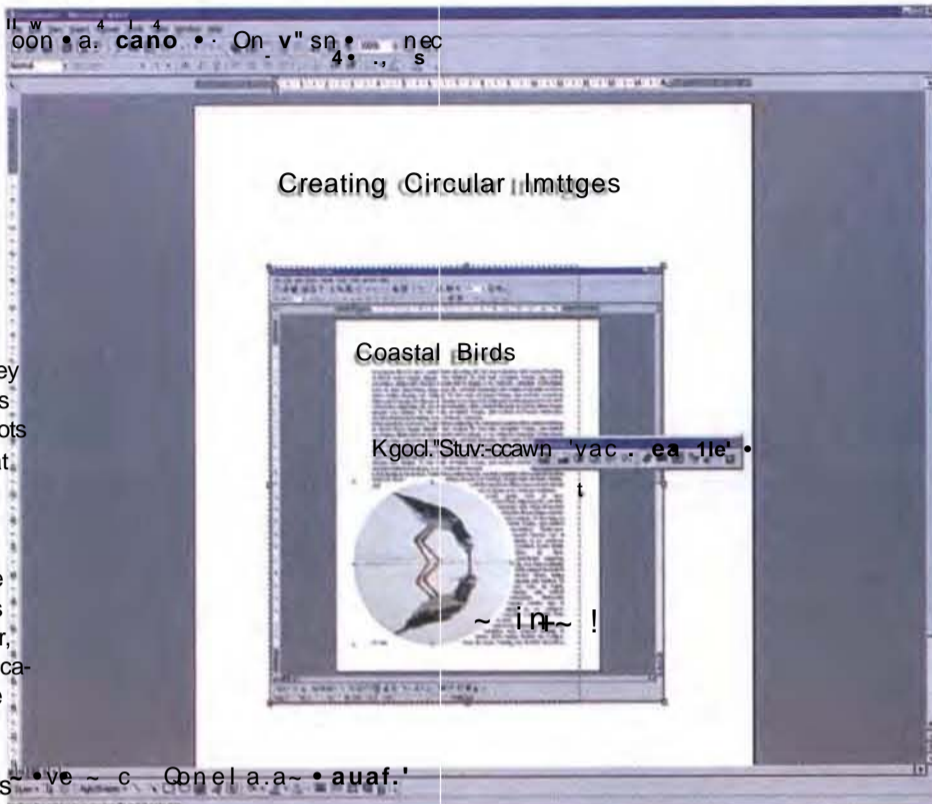


Figure 1: A screenshot of the PaintShop Pro application showing the 'Creating Circular Images' dialog box. The dialog box has a preview window showing a portion of a 'Coastal Birds' image being cropped into a circle. The 'Crop' button is highlighted.

primarily remove excess portions of a screenshot using the Crop tool on the Picture toolbar in Word. You can easily remove excess portions of a screenshot using the Crop tool on the Picture toolbar in Word.

When you're done, press Escape or Switch to the application you want to take a screenshot of and either press the hot key you want until you hear the small sound that indicates the timer has expired and the shot has been taken. If you enable the multiple capture checkbox, you can continue shooting screenshots. You can use this cropping technique to reduce the screenshot so it displays only the area you want to highlight. However, if you need a series of shots of toolbar buttons, for example, you'll find that using large images and cropping them will bloat the size of your file unnecessarily. In addition, if you don't have enough memory available, Word may have problems displaying your document properly.

At this point you should move to using a graphics program like PaintShop Pro to edit the screenshot. It will also allow you to grab portions of the toolbar and mouse pointer in addition to the toolbar buttons.

**Using PaintShop Pro**  
PaintShop Pro's screen capture utility will take a shot of your screen with or without the cursor being visible. From inside PaintShop Pro choose Capture, then Setup. From the left side of the dialogue, select the portion of the screen you want to capture. Area allows you to select the portion of the screen you want to capture manually; a Full Screen copies the entire screen; Client Area copies the input area, which will vary according to what is currently active window.

You can select a hot key to use for capturing screenshots — F11 is a good choice, you can select a time delay so PaintShop Pro will take the shot after a specified number of seconds elapse. Choose to include the cursor and, finally, choose Capture Now to begin the process.

When you choose that selection, you'll see a composite image of the menu and the dialogue that is displayed as a result of selecting a particular menu option, you'll see the first will be the open menu with the items when you choose that selection. You'll need to create this as a composite simply because, if you never see both the menu and the dialogue open on the screen at once, you'll never see both the menu and the dialogue open on the screen at once. To do this in PaintShop, begin by selecting the application and choosing the menu option

### Java Tutorials: Part 4

## Java's eight basic datatypes

By Jacques Surveyer

In our last Java tutorial, we created a third Java program containing four classes. These classes were effectively new datatypes in Java for Point, Line, and Circle. Although the class definitions were fairly simple, they nonetheless revealed some of Java's flexibility and power: users can create then manipulate exactly the objects/datatypes they need in Java.

With Java, users do not have to rely on built-in primitive datatypes and objects provided in a language, however, as of the derived objects, draw upon Java's eight basic or primitive datatypes, plus the most important predefined class, String, as shown in Fig. 1.

These basic datatypes match very closely to

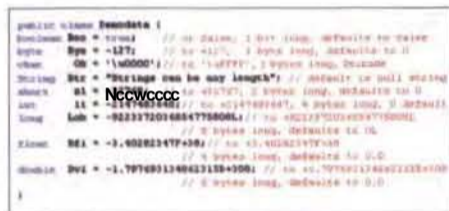


Fig. 1: Java datatypes Range of values, storage size and Default Value

What is available in C, C++, Fortran, Visual Basic, and other popular languages, although these other languages have a number of additional datatypes such as complex, date, decimal, and variant. However, the designers of Java felt that these additional datatypes were really components of the basic datatypes and have left most of these special types for users to implement. There are some Java-predefined object datatypes including BitSet, Calendar, and String that help to complete the eight basic datatypes.

Fig. 1 lists Java's eight basic datatypes and it is interesting to note that six (byte, short, int, long, floating point, and double) are numeric datatypes. Byte is also used extensively for general data manipulation and input/output operations, while char is used for character manipulation and as the basis of the String class. Unlike most other languages, including C and C++, char in Java is not one but two bytes long because it uses Unicode characters that allow almost all of the major languages and their letterings/scripts to be represented (over 60,000 individual characters). The ANSI character set is a subset of Unicode.

Finally, there is the boolean type that represents one binary bit with one of two values: 0 or 1. Java has a predefined class called BitSet that literally stores a set of bits and allows bit operations like and(), or(), and xor() to be performed on bits. A program to test the relative speed of operation of the two datatypes, BitSet versus boolean:

Continued on page 117

Continued on page 117

gnv10=high-bask-angngyys  
Continued from page 11/16

```

import java.util.*;
public class Test {
// Thinkies pari istogj tivagl amefocul
String textDateformat =
saaiaihDnyomuhgnfaudosacocbeatesbateforautIME
DIUM);
pubk=slabzedirwo(5inrg 49/dfi
5nog um launt( new java Date); // sds read l
time
805eteh= new S55a(500000); // eb5000husaud bh
SyneminnpocogQeebog045n of me500000 at +rtisue);
// Nowkp 100imes through sibugal 500000hh
Wint=, 1<=100);
for (all i= 1; i<=499999; i++) {
time= format( new java Date); // Current time
System.out.println(" Age f= srtiboga
" rraeeatdangh(26666));
boolean (bol = new java Date(500000));
time= format( new java Date(40)); // Current time
System.out.println(" Create good many of me 500 (an at
+Huna);
// The same test for loop 100 times on really 50,00%
boolean
for (all i= 1; i<=100; i++)
for (all i= 1; i<=499999; i++) {
time= format( new java Date(40));
System.out.println(" Absending Odeao
" + time + bol(499999));
}
}

```

The results of running this test are somewhat surprising:

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Ater swing Occasimns PM Uue  
Genugochmar yd mehmooat 9:48:00 PM  
Ater senog Soomo 9:44:09 PM Uue

It turns out the basic boolean datatype is four times faster than the specially built BitSet class. This example shows why using the Java Development Kit (JDK) directly in DOS can be so useful. Some Java articles implied that BitSet was essential for doing bit manipulations with its predefined operations. However, the penalty of slower (by a factor of four) runtimes was not mentioned. Only by being able to write and quickly test Java programs directly in DOS (or Linux, or wherever) can users experiment with the language and gain proven confidence with it.

**Java numerics**  
Java's numbers follow closely those of C/C++ with one critical exception. Java specifies for each numeric datatype not only its exact size in bytes but also what underlying integer and more important floating point operations must be performed. This is critical because both C and C++ have different implementations of short, int, and long depending on what system C is running on. For example, C on the HP3000 has ints of two bytes in size, while on the 9000 series they are four bytes. Unfortunately this is common, so numeric operations are often not repeatable between versions of C or C++ on different hardware and/or compiler software.

However, C, C++, Fortran and Pascal all have an advantage over Java: their numeric operations can be compiled to machine code for a speed/performance advantage. Because Java does array bounds and other validity checks, even if it were compiled (and there are good native compilers for Java applications from Tower and others), the Java numeric code would run slower than these other languages because of integrity checks. In a test of this, we converted the Numerical Recipe (see Resources below) POLINTC into Point.java. The conversion process is simple (but some of

the conversion problem below). After running the two programs on the same Dell Notebook example, Borland BCJ Java compiler respectively, we found the C++ code to be about 20 percent faster than Java as might be expected of a line with extensive use of arrays.

However, the most interesting result of the exercise were the many datatype conversion problems encountered. Java is fairly finicky about converting values between various datatypes. Table 1 summarizes the results. First, boolean is not interchangeable at all. Second, whenever converting between datatypes, if going from a smaller data size to a larger,

In the conversion of the program POLINTC to Point.java, most of the time was spent putting in casts for conversions from int to float and double to float. The program refuses to compile without these casts. The only other tricky part was converting arguments passed by reference in method/function calls to static variables. However, the resulting code is riddled with explicit casts that are harder to find and understand. If we had converted all the C global variables to double, no casts would have been required and that is a strategy we will use in the future.

Another problem in converting C to Java was

Continued on page 11/9

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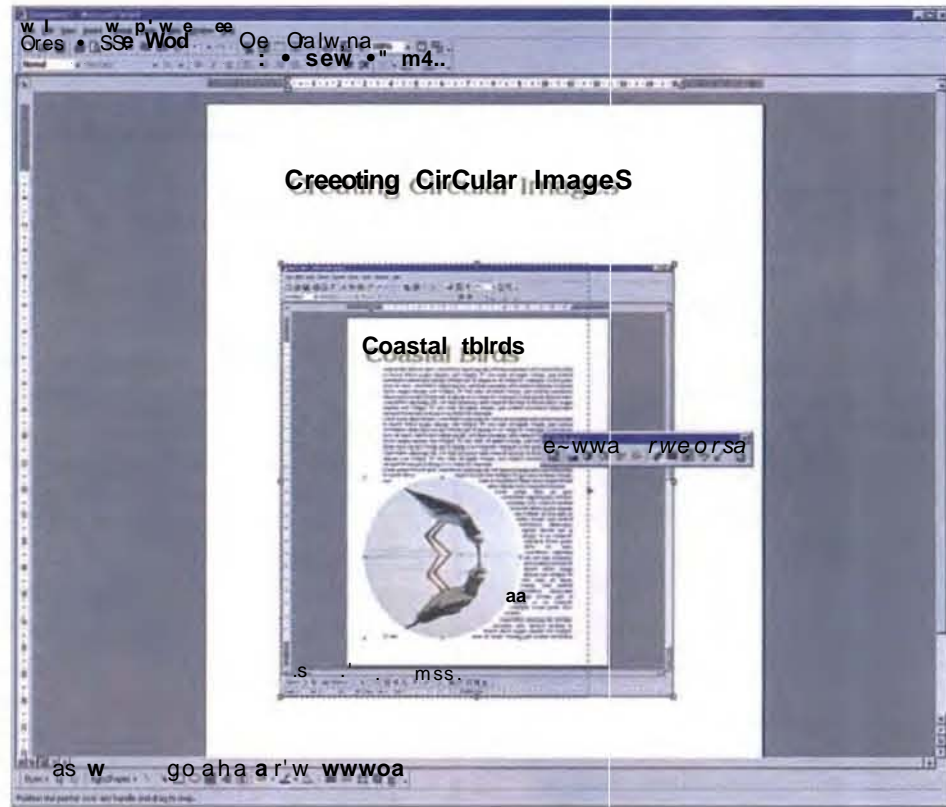
### Continued from page 26

using the keyboard and stop just short of making the actual selection. With the mouse button makes the image larger and the right mouse button makes it smaller.

Now make the menu selection so the dialogue appears on the screen. If you want your user to make certain selections, do them now and wher you're ready, hold the ALT key and press the PrintScreen key. Switch back to

PaintShop Pro and use the Zoom tool to display the screen capture file. Notice that when you have the Zoom tool selected, the left mouse button makes the image larger and the right mouse button makes it smaller.

Add the image of the dialogue to your logue by choosing: Edit Paste, then New Selection. The image of the dialogue will appear over the top of the image with "marching ants" around it, indicating it is selected. Continued on page 27



This image can only be created by pasting part of one screenshot on top of another.

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ending equivalents for some of the C numeric functions. C simply has a much broader list of numeric functions than Java. In Table 2, we list some of the important numeric functions. Notice that Java provides the usual calculator math functions plus conversion of numbers to and from strings. In addition to these functions, Visual Numerics makes available for free its JNL (Java Numeric Library), which consists of Java classes that go a long way towards making Java much closer to C, C++, and Fortran in terms of numeric capabilities.

Finally, one of the important divisions in Java is between the basic datatypes and all other objects. For example, basic datatypes are treated differently than objects in declarations and when used as parameters for functions/methods. For example, the statement float f1, f2, f3; immediately creates three float variables of four bytes each set to the default value of zero.


But Point pts; only creates four byte reference to pts, which is set to null. Only by explicitly declaring Point pts = new Point(1,2,3,5); does memory get allocated for the Point object and its two double values. Likewise, when a basic datatype is used as a parameter in a method/function, the parameter is by value (a copy of the basic datatype is made and passed to the subroutine). In contrast, an object parameter is passed by reference. This means that basic datatypes, when used as parameters, are protected from inadvertent change; object parameters are not. As we continue exploring Java we shall see more of these differences between objects and the basic datatypes. In fact, it is so important that all the basic datatypes have their object equivalents: boolean, byte, char, short, int, long, float, and double. Go to the Java API reference and look up double to see how double

doubles as an object. (3)  
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**< CAREERS & TRAINING >**

**Set stage with smeeashats**  
Continued from page 15

selected. Use the mouse to move it into position then choose Select, Selections, then None to remove the marching ants.

**CEstng fakes**

Sometimes you simply won't be able to get an image of exactly what you want. For example, some toolbars have buttons that are greyed out and it's impossible, or very difficult, to see what they do. You can, however, create a fake toolbar that has all the buttons enabled and visible.

Another shot you may want to fake is where a toolbar button has its tooltip displayed at the same time the tool is being used in the document. Because you can't have two mouse pointers active at the one time, you can never capture this with a single screenshot but you can create it! Do this by showing two screenshots, one showing the toolbar button active and the second showing the tooltip visible and the second shown. To do this, use the toolbar button in the first screenshot and copy it using Edit, then Copy. Switch to the second screenshot, paste the selection in using Edit, Paste, As, New Selection and move it into position.

**Recasaf g e she**  
If you're printing documents in black and white you won't need to use colour images in the document. You can save space by reducing your screen-resolution to greyscale before you import them into your document. You should do this in your graphics software and not in Word because Word won't make the change permanent, so the Be size won't be reduced. To create a "fake" toolbar that has all the buttons enabled and visible, choose Colors, then the toolbar buuon in the Srst screen capture and copy it using Edit, then Copy. The switch Adding screenshots to your documents is a great tool for illustrating instruction manuals and creating procedures and training documents.

**Anetang the shot**

Once you have an image in PaintShop Pro you can add text and other pointing elements to it to draw attention to what is your reader to see. To add text to the image, select a foreground colour and click the Add Text dialogue. If you're using PaintShop Pro 6 or higher, click the Floating option button. Choose the font, size and marked Enter Text Here, and click OK. The text will appear as a selection surrounded by marching ants. Drag it into position and add a drop shadow by choosing Image, Effects, then Drop Shadow. Choose a colour for the drop shadow (black or white are good choices depending on the background colour of the image), set Opacity to 100 percent, and set Blur, Horizontal, and Vertical to five, and click OK. To turn off the marching ants choose Selections, then None.

You can also add lines and ellipses to your image to point to and circle important elements. To do this, use the Draw (or Line), or Preset Shapes tool, set a width of three to four pixels, and set the colour to red to help the shape stand out. PaintShop Pro lets you create straight lines and curved lines, which are called Bezier curves, and which take a little practice to draw correctly. To draw a Hazier curve, select the Draw (or Line) tool and from the controls, select Line type, Bezier. Drag the mouse button, click and drag the line to where you want the tip of the curve to be. You can, however, create the line to even out the curve of the line by shooting a number of images of the toolbar with various combinations of buttons active and use the Edit, Copy and Edit, Paste, and As, New Selection options same width as your line and draw them with tons enabled and visible.

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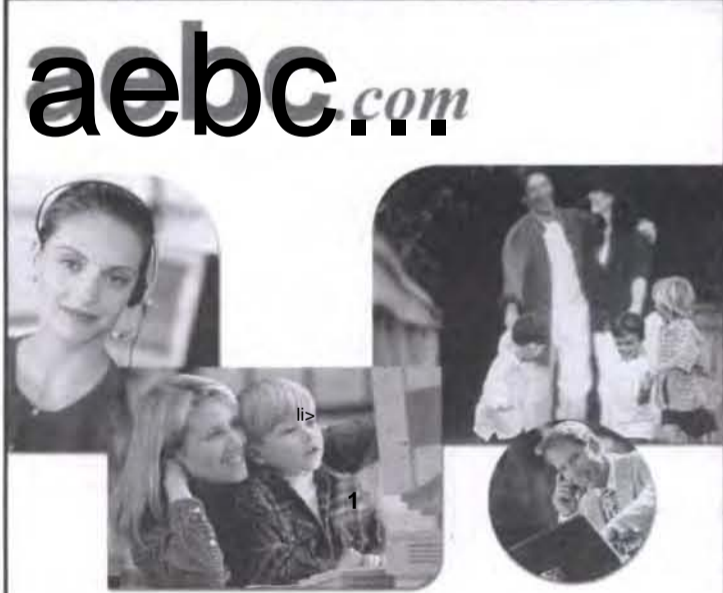
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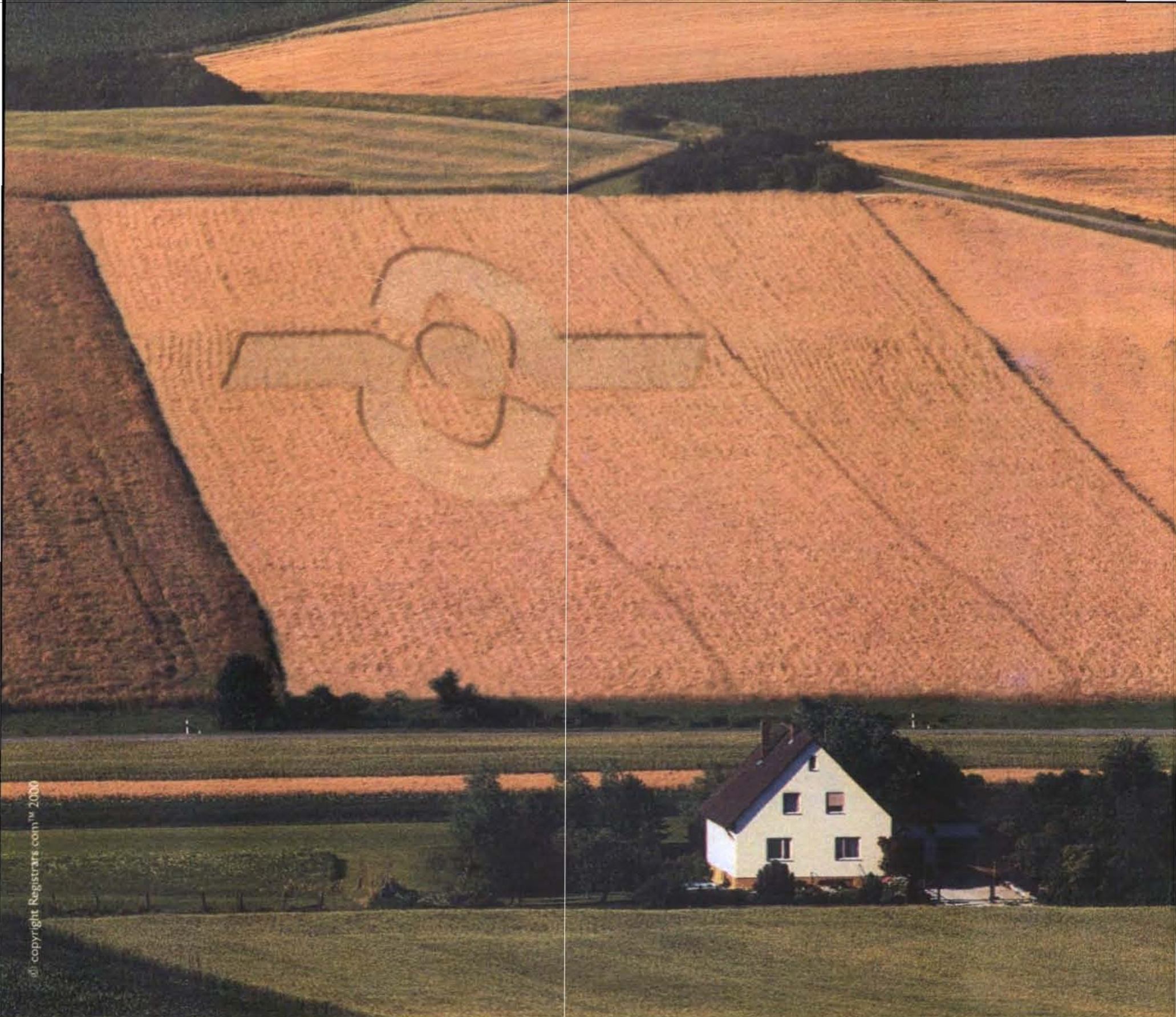
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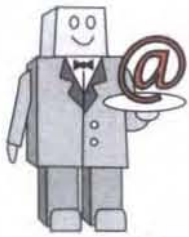
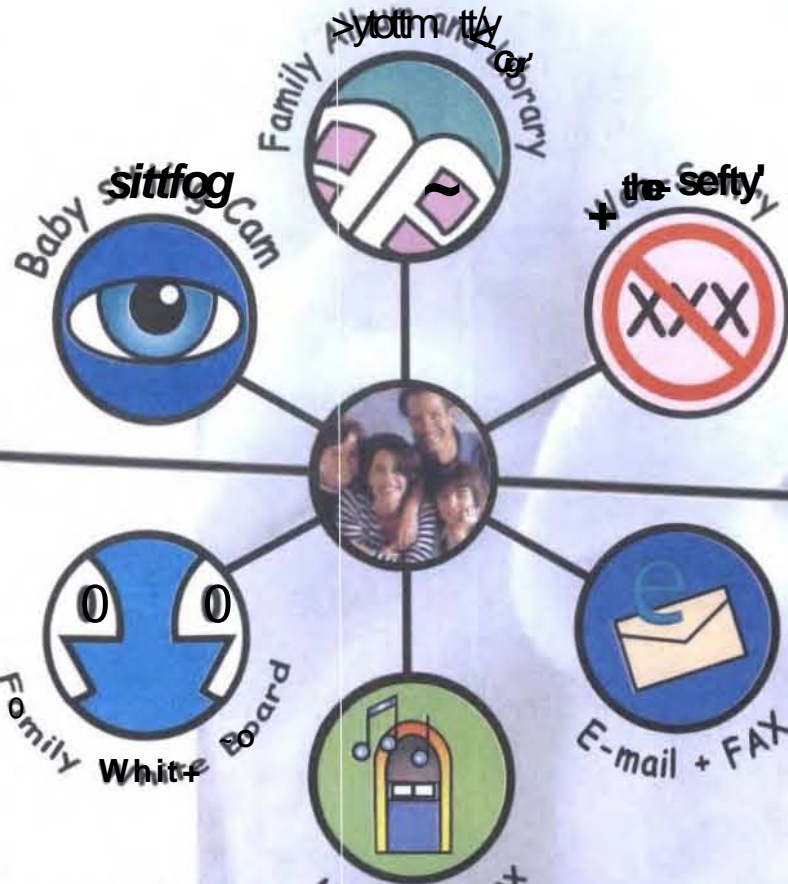


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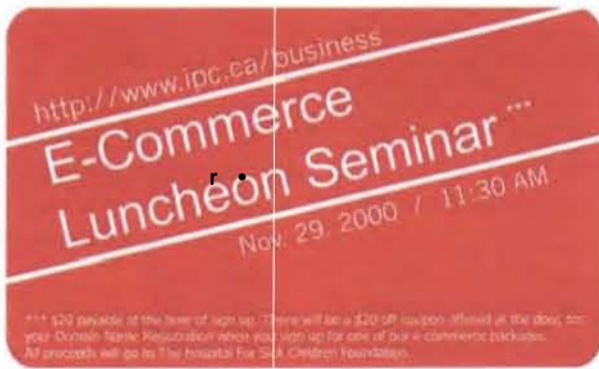
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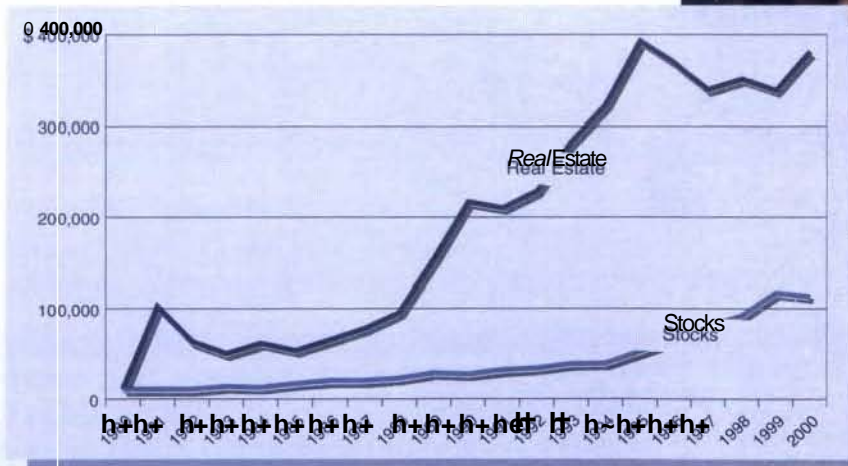
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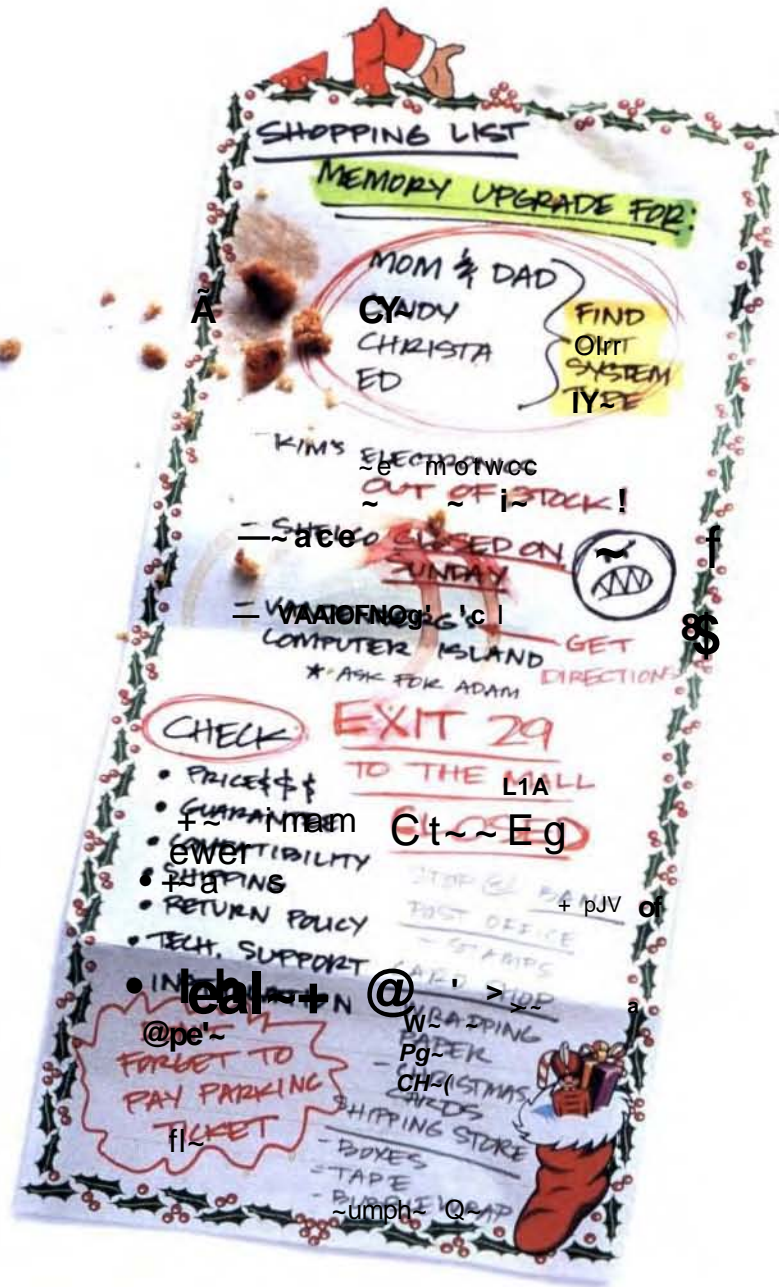
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