

FREE

The Computer PAPER

A Trader.com Publication

Canada's Computer Information Source

READ US ON THE WEB — www.canadacomputes.com

B.C. EDITION (COVER MAINLAND) JULY 2000 VOLUME 13 NO. 7

Flat Panels

TCP Lab Roundup

Plus:
Ergonomics & Peripherals Guide

DELL4me™

The Total Ownership Experience

Easy to Buy • Easy to Own • Easy to Pay For • Easy to Use

The DIMENSION XPS T & XPS B Desktop Series

With two great systems from Dell™ how do you choose which one is best for you? You can choose a high end Dell Dimension XPS T Series desktop and get powerful Pentium III performance of up to 850MHz and custom configuration options at very affordable prices.



Or you can go for the high end Dell Dimension XPS B Series with up to an earth shattering 1GHz of Pentium III processing power.

"We divided our benchmark tests into three key areas: business applications, Internet tasks, and 3D gaming. Overall, the Dell Dimension XPS B1000r clearly came out on top."

PC Magazine, April 18, 2000

The XPS B Series combines RDRAM technology for high performance and multi-tasking, up to a 40GB³ hard drive and high throughput 4X AGP graphics, to enhance your computing experience.

WE'VE GOT YOU COVERED

All DELL DIMENSION desktops come standard with a 3 Year Limited Warranty including 1 Year On-Site Service⁴, one of the longest in the industry. Or you can upgrade to 3 Year On-Site Service⁴ for an incredibly low price of \$169⁴.

DIMENSION™ XPS T700r

- Intel® Pentium® III Processor at 700MHz (up to 850MHz²)
- 128MB SDRAM Memory (up to 768MB³)
- 10GB³ Ultra ATA Hard Drive (up to 40GB³)
- 17" E770 Monitor (16.0" v.i.s.)
- 16MB ATI Rage 128 Pro Graphics
- 48X Max Variable CD-ROM Drive
- SoundBlaster 64V Sound
- harman/kardon Speakers
- 3Com® 10/100 Ethernet Card
- Microsoft® Windows® 98 Second Edition
- Microsoft Works Suite 2000 with Money 2000 Basic
- 3 Year Limited Warranty with 1 Year Next Business Day On-Site Service⁴

NEW LOW PRICE!

\$1799

\$54^{mo.}
48-mo.
Purchase Plan¹

Design Code: 21306 T700P1

DIMENSION XPS T700r Upgrades

- 12X Max Variable DVD-ROM Drive Add \$74⁴
- Altec Lansing ACS-340 Speakers with Subwoofer Add \$60⁴
- 3 Year Next Business Day On-Site Service⁴ Add \$169⁴

DIMENSION XPS B733r

- Intel Pentium III Processor at 733MHz (up to 1GHz²)
- 128MB RDRAM Memory (up to 512MB³)
- 20GB³ Ultra ATA Hard Drive (up to 40GB³)
- 17" E770 Monitor (16.0" v.i.s.)
- 32MB NVIDIA TNT2 M64 4X AGP Graphics
- 48X Max Variable CD-ROM Drive
- Turtle Beach Montego II A3D 320V Sound
- V.90/56K⁵ Modem
- Microsoft Windows 98 Second Edition
- Microsoft Works Suite 2000 with Money 2000 Basic
- 3 Year Limited Warranty with 1 Year Next Business Day On-Site Service⁴

\$2299

\$69^{mo.}
48-mo.
Purchase Plan¹

Design Code: 21306 B733P5

DIMENSION XPS B733r Upgrades

- Altec Lansing Speakers ACS-340 Speakers with Subwoofer Add \$100⁴
- 3Com 10/100 Ethernet Card Add \$70⁴
- 3 Year Next Business Day On-Site Service⁴ Add \$169⁴

DIMENSION XPS T800r

- Intel Pentium III Processor at 800MHz (up to 850MHz²)
- 128MB SDRAM Memory (up to 768MB³)
- 20GB³ Ultra ATA Hard Drive (up to 40GB³)
- 17" E770 Monitor (16.0" v.i.s.)
- 32MB NVIDIA TNT2 M64 AGP Graphics
- 12X Max Variable DVD-ROM Drive
- SoundBlaster 64V Sound
- harman/kardon Speakers
- V.90/56K⁵ Modem
- Microsoft Windows 98 Second Edition
- Microsoft Office 2000 Small Business Edition
- 3 Year Limited Warranty with 1 Year Next Business Day On-Site Service⁴

\$2499

\$75^{mo.}
48-mo.
Purchase Plan¹

Design Code: 21306 T800P4

DIMENSION XPS T800r Upgrades

- SoundBlaster Live! 512V Sound Add \$80⁴
- 100MB Iomega Zip Drive with One Disk Add \$99⁴
- 3 Year Next Business Day On-Site Service⁴ Add \$169⁴

DIMENSION XPS B866r

- Intel Pentium III Processor at 866MHz (up to 1GHz²)
- 128MB RDRAM Memory (up to 512MB³)
- 30GB³ Ultra ATA Hard Drive (up to 40GB³)
- 17" P780FD Trinitron® Monitor (16.0" v.i.s.)
- 32MB NVIDIA TNT2 M64 4X AGP Graphics
- 12X Max Variable DVD-ROM Drive
- SoundBlaster Live! 512V Sound
- Altec Lansing ACS-340 Speakers with Subwoofer
- 3Com 10/100 Ethernet Card
- Microsoft Windows 98 Second Edition
- Microsoft Office 2000 Small Business Edition
- 3 Year Limited Warranty with 1 Year Next Business Day On-Site Service⁴

\$3599

\$129^{mo.}
48-mo.
Purchase Plan¹

Design Code: 21306 B866P2

DIMENSION XPS B866r Upgrades

- Dell 4800LT 11MB Wireless Networking PCI Card⁷ Add \$299⁴
- 8X/4X/32X CD-Rewritable Drive Add \$280⁴
- 3 Year Next Business Day On-Site Service⁴ Add \$169⁴

DIMENSION XPS T850r

- Intel Pentium III Processor at 850MHz
- 128MB SDRAM Memory (up to 768MB³)
- 20GB³ Ultra ATA Hard Drive (up to 40GB³)
- 19" M990 Monitor (18.0" v.i.s.)
- 32MB NVIDIA TNT2 M64 AGP Graphics
- 12X Max Variable DVD-ROM Drive
- SoundBlaster Live! 512V Sound
- Altec Lansing ACS-340 Speakers with Subwoofer
- V.90/56K⁵ Modem
- 3Com 10/100 Ethernet Card
- Microsoft Windows 98 Second Edition
- Microsoft Office 2000 Small Business Edition
- 3 Year Limited Warranty with 1 Year Next Business Day On-Site Service⁴

\$3299

\$99^{mo.}
48-mo.
Purchase Plan¹

Design Code: 21306 T850P1

DIMENSION XPS T850r Upgrades

- 30GB³ Ultra ATA Hard Drive (7200 RPM) Add \$120⁴
- 8X/4X/32X CD-Rewritable Drive Add \$280⁴
- 64MB DDR NVIDIA GeForce Plus AGP Graphics Card Add \$500⁴

DIMENSION XPS B1000r

- Intel Pentium III Processor at 1GHz
- 128MB RDRAM Memory (up to 512MB³)
- 40GB³ Ultra ATA Hard Drive
- 19" P991 FD Trinitron Monitor (18.0" v.i.s.)
- 32MB NVIDIA GeForce 4X AGP Graphics
- 12X Max Variable DVD-ROM Drive
- 8X/4X/32X CD-Rewritable Drive
- SoundBlaster Live! 512V Sound
- Altec Lansing ACS-340 Speakers with Subwoofer
- V.90/56K⁵ Modem
- 3Com 10/100 Ethernet Card
- Microsoft Windows 98 Second Edition
- Microsoft Office 2000 Small Business Edition
- 3 Year Limited Warranty with 1 Year Next Business Day On-Site Service⁴

\$5699

\$203^{mo.}
48-mo.
Purchase Plan¹

Design Code: 21306 B1P3

DIMENSION XPS B1000r Upgrades

- 64MB DDR NVIDIA GeForce Plus 4X AGP Graphics Card Add \$290⁴
- 1394 IEEE PCI Card (3 Port) with MGI VideoWave III Digital Editing Software Add \$149⁴ (requires 64MB NVIDIA GeForce Plus 4X AGP Graphics)
- 3 Year Next Business Day On-Site Service⁴ Add \$169⁴

PURCHASE Online

Mon-Fri 8am-10pm EST • Sat 10am-6pm EST Service in French: Mon-Fri 8am-8pm EST • Sat 10am-6pm EST
www hours: 24 hours a day, 7 days a week.

PURCHASE by Phone

www.dell.ca 1-800-863-7395



1 Non-Discountable Price. SHIPPING AND APPLICABLE TAXES NOT INCLUDED. PRICES AND SPECIFICATIONS VALID IN CANADA ONLY AND SUBJECT TO ERROR AND CHANGE WITHOUT NOTICE. Software does not include documentation and may differ from retail version. 2 48-Month Purchase Plan offered through Dell Financial Services, an independent entity to qualified customers, subject to credit approval and availability. Monthly payments are based on sales prices depicted for a 48-Month term. Shipping and applicable taxes not included. Full cost of borrowing at an annual rate of 18.99% Finance example: \$1799 @ 18.99% per annum interest rate equals \$53.77 per month for 48 months. Total payable: \$2,580.96. Full cost of borrowing: \$781.96. Terms subject to error and change without notice. 3 For Hard Drives, GB means 1 billion bytes, total accessible capacity varies depending on operating environment. 4 See Dell's Warranty and SelectCare Services Guide for full details. For a copy, please write to Dell Canada, 155 Gordon Baker Road, Suite 501, North York, Ontario, M2H 3N5, or visit www.dell.ca. On-site service may not be available in certain areas. 5 TECHNICIAN WILL BE DISPATCHED IF NECESSARY FOLLOWING PHONE BASED TROUBLE SHOOTING. 6 Download speeds limited to 53Kbps. Upload speeds are limited to 33.6 Kbps. Actual speeds may vary by modem manufacturer and line conditions. 7 Conforms to IEEE 802.11b 11MB wireless networking standard. As with other networking, actual transmission speeds depend on number of computers simultaneously networking. 8 Transmission range at the maximum rate is 150 feet. Transmission is possible outside of this range but at a reduced rate. Transmission may be impacted by internal metal structures. 9 Interference is possible from other devices that operate on a 2.4GHz spectrum. Some household appliances, such as microwaves during use, may impact if the networking device is close to the appliance. Dell, the Dell logo, Dell4me, Dimension, and the Dell E Com logo are trademarks of Dell Computer Corporation. Intel, the Intel Inside logo and Pentium are registered trademarks and Celeron is a trademark of Intel Corporation. Microsoft and Windows are registered trademarks of Microsoft Corporation. 3Com is a registered trademark of 3Com Corporation. All other trademarks and registered trademarks are the property of their respective holders. ©2000 Dell Computer Corporation. All rights reserved.

AD CODE CP081

DELL
COM
www.dell.ca

ViewSonic® offers a nest full of choices.

E² Series - EF70

PerfectFlat™ technology is now available in the price/performance ViewSonic EF70 monitor. The flat screen and anti-reflection coating on the 17" (16.0" viewable) monitor result in edge-to-edge, precise images and minimal glare. With a 0.25mm ultra-fine aperture grille pitch and a high refresh rate of 87 Hz at 1,024 x 768 resolution the user is assured of brighter, crisper and greatly enhanced images. The EF70 is the ideal choice for education, home offices, small business and corporate environments.



.E ² Series					
ViewSonic Model	CRT Size/Viewable	Horizontal Dot Pitch	Maximum Resolution	OnView®	Low Radiation
E40	14/13.2	0.25	1024 x 768	LED	MPR-II
E651	15/13.8	0.24	1024 x 768	YES	MPR-II
E655	15/13.8	0.24	1280 x 1024	YES	TCO '92
EF70 [†]	17/16.0	0.25/AG	1280 x 1024	YES	MPR-II
E771	17/16.0	0.24	1280 x 1024	YES	MPR-II
E773	17/16.0	0.23	1280 x 1024	YES	TCO '99
E790 [‡]	19/18.0	0.22	1600 x 1280	YES	TCO '95

Also available in black bezel #PerfectFlat †Aperture Grille

Graphics Series

ViewSonic Model	CRT Size/Viewable	Horizontal Dot Pitch	Maximum Resolution	OnView Controls	TCO Low Radiation
G655	15/14.0	0.24	1280 x 1024	YES	TCO '99
G773 ^{**}	17/16.0	0.22	1280 x 1024	YES	TCO '92
GS771 [*]	17/16.0	0.23	1280 x 1024	YES	TCO '92
GS773 [*]	17/16.0	0.22	1280 x 1024	YES	TCO '92
GS790 [*]	19/18.0	0.22	1600 x 1280	YES	TCO '92
G810	21/20.0	0.22	1600 x 1280	YES	TCO '92

*Short Depth Monitor **Multi-port USB hub

Professional Series

ViewSonic Model	CRT Size/Viewable	Horizontal Dot Pitch/Aperture Grille Pitch	Maximum Resolution	TCO Low Radiation
PF77 [†]	17/16.0	0.25/AG	1600 x 1280	TCO '99
PF775 [†]	17/16.0	0.25/AG	1600 x 1280	TCO '99
PS775 ^{†*}	17/16.0	0.22	1600 x 1280	TCO '99
PF97 [†]	19/18.0	0.25-0.27/AG	1600 x 1280	TCO '99
PF790 [†]	19/18.0	0.25-0.27/AG	1600 x 1280	TCO '99
PF795 [†]	19/18.0	0.25-0.27/AG	1920 x 1440	TCO '99
PS790 [*]	19/18.0	0.22	1600 x 1280	TCO '99
P810	21/20.0	0.22	1800 x 1440	TCO '99
P815 [*]	21/20.0	0.22	1800 x 1440	TCO '99
P817 ^{**}	21/20.0	0.22	2048 x 1536	TCO '99
PF815 [†]	22/20.0	0.25-0.27/AG	1920 x 1440	TCO '99

†Aperture Grille *Short Depth Monitor **Multi-port USB hub
*Multi-port USB hub and Short Depth #PerfectFlat

MultiMedia Series

ViewSonic Model	CRT Size/Viewable	Horizontal Dot Pitch	Maximum Resolution	TCO Low Radiation	Speakers
MS0	15/13.8	0.24	1280 x 1024	TCO '92	2-watt (X2)
M70 [‡]	17/16.0	0.24	1280 x 1024	TCO '92	2-watt (X2)

Also available in black bezel

ViewPanel Series

ViewSonic Model	Screen Viewable	Special Feature	Maximum Resolution	Analog Interface	Bezel Integrated Speakers
VP140	14.0	WALL MOUNTABLE	1024 x 768	YES	
VE150	15.0	WALL MOUNTABLE	1024 x 768	YES	
VE150B	15.0	WALL MOUNTABLE BLACK VERSION	1024 x 768	YES	
VG150	15.0	WALL MOUNTABLE	1024 x 768	YES	
VPA150	15.0	PIVOT	1024 x 768	YES	YES
VP150	15.0	WALL MOUNTABLE	1024 x 768	YES	
VP151	15.0	COMPOSITE VIDEO	1280 x 1024	DIGITAL/ANALOG	YES
VP181	18.1	COMPOSITE VIDEO	1600 x 1200	DIGITAL/ANALOG	YES
VPD150	15.0	PIVOT	1024 x 768	DIGITAL INTERFACE	YES
VPD180	18.1		1280 x 1024	DIGITAL INTERFACE	



MultiMedia Series - M70

Our MultiMedia monitors provide the ultimate in sight and sound. The new M70 is a 17" (16.0" viewable) 0.24mm horizontal (0.27mm diagonal) dot pitch monitor with a maximum resolution of 1,280 x 1,024.



ViewPanel® Series - VP151

For those who need big screens that fit in small spaces, our Visual Computing™ ViewPanels provide the ultimate experience. The new VP151 displays a full 15" multifunctional, flat panel to incorporate digital, analog and composite video inputs using OptiSync™ technology into a single unit that also offers picture-in-picture capabilities†.

OPTISYNC
BEYOND DIGITAL™

For more information on the company that's won over 600 industry awards, call one of the listed ViewSonic dealers or visit ViewSonic at: www.ViewSonic.com

The Visual Technology and Communications Company™

Varsity Computers
604-222-2326

A-POWER
Computer Ltd.
604-273-8868 / 604-570-0766

Aspert Technologies Inc.
604-232-0328

ATIC
604-875-8859

ROCK
604-879-8642



DEXTON
604-434-3842

NCIX CANADA
1-888-NCI-9888

THE COMPUTER DEPARTMENT OF LONDON DRUGS
www.londondrugs.com

f
www.fronet.com

ICI
ICI COMPUTER INC.
604-273-1368

MicroConcept
Systems Inc.
604-730-8183

(800) 888-8583 Copyright © 2000, ViewSonic Corporation. All rights reserved. Specifications subject to change without notice. Corporate names and trademarks stated herein are the property of their respective companies. *ViewSonic ranks as United States' #1 best selling flat panel display and the leading non-captive monitor brand by Stanford Resources, Inc. (Flat Panel Monitor, Q3 '99 and Monitor Q3 '99). **USB is compatible with Windows® 98 and also requires USB-equipped computers and peripheral devices. †Currently, audio, composite video and picture-in-picture features are supported via analog only.

The Computer PAPER

Canada's Computer Information Source



BC EDITION
JULY 2000

Commentary

- 6 From the Editor
- 8 Letters
- 114 The Last Byte
The Eyes of the Web are upon you

New & Notable

- 10 New Media Innovation Centre opens
- 12 What's New

Ergonomics & Peripherals Guide

- 14 The ergonomics of IT
- 21 Have wireless will travel
- 45 Two paths to multi-megapixel quality
- 54 More than *just* a mouse or keyboard

Hands On

- 38 Photo album software, take three
- 38 Vopt99 a fast disk defragmenter
- 38 Monsoon blows a 950 MHz storm
- 62 Keep it flat!
TCP Lab looks at flat-panel monitors
- 63 Flat-panel monitor survey
- 65 For the big picture, try LaCie's Electron 22 Blue
- 70 The future of flat
Syncmaster 150MP raises level of multimedia

Tech Enterprise

- 73 Bring on that light, bright light!
Projectors get lighter, brighter, more affordable
- 73 Connecting VCs and startups
Getting your idea off the ground, on the Web
- 73 LAN Line: NetWinder a good thing in a small package

Platform News

- 78 Jon "maddog" Hall talks Linux
- 78 Mac News: Apple delays OS X release
- 78 WordPerfect Office for Linux a contender

Online & Connected

- 89 Love bug a wake-up call for cyber-terrorism foes
- 89 Free calls... or busy signal?
Actiontec offers help with long-distance bill

Careers & Training

- 92 Office Suite Training: Put yourself in command
- 92 Linux for Newbies Part 12:
Home Networking: Part 1

Reader Services

- 104 Marketplace
- 109 Advertising Index
- 110 Classified
- 110 User Groups
- 111 Calendar

FREE

Unlimited
Internet
Access

100%

Absolutely FREE



WIN a Free PC!

Everytime
you use Funcow e-mail,
you could
WIN a Free PC!

SIGN UP TODAY



For Full / AD-Sponsored Memberships
Download your Funcow Connect Software
from www.funcow.com/download
or call: Toronto - 416-225-1990
Montreal / Vancouver - 1-877-7Funcow

AD-Sponsored Membership

Free unlimited Internet access
(Toronto, Montreal, Vancouver)
Free e-mail address
Fixed advertising banner

100% Absolutely
Free

Isn't that
Moovellous

Full Membership

Free unlimited Internet access
(Toronto, Montreal, Vancouver)

Free e-mail address

100% Bandwidth

100% Viewable Space

\$25.99
Annual
Membership Fee

Associate Membership

Free e-mail address
Unlimited use of member services

Free

Member Services

Member classifieds
Powerful search engine
E-shopping channel
On-line weather, horoscopes
Internet time display
Web directory
On-line news, stock quotes
Multimedia e-card
Business/People finder
Lottery results

Free classifieds service,
Buy and Sell for FREE

For online introduction, visit: www.funcow.com/intro.asp

www.funcow.com

All trademarks and tradenames are the property of their respective owners. All information subject to change without prior notice. © copyright funcow.com Inc. 2000. All rights reserved.

You are your own publisher

Working online has become a living example of infoglut. A simple query in a Web search engine returns thousands of hits, only a few of them useful. Email boxes fill with 99 percent junk or otherwise unsolicited mail. While the Internet may be the primary source of today's infoglut, out of Web technology comes some potential solutions as well.

One of the trendy concepts these days is personalization. The first expression of this was when Web sites began offering visitors the opportunity to modify the opening page to suit their specific interests. So, using some "my homepage" functions, you could tailor the page to show more sports, only the stock news you care about, and the local weather. Today, you can receive email newsletters customized to suit your interests. But of course, when these are tied to the host's revenue objectives, the more you reveal about the subjects that interest you, the more tightly marketers can focus their pitches on your hot spots.

But there is another side to personalization that isn't specifically tied to an ecommerce agenda. It's the way we sort, compile and store the information as a matter of course these days. This includes bookmarking useful Web sites in our Favourites folder, printing out Web pages to physically store in filing cabinets, or setting up filters on our email so that the mail is automatically sorted into electronic bins.

When information is abundant and commonly available, everyone takes on some of the roles previously assigned to editors and publishers. In the funnelling that takes place in assembling a typical magazine, all possible information about a given subject is narrowed down and refined to perhaps two or three dozen stories and images that make up a single issue. Magazine editors are information gatekeepers, deciding which kinds of content will appeal to the reader and which won't. If they gauge the readership pulse accurately, they are



David Tanaka

FROM THE EDITOR

rewarded with a satisfied customer; but if they stray too far and too often from what readers expect, they may wake up one day to realize the magazine has lost touch—and readers.

We editors take pride in our news judgement and our ability to spot a story or trend that will provide unique entertainment or information value. But readers don't have to rely solely on editors' views of the world anymore. Not only can readers make their own judgements about what content is important, they can publish personal volumes that reflect their tastes, priorities and interests. And the Web reduces the costs of both publishing and distribution to just a fraction of what it costs to print and distribute a glossy full-colour magazine.

The obvious consequence of this is that the alternative press flourishes on the Web. Anyone with a passion and a point of view can start an online publication. The hate and porn sites that disgust or titillate (depending on your point of view) are a consequence of this reality, but so are the beautifully crafted personal sites devoted to roses, woodworking or bottle collecting.

A less obvious consequence is the shift in the

way information in general is now consumed. I attended a Hewlett-Packard product roll-out recently, where Keith Kmetz, an analyst from International Data Corporation talked about the changes in office document distribution. Kmetz said office communication is shifting from a print and distribute model to a distribute and print one. In other words, we're seeing the final days of the centralized printing of multiple copies of a memo or report, which is then distributed to employees. I can't remember the last time anyone distributed a paper memo in our company—it's all email. Even reports are distributed as email attachments, to be printed only if the recipient wants hard copy.

Is the distribute and print model relevant beyond the office? In fact, we already see the

beginnings of this outside business environments. Suppose you are doing research on flying mammals. With Adobe Acrobat 4 you can surf the Web, going to as many sites as you care to, and saving pages as you jump from site to site. In the process, you're creating an instant volume on flying mammals. Likewise, online music is already there, where you have the ability to produce your own compilations and burn them onto a CD. This isn't printing, but the model is the same: the audience does the compiling.

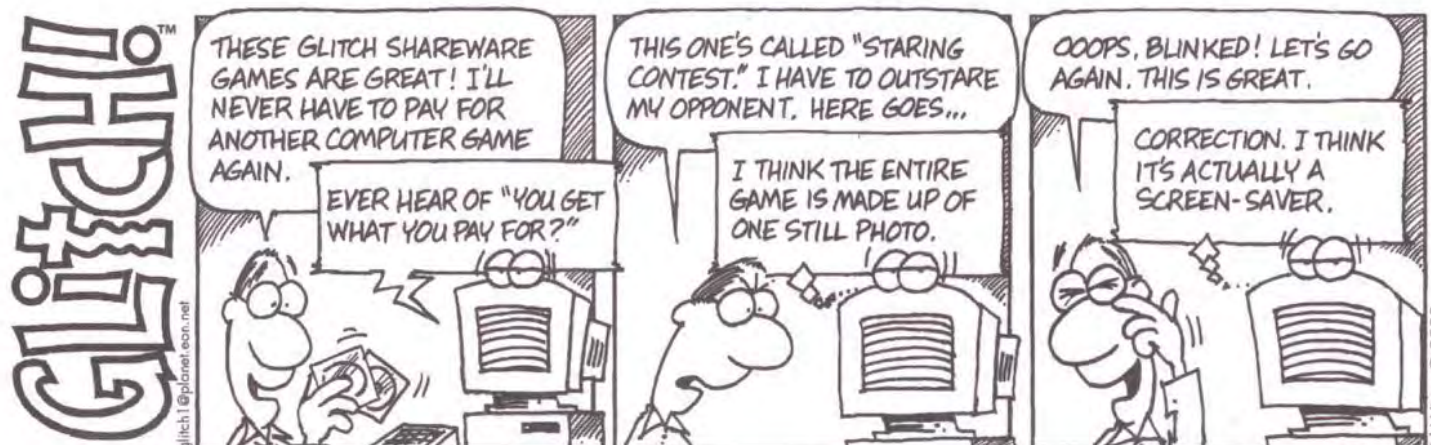
There are big issues to deal with here, copyright and intellectual property being one. But the gate is now yours to keep.

Interesting times ahead!
David Tanaka

Thank you all!

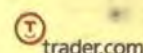
On a personal note, I would like to extend my thanks and best wishes to the graphics, layout and IT people in Vancouver, for whom this issue of *The Computer Paper* will be their last. Like many organizations that operate multiple offices, we are undergoing, and will continue to undergo, many changes, some of which, regrettably, involve shifts in responsibilities and job functions.

The Computer Paper has its roots in Vancouver and many of the people in that office helped build the paper from a local magazine into one that is recognized from coast to coast. Having worked side by side with these people for many years, I know the creativity and genuine work ethic they brought to the job. It's a rare quality in the modern workplace. □



The ComputerPAPER

Canada's Computer Information Source



VOL. 13, NO. 7, JULY 2000

EDITOR David Tanaka, david@tcp.ca
MANAGING EDITOR Megan Johnston, megan@tcp.ca
PRODUCT REVIEW EDITOR Sean Carruthers, sean_carruthers@tcp.ca
STAFF WRITER Tom Venetis, tom_venetis@tcp.ca
EDITORIAL ASSISTANT Sharlene Myers
TCP PRODUCTION DESIGNERS Jason Edmunds, Selim Sora, Ernest Stelzer, Colleen Stobbe

COVER DESIGN / FEATURE GRAPHICS Jason Edmunds

Press releases: Fax (604) 688-4680
Email: tcpeditorial@tcp.ca Letters: letters@tcp.ca

BUSINESS GROUP

PUBLISHER Frank Shoniker, frank_shoniker@tcp.ca
CONTROLLER Linda Lovegrove, linda_lovegrove@tcp.ca
NATIONAL PROD. MANAGER Maxine Lewis, maxine_lewis@tcp.ca
NATIONAL CIRC. MANAGER Charles Oliver, charles_oliver@tcp.ca
CIRCULATION MANAGER Samiatha Roy, samiatha_roy@tcp.ca
B.C. CIRCULATION Kim Jewison, kim_jewison@tcp.ca
ACCOUNTING Farida Aini, farida_aini@tcp.ca

ADVERTISING SALES

NATIONAL SALES MANAGER Frank Houston, frank@tcp.ca
AD SALES Dyal Singh Khalsa, Kit Griffin
BC AD TRAFFIC Jennifer FitzGerald
Tel: (604) 688-2120
Email: bcsales@tcp.ca Classified Ads Email: classifieds@tcp.ca

VANCOUVER OFFICE

OPERATIONS MANAGER Malcolm MacLachlan, malcolm_macLachlan@tcp.ca
503-425 Carrall St., Vancouver, BC V6B 6E3
Phone: (604) 688-2120
Fax: main (604) 688-4270, Accounting: (604) 688-7063

TCP OFFICES

PRAIRIE
The Devenish Bldg, Suite 306, 908 17 Ave. S.W. Calgary, AB T2T 0A3
Calgary Direct, Phone: (403) 228-3355, Fax: (403) 228-3456
Alberta, Sask., & Manitoba: 1-800-407-3355, Fax: 1-800-695-1155

SW ONTARIO
196 Kehl St., Kitchener, ON N2M 3V2
Phone: (519) 221-6972, Fax: (519) 741-9186, London phone: (519) 433-3134

TORONTO

625 Church St, Suite 600, Toronto, ON M4Y 2G1
Phone: (416) 923-4200, Fax: (416) 923-7994

MONTREAL

130 De Liège Est, Montreal, QC H2P 1J1
Phone: (514) 384-1123, Fax: (514) 384-3384, Toll free: 1-877-843-4770

OTTAWA

303-260 St. Patrick Street, Ottawa, ON K1N 5K5
Phone: (613) 789-6431, Fax: (613) 789-6433

HALIFAX

1 Dillon Ave., Halifax, NS, B3M 3Y8
Phone: (902) 457-0121, Phone & Fax: (902) 457-4390

GADEKIN INTERNATIONAL

Gadekin International Computer Publishers Inc. Corporate Office
625 Church St, Suite 600, Toronto, ON M4Y 2G1
Phone: (416) 923-4200, Fax: (416) 923-7994

CIRCULATION

TOTAL NATIONAL CIRCULATION	395,000
BRITISH COLUMBIA EDITION	Vancouver 60,000*
ALBERTA EDITIONS	Calgary 30,000*
(Total 60,000)	Edmonton 30,000*
PRAIRIE EDITION	Saskatoon, Regina, Winnipeg, Brandon 30,000
SW ONTARIO EDITION	Southwestern Ontario 30,000
GREATER TORONTO EDITION	Greater Toronto 110,000*
EASTERN EDITIONS	Montreal 50,000*
(Total 105,000)	Ottawa 30,000*
	Atlantic 25,000*
	* CCAB audited

SUBSCRIPTIONS

To have 12 issues of *The Computer Paper* mailed directly to your home (in Canada), send a money order or cheque (payable to The Computer Paper) for \$34.95 (or \$59.90 for two years, \$74.85 for three years) to Suite #600-625 Church St., Toronto, ON M4Y 2G1. American subscriptions please send \$75 (for one year) in US Funds. Overseas please send (first class) \$135 Canadian (one year). Email: subscriptions@tcp.ca
The Computer Paper is published monthly by Gadekin International Computer Publishers Inc. under licence from Canada Computer Paper. All rights reserved. Reproduction in whole or in part without the permission of the publisher is strictly prohibited. The opinions expressed in articles are not necessarily those of the publisher. Information presented here is compiled from sources believed to be accurate, however, the publisher assumes no responsibility for errors or omissions. The publisher reserves the right to refuse ads of a sexual or violent nature, or ads which may be deemed to perpetuate sexual or racial stereotypes. The opinions expressed in the articles and columns and ads are those of the writer/advertiser and not necessarily those of *The Computer Paper*. Member of the BDA Division of CCAB. Printed in Canada ISSN 0840-3929

COMING UP

August 2000

What's new in New Media
PC Music
Knowledge management
Ad deadline Tue., June 27
Distribution Fri., July 14

September 2000

Tracks and strategies
for a career in IT
Multimedia cards (audio/video)
Videoconferencing
Ad deadline Tue., Aug. 1
Distribution Fri., Aug. 18

October 2000

Mondo PC: the system you really want
Monitors
Small business essentials
Ad deadline Tue., Aug. 29
Distribution Fri., Sept. 15

Call (604) 688-2120
for ad information

Everything But The...



when you register your **Domain Name** with us!

THE EASIEST WAY TO REGISTER "YOUR NAME" .COM .NET .ORG

Introducing:

The fastest, easiest, most affordable domain registration service on the Internet! Register your .COM .NET or .ORG domain name **before** it's gone!

For over 3 years, Domain Direct, as one of the leading domain registration services worldwide, has strived to make getting your own Internet name **as easy and value packed** as possible! Don't throw your money down the drain. Get **MORE** with Domain Direct today!

Visit www.domaindirect.com

 **domain**
direct

"Because people need Names"

Personal Identity Account

Includes:

Domain Control Panel 5.1

- ✓ **Domain Forwarding**
(redirect your domain to any website)
- ✓ **URLKeeper**
- ✓ **POP E-mail Account**
(you@yourname.com)
- ✓ **E-mail Forwarding**
- ✓ **Domain Name Management**
- ✓ **Website Promotion**

NEW! INCLUDES DOMAIN NAME REGISTRY FEE!
(www."yourname".com)

- ✓ **Website Maintenance**
- ✓ **Website Building Software**
- ✓ **Free Personal Website**
- ✓ **Web Search Tools**
And much more...

All this for just
\$39.99/year!

ABSOLUTELY NO MONTHLY FEES!
www.domaindirect.com

* No registry fees for as long as your Personal Identity Account is active.
All prices in U.S. funds.
Official member of the TUCOWS Network

Go to: www.domaindirect.com TODAY!

Web software questions

I read "Web development software shootout" in the June 2000 issue of *The Computer Paper*. Any reason you did not include the popular NetObjects software in your review?

Rick

JS replies: Yes, simply because the Drumbeat 2000 template model so far outclassed what was supposed to be the corner piece of NetObjects Fusion. Likewise in the scripting arena and visual designers' ease of use, GoLive, Dreamweaver, Drumbeat

and HotMetal all put NetObjects to shame.

With its special interfaces to IBM WebSphere and other databases, NetObjects is doing some interesting but not uniform stuff in contrast with what Drumbeat and GoLive are doing.

In short, NetObjects would have come out so low in the review I decided to wait for the new version 6, which is due at summer's end and promises a major step up.

Two comments on the "Web development software shootout." First, Front Page has never

been a part of Office Professional. It's a part of Office Premium. Second, what about Allaire's HomeSite? Don't discharge it! Looks a lot better than weird and expensive Dreamweaver.

Gleb Bylov

JS replies: On the first point, you are right, and we stand corrected. The feature set of Allaire's HomeSite has peaked somewhat in comparison to the template and database and XML stuff being done in the visual editors—that is why we focussed on visual editors.

How private? The replies

In our June letters column, a reader recounted a story about the arrest of a person after child pornography was found on his computer by a technician who was servicing it. He wondered what privacy issues this incident raised. We asked readers to respond and received many replies. What follows are some excerpts.—Ed.

As far as I understand it, here in Canada at least, it is a criminal offense to fail to report incidents of child abuse. This is to say then, that when child abuse (child pornography equals child abuse) is discovered by any third party who stumbles across it or who is somehow made aware of it and has no doubts about what the nature of the abuse is, it is incumbent on this person to report it. ... It seems to me, therefore, that a repair company or data recovery company would do well to protect themselves in this area with a zero-tolerance policy where child pornography files stored on hard disks are concerned. ... I, personally, am not terribly anxious that the privacy "rights" of perpetrators be supported when helpless kids are being mercilessly exploited and discarded and their rights to safety and respect are minimized or disregarded.

Maureen Marder

...

Someone who wants to snoop isn't going to worry about ethics. And how effective can the law be? I'd guess about as effective as a stop sign in making drivers stop. When I turn my equipment over to a professional for an upgrade—which seems to happen more and more often—I'd like to feel that private files stay private. Applications like Quicken or QuickBooks provide password protection against unauthorized opening. I'm confident they'll protect my data against a casual visitor to my home or office—but a savvy technician in a well-equipped workshop?

Kevin Golden

...

Suppose that I am a plumber called to fix your kitchen sink. If in the course of my business I see fit to visit your washroom and unexpectedly interrupt your wife in the shower, an embarrassing accident has occurred but not a purposeful invasion of privacy. If, however, I find a child gagged and chained to the drain pipe... thank God.

Rights to privacy do not belong to us for the purpose of hiding what is immoral about ourselves. What is not immoral will survive such accidental embarrassments.

Sandes Ashe

...

It's probably no different than an auto mechanic reading documents in a glove compartment when the car is in for service. In both cases, the technicians should be aware that discretion is an important part of customer relations. They will also remember that they are liable, under civil law, for any damages a customer might suffer. In the case of illegal activities however, customers will not be protected and the authorities should be contacted without delay. That's what happened when pornography was discovered in a computer and the same would be acceptable if an illegal weapon was to be found in a car.

George Dunbar

...

A computer repair technician is a service representative, all service-oriented occupations have a border which they must not cross over! A cable television tech that enters your home

Continued on page 11

One Chip Can Turn One Second Of Gaming Into

ONE HELLISH NIGHTMARE!

Today's game opponents are tougher to beat. So we're issuing you an unrivaled weapon. The new Viper II graphics card is equipped with 4X AGP power and a transformation and lighting engine for the most realistic images ever. Better yet, Viper II now features S3TC texture compression, which hurls up to 15 million triangles at your monitor every second for the most intense 3D action ever. Make your screen image come alive. Unless, of course, you'd prefer to make them otherwise.

QUAKE III Arena™ is a trademark of Id Software, Inc. Quake III Arena™ characters, screenshots and images ©1999 Id Software, Inc. All Rights Reserved.



www.s3.com

AUDIO

GRAPHICS

COMMUNICATION

HOME NETWORKING

SAMSUNG

SAMSUNG BUSINESS SOLUTIONS

New!

TV/Monitor



SyncMaster 15" 150MP

\$2,499.99

MSRP

SyncMaster 17" 170MP

\$4,599.99

MSRP

- High-breed TFT-LCD monitor
- Built-in TV tuner

New!



QwikLaser Printer QL-6100

- 12 ppm
- 600 x 600 dpi
- 4MB memory

\$799.99

MSRP



QwikLaser Printer QL-6050

- 12 ppm
- True 600 x 600 dpi
- 4MB memory

\$429.99

WITH \$50
REBATE COUPON*



QwikLaser Printer QL-5100A

- 8 ppm
- True 600 x 600 dpi
- 4MB memory

\$329.99

WITH \$50
REBATE COUPON*

QwikLaser Printers

New!

SyncMaster™ TFT Monitor



SyncMaster 770TFT

- 17" viewable size
- LCD display
- .26 mm dot pitch

\$3,599.99

MSRP

New!



SyncMaster 700NF

- Optically flat image
- .25 mm Aperture Grille Pitch

\$499.99

WITH \$50
REBATE COUPON*

Natural Flat Monitor

New!



Multi-Function Printer SF-5800P

- 8 ppm
- 600 x 600 dpi
- 2MB memory

\$649.99

WITH \$50
REBATE COUPON*

New!



Multi-Function Printer SF-5100P

- 6 ppm
- 300 x 300 dpi
- 2MB memory

\$549.99

WITH \$50
REBATE COUPON*

Multi-Function Printers

DynaFlat™ Monitor



SyncMaster 700IFT

- Flat screen - no visible curvature
- .20 mm (H) dot pitch

\$449.99

WITH \$50
REBATE COUPON*



SyncMaster 753DF

- Flat screen - no visible curvature
- .20 mm (H) dot pitch

\$419.99

WITH \$30
REBATE COUPON*

Samtron™ Monitors



Samtron 55E

- 13.8" viewable size
- .28 (H) mm dot pitch
- 1024 x 768@75Hz max. resolution

\$199.99

MSRP



Samtron 75E

- 16.0" viewable size
- .28 mm (H) dot pitch
- 1280 x 1024@60Hz max. resolution

\$299.99

MSRP



Samtron 95P

- 18.0" viewable size
- .26 mm (H) dot pitch
- 1600 x 1200@75Hz max. resolution

\$499.99

MSRP

© 2000 Samsung Electronics Canada Inc. DynaFlat, QwikLaser, Samtron, and SyncMaster are trademarks of Samsung Electronics Co., Ltd. Manufacturer suggested retail price is subject to change without prior notice. Prices are subject to applicable taxes. Dealers may sell for less. Appearance and specifications are subject to change without prior notice. All other brand and product names are registered trademarks or trademarks of their respective companies. *See details in store.

ALL SAMSUNG PRODUCTS ARE AVAILABLE AT:

Aspert Technologies
110 - 11100 Bridgeport Rd.
Richmond
604-232-0328

Campus Computers
108 - 2605 Bridge St.
Victoria
250-920-9828

Dexton Computers
3112 Boundary Rd.
Burnaby
604-437-0077

Evergreen Computers
1615 Lonsdale Ave.
North Vancouver
604-990-3960

Frontier Computers
Ste 105, 1755 West Broadway
Vancouver
604-739-8060

Micro Concepts
Ste 102, 1245 West Broadway
Vancouver
604-730-8183

SAMSUNG DIGITall
everyone's invited™

www.samsungcanada.com

New Media Innovation Centre opens

By Chris Keam

New media in British Columbia got a helping hand from government May 12, with the announcement of the New Media Innovation Centre (NewMIC). The centre, to be established at Harbour Centre in downtown Vancouver is a five-year, \$29-million initiative to fuel growth in new media technologies, products, and delivery systems.

Officials on hand to participate in the announcement included federal Environment Minister David Anderson, B.C.'s Employment and Investment Minister Gordon Wilson, and Graeme Bowbrick, the B.C. minister responsible for the provincial Information, Science, and Technology Agency.

NewMIC is the first project approved for funding under the new Western Economic Partnership Agreement (between the province of B.C. and the federal government), which will see \$40 million spent to stimulate job creation, new technologies, and entrepreneurship between now and March 2002.

Federal and provincial governments will each contribute \$4 million to NewMIC, with the remainder of the budget to come from industry, revenues generated, and in-kind contributions from the University of B.C., Simon Fraser University, the University of Victoria, the Technical University of B.C., and the Emily Carr Institute of Art and Design. A number of high-tech and new media companies are also founding partners in the centre, including IBM, Nortel, Xerox, TRILabs, Electronic Arts, and INSINC! Interactive Netcasting Systems.

NewMIC will be helmed by Alan Winter, the organization's founding president and chief executive officer. Previous positions held by Winter include stints as president and CEO of MPR Teltech, president of Comdev Space Group, and president and chief executive officer of SCS Solars.

"The impetus for this project came from the fact that the high tech sector was growing," says Winter. "There were a number of companies such as PMC Sierra and Sierra Wireless in the first wave of development, which was infrastructure and applications. New media is the next wave."

Winter adds, "Vancouver is very well situated in Western Canada, with a thriving film industry, and schools such as Emily Carr and the Vancouver Film School already in place. So, two years ago, a number of people in industry, and particularly the universities said, 'Could we get a group together to focus on the next wave of development?'"

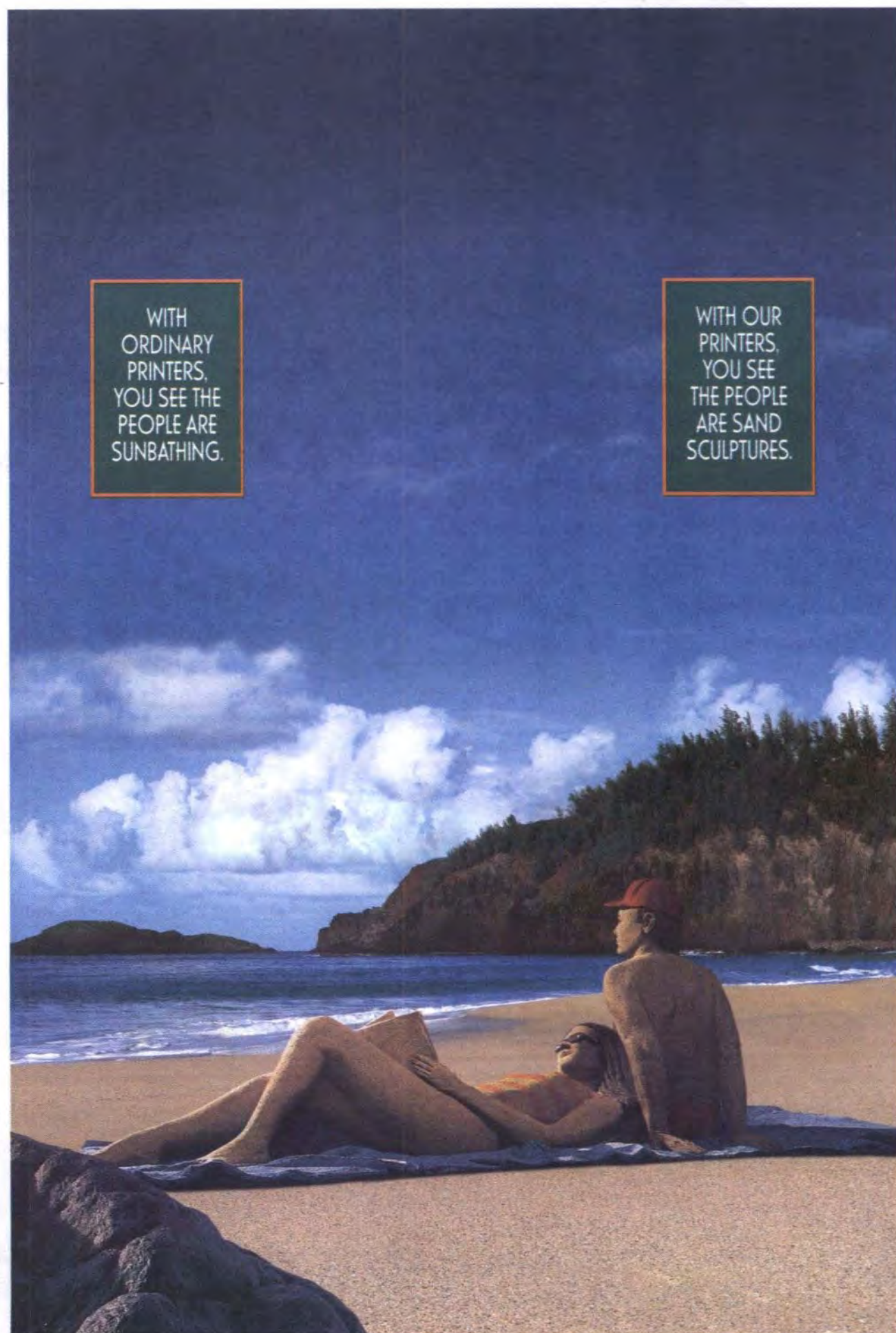
Winter expects results from NewMIC to be apparent in about a year. "We expect over the next year to develop a research program with our industry partners and during that period we expect to be generating intellectual property, maybe even spin-off companies. But it will take a number of years for that to work its way through to the next wave of development, in terms of companies growing."

"The high-tech sector in British Columbia now employs 50,000 people, has 7,000 businesses in it, and annual revenues of \$5 bil-

lion," said Bowbrick, in an announcement at the opening ceremonies. "Unlike some other high-tech areas however, new media's demands for skilled personnel goes beyond scientists. There is a need for a wide variety of backgrounds including the liberal arts, cre-

ative writing, drafting and graphic design, animation, advertising, and marketing. Such a diverse and creative workforce will bring about great innovation in this province. That's what the New Media Innovation Centre is all about."

British Columbia's multimedia industry currently ranks a distant third among provinces with 13 percent of firms calling B.C. home. Ontario leads with 40 percent and Quebec is second with 28 percent. □



WITH
ORDINARY
PRINTERS,
YOU SEE THE
PEOPLE ARE
SUNBATHING.

WITH OUR
PRINTERS,
YOU SEE
THE PEOPLE
ARE SAND
SCULPTURES.

MP3 digital watermark debuts

MINNEAPOLIS, Minn.—Cognicity (<http://cognicity.com>) has taken the wraps off a user-transparent digital watermark system for MP3 files. The AudioKey tMark system has been developed to embed unique watermarks into digital audio files in real-time—as the file is being downloaded—the firm said.

Cognicity said the tMark system's unique feature is that the identity of the consumer making

a download transaction is embedded into the MP3 track as it is being downloaded.

If the file is uploaded or transferred to other users, the unique watermark clearly identifies the MP3 file's origins, but without preventing the file from playing in the existing wide range of MP3 mobile players or MP3 PC playing software.

The firm said content owners need the transactional watermark solution to fingerprint MP3

downloaded and streamed music, so they can identify those who abuse content distribution rights.

To launch the tMark system, Cognicity is offering a free starter kit to qualified customers. The firm said the starter kit will allow content owners and online merchants to experiment with transactional watermarking at no cost or risk to themselves.

—Newsbytes

YOU'VE GOT TO SEE IT IN **EPSON** COLOUR.



It's true. The couple enjoying the sand is actually made from it. As are their clothes, glasses and book. Even the blanket they're lying on. It's all sand. Meticulously sculpted, painted and photographed to fool the eye. So when the artists who created this difficult illusion wanted to reproduce it for a brochure, there was only one printer they could trust with the job. An Epson. As you can see here, it captured not just the vibrant colour of the setting but also the incredible detail in the sculptures. And turned what could have been a nightmare of a project into a day at the beach.

INTRODUCING THE ONLY PRINTERS WITH EVERYTHING YOU NEED FOR ALL THE DETAIL YOU WANT.

To capture the world's most brilliant images, only Epson colour ink jet printers have the PerfectPicture® Imaging System for: 1440 x 720 dpi • Micro Piezo™ technology, for a cleaner, smaller droplet — as small as 3 picoliters • Fast print speeds — up to 12 PPM black/10 PPM colour • Quick-drying inks • PC/MAC/USB compatibility. And remember, only Epson supplies guarantee Epson quality. For more information, call 1-800-GO-EPSON or visit www.epson.com.



Epson Stylus Color Ink Jet Printers. Sheer brilliance starting at \$199.

Price may vary. Up to 12 PPM black/10 PPM colour with the EPSON Stylus Color 900. Epson, EPSON Stylus and Micro Piezo are trademarks/registered trademarks of Seiko Epson Corp. PerfectPicture is a registered trademark of Epson America, Inc. ©2000 Epson America, Inc.

I am geek!

(With apologies to Joe Canadian)

It was inevitable that Molson's popular "I am Canadian" TV ad would inspire people to create their own rants. We discovered the following on a mailing list and traced its origin to one Peter Bennett of Mississauga, Ont.—Ed.

Hello world!

I don't live with my parents in a room full of cables and assorted boxes, my glasses aren't held together with sticky tape, and I don't live on pizza and Twinkies and potato chips.

I don't know Eric Raymond, Larry Wall, or Linus Torvalds, although I'm sure they are all really good coders.

I drink Jolt Cola, *not* Coke, and I eat sushi, *not* Big Macs.

I believe in open source for everything, not proprietary code, and it's spelled PERL, not PEARL or PURL.

I can proudly slap a penguin sticker on my monitor during an all-night Quake session.

A Palm Pilot *is* a computer, a switch *is not* a router, and it's pronounced LIN-ux, *not* LYE-nux... LIN-UX!

The Internet *is* bigger than any country, the first defence against government oppression, and the *best* damned thing that ever happened to the human race!

My name is h4X0rD00d
And I am a Geek!

Letters

Continued from page 8

to install co-ax has no right to open a woman's dresser to seek out lingerie, nor does he have the right to preview magazines or inspect book titles on a shelf, enter a refrigerator or open closet doors where the co-ax cable would not run.

Alexi Stelger

Make my art permanent

Your editorial "Art and Technology" (see Letter from the editor, May 2000 issue) touched on a topic that is finally getting some attention: the issue of permanence in inkjet printing. As a photographer who has spent thousands of hours in a darkroom breathing in fumes from the chemistry, I was quite happy to make the switch to Photoshop and my Epson printer. However, for this approach to be viable for photographers producing personal artwork, we need archival quality. It was heartening to see at least two exhibitors at a recent new media trade show demonstrating archival inks and papers.

I hope TCP will cover the state of the archival art in a future issue. I think there is a lot of interest in this area.

Gerard Gotzman □

Optra printers for small business



Lexmark Canada Inc. rolled out several new Optra series printers aimed at claiming a greater stake in the growing small- and mid-sized business market in Canada.

Some 78 percent of Canada's one million employers have fewer than five employees, and 97 percent say they have fewer than 50, according to Lexmark.

Andrew Kiss, product manager for the business printer division at the Richmond, Hill, Ont.-based Lexmark says these businesses are looking for printers that are easy and reliable.

For this market, Lexmark has introduced its Optra E312, which replaces Lexmark's earlier Optra E310 printer. Priced at \$599, the E312 is a 10 page per minute (ppm) monochrome laser printer that comes standard with both USB and PostScript emulation. It is cross-platform compatible and comes with 4 MB of memory, which is upgradable to 68 MB.

The Optra M412 is a complement to Lexmark's current mid-range M line of printers. Priced at \$1,199, the M412 offers 12 ppm monochrome laser printing, cross-platform compatibility USB and PostScript support and has a duty cycle of 20,000 pages.

For the corporate market, Lexmark introduced its Optra T614 and Optra C710 network laser printers. The T614 offers 25 ppm monochrome printing speeds, parallel and internal ports and Ethernet 10/100BXT connectivity. It is priced at \$2,249.

The Optra C710 is a colour laser printer capable of producing images up to 1,200x1,200 dpi resolution with speeds of 16 ppm monochrome and 3 ppm colour. It is priced at under \$3,000.

—Tom Venetis

WHAT'S NEW

Qbe tablet begins shipping

When Aqcess Technologies previewed its Qbe (pronounced cube) Cirrus computing tablet at last fall's Comdex trade show, it won a "Best of Comdex" award and lots of admiration. The unit is now finally on sale. While plans for Canadian availability are still unclear, you can always order one directly from the Santa Ana, Calif. company (Tel: 888-818-0055, <http://www.qbnet.com>), if you can shoulder the US\$4,745 price tag.

For that you get a 2.7 kg (6 lb.) computer that measures 25.5x35.5x4 cm (10x14x1.6 in.) with a 13.3-inch active-matrix touch-screen display, a 12 GB hard drive, 128 MB of RAM and a 400 MHz Pentium II processor. Data is input either by voice or with a stylus, and is processed by handwriting-recognition or voice-recognition software. A built-in digital camera allows video and still image capture. And if you really need to type, the included PS/2 port will accept a standard keyboard.

The company also announced a new model, the Qbe Stratus, which will weigh a little over 1 kg. (3 lb.) and will measure 28x23x3.8 cm (11x9x1.5 in.). It will be available in the fall, and is expected to cost around US\$1,500.

—David Tanaka



Town wired for Web and WAP

A village near Cologne in Germany says it is the first to be fully Web- and WAP-enabled (Wireless Application Protocol-enabled). According to wireless application company Yourwap.com, the village of Untereschbach can now be accessed as Untereschbach.com (<http://www.untereschbach.com>), with information about local business services, products and events available to every resident and visitor via mobile phone and the Internet. The company said Untereschbach.com is a pilot project to show how WAP technology can be used even in small towns to enhance retail business. The goal of the project is to provide consumers with location- and time-specific information about businesses while they are on the move, and to prove that wireless commerce can actually help cement long-standing relationships with local businesses.

—Newsbytes

Diminutive digicam stores 20 pics

Details are still sketchy about a new digital camera from Xtreme Peripheral Inc. (Tel: 888-987-3630). What we do know is that it will cost less than \$150, hold 20 images, use a USB connection to download images, and is about the size of a Bic lighter. We'll be taking a closer look at this when product samples become available.

—David Tanaka



Chiro pads ooh so soft

From Body Moulded Comfort Inc. (Tel: 888-838-3433, <http://www.bodymouldedcomfort.com>) in Brampton, Ont., comes a line of very comfortable mouse and keyboard pads being sold under the brand names Chiro Keyboard Pad and Chiro Mouse Pad. The company says its products have been endorsed by the Canadian Chiropractic Association and Canadian Physiotherapy Association.

The pads are made using an impact absorbing foam product called "visco-elastic." We're not sure of the physics involved, but can attest to the fact that they are indeed very comfortable. They have a rough industrial look to them, and the foam initially gives off a faint odor of rubber some might find unpleasant. But we think they are worth the \$19.95 suggested retail price.

—David Tanaka





- 9:15 a.m.** "Client called. Urgent. Did you get her e-mail about new orders for Calgary office? Asked her to resend."
- 11:20 a.m.** "Client called again. Pretty stressed. Did you get her e-mail yet?"
- 2:10 p.m.** "Client again. Can't repeat what she said. Told her we're working on the e-mail."
- 5:15 p.m.** "Forget the e-mail. Client has called the competition."

Are you getting the message?

You should be getting dedicated Internet access from AT&T Canada.

Dedicated access means you're on-line all the time. Instant access. No waiting for e-mail. No dial-up. No line-up. No missed opportunities.

AT&T Canada offers a full range of sophisticated, reliable Internet services, no matter what size your business is.

A solution for your needs: we have a solution for any type of connection requirement, from basic ISDN right up to T1 which allows you to handle large file attachments, transfer extensive video or image files and even host a corporate Intranet.

Guaranteed access: with a dedicated line, your service is always available - 99.5% guaranteed or we refund 25% of your monthly service fee.

Access on the road: when you're on the road, connect directly to the Internet through 60 local access numbers across Canada, and hundreds of U.S. access points.

Reliable performance and exceptional support: AT&T Canada offers a high speed, high quality network with multiple Internet connections and monitoring around the clock. Plus, depend on highly-skilled technical support 7 x 24 and access to a valuable on-line library.

Hardware included: AT&T Canada supplies industry-leading Cisco routers to suit your access needs.

We'll include the monthly business line^{††} plus all necessary hardware and waive the set-up fee - up to \$1,000.*
From as low as \$295 per month

As one of the leading business-focussed global providers, we're committed to bringing you reliable leading edge solutions for all your local, long-distance and Internet needs.

For more information talk to an AT&T Canada Sales Representative or call us today at

1-877-430-7553
or visit www.attcanada.ca/business/dedicate.html



The network the world works on.

[†] Call or visit our website for complete details on AT&T Canada's service guarantees.

^{††} Monthly business line included with T1 and ADSL services only.

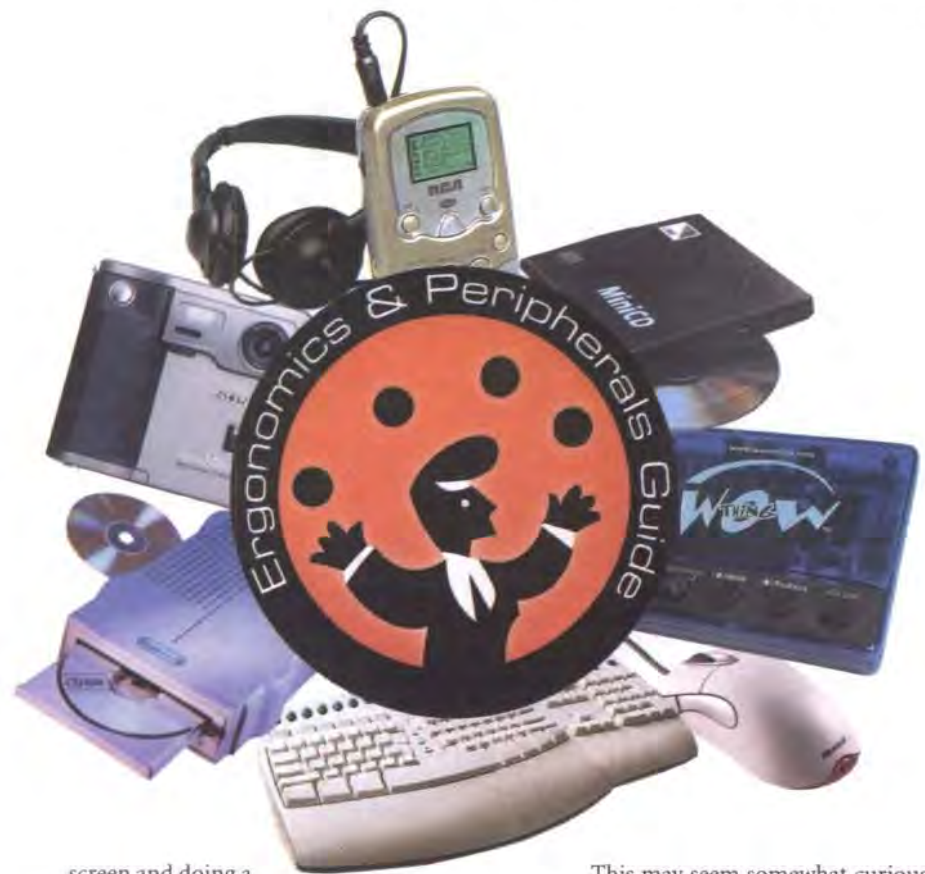
* Some set-up fees exceed \$1,000. Offer covers first \$1,000 only.

Terms and Conditions apply. Guarantee subject to change.

[™] AT&T Corp. used under licence.

Please quote the following registration code N177.

The ergonomics of IT



Problems associated with long spells at the computer remain a major health hazard despite years of expert warnings

By Ross MacDonald

A visit to just about any computer retailer shows evidence that ergonomic issues have become a major part of product design. Keyboards bend in all manner of directions, mice undulate in infinite variety while monitors and LCD panels tout the latest in eye-massaging pixel production and anti-glare coatings. Add to that the racks of copy holders, mouse arenas, wrist rests and monitor stands and we begin to suspect there might be something to this thing called ergonomics—particularly in relation to our computers—and that it's an issue we should more seriously consider while tapping and clicking away.

Ergonomics, in simplest terms, is the study of the relationship between the worker and the workplace. It is the science of fitting the workplace to the worker, which has become a specialized field as workers are exposed to many situations that can potentially lead to injury.

What do we know about ergonomics?

Meera Manahan manages the Human Factors Lab, an internal consulting firm operated by Compaq Computer Corp. to test the efficiency, comfort and useability of both hardware and software before it is released onto the market.

"There are various ergonomic consortia that are a part of academic institutions, like the VDT Health Foundation at Johns Hopkins University and the Office Ergonomics Research Committee, which a number of companies, including Compaq, support. These organizations assess the factors leading to disorders and we, along with the other supporting companies, rely on their research when designing our products."

But Manahan notes that, despite many years of research into ergonomics and the various associated disorders, their causes and sources have yet to be positively determined: "There are several factors and combinations of factors that contribute to things like repetitive-stress

disorders for different individuals, so I think it would be incorrect to say, at this point, that we know the exact causes."

Work can hurt ya

While research may not have been able to pinpoint the exact causes, we are all familiar with the high risk situations and the consequences of working in them.

"Fatigue of the musculature is of particular concern because it can lead to joint immobility or improper joint movement," says Jody Anderson, a New York-trained chiropractor, and vice-president of research and ergonomics for Microsphere, a maker of ergonomic workstations. "Ultimately that can lead to certain pathologies or conditions, one of the most prevalent being the repetitive-stress injuries [RSIs] like carpal tunnel syndrome in the wrist area."

Wrist problems are prevalent, largely because of the relationship between the body and the keyboard. The head, neck and shoulders can also be affected, which manifest as either simple discomfort or unexplained headaches.

"Problems in the head, neck and shoulder area result from a combination of factors," Anderson explains, "the most influential of which are improper seating position and an improper positioning of the computer screen."

Peter Goyert is an ergonomist at the Workers Compensation Board, a position rooted in his training as a physiotherapist. He feels that ergonomics considerations have become more salient because computers are now so fast and can do so much, people tend to work at them for longer periods of time while sitting in a static position.

"People aren't doing as many different tasks as they once were," he says. "Like, with a typewriter, you used to have to roll the paper through, set up carbon paper, type the letter... that sort of thing, whereas with a computer you're basically sitting all day looking at the

screen and doing a lot of high repetition tasks."

Goyert says the injuries these days include tendinitis, carpal tunnel syndrome, bursitis and shoulder problems. In short, he says, "a wide variety of what we call activity-related soft tissue disorders [ASTD for short]—or muscular-skeletal disorders, or work-related muscular-skeletal disorders, or repetitive strain injuries, or symptomatic traumas, or repetitive motion injuries, or overuse syndrome—there's all sorts of names for these problems, but they essentially address the same things."

Repetition, awkward posture, static loading and forceful exertion are the risk factors associated with those problems, says Goyert. "It doesn't really matter whether you're sitting at a computer or whether you're turning boards on a grading table or you're a cashier checking out groceries, the risk factors are essentially the same."

These injuries don't just appear overnight. There are warning signs and symptoms, including aches and pains, tingling, and headaches. Goyert says people tend to ignore these, which can lead to problems progressing to the point of becoming a genuine incapacity. "You want to watch out for any signs and symptoms," he says. "Maybe a pain somewhere or swelling in the hands, or something that you'd want to get checked out to try and avoid the development of a chronic problem."

In the United States, the Occupational Safety and Health Administration (OSHA) has addressed the issue of ergonomics by passing new workplace regulations. "It's such a serious issue," Anderson says, "that corporations are now mandated to increase their standard of workstations to comply with new ergonomic rules and regulations." A company can now be held liable for an injury and potentially lose its insurance if it does not upgrade the workplace environment to comply with the OSHA requirements.

The problem, however, is that no single standard has been determined. A further problem is that nothing like the OSHA initiative has yet been undertaken in Canada. "Trends are moving toward such regulation in this country," says Anderson, "but nothing has been done at this point."

This may seem somewhat curious because, according to the 1998 B.C. Workers' Compensation Board annual report, of 3,319,300 claims in that province, 32,105 were from strains resulting from repetitive stress and 71,760 claims were specifically classified as ergonomic injuries. Add the fact that over 128 million computers were in use in North America in 1999—compounded by an annual market growth rate of 28 percent—and you don't need a calculator to add up the vast potential for both injury and the subsequent costs.

But it doesn't have to hurt ya

One of the most frustrating aspects of the whole issue, as far as Anderson is concerned, is that disorders related to poor ergonomics represent the largest group of preventable job-related injuries because there are so many simple ways to accommodate safe and comfortable computing.

If you're sitting for eight hours a day doing data entry on a computer, you just can't expect not to have any problems. So, what you have to do is get some rest from that constant repetition.

—Peter Goyert, WCB

Like Anderson, Goyert stresses the layout of the computer workstation as a prime consideration in avoiding ergonomic problems: "You want to make sure your workstation is adjusted properly—have your forearms horizontal to your keyboard, make sure your wrists are straight and not bent upward, making sure the top of your screen is level with your eyes. As well, your lower back should be supported by the chair and your feet supported by the floor or a footrest. You also want to make sure you

Continued on page 22

To make the Internet more fun, we made it more simple.



**With iPrimus, the Internet is simpler to get,
simpler to open, and simpler to use.**

If you've been hesitant about getting the Internet because you thought it was too complicated or expensive, now's the time to join the world online.

Now iPrimus makes it simpler than ever to bring the Internet home. With our easy-to-install pre-configured software and straightforward Internet Guide you'll be surfing in no time, enjoying all that the Internet has to offer. And with this low unlimited usage rate it's simple to afford, too!

Join iPrimus today and get:

- Free e-mail account • National high speed network • 24 x 7 Technical Support
- 20 MB personal web space • Free software • Free new user guide
- Ask about our \$9.95 Light User Plan with 20 hours of access
\$1.95/ additional hour

**Unlimited
Internet**

\$19.95[†]
per month

Plus join iPrimus today and get -- One Month FREE*!
Unlimited Internet Access

Call 1 877 701-7602

iPRIMUS

Canada

Making the Internet simply better.

Some terms and conditions apply. *FREE month credit applied on your fourth invoice. Offer valid for Unlimited plan only. Service may not be available in some local serving areas.
[†] \$19.95 when you use Primus Long Distance and Internet. \$22.95 per month for Internet only. Minimal systems requirements 14.4k modem or higher. Call us for details.

AMD K7 X-Gamer

Asus K7M Slot A K7 Main Board
128MB 168 Pin SDRAM (PC 133MHz)
1.44MB Floppy Drive
15GB Ultra DMA-66 7200RPM Hard Drive
Ultra DMA-66 Cont. w/2x16550 Serial
1xBi-Directional Parallel, 4xUSB Port
AGP Asus V6600 nVIDIA GeForce 256 w/32MB
Creative Labs Sound Blaster Live! Value Card
50x Speed UDMA CD-ROM
Yamaha YST-MS30 Speakers w/Subwoofer
Samsung 750S 17" .27mm DP NI SVGA Monitor
ATX Mid-Tower Case with CSA 300W Power Supply
107-keys Windows 98 Keyboard, PS/2 Mouse
2 Year Parts & Service Warranty

1GHz
THE ATHLON HAS LANDED



Athlon K7-700MHz	\$1,770
Athlon K7-750MHz	\$1,820
Athlon K7-800MHz	\$1,930
Athlon K7-850MHz	\$2,065
Athlon K7-900MHz	\$2,360
Athlon K7-950MHz	\$2,530

Pentium III ~ MediaMax

Intel Pentium II/III (Coppermine) Processor
Pentium III 440EX AGP/PCI/ISA Main Board
Internal L2 Cache
64MB 168 Pin SDRAM (PC100MHz)
1.44MB Floppy Drive
10GB Ultra DMA-66 IDE Hard Drive
Ultra DMA33 Cont. w/2x16550 Serial,
1xBi-Directional Parallel, 2xUSB Port
AGP nVidia TNT Vanta 3D Card 16MB SDRAM
Creative Labs Sound Blaster Ensoniq Card
50x Speed UDMA CD-ROM, Speakers
15" Non-Int Low Rad. SVGA Monitor PnP
ATX Mid-Tower Case with CSA Power Supply
107-keys Windows 98 Keyboard, PS/2 Mouse
2 Year Parts & Service Warranty



PIII 400MHz 512KB L2 ...	\$1,035
PIII 500MHz 256KB L2 ..	\$1,080
PIII 550MHz 256KB L2 ..	\$1,105
PIII 650MHz 256KB L2 ..	\$1,160

Pentium III ~ MediaMax Pro

Asus CUBX AGP/PCI/ISA ATX Main Board
Internal L2 Cache
64MB 168 Pin SDRAM (PC100MHz)
1.44MB Floppy Drive
15GB Ultra DMA-66 IDE Hard Drive
Ultra DMA66 Cont. w/2x16550 Serial
1xBi-Directional Parallel, 5xUSB Port
AGP nVidia TNT2 M64 3D Card with 32MB
Creative Labs Sound Blaster Live! Value Card
50x Speed UDMA CD-ROM
MLI-460 Sub-Woofer Speaker System
Impression 17" .27mmDP SVGA Monitor
ATX Mid-Tower Case with CSA Power Supply
107-keys Windows 98 Keyboard, PS/2 Mouse
2 Year Parts & Service Warranty



PIII 550MHz 256KB L2 .	\$1,380
PIII 650MHz 256KB L2 .	\$1,435
PIII 700MHz 256KB L2 .	\$1,485
PIII 750MHz 256KB L2 .	\$1,660
PIII 800MHz 256KB L2 .	\$1,775



Acer Storage Pack
7 Discs-74min 8x 74min CD-Recordable
3 Discs-74min 4x CD-ReWritable



\$15

IDE Hard Drive Special !!

UDMA 66 6.4GB	\$118
IDE 10GB	\$130
15GB	\$168

17GB
\$183



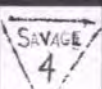
D-Link DFE-905

4 Port 10/100 Hub,
2x UTP 20 ft. Cable
& 2x DFE-530TX

\$155.00

Power Station

PC Partner VIA Apollo Pro 133 AGP Main Board
64MB 168 Pin High Performance SDRAM (PC 100)
1.44MB Floppy Drive
10GB Ultra DMA-66 IDE Hard Drive
Ultra DMA66 Cont. w/2x16550 Serial
1xBi-Directional Parallel, 2xUSB Port
AGP Diamond Speedstar A90 Savage 4 16MB
On Board AC-97 Sound Card
50x Speed UDMA CD-ROM, Speakers
15" Non-Int Low Rad. SVGA Monitor PnP
ATX Mid-Tower Case with CSA Power Supply
107-keys Windows 98 Keyboard, PS/2 Mouse
1 Year Parts & Service Warranty



CELERON

466MHz w/128KB L2	\$ 865
500MHz w/128KB L2	\$ 880
533MHz w/128KB L2	\$ 890
566MHz w/128KB L2	\$ 935

Celeron ~ All-in-One

PC Partner i810 Micro ATX Main Board
64MB 168 Pin High Performance SDRAM
1.44MB Floppy Drive
10GB Ultra DMA-66 IDE Hard Drive
1xBi-Directional Parallel, 2xUSB & 2xSerial Port
On Board 64 Bit 3D Graphics Accelerator
On Board 3D Sound Pro WaveTable Card
56Kbps v.90 Modem (or DLink DFE-530TX 10/100 LAN)
50x Speed UDMA CD-ROM, Speakers
15" Non-Int Low Rad. SVGA Monitor PnP
ATX Mid-Tower Case/w CSA Power Supply
107-keys Win98 Keyboard, PS/2 Mouse
1 Year Parts & Service Warranty



CELERON

466MHz w/128KB L2	\$ 825
500MHz w/128KB L2	\$ 840
533MHz w/128KB L2	\$ 850
566MHz w/128KB L2	\$ 895

AMD K7 Performer

Impression K7 Athlon VIA 133 Main Board
128MB 168 Pin High Performance SDRAM (PC100MHz)
1.44MB Floppy Drive
15GB Ultra DMA-66 IDE Hard Drive
Ultra DMA-66 IDE Controller
2 x 16550 Serial, 1 Parallel & 2xUSB Port
AGP TNT Vanta 3D Card w/16MB
On Board AC-97 2.0 Audio Sound Card
50x Speed UDMA CD-ROM, Speakers
15" Non-Int SVGA Monitor .28mm dp PnP
ATX Mid-Tower Case with CSA Power Supply
107-keys Win98 Keyboard, PS/2 Mouse
1 Year Parts & Service Warranty



AMD Athlon K-7

K7 - 550MHz	\$1,135
K7 - 650MHz	\$1,195
K7 - 700MHz	\$1,230

Video Graphics Adapters

ATI 3D Charger AGP 4MB/8MB	\$ 38 / 48
ATI All-in-Wonder 128 AGP Card 16MB/32MB	\$212/280
ATI Xpert98/Xpert99 AGP Card 8MB	\$ 52 / 83
ATI Rage 128 AGP Card 16MB/Xpert 2000 AGP 32MB	\$105/114
ATI Rage Fury/Fury Pro (VIVO) AGP 32MB	\$155/164
ATI Rage Fury Maxx 64/All-in-Wonder 128 Pro 32MB	\$250/350
ATI TV Wonder Tuner Card (NTSC)	\$ 90 . 00
ASUS V6600 nVIDIA GeForce 256 Pure/Deluxe 32MB	\$260/315
ASUS V6800 nVIDIA GeForce 256 Pure/Deluxe DDR	\$300/355
ASUS V6800 nVIDIA GeForce 256 64MB DDR Pure	\$428 . 00
ASUS V7700 nVIDIA GeForce 2 GTS 32MB DDR Pure	\$490 . 00
Diamond Speedstar A90 Savage 4 AGP 16MB	\$ 58 . 00
Guillemot Maxi Gamer Xentor AGP 32MB (\$30 rebate)	\$300 . 00
Guillemot Maxi Gamer 3D Prophet 32MB DDR	\$480 . 00
Matrox Millennium G400 AGP 16/32MB SGRAM	\$140/186
Matrox Millennium G400 AGP 16/32MB Dual Display	\$182/238
nVIDIA TNT Vanta 3D AGP 16MB	\$ 74 . 00
nVIDIA TNT2 M64 32MB/TNT2 Ultra 32MB TV Out	\$99/192

Monitors

ADI 5P+/G700 17" 0.26mm/0.24mmDP	\$385/445
Mag 786FD 17" NI (1280x1024, 24mmDP)FD	\$450 . 00
Mag 800V 19" NI/LR (1600x1200, 26mmDP)	\$605 . 00
NEC AS50/AS70 15"/17" .28mmDP DotTrio	\$222/310
NEC FE700/700M 17" .25mmDP Flat Display	\$425/480
Panasonic E701 17" (1280x1024, 27mmDP)	\$328 . 00
Panasonic S50/SL75 15"/17" (1280x1024, 27mmDP)	\$270/410
Panasonic SL95 19" FS (1600x1200, 25mmDP)	\$660 . 00
Panasonic S110 21" (1800x1440, 25mmDP)	\$1190 . 00
Proview 17" NI/LR (1280x1024, 27mmDP)	\$268 . 00
Proview 17" NI/LR (1280x1024, 25mmDP)	\$293 . 00

Proview 19" NI/LR (1600x1200, 26mmDP)	\$419 . 00
Sony E100 15" NI/LR (1280x1024, 24mmDP) FD	\$315 . 00
Sony E200 17" NI/LR (1280x1024, 24mmDP) FD	\$545 . 00
Sony E400 19" NI/LR (1800x1440, 24mmDP)FD	\$795 . 00
Sony E500 21" NI/LR (2048x1536, 24mmDP) FD	\$1535 . 00
Sony G200 17" NI/LR (1600x1200, 24mmDP) FD	\$610 . 00
Samsung 550S 15" NI/LR (1024x768, 28mmDP)	\$195 . 00
Samsung 950P 19" NI/LR (1600x1200, 26mmDP)	\$530 . 00
Samtron 15" NI/LR (1024x768, 28mmDP)	\$187 . 00

HD/FD Controllers

ISA IDE HD/FD Controller with IO UART 16550	\$ 20 . 00
Adaptec 1505/2906 SCSI CD-ROM Controller	\$ 67 / 73
Adaptec 2910/2930U PCI SCSI Controller	\$115/135
Adaptec 29160/39160 PCI I Ultra 160 SCSI	\$350/535
Adaptec AAA-UDMA/66 RAID Card Kit	\$585 . 00
Adaptec AAA-131U2 RAID SCSI Card	\$540 . 00
Promise Ultra66/Fastrak 66 PCI Controller	\$36/165

Keyboards & Cases

Fujitsu 4725/8725 Enhanced 104 Keys	\$57/116
Proxcel Windows 98/Internet Keyboard	\$10/23
Logitech Deluxe/Internet Keyboard	\$20/32
Logitech Cordless iTouch Keyboard	\$ 74 . 00
Logitech Cordless iTouch/Desktop Pro Keyboard	\$120/160
Microsoft Natural Elite/Internet Keyboard	\$ 30 / 28
17/19" ATX Mid Size Tower w/ CSA Power Supply	\$43/48
25" ATX Tower with 250W CSA Power Supply	\$ 85 . 00
15/19" Mid Size Tower with CSA Power Supply	\$ 33 / 43

Drives & Tape Backup

1.2MB 5.25"/1.44MB 3.5" Floppy Drive	\$ 56 / 17
Panasonic LS-120 120MB Floppy Drive(2x Speed)	\$ 88 . 00

20GB/30GB/40GB/60GB 5400RPM HDD	\$189/258/354/475
15GB/20GB/30GB/40GB 7200RPM HDD	\$188/245/302/409
HP Colorado 8GB Int/Ext Backup Drive (no media)	\$280/340
HP Colorado 14GB Int/Ext Backup Drive (no media)	\$338/405
HP Colorado 20GB Int/Ext Travan Drive(no media)	\$380/445
Seagate 8GB TR-4 Int IDE/SCSI Tape Backup Drive	\$295/315

Motherboards

Intel L440GXC Pentium II / III Server Board	\$765 . 00
Abit BF6/BE6v2 440BX Pentium II/III Board	\$163/208
Abit BP6 440BX Dual Socket 370 Board (Ultra66)	\$ 215 . 00
Abit VT6 VIA Apollo Pro 133 Pentium III Board w/Sound	\$150 . 00
Abit KA7-100 KX133 ATA-100 Athlon Board	\$270 . 00
ASUS P5 A-B 100MHz AGP Socket 7 512KB L2	\$122 . 00
ASUS P3BF/CUBX 440BX Pentium II/III Board	\$188/199
ASUS P2BDS 440BX, Dual CPU, Ultra2SCSI Board	\$678 . 00
ASUS P3C-E 133MHz RAMBUS Pentium III Board	\$280 . 00
ASUS P3V4X/CUV4X VIA Apollo Pro 133 Board	\$166/176
ASUS K7M/K7V Slot A Athlon Board	\$218/239
Tyan S18340-I VIA KX133 Dual Pentium III Board	\$232 . 00

MultiMedia

Aureal Vortex 2 SuperQuad A3D 2.0 Sound Card	\$ 66 . 00
Creative Labs Sound Blaster Ensoniq PCI/PCI 128	\$ 30 / 46
Creative Labs Sound Blaster Live! MP3+/X-Gamer	\$133 . 00
Creative Labs Sound Blaster Live! Platinum/Live Value	\$266/69
Afreedy 50X/Creative Labs 52X IDE CD-ROM Drive	\$ 55 / 64
Hewlett Packard 8250i 4x4x24 IDE CDRW	\$270 . 00
Hewlett Packard 9210i Int/Ext SCSI CDRW	\$395/530
Panasonic 8x4x32 Int IDE CDRW	\$ 273 . 00
Plexor 8x4x32 / 12x4x32 IDE/SCSI CDRW	\$343/520
Toshiba 40X SCSI CD-ROM Drive	\$125 . 00
Yamaha 8424E/S Int IDE/SCSI CDRW	\$300/315

Modem & Mice

Diamond SupraMax 56K v.90 PCI Voice	\$ 47 . 00
US Robotics 56K v.90 Int/Ext Fax Modem	\$ 49 / 176
US Robotics 56K v.90 USB Pro Ext Modem	\$205 . 00
Zoltrix 56K v.90 External Fax Modem	\$ 80 . 00
Genius NetMouse with Magic-Button	\$12 . 00
Logitech Mouseman/FirstMouse+ OEM	\$15 . 00
Logitech Cordless Wheel Mouse	\$ 53 . 00
Logitech TrackMan Marble Wheel/Marble FX	\$ 66 / 79
Microsoft Basic Mouse/Cordless Wheel Mouse	\$17 / 51
Microsoft Trekker Mouse/IntelliMouse	\$14 / 21
Microsoft IntelliMouse Web PS/2	\$ 29 . 00
Microsoft IntelliMouse Optical Tech/Explorer	\$ 64 / 85
Microsoft Compatible Mouse	\$ 6 . 50

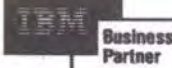
Printers

Canon BJC-1000SE/2000SE (\$20 rebate)	\$98/118
Canon BJC-5100 Color Inkjet	\$179 . 00
Canon BJC-3000/6100 Inkjet (\$30 rebate)	\$228/299
Brother 1030 Laser 600dpi 10ppm	\$390 . 00
Epson Stylus 440/670	\$113/133
Epson 740i Inkjet for iMac(US\$50 rebate)	\$255 . 00
Epson Stylus 760 Inkjet(US\$30 rebate)	\$226 . 00
Epson Stylus 870/875DC Inkjet 1440dpi	\$420/540
Epson Stylus 900/900N Color Inkjet 1440dpi	\$507/795
HP 610CL/840C Deskjet Color Printer	\$150/234
HP 930C/950C Deskjet Color Printer	\$305/450
HP 895Cxi/970Cse Deskjet Color Printer	\$370/590
HP P1000/P1100 PhotoSmart Color Printer	\$600/725
HP 1220CXi/2000C Deskjet Color Printer	\$700/700
HP 2500C/2500CM Professional Printer	\$1395/2095
HP 1100/1100A Laserjet, 600 dpi 8 ppm	\$580/715
HP 2100/2100M Laserjet, 1200 dpi 10 ppm	\$1020/1175

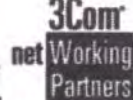


Authorized
Reseller

COMPAQ



CISCO SYSTEMS



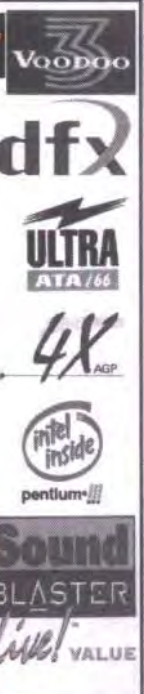
SONY MicroConcept

102 - 1245 West Broadway
Vancouver, B.C. V6H 1G7

Pentium III-Game Blaster

Intel Pentium III Processor/133MHz Bus
Asus CUV4X VIA Apollo Pro 133A ATX Board
128MB 168 Pin SDRAM (PC133MHz)
1.44MB Floppy Drive
15GB Ultra DMA-66 7200RPM IDE Hard Drive
Ultra DMA66 Cont. w/2x16550 Serial,1xBi-Direc
tional Parallel
AGP 3dfx Voodoo 3000 Graphics Card with 16MB
Creative Labs Live! Value Card-Environmental Audio
50x Speed UDMA CD-ROM
MLi-480 Sub-woofer Speaker
Samsung 750S 17" .27mm DP NI SVGA Monitor
ATX Mid-Tower Case with CSA Power Supply
107-keys Windows 98 Keyboard,PS/2 Mouse
2 Year Parts & Service Warranty

Piii 533MHz 256KB L2 ...	\$1,555
Piii 600MHz 256KB L2 ...	\$1,595
Piii 667MHz 256KB L2 ...	\$1,620
Piii 733MHz 256KB L2 ...	\$1,715
Piii 800MHz 256KB L2 ...	\$2,000



Ultimate Power Station

Intel Pentium III Processor/133MHz Bus
Asus CUV4X VIA Apollo Pro 133A ATX Board
128MB 168 Pin SDRAM (PC133MHz)
1.44MB Floppy Drive
20GB Ultra DMA-66 7200RPM IDE Hard Drive
Ultra DMA66 Cont. w/2x16550 Serial,1xBi-Direc
tional Parallel
AGP nVidia TNT2 Ultra Card 32MB TV Out
Aureal Vortex 2 SuperQuad A3D 2.0 Sound Card
50x Speed UDMA CD-ROM
Altec Lansing 45.2 Sub-woofer Speaker
Samsung 753DF 17" .27mm DP DynaFlat Monitor
ATX Mid-Tower Case with CSA Power Supply
107-keys Windows 98 Keyboard,PS/2 Mouse
2 Year Parts & Service Warranty

Piii 600MHz 256KB L2...	\$1,790
Piii 667MHz 256KB L2...	\$1,815
Piii 733MHz 256KB L2...	\$1,910
Piii 800MHz 256KB L2...	\$2,195
Piii 866MHz 256KB L2...	\$2,500



MEMORY SALE! LIFETIME WARRANTY

16MB 60ns 72-Pin EDO SIMM	\$ 63.00
32MB 60ns 72-Pin EDO SIMM	\$117.00
32MB SDRAM PC-100 compliant	\$ 40.00
64MB SDRAM PC-100 compliant	\$ 95.00
128MB SDRAM PC-100 compliant	\$183.00
256MB SDRAM PC-100 compliant	\$368.00
128MB SDRAM PC-133 compliant	\$195.00
256MB SDRAM PC-133 compliant	\$385.00
128MB ECC SDRAM PC-100 compliant	\$208.00
256MB ECC SDRAM PC-100 compliant	\$408.00
128MB ECC SDRAM PC-133 compliant	\$215.00
256MB ECC SDRAM PC-133 compliant	\$425.00

BASF/Verbatim/Sony CDR

BASF CDR - \$1.20
SONY CDR - \$1.55
Dataware 80min CDR - \$1.50
BASF/Mr. Write CDRW - \$3.45/\$2.50
Imagis Zip 56K Modem
100MB Zip Disk
V.90 Internal Fax Voice Modem
\$12.50 \$22.00

MICROCONCEPT NETWORK PRODUCTS FOR LESS !!

NOVELL Software

NetWare v3.2	
NetWare v3.2 5/10 User	\$1450/3030
NetWare v3.2 25/50 User	\$5270/8080
NetWare v3.2 Enhancement Pack	\$505
IntraNetWare v5.1	
NetWare 5.1 Server Plus 5 User Lic.	\$1635
NetWare 5.1 5/10 Additive Lic. Only	\$1210/1740
NetWare 5.1 25/50 Additive Lic. Only	\$3820/6630
Netware Small Business Suite v5	
Netware Small Business v5 Server w/5 user	\$1560
Netware Small Business v5 Connection Lic.	\$ 8.5

MICROSOFT NT

Windows NT Server v4.0 CD w/5 Clients Lic.	\$1095
Windows NT Server v4.0 CD w/10 Clients Lic.	\$1540
Windows NT v4.0 Client Access Lic.	\$ 4.8
Windows NT Workstation 4.0 CD	\$430
Windows 2000 Server w/5 Clients Lic.	\$1360
Windows 2000 Server w/10 Clients Lic.	\$1620
Windows 2000 Professional	\$430
BackOffice Small Business Server v4.5 w/5 Clients	\$2075
BackOffice Server v4.5 w/5 Clients	\$4320
Microsoft SMS version 2.0 w/10 Clients Lic.	\$1560
Microsoft SMS version 2.0 w/25 Clients Lic.	\$2465
Microsoft Windows 2000 Terminal Server w/5 Clients	\$1025

Network Printers

HP 4050 Laserjet, 1200dpi, 17ppm, 16MB, Network	\$1695
HP 4050TN Laserjet, 1200 dpi, 17ppm, 16MB, Network	\$2190
HP 5000 Laserjet, 1200dpi, 16ppm, 11x17"	\$2235
HP 5000N Laserjet, 1200dpi, 16ppm, 11x17", Network	\$3150
HP 5000GN Laserjet, 1200dpi, Graphics intensive	\$3985
HP 8100 Laserjet, 1200dpi, 32ppm	\$4000
HP 8100N Laserjet, 1200dpi, 32ppm, Network	\$4460
HP 8100DN Laserjet, 1200dpi, 32ppm, Duplexer	\$5175
HP 4500 Color Laserjet, 600dpi, 32MB	\$3785
HP 4500N Color Laserjet, 600dpi, 32MB, Network	\$4430
HP 8550 Color Laserjet, 600dpi, 12x18", 32MB	\$7050
HP8550N Color Laserjet, 600dpi, 32MB, Network	\$8655
Lexmark Optra E310, 8ppm, 2MB	\$ 57.0
Lexmark Optra M410n, 12ppm, 4MB, USB	\$1250
Lexmark Optra T610, 15ppm, 4MB, Parallel	\$1465
Lexmark Optra T610n, 15ppm, 8MB, 10/100BaseTx	\$1930
Lexmark Optra T612, 20ppm, 8MB, Parallel & Serial	\$1585
Lexmark Optra T612n, 20ppm, 16MB, 10/100BaseTx	\$2035
Lexmark Optra T614, 25ppm, 8MB, Parallel	\$1700
Lexmark Optra T614n, 25ppm, 16MB, 10/100BaseTx	\$2580
Lexmark Optra T616n, 35ppm, 16MB, 10/100BaseTx	\$3560
Lexmark Optra W810n, 35ppm, 16MB, 11x17", Parallel	\$3840
Lexmark Optra W810n, 35ppm, 16MB, 11x17", Network	\$4085
Lexmark Optra C710, 3ppm, 32MB, 1200dpi	\$2915
Lexmark Optra C710N, 3ppm, 32MB, 1200dpi, Network	\$3315
Lexmark Optra Color 1200, 12ppm, 1200dpi, 11x17"	\$5370
Lexmark Optra Color 1200N, 12ppm, 1200dpi, 11x17"	\$6475

Tape / CD ROM Drive

Hewlett Packard SureStore 8GB Int/Ext DAT Drive	\$940/1110
Hewlett Packard SureStore 24GB Int/Ext DAT Drive	\$1235/1410
Hewlett Packard SureStore 40GB Int/Ext DDS-4 DAT	\$1645/1910
Hewlett Packard SureStore DLT 40i/e SCSI Drive	\$2620/2920
Hewlett Packard SureStore DLT 80i/e SCSI Drive	\$6455/6730
Onstream 30GB IDE/SCSI Int. Drive Echo SW Incl.	\$425/710
Onstream 50GB SCSI Int. Drive Echo SW Incl.	\$ 9 9 5
Quantum DLT4000 40GB Int/Ext SCSI Drive	\$2180/2700
Quantum DLT8000 80GB Int/Ext SCSI Drive	\$6320/6720
Seagate Scorpion 8GB DAT Int/Ext Drive	\$ 775/955
Seagate Scorpion 24GB DAT Int/Ext Drive	\$1055/1230
Seagate Scorpion 96GB DAT Int/Ext Drive	\$3175/3530
Seagate Scorpion 240GB DAT Internal SCSI Drive	\$3500.00
Seagate TapeStore 20GB IDE/SCSI Drive	\$390/460
Sony SuperStar 10GB Int/Ext Drive	\$220/260
Sony SDT-7000 Int/Ext. 4-8GB DAT	\$835/1015
Sony SDT-9000 Int/Ext. 24GB DAT	\$990/1290
Sony SDT-11000 Int 40GB DDS-4 DAT SCSI	\$ 1 3 9 5
Sony AIT 200GB Int/Ext AutoLoader	\$5360/5950

Power Protection

APC BackUPS 300	\$126.00
American Power 120 Volt	
BackUPS 300/500M/650M	\$126/184/254
BackUPS Pro 280S/350/420S	\$180/212/290
BackUPS Pro 500/650S	\$238/390
BackUPS Pro 1000/1400	\$550/700
SmartUPS SU420/SU620NET	\$320/415
SmartUPS SU700/SU1000/SU1400NET	\$449/720/950
SmartUPS SU2200/SU3000/5000NET	\$1350/2150/3590
Back UPS Office BF350/BF500	\$117/148
Matrix 3000VA/5000VA (Modular UPS)	\$3600/6140
SmartCELL for Matrix 3000/5000	\$ 7 1 0
Line Conditioner LR600/LR1250	\$128/173
Personal SurgeArrest 7/7 Outlets with Tel	\$ 2 6 3
Professional SurgeArrest 7/7 Outlets with Tel	\$ 4 0 5 2
Professional SurgeArrest 8/8 Outlets with Tel	\$ 4 4 5 6
Network SurgeArrest 7/7 Outlets with Tel	\$ 4 5 6 0
Notebook Surge Protector	\$ 2
Battery for Compaq/IBM/Toshiba Notebook	C. A. I.

Cables & Jacks

Twisted Pair	
Assembly, Cat 5 10/100BaseT Cable 10/15/25 ft	\$8/10/12
Assembly, Cat 5 10/100BaseT Cable 50/75/100 ft	\$20/27/33
Cable, Cat 5 10/100BaseT Cable, per ft	\$0.25
Cable, Cat 5 10/100BaseT Cable, per 1000 ft	\$160
Connector RJ45M	\$0.38
Tool, RJ45 Crimping	\$ 2 5
Multi-Network Cable Tester	\$ 8 0

Coaxial

Assembly, RG58/AU Thin Coax 25/50 ft	\$15/22
Assembly, RG58/AU Thin Coax 100 ft	\$ 3 5
Cable, RG58/AU Bulk per ft	\$0.25
Cable, RG58/AU Bulk per 1000 ft	\$180
Connector, BNC "T"	\$2.50
Terminator, BNC, 52 ohm	\$2.50
Tool, BNC Crimping	\$ 3 0
Terminator, BNC, 52 ohm w/ground strap	\$3.00

10BaseT/2 Adapters

3COM 3C509B-TPC ISA Ethernet Combo	\$102
3COM 3C900B PCI Ethernet XL Combo	\$185
Aopen PCI Ethernet Combo	\$ 1 8
D-Link DE-220PCT ISA/DE-528CT+ PCI Combo	\$25/25
Intel PCL8210B ISA EtherExpress Pro 10+ Combo	\$ 9 8
Intel PCL8210B PCI EtherExpress Pro 10+ Combo	\$175
SMC 1208BT PCI EzCard Combo	\$ 3 4
SMC 8416BT ISA/8432BT PCI EtherEZ Combo	\$60/60

Print Servers/USB Hub

HP JetDirect J3258B 170X 10BaseT Ext Print Server	\$205
HP JetDirect J4100A 400N 10/100BaseT Print Server	\$580
HP JetDirect J3263A 300X 10/100BaseT Ext Print Server	\$362
HP JetDirect J3265A 500X 10/100BaseT Ext Print Server	\$480
HP JetDirect J3110A 600N RJ45 10BaseT	\$362
HP JetDirect J3113A 600N 10/100BaseT	\$460
HP JetDirect J4135A USB Connectivity Card	\$158
Intel NetPortExpress Pro Ext. Printer Server PCL2151	\$375
Intel NetPortExpress 10/100 Ext. Printer Server 1 Port	\$310
Intel NetPortExpress 10/100 Ext. Printer Server 3 Port	\$455
Intel InBusiness Print Station SP5110TX2US	\$238
Netgear PS104 4 Port 10BaseT Print Server	\$145
Netgear PS110 10/100BT Print Server	\$165
Linksys USBHUB4/SOHO USB Hub 4 Port	\$49/43
Xircom Portgear USB Hub 4 Port/7 Port	\$76/95

PCMCIA Adapters

D-Link DE-660CT PCMCIA Combo NE2000 Compatible	\$ 7 8
Xircom Realport 10/100 Ethernet + 56K v.90 Modem	\$390
Xircom Realport 10/100 Fast Ethernet CardBus	\$210
Xircom Realport RM56V1 56K v.90 Modem	\$182
Xircom Realport 2 R2BM56W WinShift 56K Modem	\$198
Xircom Realport 2 R2BM56WG 56K WinGlobal Modem	\$225
Xircom Realport 2 R2BE-100BTX 10/100 Ethernet	\$220

10 BaseT Hubs

3COM 3C1644 SuperStack II Entry Hub 12 Port	\$228
3COM 3C16441 SuperStack II Entry Hub 24 Port	\$355
3COM 3C16405 SuperStack II PSH Hub 40 12 Port	\$720
3COM 3C16406 SuperStack II PSH Hub 40 24 Port	\$1270
3COM 3C16450 SuperStack II PSH Hub 50 24 Port	\$1370
3COM 3C16670A SuperStack II Hub 10 12 Port	\$760
3COM 3C16671A SuperStack II Hub 10 24 Port	\$1320
3COM 3C16610 SuperStack II Dual Speed Hub 12 Port	\$970
3COM 3C16611 SuperStack II Dual Speed Hub 24 Port	\$1335
3COM 3C16700A OfficeConnect 8/TPO	\$120
3COM 3C16701A OfficeConnect 8/TPC	\$150
3COM 3C16702A OfficeConnect 16/TPC	\$255
3COM 3C16704A OfficeConnect 4/TPO	\$ 7 2
3COM 3C16710 OfficeConnect 8/TPM	\$495
Aopen SOHO-5+ 5 Port/528 8 Port Hub	\$36/49
D-Link DE-805 TP/C 5 Port Hub	\$ 5 3
D-Link DE-809TC 8 Port/DE-812TP+ 12 Port Hub	\$66/203
D-Link DE-816TP 16 Port/DE-824TP 24 Port Hub	\$182/294
Intel InBusiness SH10T5 5 Port/SH10T8US 8 Port Hub	\$73/90
Intel InBusiness SH10T8B 8 Port Hub (with coax)	\$116
Intel InBusiness SR10TPSUS Internet Station	\$590
Netgear EN104TPNA/EN104NA 4 Port Hub	\$42/54
Netgear EN106TP 6 Port Hub	\$ 5 2
Netgear EN108TPNA/EN108NA 8 Port Hub	\$63/75
Netgear EN116NA 16 Port Hub	\$128
SMC 3605T-EZ 5 Port/SMC 3608T-EZ 8 Port Hub	\$53/80
SMC 3616TC-EZ 16 Port Hub (with coax)	\$195

10 BaseT Adapters

3COM 3C509B/3C900B ISA/PCI Ethernet TPO	\$80/77
3COM 3C19250 10BaseT USB Network Interface	\$ 9 0
Intel PCL8220B ISA/PILA8520 PCI EtherExpress	\$80/120
Netgear EA101C 10BaseT USB Network Interface	\$ 5 5

Systems Inc.

Tel: (604) 730-8183
Fax: (604) 730-7983
Tech: (604) 738-8738

Store Hours:
Mon-Fri 09:30am - 6:30pm
Sat 10:00am - 5:00pm
Sun Closed

http://www.mconcept.com

* Two Year Parts And Service Warranty (Systems Only)
* All Systems Are Tested And Burned-In For 48 Hours Before Shipping
* Government And Corporate Purchase Orders Welcome
* Fax Orders And Bids Are Accepted
* All Prices Reflect 2% Cash Discount
* Leasing Available
* Prices Subject To Change Without Prior Notice

TURN THE PAGE

All product names, trademarks and registered trademarks are properties of their respective owner

Upgrading Your PC



free installation

VIA Apollo Pro Celeron AT Board with AC-97 On Board Sound (100MHz Bus)

Intel Celeron 466MHz w/128KB L2 . \$265
Intel Celeron 500MHz w/128KB L2 . \$280
Intel Celeron 533MHz w/128KB L2 . \$290
Intel Celeron 566MHz w/128KB L2 . \$335

VIA VP3 Super Socket 7 AT AGP Board with 512KB L2 Cache & AC-97 On Board Sound

AMD K6-2 3D 500 MHz \$195
AMD K6-2 3D 533 MHz \$210
AMD K6-2 3D 550 MHz \$235

brother
HL-1240DX Series
• True 600 x 600 dpi output
• 2MB RAM **\$475**
HL-1250DX Series
• 1200 x 600 dpi
• 4MB RAM **\$575**
HL-1270N Series
• 1200 x 600 dpi
• 10/100BT **\$765**

OKIDATA
Okipage 6w
Model PPM Res Price
Okipage 6w 6 600dpi \$ 308
Okipage 8w 8 600x600 \$ 385
Okipage 10e 10 600dpi \$ 475
Okipage 12i 12 600x600 \$ 955
Okipage 18 18 600dpi \$1350
Okipage 24dx 24 600dpi \$1995

Microline
DOT-MATRIX
OKIDATA Printer
Model N/W CPS Pin Price
ML184 300 9 \$350
ML320/321 435 9 \$510/715
ML520/521 435 9 \$625/830
ML390/391 390 24 \$540/730
ML395/Color 607 24 \$1650/1750
ML590/591 360 24 \$725/985

Asus 1394 FireWire Adapter
• 2 IEEE 1394 Ports
• 100,200 & 400 Mb/s Transfer Rates
• Supports DV Camcorders

Zip Cartridge not Included
Internal IDE Zip Drive
11.2Mb/sec data transfer rate,
20 times faster than floppy.

Millennium G400 Max
• 256 Bit DualBus Graphics Chip
• DualHead Display & TV Output
• 360MHz Ultrasharp DAC

Agfa SnapScan 1212u
• 36 Bits/Pixel Color
• Optical Resolution 600x1200dpi
• USB Interface

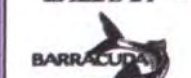
Linksys BEFSR41
Instant Broadband
EtherFast Cable/DSL Router

Microsoft
MS Intellimouse Explorer
• New Optical Technology
• No ball to Clean
• Scroll wheel & 5 programmable buttons

3dfx
5500 AGP **\$435**

3500 AGP **\$268**
3000 AGP **\$166**
OEM

Disco Storage



Capacity	Model	Access	Cache	RPM	Interface	Price
9.2GB	ST39236LW	5.9ms	2MB	7200	ULTRA 2 SCSI	\$ 365
9.2GB	ST39204LW	5.2ms	4MB	10000	ULTRA 160	\$ 530
18GB	ST318436LW	5.9ms	2MB	7200	ULTRA 2 SCSI	\$ 530
18.4GB	ST318404LW	5.2ms	4MB	10000	ULTRA 160	\$ 770
36.4GB	ST136475LW	7.4ms	1MB	7200	ULTRA 2 SCSI	\$1200
36.4GB	ST136403LW	5.7ms	1MB	10000	ULTRA 2 SCSI	\$1360
36.7GB	ST336704LW	5.2ms	4MB	10000	ULTRA 160	\$1375
50.1GB	ST150176LW	7.4ms	1MB	7200	ULTRA 2 SCSI	\$1380
73.4GB	ST173404LW	5.2ms	4MB	10000	ULTRA 160	\$2220
9.1GB	DNES-309170	7ms	2MB	7200	ULTRA 2 SCSI	\$ 360
9.1GB	09L3907	5.4ms	2MB	10000	ULTRA 2 SCSI	\$ 525
9.1GB	07N3220	4.9ms	4MB	10000	ULTRA 160	\$ 515
18.3GB	DNES-318350	7ms	2MB	7200	ULTRA 2 SCSI	\$ 540
18.2GB	09L3905	5.4ms	2MB	10000	ULTRA 2 SCSI	\$ 760
18.3GB	07N3210	4.9ms	4MB	10000	ULTRA 160	\$ 760
36.9GB	07N3100	6.8ms	4MB	7200	ULTRA 160	\$1100
36.7GB	09L3903	6.5ms	2MB	10000	ULTRA 2 SCSI	\$1295
36.7GB	07N3200	4.9ms	4MB	10000	ULTRA 160	\$1310
9.1GB	WD9150-0040	5.2ms	2MB	10000	ULTRA 2 SCSI	\$ 345
9.1GB	WD9150-0051	5.2ms	8MB	10000	ULTRA 2 SCSI	\$ 350
18.3GB	WD18310-040	5.2ms	2MB	10000	ULTRA 2 SCSI	\$ 620
18.3GB	WD18310-051	5.2ms	8MB	10000	ULTRA 2 SCSI	\$ 660
9.1GB	QM309100KN	6.9ms	2MB	7200	ULTRA 2 SCSI	\$ 335
9.1GB	QM309100TN	5ms	2MB	10000	ULTRA 2 SCSI	\$ 520
18.2GB	QM318300KC	6.3ms	4MB	7200	ULTRA 160	\$ 535
18.2GB	QM318200TN	5ms	2MB	10000	ULTRA 2 SCSI	\$ 805
36.4GB	QM336700KC	6.3ms	4MB	7200	ULTRA 160	\$1070
36.4GB	QM336400TN	5.5ms	2MB	10000	ULTRA 2 SCSI	\$1415
73.4GB	QM373410TY	5ms	8MB	10000	ULTRA 160	\$2785
9.1GB	MAE3091LP	10ms	256KB	7200	ULTRA 2 SCSI	\$ 325
9.1GB	MAG3091LP	7.5ms	2MB	10000	ULTRA 2 SCSI	\$ 485
18.2GB	MAE3182LP	10ms	256KB	7200	ULTRA 2 SCSI	\$ 505
18.2GB	MAG3182LP	7.5ms	2MB	10000	ULTRA 2 SCSI	\$ 725
36.4GB	MAF3364LP	5.7ms	4MB	10000	ULTRA 2 SCSI	\$1335

SAMSUNG
ELECTRONICS
SyncMaster 750s
• 17" (16" Viewable)
• 0.27mm Dot Pitch
• 1280x1024 @60Hz **\$283**

570S TFT LCD Display
• Full 15" Viewable Screen
• Zoom In Up To 8 Times
• Backlight Dimming Control **\$1315**

SyncMaster 753DF
• 17" (16" V) DynaFlat Tube
• 0.20mm (H) Pitch **\$368**
• 1280x1024@65Hz

SyncMaster 700NF
• 17" (16" V) Natural Flat Tube
• 0.25mm AG Pitch **\$435**
• 1600x1200@76Hz

SyncMaster 900NF
• 19" (18" V) Natural Flat Tube
• 0.25mm AG Pitch **\$660**
• 1600x1200@76Hz

Mail-in Rebate Offer: 753DF-\$30.00 700NF-\$50.00 900NF-\$50.00

DIAMOND
RIO PLAYERS
Rio 500 **\$385**
Rio Remote **\$28**
OEM

Monster Sound MX400
OEM Pack **\$77/112**
Retail Pack

CD-RW Blaster 8432
Annihilator 2 **\$420**
Blaster CDRW Drive **\$330**

Sound Blaster Live Value **\$69**

APOLLO CREATIVE
P-1250i **\$118**
P-2250i **\$145**

Mail-In Rebate
\$45.00 Purchase an Apollo P-1250i or P2250 Printer - Printer Only -
\$75.00 Purchase an Apollo P-1250i or P2250 Printer w/any PC And Monitor On the Same Receipt

HEWLETT PACKARD
SafeStore 9310i CD-Writer
• Create CDs for CD-ROM & Audio Players
• Write & Rewrite CDs using CD-RW Discs
• Speeds: 10x (write) 4x (rewrite) 32x (read)

Parallel Port \$ 139
USB Port \$ 150
ZIP 250MB Drive
Parallel/SCSI \$ 222
USB Port \$ 233

jaz drives
Jaz 2GB SCSI External Drive **only \$ 475**
Get 2GB Storage for only **\$128**
Get 1GB Storage for only **\$120**

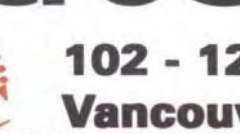
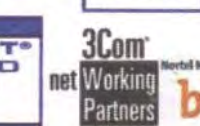
ALTEC LANSING
MULTIMEDIA
ACS95W PowerCube Speaker (2 pcs) w/Headphone Jack \$40.00
ACS33 PowerCube Speaker (3 pcs) \$60.00
ACS45.2 PowerCube 3 pcs Speaker w/Wood Subwoofer \$86.00
ACS48 PowerCube Plus Speaker (3 pcs) \$150.00
ACS54 PowerPlay Plus 5 pcs. Speaker System \$95.00
ACS56 Digital High Power 5 pcs. Gaming Speaker System \$175.00
ACS66i iMac 3 pcs. Speaker System (6 color options) \$118.00
ATP3 3 pcs. Speaker System with Thin Profile Design \$118.00
ADA70 Digital PowerCube Speaker (3 pcs with USB) \$192.00
ADA104 Set-Top 2 pcs. Surround with Subwoofer \$139.00
ADA305 Digital PowerCube Speaker w/MultiChannel Surround \$198.00
ADA880R Dolby Digital Speaker w/detachable Rear Surrounds \$350.00

YAMAHA
THE WAY YOUR COMPUTER SHOULD SOUND.
YST-M8 5 Watts/ch Multimedia Speaker (2 pcs) \$40.00
YST-MS30 Multimedia Speaker & Subwoofer (3 pcs) \$80.00
YST-M40 2-Way Multimedia Speaker \$68.00

CREATIVE
audiophiles music lovers gamers
MicroWorks value shoppers PC Works
DeskTop Theater 5.1 DTT2500 Digital Speakers
PC Works Desktop Speaker \$69.00
PC Works Four Point Surround Speaker FPS1000 \$108.00
PC Works Four Point Surround FPS2000 Digital Speaker \$200.00
SoundWorks Amplified Speaker & Subwoofer \$135.00
SoundWorks Digital Speaker & Subwoofer (Black) \$138.00
Desktop Theater 5.1 Dolby, 5 Speaker System DTT2500 \$390.00



Authorized Reseller



102 - 1245 West Broadway
Vancouver, B.C. V6H 1G7

All product names, trademarks and registered trademarks are properties of their respective owners

**F-490 \$6199.99**

Intel Pentium III 650MHz
128MB Memory
18.1GB Hard Drive
4 X DVD ROM
56KBps Fax Modem
15" XGA TFT Display
iLink S400 Interface
Video Out - NTSC

**F-450 \$4299.99**

Intel Pentium III 500MHz
64MB Memory
9GB Hard Drive
4 X DVD ROM
56KBps Fax Modem
14.1" XGA TFT Display
iLink S400 Interface
Video Out - NTSC

**Z505HE \$3999.99**

Intel Pentium III 450MHz
64MB Memory
8.1GB Hard Drive
56KBps Fax Modem
12.1" XGA TFT Display
2 USB, 10/100BT Ethernet
Port Replicator & Floppy

F-480 \$5299.99

Intel Pentium III 600MHz
64MB Memory
12GB Hard Drive
4 X DVD ROM
56KBps Fax Modem
15" XGA TFT Display
iLink S400 Interface
Video Out - NTSC



Buy any Sony Notebook
before July 15th, and
you will receive a free
MS IntelliMouse!

How Cool are They?
0.18 micron technology

Specials**F-430 \$3799.99**

Intel Pentium III 450MHz
64MB Memory
6GB Hard Drive
4 X DVD ROM
56KBps Fax Modem
14.1" XGA TFT Display
iLink S400 Interface
Video Out - NTSC

**F-420 \$2699.99**

Intel Pentium III 450MHz
64MB Memory
6GB Hard Drive
24 X ROM
56KBps Fax Modem
13" SVGA HPA Display
iLink S400 Interface
Video Out - NTSC

**C1XS \$3599.99**

Intel Pentium II 400MHz
64MB Memory
12GB Hard Drive
56KBps Fax Modem
8.9" XGA TFT Display
Integrated Digital Camera
External USB Floppy Drive

**XG-18 \$5899.99**

Intel Pentium III 650MHz
128MB Memory
18.1GB Hard Drive
4 X DVD ROM
56KBps Fax Modem
13.3" XGA TFT Display
Sony Programmable Jog Dial

**SONY****505 Accessories**

PCGA-CD51 Ext. 16x CD ROM Drive \$468
PCGA-CC525 Leather Carrying Case \$239
PCGA-BP52 Double Cap. Battery \$489
PCGA-BP51 Stereo Speaker \$249
PCGA-AC51 AC Adapter \$164
PCGA-BP52 Triple Cap. Bat.(Z505R) .. \$639
PCGA-BP51 Standard Battery (Z505R) \$319
PCGA-BP54 Quad Cap. Battery \$788
PCGA-DA5 Monitor Adapter for Z505 ... \$ 7 9

F-Series Accessories

PCGA-AC71 AC Adapter \$164
PCGA-BP71 Privacy Screen \$409
PCGA-PRF1A Port Replicator \$327

XG Accessories

PCGA-CDRWX1 CD-RW Drive \$879
PCGA-FLX1 Privacy Screen \$479
PCGA-PSX1 XG Dock \$559
PCGA-HDX10 10GB Hard Drive.....\$1279

VAIO Accessories

PCGA-CDRW51 PC Card CD-RW Drive...\$789

Memory Stick

MSA-4A 4MB Memory Stick \$ 4 9
MSA-8A 8MB Memory Stick \$ 6 9
MSA-16A 16MB Memory Stick \$109
MSA-32A 32MB Memory Stick \$179
MSA-64A 64MB Memory Stick \$299
MSAC-PC2 PC Card Adapter \$119



Model	CPU	RAM	HDD	CD	Display	EtherJet	Price
i1422	Cel500	32MB	6GB	24X	13 HPA	56K	\$1,800
i1480	Cel466	64MB	6.4GB	DVD	14.1 TFT	56K	\$2,810
i1482	Cel500	64MB	12GB	DVD	14.1 TFT	56K	\$3,110
i1492	P3-500	64MB	12GB	DVD	15.0 TFT	56K	\$3,910
i1542	Cel500	64MB	12GB	24X	12.1 TFT	56K	\$2,750
240	Cel366	64MB	6.4GB		10.4 TFT	56K	\$2,560
240	Cel400	64MB	12GB		10.4 TFT	56K	\$2,690
390X	P3-450	64MB	12GB	24X	14.1 TFT	56K	\$3,915
390X	P3-500	64MB	12GB	24X	15 TFT	56K	\$4,345
600X	P3-450	64MB	6.0GB	24X	13.3 TFT	56K	\$3,975
600X	P3-500	64MB	12GB	24X	13.3 TFT	56K	\$4,670
600X	P3-500	64MB	12GB	DVD	13.3 TFT	56K	\$4,870
600X	P3-650	64MB	12GB	DVD	13.3 TFT	56K	\$5,370
A20m	Cel500	64MB	6.0GB	24X	12.1 TFT	56K	\$2,745
A20m	Cel500	64MB	6.0GB	24X	12.1 TFT	Combo	\$2,845
A20m	P3-500	64MB	6.0GB	24X	12.1 TFT	56K	\$3,095
A20m	P3-500	64MB	6.0GB	24X	12.1 TFT	Combo	\$3,195
A20m	Cel500	64MB	12GB	24X	15 TFT	56K	\$3,495
A20m	Cel500	64MB	12GB	24X	15 TFT	Combo	\$3,595
A20m	P3-700	64MB	12GB	24X	14.1 TFT	56K	\$4,395
A20m	P3-700	64MB	12GB	24X	14.1 TFT	Combo	\$4,495
A20p	P3-700	128MB	18GB	DVD	15 TFT	56K	\$5,895
A20p	P3-700	128MB	18GB	DVD	15 TFT	Combo	\$5,995
T20	P3-650	128MB	6.0GB	24X	13.3 TFT	56K	\$4,695
T20	P3-650	128MB	6.0GB	24X	13.3 TFT	Combo	\$4,795
T20	P3-700	128MB	12GB	DVD	14.1 TFT	56K	\$5,995
T20	P3-700	128MB	12GB	DVD	14.1 TFT	Combo	\$6,095

TOSHIBA Satellite 2610DVD

Intel Celeron 433MHz
64MB RAM exp. to 192MB
6GB Hard Drive
Trident Graphics w/2.5MB
12.1" TFT Display
56KBps V.90 Fax Modem
DVD ROM Drive
Built-in Sound System

**\$2,480**

Model	CPU	RAM	HDD	CD	Display	Price
7200CT	P3-600	64MB	12GB		13.3 TFT	\$5,015
2140CDS	K6/450	64MB	4.0GB	24X	12.1DSTN	\$1,685
2180CDT	K6/475	64MB	4.0GB	24X	12.1 TFT	\$2,395
3110CT	PII300	64MB	6.4GB		10.4 TFT	\$2,590
3440CT	P3-500	64MB	6.0GB		11.3 TFT	\$3,675
4070CDS	Cel366	64MB	4.3GB	24X	13 DSTN	\$2,070
4270DVD	Cel500	64MB	6.0GB	DVD	14.1 TFT	\$3,200
4270zDVD	Cel500	64MB	12GB	DVD	15.0TFT	\$3,890
4260DVD	P3-450	64MB	12GB	DVD	14.1TFT	\$3,800
4300	P3-600	64MB	12GB	DVD	14.1 TFT	\$4,495
8100	P3-500	64MB	12GB	DVD	14.1 TFT	\$4,925
8100	P3-650	128MB	18GB	DVD	14.1 TFT	\$5,880

PCMCIA / PC Cards

Adaptec APA-1350 MiniSCSI Parallel Port Kit	\$ 9 8 . 0 0
Adaptec APA-1460D SlimSCSI Kit	\$ 1 7 5 . 0 0
Adaptec APA-1480A SlimSCSI Kit (CardBus)	\$ 2 4 5 . 0 0
Exp DVD Traveler Plus DVD ROM w/Software	\$ 3 9 5 . 0 0
Exp DVD Traveler Plus DVD w/MPEG2 Card	\$ 7 0 0 . 0 0
Exp MIDI Traveler PCMCIA MIDI w/Game Port	\$ 1 4 8 . 0 0
Intel Pro/100 Mobile LAN CardBus II RealPort	\$ 2 1 0 . 0 0
Intel Pro/100 LAN+56K Modem CardBus II RP	\$ 4 5 5 . 0 0
Intel Pro/100 LAN+56K Modem CardBus II	\$ 3 2 0 . 0 0
Kingston EtherX PCMCIA Ethernet Combo	\$ 1 1 2 . 0 0
Linksys PCMLM56 10/100 LAN+56K Modem	\$ 2 2 8 . 0 0
Megahertz 3CXFE575CT 10/100 LAN XJack	\$ 2 2 5 . 0 0
Megahertz 3CCFE575CT 10/100 LAN CardBus	\$ 2 2 5 . 0 0
Megahertz 3CXE589ET 10BaseT	\$ 1 9 5 . 0 0
Megahertz 3CXE589EC 10BaseT/2	\$ 2 6 5 . 0 0
Megahertz 3CXM756-CA 56K Global GSM Modem	\$ 2 7 3 . 0 0
Megahertz 3CXM556 56K Cellular Modem	\$ 2 9 5 . 0 0
Megahertz 3CXM356 56K Win Modem (XJack)	\$ 2 1 0 . 0 0
Megahertz 3CCFEM556B 100 LAN+56K Modem	\$ 3 1 5 . 0 0
Megahertz 3CXEM556BT 10BaseT+56K Modem	\$ 2 9 5 . 0 0
Megahertz 3CXEM556BC 10BaseT/2+56K Modem	\$ 3 5 5 . 0 0
Micro Solutions 24X Bantam Ultra Light CD-ROM	\$ 2 3 8 . 0 0
Micro Solutions 24X Backpack CD w/Sound	\$ 2 9 2 . 0 0
Micro Solutions 32X Backpack CD-ROM	\$ 2 4 0 . 0 0
Micro Solutions 32X Backpack 32X CD w/Sound	\$ 2 9 2 . 0 0
Netgear FA410 10/100BaseT Ethernet PCMCIA	\$ 8 8 . 0 0
New Media Mobile Gamer	\$ 9 0 . 0 0
Nogatech USB TV Tuner,151 Cable Channels	\$ 1 8 2 . 0 0
Orange Micro Firewire CardBus Card	\$ 1 5 9 . 0 0
PCMCIA 20x CD-ROM Drive (A/C not required)	\$ 2 2 0 . 0 0

Kingston TOSHIBA-Notebook

Protege 3110CT \$150/170/ NA
Satellite 4090XDV,2590CDT,2060CDS \$113/160/320
Portege 7000CT, Satellite 4000,4010,Tecra8000 \$113/160/320
Tecra 8100, Portege 7200CT, Satellite 4270 \$ 80/135/265

IBM-ThinkPad
ThinkPad 760E/ED/EL/ELD/XD \$129/245/NA
ThinkPad 365X/XD & 560,380 \$129/245/NA
ThinkPad TP 390x, 600x \$ 95/155/275
ThinkPad 770,770E,600E,TP390,i-1460,1540,2405 95/138/273
ThinkPad Z50 \$133/NA/NA

Compaq-Notebook

Armada E500,E700,M300,M700,V300 \$ 95/155/275
Armada 1500C,1700,7400,7800 \$ 95/155/275
Armada 4100, 4110, 4120, 4130, 4131,4220T \$155/310/NA
Presario 1200-XL Series \$ 95/155/275

Hard Drive Upgrades For Portables

TOSHIBA
2.5" EIDE Hard Disk Drive
6.0/12/18GB
.....\$230/330/460



Jornada 540 16MB Pocket PC.....\$650
Jornada 548 32MB Pocket PC.....\$775
Jornada 680 16MB, Modem.....\$1165
Jornada 690 SH3-133, 32MB.....\$1315
Jornada 820 16MB, Modem.....\$1340



COMPAQ
iPAQ 3650 Pocket PC 32MB \$705
Aero 2110 Palm PC 8MB \$590

Acer TravelMate 600TER

Intel Pentium III 600MHz
64MB Memory
12GB Hard Drive
4x4x20 CDRW/built-in sound
13.3" TFT Display
56KBps Modem/Ethernet

**\$3,550**

Model	CPU	RAM	HDD	CD	Display	Price
341TV	P3-500	64MB	6GB	DVD	12.1 TFT	\$3,005
343TV	P3-500	128MB	12GB	DVD	12.1 TFT	\$3,535
507T	Cel466	64MB	4.8GB	24X	12.1 TFT	\$1,760
514TXV	Cel466	64MB	6GB	DVD	14.1 TFT	\$2,780
602TER	P3-600	128MB	12GB	CDR	13.3 TFT	\$3,960
730TXV	P3-450	64MB	6GB	DVD	14.1 TFT	\$3,290
732TXV	P3-500	64MB	9GB	DVD	14.1 TFT	\$3,430
732TLV	P3-500	128MB	12GB	DVD	15 TFT	\$3,960
734TXV	P3-600	64MB	9GB	DVD	14.1 TFT	\$3,720
734TL	P3-600	64MB	12GB	24X	15 TFT	\$3,960
735TLV	P3-650	128MB	12GB	DVD	15 TFT	\$4,240
736TL	P3-650	128MB	18GB	24X	15 TFT	\$4,240
737TLV	P3-700	128MB	18GB	DVD	15 TFT	\$4,950

COMPAQ Presario 1200 -XL115

AMD K6-2 475MHz CPU
32MB RAM
5GB Hard Drive
Trident CyberBlade 3D Graphics
24X CD-ROM
56KBps Fax Modem
12.1" HPA Display

**\$1,875**

Model	CPU	RAM	HDD	CD	Display	Price
V300	Cel466	32MB	6GB	24X	13.3 HPA	\$2,190
V300	Cel500	64MB	6GB	24X	14.1 TFT	\$3,200
M300	P3-500	64MB	6GB		11.3 TFT	\$3,850
M300	P3-500	64MB	12GB		11.3 TFT	\$4,210
M700	P3-450	64MB	6.0GB	24X	14.1 TFT	\$4,300
M700	P3-500	64MB	12GB	DVD	14.1 TFT	\$5,020
M700	P3-650	64MB	6GB	24X	14.1 TFT	\$5,300
M700	P3-700	64MB	12GB	DVD	14.1 TFT	\$5,850
E500	P3-500	64MB	6GB	24X	13.3 TFT	\$3,725
E500	P3-450	64MB	12GB	24X	14.1 TFT	\$3,935
E500	P3-600	64MB	12GB	24X	14.1 TFT	\$4,225
E500	P3-650	64MB	12GB	DVD	14.1 TFT	\$4,800
E500	P3-700	64MB	12GB	DVD	15 TFT	\$5,520
E700	PII400	128MB	14GB	DVD	14.1 TFT	\$4,700
E700	P3-500	128MB	18GB	DVD	15 TFT	\$5,765

Systems Inc.

Internet Tour @
http://www.mconcept.com

Tel: (604) 730-8183
Fax: (604) 730-7983
Tech: (604) 738-8738

Store Hours:
Mon-Fri 09:30am - 6:30pm
Sat 10:00am - 5:00pm
Sun Closed

* Government And Corporate Purchase Orders Welcome
* Fax Orders And Bids Are Accepted
* All Prices Reflect 2% Cash Discount
* Leasing Available
* Prices Subject To Change Without Prior Notice



FOR RENT Call Today
Notebooks
Desktops
Monitors
Starting At **\$1.99**



BIGDATA SERVER

BigData BX¹

- Intel T440BX Pentium III Server Board (RAID Capable)
- 128MB ECC SDRAM/4MB EEPROM
- 1.44MB Floppy Drive
- Quantum 9.1GB Ultra Wide SCSI Drive 6.9ms access time, 7200 RPM, 2MB
- On Board Symbios Logic Single Channel Ultra Wide SCSI Controller
- On Board GD5480 Video Card 2MB
- Toshiba 40x Speed SCSI CD-ROM
- 15" SVGA Monitor
- On Board EtherExpress Pro+ 10/100
- 56Kbps External Fax Modem
- ATX NetServer Case with 300 Watts Power Supply
- 14 Device Bays, 5.25" x 8 & 3.5" x 6
- 104-keys Keyboard & PS/2 Mouse

PII-400MHz...\$2,155
PIII-500MHz...\$2,200
PIII-550MHz...\$2,225
PIII-600MHz...\$2,290

BigData GX²

- Intel L440GXC Pentium III Server Board (Dual Processor/RAID Capable)
- 128MB ECC SDRAM/8MB EEPROM
- 1.44MB Floppy Drive
- Seagate ST318436LW 18GB Hard Drive Ultra 2 SCSI, 7200 RPM
- On Board Adaptec AIC-7896 Dual Channel Ultra 2 SCSI Controller
- On Board GD5480 Video Card 2MB
- Toshiba 40x Speed SCSI CD-ROM
- 15" SVGA Monitor
- On Board EtherExpress Pro 100+ LAN
- 56Kbps External Fax Modem
- ATX NetServer Case with 300 Watts Power Supply
- 14 Device Bays, 5.25" x 8 & 3.5" x 6
- 104-keys Keyboard & PS/2 Mouse

PIII-650MHz...\$2,730
PIII-700MHz...\$2,780
PIII-750MHz...\$2,975
PIII-800MHz...\$3,075
PIII-850MHz...\$3,380

Graphics Performance
Never Looked So Hot!

Ultra
160 SCSI

intel
inside
pentium III



OXYGEN VX¹



SUPERMICRO[®]

TWO YEAR WARRANTY

3D Station VX¹

- Asus CUV4X Pentium III/PC133 Board
- 128MB SDRAM (133 MHz System Bus)
- 1.44MB Floppy Drive
- 20GB Hard Drive UDMA 66 8.5ms access time, 7200 RPM
- 3Dlabs Oxygen VX1 GLINT R3 Card with 32MB SDRAM
- 50x Speed UDMA CD-ROM
- Viewsonic E790 19" SVGA Monitor 1600x1280 resolution, 0.26mm DP
- ATX Mid-Tower Case w/Power Supply
- Fujitsu 104-keys Keyboard /w MS Mouse

PIII-533MHz...\$1,875
PIII-600MHz...\$1,915
PIII-667MHz...\$1,940
PIII-733MHz...\$2,035
PIII-800MHz...\$2,320

3D Station GVX¹

- Supermicro PIIDME i840 PC133 Board (Dual Processor/RAID Capable)
- 256MB SDRAM (133 MHz System Bus)
- 1.44MB Floppy Drive
- Adaptec 29160 Ultra160 SCSI Controller
- Seagate ST318404LW 18GB Hard Drive Ultra160, 10000 RPM
- 3Dlabs Oxygen GVX1 GLint R3 & GLint Gamma G1 chipset 32MB
- 50x Speed UDMA CD-ROM
- Viewsonic PF790 19" SVGA Monitor
- ATX Mid-Tower Case w/Power Supply
- Fujitsu 104-keys Keyboard/w MS Mouse

PIII-667MHz...\$4,425
PIII-733MHz...\$4,505
PIII-800MHz...\$4,765
PIII-866MHz...\$5,080
PIII-933MHz...CALL

Video Cards

G400	Millennium G400 chip 16MB/32MB Dual Display	\$182/238
G400 Max	Millennium G400 Max chip w/32MB Dual Display	\$289.00
G400 Marvel	G400 chip 16MB w/Motion JPEG Capture & Editing	\$415.00
FireGL1	IBM 256 bit processor w/32MB AGP (SIMD ext.)	\$935.00
Oxygen ACX	Premedia 2 processor with 8MB SGRAM AGP	\$155.00
Oxygen VX1-16	GLINT R3 processor with 16MB SDRAM AGP	\$210.00
Oxygen VX1	GLINT R3 processor with 32MB SDRAM AGP	\$277.00
Oxygen GVX1	GLINT R3 & GLINT Gamma G1 chipset 32MB AGP	\$1095.00
Oxygen GVX210	2x GLINT R3 + Gamma G2 processor 64MB AGP	\$2185.00
Premedia Create!	Premedia 3 processor with 32MB SDRAM AGP	\$225.00
Lightning 1200	Realimage 1200 chipset 15+16MB 3D Memory AGP	\$640.00
Tornado 3000	Realimage 3000 chipset 30+32MB 3D Memory AGP	\$1930.00

Monitors

SScan 761	SuperScan 761 19"/18"V 0.22mmDP, 1600x1200@75Hz	\$975.00
SScan 813	SuperScan 813 21"/20"V 0.22mmDP, 1856x1392@80Hz	\$1820.00
SScan 814	SuperScan 814 21"/20"V 0.22mmDP, 2048x1536@85Hz	\$2425.00
205SXU	25" Color Plasma Display, 0.39mmDP, 1280x1024@75Hz	\$11450.00
DScan 70	70 17"/16"V 0.28mmDP, 1280x1024@65Hz	\$440.00
DScan 90e	90e 19"/18"V 0.25mmDP, 1600x1280@75Hz	\$735.00
DPro 710S	DP710S 17"/16"V 0.25mmDP, 1600x1200@65Hz Flat	\$580.00
DPro 900u	900u 19"/18"V 0.25mmDP, 1600x1280@75Hz USB	\$950.00
DPlus 73	DP73 17"/16"V 0.25mmAG, 1280x1024@65Hz	\$450.00
DPlus 91	DP91 19"/18"V 0.25mmAG, 1600x1200@75Hz	\$818.00
DPlus 200u	DP200u 22"/20"V 0.24mmDP, 1600x1200@85Hz	\$1480.00
DPro 2040u	2040u 22"/20"V 0.24mmDP, 1600x1200@85Hz	\$1755.00
LXA550W	15" LCD Panel 1024x768@75Hz LCD52	\$1695.00
LSA820W	18" LCD Panel 1280x1024 LCD80	\$4685.00
FE750	17"/16"V 0.25mmDP, 1600x1200@73Hz	\$505.00
FE950	19"/18"V 0.25mmDP, 1792x1344@68Hz	\$705.00
FP950	19"/18"V 0.25mmDP, 1920x1440@73Hz	\$820.00
FP1350	22"/20"V 0.25mmDP, 1920x1440@76Hz	\$1425.00
FP1370	22"/20"V 0.24mmDP, 2048x1536@80Hz	\$1840.00
CPD-G400	19"/18"V 0.24mmDP, 1800x1440@70Hz	\$885.00
CPD-G500	21"/20"V 0.24mmDP, 2048x1536@75Hz	\$1600.00
GDM-F500R	21"/19.8"V 0.22mmDP, 2048x1536@75Hz	\$2630.00



		Model	Dot Pitch	Max Res.	Viewable	H-Scan	Price
15" 	OPTIQUEST.	Q51	0.28mm	1024x768	13.7"	30-50KHz	\$ 218
	OPTIQUEST.	Q55	0.28mm	1280x1024	13.8"	30-70KHz	\$ 228
	ViewSonic	M50	0.27mm	1280x1024	13.8"	30-70KHz	\$ 263
	ViewSonic	G655	0.27mm	1280x1024	14.0"	30-70KHz	\$ 265
17" 	OPTIQUEST.	Q71	0.27mm	1280x1024	16.0"	30-70KHz	\$ 315
	OPTIQUEST.	Q75	0.23mm	1600x1200	16.0"	30-85KHz	\$ 415
	ViewSonic	E771	0.27mm	1280x1024	16.0"	30-70KHz	\$ 330
	ViewSonic	E773	0.25mm	1280x1024	16.0"	30-70KHz	\$ 390
	ViewSonic	G773	0.26mm	1280x1024	16.0"	30-70KHz	\$ 425
	ViewSonic	GS771	0.27mm	1280x1024	16.0"	30-70KHz	\$ 445
	ViewSonic	PS775	0.25mm	1600x1200	16.0"	30-95KHz	\$ 465
	ViewSonic	M70	0.27mm	1280x1024	16.0"	30-70KHz	\$ 375
	ViewSonic	EF70	0.25mm	1280x1024	16.0"	30-70KHz	\$ 405
	ViewSonic	PF775	0.25mm	1600x1200	16.0"	30-97KHz	\$ 495
	ViewSonic	PF77	0.25mm	1600x1200	16.0"	30-97KHz	\$ 550
	OPTIQUEST.	Q95	0.23mm	1600x1200	18.0"	30-86KHz	\$ 515
19" 	ViewSonic	E790	0.26mm	1600x1280	18.0"	30-95KHz	\$ 530
	ViewSonic	E790B	0.26mm	1600x1280	18.0"	30-95KHz	\$ 580
	ViewSonic	GS790	0.26mm	1600x1280	18.0"	30-95KHz	\$ 620
	ViewSonic	PS790	0.25mm	1600x1280	18.0"	30-95KHz	\$ 750
	ViewSonic	PF790	0.25mm	1600x1200	18.0"	30-97KHz	\$ 700
	ViewSonic	PF795	0.25mm	1920x1440	18.0"	30-110KHz	\$ 830
	OPTIQUEST.	Q115	0.26mm	1600x1280	19.6"	30-95KHz	\$ 990
21" 	ViewSonic	G810	0.25mm	1600x1200	20.0"	30-89KHz	\$1,170
	ViewSonic	P810	0.25mm	1600x1200	20.0"	30-95KHz	\$1,200
	ViewSonic	PF815	0.25mm	1920x1440	20.0"	30-117KHz	\$1,340
	ViewSonic	P817	0.26mm	2048x1536	20.0"	30-137KHz	\$2,190
	ViewSonic	VE150	0.30mm	1024x768	15.0"	30-62KHz	\$1,340
	ViewSonic	VG150	0.30mm	1024x768	15.0"	30-62KHz	\$1,395
	ViewSonic	VPD150	0.30mm	1024x768	15.0"	48-62KHz	\$1,590
	ViewSonic	VPA150	0.30mm	1024x768	15.0"	30-62KHz	\$1,670
LCD Panel 	ViewSonic	VP151	0.30mm	1280x1024	15.0"	30-95KHz	\$2,000
	ViewSonic	VP181	0.30mm	1600x1200	18.1"	30-107KHz	\$4,390

Palm V Modem \$230

Palm IIIe Palm IIIxe Palm IIIc Palm V Palm Vx

\$49 Hard Case

\$139 Portable Keyboard

\$32 Slim Leather Carrying Case

Product Features	Palm IIIe	Palm IIIxe	Palm IIIc	Palm V	Palm Vx
Core Organizing Applications	✓	✓	✓	✓	✓
MSOutlook Links	✓	✓	✓	✓	✓
Advanced LCD	✓	✓	✓	✓	✓
TFT Display			✓		
AvantGo Web Channel Manager		✓	✓		✓
Storage Capacity	2MB RAM	8MB RAM	8MB RAM	4MB RAM	8MB RAM
Operating System	Palm OS v3.0	Palm OS v3.5	Palm OS v3.5	Palm OS v3.0	Palm OS v3.5

Buy Now! \$210 \$335 \$600 \$440 \$535

MicroConcept Systems Inc.



102 - 1245 West Broadway
Vancouver, B.C. V6H 1G7

Tel: (604) 730-8183
Fax: (604) 730-7983
Tech: (604) 738-8738

FREE!

DOWNLOAD TODAY!

For your FREE PC catalog PDF File! @
www.mconcept.com



Have wireless will travel

A wireless Ethernet card may become an indispensable peripheral for travelling notebook users as airports and other facilities embrace the 802.11b standard

By Tom Venetis

Notebook computer-equipped travellers will soon be able to wirelessly connect to the Internet at speeds equal to those available to their desktop PCs via the office LAN.

Recently, the Vancouver International Airport began offering travellers access to a wireless network that will allow them to connect to the Internet, and in some cases their corporate email accounts, at speeds approaching 11 Mbps.

Viji Maini, manager for airport systems in the Vancouver International Airport Authority's information technology department, says the airport is known for being at the forefront of technological change. Integrating an airport-wide wireless solution was something the authority decided was best for its customers.

"Business passengers have rated the Vancouver airport as the number one airport in terms of the service they get," Maini adds. "And we have had requests about Internet access and questions about what our strategy for wireless was. So we did an evaluation of some of the technologies available and selected to go with a high-speed wireless because of the advantages it offered."

The 802.11b connection

Wireless Internet connectivity is being enabled through devices that conform to an Ethernet standard known as 802.11b, which supports data transmission rates of up to 11 Mbps, comparable to standard Ethernet's 10 Mbps. A typical setup includes three components: a network switch or access controller, wireless access points, and wireless 802.11b Ethernet cards.

The access points are distributed throughout the area where network access is required. The access points are connected to a switch, which in turn is connected to services like Internet access. Notebook computers can gain access to the resulting network if they are equipped with wireless 802.11b Ethernet cards. So, the theory is, no matter where passengers are in the airport they should be able to connect to the network and out onto the Internet if they have a compatible 802.11b card installed in their computer.

To help install this network, the Vancouver airport worked with Nokia, which contracted Vancouver-based ZooLink Communications Ltd. to integrate and support the network



with the airport authority.

"We are in partnership with Nokia right now to use their 802.11 hardware to cover the airport with access points," says Yen Choi, director of technology with ZooLink. "We have 59 access points in the airport, which are connected by fiber to an access controller. It allows any business traveler, or anybody in the airport with a wireless LAN card, to have high speed Internet access."

In order for someone to use the network, users will need a Nokia Wireless Local Area

ports and hotels across North America and Canada.

"We formed the company to basically solve the problem of connectivity for travelers," says Dirk Heinen, vice-president of marketing for Wayport.

In March, Wayport announced an agreement with Marshall Management Inc., a Maryland-based hotel management firm, to provide wireless and wired high speed Internet access at some 15 hotels in six U.S. states. These networks will let hotel guests connect to the Internet and corporate networks at speeds up to 50 times faster than normal dial-up.

Wayport has installed wireless networks at four airports across North America, including the Dallas International Airport. Like the Nokia network in Vancouver, the Wayport network allows travelers to connect anywhere in the airport. The network is open to any 802.11 wireless modem or device so users do not need a specific manufacturer's card to connect to the system.

Recognizing that more people are demanding access to networks wherever they are, Burlington, Ont.-based 3Com Corp. announced that it will begin working more closely with visitor-based network service providers to integrate 3Com's own set of wireless and network technologies into public areas.

"We recognize the requirement that people want to connect wherever they are," says Glen Lavigne, sales director for 3Com's

visitor-based network division for the Americas. "Our vision is to extend the reach of the corporate office into spaces where business travelers are, whether it is a hotel, a public lobby or public building."

Enter Bluetooth

Toronto-based Classwave Wireless Inc. also sees a growing market for publicly accessible wireless networks, although the company believes such networks will be based not around the 802.11 wireless standard but around Bluetooth. Also referred to as a wire-replacement technology, Bluetooth has a shorter range than 802.11b, but because of its low power requirements, can be used in cellu-

lar phones, pagers, and other lightweight devices.

In April, Classwave unveiled its Polyphony server software that allows application service providers to exchange digital information with a variety of Bluetooth-enabled devices such as cellular phones and PDAs.

Continued on page 22



ZooLink Communications uses Nokia's WLAN card and access points to offer wireless Net access at Vancouver International Airport.



Network (WLAN) card. If a traveler does not have such a card, one can be purchased for \$299.95 at any one of the ZooLink kiosks in the airport. They can also choose to rent one and purchase blocks of time, from 15 minutes up to a flat-rate all-day fee. The kiosks will also supply any technical support a traveler may need.

Once connected to the network, travelers will be able to access specialized information such as real-time flight information, and tourist and hotel information.

ZooLink and Vancouver's airport authority are not the only ones looking to provide wireless connectivity to travelers.

Austin, Tex.-based Wayport Inc. specializes in developing wireless technologies for air-

Working wirelessly

I recently attended a meeting in Vancouver where the organizer had hired Wayport to set up a temporary 802.11b wireless network in the hotel meeting rooms.

Technicians installed Lucent PC Card wireless LAN cards in our notebooks when we arrived at the hotel, and when I fired up my notebook for the first meeting the next morning, email and Internet access were there, just as if I'd plugged into the LAN at work.

Passing through the Vancouver Airport on the way home, I noticed the Nokia kiosk advertising the wireless email and Internet access service. In talking with the person at the booth, we determined that my Lucent PC Card should work, since both it and the Nokia installation appeared to be based on 802.11b. He said the system was still in the trial phase, but gave me a user ID and password so that I could test it. Alas, no luck at the airport. I didn't have time to determine where the problem lay—with the system, or some incompatibility with the network card—but the possibilities are interesting.

Wireless networking is like high-speed Internet service: once you've tasted it, it's hard to go back. Last year, I tested a Diamond Multimedia wireless network system for the home, based on the HomeRF standard. It was great to be able to fire up my notebook in any room of the house and have access to email and the Internet. The problem I encountered with it was incompatibility with the Ethernet LAN at work—I had to change settings on the notebook each time I shuttled it between home and work.

The 802.11b wireless standard seems to make more sense as a universal standard for home and work. A 3Com representative said there's a good chance 3Com will be developing home networking products based on its AirConnect wireless products, which presently are aimed at business customers.

—David Tanaka

Auction online at www.Auction4it.com



DELL 21" Ultrascan
D1626HT .25dpi
1600x1200 Start Bid \$1

Mass Storage
Celeron PPGA-S370 CPU Conv. \$1
Fujitsu 13.6 GB UDMA HD \$1
Imation 8GB Tape Cartridge \$1
SyJet 1.5 GB Ext. Parallel Port \$1

Multi Media/Media
Cyberdrive 24x CDROM \$1
Panasonic 8x4x32 CD-RW Drive \$1
Ricoh CD-RW 20 pk. \$1

Upgrades/Accessories
Altec Lansing Speakers \$1
ATX Mid-Tower 250W \$1
Kensington Surge Protector \$1
Mobile Removable IDE HD \$1
Pentium Motherboard Intel 810 \$1

Monitors
Dell 17" Trinitron 0.26mm SVGA \$1
HP 20" Trinitron 0.26mm SVGA \$1
IBM G70 17-inch Digital SVGA \$1

Spring Promo
Register NOW!
50% Off Shipping 1st Order
Free Shipping 2nd Order!
New & Refurbished products
backed by minimum
30-day warranty
Email: sales@auction4it.com
Toll Free: 1-877-808-8352

Video/Audio Cards
Creative Labs PC-DVD Decoder \$1
Creative Labs SB PCI128 \$1
Diamond SpeedStar 3D 8 Meg \$1
Matrox 4MB 3D Accelerator \$1

Networking/Modem
3COM Etherlink PCI 10/100 Card \$1
Ark 4 Port USB Hub \$1
SmartLink 10/100 TX PCI Adapter \$1

Electronics/Housewares
Bionaire Air Purifier \$1
Eveready Generator Batt. Charger \$1
Krupps II Caffe Duomo \$1
Nokia Cell Phone Lighter Charger \$1
Oster 2lb Breadmaker \$1
Proctor Silex Iron \$1
Uniden 900MHz Cordless phone \$1
Wagner 12V Cordless Drill Kit \$1
Wagner Paint Roller \$1



Maxtor DiamondMax
Plus 15 GB HD
Start Bid \$1

The ergonomics of IT*Continued from page 14*

have an anti-glare monitor or eliminate glare at the source."

A simple and effective suggestion from Goyert to reduce eye strain is to make sure your monitor isn't set up in front of a window so that your eyes don't have to constantly adjust between the light from outside and the screen. Instead, place your monitor in front of a background that is not the source of a lot of bright light. Also Goyert likes the idea of hav-

ing a copy holder at the side of the monitor so you don't have to look down to see what you're typing from.

"There's lots of ways to adjust your workstation," Goyert says. "One of my favourites for adjusting monitor height is to use a telephone book—if it's too high you just slice out a few pages, or if it's too low just add another phone book."

He also stresses that properly setting up your workstation is not the whole answer to avoiding ergonomic-related problems. Doing

that functions instead as more of a mitigating influence: "If you're sitting for eight hours a day doing data entry on a computer, you just can't expect not to have any problems. So, what you have to do is get some rest from that constant repetition. Adjust your work so that every so often—there's no hard and fast rule about time—you get up and move around, change your position."

One helpful thing you can do is make sure your printer isn't right next to your computer so that you have to get up and walk down the

hall or across the room to get your printouts. There are also numerous booklets and charts and software packages that show stretches you can do at your desk periodically.

"I think they're great," Goyert says. "But what I find is that people tend to, unfortunately, tack them up on their bulletin boards or put them on the bookshelf or whatever and never look at them again. Even those programs that pop up on the screen to tell you when it's time to stretch often simply get switched off and ignored."

"The thing to remember is that there's no one thing that's going to do the trick. You have to do everything—set up your workstation to fix your awkward posture, reduce the repetition and the forceful exertions in your work and take breaks to stretch or move around," Goyert says.

Manahan cites Compaq's *Comfort and Safety Guide*, a booklet that is shipped with all of the company's products and is freely available to anyone wishing to receive a copy. She says the information it contains is from the ergonomic research organizations mentioned earlier, and is presented in a simple, easy-to-follow fashion.

"Our *Comfort and Safety Guide* reflects the current research into the ergonomics issue," she explains. "In the past, for example, it was thought there was only one perfect posture; one way to hold the body when working at a computer. But I think what our guide shows is that now there's a range of postures that can be appropriate. I think if you're shopping for a desk or a chair or other components needed for a workstation, it's very important that you can make adjustments and changes to that equipment regularly and easily."

There are some very basic concepts that users should be aware of, says Dr. Keith Phillips, who sits on the B.C. Medical

Continued on page 34



Believe it.

Register Domain Names for:
NOW JUST:

WAS: ~~\$70~~ **\$14.99!** *

[.com .net .org]

It's Incredible!

No additional Internic Fees

Web Hosting / Email solutions starting at \$14.99 NO SETUP FEES!

Hi there. We're Blue Genesis Web Hosting, and we've just made our Web Hosting services **even EASIER!** Check out our new Domain Registration service. We now offer an unbelievably low price to register your very own Internet name.

After you've secured your name, consider hosting your Website with us. We challenge you to find a more **robust, user friendly, cost effective, hosting\email solution** - **plus:** we offer state of the art **E-commerce Capabilities!**

This is Web Hosting Made Easy!

*One year of service.



Blue Genesis
The Next Generation in Web Hosting
Call now: 1-800-266-4881
sales@bluegenesis.com

www.bluegenesis.ca

Have wireless will travel

Continued from page 21

Simon Arnison, founder and chief technology officer for Classwave says the Polyphony server could be used in such areas as shopping malls, grocery stores and other public places to deliver specialized digital content to Bluetooth-enabled devices. A shopping mall can send information on sales to a customer's Bluetooth-ready PDA, or someone could dial-up to get information about a store location via a Bluetooth-ready cellular phone. Bookstores could use Bluetooth to deliver news highlights or book reviews to a variety of different devices.

"In the future world, there will be so much activity and applications for the server that we have created, it will boggle the mind," Arnison adds. "Bluetooth—being an unregulated and uncontrolled space, a frequency that does not require licensing—it creates fantastic opportunities for low-cost wireless delivery."

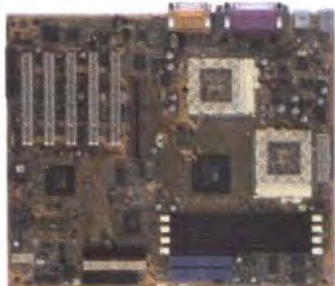
Arnison also believes criticisms of the difficulty of networking an area wider than one's desk with Bluetooth are premature. Because Bluetooth technology is inexpensive, it will not cost companies a lot to Bluetooth-enable devices or to set up Bluetooth access points around an office or public space.

"Bluetooth also has a greater acceptance among manufacturers and software vendors, and the people building silicon," Arnison says. "The cost of manufacturing the appliances is far less." □

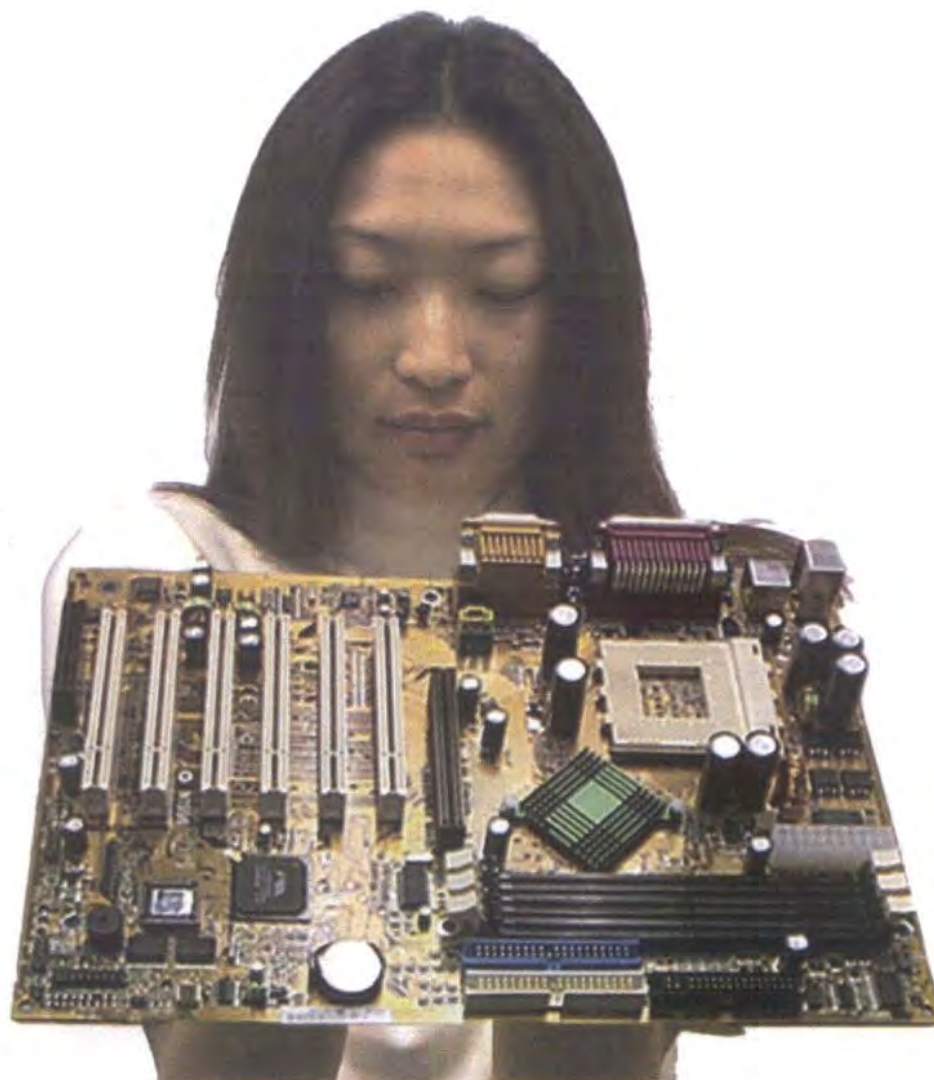
MSI Brings the Future Closer to You.

Worldwide leader in providing latest technology in mainboards.

**Dual CPU
694D Pro**



- Dual Socket 370
- Intel[®]PIII Coppermine[™] and Celeron[™] support full PC133 compliant.
- AGP 4X
- Ultra DMA/100
- IDE RAID support
- IEEE-1394 support



Latest Features



Ideal for users who want to tweak their systems for maximum performance



16 combinations of light signals help users debug their systems of all problems

K7T Pro

AMD[®] Socket A
Support Thunderbird[™] and Duron[™] processors
Full PC133 Compliant
AGP 4X
Ultra DMA/66/100 (optional)



MS-6309
February 2000
www.firingsquad.com



K7 Pro
February 2000
www.slota.com



MS-6301
April 2000
www.motherboards.org



MS-6309
April 2000
www.dw3d.com



BX MASTER
April 2000
www.pcxtrmist.com



K7 Pro/BX Master
March 2000
www.anandtech.com



MICRO-STAR INT'L COMPUTER CORP.
47800 Fremont Blvd.
Fremont, California 94538
<http://www.msicomputer.com>

Contact your nearest distributor!

EPRON

750 Cochrane Drive
Markham, ON L3R 8E1
Tel: 905-944-9000

DAIWA

361 Alden Road
Markham, ON L3R 3L4
Tel: 905-940-2889

SAMTACK

385 Bentley Street
Markham, ON L3R 9T2
Tel: 905-940-1880

ASI

30 Shields Court
Markham, ON L3R 9T5
Tel: 1-888-2000-ASI

high quality, crisp sharp image displays

Each AZURA model is designed to deliver the best possible value for your computing dollar.

AZURA has a solution to fit just about any type of computing need, you can choose from any pre-configured system or any barebone system with specific components.



actual system may be different than picture shown

Intel® mainboards
Intel® Pentium® III Processor
Intel® Celeron Processor



BUILD TO ORDER SYSTEM WITH BRAND NAME COMPONENTS

AZURA C500I+

Intel® Celeron™ Processor at 500 MHz
Mainboard manufactured by Intel®
32MB SDRAM
10 GB UDMA ATA Hard Drive
Creative 52X CD-ROM
On-board Video
On-board Audio
U.S. Robotics 56K++ V90 Modem
Microsoft® Windows® 98 SE w/CD
Win98 keyboard / Scroll Mouse

MSRP \$819.00**

AZURA 550A+

Intel® Pentium® III Processor at 550 MHz
Shuttle Mainboard
64MB SDRAM
10 GB UDMA ATA Hard Drive
Creative 52X CD-ROM
Creative Sound Blaster PCI 128 Audio
8MB AGP RangePro chipset
Azura 56K++ V90 Modem
Microsoft® Windows® 98 SE w/CD
Corel® WordPerfect 2000
Win98 Keyboard / Scroll Mouse

MSRP \$1,239.00**

AZURA 650A+

Intel® Pentium® III Processor at 650 MHz
Shuttle Mainboard
64MB SDRAM
13 GB UDMA ATA Hard Drive
Creative 52X CD-ROM
Creative Ensoniq Audio PCI sound card
Creative TNT w/16MB AGP
GVC 56K++ V90 Modem
Microsoft® Windows® 2000 w/CD
Win98 Keyboard / Scroll Mouse

MSRP \$1,549.00**

Contact your nearest Azura authorized dealer!

Courtenay
Comox Valley Computer
Tel: (250)338-0727

Gibson
Productive Computers
Tel: (604)886-3301

Grande Paire
Skyline Micro System
Tel: (780)539-9677

Hazelton
Omnyx Systems
Tel: (250)842-0012

Kamloops
Blc Tech
Tel: (250)851-4490

Kamloops
One Stop Computer
Tel: (250)554-0180

Medicine Hat
R.A. & M Computer
Tel: (403)523-7869

P. Coquitlam
DC Computer Hospital
Tel: (604)942-2830

Penticton
R & B
Tel: (250)492-5556

Pt. Alberni
Abe's Computer Shop
Tel: (250)723-8678

Powell River
RCCS
Tel: (604)483-8970

Surrey
Strategic Mobile
Tel: (604)502-3318

Queen Charlotte
Echo Bay office works plus
Tel: (250)559-4599

Victoria
Microtech Computer
Tel: (250)386-8683

www.azura.com

+All systems come with a two year parts & labour depot warranty. Monitors are not included in system configurations.

**Manufacturer's suggested retail price. All prices shown are net before applicable federal and provincial sales taxes, shipping and handling. All prices and configurations subject to change without notice.

++Canadian CRTC regulation, download restricted to speed of 56Kbps.

Azura and Azura logo are registered trademarks of Empac. Intel, the Intel Inside logo and Pentium are registered trademarks and Celeron is trademark of Intel Corporation. Microsoft and Windows are registered trademarks of Microsoft Corporation.

AZURA

SAMSUNG

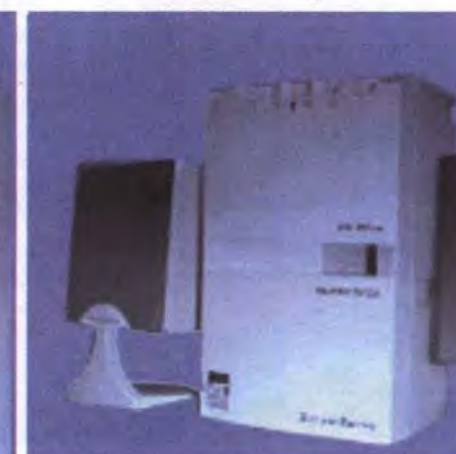
www.samsungcanada.com

We're
Really
Getting
Pushy!

Watch for it soon!



the popular canadian brand now at a store near you



universal • C 533

Intel® Celeron™ Processor 533 MHz
64MB SDRAM
6.4 GB Hard Drive
40X CDROM
Intel 3D AGP Graphics**
10/100 LAN Network Ready
Amplified Speakers
USB Gamepad & Game
Corel® WordPerfect® Family Pack
Canon Colour Printer ‡
15" Monitor

P10-G-1-533-35



\$899

After \$50 Rebate



universal • 3 650

Intel® Pentium® III Processor 650 MHz
64MB SDRAM
10.2 GB Hard Drive
40X CDROM
Intel 3D AGP Graphics**
10/100 LAN Network Ready
Amplified Speakers
USB Gamepad & Game
Corel® WordPerfect® Family Pack
17" Monitor

P10-H-3-650-36

\$1199

After \$100 Rebate
Or Lease for \$45/month



universal • 3 667

Intel® Pentium® III Processor 667 MHz
64MB SDRAM
15 GB Hard Drive
12X DVD
Intel 3D AGP Graphics**
10/100 LAN Network Ready
TVMax TV Tuner w/ Video Capture
300W Speakers w/ Subwoofer
USB Gamepad & Game
Corel® WordPerfect® Family Pack
17" Monitor

P10-H-3-667-37

\$1449

After \$100 Rebate
Or Lease for \$53/month



universal • 3 800

Intel® Pentium® III Processor 800 MHz
64MB SDRAM
20 GB Hard Drive
12X DVD
Intel 3D AGP Graphics**
10/100 LAN Network Ready
TVMax TV Tuner w/ Video Capture
Hollywood 4 pt. Surround Speakers
USB Gamepad & Game
Corel® WordPerfect® Family Pack
USB Camera
17" Monitor

P10-H-3-800-38

\$1849

After \$100 Rebate
Or Lease for \$67/month

Upgrade Package 1
15GB Hard Drive
128MB RAM

\$125

Upgrade Package 2
17" Monitor
Corel® WordPerfect® Office 2000

\$99

Upgrade Package 1
12X DVD
20GB Hard Drive

\$188

Upgrade Package 2
128MB RAM
Corel® WordPerfect® Office 2000

\$120

Upgrade Package 1
Toshiba 4X DVD/ 4X CD-RW

\$280

Upgrade Package 2
128MB RAM
Corel® WordPerfect® Office 2000

\$120

Upgrade Package 1
Toshiba 4X DVD/ 4X CD-RW

\$280

Upgrade Package 2
128MB RAM
Corel® WordPerfect® Office 2000

\$120

The Intel® Pentium® III processor is available TODAY at a PC Centre near you! The Intel® Pentium® III processor will offer you great performance for today and tomorrow's applications - as well as quality, reliability, and compatibility! Watch full -screen, full-motion video with realistic graphics for an enhanced, exciting Internet or gaming experience with these amazing processors! Unleash the full multimedia & Internet capabilities of a NEW PC from PC Centre with the Intel® Pentium® III processor TODAY!

Toshiba 4X DVD-ROM/ 4X CD-RW

IT'S AVAILABLE HERE! TODAY! The NEW Toshiba CD-RW/DVD ROM Combination Drive turns your PC into a home entertainment system! Imagine sitting back at your desk and watching the latest DVD videos and exciting interactive titles right on your monitor! Also this amazing unit comes with CD-RW technology, so that you can store all your important data and files on CD-RW and CD-R included! The Toshiba CD-RW/DVD ROM also comes with easy to use software to help you on your way! Order yours today!!!

common features

56K V.90 Modem

Mouse

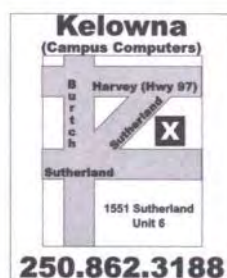
Keyboard

Windows 98 (w/CD)

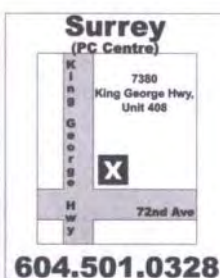
**90 Days Free Internet Access
from Look Communication**



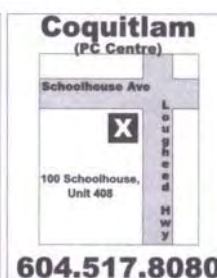
Bring the world home.



250.862.3188



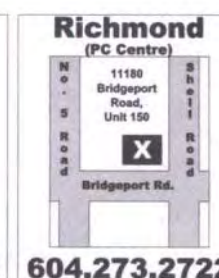
604.501.0328



604.517.8080



604.730.6886



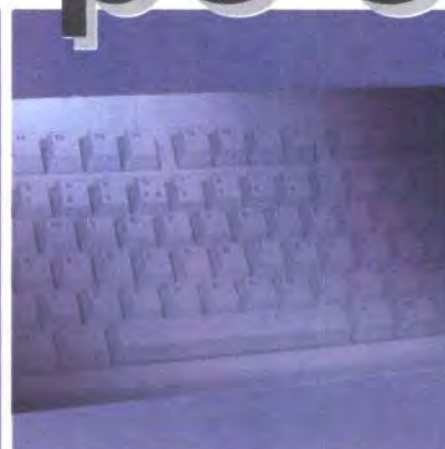
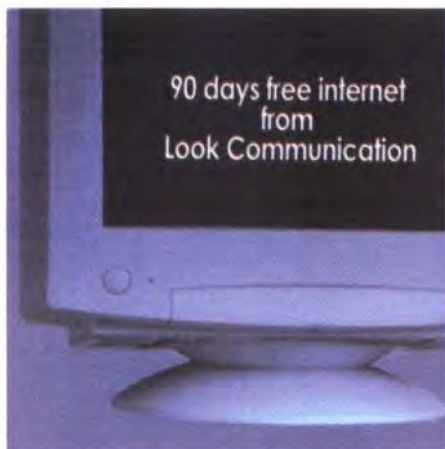
604.273.2722



For Your Complete Demonstration Or To Order, Please Visit Your Local PC Centre

PCC-0601

expect the best from **pc centre**



chips • 3 600

Intel® Pentium® III Processor 600 MHz
64MB SDRAM
6.4 GB Hard Drive
40X CDROM
nVidia TNT 16MB AGP Video
Amplified Speakers
Gamepad & Game
Corel® WordPerfect® Family Pack
17" Monitor

P10-A-3-600-31

\$1249

After \$100 Rebate
Or Lease for \$46/month

chips • 3 650

Intel® Pentium® III Processor 650 MHz
64MB SDRAM
10.2 GB Hard Drive
40X CDROM
nVidia TNT2 32MB AGP Video
Amplified Speakers
TVMax TV Tuner w/ Video Capture
Gamepad & Game
Corel® WordPerfect® Family Pack
17" Monitor

P10-A-3-650-32

\$1349

After \$100 Rebate
Or Lease for \$50/month

chips • 3 700

Intel® Pentium® III Processor 700 MHz
128MB SDRAM
20 GB Hard Drive
12X DVD
nVidia TNT2 32MB AGP Video
300W Speakers w/ Sub-woofer
TVMax TV Tuner w/ Video Capture
Gamepad & Game
Corel® WordPerfect® Family Pack
17" Monitor

P10-A-3-700-33

\$1699

After \$100 Rebate
Or Lease for \$62/month

chips • 3 866

Intel® Pentium® III Processor 866 MHz
128MB SDRAM
20 GB Hard Drive (7200 RPM)
12X DVD
nVidia GeForce 256 32MB AGP Video
Hollywood 4 Point Surround Speakers
TV Max TV Tuner w/ Video Capture
Gamepad & Game
Corel® WordPerfect® Family Pack
USB Camera
17" Monitor

P10-A-3-866-34

\$2499

After \$100 Rebate
Or Lease for \$89/month

Upgrade Package 1
15GB Hard Drive
32MB Matrox G400 AGP Video

\$215

Upgrade Package 2
128MB RAM
Corel® WordPerfect® Office 2000

\$120

Upgrade Package 1
20GB Hard Drive
32MB Matrox G400 AGP Video

\$199

Upgrade Package 2
128MB RAM
Corel® WordPerfect® Office 2000

\$120

Upgrade Package 1
28GB Hard Drive
nVidia GeForce 256 32MB AGP Video

\$300

Upgrade Package 2
256MB RAM
Corel® WordPerfect® Office 2000

\$199

Upgrade Package 1
28GB Hard Drive
19" Monitor

\$325

Upgrade Package 2
256MB RAM
Corel® WordPerfect® Office 2000

\$199

Need more? We got more!

camera

Kodak DC215.....\$429
Olympus D-460.....\$799
Olympus D-360L.....\$489
Epson PhotoPC 650.....\$429
Epson PhotoPC 750.....\$689

web cam

Kodak DVC325.....\$139
3COM Homeconnect.....\$209
Zoltrix USB Camera.....\$79

handhelds

3COM Palm IIIe.....\$219
3COM Palm VX.....\$569

sound

Creative SB Live MP3+.....\$218
Creative SB PCI128.....\$39

printers

HP 840C.....\$239
HP 925XI.....\$359
HP 950C.....\$459
HP PhotoSmart P1000.....\$609

graphics

Creative 3DBlaster Annihilator.....\$488
Diamond Viper II Z200 AGP 4X/2X 32MB.....\$258
3DLabs Oxygen VX1 32MB AGP SDRAM R3 Chipset.....\$288
Matrox 32MB G-400 AGP.....\$239

scanners

HP Scanjet 3300 USB.....\$149
HP Scanjet 4200 USB.....\$189
UMAX Astra 2200 USB.....\$299

monitors

NEC 17" SVGA.....\$329
Sceptre 19" SVGA.....\$539
Princeton 19" SVGA.....\$559
Zoltrix 17" SVGA.....\$279
Hitachi 27" SVGA.....\$559

Ask About Our
bonus software

Mech Warrior
Sonic "R"
Philips Free Speech



pentium III

More power. More internet.

Corel® WordPerfect® Family Pack:
Corel® WordPerfect® 8 • Corel® Quattro Pro® 8
Corel® Print House™ Magic 4 • Corel® Photo House™ 3
• Compton's® Interactive Encyclopedia 1999
• Mavis Beacon Teaches Typing® 9

visit us

@

www.pc-centres.com

Intel, the Intel Inside Logo and Pentium are registered trademarks and Celeron is a trademark of the Intel Corporation. Prices and configurations are subject to change without notice, and may vary in differing regions of Canada. All prices are cash discounted by 3%. Technical support for all software and operating systems is for a period of 90 days from original purchase date. Shipping and applicable taxes are NOT included in the price. All systems come with a two year parts & three year labour warranty unless otherwise specified. Due to CRTC regulation Canada, downloading is restricted to speeds of 56bps, and connection times may vary. Lease prices are based on a 48 month (OAC) Small Business lease. See store for complete and further details regarding warranty & pricing conditions. *Price shown is after manufacturer's mail-in rebate. 90 days unlimited Internet access provided by Look Communication where available. All other areas receive 100 hours unlimited Internet. *Manufacturer's Mail-in Rebate offer applies to purchasers during the promotional period. For more information, contact store staff for further details. ^Lease rates based on a 48 month term. Systems may not be exactly as shown. **Customer is to mail in rebate to PCC Rebate Centre, see stores for details. †Factory refurbished with full 1 year warranty.

PCC-0600



Frontier Computer

A reliable business partner



Professional Graphics

\$3395

- ASUS P3B-F1 PIII 440BX AGP 2ISA
- INTEL Pentium III 750MHz (Retail)
- Dimm 100MHz SDRAM 128MB 168pin
- 40GB Ultra DMA 66 2MB Hard Drive
- 1.44 MB High Density FD
- Toshiba CDRW-DVD Drive Int.
- Matrox Millen. Dual G400Max 32MB
- Creative Ensonic PCI (OEM)
- Frontier 17" CS-A1 ATX w/250W P.S.
- Sony E400 19 inch Flatscreen .25mm
- IBM Multimedia Internet Keyboard
- Microsoft Intellimouse 2B w/wheel
- PMPO SP691 Stereo Speakers 60W
- MS Windows 98 Second Edition (OEM)
- 2 Year Parts & Labour warranty

Game Monster

\$2,268

- ASUS P3V/4X Pentium III 133Mhz 4X Via
- INTEL Pentium III 600EB 133Mhz (Retail)
- Dimm 100MHz SDRAM 128MB 168pin
- 20GB Ultra DMA 66 2MB Hard Drive
- 1.44 MB High Density FD
- DVD Drive 8X/32X Int.
- ATI AGP Rage Fury (Rage 128) TV 32MB
- Creative PCI SB Live Value 1024 (OEM)
- Aopen PCI FM56-H ITU-T V.90 56k/V
- Frontier 17" CS-A1 ATX w/250W P.S.
- NEC MultiSync Fe700 17" .25mm
- IBM Multimedia Internet Keyboard
- A Open 2B First Mouse w/wheel
- Micromedia M-6100 Sub Woofer
- MS Windows 98 Second Edition (OEM)
- 2 Year Parts & Labour warranty

Home Business

\$1,395

- AOpen AX63Pro Pentium III 133Mhz Via
- INTEL Celeron 533 (Retail)
- Dimm 100MHz SDRAM 64MB 168pin
- 10.2GB Ultra 66 DMA
- 1.44 MB High Density FD
- Creative 52X int.IDE CD-ROM
- Creative AGP Serage 32MB
- Aopen PCI FM56-H ITU-T V.90 56k
- Creative PCI Ensoniq Audio (OEM)
- D-Link PCI DFE-538TX 10/100 10BT
- Frontier 17" CS-A1 ATX w/250W P.S.
- Samsung 750S 17" .27mm Monitor
- IBM Multimedia internet PS/2 Keyboard
- A Open 2B First Mouse w/wheel (OEM)
- PMPO SP691 Stereo Speakers 60W
- MS Windows 98 Second Edition (OEM)
- 2 Year Parts & Labour warranty

BabyNet Multimedia Slim System

\$325

- All-in-one Mainboard utilizing the Intel 810 chipset,
- Support Intel Celeron 300 - 500 MHz Socket 370 CPUs
- Highly integrated chipset with 3D AGP VGA embedded, Motion Compensation circuit inside for smooth DVD
- Provided AV or S-Video output for TV connection
- 56K V.90 Modem, 10/100Mbps Fast Ethernet LAN and dual USB ports for Internet access or external communication
- **Book Size 272mmX295mmX82mm**
- Add on Option:
- Intel CPU: 466Mhz -- 500Mhz \$129 and up
- Memory: 64MB -- 512MB \$ 79 and up
- Hard Drive: 4.3GB -- 40.0GB \$125 and up



High Tech Lab For Rent

\$300 per day

Frontier Computers has a fully equipped high tech computer classroom available for rent. Classroom is fully furnished with a 12 student capacity. Overhead mounted TV with PC2TV adapters are included and full use of our ADSL High Speed internet connection is provided at no extra charge. FREE UNDERGROUND PARKING is provided. A Private office is available to the instructor for private use with all necessary business peripherals. Please call for more details.

CONTACT PERSON: SAM CHAN



OpenBSD

OpenBSD V2.6 CD Version
(2 disks set)

\$42

Save time over web orders
Secure, Reliable, and Correct,
the OpenBSD operating system is used for high reliability servers. Includes built in strong cryptography and Internet servers, making it ideal for VPN, NAT, www, mail, etc.
for more information
[Http://www.openbsd.org](http://www.openbsd.org)

Greater Vancouver CD set Distributor

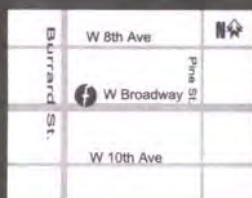
*All prices reflect 2% cash discount.

*All prices & spec. are subject to change without notice.

*All logos and trademarks are their respective owner.

Your Only Source For Online Computer shopping
www.fronet.com

- ✓ Competitive and up-to-date pricing
- ✓ Nation wide shipping
- ✓ Huge inventory
- ✓ High security, so your private information stays private
- ✓ Having trouble deciding what kind of computer would suit you best?
- ✓ Check our shopping guides, ask our experts for advice, or post a question on our Q&A board.
- ✓ Looking for a hard-to-find-part?
- ✓ Check out online parts list. We have over 50,000 different items!
- ✓ FREE online quotation for a new custom computer system



105-1755 West Broadway, Vancouver, B.C. V6J 4S5

Tel: (604) 739-8060 Fax: (604) 739-8061

Toll Free: 1-888-678-4222

E-mail:sales_vancouver@fronet.com

Business Hours:

Frontier Burnaby

• NEW STORE • NEW IDEA

E-mail: Sales_Burnaby@fronet.com

www.frontierpc.com

Six Reasons to Shop With Us

- ✓ Largest Showroom, Huge Selections
- ✓ Knowledgeable Professional Staff
- ✓ Most Competitive Pricing All The Time
- ✓ High Quality Parts, High Quality Services
- ✓ Easy Access From N. Van., Coq., Surrey
- ✓ Plenty Free Parking Space

Motherboard

Pentium III Motherboard:

ASUS P3C-D Daul - PentiumIII 820 PC133Mhz AGP, ATX	\$579
ASUS P3C-E PentiumIII 820 PC133Mhz RamBus, AGP, ATX	\$359
ASUS P3W-E PentiumIII 810 Video, AGP, ATX	\$209
ASUS MEW Cel. 810 Video/Sound/Ultra66, AGP, ATX	\$178
ASUS P3V/4X Cel. PIII Via693 PC 133Mhz 1ISA 6PCI ATX	\$178
ASUS CUB4X Cel. PIII 440BX PC133Mhz Socket ATX	\$198
ASUS CUV4X 133Mhz AGP 4X 2PCI 1ISA Via693	\$188
ASUS P2-99 PentiumII/III Celeron, AGP, ATX / AT	\$149
ASUS P3B-F1/F PentiumII/III 440BX, AGP, ATX	\$198
ABIT VT6X4 133Mhz FSB Sound 66Ultra	\$158
Abit BV6 PIII, Cel. 133Mhz Via, AGP, ATX	\$128
Abit BF6 PentiumII/III 440BX AGP, ATX / Sound on board	\$168
Abit BT6 Celeron Socket 370 Pci33 Via AGP, ATX	\$172
Abit BE6-II PentiumII/III 440BX ATX, Ultra66	\$198
Abit BP Dual Socket 370 440BX ATX, Ultra66	\$208
Aopen AX63Pro PIII Pci33 Via, Ultra 66	\$129
Aopen MX66 PIII 133 Via, Ultra66	\$145
Intel PIII CC820 PC133Mhz, Sound, Ultra 66, ATX	\$216
Elite P6SET-ML PII/PIII, Cel. Video, 3DSound, 56K/Ni	\$128
Elite P6BAT-A+ PII/PIII, Cel. PC133, 3DSound, Ultra DMA66	\$118
ASUS P5A(A) / P5AB Super 7, AGP K6-2, (Sound) ATX / AT	\$142 / \$152 / \$135
ASUS P3B11394 IEEE Link Layer Controller ATX	\$268
ASUS K7V Althon AMD Via Aprill Kx133 200Mhz 4XAGP	\$268

MassStorage

IDE Drive

Maxtor 90100U 10.2GB / 91531U 15.6GB Ultra 66 2MB	\$149 / \$168
Maxtor 92040U 20.4GB / 93073U 30.0GB Ultra 66 2MB	\$198 / \$258
Maxtor 91366U 13.6GB 2MB / 92048U 20.2GB (7200)	\$199 / \$248
Maxtor 50373U 30.0GB / 54098U 40.0GB 2MB (7200)	\$318 / \$398
IBM Deskstar 20.0GB / 34.6GB Ultra 66 (7200)	\$268 / \$499
Fujitsu MPC3043 4.3GB Ultra ATA (5400 rpm)	\$124
Fujitsu MPC3064 6.4GB Ultra ATA (5400 rpm)	\$138
Quantum Fireball Plus LM 10.2GB / 15.2GB (7200 rpm)	\$188 / \$208
Quantum Fireball Plus LM 20.2GB / 30.4GB (7200 rpm)	\$248 / \$368
W.D. 15.2GB W153GB / W.D. 20.0GB W205BA (7200rpm)	\$219 / \$268

SCSI Drive

Seagate ST336704LW 36.6GB Ultra-2W ((Cheetah) 10,000rpm)	\$1398
Seagate ST318233LWV 18GB Ultra-160 ((Cheetah) 10,000rpm)	\$865
Seagate ST 39103LW 9GB Ultra-2W ((Cheetah) 10,000rpm)	\$528
Seagate ST318275LW 18GB Ultra-2W (Barracuda) 7,200rpm	\$648
Quantum Atlas V 9.1GB / Atlas V 18.2GB U2W (7200rpm)	\$365 / \$599
Quantum Atlas V 36.7GB (7200)	\$1338
Quantum Atlas IV 9.1GB / Atlas IV 18.2GB U2W (10,000rpm)	\$540 / \$940
IBM Ultrastar 4.5GB 34560 7,200rpm (special)	\$218

CDR / CDRW / Zip Drive

HP SureStore CD-Writer Plus 8250i IDE 4R/4W / Int. w/SW	\$278
HP SureStore CD-Writer Plus 9110e 8R/4W USB / w/SW	\$325
HP SureStore CD-Writer Plus 9310i IDE 10R/4W / Int. w/SW	\$399
HP SureStore CD-Writer Plus 9210 SCSI 6R/4W Int. w/SW / Ext.	\$399 / \$545
Plextor Writer PX-R820Ti 20R/8X/2X SCSI (Retail)	\$556
Plextor Writer W8432Ti 32R/8X/4X IDE (Retail)	\$409
Yamaha CRW8424S 24R/8X/4R SCSI Int. (Retail)	\$338
Yamaha CRW8424E 24R/8X/4R IDE Int. (Retail)	\$315
Mitsumi 4804TBE 24X/4X/4X IDE int (OEM)	\$279
Panasonic Cw2785 32X/8X/4X w/software IDE Int. (OEM)	\$299
Sony 104Si0i 32X/8X/4X IDE Int. (OEM)	\$298
Toshiba SD-R1002 4XCDRW / 4XDVD / 24XCD NEW!	\$478
Zip 100MB Internal IDE (OEM) / Parallel (Retail)	\$79 / \$155
Zip Drive 250MB IDE (OEM)	\$148
Zip Drive 250MB Parallel, SCSI or USB (Retail)	\$275
Zip Disks 100MB Single Cartridge / 10 Pack	\$14 / \$135
Zip Disks 250MB Single Cartridge / 3 Pack	\$29 / \$78
Jaz Drive 2GB SCSI Int. / Ext. (Driver on CD)	\$460 / \$478
Jaz Disks 1GB / 2GB Cartridge	\$129 / \$135
Onstream 30GB Digital Drive IDE / SCSI Int	\$425 / \$664
Onstream 50GB Digital Drive SCSI Int	\$898
Onstream 30GB / 50GB Digital Media	\$54 / \$76

Video Cards

Matrox Millennium G400 16MB / 32M (OEM)	\$178 / \$248
Matrox Millennium G400 16MB / G400 32M Dual Display	\$179 / \$248
Matrox Millennium G400 Max Dual Display (Retail)	\$284
ATI Rage Fury Pro (Rage Pro 128) 64MB w/o TV	\$399
ATI Rage Fury Max (Rage Pro 128) 32MB w TV/Capture	\$218
ATI Rage Fury (Rage 128) 32MB w TV	\$165

ATI Xpert Rage 128 AGP 16MB (OEM)	\$119
ATI Xpert 98 AGP 8MB / Xpert @Play 98 8MB	\$68 / \$109
ATI All In Wonder 128 AGP 32MB / 16MB (OEM)	\$325 / \$245
ATI All In Wonder 128 AGP 32MB (Retail) (Special)	\$298
Guillemot Cougar Video Edition 2D/3D (Retail)	\$249
Creative AGP 3D Blaster GeForce Pro 32MB (Retail)	\$418
Creative AGP Savage4 32MB (Retail)	\$128
ASUS AGP V6800 GeForce DDR 32MB Pure	\$309
ASUS AGP V6800 GeForce DDR 32MB Deluxe	\$438
ASUS AGP V6800 GeForce DDR 64MB	\$478
ASUS AGP V6800 GeForce DDR2 64MB Deluxe	\$Call
3DFx AGP Voodoo III 2000 16MB ((Retail)	\$149
3DFx AGP Voodoo III 3000 16MB ((Retail)	\$199
3DFx AGP Voodoo III 3500 16MB TVTuner (Retail)	\$355
3DFx AGP Voodoo V 5500 64MB TVTuner (Retail)	\$Call

Modem / PCMCIA

3Com-USR V90 56k PCI FaxModem (OEM)	\$54
3Com-USR V90 56k PCI (2977 Hardware) FaxModem (OEM)	\$88
3Com-USR V90 56k PCI (2976 Hardware) Voice FaxModem (OEM)	\$99
3Com-USR PCMCIA 3CCM556 56K Modem (Retail)	\$299
3Com-USR PCMCIA 3CCFEM556B 56K + 10/100 Lan	\$445
Aopen PCI / ISA 56k V90 Voice Fax modem (Retail)	\$45 / \$78
Xircom CreditCard (PCMCIA) 56K Modem (Retail)	\$199
Xircom RBEM56G RealPort 56K+100MLan Cardbus (Retail)	\$398

Printer

Brother Laser Jet HL1030 (Windows Only)	\$399
Brother Laser Jet HL1240DX 600dpi 12ppm 2MB	\$459
Brother Laser Jet HL1270DX 1200dpi 12ppm 4MB	\$559
Epson DeskJet Stylus 440 720 dpi (Windows Only)	\$148
Epson DeskJet Stylus 660 / 760 USB Color 1440 dpi	\$198 / \$259
Epson Stylus Photo 750 720x720	\$385
Epson Stylus 900 / 900N	\$588 / \$878
HP DeskJet 610C / 840C / 950C Color	\$148 / \$239 / \$445
HP Multifunction 3150 Printer, Scanner, Copier...	\$899
HP DeskJet 2000C / 2000CN Professional	\$735 / \$1298
HP LaserJet 1100 600dpi 8ppm 2MB	\$578
HP LaserJet 2100 600dpi 10ppm 4MB	\$998
HP 4050 4MB / 4050N 1200dpi 17ppm 8MB	\$1689 / \$2198
HP 5000 4MB / 5000N 1200dpi 16ppm 8MB (11x17)	\$2248 / \$3140
HP 8100 / 8100N 1200dpi 24ppm 16MB (11x17)	\$3980 / \$4390
Lexmark E11 / Z31 / Z51 Inkjet 1200 dpi	\$109 / \$229 / \$298
Lexmark Optra E310 8ppm Postscript	\$559
Lexmark Optra M410 12ppm 4MB USB/Parallel	\$980

Scanner

Umax ASTRA 2000P / 2000U 1200dpi w/Photo Deluxe	\$149 / \$188
Umax ASTRA 2100U / 2200U SinglePress 1200dpi USB	\$238 / \$586
Agfa Snapscan 1212 1200dpi Flatbed / USB	\$138
Agfa Snapscan 1236S 1200dpi Flatbed	\$258
Visioneer 7600 600x1200 dpi, 36-bit Parallel / USB	\$159

Multimedia

Speakers

Creative Cambridge FPS2500 5.1 Theater speakers	\$398
Creative PC Works Fourpoint surround FPS2000 FPS1000	\$226 / \$118
Altec Lansing ACS48 PowerCube w/Dolby S-Sound	\$168
Altec Lansing ACS54 5 Speaker w/Subwoofer	\$98
Altec Lansing ACS45.2 PowerCube System w/Subwoofer	\$98
Altec Lansing ACS33 Speakers System	\$72
Altec Lansing ACS95 Speakers System	\$49
Micromedia M-9000 Multimedia Subwoofer System	\$79
Micromedia M-6100 Multimedia Subwoofer System	\$67
Micromedia M-4100 2way Speaker Systems	\$55

Sound Card

SoundBlaster PCI Ensoniq Audio (OEM)	\$38
SoundBlaster PCI 128 bit PnP (OEM)	\$58
SoundBlaster PCI Live Value (OEM)	\$78
Sound Blaster Live Platinum (Retail)	\$278
Aureal Vortex2 Superquad PCI W/4 Spks, D/Out (OEM)	\$79

CD / DVD Drive

Aopen 52X / Creative 52X CD ROM	\$76
Creative PC DVD RAM 5.2GB Int (Retail)	\$425
Toshiba XM6502B 48X EIDE Int.	\$96
Toshiba SD-R1002 4XCDRW / 4XDVD / 24XCD NEW!	\$478
Pioneer DVD 16X DVD (Drive Only) / Slot Load	\$198 / \$208
ASUS DVD-8X IDE Int. (Drive Only)	\$189
Toshiba XM6402 40X CD-ROM SCSI Int.	\$155
Plextor Ultrplex Wide SCSI Int.	\$189
External Case for CD-ROM SCSI / IDE	\$78 / \$98

Monitor

Optquest Q71 17" 1280x1024 .27mm	\$315
Optquest Q95 19" 1280x 1024 .23mm (Horizontal)	\$515
ViewSonic E771 17" / E773 .27mm	\$328 / \$385
Viewsonic EF70 17" .25mm PerfectFlat (New)	\$399
Viewsonic PF775 17" .25mm PerfectFlat (New)	\$498
Viewsonic PF790 19" .25mm PerfectFlat (New)	\$688
ViewSonic VP150 15 inch LCD Monitor	\$1468
Sony Multiscan CPD-210GS 17" 1280 x 1024 .25mm (Demo)	\$390
Sony Multiscan CPD-E200 17" 1600 x 1200 .24mm FlatScreen	\$558
Sony Multiscan CPD-E400 19" 1600 x 1200 .25mm (in stock)	\$779
Sony Multiscan CPD-G400 19" 1800 x 1440 .24mm (in stock)	\$865
Sony Multiscan GDM-F400 19" 1600 x 1200 .22mm (in stock)	\$1345
Sony Multiscan CPD-G500 21" 2048 x 1536 .24mm (in stock)	\$1620
Sony Multiscan GDM-F500 21" 1800 x 1440 .22mm (in stock)	\$2835
ADI MicroScan Viewpoint 15" .28mm N.I.L.R.	\$235
ADI MicroScan G700 / GT56 17" .25mm N.I.L.R.	\$448 / \$548
ADI MicroScan G66 19" .25mm USB	\$668
LG 995E 19" 1600 x 1280 .24mm	\$538
LG 795 17" 1600 x 1280 .24mm FlatScreen	\$499
Mitsubishi Diamond Pro 900u 19" .25mm FlatScreen	\$938
Mitsubishi Diamond Pro 2040u 21" .25mm	\$1745
Mag 976FD 17" Trinitron 1280 x 1024 .25mm FlatScreen	\$485
Mag 800V 19" 1600 x 1200 .22mm	\$598
NEC FE700 17" FlatScreen 1280 x 1024 .25mm	\$389
NEC FE1250 22" FlatScreen 1800 x 1440 .25mm	\$1320
Samsung Syncmaster 750S 17" .28 / 750B 17" .26	\$289 / \$345
Samsung Syncmaster 1000P 21" 1600 x 1200 .25 (Demo Special)	\$998
Samsung Syncmaster 1100P 21" 1600 x 1200 .25	\$1198
Samsung Syncmaster DynaFlat 753DF 17" .22mm	\$398
Samsung Syncmaster DynaFlat 700FT 17" .25mm	\$435
Samsung Syncmaster DynaFlat 900NS 19" .25mm	\$759
Samsung LCD 570BTF 15 inch LCD Monitor (Demo Special)	\$1460
Samsung LCD 770BTF 18 inch LCD Monitor (Demo Special)	\$3150

10/100MB Adapters

3Com Fast Etherlink XL PCI 3C905C-TX 10/100BT (For Desktop)	\$78
3Com Fast Etherlink XL PCI 3C905B-TX 10/100BT (For Desktop)	\$78
3Com Fast Etherlink PCI 3C980-TX 10/100BT (For Server)	\$168
D-Link DFE-538TX PCI Fast Ethernet 10/100MB RJ-45	\$32
Intel Pro / 100+ P1LA8460 PCI 10/100MB RJ-45 (OEM)	\$78
Intel Pro / 100+ P1LA8470 PCI 10/100MB RJ-45 Server	\$145
Aopen ISA / PCI 10BT and BNC Network Card	\$28
Aopen PCI 10/100BT Network Card	\$28

PCMCIA Cards

3Com/Megahertz PCMCIA 3CXFE575CT 10/100 CardBus	\$210
3Com/Megahertz PCMCIA 3CCFEM556B 10/100Lan + 56K Modem	\$445
D-Link PCMCIA DFE-650TX Ethernet 10/100 MBLan	\$99
D-Link PCMCIA DFE-660TX 56k & Ethernet 10MBLan	\$299
Intel Pro/100 Mobile PCMCIA MBLA3200 10/100MBLan CardBus	\$232
Xircom PCMCIA RE-10BT RealPort 10MB (Special)	\$119
Xircom PCMCIA RE-100BTX RealPort CardBus 10/100MB	\$225

10/100MB Hub

10 BaseT Hub	
Aopen 5 Port 10BT Hub	\$49
Netgear NE104 4Port 10M Hub (Retail)	\$58
Netgear FE104 4Port 10/100M + 2Lan Kit (Retail)	\$158
D-Link DE-805TP 5 Port / DE-809TC or 809TC 9 Port Hub	\$68 / \$78

10/100 MB Dual Speed Hub and Switch

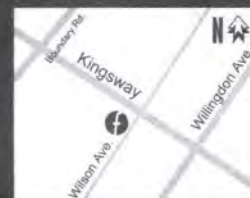
3Com OfficeConnect TP400 3C16723 4Port 100Base-TX	\$158
3Com OfficeConnect TP800 3C16722 8Port 100Base-TX	\$239
3Com OfficeConnect TP1200 3C16721 12Port 100Base-TX	\$404
3Com SuperStack II 3C16610 Dual Speed Hub 500 12 Port	\$955
3Com SuperStack II 3C16611 Dual Speed Hub 500 24 Port	\$1310
D-Link DSH- 5 5 Port Hub 10/100MB Dual Speed	\$155
D-Link DSH- 8 8 Port Hub 10/100MB Dual Speed	\$185
D-Link DSH-16 16 Port Hub 10/100MB Dual Speed	\$356
D-Link DSS- 5 5 Port Switch 10/100MB Dual Speed	\$155
D-Link DSS- 8 8 Port Switch 10/100MB Dual Speed (Special)	\$185
D-Link DSS-16 16 Port Switch 10/100MB Dual Speed	\$555

SCSI Adapters

Adaptec PCI 2930 U/W (Retail)	\$165
Adaptec PCI 29160 U2-W (OEM)	\$325
Adaptec PCI 3940 Dual SCSI-II	\$CALL
Adaptec PCI ARO-1130	\$410
Adaptec PCI AAA133 16MB U2 Kit Raid (Cable, Software)	\$1068
TekRam PCI 315 Ultra SCSI Card	\$64
TekRam PCI 390F Ultra Wide / 390U2W Ultra 2 Wide	\$148 / \$276

-Mon-Fri: 10:00 AM to 6:30 PM
-Sat: 10:00 AM to 5:30 PM
-Sunday & Holiday Closed

6B - 4300 Kingsway, Burnaby, B.C. V5H 1Z8
Tel: (604) 434-3800 Fax: (604) 434-3810
Toll Free: 1-877-434-3800
E-mail: sales_burnaby@fronet.com



NCIX CANADA.com

NETLINK COMPUTERS INC.
One Stop Internet Computer Store



- 40,000+ Products with REAL-TIME Pricing
- Secure On-Line Order
- Processed On The Same Day For Most Products Ordered Before 2:00PM

Toll Free: 1-888-NCI-9888
Tel: (604) 451-8682
Fax: (604) 451-8611
Tech Support: (604) 451-8680
Email: info@ncix.com
5068 - B Kingsway
Burnaby, BC, V5H 2E7

OFFICE WORKSTATION HOME ENTERTAINMENT CELERON II MACHINE ATHLON MULTIMEDIA

INTEL CELERON 500MMX

- Elite P6SET-ML DUAL, ATX, AGP Video, A3D Sound, 56k & NIC
- 32MB PC100 SDRAM
- 6.4GB UDMA66 hard drive
- 3.5" 1.44MB floppy disk drive
- 64Bit AGP 8M 3D Video Accelerator supporting full screen MPEG
- 15" ATX Mini-tower case 230W
- 2B Mini Mouse & Pad
- 104 Win98 Keyboard
- 50X UDMA CD-ROM Drive
- 100W Multimedia Speakers
- 56K V.90 Voice/FAX Modem
- 10/100 Mbps NetCard (@HOME /ADSL Ready)
- 2 Years Parts and 3 year Labour Warranty

(Monitor Extra) **\$599**

INTEL CELERON 533MMX

- Microstar 6163Pro 440BX, USB, 128K
- 64MB PC100 SDRAM, 128K
- Maxtor 15GB UDMA33 Hard Drive
- 3.5" 1.44MB Floppy Disk Drive
- Sniper2 TNT2 M64 32MB AGP W/DVD SW TV OUT
- 15" Monitor N.I.L.R. Digital Control 1280x1024, .28 dp, PnP
- 18" Med-Tower case ATX 250W CSA
- Microsoft 3B IntelliMouse
- 104 Windows 95/98 Keyboard
- 8X DVD-ROM Drive
- Acer AW37 3D SW Wavetable ISA
- Juster 3D-FX1 450W /Subwoofer
- 56K PCI Voice/FAX Modem
- 2 Years Parts and 3 year Labour Warranty

\$1276

INTEL CELERON II 566A

- ASUS P3V4X PII/III 300-750MHz VIA133A ATX
- 128MB PC100 SDRAM
- Fujitsu 17GB 5400RPM Hard Drive
- 3.5" 1.44MB Floppy Disk Drive
- 3DFX Voodoo III 3000 16MB w/ TV-Out
- Samsung 750s 17" Monitor .27mm
- BTC 104 Win95 Keyboard
- Logitech 2B PS/2 Mouse
- 18" Med-Tower Case ATX 250W CSA
- 56K PCI Voice/Fax Modem
- Aureal Vortex2 SuperQuad (Digital I/O) A3D
- Acer 52X CD-ROM INT IDE
- Juster 3D-FX1 450W /Subwoofer
- 2 Years Parts and 3 year Labour Warranty

\$1472

AMD ATHLON 650

- Gigabyte 7IX Athlon 500-700MHz Slot-A
- 64MB PC100 SDRAM
- Western Digital 13GB Hard Drive 5400RPM
- 3.5" 1.44MB Floppy Disk Drive
- Arcade Riva TNT2 M64 32MB 4X AGP
- Samsung 750s 17" Monitor .27mm
- IBM Multimedia Keyboard
- Logitech 2B Netmouse w/ Scrolling / PS/2
- 18" Med-Tower Case ATX 250W CSA
- 56K PCI Voice/Fax Modem
- 8X DVD-ROM Drive
- Rock Live 200 Speaker System w/ Subwoofer
- Lexmark Z11 Color Jet Printer 1200DPI
- Acer 640U 600x1200 48bit USB Scanner
- Microsoft Windows98 SE OEM Full Version
- 2 Years Parts and 3 year Labour Warranty

\$1859

HOME & OFFICE PLUS ATHLON SUPERSTATION SUPER 7 SUPER DEAL GAME BUSTER

INTEL PENTIUM 667EB

- Microstar 6163Pro 440BX, USB, 512K
- 64MB PC133 SDRAM
- Maxtor 15GB 5400rpm Hard Drive
- 3.5" 1.44MB Floppy Disk Drive
- Arcade RIVA TNT2 M64 Video Card 32MB
- Samsung 750S 17" Monitor .27mm
- 18" Med-Tower case ATX 250W CSA
- Logitech 2B NetMouse w/scroll
- IBM Multimedia Keyboard PS/2
- Acer 52X UDMA CD-ROM Drive
- Acer AW230 PCI Crystal 3D Sound
- Acer PCI 56K V.90 Voice/Fax Int.
- Juster 3D-FX1 450W /Subwoofer
- 2 Years Parts and 3 year Labour Warranty

\$1446

AMD ATHLON 850

- Abit KA7 KX133 ATX SLOT-A UDMA66 4XAGP
- 128MB PC133 SDRAM
- Quantum LM 20GB 7200RPM Hard Drive
- 3.5" 1.44MB Floppy Disk Drive
- ASUS V6600 Geforce 256 Deluxe w/ TV-OUT, 3D Glasses & Asus Software
- Optique Q95 19" Monitor .23mm 1600x1280
- 18" Med-Tower case ATX 250W CSA
- Acer 56K v.90 Voice/Fax Modem
- Logitech 2B NetMouse w/scroll
- IBM Multimedia Keyboard PS/2
- Panasonic SR-8585 8X DVD Drive
- Sound Blaster Live v2.0 Value w/ Digital Out
- Juster 3D-FX1 450W /Subwoofer
- 2 Years Parts and 3 year Labour Warranty

\$2748

AMD K6-II 550 MMX

- Microstar M55169 ALI ATX 512K, USB
- 64MB PC100 SDRAM
- Quantum 6.4GB 7200RPM Hard Drive
- 3.5" 1.44MB Floppy Disk Drive
- 3DFX Voodoo III 2000 AGP 16MB
- 15" Monitor N.I.L.R. 1280x1024, .28mm
- 17" Med-Tower case ATX 250W CSA
- Logitech 2B PS/2 Mouse
- 104 Windows 98 Keyboard
- 8X DVD ROM w/SOFTWARE
- Sound Blaster Live v2.0 Value w/ Digital Out
- 100W Multimedia Speakers
- 56K PCI Voice/FAX Modem
- 2 Years Parts and 3 year Labour Warranty

\$1188

INTEL PENTIUM 667EB

- Microstar 6163Pro 440BX, USB, 512K
- 128MB PC133 SDRAM
- Maxtor 15GB 5400RPM Hard Drive
- 3.5" 1.44MB Floppy Disk Drive
- ASUS V6800 PURE Geforce 32MB DDR
- Optique Q95 19" Monitor .23dpi 1600x1280
- 17" Med-Tower case ATX 250W CSA
- Logitech 2B NetMouse PS/2
- 104 Windows 98 Keyboard
- Acer 50X UltraDMA CD-ROM Drive
- Aurel Vortex2 SuperQuad (Digital I/O) A3D 2.0
- Juster 3D-FX1 450W /Subwoofer
- 56K PCI Voice/FAX Modem
- 2 Years Parts and 3 year Labour Warranty

\$2028

CPU

(Call 451-8682 for the Latest Price)

MHZ	500	533	550	566	600	650	700	733	750	800	850	900	950	1000
CELERON	\$160	\$166	\$189											
PENTIUM III	\$330	\$330	\$348		\$360	\$445	\$636	\$750						
AMD K6-2	\$110	\$110	\$120											
AMD K7		\$220		\$262	\$270	\$310	\$438	\$558	\$745	\$889	\$1144	\$2095		

NOTEBOOKS

Manufacture	Model	CPU	MEM	HDD	CD	Display	Modem	Price
Compaq	XL115	K6-2 475	32MB	5GB	24X	12.1"	56K	\$1953.72
NEC	VERSA VX	C-500	64MB	6GB	24X	12.1 TFT	56K	\$2595.00
Fujitsu	S-4510	PIII-400	64MB	6.4GB	24X	12.1"	56K	\$3492.57
HP	OB 900	PIII-400	64MB	6.4GB		12.1 TFT		\$3402.87
Toshiba	3020CT	C-500	64MB	6GB	6X DVD	14.1 TFT	56K	\$3339.52
Toshiba	T8000	PIII-500	64MB	12GB	DVD	12.1 TFT		\$5183.35

RAM

(Call 451-8682 for the Latest Price)

MEMORY TYPE	4MB	8MB	16MB	32MB	64MB	128MB	256MB
Regular 72-Pin Fast Page	\$32	\$66	\$129	\$241			
EDO 72-Pin	\$30	\$66	\$128	\$239			
SDRAM 168-Pin			\$69	\$94	\$169		
PC100 SDRAM 168-Pin			\$68	\$89	\$180	\$349	
PC133 SDRAM 168-Pin				\$94	\$186	\$360	
ECC PC100 SDRAM				\$179	\$270	\$388	
Corsair PC133					\$180	\$300	
Corsair PC100 CAS2					\$180	\$300	

CONTROLLERS

ADAPTEC PCI SCSI 2940UW OEM/2940U2W OEM	\$265/320
SIIG CYBER PCI ECP/EPP Printer Port	\$69
TEKRAM PCI 390F UW/390U2W SCSI3 KIT	\$133/279
TEKRAM PCI 310U PCI Ultra-SCSI	\$80
PROMISE UDMA66 PCI w/Cable OEM	\$44
PROMISE FASTTRAK66 IDE Raid Cntrl	\$212

NETWORK

3C905 PCI Fast Link 10/100BaseT (OEM)	\$79
10/100Mbps PCI D-Link 538TX / ACER 320 ALN-320	\$28/26
ACER Combo ISA/PCI / ACER 8-Port Hub	\$20/20/60
INTEL EtherExpress Pro 10/100 PCI 32Bit	\$70
D-LINK 5/9 Port Mini Hub	\$54/99
LINKSYS 10/100 Auto-Sense 5/16 Port Hub	\$100/272
SAMSUNG SmartEther 10/100 4	\$116
NETGEAR 10BT 8 Port	\$81
D-LINK 10/100 4 Port PCI Network Starter Kit	\$154
D-LINK 10/100 8 Port Switch	\$149
SURECOM 10/100 PCMCIA Ethernet Cardbus	\$87

REMOVABLE

IOMEGA CLICK! 40MB Parallel Removable Drive	\$279
Super Disk LS-120 120MB Floppy Drive Ext	\$280
IOMEGA ZIP Parallel/USB	\$149/182
IOMEGA ZIP100 Int. IDE	\$81
IOMEGA ZIP 250MB IDE/Parallel/SCSI EXT/USB	\$159/236/237/265
CASTLEWOOD ORB 2.2GB INT IDE/EXT Parallel	\$273/301
CASTLEWOOD ORB 2.2GB Disk	\$52

MODEMS

ACER 56K Int. Voice SVD SPK V.90 ISA/PCI/EXT	\$76/40/109
LUCENT 56K Int. Voice V.90 PCI	\$37
DIAMOND PCI 56K SupraMax Voice Int. V.90	\$56
THUNDERLINK 56K v.90 PCI Modem	\$25
USR 56K Sportster 56K Voice Int. V.90 OEM ISA/PCI Win/PCI Hard	\$112/46/105
USR 56K V.90 Voice/Fax Ext.	\$268
USR 56K V.90 PRO Data/Fax/Voice Ext. w/USB	\$195
MOTOROLA 56K V.90 Data/Fax/Voice PCI	\$29
SURECOM v.90 PCMCIA Modem	\$90

SYSTEM FAVORITE OPTIONS

Corel/Wordperfect Office 2000	\$44.95
Windows98 SE Full Version	\$138
WindowsNT Workstation 4.0	\$276
MS Home Bundle	\$88
Windows 2000 Pro/Server 10 Client	\$280/\$780
Linux Redhat 6.1 / Open 2.2	\$59/69

5068-B Kingsway
(2 Blocks East of Metrotown)
Burnaby, BC, V5H 2E7

All Prices are Cash Discounted
and Subject to Change
Without Notice
LIMITED QUANTITY

gotoecom

web design

Free Personal Webpage

- 20MB Disk Storage
- 1 Email Account
- Email Autoresponders
- Unlimited Email Alias
- FTP Access

www.gotoecom.com

Starting At

\$5.95
/month

Ready for E-Commerce?

We Have Your Professional Business Solution

- Setup Fee: \$15.00
- Billing Cycle: Every 12 Months
- Domain Name Hosting (www.yourname.com*)
- 20 MB Disk Storage
- 20 you@yourname.com Email Accounts
- 20 Configurable Email Forward
- Email Autoresponders

- Unlimited Email Alias
- Unlimited FTP Access
- Unlimited Traffic/Hits/Updates
- Mailing List
- Detail Site Statistic
- Access to rawlog files

Tel: (604) 412-1503

Email: info@gotoecom.com

#210-5066 Kingsway, Burnaby, B.C. V5H 2E7

HARD DRIVES

EIDE & ULTRA DMA HD

Fujitsu	4.3GB	9.5ms	5400	512K	UDMA66	\$130
Fujitsu	6.4GB	10ms	5400	256K	UDMA33	\$123
Fujitsu	10.2GB	9ms	5400	256K	UDMA66	\$140
Fujitsu	13.6GB	8.5ms	7200	2MB	UDMA66	\$185
Fujitsu	17.3GB	9ms	5400	512K	UDMA66	\$179
Fujitsu	20GB	9.5ms	5400		UDMA66	\$186
Western Digital	4.3GB	9.5ms	5400	512K	UDMA66	\$150
Western Digital	6.4GB	9.5ms	5400	2MB	UDMA66	\$168
Western Digital	10.2GB	9.5ms	5400	512K	UDMA66	\$156
Western Digital	13GB	9.5ms	5400	2MB	UDMA66	\$160
Western Digital	20.4GB	9ms	5400	2MB	UDMA66	\$199
Western Digital	30GB	9ms	5400	2MB	UDMA66	\$349
Quantum	6.4GB	9ms	7200	512K	KA UDMA66	\$149
Quantum	10.2GB	9ms	5400	512K	CX UDMA66	\$183
Quantum	20GB	9ms	5400	512K	CX UDMA66	\$230
Quantum	13.6GB	8.5ms	7200	512K	KX UDMA66	\$200
Quantum	10.2GB	8.5ms	7200	2MB	LM UDMA66	\$176
Quantum	20GB	8.5ms	7200	2MB	LM UDMA66	\$250
Quantum	30GB	8.5ms	7200	2MB	LM UDMA66	\$380
IBM	20.5GB	9ms	7200	2MB	UDMA66	\$250
IBM	30GB	8.5ms	7200	2MB	UDMA66	\$338
Maxtor	8.7GB	9ms	5400	512K	UDMA66	\$166
Maxtor	10GB	9ms	5400	2MB	UDMA66	\$153
Maxtor	13.6GB	9ms	7200	2MB	UDMA66	\$199
Maxtor	13.6GB	9ms	5400	512K	UDMA66	\$185
Maxtor	15GB	9ms	5400	512K	UDMA66	\$176
Maxtor	20GB	9ms	7200	2MB	UDMA66	\$250
Maxtor	20GB	9.5ms	5400	512K	UDMA66	\$199
Maxtor	30.7GB	9ms	7200	2MB	UDMA66	\$300
Maxtor	40GB	9ms	7200	2MB	UDMA66	\$399
Maxtor	61GB	9ms	5400	2MB	UDMA66	\$449

SCSI-2 ULTRA WIDE HD

IBM U2W	36.4GB	7.5ms	7200	4MB	UltraStar36XP	\$2199
Quantum U2W	9.1GB	6.9ms	7200	512K	Atlas IV	\$374
Seagate U2W	50GB	8ms	7200	512K	Barracuda	\$1958
Seagate U2W	9.1GB	8ms	7200	512K	Barracuda	\$728
Seagate	9.1GB	8ms	10000	1MB	Cheetah	\$1448

MOTHERBOARD

ABIT KA7/KA7-100 *NEW!	KX133 SLOTA 550-1GHZ	\$230/\$273
ABIT PI/PIII 233-500MHz	PC100 B/H6/BX6-2	\$166/\$189
ABIT PI/PIII 233-500MHz	PC100 BE6/BP6/BE6-2	\$197/\$210/\$197
ABIT PI/PIII 300-750MHz	VIA APOLLO PRO133A VAG/V164X	\$131/\$157
ACER 440BX/PIII AX6BC/AX6BC PRO GOLD		\$140/\$220
ACER N MX64 PII/PIII 233-600MHz	VIA APOLLO PRO 133A CHIPSET	\$129
ASUS K7V KX133 SLOTA 550-1GHZ *NEW!		\$240
ASUS PI/PIII 233-500MHz	P3B-F	\$190
ASUS P3B-1394 PII/PIII 233/300MHz		\$268
ASUS CUBX PII/PIII 300-800MHz	ATX 300-800MHz *NEW!	\$200
ASUS P3V4X PII/PIII 300-750MHz	VIA APOLLO PRO133A CHIPSET *NEW!	\$170
ASUS P5A SUPER 7 ATX w/SOUND	w/o SOUND	\$140/\$125
ASUS K7M ATHLON SLOT-A UDMA66		\$220
GIGABYTE 7IX ATHLON SLOT-A 500-700MHz	UDMA66	\$188
GIGABYTE GA-6VX-4X PII/PIII UDMA66	VIA APOLLO PRO 133A CHIPSET	\$159
INTEL MB86 SE440BX2 PII/PIII 233-500 w/o AUDIO		\$183
INTEL C8B10 CEL/PPGA ATX w/SOUND & VIDEO		\$168
MICROSTAR MS-6163 PRO ATX		\$150
MICROSTAR MS-6182 AL-IN-ONE i810 CHIPSET ATX		\$164
MICROSTAR MS-6199 PII/PIII 233-733MHz	VIA APOLLO PRO 133A CHIPSET	\$120
MICROSTAR MS-6195 ATHLON SLOT-A		\$183
SUPERMICRO P6SBA BX AGP 100MHz 4PCI 3ISA		\$234

SCANNER

Scanner	Model	Color	Resolution	Price
Agfa	1212P	36	600x1200	\$122.00
Agfa	1236S	36	600x1200	\$261.00
Artex	1236P	36	600x1200	\$104.00
Artex	1236USB	36	600x1200	\$105.00
Artex	AM12E Plus	36	600x1200	\$90.00
Acer	620U	36	600x1200	\$139.00
Genius	Color Page View	30	300x600	\$104.00
HP	5100C	36	1200	\$278.00
HP	4200CXI USB	36	1200	\$267.00
HP	PhotoSmart	30	2400	\$640.00
Canon 320P	30	30	1200x1200	\$137.00
Canon	620P	36	2400x2400	\$166.00
Umax	1220U	30	600x1200	\$187.99
Umax	1220S	30	600x1200	\$215.00

MULTIMEDIA

CD-ROM & DVD DRIVE

CREATIVE LABS 52X CD-ROM	\$69
ACER 40X/48X/50X/52X CD-ROM	\$57/64/69/69
TOSHIBA 36X IDE/40X IDE/40X SCSI	\$75/86/149
CD-ROM External Case Parallel Port To IDE	\$79
DVD 6X IDE Bare Drive TOSHIBA/SONY	\$205/178
DVD 10X PIONEER Tray-Load/Slot-Load	\$195/210
DVD 6X IDE Bare Drive PANASONIC/HITACHI	\$200/110
CREATIVE PC-DVD 6X Encore Dxr2 Dolby AC-3	\$341
Pioneer 16X DVD Slot/Tray Load	\$215
Asus 8X DVD/40X CD-ROM	\$178

SOUNDCARD

AUREAL VORTEX2 PCI w/ 4SPKR & Digital Out OEM	\$74
AUREAL VORTEX2 SUPERQUAD PCI w/4SPKR * Digital Out	\$76
CREATIVE Sound Blaster 16PnP/Ensoniq PCI	\$40/35
CREATIVE Sound Blaster PCI-128/LIVE v2.0 Value OEM	\$50/80
CREATIVE Sound Blaster Live Platinum/X-Gamer/MP3+	\$268/139/138
DIAMOND Sonic Impact PCI 3D Sound	\$51
DIAMOND Monster Sound MX300	\$114
ACER PCI WaveTable AW37/AW230/AW320	\$21/24/34
LG MP3 Player 32MB	\$185
DIAMOND Rio RMP300 MP3 Player 32MB	\$253

CD WRITER & MEDIA

ACER 8X/4X/32X CDRW Int. IDE 8MB Buffer	\$348
RICOH 8x/4x/32x Int. IDE	\$280
PANASONIC 8x/4x/32x CDRW OEM	\$290
CREATIVE CDRW 6424 Retail	\$330
PLEXTOR 8x/4x/32x CDRW Int. IDE w/ Software OEM	\$334
YAMAHA CDRW8424E 8x/4x/24x Int. IDE OEM	\$360
NO NAME CDR 74Min	\$2.49

SPEAKERS

ALTEC LANSING PowerCube ACS44/ACS48	\$115/170
ALTEC LANSING PowerCube USB ADA70/ADA880 5-Piece	\$192/349
GNT-5000A w/ Subwoofer	\$59
CAMBRIDGE Soundworks Speakers	\$157
CAMBRIDGE Desktop Theatre 5.1	\$379
CAMBRIDGE 4Point FPS1000/FPS2000	\$109/220
YAMAHA M8/M15/M20/MS28 Speakers	\$43/85/89/99

MONITOR

Monitor	Size	Model	DPI	Resolution	Price
Acer	17"	G772	0.25	1280x1024	\$318.00
ADI	17"	5G	0.26	1600x1280	\$462.00
ADI	19"	G66	0.26	1600x1280	\$636.00
Impression	15"	5 Plus	0.28	1280x1024	\$192.00
Impression	17"	70 Plus	0.28	1280x1024	\$283.00
LG	17"	795F+	0.24	1600x1200	\$440.00
LG	19"	995E	0.26	1600x1200	\$538.00
NEC	17"	AS70	0.27	1280x1024	\$279.00
NEC	17"	FE700	0.25	1280x1024	\$400.00
Panasonic	17"	E70	0.27	1280x1024	\$329.00
Panasonic	17"	SL701	0.27	1280x1024	\$428.00
Panasonic	17"	SL75	0.27	1280x1024	\$455.00
Proview	17"		0.27	1280x1024	\$289.00
Proview	17"	PS-776	0.26	1280x1024	\$339.00
Proview	19"		0.26	1600x1200	\$489.00
Samsung	17"	750S	0.28	1280x1024	\$269.00
Samsung	17"	700NF	0.25	1600x1200	\$440.00
Samsung	17"	753DF	0.20	1280x1024	\$349.00
Samsung	19"	900NF	0.22	1600x1200	\$708.00
Samsung	19"	995E	0.26	1600x1200	\$537.90
Sceptre	19"	D98A	0.26	1600x1200	\$638.00
Sony	15"	110GS	0.25	1280x1024	\$322.00
Sony	17"	210GS	0.25	1120x1024	\$499.00
Optique	17"	Q71	0.28	1280x1024	\$300.00
Optique	17"	V75	0.26	1600x1200	\$485.00
Optique	19"	G790	0.26	1600x1200	\$727.00
Viewsonic	17"	EF70	0.25	1280x1024	\$402.00
Viewsonic	17"	E771	0.27	1280x1024	\$330.00
Viewsonic	17"	E773	0.25	1280x1024	\$370.00
Viewsonic	17"	G773	0.26	1280x1024	\$417.00
Viewsonic	17"	PS775	0.25	1600x1200	\$518.00
Viewsonic	19"	PS790	0.25	1600x1200	\$700.00
Viewsonic	19"	PF790	0.25	1600x1200	\$689.00

VIDEO CARD

ARCADE RIVA TNT2 M64/TNT2 ULTRA 32MB 4X AGP TV-OUT	\$110/191
ASUS V7700 GEFORCE 2 GTS 32MB DDR *NEW!	\$489.55
ASUS V6800 GEFORCE 32MB DDR Pure/Deluxe	\$309/352
ASUS V6600 GEFORCE DELUXE w/TV-Out/3D Glass/Software	\$314
ASUS V3800 TNT2 32MB TV-Out Pure/Deluxe	\$242/269
ATI All-In-Wonder PRO 8MB PCI /AGP /128 PRO 32MB	\$203/168/350
ATI AGP 16MB XPERT 128/XPERT 2000 OEM	\$115/120
ATI RAGE Fury 32MB AGP OEM/TV Wonder PCI (Retail)	\$170/115
ATI RAGE FURY MAXX 2X/4X AGP 64MB OEM	\$256
CREATIVE 3D Blaster Annihilator PRO DDR 32MB GeForce	\$380
CREATIVE Savage4 32MB PCI/AGP Retail	\$142/112
CREATIVE TNT2 32MB AGP Ultra	\$272
DIAMOND Viper II 2x/4x AGP 32MB Retail	\$271
DIAMOND Stealth III S540 32MB OEM/Retail/Xtreme Retail	\$110/142/176
GUILLEMOT Xentor TNT2 32MB Ultra	\$279
LEADTEK WINFAST GEFORCE 2 GTS 32MB DDR *NEW!	\$500
MATROX G400 AGP OEM 16MB/32MB	\$139/169
MATROX G400 AGP 32MB DUALHEAD OEM/RETAIL/MAX	\$245/259/290
PowerColor Sniper TNT2 M64 32MB /TV-Out	\$131/134
S3 Trio 4MB AGP	\$40
VOODOO3 AGP OEM 2000/3000 TV-OUT/3500 TV-OUT	\$125/190/310

PRINTER

Brand	Model	Description	PPM	Price
Brother	HL1020	600DPI	10	\$365.00
Brother	HL1040DX	600DPI	10	\$429.00
Brother	HL1050DX USB	1200DPI	10	\$533.00
Brother	1660E	1200DPI	17	\$1,256.00
Brother	HL1270N	1200DPI	12	\$640.00
Canon	BJC 1000B	720x360	4/1	\$100.00
Canon	BJC 2000	720x360	5/2	\$121.00
Canon	BJC 80	360x360	4 5/2	\$392.00
Canon	BJC 7000	1200x600	5/3.5	\$500.00
Epson	Stylus 440	720x720	5	\$154.00
Epson	Stylus 660	1440x720	6	\$198.00
Epson	Stylus 740	1440x720	7	\$250.00
Epson	Stylus 900	1440x720	10	\$566.00
Epson	Photo 700	1440x720	7	\$384.00
Epson	Photo 850	1440x720	7	\$519.00
HP	610C	600x600	4	\$154.00
HP	840C	1200x600	8/5	\$229.95
HP	880C USB	600x600	8/5	\$380.00
HP	930C	2400x1200	9/7.5	\$306.36
HP	1100XI	600x600	8	\$587.00
Lexmark	Z11	1200	4/2.5	\$149.00
Lexmark	Z31	1200x1200	8/3.5	\$174.00
Lexmark	Jet 1100	600x600	3.5	\$146.00
Lexmark	Jet 3200	1200x1200	6	\$148.00
Lexmark	Jet 5770 Photo	1200x1200	8	\$341.00
Lexmark	Optra E+	600x600	6	\$499.00
Lexmark	Optra E310	600x600	8	\$575.00
Samsung	L-5100A	1200DPI	8	\$329.00
Samsung	L-6050	1200DPI	12	\$460.00
Okidata	10EX	1200DPI	10	\$460.00
Okidata	8W	600DPI	8	\$386.00
Okidata	6W	600DPI	6	\$230.00

ACCESSORIES

15"/19"/24" AT Tower Case	\$45/65/85
15"/17"/19" ATX Tower Case	\$38/50/63
InWin ATX Tool Free 250W 17"/24"/24" 300W	\$88/111/129
18" ATX Tower Case Side Open w/ 21.C. Fan	\$138
A-TOP 21" ATX Tool Free 250W w/1 Extra Fan	\$140
ANTEC 24" Full Tower 10Bay ATX 253W	\$169
SUPERMICRO SC-760A PCI 2.01 Compliant	\$268
HDD Cooler/I-STORM II *NEW!	\$14/48
CHASSIS Fan Generic	\$12
SOCKET 370 TO SLOT 1 Converter HOUSTON	\$12
SOCKET 370 TO SLOT 1 Converter MSI	\$45
LOGITECH 2B Mouse/3B First Mouse/4B PLUS	\$22/13/78
LOGITECH Trackman Marble/FX	\$88/106
LOGITECH DELUXE MOUSE PS/2	\$27
MICROSOFT Intellimouse Explorer PS/2/USB	\$90
104 Keys PS/1 / PS/2 Win95/98 Keyboard	\$22
FUJITSU 8725/4725/Focus 2001	\$23/68/48
LITEON Win95 Natural K.B. with TouchPad	\$63
LOGITECH Internet /Cordless Desktop	\$40/133
MS Natural Elite Keyboard PS/2 / USB	\$40/78
QTRONIC PS/1 / PS/2 /Internet	\$15/38/32
GLOBALWIN ISTORM HD COOLER	\$48

Sales & Service Centre **BESTOP** Since 1993

4058 Cambie St. Vancouver, B.C. V5Z 2X8
(Cambie & King Edward/ Parking at Rear)
Mon-Sat: 9:30 - 6:00 Sunday: 10:00 - 6:00
email: btccemail@bestop.bc.ca
website: www.bestop.bc.ca
Tel.: 879-4688
Fax: (604) 879-0223

AMD K6-II 500 Budget Model #K625007C

Super 7 AGP Motherboard
64 MB PC100 MHz, 1.44MB Floppy
6.4GB UDMA Hard Drive
3D AGP Video Accelerator, 8MB
Samsung 17" 750S SVGA Monitor, .27mm
Acer 40X Int. CD-ROM Drive
16-bit 3D Stereo Sound/ 120W Spks
104-keyboard/ 14" Tower Case
56K Int. Voice Fax Modem, V.90
Lexmark Z11 Color Printer

\$899 Lease \$31/mo

AMD ATHLON K7 700 Model #K77007C

Gigabyte GA-71XE AGP M/B
128 MB PC100 MHz, 1.44MB Floppy
Maxtor 15GB 7200rpm H.D.
3Dfx Voodoo3 3000 AGP Video, 16MB
17" SVGA Color Monitor, .25mm
Creative 52X UDMA Int. CD-ROM Drive
Sound Blaster PCI 128 Sound Card
19" ATX CSA Approved 300W P/S
104-key Windows K.B./ 120W Spks
56K Int. V/F Modem V.90

\$1,549 Lease \$61/mo

Intel Celeron 500 Model #BIC5007C

Intel 440LX Chipset AGP M/B
64 MB PC100 MHz, 1.44MB Floppy
Fujitsu 10GB UDMA Hard Drive
ATI Rage II AGP Video, 8MB
Samsung 17" 750S SVGA Monitor, .27mm
40X Int. CD-ROM Drive, 120W Speakers
16-bit 3D Stereo Sound Card
17" Tower Case, 104-keyboard
56K Int. Voice/ Fax Modem V.90
Lexmark Z11 Color Printer

\$999* Reg \$1019 Lease \$40/mo

Intel Celeron 533 Family Model #BIC5337C

Abit VA6 VIA AGP Motherboard
128 MB PC100 MHz, 1.44MB Floppy
Maxtor 15GB UTA 66 Hard Drive
Riva TNT2 AGP Video, 32MB
NEC 17" AS70 SVGA Monitor .27mm
Acer 40x UDMA CDROM Drive
16-bit 3D Stereo Sound Card
17" CSA Approved P/S Tower Case
104-keyboard, 120W Speakers
Lexmark Z11 Color Printer
Acer 620P Color Scanner

\$1,299 Reg \$1329 Lease \$49/mo

FREE Microsoft 2-Button Mouse

FREE Microsoft 2-Button Mouse

FREE Microsoft 2-Button Mouse

FREE Microsoft 2-Button Mouse

FREE Microsoft 2-Button Mouse

Intel PIII 600 Value Model #BIP36007C

Asus P3V AGP Motherboard
64 MB PC133 MHz, 1.44MB Floppy
Maxtor 15GB UTA66 Hard Drive
Riva TNT2 AGP Video, 32MB
Samsung 17" 750S SVGA Monitor .27mm
Acer 40x Int. CD-ROM Drive
16-bit 3D PCI Stereo Sound
17" CSA Approved P/S Tower Case
104-key Windows Keyboard
Pair of 120W Speakers

\$1,249 Lease \$56/mo

Intel PIII-650 Screamer Model #BIP36507C

Intel 440BX Chipset Motherboard
128 MB PC100 MHz, 1.44MB Floppy
Fujitsu 20GB UDMA Hard Drive
ATI Xpert 2000 AGP Video, 32MB
NEC 17" AS70 SVGA Monitor .27mm
Pioneer 10X DVD ROM Drive
Sound Blaster PCI 128 Sound Card
17" CSA Approved P/S Tower Case
104-keyboard/ MLI 450w Sbwtr Spks

\$1,599 Lease \$61/mo

Intel PIII-667 Deluxe Model #BIP36677C

Asus P3V4X AGP Motherboard
128 MB PC133 MHz, 1.44MB Floppy
Quantum 20GB 7200rpm H. D.
3Dfx Voodoo3 3000 AGP Video, 16MB
Creative 52x UDMA CDROM Drive
NEC 17" FE700 SVGA Monitor .25mm
Sound Blaster Live Value Sound Card
17" CSA Approved P/S Tower Case
104-keyboard, 120W Speakers

\$1,749 Lease \$69/mo

Intel PIII-733 Super Model #BIP37337C

Asus P3V4X AGP Motherboard
128 MB PC133MHz, 1.44MB Floppy
Maxtor 30GB 7200rpm H.D., 2MB cache
Asus V6600 AGP Video, 64MB
Panasonic 8x4x32 CD-Rewriter
Sound Blaster Live Value Sound Card
GNT 5000A Subwoofer Speakers
Microsoft Internet Keyboard
16" ATX Tower Case / Monitor Extra

\$1,999 Lease \$79/mo

SUPER-MINI
COMPUTER

Featuring :

- Portable
- USB Ports
- Internet Ready
- 10/100 Network Interface
- Output To TV
- Home Entertainment
- Affordable Price

Specifications

- Intel Celeron 466 MHz CPU • 32MB SDRAM • 1.44MB Floppy
- Intel 810 Chipset Video, 6.4MB • Fujitsu 6.4G Hard Drive
- 52x CD-ROM Drive • Sound System, Speakers
- 104 Key Windows Keyboard & Mouse • 2 USB Ports
- 10/100 Network Card • 56K Int. Voice Fax Modem
- TV Output Connector • Super Mini Case (12"x11"x3.5")

IBM Notebook IBM Notebook IBM Notebook

TP i 1420
\$1,699
• Celeron 433 CPU • 32MB RAM
• 4.8G H.D. • 24X CDROM
• 56K modem • 13.1"HPA Screen

TP1482 C500 64MB 12G DVD 56K 14.1TFT \$3,090
TP390X PII400 64MB 6.4G 24x 56K 14.1TFT \$3,369
TP390X PIII450 64MB 12G 24x 56K 14.1TFT \$3,888
TP600X PIII 650 64MB 12G DVD 56K 13.3TFT \$5,499

Monitor

NEC 17" AS70, .27mm	\$279
NEC 17" FE700, .25mm	\$385
Samsung 15" 550S, .28mm	\$195
Samsung 17" 750S, .27mm	\$265
Samsung 17" 753DF, .20mm	\$359
Samsung 15" 750B LCD	\$1250
Sony G200 17" .25mm	\$599
Sony G400 19" .25mm	\$849
Viewsonic 17" E771 .27mm	\$309
Viewsonic 17" EF70 .25mm	\$385
Viewsonic 17" M70 .27mm	\$399
Viewsonic 17" PS775 .22mm	\$495
Viewsonic 17" PF 775 .25mm	\$465
Viewsonic 19" E790 .26mm	\$495
Viewsonic PF790 .25mm	\$669
Viewsonic 19" PS790 .25mm	\$699

Scanner

Acer 620P	\$99
Acer 320U / 640U	\$115/129
Canon 630U	\$179
HP 3300C / 5200C	\$175/339
HP 5300U / 6390U	\$339/1149

Hard Drive

Fujitsu 6.4GB Ultra DMA	\$129
Fujitsu 10GB Ultra DMA	\$145
Fujitsu 20GB Ultra DMA	\$189
Maxtor 15G 7200rpm	\$179
Maxtor 20G 7200rpm	\$245
Maxtor 30G 7200rpm	\$309
Quantum 15GB LM 7200rpm	\$205
Quantum 20GB LM 7200rpm	\$249
Quantum 30GB LM 7200rpm	\$349
IBM 30/40GB 7200rpm	\$319/419
Western Digital 20G UTA66	\$189
Western Digital 30G 7200rpm	\$345

Backup Device

Panasonic 8432 CDRW	\$279
Acer 8x4x32 CD Rewriter	\$325
HP 8250i 4x4x24	\$275
HP 9110i 8x4x32 CDRW	\$329
HP 9310i 10x4x32 CDRW	\$389
BASF CDR Media 10Pk	\$14.9
Zip Drive Int.IDE 100/250M	\$85/148
Zip Disk 100 / 250MB	\$13/23
120MB Super Floppy	\$99
LS 120 Disk	\$16

Printer

Brother HL1030 Laser	\$379
Brother HL 1240DX	\$455
Brother HL 1250DX	\$549
Brother HL1270N Laser	\$699
Brother MFC-4350MC	\$549
Canon 1000 Color	\$69*
Canon 2100USB Color	\$125
Canon 5100 Color	\$169
Canon 6100 Color	\$269*
Epson 670 Color	\$139*
Epson 760 Color	\$155*
Epson 860 Color	\$204*
HP 840C Color Printer	\$235
HP 970C Color Printer	\$549
HP 1220CXI Color Printer	\$669
HP 1100 Laser Printer	\$569
HP 2100TN Laser Printer	\$1425
HP 4050TN Laser Printer	\$2299
Lexmark Z11 Color	\$99
Lexmark Z31 Color	\$249
Lexmark 3200 Color	\$135

* After Rebate

Video Card

S3 AGP Video, 4MB	\$42
ATI Xpert 2000 32MB	\$119
ATI Rage Fury Max, 64MB	\$299
ATI All-in-Wonder 128 Pro, 32MB	\$379
Asus V6600 GeForce, 32MB	\$319
Asus V6600 GeForce, 64MB	\$335
Asus V7700 GeForce-2, 32MB	\$465
Matrox G400 D/H, 32MB	\$235
3Dfx Voodoo3 3000 AGP, 16MB	\$169
3Dfx Voodoo3 3500 AGP, 16MB	\$255

Multimedia

Acer 40X CD-ROM	\$59
Creative 52X CD-ROM	\$69
Pioneer 10X DVD ROM	\$209
Pioneer 16X DVD ROM	\$225
SB comp Sound card PCI	\$22
SoundBlaster 128 PCI	\$55
SoundBlaster Live value	\$79
SoundBlaster Live X Gamer	\$139
GNT 5000A w/Subwoofer	\$59
Altec Lansing ACS45.2	\$95
Creative 4 point speaker	\$109

Modem

56K V90 int. Voice/Fax	\$29
Acer 56K V90 int. Voice/Fax	\$45
USR 56K PCI Voice V90 (Win)	\$59
USR 56K Int. Voice V90	\$99
USR 56K Ext. Fax V90	\$179

Motherboard

ABIT VA6 w/ Audio	\$135
ABIT BF6 440BX	\$179
ASUS P5AB, 512K	\$125
ASUS P3V VIA	\$139
ASUS P3V4X VIA	\$169

IBM 4G U2W SCSI Hard Drive	\$199
Viewsonic 17" E771 .27mm Monitor	\$309
Viewsonic 19" E790 .26mm Monitor	\$495
Viewsonic 19" PF790 .25mm Monitor	\$669
Samsung 17" 753DF, .20mm(H) Monitor (after rebate)	\$329*
Samsung 15" 750B LCD Monitor	\$1250
Canon BJC 2100 USB Color Printer	\$125
Epson 760 Color Printer	\$199
Brother 1240DX Laser Printer	\$455
Brother HL 1270N Network Printer	\$699
HP 840 Color Printer	\$235
HP 970C Color Printer	\$549
Canon 630U Color Scanner	\$179
Samsung MJ4500C 5-in-1 MFC	\$289
Samsung SF5100P 6-in-1 Laser (after rebate)	\$399*
MS Windows 98 (with system purchase only)	\$135
MS Windows 2000 (w/ system only)	\$199

133MHz VIA chipset M/B	Intel Celeron 466	\$349
32MB PC100 SDRAM	Celeron 500/533	\$375/399
S3 3D AGP Video, 4MB	PIII 500/600	\$519/559
14" ATX Tower Case		

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.

Magma's Web Servers come with ... more freedom!



Magma's Virtual Web Servers give you more freedom to enjoy life. We take care of all your Web hosting needs, from a basic Website to full eCommerce with integrated databases and electronic payment. You won't have to worry about a thing!

The Magma Difference is our professional and knowledgeable technical support.

Magma provides everything you need:

Unix and NT Hosting	24/7 support
Cold Fusion	UPS with diesel backup
CGI, PHP, ASP	4 redundant back-bones
MS SQL, MySQL	Frontpage support
Multiple email addresses	Real Audio/Video
Real time web log reporting	Load balancing
SSL security	Server co-location

Packages as low as \$**22**.95/month!



Call 1 800 576-7704

www.magma.ca/hosting

Your Internet Company

AMD

Work Station

- Gigabyte 5 SM Motherboard **K6-2 500MHz \$499**
- 17" ATX Case 250W P/S
- 32MB SDRAM
- 1.44 Floppy Drive
- Fujitsu 6.4GB HD
- 36X CDROM
- SVGA 8MB O/B **K6-2 533MHz \$510**
- 16Bit 3D Sound Card O/B
- 56K V90 Modem
- Win98 Keyboard, 2 B Mouse/pad
- 140W Speaker
- 15" SVGA Monitor +\$175
- AMD K6 II CPU **K6-2 550MHz \$528**

Intel

Power Station

- Elite P6set AGP Motherboard
- 17" ATX Case 250W P/S
- 64MB PC100 SDRAM
- 1.44 Floppy Drive
- Fujitsu 6.4GB HD
- SIS SVGA 8M AGP O/B
- PCI 16Bit Soundcard O/B
- 48X EIDE CDROM
- 56K V90 Modem O/B
- 140W Speaker
- Win98 PS/2 Keyboard & Mouse
- Intel Celeron CPU
- 15" No-int. Low Rad Monitor +\$175

Intel

Professional Station

- Elite PIII B 133MHz Motherboard **P-III 533MHz \$1239**
- 17" ATX Case 250W P/S
- 64MB PC133 SDRAM
- Panasonic 1.44 Floppy Drive
- Fujitsu 13GB HD
- RIVA TNT2 32MB
- Creative Ensoniq 128 Sound card
- Creative 52X EIDE CDROM
- 56K V90 Modem ESS
- Juster 3D 300W Spkr /w subwoofer
- 17" N-I SVGA AOC .28 Monitor
- Win98 PS/2 Keyboard & Mouse
- Intel CPU **P-III 600MHz \$1279**

AMD Athlon K7

Superior Station

- Gigabyte 7VG Motherboard **K7 650MHz \$1399**
- 128MB 168pin SDRAM
- Panasonic 1.44MB Floppy Drive
- 15GB DMA66 7200rpm HD
- 2 USB port
- AGP TNT2 32MB VGA
- Sound Blaster Live Value
- 450W Speaker / Subwoofer
- 50X CDROM
- 17" .27 N-I SVGA Monitor
- ATX Case 250W power supply
- 107 keys Win98 KB, PS2 Mouse

Intel

Premium System

- Asus PIII 133 ATA 66 Motherboard **PIII 533MHz \$1369**
- 17" ATX Case 250W P/S
- 64MB PC133 SDRAM
- 1.44 Panasonic Floppy Drive
- Fujitsu ATA66 20GB HD
- Asus TNT2 3800 32MB
- SB Live Value Card
- Creative 52X CDROM
- AOpen V90 56K PCI Modem
- Juster 450W Spkr/Subwoofer
- 17" SVGA .25 AOC Monitor
- Win98 PS/2 Keyboard & Wheel Mouse
- Intel Pentium III CPU **PIII 600MHz \$1399**

Intel

Game Blaster

- Asus P3V4X133 ATX Motherboard **P III 600MHz \$1799**
- 17" ATX Case 250W P/S
- 128MB PC133 SDRAM
- 20GB 7200rpm ATA66 HD
- Creative 52X CDROM Drive
- 1.44 Panasonic Floppy Drive
- Asus TNT2 3800 32MB
- Creative SB Live Value Card
- Cambridge PC Work Subwoofer
- USR 3 Com 56K V90 Modem
- MS Internet Keyboard
- MS IntelliMouse Explorer Mouse
- Viewsonic E773 17" dp .25 Monitor **P III 700MHz \$1900**

Free 1 month Internet Access with All System Purchase • Rogers @ Home the Internet on Cable Authorized Retail Center

Motherboard

- Abit V6A / BF6 / BE6 2.0 . . . \$138/155/199
- Abit BE6 II 440 / BP6 ATX . . . \$185/189
- Abit VT6x4 / KA7 . . . \$145/219
- Asus P5A / P3V 133 / K7 . . . \$129/149/209
- Asus PIII B-F / C2000 133MHz \$179/230
- Asus P3 133Vx4/K7M/K7V . . . \$175/199/225
- Gigabyte BX 2000 . . . \$155
- Gigabyte S.Socket7 55MM Ultra 66 \$119
- Gigabyte GA 6VX-4X/GA 7VM . . . \$149/168
- Intel T440BX / C820 . . . \$179/205
- Elite PIII B 133MHz / ATA Ultra 66 . . . \$119

Hard Drives

- 6.4/10/13/20/40GB \$129/142/169/189/339
- 13/ 20 / 30GB (7200rpm) . . . \$199/259/309
- SCSI 9.2 GB Ultra 2 . . . \$362
- NoteBook
- 2.5" EIDE 6.4 / 12 / 18 GB . . . \$315/446/610

Memory

Big Savings!

- 32 / 64 MB PC100 . . . \$47/85
- 128 / 256 MB PC100 . . . \$165/339
- 64 / 128 MB PC133 . . . \$89/179
- ECC 128 / 256 MB PC 100 . . . \$199/388
- 16 / 32 MB EDO 72pin . . . \$64/128
- 32 / 64 MB PC100 144pin . . . \$59/ 128

CD-ROM/DVD/CD Writers

- IDE 36X/48X/50X/Creative 52X \$42/58/59/64
- SCSI Toshiba 40X . . . \$112
- DVD
- Hitachi 8X / Pioneer 10X . . . \$189/219
- Creative 5X . . . \$159
- Hollywood Decode Card . . . \$119

CD Writers

- Creative 4416/6424/8432 \$269/289/319
- Acer/Plex/Yamaha 8432 \$329/409/399
- HP 8250/8432/9310 10x4x32 \$269/309/389
- Bare CD/BASF CD/RW Disk \$1.1/1.59/2.09

Keyboard/Mouse

- 104 Keyboard/ Chinese Keyboard \$12/19
- Fujitsu 8725/ 4775 Keyboard . . . \$19/59
- Logitech 2B Mouse / wheel . . . \$10/18
- MS Tracker/IntelliMouse Explorer Mouse \$12/21
- MS Internet Keyboard . . . \$29
- IBM 3B Compatible Wheel Mouse . . . \$10
- IBM Compatible Internet Keyboard . . . \$19

CPU

- AMD K6-II 400/500/550 \$89/99/114
- AMD K7 550 / 600 . . . \$229/269
- AMD K7 650/700/800 \$275/309/455
- Intel Celeron 366 / 400 . . . \$99/129
- Intel Celeron 466/500/533 \$149/159/168
- Intel PIII 500/550/600 \$319/339/369
- Intel PIII 650 / 700 . . . \$399/449
- Intel PIII 733/750/800 \$459/629/699
- MMX 233 . . . \$79

Backup

- Iomega 100MB Int / Ext . . . \$89/139
- Jazz 2GB SCSI Ext . . . \$478
- Iomega Zip Drive 250MB USB \$239
- Iomega 100/120/250 Disk \$11.9/12.5/24

Network

- Surecom 10BT PCI/ISA . . . \$18/19
- Surecom 10/100BT . . . \$22
- Surecom/DLink 5 Port Hub \$39/55
- Surecom 10/100 5 Port Hub . . . \$85
- Acer 10/100BT PCI . . . \$25
- DLink Network Kit . . . \$159
- 3Com 905B 10/100BT / Intel \$69/78
- Network Cable 10/25/50 \$7.99/14.9/21.99
- PCMCI 10BT / Modem . . . \$49/89
- Surecom PCMCI 10/100BT \$49/85
- Netgear 105 5 Port Switch . . . \$145

SCSI Controllers

- Adaptec 1505/2906 SCSI CTRL \$68/79
- 2930U/2940 UW . . . \$135/299
- 29160N/PCI Ultra 160 SCSI \$365/515

Modems

- 56K v.90/Aopen 56K v90 PCI \$28/39
- 56K PCMCI Modem . . . \$79
- US Robotics 56K ISA / PCI . . . \$82/49
- A Promise Fastrack 66 PCI . . . \$165

Scanner/Camera

- Hewlett Packard
- 4200C / 5300C USB . . . \$255/358
- 5300C / 6200C / 6350 \$349/520/608
- Canon 330P / 630U (-\$30) . . . \$138/185
- Acer 620P/SCSI/USB \$150/160/160
- Acer 320P/320 SCSI (-\$20) . . . \$99/99
- Logitac Quacam express/home \$71/109
- EZ Dual Cam . . . \$195

Monitors

- AOC 15" / 17" / 17" 0.25 . . . \$179/249/279
- Azula 15" / 17" 0.28 . . . \$169/250
- Hansol 17" 0.28 / 0.25 . . . \$289/309
- MAG 786F . . . \$420
- Mitsubishi 17" DP70 . . . \$549
- Mitsubishi 19" DP900U . . . \$749
- NEC A500 / E500 . . . \$279/375
- NEC M500 . . . \$399
- NEC A570 17" .27 . . . \$287
- NEC FE700/FE770 .25 . . . \$399/349
- NEC 700M .25 . . . \$479
- NEC FE950/ F1250 . . . \$669/899/1399
- NEC LCD Panel 14" / 15" . . . \$1199/1668
- Panasonic E50 / P50 / E70 . . . \$239/295/325
- Panasonic P110 21" . . . \$1129
- Panasonic E70i 17" .27 . . . \$328
- Panasonic SL95 19" FS .25 . . . \$609
- Samsung 700NF/900NF . . . \$429/629
- Samsung 750S .27 . . . \$279
- Sony 110G / 210GS/ E200 . . . \$310/479/560
- Sony E100 15" C1280x1024 . . . \$329
- Sony E200 17" / E400 17" . . . \$539/769
- Sony 400G / 520G . . . \$838/1519
- Viewsonic E771/E773 . . . \$309/399
- Viewsonic E790 19" . . . \$520
- Viewsonic P5775/ PF775 . . . \$505/485
- Viewsonic LCD VP140/ 150 . . . \$1310/1665
- Viewsonic P5790 . . . \$740
- Viewsonic PF790 . . . \$699

Monthly Special

- 19" Optique 0.25 . . . \$509
- MS Internet Keyboard . . . \$25
- MS Intelli Mouse . . . \$19
- MS Office 2000 Pro / SBV . . . \$389/249
- MS Window 2000 Pro . . . \$199
- MS Window Office 97 Pro . . . \$138
- MS Win98 . . . \$130
- HP 970 Printer . . . \$409
- ROGER@Home (3 month free) . . . \$24.99*
- Zip 100M Disk . . . \$11.99
- Bare/ BASF CD Disk . . . \$0.99/1.49
- Re-writable CD Disk . . . \$1.99

* Save \$100 install Roger Cable & 3 Months Free

Copier / Printer / Fax / Monitor
Repair Centre

Video Cards

- ATI Xpert 98/ 99 8MB/ 2000 16MB \$62/86/109
- ATI Rage 128 32 / 32MB Fury . . . \$119/179
- ATI TV Wonder Card . . . \$99
- ATI All-in-W Pro AGP 8/16/32MB \$159/233/279
- ATI Fury Max 64MB . . . \$399
- 3Dfx Voodoo 2000/3000/3500 \$139/189/339
- 3Dfx Voodoo 5 5500 64MB . . . \$419
- Asus V3800 32MB/TNT2/Deluxe \$149/215/252
- Asus TV Box w/Remote /3D Glasses . \$105/49
- Asus 6800 GeForce 256 / Deluxe 32M \$369/430
- Creative Savage 4 32MB . . . \$109
- Creative GeForce pro/ II 64MB . . . \$399/459
- Matrox Millennium G400 16 / 32MB \$159/199
- Matrox Millennium G400 Dual Head . . . \$249
- Matrox Millennium G400 Max 32MB . . . \$252
- RIVA TNT2 16 / 32MB / Pro . . . \$99/109/139
- SIS 6236 8MB AGP / SIS 4MB . . . \$50/39
- S3 Savage 4 GT 3D AGP 16MB . . . \$66

Printers

- Lexmark Z 31/ 3200 . . . \$175/155
- Brother 1030/1040DX/1250DX \$379/429/540
- Canon 2000 / BJC-1000 (\$20 rebate) \$139/99
- Canon BJC-5100 / 6100 . . . \$179/325
- Epson 440/660/760 (US\$50 reb.) \$154/199/339
- Epson 800/850/900/860 . . . \$359/420/620/382
- Hewlett Packard
- 810 / 880 / 950C / 970 . . . \$235/305/449/569
- 1100 / 2100 / 2500C Laserjet \$569/1020/1329

Sound Card

- 3D Sound Card / Yamaha 3000 . . . \$18/20
- Soundblaster Live MP3+X Gamer . . . \$130
- Soundblaster 16bit ISA . . . \$38
- Soundblaster PCI 128 / Ensonic . . . \$49/32
- Soundblaster Live Value/ 512Bit . . . \$75/73
- Soundblaster Live Platinum . . . \$259
- Diamond MX400 . . . \$82

Speakers

- 140W Speaker . . . \$9.99
- Zenon 6000 500W . . . \$58
- Cambridge PC Works Spkr/Sub . . . \$69
- 4 PT Surround FPS 1000/2000 . . . \$99/188
- Juster 450W Speaker/Subwoofer . . . \$35
- Multimedia 480W Speaker/Subwoofer . . . \$49
- Altec Lansing ACS 45.2 / 48 . . . \$88/165

Toner Cartridge Re-charge

- Canon Cartridge FX-1/2/3/860 \$60/60/60/60
- HP Laserjet AX,BX,EX,LX,PX,XX,WX . . . \$50 up
- Brother 630/730/2500 Refill . . . \$26/26/26

The ergonomics of IT

Continued from page 22

Association's computer committee. "Making sure the height of the keyboard above the floor and the height of the seat you're sitting on above the floor are both optimal is a good place to begin.

"Second, the individual sitting at the keyboard should be in good physical shape," Phillips adds. "If they tend to be a very tense individual whose lifestyle doesn't include regular physical activity, the literature is substantial that suggests that type of individual is more likely to develop the syndrome. On the other hand, it's very rare in my experience to come across a patient who does a regular cardiovascular fitness program or some kind of good regular exercise who develops these kinds of disorders."

A common risk factor is when people use standard desks, rather than desks designed to accommodate a computer, which puts their arms and elbows higher than they should be when using a keyboard.

But Phillips' solution looks to a person's overall fitness: "If I can trigger some interest in adopting a pro-active, self-help program that involves some sort of regular exercise that's pleasurable to them, that will usually have much more effect than going out and buying different equipment."

If I can trigger some interest in adopting a pro-active, self-help program that involves some sort of regular exercise that's pleasurable to them, that will usually have much more effect than going out and buying different equipment.

—Dr. Keith Phillips, B.C. Medical Association's computer committee

Phillips is convinced that there's rarely a single, simple solution to syndromes resulting from poor ergonomics. Anderson, Goyert and Phillips all agree that you not only have to look at the setup of the desk, chair, keyboard, mouse and monitor, you also have to consider what you're doing when you're not working.

All support taking time out to stretch periodically when working at a computer for long periods. "Usually I give patients a little chart of neck and upper torso exercises," says Phillips. "And if they can do that in their workplaces that's all the better."

In summing up his advice, Phillips essentially recommends that we all keep moving: "We are a very sedentary nation, to the point that suggesting activity is a revolutionary idea to some. But we can't underestimate lifestyle's impact on keeping people healthy and avoiding these kinds of problems. The human organism is meant to be used and we often forget that in our complex technological environment." □

Store Hours:
M-F 10am-8pm
Sat: 10am-5 pm

PHASE 1 SYSTEMS CORPORATION

Since 1988
12 Years Strong

410 Willingdon Avenue
Burnaby, BC V5C 5G4
<http://www.phase-1.com>

Phone: (604) 291-1558
Fax: (604) 298-5126
Email: info@phase-1.com



Ask About Our Five Star ★★★★★ Total Commitment Program



- 1 Your Satisfaction Is Guaranteed With Our EXCLUSIVE 30-day "NO PENALTY" Upgrade Program. Ask your Sales Rep for details.
- 2 Personalized Technical Support And Service.
- 3 Intelligent, Affordable Network and Internet Solutions.
- 4 Commitment To Top Quality Components And Configurations.
- 5 5-Year Canada-Wide Warranty (5-year labour / 3-year parts)

Horizon Systems include Five-Year Labour/Three-Year Parts Canada-Wide Warranty.

***Play Now...Pay Later! Interest Free 12, 24 or 36 Month Financing Now Available.**



Horizon Systems Spring Specials



Family Special

Intel Celeron 466MHz
DFI CA61 Via AGP MB
32MB SDRAM Memory
Fujitsu 6.4GB Hard Drive
A-Open 52x IDE CD-ROM
S3 Trio 8MB AGP Video
56k v.90 PCI Voice Modem
A-Open 16-bit 3D Sound
60-Watt Stereo Speakers
16" Mid-Tower 200w Case
Fujitsu 8725 PS/2 Keyboard
A-Open PS/2 Mouse w/Pad
MS Windows '98 SE CD
15" TTX 1557 .28 Monitor
\$1299 or \$54/month OAC*
64MB PC100 Memory: \$49
Intel Celeron 500MHz CPU: \$39

Home & Office

Intel Celeron 500MHz
DFI CA61 AGP ATX MB
64MB SDRAM Memory
Fujitsu 10.2GB Hard Drive
A-Open 52x IDE CD-ROM
ATI Xpert98 8MB AGP Video
56k v.90 PCI Voice Modem
Sound Blaster PCI-128
60-Watt Stereo Speakers
16" Mid-Tower 200w Case
Fujitsu 8725 PS/2 Keyboard
A-Open PS/2 Mouse w/Pad
MS Windows '98 SE CD
15" TTX 1557 .28 Monitor
\$1449 or \$60/month OAC*
128MB PC100 Memory: \$99
Intel Celeron 533MHz CPU: \$39

SOHO Special

Intel Pentium III 550MHz
ASUS P3BF1 i440BX AGP
64MB SDRAM Memory
Fujitsu 13.6GB Hard Drive
A-Open 52x IDE CD-ROM
ATI Xpert '98 8MB AGP
56k v.90 PCI Voice Modem
Sound Blaster Live! Value
60-Watt Stereo Speakers
19" Mid-Tower ATX Case
Fujitsu 8725 PS/2 Keyboard
A-Open PS/2 Mouse w/Pad
MS Windows '98 SE CD
15" TTX 1557 .28 Monitor
\$1799 or \$75/month OAC*
128MB PC100 Memory: \$99
Intel Pentium III 600MHz: \$69

Workstation

AMD Athlon K7 600MHz
Gigabyte 71X Mainboard
64MB SDRAM Memory
Fujitsu 17.0GB Hard Drive
A-Open 52x IDE CD-ROM
ATI 128 Xpert '99 8MB AGP
56k V.90 PCI Voice Modem
Sound Blaster Live! Value
60-Watt Stereo Speakers
19" Mid-Tower ATX Case
Fujitsu 8725 PS/2 Keyboard
A-Open PS/2 Mouse w/Pad
MS Windows '98 SE CD
15" TTX 1557 .28 Monitor
\$1849 or \$77/month OAC*
128MB PC100 Memory: \$99
AMD Athlon K7 700MHz: \$69

Gamer's Power

Intel Pentium III 650MHz
ASUS P3BF1 i440BX AGP
128MB SDRAM Memory
Fujitsu 20.4GB Hard Drive
Panasonic 8x DVD-ROM
Voodoo3 2000 16MB AGP
56k V.90 PCI Voice Modem
Sound Blaster Live! Value
Creative FPS1000 Speakers
19" Mid-Tower ATX Case
Fujitsu 8725 PS/2 Keyboard
Microsoft PS/2 IntelliMouse
MS Windows '98 SE CD
15" TTX 1557 .28 Monitor
\$2399 or \$99/month OAC*
128MB PC100 Memory: \$99
Pentium III 700MHz CPU: \$139

All Horizon Systems are ISO-9002/Y2K/GEMS/CSA Certified. Government and Corporate bids are welcome.

Add-Ons, Upgrades and Software Specials

MS Natural Elite Keyboard \$49
SubWoofer Speaker System \$69
Epson 670 Stylus Colour Printer \$149
600x1200 USB Colour Scanner \$119
MS Works Suite 2000 CD \$149
Headset w/Microphone \$15
WinFax PRO v8.0 CD \$99
Lotus SmartSuite Millennium \$99
WordPerfect Office Suite 2000 \$99

Monitor Upgrade!

17" TTX 1771 \$129
19" TTX 1995A \$329

At Phase 1 Systems, we're committed to helping you design the perfect system by listening to your needs and providing you with the perfect mix between power and price. This has always been our policy and always will be.

Our Millenium System Special!

Super Special!
Intel Celeron 466MHz
Multimedia System
With Monitor!



Now Only \$1099 or just \$46/month OAC

Completely configured with the following features:

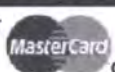
Intel Celeron 466MHz CPU w/Cooler
128k Cache Memory
64MB PC100 SDRAM Memory
Fujitsu 6.4GB Hard Drive
40x Max IDE CD-ROM Drive
On-board 64-bit AGP 2.0 Video
56k v.90 Fax/Data Modem
Integrated 16-bit 3D Sound
Ports: Parallel, Serial, Keyboard, USB, Monitor, Mouse & Game.
1.44MB 3.5" Floppy Disk Drive
Stereo Computer Speakers
15" Micro-ATX 150 Watt Case
Win98 107-key PS/2 Keyboard
Win98 2-button PS/2 Mouse
15" TTX1556 .28 1024x768 Monitor
Driver Disks/Manuals/User Guides
MS Windows 98 SE CD-ROM
Software: Norton Antivirus
Norton Ghost & Virtual Drive
One-Year Parts & Labour Warranty.
(Not exactly as illustrated/limited quantity)



Supporting Better Business
Through The Better Business
Bureau Reg. Number 12433



Member Since 1992



All Prices Reflect 2.5% Cash Discount



Prices are based on payment by cash, cheque or debit card. Add 2.5% for payment by Visa or Mastercard. Prices are subject to change without notice.

Financing is based on 24-month term and subject to credit approval. One-time administration will apply to financed purchases.

NOTEBOOK SPECIALS

SMARTBOOK 995T

12.1" TFT SVGA
Active Matrix Display
Intel Celeron 400MHz CPU
32MB SDRAM/128k Cache
4.2GB Hard Disk Drive
4MB SGRAM Video
24x CD-ROM Drive
56k v.90 Internal Modem
16-bit 3D Stereo Sound
TouchPad Device
Windows '98 SE CD-ROM
Li-Ion (~2 hr.) Battery
RCA Video Out Port/USB
\$2199 or \$92/month OAC*

SMARTBOOK 3100C

14.1" TFT SVGA
Active Matrix Display
Intel Celeron 466MHz
64MB SDRAM/128k Cache
6.2GB Hard Disk Drive
8MB ATI 2xAGP Video
6x DVD-ROM Drive
56k v.90 PCMCIA Modem
16-bit 3D Stereo Sound
TouchPad Device
Windows '98 SE CD-ROM
Lithium-Ion (~2 hr.) Battery
S-Video Out Port
2xUSB Ports
\$3199 or \$133/month OAC*

SMARTBOOK 3173

13.3" TFT SVGA
Active Matrix Display
Intel Celeron 500MHz
64MB SDRAM/128k Cache
6.4GB Hard Disk Drive
8MB ATI 2x AGP Video
6x CD-ROM Drive
56k v.90 Internal Modem
16-bit 3D Stereo Sound
TouchPad Device
Windows '98 SE CD-ROM
Li-Ion (~2 hr.) S-Battery
USB/S-Video Out
\$2799 or \$117/month OAC*

SMARTBOOK 8700C

15.1" TFT XGA
Active Matrix Display
Intel Celeron 466MHz
64MB SDRAM/512k Cache
6.2GB Hard Disk Drive
ATI 8MB 2xAGP Video
24x Teac CD-ROM Drive
56k v.90 PCMCIA Modem
16-bit 3D Stereo Sound
TouchPad Device
Windows '98 SE CD-ROM
Lithium-Ion (~2 hr.) Battery
S-Video Out Port
USB/Game Ports
\$3499 or \$146/month OAC*

SMARTBOOK 3100U

14.1" TFT SVGA
Active Matrix Display
Intel Mobile P3 500MHz
64MB SDRAM/256k Cache
6.2GB Hard Disk Drive
ATI 8MB 2xAGP Video
6x DVD-ROM Drive
56k v.90 PCMCIA Modem
16-bit 3D Stereo Sound
TouchPad Device
Windows '98 SE CD-ROM
Lithium-Ion (~2 hr.) Battery
S-Video Out, USB Port
Metallic Lime Colour
\$3599 or \$150/month OAC*



Free Carrying Case Included!
<http://www.mobiltech.net>

All Notebooks include 2-Type II PCMCIA (32bit) Slots. Call us for other upgrades and options.

Smartbooks include 3-year Labour/1-year Parts Warranty and Toll-Free technical support.

Call us for detailed information and custom configurations on all Smartbook Notebooks

NOTEBOOK SPECIALS

ROCK

rock@rockcomputer.com

FREE on-site Network Package Estimation available Please Call



NEC TOSHIBA

Supporting Better
Business through the
Better Business BureauROCK
COMPUTERAll prices & spec. are subject to change without notice. All logos and trademarks are their respective owner.
All Listed prices (reflect 2% cash discount), quantities and specifications are subject to change without notice.

ROCK SPECIAL

Adaptec 19160 Ultra160 SCSI Controller
\$248.00Fujitsu 6.4GB IDE-ATA66 5400rpm/9.5ms/512k Hard Drive
\$116.00ATI 32MB Fury Rage128 PRO AGPx4 Video Card
\$158.00ASUS 32MB V6800 DDR Deluex
GeForce256 AGP Video Card TV, V
\$349.0017" SVGA Color Monitor (.25mm)
\$268.0019" SVGA Color Monitor
\$399.00EPSON Deskjet 740 Color Printer
(After US\$50 mail in rebate)
\$146.00Afreey 10X Int. IDE DVD Drive
\$196.00Samsung 6x4x24 CDRW Int. IDE CD Write
\$196.00

Store Hours :

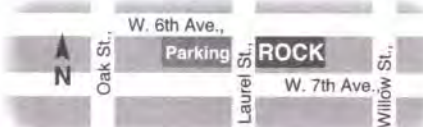
Mon - Fri 9:00 - 6:30

Sat. 9:30 - 6:00

896 West 6th Ave,
Vancouver, B. C.

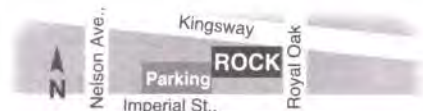
Fax:(604)879-8640

Tel:(604) 879-8642

#150 - 5172 Kingsway
Burnaby, B. C.

Fax:(604)419-8898

Tel:(604) 419-8828



Mother board

ABIT BE6II Pentium III Motherboard ATX	\$186.00	ASUS P3V-4X Pentium II & III PC133 Motherboard ATX	\$159.00
ABIT BF6 Pentium III Motherboard ATX	\$166.00	ASUS P5A Super7 PC100 Motherboard ATX	\$126.00
ABIT BP6 Dual Celeron Motherboard ATX	\$206.00	ASUS P5A-A Super7 PC100 Motherboard w/SB16 ATX	\$156.00
ABIT KA7 Athlon Motherboard ATX	\$236.00	ASUS P5A-B Socket 7 Motherboard ATX\$126.00	\$126.00
ABIT VA6 VIA Lots 1 Motherboard ATX	\$118.00	Elite P6STP-FL SIS630 FC-PGA/Socket 370 Motherboard ATX	\$126.00
ABIT VT6X4 Pentium III/Cel VIA Motherboard w/Audio ATX	\$148.00	GIGABYTE GA-6BXD PIII Motherboard ATX	\$228.00
Aopen AX64Pro PIII, PC133, 4XAGP Motherboard ATX	\$166.00	GIGABYTE GA-6VX-4X PIII Motherboard ATX	\$145.00
Aopen AX6B-Plus Motherboard	\$296.00	GIGABYTE GA-6VX7+ PPGA/FCPGA/EPGA Motherboard ATX	\$116.00
Aopen AX6BC Pro-II PIII, PC133 4X Motherboard ATX	\$229.00	GIGABYTE GA-6VX7-1394 S370 Motherboard ATX	\$198.00
ASUS CUBX COP/370 Motherboard ATX	\$198.00	GIGABYTE GA-6VX7-4X PPGA/FCPGA/EPGA Motherboard ATX	\$136.00
ASUS CUV-4X Socket 7 Motherboard ATX	\$166.00	GIGABYTE GA-6VXE+ PIII Slot1 Motherboard ATX	\$108.00
ASUS K7M AMD K7 Athlon Slot A Motherboard No/Audio ATX	\$209.00	GIGABYTE GA-7IXE AMD K7 SlotA Motherboard ATX	\$189.00
ASUS K7V AMD K7 Athlon Slot A Motherboard Yamaha Audio ATX	\$229.00	GIGABYTE GA-BX2000 PII & III Dual BIOS Motherboard ATX	\$159.00
ASUS P2B-D Dual Pentium-II Motherboard ATX	\$386.00	GIGABYTE GA-BX2000+ PII & III Dual BIOS Motherboard ATX	\$169.00
ASUS P3B-1394 440BX PC100 FSB 5P/2ISA/AGP	\$259.00	MicroStar MS-6195 K7 Motherboard ATX\$186.00	\$186.00
ASUS P3B-F Pentium-III Motherboard ATX	\$179.00		

Video Card

3Dfx Voodoo3 2000 16MB AGP Video Card	\$138.00	ATI 8MB SRAM Xpert98 Work PCI Video Card	\$86.00
3Dfx Voodoo3 3000 16MB AGP Video Card	\$169.00	ATI 8MB SRAM Xpert99 AGP Video Card	\$85.00
3Dfx Voodoo3 3500 16MB AGP Video Card w/TV Tuner	\$258.00	Creative 32MB Annihilator GeForce PRO (DDR)	\$379.00
ASUS 32MB V6600 DDR Deluex GeForce256 AGP Video Card TV	\$306.00	Creative 32MB Annihilator2 GeForce2 GTS AGPx4 Video Card	\$459.00
ASUS 32MB V6600 DDR GeForce256 AGP Video Card TV	\$298.00	Matrox 32MB Millennium G400 Dual Head Video Card	\$226.00
ASUS 32MB V6800 DDR Deluex GeForce256 AGP Video Card TV	\$349.00	Matrox 32MB Millennium G400 MAX Dual Head Video Card	\$279.00
ATI 16MB All-in-Wonder 128 AGP Video Card	\$226.00	Matrox 32MB Millennium G400 Single Head Video Card	\$179.00
ATI 32MB All-in-Wonder 128 AGP Video Card	\$279.00	Oxygen 32MB VY1 AGP Video Card \$296.00	\$296.00
ATI 32MB Fury Rage128 PRO 4xAGP Video Card w/o TV in/out	\$158.00	Pine SIS 3D RMB AGP Video Card\$48.00	\$48.00
ATI 32MB SRAM Xpert2000 AGP Video Card	\$116.00	S3 Savage4 32MB AGP Video Card\$96.00	\$96.00
ATI 64MB Fury Max AGPx4 Video Card	\$328.00	SNIPER2 32M NVIDIA RIVA TNT2 M64 4X/2X AGP\$108.00	\$108.00
ATI 8MB SRAM Xpert98 AGP Video Card	\$58.00		

Monitor

Acer 17" 77c SVGA Color Monitor	\$379.00	Optique 17" Q71 SVGA Color Monitor	\$668.00
Acer 17" G772 SVGA Color Monitor	\$319.00	Optique 17" V73 SVGA Color Monitor	\$446.00
Acer 19" 99SL SVGA Color Monitor	\$546.00	Optique 17" V75 SVGA Color Monitor	\$386.00
AOC 15" SVGA Digital Color Monitor	\$178.00	Optique 19" Q95 SVGA Color Monitor	\$486.00
AOC 17" SVGA Digital Color Monitor (.25mm)	\$268.00	Panasonic 21" S110 SVGA Color Monitor	\$1,078.00
AOC 17" SVGA Digital Color Monitor (.28mm)	\$259.00	Proview 19" SVGA Color Monitor	\$418.00
Hansel 17" 710D 1600x1280, 0.25 SVGA Color Monitor	\$356.00	SONY 15" E100 SVGA Color Monitor	\$299.00
Hansel 17" 710P 1600x1280, 0.28 SVGA Color Monitor	\$309.00	SONY 17" E200 SVGA Color Monitor	\$519.00
Hansel 19" 900P 0.28 SVGA Color Monitor	\$469.00	SONY 17" G200 SVGA Color Monitor	\$576.00
IMAGO 19" SVGA Digital Color Monitor	\$399.00	SONY 19" E400 SVGA Color Monitor	\$738.00
MAG 17" 788FD SVGA Color Monitor	\$449.00	SONY 19" G400 SVGA Color Monitor	\$836.00
MAG 17" 796FD SVGA Color Monitor	\$469.00	SONY 21" E500 SVGA Color Monitor	\$1,429.00
MAG 17" XJ796 SVGA Color Monitor	\$416.00	SONY 21" G500 SVGA Color Monitor	\$1,538.00
MAG 19" 810FD SVGA Color Monitor	\$739.00	Viewsonic 17" E771 SVGA Color Monitor	\$316.00
MAG 19" XJ810 SVGA Color Monitor	\$618.00	Viewsonic 17" E770 SVGA Color Monitor	\$386.00
MAG 21" XJ910 SVGA Color Monitor	\$1,148.00	Viewsonic 17" G775 SVGA Color Monitor	\$486.00
NEC 17" A570 SVGA Color Monitor	\$285.00	Viewsonic 17" GS773 SVGA Color Monitor	\$418.00
NEC 17" FE700 SVGA Color Monitor	\$396.00	Viewsonic 19" PF790 SVGA Color Monitor	\$659.00
NEC 17" FE750 SVGA Color Monitor	\$468.00	Viewsonic 21" P810 SVGA Color Monitor	\$1,119.00
NEC 19" FE950 SVGA Color Monitor	\$1,369.00	Viewsonic 21" P815 SVGA Color Monitor	\$1,246.00
NEC 22" FP1350 SVGA Color Monitor	\$298.00	Viewsonic 21" PF815 SVGA Color Monitor	\$1,269.00

CD ROM Drive

Acer 52X U-DMA IDE CD ROM Drive	\$68.00
Creative Labs 52x IDE CD ROM Drive	\$66.00
PINE 52X IDE CD-ROM DRIVE	\$59.00
Plextor 40X Int. Ultra SCSI CD ROM Drive	\$169.00
Toshiba 40x SCSI CD ROM Drive	\$128.00
Toshiba 48x IDE CD ROM Drive	\$89.00

Hard Drive (IDE)

Fujitsu 10.8GB IDE-ATA66 5400rpm/10ms/512k Hard Drive	\$129.00
Fujitsu 17.0GB IDE-ATA66 5400rpm/10ms/512k Hard Drive	\$186.00
Fujitsu 20.4GB IDE-ATA66 5400rpm/10ms/512k Hard Drive	\$196.00
Fujitsu 27.3GB IDE-ATA66 7200rpm/8.5ms/512k Hard Drive	\$329.00
Fujitsu 6.4GB IDE-ATA66 5400rpm/9.5ms/512k Hard Drive	\$116.00
Fujitsu 8.4GB IDE-ATA66 5400rpm/10ms/256k Hard Drive	\$155.00
Maxtor 10.0GB IDE-ATA66 7200RPM/9ms/2MB Hard Drive	\$186.00
Maxtor 15GB IDE-ATA66 7200RPM/9ms/2MB Hard Drive	\$199.00
Maxtor 20.4GB IDE-ATA66 5400RPM/9.5ms/512 Hard Drive	\$209.00
Maxtor 20.4GB IDE-ATA66 7200RPM/9ms/2MB Hard Drive	\$239.00
Maxtor 30GB IDE-ATA66 5400RPM/9ms/2MB Hard Drive	\$281.00
Maxtor 30GB IDE-ATA66 7200RPM/9ms/2MB Hard Drive	\$296.00
Maxtor 40.9GB IDE-ATA66 7200RPM/9ms/2MB Hard Drive	\$416.00

Hard Drive (SCSI)

Fujitsu 18.2 SCSI 68pin U2W 7200rpm/10ms/2MB Hard Drive	\$568.00
Fujitsu 9.1 SCSI 68pin U2W 7200rpm/10ms/256K Hard Drive	\$369.00
IBM 9.1GB U2W SCSI Hard Drive	\$498.00
IBM 9.1GB ULTRA2 SCSI Hard Drive	\$369.00
IBM 9.1GB UW SCSI Hard Drive(10,000)	\$698.00
Quantum 9.1GB Atlas 10K RPM/5ms/2MB UW SCSI Hard Drive	\$486.00
Quantum 9.1GB Atlas 7200RPM/7.5ms/1MB U2W SCSI Hard Drive	\$339.00
Quantum 9.1GB Atlas 7200rpm/8.5ms/2MB UW SCSI Hard Drive	\$345.00
Seagate 19GB Cheetah U2W SCSI Hard Drive	\$338.00
Seagate 50.0GB U2W SCSI Hard Drive	\$928.00
WD 18.0GB SCSI 68pin U2 SCA2 10Krpm/2MB Hard Drive	\$1,489.00
WD 18.0GB SCSI 68pin U2W 10Krpm/2MB Hard Drive	\$709.00
WD 18.3GB SCSI 68pin U2 SCA2 10Krpm/7.8ms/8MB Hard Drive	\$719.00
WD 18.3GB SCSI 68pin U2W 10Krpm/8ms/2MB Hard Drive	\$719.00
WD 9.1GB SCSI 68pin U2W 10Krpm/8MB Hard Drive	\$469.00
WD 9.1GB SCSI 68pin U2W 10Krpm/8MB Hard Drive	\$498.00
WD 9.1GB SCSI 68pin U2W 7200rpm/8ms/2MB Hard Drive	\$316.00

DVD

Afreey 10X Int. IDE DVD Drive	\$196.00
Creative Encore DVD Drive DXr3 8XKit	\$329.00
L.G Electronic 8X DVD Int. IDE Drive	\$159.00
Panasonic 8X IDE DVD Drive	\$189.00
Pioneer 10X DVD int. IDE Trayless Drive	\$209.00
Pioneer 16X DVD int. IDE Drive	\$236.00
Samsung 6X DVD Drive	\$149.00

Optical Drive

Iomega 100MB Ext. USB ZIP Drive	\$146.00
Iomega 100MB IDE Int. ZIP Drive	\$98.00
Iomega 100MB Parallel & SCSI Ext. ZIP+ Drive	\$238.00
Iomega 100MB Parallel Ext. ZIP Drive	\$138.00
Iomega 100MB SCSI Ext. ZIP Drive	\$196.00
Iomega 100MB SCSI Int. ZIP Drive	\$206.00
Iomega 250MB Ext. Parallel ZIP Drive	\$269.00
Iomega 250MB Ext. SCSI ZIP Drive	\$289.00
Iomega 250MB Ext. USB ZIP Drive	\$248.00
Iomega 250MB Int ZIP Drive	\$226.00
Iomega 2GB JAZZ Ext. SCSI Drive	\$459.00
Iomega 2GB JAZZ Int. SCSI Drive	\$446.00
Panasonic 100MB IDE Int. ZIP Drive	\$75.00
Panasonic 100MB Parallel Ext. ZIP Drive	\$166.00
Panasonic 250MB Parallel Ext. ZIP Drive	\$229.00

Sound Card

SoundBlaster 3D Blaster	\$326.00
Annihilator Sound Card	
SoundBlaster Ensoniq PCI	
Sound Card	\$36.00
SoundBlaster Live MP3+	
Sound Card Retail	\$129.00
SoundBlaster Live Platinum	
Sound Card	\$269.00
SoundBlaster Live	
Sound Card X-GAME	\$129.00
SoundBlaster Live Value	
Sound Card	\$69.00
SoundBlaster PCI 128	
Sound Card	\$46.00

Keyboard

Fujitsu 4725 P/S2 Keyboard	\$68.00
Fujitsu 8725 Win95 P/S2 Keyboard	\$19.00
Logitech Cordless i Touch P/S2	
Keyboard w/Mouse & Pad	\$119.00
Logitech Cordless Pro i Touch P/S2	
Keyboard w/Mouse/Rest	\$159.00
Logitech Deluxe P/S2 Keyboard	\$29.00
Logitech Deluxe P/S2	
Keyboard New Touch Egle	\$66.00
Logitech Internet P/S2 Keyboard	\$36.00
MS Internet P/S2 Keyboard	\$35.00
MS Internet Pro P/S2 Keyboard	\$56.00
MS Natural Elite Keyboard P/S2	\$36.00

Mouse

Logitech Cordless MouseMan Wheel	\$78.00
Logitech Cordless Wheel Mouse	\$68.00
Logitech MouseMan Wheel USB Combo	\$49.00
Logitech Trackman Marble Wheel USB	\$76.00
MS Optical Intimouse Explorer	
Wheel Mouse P/S2 USB (Silver)	\$88.00
MS Optical Intimouse Wheel P/S2 Mouse	\$68.00
MS Trekker Wheel Mouse P/S2	\$18.00
Wacom 4x5 ArtPad Serial for PC	\$116.00
Wacom Graphice Tablet 4"x5" USB	\$126.00
Wacom Intuos Drawing Tablet 6x8	\$449.00
Wacom Intuos Drawing Tablet 9x12	\$619.00

CD Write

ACER 4432 Retail IDE CD Writer	\$256.00
Creative Labs 8432 Int. IDE	
CD-RW Drive	\$319.00
HP 8250i (4x4x24) IDE Int.	
CD-ReWrite Drive	\$259.00
HP 9210i (8x4x32) SCSI Int.	
CD-ReWrite Drive	\$376.00
HP 9310i (10x4x32) IDE Int.	
CD-ReWrite Drive	\$389.00
Panasonic CW7585 (8x4x32)	
CD-ReWrite Drive	\$299.00
Plextor 8x4x32x int IDE CD Writer	\$326.00
Samsung 6x4x24 CDRW Int.	
IDE CD Write	\$196.00
SONY 10X4X32 CDRW int.	
EIDE Bare Drive(with software)	\$358.00
SONY 8X4X32 CDRW int.	
EIDE Bare Drive(with software)	\$276.00
Yamaha CRW8424 E-IDE Int	
8X/4X/24 CDR Write w/Kit	\$419.00
Yamaha CRW8424 E-IDE Int	
8X/4X/24 CDR Write	\$366.00
Yamaha CRW8424S Int. SCSI	
DR Write w/PC Kit	\$469.00

GRANITE SYSTEM

Intel Celeron 500MHz CPU & Fan
Elite FC-PGA/Socket 370 Motherboard ATX
32MB PC100 SDRAM
Panasonic 1.44MB 3 1/2" Floppy Drive
6.4GB IDE-ATA66 5400rpm Hard Drive
8MB 530 Chipset Integrated AGP Video
18" AT/ATX Tower Case/250W Power Supply
104 Win98 P/S2 Keyboard
Logitech 2 Button Mouse
56K V.90 Integrated Voice Fax/Modem
16Bit 3D Integrated Sound w/ WaveTable
52x IDE CD ROM Drive
120W Stereo Speakers
One Month Internet Free
Full warranty

15" SVGA Color Monitor

\$179 Special price only for this system

\$556

RUBY SYSTEM

Intel Pentium III 550MHz CPU & Fan
GIGABYTE GA-6VXE+ PIII Slot1 Motherboard ATX
64MB PC100 SDRAM
Panasonic 1.44MB 3 1/2" Floppy Drive
10GB IDE-ATA66 5400rpm Hard Drive
32MB AGP Video Card
18" AT/ATX Tower Case/250W Power Supply
104 Win98 P/S2 Keyboard
Logitech 2 Button Mouse P/S2
56K V.90 Int. True PCI Voice/Fax Modem Card
SoundBlaster Ensoniq PCI Sound Card
52X IDE CD-ROM DRIVE
Juster 3D-FX1 450 Watt w/Subwoofer Speakers
PCWorks 2000 Plus Software Bundle
One Month Internet Free
Full warranty

NEC 17" AS70 SVGA

Color Monitor **\$279** Special price only for this system

\$989

EMERALD SYSTEM

Intel Pentium III 600MHz CPU & Fan
ASUS P3V-4X Pentium-III Motherboard ATX
64MB PC133 SDRAM
Panasonic 1.44MB 3 1/2" Floppy Drive
Maxtor 20.4GB IDE-ATA66
7200rpm/9ms/2MB Hard Drive
ATI 32MB Fury Rage128 Pro 4xAGP Video Card
18" AT/ATX Tower Case/250W Power Supply
104 Win98 P/S2 Keyboard
Logitech 2 Button Mouse P/S2
56K V.90 Int. True PCI Voice/Fax Modem Card
SoundBlaster PCI 128 Sound Card
Creative Labs 52x IDE CD ROM Drive
Juster 3D-105 Subwoofer Speakers
PCWorks 2000 Plus Software Bundle
One Month Internet Free
Full warranty

17" Viewsonic Q71

SVGA Color Monitor **\$279** Special price only for this system

\$1,316

DIAMOND SYSTEM

AMD K7 Athlon 650MHz CPU & Fan
GIGABYTE GA-7IXE AMD K7 SlotA Motherboard ATX
128MB PC100 SDRAM
Panasonic 1.44MB 3 1/2" Floppy Drive
Maxtor 30GB IDE-ATA66 7200rpm/9ms/2MB Hard Drive
Matrox 32MB Millennium G400
SingHead Head Video Card
17" A500 ATX Tower Case/230W Power Supply
MS Internet P/S2 Keyboard
MS IntellMouse Wheel P/S2 Mouse
56K V.90 Int. True PCI Voice/Fax Modem Card
Altec Lansing ADA70 USB True Digital Speakers
10X Int. IDE DVD Drive
PC Works 2000 Plus Software Bundle
One Month Internet Free
Full Warranty

NEC 17" FE700

SVGA Color Monitor **\$385** Special price only for this system

\$1,698

ROCK SERVER #1

Intel Pentium III 550MHz CPU & Fan
Intel T440BX SCSI U2W Server Motherboard (Raid Capable)
128MB PC100 ECC SDRAM
Panasonic 1.44MB 3 1/2" Floppy Drive
Integrate single-channel ultra-SCSI Controller
Quantum 9.1GB Atlas 7200rpm/6.9ms/2MB U2W SCSI Hard Drive
Intel 2MB SGRAM PCI Integrate Video
Net Server Case with 300W Power Supply
(Dimension: 14.8w X 20.4d X 18.4h)
(Bay: 2x3 1/2" exposed: 4x3 1/2", Hidden: 8x5 1/4 exposed)
Toshiba 40x Int. SCSI CD ROM Drive
Intel EtherExpress Pro/100+ On-Board Networking Lan
One Month Internet Free
Full warranty

\$1,998

ROCK SERVER #2

Intel Pentium III 600MHz CPU & Fan
Intel L440GXC Dual SCSI U2W Server Motherboard
(Dual Processors & Raid Capable)
128MB 168pin PC100 ECC SDRAM
Panasonic 1.44MB 3 1/2" Floppy Drive
Adaptec AIC-7896 Dual U2W SCSI On-Board Controller
Quantum 18.2GB Atlas 10K/5ms/2MB U2W SCSI Hard Drive
Intel 2MB SGRAM PCI Integrate Video
Net Server Case
(Dimension: 14.8w X 20.4d X 18.4h)
(Bay: 2x3 1/2" exposed: 4x3 1/2", Hidden: 8x5 1/4 exposed)
300W Redundant ATX Power Supply
USR 56K V.90 Internal ISA Voice/Fax Modem
Toshiba 40x SCSI CD ROM Drive
Intel EtherExpress Pro/100+
On-Board Networking Lan
One Month Internet Free
Full warranty

\$3,345

Printer



Brother LaserJet HL-1030 Printer	\$376.00
Brother LaserJet HL-1240DX Printer	\$466.00
Brother LaserJet HL-1250DX Printer	\$549.00
Brother LaserJet HL-1270N Printer	\$739.00
Brother LaserJet HL-1660E Printer	\$1,198.00
Brother LaserJet HL-2060 Printer	\$1,536.00
Brother LX-900 LAMINATOR	\$236.00
Brother MFC-1970MC Multi-Function Center	\$369.00
Brother MFC-7050C Multi-Function Printer	\$466.00
Brother MFC-7150C Multi-Function Printer (After \$50 mail in rebate)	\$488.00
Brother MFC-8300 Multi-Function Center	\$659.00
Brother MFC-9100C Multi-Function Printer (After \$100 mail in rebate)	\$729.00
Canon DeskJet BJC-1000SE Color Printer (After \$20 mail in rebate)	\$76.00
Canon DeskJet BJC-2000SE Color Printer (After \$20 mail in rebate)	\$99.00
Canon DeskJet BJC-2100 Color Printer	\$126.00
Canon DeskJet BJC-3000 Color Printer (After \$30 mail in rebate)	\$196.00
Canon DeskJet BJC-5100 Color Printer	\$179.00
Canon DeskJet BJC-6100 Color Printer (After \$30 mail in rebate)	\$276.00
Canon MultiPASS Color BubbleJet Printer/Fax/Copier/Scanner	\$379.00
Canon MultiPASS LaserJet 16000 Printer/Fax/Copier/Scanner	\$666.00
Canon PC 920 Copier	\$669.00
Canon PC 980 Copier	\$1,159.00
EPSON DeskJet 440 Color Printer (After US\$30 mail in rebate)	\$108.00
EPSON DeskJet 670 Color Printer (After US\$50 mail in rebate)	\$129.00
EPSON DeskJet 740 Color Printer (After US\$50 mail in rebate)	\$146.00
EPSON DeskJet 760 Color Printer (After US\$30 mail in rebate)	\$186.00
HP Color LaserJet 4500 Printer	\$3,589.00
HP Color LaserJet 4500DN Printer	\$5,649.00
HP DeskJet 2000Cxi Color Printer	\$659.00
HP DeskJet 2500Cxi Color Printer	\$1,366.00
HP DeskJet 2500Cxi Color Printer	\$2,066.00
HP DeskJet 830C Color Printer	\$299.00

HP DeskJet 840C Color Printer	\$229.00
HP DeskJet 930C Color Printer	\$296.00
HP DeskJet 970Cxi Color Printer	\$569.00
HP LaserJet 1100xi Printer	\$559.00
HP LaserJet 2100M Printer	\$1,156.00
HP LaserJet 2100TN Printer	\$1,386.00
HP LaserJet 2100xi Printer	\$978.00
HP LaserJet 4050 Printer	\$1,599.00
HP LaserJet 4050N Printer	\$2,089.00
HP LaserJet 4050T Printer	\$1,869.00
HP LaserJet 4050TN Printer	\$2,286.00
HP LaserJet 5000 Printer	\$2,169.00
HP LaserJet 5000N Printer	\$3,498.00
HP LaserJet 5000N Printer	\$3,129.00
HP OfficeJet 3150 Color Printer/Fax/Copier/Scanner	\$869.00
Lexmark Color LaserJet Optra C710 Printer	\$3,416.00
Lexmark Color LaserJet Optra C710N Printer/Network	\$3,268.00
Lexmark DeskJet 3200 Color Printer	\$129.00
Lexmark DeskJet 5770 Color Printer	\$386.00
Lexmark DeskJet Z11 Color Printer	\$95.00
Lexmark DeskJet Z31 Color Printer	\$146.00
Lexmark DeskJet Z51 Color Printer	\$239.00
Lexmark LaserJet Optra E310 Printer	\$559.00
Samsung LaserJet LQ-5100A Printer (After \$50 mail in rebate)	\$298.00
Samsung LaserJet LQ-6050 Printer (After \$50 mail in rebate)	\$388.00
Samsung Multi LaserJet MJ-4500C Color Printer/Copier/Fax	\$328.00
Samsung Multi LaserJet SF-5100P Printer/Scan/Copier/Fax (After \$50 mail in rebate)	\$516.00
Samsung Multi LaserJet SF-5800P Printer/Scan/Copier/Fax (After \$50 mail in rebate)	\$508.00

Hub Repeats

3COM 12Port 10Base Hub	\$259.00
3COM 12Port Superstack II Hub	\$669.00
3COM 12Port TP1200 100Base Office Connector Hub	\$439.00
3COM 16Port Office Connect Dual Speed Hub	\$466.00
3COM 8Port 10/100 Dual Speed OfficeConnect Hub	\$286.00
3COM 16Port 10Base TX Office Connector Hub	\$98.00
3COM 8Port Office Connect Dual Speed Hub	\$308.00
Acer 8 Port Coax/10Base Hub	\$59.00
D-Link 12Port 10Base Hub	\$199.00
D-Link 16Port 10/100Base Dual Hub	\$438.00
D-Link 24Port 10Base Hub	\$319.00
D-Link 4Port 10/100Base Dual Hub	\$126.00
D-Link 4Port USB Hub	\$49.00
D-Link 7Port USB Hub	\$109.00
D-Link 9Port 10Base Hub (8xRJ45, 1xBNC)	\$96.00
D-Link 9Port 10Base Hub w/UpLink Port	\$106.00
HP 24Port AdvanceStack 10BT Switching Hub	\$1,138.00
HP 8Port Advance Stack 10Base Hub	\$159.00
Intel Express 10/100 16port Standalone Switch Hub	\$819.00
Intel Express 100 Base T 12Port Hub	\$1,169.00
Kingston 8 Port 10/100Base Stack Hub	\$319.00
Kingston 8 Port 100Base Stack Hub	\$168.00
Kingston 8 Port 10Base Stack Hub	\$99.00
Linksys Etherfast Cable/DSL Router	\$246.00
Linksys Fast Ethernet Network Starter Kit	\$198.00
OEM 8Port Networking Hub 10 base Stackable	\$48.00

Tape Drive

HP 10-20GB Int IDE Tap Backup Drive	\$368.00
HP 7GB (Comp to 14GB) Travan Int IDE Tap Backup Drive	\$328.00
HP Surestore DAT 40 Tape Drive \$1,569.00	\$8,898.00
IBM DLT 40-80GB Int SCSI Tap Backup	\$1,079.00
IBM DLT DDS-3 Tape Drive Back UP Unit	\$285.00
Imagem DLT 7GB Int Tap Drive	\$379.00
On Stream 30GB INT IDE Back UP Drive	

Optical Drive

Imagem 100MB Ext. USB ZIP Drive	\$169.00
Imagem 100MB IDE Int. ZIP Drive	\$98.00
Imagem 100MB Parallel Ext. ZIP Drive	\$138.00
Imagem 100MB SCSI Ext. ZIP Drive	\$196.00
Imagem 100MB SCSI Int. ZIP Drive	\$209.00
Imagem 250MB Ext. Parallel ZIP Drive	\$269.00
Imagem 250MB Ext. SCSI ZIP Drive	\$289.00
Imagem 250MB Ext. USB ZIP Drive	\$246.00
Imagem 250MB Intl ZIP Drive	\$226.00
Imagem 2GB JAZ Ext. SCSI Drive	\$459.00
Imagem 2GB JAZ Int. SCSI Drive	\$439.00
Imagem 7GB Zip Int. Drive	\$278.00
Panasonic 100MB IDE Int. ZIP Drive	\$75.00
Panasonic 100MB Parallel Ext. ZIP Drive	\$168.00
Panasonic 250MB Parallel Ext. ZIP Drive	\$229.00

Camcorder

3COM Home Connector USB Camera	\$189.00
Canon PowerShot A50 Digital Camera	\$658.00
Canon PowerShot CD300 Digital Camera	\$458.00
Canon PowerShot S10 Digital Camera	\$929.00
Creative WebCam Go Digital Camera	\$199.00
Creative WebCam III USB	\$79.00
EPSON PC650 Digital Camera	\$399.00
EPSON PC750Z Digital Camera	\$649.00
EPSON PC800 Digital Camera	\$769.00
EPSON PC850Z Digital Camera	\$1,058.00
Kodak DC215 Digital Camera	\$419.00
Kodak DC220 Digital Camera	\$946.00
Kodak DC290 Digital Camera	\$1,169.00
Logitech Quick Cam Express	\$59.00
Logitech Quick Cam Home (USB)	\$126.00
Logitech Quick Cam VC (Parallel)	\$99.00
Logitech Quick Cam VC (USB)	\$99.00
Nikon Coolpix 990 Digital Camera	\$51,278.00
Nikon Coolpix 990 Digital Camera/USB	\$1,465.00
Olympus D-460L Digital Camera	\$708.00
Olympus DL600 With 4MB	\$1,118.00

Scanner



Acer Prisa 620U USB scanner	\$129.00
Acer Prisa 620UT Scanner	\$169.00
Acer Prisa 640P Scanner	\$138.00
Acer Prisa 640U Scanner	\$146.00
Canon FB630P Color Scanner (After \$30 mail in rebate)	\$146.00
Canon FB630U Color Scanner (After \$30 mail in rebate)	\$146.00
Canon FS2710 Photo Film Color Scanner	\$798.00
Epson 1200S SCSI Perfection Scanner	\$396.00
Epson 1200U USB Perfection Scanner	\$329.00
Epson 1200U USB Photo Perfection Scanner	\$429.00
Epson 610 Perfection Scanner	\$206.00
Epson 636U Perfection Scanner	\$269.00
HP 3300C Color Scanner	\$209.00
HP 5300Cxi Business Series Color Scanner	\$396.00
HP 5300Cxi Professional Series Color Scanner	\$519.00
HP 6350Cxi Professional Series Color Scanner	\$638.00
Micromtek ScanMaker V6UPL FlatBed Scanner	\$176.00
Micromtek ScanMaker V6USL FlatBed Scanner	\$239.00
UMAX 2200 USB/SCSI FlatBed Scanner	\$276.00
UMAX 4000U FlatBed ScannerCall	
UMAX 4000U SE FlatBed ScannerCall	
UMAX Powerlook 3 FlatBed Scanner	
Visoneer 7600 FlatBed USB Scanner	\$2,759.00
	\$169.00

Controller Card

Adaptec 1505 SCSI Controller Card	\$66.00
Adaptec 19160 Ultra160 SCSI Controller Card	\$248.00
Adaptec 2906 SCSI Controller w/Kit Retail Card	\$78.00
Adaptec 29160 SCSI Controller Card	\$389.00
Adaptec 2940 U2W SCSI Controller Card	\$349.00
Adaptec AAA-131U2 Raid Controller Kit	\$559.00
Adaptec AHA-8945 UW SCSI/1394 Controller/kit	\$766.00
Parallel Port EPP/ECP ISA Card	\$18.00
Tekram DC315U SCSI Controller Card	\$58.00
Tekram DC390U2W SCSI PCI Bootable Controller Card	\$258.00
USB PCI Controller Card	\$36.00
Xnet Fire Wire IEEE-1394 Controller Card	\$98.00

Speakers

Altec Lansing ACS22 Speakers	\$46.00
Altec Lansing ACS33 Speakers	\$65.00
Altec Lansing ACS45.2 Speakers	\$89.00
Altec Lansing ACS48 Speakers	\$159.00
Altec Lansing ACS54w Speakers	\$96.00
Altec Lansing ADA305 Speakers	\$186.00
Altec Lansing ADA70USB Speakers	\$188.00
Cambridge PCWorks 4Point Surround Kit Speakers	\$99.00
Creative Labs PC Works w/Subwoofer Speakers	\$75.00
Creative Labs SoundWork w/Subwoofer Speakers	\$99.00
KOSS HDM 325 36W Speakers	\$105.00
KOSS SXM 235 5W w/Channel Speakers	\$48.00
Labtec C-324 Headset	\$26.00
Labtec C-370 Headset	\$86.00
Juster 3D-105 Subwoofer / 3D Sound Speakers	\$46.00
ZN-6000 Spkr:7W each/Sub:22W w/Subwoofer Speakers	\$56.00
Yamaha MS30 w/Sub/Woofers Speakers	\$79.00
Yamaha MSW10 w/Subwoofer Speakers	\$99.00
Yamaha YST M8 Speakers	\$48.00

Network Card

3COM 3C410 Home Connect PhoneLink Network Card	\$99.00
3COM 3C410-Kit Home Connect PhoneLink Network Kit	\$186.00
3COM 3C509B-TPO ISA RJ45 Networking Card	\$87.00
3COM 3C905B-TX-NM Ethernet 10/100 Network	\$66.00
3COM 3C905C-TXM 10/100Base PCI Networking Card w/wol/EPP	\$68.00
Acer Ethernet Combo ISA PnP 10Mbps Card	\$26.00
Acer Ethernet Combo PCI PnP 10Mbps Card	\$26.00
D-Link DFE-538TX 10/100Base PCI RJ45 Network Card	\$28.00
GVC Ethernet 10/100 PCI Networking Card	\$25.00
GVC Ethernet ISA Network Card	\$29.00
GVC Ethernet PCI Combo Network Card	\$28.00
Intel EtherXpress Pro 100 Plus PCI Network Card	\$79.00

PCMCIA Card

3COM Megahertz 10/100 LAN PC Adapter	\$179.00
D-Link 10/100Mbps 16-bit Fast ethernet PCMCIA Adapter	\$116.00
GVC 10/100 PCMCIA Ethernet Adapter	\$98.00
GVC 56K PCMCIA V90 Modem Adapter	\$109.00
IBM 10/100 EtherJet CardBus Adapter	\$199.00
Netgear FA410 10/100 RJ45 PCMCIA Ethernet Adapter	\$86.00

Fax/Modem

ACER (ACOpen) 56K V.90 Int. Voice/Fax Modem ISA	\$66.00
ACER (ACOpen) 56K V.90 Int. Voice/Fax Modem/PCI (True)	\$38.00
GVC 65K V.90 Int. PCI Voice/Fax/Modem Card	\$38.00
USR 56K V.90 External Sport Voice Fax/Modem	\$188.00
USR 56K V.90 External USB Pro Voice Fax/Modem	\$188.00
USR 56K V.90 Internal Voice/Fax Modem (OEM) ISA	\$106.00
USR 56K V.90 Internal Voice/Fax Modem (OEM) PCI (win)	\$56.00
USR 56K V.90 Internal Voice/Fax Modem Card	\$189.00
USR 56K V.90 Internal Voice/Fax Modem Real PCI Card	\$96.00

NoteBook

3Com PALM Vx Connected Organizer	\$519.00
Acer 507T C466/64MB/4.8GB/24x56K 12.1" TFT Notebook	\$1,859.00
Acer 514TXV C466/64MB/6GB/6xDVD/56K 14.1" TFT Notebook	\$2,876.00
Acer 730TXV P3-450/64MB/6GB/6xDVD/56K/14.1" TFT Notebook	\$3,396.00
Acer 732TXV P3-500/64MB/6GB/6xDVD/56K/14.1" TFT Notebook	\$3,599.00
Acer 734TL P3-600/64MB/12GB/24x56K/14.1" TFT Notebook	\$4,068.00
Acer 736TL P3-650/128MB/18GB/24x56K/14.1" TFT Notebook	\$4,359.00
ASUS 7200 C366/32MB/6GB/24x56K/12.1" TFT Notebook	\$2,288.00
ASUS 7300 P2-366/32MB/4.1GB/24x56K/13.3" TFT Notebook	\$2,648.00
ASUS 7400 P3-450/64MB/6GB/6xDVD/56K/14.1" TFT Notebook	\$3,189.00
ASUS 8450 P3-500/64MB/6GB/6xDVD/56K/14.1" TFT Notebook	\$3,439.00
Fujitsu B2130 C400/64MB/4GB/24x56K/10.4" TFT Notebook	\$2,638.00
Fujitsu E5140 CE1-433 64K 4GB/24x56K/13.3" TFT Notebook	\$2,499.00
Fujitsu E6520 P3-450/64MB/6GB/24x56K/14.1" TFT Notebook	\$3,256.00
Fujitsu E6530 P2-500/128MB/10GB/6xDVD/56K/14.1" TFT Notebook	\$4,599.00
Fujitsu E6550 P3-600/128MB/10GB/6xDVD/56K/14.1" TFT Notebook	\$4,798.00
HP OmniBook 900 Notebook	\$3,185.00
HP OmniBook P3-500/128/12GB/24x56K/Win98/14.1" TFT Notebook	\$4,298.00
IBM 390 P2-400/64MB/6GB/24x56K/WinNT/14.1" TFT Notebook	\$3,558.00
IBM 390 P3-450/64MB/12GB/24x56K/Win98/14.1" TFT Notebook	\$3,968.00
IBM 390 P3-500/64MB/12GB/24x56K/Win98/14.1" TFT Notebook	\$4,349.00
IBM 570 P3-450/64MB/12GB/24x56K/Win98/13.3" TFT Notebook	\$4,546.00
IBM 600E P2-400/64MB/10GB/24x56K/Win98/13.3" HPA Notebook	\$3,129.00
IBM 11422 C6500/32MB/12GB/DVD/65K/Win98/14.1" TFT Notebook	\$1,838.00
IBM 11482 C500/64MB/12GB/DVD/65K/Win98/14.1" TFT Notebook	\$3,929.00
IBM 11492 C500/64MB/12GB/DVD/65K/Win98/14.1" TFT Notebook	\$3,279.00
IBM 11542 C500/64MB/12GB/24x56K/Win98/12.1" TFT Notebook	\$2,699.00
Panasonic CF47 P2-366/64MB/6GB/24x56K/13.3" TFT Notebook	\$4,399.00
Panasonic CF71 P2-366/64MB/10GB/24x13.3" TFT Notebook	\$5,989.00
Toshiba Satellite 4260DVD/PIII450/64MB/12GB/DVD/14.1" TFT	\$3,886.00
Toshiba Satellite 8100DVD Notebook	\$6,298.00

Hands On

Lab Test • Hardware Evaluations • Software & CD-ROM Reviews

Photo album software, take three

With the proliferation of images used in Web sites and generated by digital cameras, one would think that a clear winner would emerge in the digital photo album market by now. In our third look at this software category, we find packages that come very close to fulfilling our wish list.

By Jacques Surveyer

Perhaps users are just as frustrated as this reviewer was the first time we evaluated photo album software. At that time, all of the products matched some of our needs but each was missing a key feature, such as the ability to process more than 30 images per second; support for other media files such as sound, animation, and video; filters to search for files using keywords and/or default specs; or the ability to drag and drop files from the album for use in other programs.

We last looked at this software category in February (see "Cataloguing your digital images"). This time around we will see four unique approaches to solving these problems.

Jasc Media Center Plus 3.0

From: Jasc Software Inc.
7905 Fuller Rd., Eden Prairie, MN 55344-2137
<http://www.jasc.com>
Street price: \$45
Pros: Meets all our requirements and adds the ability to create many albums spanning diverse directories of images.
Cons: Minor convenience features.
Out of the box: Good quality manuals typical of Jasc products, plus robust GUI, ease of use and ability to customize.
Overall rating: 4.4 out of 5

Media Center has a good pedigree. Jasc's Paint Shop Pro has had a photo album routine built



into it for several versions. Like Media Center, the photo album program built into Paint Shop Pro handles most popular image types (over 30) and is fairly fast. However, Media Center is even faster, processing more than 400 images per minute. Also, Media Center handles many more media types—animation, video, audio and other multimedia files as well as image files.

Media Center allows the user to add comments and keyword fields to each file contained in the album. Keywords can be used to later look up and find all of the files with specific keyword(s). Finally, Media Center allows users to add comments to any file.

Creating a new album is very easy. Media

Center prompts for an album name and asks how you want to populate it. There are four options: by scanning a specified directory (and all sub-directories if requested) for all media files; by browsing and selecting files; by copying selected files from an existing album; or by reading directly from a scanner or digital camera. In short, the process is easy and, as noted, very quick. Albums can be merged, printed in thumbnail format, and made into slideshows. The slideshows can be saved in HTML format for convenient Internet browsing.

Finally, right-clicking the mouse on any album presents the user with the following set of options: Media File Info, Print, Play/View, Comments, Keywords, Edit with, Cut, Copy, Convert (from one media format to another), Delete from album (but retain original file), Rename, and Rotate.

On the downside, Media Center lacks some convenience features like the ability to automatically load file properties such as the type or extension of the file or its size in kilobytes. Also there is no scripting language to batch up operations on albums.

PhotoRecall Deluxe 3.0

From: G&A Imaging Software Inc.
Tel: 819-772-7640. <http://www.photorecall.com>
Street price: \$50
Pros: Does a great job of creating photo albums and shows

Continued on page 42

Monsoon blows a 950 MHz storm



At 950 MHz, the Voodoo Monsoon isn't quite the 1 GHz machine that we've been holding our breaths for, but it's pretty close and, as you'd expect, it delivers blistering performance. The machine was put together by Calgary-based Voodoo Computers Ltd.

for a performance appraisal by TCP's Test Lab.

Voodoo Monsoon

From: Voodoo Computers
Tel: 403-264-4530. <http://www.voodoo.ca>
Price: \$3,799 (without monitor)

The 950 MHz processor is one of the new AMD Athlon chips, and is paired up with the Apollo VX133 chipset with the front-side bus running at 200 MHz. Our test machine came with 256 MB of PC133 SDRAM. The system ships with a spacious 40.9 GB Maxtor DiamondMax hard drive, which spins up to 7,200 rpm and makes use of the UDMA66 interface for faster data transfer.

On the multimedia side, the machine is packed full of goodies. The graphics card is a 32 MB Guillemot 3D Prophet, which uses the GeForce256 processor and double-speed DDR memory. Sound is courtesy of Creative's Sound Blaster Live! Value edition, coupled with a set of Cambridge Soundworks FPS2000 Digital four-point surround speakers. The system we tested came with a 10x Pioneer DVD, but a 16x version should be dropped into shipping machines as soon as it becomes available.

For communication, the Monsoon comes with a 56Kbps Supramax v.90 modem from Diamond. For basic input, the mouse and keyboard are anything but

Continued on page 48

Vopt99 a fast disk defragmenter

By Chris Metten

Windows 95 and 98 come with the DOS program Defrag.exe, which is a subset of the Speed Disk program in Norton Utilities. When I use Windows' Defrag, I click the Details button to see a graphical representation of what is happening. Sometimes Defrag works quickly, moving multiple clusters of data at once. Other times it laboriously moves clusters individually, even if I've defragmented very recently! When it does this, defragmenting a partition of only a couple of gigabytes becomes painfully slow.

Vopt99 for Windows (95/98) 4.1

Publisher: Golden Bow Systems
Tel: 800-284-3269. <http://www.goldenbow.com>
Price: US\$40 (single user), US\$150 (five users), US\$240 (10 users), US\$500 (25 users)

Other versions: VoptNT (for Windows NT, defragments NTFS and FAT partitions), Vopt for DOS and Windows 5.11 (for DOS, Windows 3.1/3.11)

As CPUs, RAM, and motherboards become faster, and hard disks bigger, fragmentation of files becomes a greater bottleneck to computer performance. However, many computer users seldom defragment their hard disks. This is probably because they don't understand the benefits of defragmentation, and because—even if they do—it takes so long.

I first heard about Vopt99 when reading Scott Mueller's *Upgrading and Repairing PCs, Eighth Edition*. In it, Mueller says "My favourite for an extremely safe, easy and fast unfragmenting program is the Vopt utility by Golden Bow. In my opinion, no other utility even comes close to this amazing \$50 package."

With that kind of recommendation, I had to

try it. Here are my observations on using Vopt99 with Windows 98.

Installation

Vopt99 is not sold in stores, which is probably why I had never heard of it. You can download a trial version of the program—a 1,917 KB self-extracting, compressed file, that is easy to install—from the Golden Bow Web site and use it for 30 days. If you decide to buy it, you purchase a key (registration number) from Golden Bow, which enables you to use the program beyond the trial period.

User interface

Vopt uses the Windows graphical user interface (GUI) and pull-down menus. There is no written documentation for the program, but good online help is provided. It has a Contents and Index and allows you

Continued on page 48

TCP Test Lab views
the latest flat-panel
monitors



page
62



Innovative Technology Brings You Award Winning Products



995E

19" .26mm 1600 x 1200 @80Hz, 96KHz, TCO 99
The monitor everyone is talking about



795FT

Perfectly Flat for reduced eye strain.

Model	Size (Viewable)	Stripe Pitch	Max Res	Horizontal (KHz)
775FT	17" (16")	.24 mm	1280 x 1024 60 Hz	70 kHz
795FT	17" (16")	.24 mm	1600 x 1200 75 Hz	96 kHz
915FT	19" (18")	.24 mm	1600 x 1200 85 Hz	107 kHz



LPC-U30 Digital PC Camera
30fps QCIF, USB port, bundled software
Capture clear crisp images from your PC.



CD Rewriteable Drive
(8x4x32) Reliable storage from a world leader



Digitally yours

www.lg.ca

inmac
www.microwarehouse.ca
1-800-635-3748

Visions
THE BEST NAME IN ELECTRONICS
1-888-208-2888

For more information call 1-800-461-2802

One of the Top 100
System Builder in North America
(System Builder Summit '99, Intel & MS)

One listed in the book
"International Who's Who"
(Professional '97)



Since 1989

www.atc.ca

#45 East Broadway
Vancouver, BC
Canada, V5T 1V4

Tel: (604) 875-8859
Fax: (604) 875-8611
Tech: (604) 879-6800
E-mail: Sales@atic.ca

Business Hours: Mon.- Sat.: 9:30am - 6:00pm (Sun. & Holiday Closed)

Intel 2U ISP2150, 4U SC450NX Server in stock !!!!

Intel PIII-600mhz System \$1380

- Abit VA6, PC133, ATX
- 128MB SDRAM DIMM PC100
- 20GB Ultra/66 UIDE
- 1.44MB Floppy
- 50x EIDE CD-ROM
- Creative Labs SB PCI 128
- 4 Speakers w/ Subwoofer
- 56k int. voice fax modem v.90
- ATI Xpert 2000 AGP 32MB
- 18" ATX Case with 250W
- Fujitsu 8725 PS2 keyboard
- Logitech mouse w/ pad
- Windows 98 ver.2 w/cd

\$1400
for Intel PIII-650

\$1480
for Intel PIII-700

\$1180
for Celeron-500

Black series

Optional: (w/system only)

- MS Suit 2000 Word kit\$140
- Canon BJC 2100C Printer\$140
- 15" / 17" SVGA 1280 .27\$180/260
- NEC 17" AS70 / FE700 .25 Flat\$280/380
- Viewsonic E770 17" 25 flat\$390
- Viewsonic E790 / FP790\$520/680
- Samsung 900NF / NEC FP950\$650/860
- SONY G400 / F400\$860/1450

- Black ATX Tower case with 250W power.....\$80
- Black 14.4 FD Teac.....\$25
- Black 40x wide CD-ROM.....\$75
- Black 40x scsi Toshiba CD-ROM.....\$140
- Black Toshiba DVD8x Drive.....\$250
- Black Win98 PS2 keyboard.....\$20
- Black Ps2 mouse.....\$15
- Black MS mouse Ps2.....\$20

K6-II 3D 500mhz \$600

- MVP3, 100mhz bus, Super 7 socket
- 32MB 8ns SDRAM-DIMM (64M ...+\$50)
- 6.4MB Ultra IDE (10.4GB+\$40)
- 4MB SVGA built-in
- 1.44 Fujitsu floppy
- 3D sound card built-in and speakers
- 50x CD-ROM int. Eide
- 15" Hilevel tower case w/230 power
- 104 win95 KB and Mouse, Mouse Pad
- 56k voice fax modem v.90 int.

K6-II 3D 400/450.....\$560/580
K6-II 3D 500/550\$600/680

Optional:

- Windows 98 full ver with cd.....+\$130
- 15" / 17" SVGA 1280x1024.....+\$180/260
- Epson 660 / BJC2000.....+\$190/125
- Colorado 600P scanner. (After rebate).....\$70
- AOC 1600x1280 17" .25.....+\$290

BLUE TOWER / BLUE KB...\$80/20

Celeron: iComer !!

- AGP Celeron PPGA motherboard
- 64MB 168pin PC100 SDRAM
- UltraIDE 15.0GB HD
- 8MB AGP video built-in
- 1.44 Fujitsu floppy
- Slim ATX tower case power
- PS2 104 KB and PS2 Mouse
- 50x cd-rom eide, 3D Sound included
- 56k voice fax modem v.90
- 10/100BT LAN, 100W speaker

Intel Celeron 466/128k.....\$600
Intel Celeron 500/128k.....\$620
Intel Celeron 533/128k.....\$680
Intel PIII-550/256k.....\$790
Intel PIII-600/256k.....\$830

Optional:

- w/128MB SDRAM ...+\$75, w/20.2G.....+\$50
- RockLive 2000 4 spkrs + subwoofer.....+\$50
- MS Windows 98 ver.2 w/ cd+\$130
- MS Office 2000 pro.....+\$450
- Apollo P2200 (HP) printer \$75 (after rebate)

Windows2000 Pro w/system ...\$195

P-III Package

- Abit VT6X4 / Asus P3V4X, KX-133, AGP4x
- 128MB SDRAM PC133mhz
- 20G ATA66, 7200 Ultra IDE
- ATI All-in-Wonder 16M AGP
- TV-in, TV-out and TV-Tuner
- 50x CD-ROM, 1.44FD
- Sound 97 on board
- USR 56k voice fax modem
- Landmark 200 ATX w/250W
- 104 Fujitsu 8725 keyboard
- Microsoft Intelli mouse w/wheel and pad
- Windows 98 full ver.2 with cd
- Intel PIII-550/600.....\$1450/1470
- Intel PIII-650/667.....\$1490/1520
- Intel PIII-700/733.....\$1590/1620
- Intel PIII-750/800.....\$1700/1800
- Intel PIII-850/866.....\$1980/2090

Upgrade to:

- ATI All-in-Wonder AGP 32M ...+\$160
- Asus V6800 Geforce Pro DDR 32M AGP ...+\$195
- Sound Blaster Live! MP3 / Platinum ...+\$135/+\$260
- ViewSonic EF70 / PF775 / PF790\$390/460/680
- NEC FE700 / Fe750 / FP950/FP1350.....\$390/490/ 870/1350

Over 2000 hit per day now

@
WWW.ATIC.CA

HP Servers/ Desktops (HP Advance Partnership)

On www.atc.ca

IBM Servers/Desktop/Laptop

Get one free color scanner from us if you Buy one IBM
Server, Desktop or Laptop from us by June 20 2000.

- (IBM 9.1 U2W scsi ...\$270, IBM 18G U2W\$450)
- (IBM 20G/7200 UIDE...\$250 IBM 40/61G 7200...\$425/650)
- i1400/2621460 C433/14.1TFT/64M/5G/DVD/FD/Li-Ion/56K/W98 \$2750
- i1400/2621482 C433/12.1TFT/64M/5G/24x/FD/Li-Ion/56K/W98 \$2430
- i1400/2621460 C500/14.1TFT/64M/12G/DVD/FD/Li-Ion/56K/W98 \$3150
- 600X/26455EU P3-500/13.3TFT/64M/12G/FD/24x/Li-Ion/56K/W98 \$4890
- 600X/26455FU P3-650/13.3TFT/64M/12G/FD/DVD/Li-Ion/56K/W98 \$5400
- Sever3000/847670U P3-600/64M/40x/UW/FD/Lan10-100 \$2295
- Sever3500/865511Y P3-600/64M/40x/UW/FD/Lan10-100 \$2860
- Sever4000R/865351Y P3-650/256M/9.1UW/FD/24x/Lan10-100 \$6280
- Seve5000 P3-700/128M/18U2W/40x/FD/Lan10-100 \$4150
- Sever5000R P3-700/128M/18U2W/40x/FD/Lan10-100/Rack \$4700

More on www.atc.ca

Intel Servers (Intel whole line products)

- SC450NX: Quad PIII-Xeon550 CPUs / 10-100TX / 32x / Dual U2W raid
- 1024 MB ECC RAM/ AGP Video / 2 x 36G U2W hot swappable\$15,800
- ISP2150: Dual PIII-600 CPUs / 10-100TX / 32x / Dual U2W raid
- 1024 MB RAM/ AGP Video / 2 x 36G U2W hot swappable\$6890

NetMaster™ More on www.atc.ca

- Intel i840, Supermicro P3DM3, Dual PPIII,
- U2/U160scsi built on board
- Intel 10/100BT LAN, Server
- AGP 32MB Video
- 512MB ECC-SDRAM
- 1.44FD, 50x CD-ROM
- Dual Redundant 2-in-1 300W x 2 ATX power
- 2x 18GB U2W SCSI HD
- Fujitsu KB and Microsoft mouse

Intel PIII 650/700/750/800/850...\$3330/3450/3550/3660/3850
Dual PIII 650/700/750/800/850...\$3750/3990/4190/4400/4780

All listed prices (reflect 3% cash discount),
quantities and specifications are subject to
change without notice.

MOTHERBOARDS

- intel ASUS G
- Abit BF6 (Slot-1) / BE6-II 440BX ATX PII\$150/175
- Abit VA6 / BP6 ATX AGP PII/ PIII\$120/195
- Abit VT64X / KA7 / KA7-100.....\$160/220/260
- Intel OR840 w/ 2x 128M RIMM/600hz\$1520
- SuperMicro P6DBU 440BX Dual PII/PIII U2W scsi.....\$550
- SuperMicro P6DBE 440BX Dual PII/PIII UIDE.....\$280
- Supermicro P6DUG / S2DUG 440GS-Xeon.....\$600/650
- Supermicro P3DME / P3DMS i840 Dual / U2W.....\$510/830
- Asus P3B-F 440BX AGP PII/ PIII 233-600.....\$195
- Asus P3V133/ P3V4X / K7V\$130/165/240
- Asus P5A ATX / P5A-B AT 100mhz AGP.....\$140/130
- ATX Celeron M/B w/8M AGP, audio, modem.....\$115
- Socket 7 ATX with AGP 4M, Audio ATX.....\$115
- Asus K7M / MSI 6195 for AMD Athlon (k7).....\$225/200
- Gigabyte Motherboard for AMD Athlon (k7).....\$190
- Intel 440BX Quanta ATX, AGP\$125
- BOOK-PC2000: case/52x/Video/Audio/56.....\$280
- SC450NX, Tower, Quad-CPU sockets, Video, LAN.....\$5450
- Intel ISP2150 2U Dual CPU socket Rack.....\$2290

HARD DRIVES

- Quantum Seagate
- Fujitsu 6.4/8/15/20G...\$125/135/160/185
- Quantum LM 15/20/30G.....\$210/250/350
- WD ATA66 8.4/15/20G.....\$140/160/185
- WD15/20/30/40G 7200...\$190/230/295/420
- Maxtor 8/15/20/30/40.....\$140/160/185/235/330
- Maxtor 7200rpm 15/20/30/40G...\$185/230/285/420
- IBM 7200 20/30/40/61G.....\$240/310/425/650
- Seagate 7200 20/30/40G.....\$230/280/420
- Quantum Atlas-4 U2W 9.0/18/36G...280/480/1020
- IBM U2W 9LP DDRS 9G/18G\$285/460
- IBM U2W ZX 9G/18G/36K(1024rpm).....\$580/880/1250
- Seagate Shetta 9/18.2/50G U2W\$350/560/1200
- Seagate 18G/36G 10K rpm 80pin\$860/1250
- Removable HD kit EIDE/SCSI/U2Wscsi.....\$20/25/80
- U2W SCSI 4Bay/8Bay case w/power.....\$150/250
- Hot swappable IBM 18/ Seagate 36G 1".....\$850/1250
- Adaptec 2940U/ UW /U2W.....\$215/270/300
- Adaptec KIT:2940 /2940UW/2940U2W.\$230/280/330
- Toshiba Notebook HD 6.0G/12G.....\$215/300

NetBook ACCESSORIES

- 32M/64M/128MSDRAM...\$70/100/180
- NiMH battery\$130
- Li-Ion battery\$240
- Car auto adapter.....\$100
- AC Smart adapter (110/220V)\$110
- Toshiba 2.5" 6.0 / 12G HD.....\$215/300
- Portable Printer BJC-80/50.....\$340/450
- Carrying case\$40

- PCMCIA 10BT/Coxal comb...\$60
- PCMCIA100BT card\$100
- PCMCIA56k Fax modem\$80
- PCMCIAserial port/dual...\$250/310
- Flash RAM card player.....\$100
- D-Link 56k/ 10-100.....\$220
- 3COM 10/100 PCMCIA.....\$210
- 3COM 56K PCMCIA fax modem.....\$320
- 3COM 56K w/ 10/100 LAN.....\$440
- Xircom 100BT + 56K PCMCIA\$450
- Intel 10/100BT + 56K PCMCIA\$480

CPU

- intel AMD
- Intel P5 MMX-233.....\$90
- Intel Celeron 466/500/533.....\$140/155/190
- Intel Celeron-II 533/566.....\$210/240
- Intel Pentium III 533 / 550 / 600.....\$330/340/380
- Intel P-III 650/667 / 700/733.....\$400/420/510/525
- Intel P-III 750 / 800/850/866.....\$600/700/870/980
- Intel Xeon P-III 550/512k 550/1M.....\$1430/3880
- Intel Xeon P-III 600/667/700 2-way.\$700/750/800
- AMD K6-II 400 /450/475/500.....\$75/85/95/100
- AMD K7 550/600/650/700.....\$250/260/270/300
- AMD K7 750/800/850/900.....\$385/495/665/920
- CPU fan Pentium / PII / Pro\$7/10/15
- S370 adapter v.1.0 / v.1.1(dual)\$15/25
- Dual PII fan / Dual K7 fan\$20

RAM

- 72pin 16/32/64M/128M EDO.....\$40/85/190/550
- EDO-ECC 128/256M 168pin w/Buffer\$450/780
- Parity 72pin 32 / 64/128M.....\$90/170/490
- SDRAM 32M / 64M PC100.....\$45/75
- SDRAM 128M / 256M PC100.....\$150/300
- SDRAM 64M/ 128M/ 256M PC133.....\$85/155/310
- ECC-SDRAM PC100 64/128/256.....\$90/170/330
- ECC-SDRAM PC133 64/128/256\$95/175/340
- SOJ Video RAM 512k/1M.....\$10/520
- SO-DIMM 72p 8/16/32M.....\$60/80/150
- SO-DIMM 144p 32/64/128M SDRAM.....\$70/100/180
- SO-DIMM 144p 32/64/128 EDO.....\$90/160/350
- Toshiba /IBM/ Dell notebook RAM ... \$ATIC.CA

MODEMS

- 56k Voice Fax modem int. V.90 ISA/ PCI.....\$25
- USR 56k.v90 fax modem int PCI\$55
- USR Sporter v.90 PCI (2976-81, Hardware)\$95
- Supra 56k v.90 Voice PCI\$45
- 3COM-USR 56k v.90 ext w/ voice\$200
- PCMCIA 56K FaxModem.....\$80
- Cisco 250-CH + IP Drivers\$2370
- PCMCIA 56k v.90 with 100BT NIC\$215
- PCMCIA 10BT combo / 10-100BT\$70/100
- Xircom 56k RealPort modem ...\$250

VIDEO CARDS

- makon DIAMOND ATI
- S3 Virge 3D 4M AGP.....\$30
- ATI Xpert98 8M AGP.....\$60
- ATI Xpert2000 32M AGP OEM/Retail\$115/120
- ATI Fury 32M AGP 2x w/TV-out.....\$165
- ATI Fury Pro 32M AGP4x w/TTO /retail.....\$185/210
- ATI Fury MAXX 64M AGP w/TV-out.....\$340
- ATI all-in-wonder 16M / 32M AGP\$180/300
- Matrox G400 32m /Dual ports\$190/230
- Matrox G400 32M MAX AGP4x\$340
- Diamond S3-Savage4 32M AGP\$110
- Diamond Viper-II 32M AGP4x.....\$190
- 3DFX Voodoo3 -2000 16M AGP /PCI\$145/160
- 3DFX Voodoo3 -3000 16M AGP\$190
- 3DFX Voodoo3-3500 16M AGP w/ Twin & Tvout.....\$290
- Asus V6600 /6600Delux GeForce.....\$290/320
- Asus V6800/6800Delux GeForce Pro DDR\$300/350
- Asus V7700 Geforce-2 GTS 32M AGP4x.....\$485
- Elsa Gladiac Geforce-2 GTS 32M AGP 4x\$490
- Miro 3D +.....\$1120

MONITORS

- SVGA15"/17" .27 /17" .25.....\$190/260/285
- CTX 17" Flat .25 1600 Trinitron\$400
- CTX 19" Flat .25 1600 Trinitron\$680
- MAG XJ500T .25 15" / 786FD Flat .25 17".....\$250/400
- NEC AS70 17" /AS90 19".....\$280/480
- NEC FE700 .25 Flat / FE750 1600 Flat.....\$390/490
- NEC FE950 /FP950 17" Flat.....\$750/870
- NEC FE1250 /FP1350\$1120/1350
- Panasonic SM70/SL95.....\$320/630
- Panasonic i110-i 21" 1800x1600 .25.....\$1160
- Sony E200/220GS. (17").....\$490/590
- Sony G400 Flat .25 19".....\$900
- Sony F400 Flat 17" / F500 Flat 21".....\$1450/2680
- Viewsonic Q71/ E771/ E773 .25\$300/300/370
- Viewsonic Flat EF70/ PF775/ PF790.....\$390/480/680
- ViewSonic E790 19" / PF815 21".....\$510/1290
- ViewSonic VP150 / VPA150.....\$1450/1650
- Samsung 700NF 17" Flat.....\$390
- Samsung 900NF 19" Flat.....\$650
- Samsung 531TFT 1024 LCD Flat Panel.....\$1190
- Samsung 800TFT 18" LCD Panel.....\$3650

CONTROLLERS

- IDE ISA Super I/O\$30
- Dual-U2IDE ATA66 PCI controller\$85
- Mylex UW scsi 950T (2940UW).....\$170
- Mylex U2W scsi 958T (2940U2W).....\$260
- Adaptec 2940/2940UW.....\$220/270
- Adaptec 2940 U2W/ U2W kit.....\$300/330
- Adaptec 29160 U2W scsi/ Kit\$320/390
- Adaptec AAA131 /AAA133 kit.....\$650/990
- TeckRam scsi PCI card\$60

- Adaptec APA1460 slim SCSI kit.....\$200
- Adaptec APA1480 slim (cardbus).....\$290
- Adaptec 3940 Dual scsi-II.....\$550
- Adaptec 3940UW Dual UW scsi.....\$589
- Adaptec 3950U2W Dual U2Wi.....\$685
- Adaptec 8945 Hot Connect.....\$820
- Adaptec F940 Fiber /950.....\$1100/1190
- Jaz PCMCIA to SCSI-II adaptor.....\$150
- Jaz Parallel to SCSI-II travelor.....\$75
- scsi /Uwscsi / U2W 80pin / UIDE 80pin cables in stock

OVER 2000 hit per Day

@

WWW.ATIC.CA

with Daily prices
Daily market news
Leading Technology
Leading performance products

www.atic.ca

Intel's 933mhz CPU in stock .../ AMD 950mhz...

Intel and AMD announced its 1GHz CPU.
Intel only ship 850/866 and 933mhz by now.
Our Landmark ATX fudy case with i840
and Dual PIII-866 made the server on the
top line. Intel Server with 4-Xeon CPUs
has been sold over 20 units. Viewsonic full
line Flat-CRT has list on our Web.
Please check the Vancouver hottest Web:
ATIC.CA

Abit VT6X4 / Abit P3V4X, KX-133, AGP 4x
Intel PIII 500-866mhz CPU, PC100/133 bus
128MB SDRAM PC133, w/ HD ATA66 ports
Landmark ATX299 tower w/ 250W
Creative 52x drive
Sound Blaster Live value
USR 56k voice fax modem
20G 7200 ATA66 HD
ATI FuryPro 32M w/ TITO AGP4x
RockLive subwoofer w/ 4 sur spkrs

MS Natural KB and MS Intellimouse
Microsoft Windows 2000-Pro with cd
Three years labor and one year parts warranty

Intel PIII-600/650/667/700/750

\$1700 / 1720 / 1750 / 1840 / 1950

Intel PIII-800/850/866/933

\$2050 / 2220 / 2390 / 2700



"We Pioneered the Past,
anticipated the Present.
And you can be Sure we're
Working on the Future."

Tel: 875-8859

Fax: 875-8611

Support: 879-6800

AMD K7 System

Abit KA7 AGP, ATX, ATA66 KX133
128MB PC133 SDRAM DIMM
1.44MB floppy drive
20GB 7200 ATA66 HD
ATI Xpert2000 32MB AGP
18" ATX tower case
50x CDROM
56k voice fax modem
Fujitsu 104 Keyboard
Lan 10/100BT NIC
Microsoft Intellimouse w/pad
PCI 128 Sound and 120W Speakers
• AMD K7 550/600/650...\$1240/1250/1260
• AMD K7 700/750/800...\$1300/1390/1500
• AMD K7 850/900/950...\$1680/1940/2150

Optional:

with .25 17" Flat CRT+\$370
with .25 17" 1600+\$280
with Panasonic 8x4x32x+\$290
Upgrade to ATI Fury 32M+\$50
Upgrade to: Abit KA7-100+\$50

NetBook-6133sn 12"/13"TFT

Intel Celeron / PIII cpu
64MB RAM (Upgrade to 128M ...+\$150)
6.1G Toshiba HD (upgrade to 12G ...+\$120)
56k Voice/faxmodem Built-in
1.44 Floppy & 24x CD-ROM Built-in
12.1" / 13.3" TFT Active True color
USB, PCMCIA slot, PS/2 port, TouchPad
USB, Infra, Parallel, serial, Ext SVGA
3D sound, Microphone & speakers built-in
NiMH Battery,
AC-adpter (110-220v auto-switch),
FREE carrying case
MS Win'98 full ver.2 w/ CD and license
All drivers preload and with cd
• 12.1" TFT Celeron 500 / Celeron 566\$2190/2290
• 12.1" TFT P3-600/650/700/750\$2390/2450/2550/2690
• 13.3" TFT Celeron 500 / Celeron 566\$2350/2450
• 13.3" TFT P3-600/650/700/750\$2550/2600/2700/2860

with Car adapter+\$110
with 10BT comb card+\$70
with 10/100 BT card+\$100
with 56k & 10/100 Lan+\$190
with 96MB+\$80

NetBook-6020-14.1"TFT

Intel PIII -450/500/550/600/650 Mobile CPU
64MB RAM (128MB...+\$150)
6.1G Toshiba HD (12.0G ...+\$120)
AGP 8M Video built-in
RealPort 56k voice fax modem
1.44 Floppy, 24x CD-ROM (DVD...+\$200)
14.1" TFT Active True color, 1024x768
3D sound, Microphone & spkr built-in
Dark-Silver, USB, Infra, Parallel, serial,
2 PCMCIA slots, S-Video out-put
Li-Ion Battery w/ Led
AC adapter (110-220 auto switch),
FREE carrying case
Win' 2000 full ver. With cd
All drivers preload and with cd
• 14.1" TFT PIII-450/500\$2300/2450
• 14.1" TFT PIII-600/650\$2950/3100

As one of the major providers of the notebooks in Vancouver,
we had sold over 2000 units of Netbook in western Canada.
As the factory authorized service center, we provide upgrade
service for Toshiba, IBM, Compaq, Fujitsu, Acer, Asus, Sharp
Canon, eWinbook, Netbook, NiCBook, Scepter, and other clones

NetBook-6120 14.1" TFT

14.1" TFT Active color 1024x768
AGP 8M 3D Video card built-in
Silver body color, All-in-one 6.2LB only
Intel Mobile Celeron 333/366/400/466/500mhz
64MB RAM (96M...+\$80 / 128M ...+\$150)
6.1GB Toshiba notebook HD (to 12G ...+\$120)
RealPort 56k voice fax modem
1.44 Floppy, 24x CD-ROM (DVD...+\$250)
3D sound, Microphone & speakers built-in
USB, Infra, Parallel, serial, Ext. SVGA port
2 PCMCIA slots
Li-Ion Battery with indicator
AC adapter (110-220 auto switch),
Win' 98 full ver.2 with cd
FREE carrying case
• 14.1" TFT Celeron 500\$2490
• 14.1" TFT Celeron 566\$2590

NetBook-Top Silver 14.1" TFT

14" TFT Active color PII/PIII
AGP 8M 3D Video card built-in
Silver body color, All-in-one 6.2LB only
64MB RAM (96M...+\$80 / 128M ...+\$150)
6.1G Toshiba HD (to 12G ...+\$120)
56k fax modem
1.44 Floppy, 24x CD-ROM (DVD...+\$200)
3D sound, Microphone & spkrs built-in
USB, Infra, Parallel, serial, SVGA port
PS2, S-Video, Doc-Station ports
2 PCMCIA slots, Li-Ion Battery
AC adapter (110-220 auto switch),
Win' 98 full ver.2 with cd,
FREE carrying case
• 6120N 14.1" TFT Celeron 500\$2600
• 6120N 14.1" TFT PIII-600/650\$2750/2800
• 6120N 14.1" TFT PIII-700/750\$2900/3080
(Upgrade to Win2000pro+\$80
(Upgrade to Win NT 4.0 WKST+\$100)

Toshiba

4070CDS • Cel366/64M/4G/13.3"DSN/24x/W98/56k \$2050
4260XVDV-P3-600/64M/12G/14.1"TFT/DVD/W98 \$4120
4270XVDV-Cel500/64M/6G/14.1"TFT/DVD/56k/W98 \$3150
4270ZDV-Cel500/64M/12G/15.1"TFT/DVD/56k/W98\$3850
4300XVDV-P3-600/64M/6G/14.1"TFT/DVD/56k/W98 \$4390

IBM ThinkPad

Get one FREE color printer if you buy one IBM notebook,
IBM server or IBM desktop from us by June 30, 2000.
11400/2621482-Cel500/64M/12G/14.1"TFT/56k/W98/DVD \$3150
600X/26455EU-P3-500/64M/12G/13.1"TFT/56k/W98/24x \$4890
600X/26455FU-P3-650/64M/12G/13.1"TFT/56k/W98/DVDS\$4400

Compaq (Presario and Armada carried)

1200XL/102 • K6-450/32M/5G/12"HPA/56k/W98/24x \$1890
1200XL/107 • K6-475/64M/6G/13"HPA/56k/W98/24x \$2390
More On WWW.ATIC.CA

Notebook Accessories

• Modems and EtherNet (PCMCIA)

56K PCMCIA fax modem v.90\$80
PCMCIA 10BT Etherne comb\$60
PCMCIA 10/100 LAN\$95
Xircom 100BT + 56k fax modem RealPort\$450
3COM 10/100BT PCMCIA (3CXFE575BT) cardbus.....\$220
3COM 56K V.90 Fax modem w/ Cellu support (3CXM556).....\$325
3COM 56K with 10/100BT LAN\$440
Intel EtherExpress Pro Plus 10/100 PCMCIA.....\$280
Intel EtherExpress Pro 100 with 56k v.90 modem.....\$490

• Batteries, Sound Cards, Backup, SCSI

Adaptec1460/1480 SlimScsi.....\$190/280
ext. parallel CD-ROM 40x / with power\$160
ext scsi 40x CD-ROM with case\$210
32x Backpack cd-rom parallel / with sound\$300/360
4x/20x CD-R writer 1" high\$540
Nogatech PCMCIA TV tuner\$385
Carrying case.Targus Notepac CN01/20.....\$40/35
Universal caseCUN1 / Leather case CLN1.....\$100/120
Platinum Leather case CPLC1/ Traveler CL86.....\$210/198
Koskin case CKN2/Convertible case CCB1.....\$80/70
Encore Air Leather case CEL1A\$200
Battery NiMH / Li-Ion for Netbook.....\$150/220
Battery for Toshiba/IBM/Compaq/Sharp/Canon.....Pr-eorder

Cases



Three-Piece-Cover Unit
No Hand-Cutting
Elegant Look
Better Ventilation
Two Optional Spaces for Fan
Stand-Off Metal
fix the MB with stand-off metals
instead of brass screws
Extra 80mm fan included

ATX-200 19", 250W Extra fan.....\$85
ATX-202 19", 250W Extra fan.....\$85
ATX-298 19", 250W Extra fan.....\$85
ATX-298B (Black) 19" 250W, extra fan\$95
ATX-299 19", 250W Extra fan.....\$110
ATX-102 24", 300W, server Extra fan.....\$140
ATX-602 19" 250W, Extra fan Desktop\$90
ATX-2000 24", 2x300W Redundant PS.....\$290
ATX-iBlue 19", 250W Extra fan.....\$90
ATX-Black 19", 250W Extra fan.....\$90

PRINTERS

HP Apollo P2200 720dpi\$75 (after rebate)
HP DJ 340C / 840C\$340/250
HP 610 / 970C / 1120C\$150/550/690
HP 2000C / 2000CN\$860/1450
HP 1100 8ppm2M / 2100 8P2M\$570/1030
HP 4050 /4050N/4050TN.....\$1590/2200/2400
HP 5000/5000N/GN.....\$2360/3360/3680
HP 8100/8100N/8100DN.....\$3520/3830/4390
HP ColorLaser 4500/4500N/4500DN.....\$3660/4330/5550
HP ColorLaser 8500/8500N/8500DN.....\$8690/9780/12890
HP OJ 725C color printer/copy/scan/fax.....\$565
HP laser 3100Xi printer/copy/scan/fax.8p.....\$990
HP Color Plotter/ HP accessorieswww.ATIC.CA

Canon
BJC1000C/2000C/2100/6000.....\$100/130/150/350

Lexmark
Lexmark Z11/ Z31/ Z51.....\$100/170/300
Optra E310(special).....\$480

Epson
Stylus 440/660/760\$120/150/230
Stylus 850 (1440dpi) 850Ne.....\$400/650
Stylus 900/900N.....\$600/860

Brother
HL-1030 10ppg.....\$390
HL-1240DX / 1250 DX\$455/ \$560
Toner Tn100 / Tn200\$35

Okidata
OL6W 600dpi laser.....\$229
OL8W 600dpi laser.....\$370

CASE / KB / MOUSE / Cables

AT15"/19"/23"case&power.....\$40/55/70
ATX 15"/18"/23" case & power.....\$45/50/70
InWin ATX case 17" / 24" & power.....\$75/100
Server 2-in-1 Redundant/ Xeon.....\$330/650
Landmark ATX-299 plastic, extra fan.....\$110
Landmark ATX-202/200 18" with 250W, extra fan.....\$80

NetMouse w/wheel / Logitech 2B w/wheel \$10/18
MS IntelliMouse / Intelli Explorer / USB.....\$25/95/80
Logitech Marble mouse / USB\$85/85
Logitech Internet KB / cordless mouse & KB.....\$40/145
104KB /Fujitsu8725 / Fujitsu 4725.....\$12/20/60
MS Natural / TouchPad KB.....\$35/65
MS natural USB / USB keyboard.....\$75 / 30
Black KB / Blue KB\$20/20
Black mouse / MS black mouse\$20/25

Scsi cable/ Wide scsi cable.....\$10/15
over 4 devices cable (scsi/UW scsi).....\$35
Ext. Scsi cable / 25p-HD50p/25p-HD68p.....\$25/40/40
ext. Scsi cable (any pin to Centronics).....\$40
Rock mounting IDE/SCSI drawer.....\$20/25
Rock mounting U2W-scsi\$75

Printer cables 6ft/10ft/25ft.....\$5/10/18
Modem cables/Laplink cables.....\$10/15
Ethernet cables In stock

MULTIMEDIA

DVD KITS

Toshiba DVD8x / Panasonic DVD8x.....\$220/185
Creative DVD4 Encore x8 kit.(retail).....\$340
Black DVD drive\$250
Hollywood+ decordable card\$100

SOUND CARD

16bit soum / SB PCI 64 / SB PCI128.....\$18/35/45
SoundBlaster PCI Live! X-Gamer / Live! MP3.....\$135
SB PCI Live Value / Live! Platinum.....\$70/255
Diamond Mx300/ MX400\$85/100

CD-ROM 52x Int. Eide\$65

Creative 52x /Toshiba 40x Eide.....\$70/60
Affery 50x / Black 40x CD-ROM.....\$60/70
40x scsi Pioneer / Toshiba 40x scsi.....\$130 /120
Backpack 16x parallel slimmed with sound.....\$260

CD WRITER Panasonic8x4x32.....\$280

Creative 8432 Rewrite w/pen (retail).....\$320
HP 9310i 10x/4x/32x retail kit\$380
HP8250i 4x4x24x retail\$265
Sony CRX145 kit 32x10x4x /\$370
Yamaha eide 8x4x32x / kit\$330/380
Yamaha 6416SX ext.\$490
Plextor 8432 retail kit int. eide\$320
writeable cd-disk/Sony\$1.5/1.9
Rewritable cd-disk/Sony.....\$4/6

SPEAKER

ACS 33 w/Subwoofer.....\$70.
120W / Subwoofer 480W.....\$10 / \$35
Eastern 4016/5107\$65/\$90
RockLive 2000 Subwoofer w/4 spkr\$50
Eastern Home Theater DA/9000.....\$250
Yamaha M28 w/Sub kit / M30.....\$115/190
Altec ACS45.2/54/R880.....\$95/130/350
Creative PCWorks 4point 1000/2000.....\$130/230
MerioPhone / Headset.....\$8/15

TITLES (w/CD-ROM kit or system ONLY)

MS Work Sult'2000 kit (Words,Works,Money).....\$140
Corel WP Sult' 2000.....\$30
MS Office 2000 Pro / Small Business.....\$450/260

SCANNERS

HP 3300C\$220
HP 6350C\$680
600x1200 Parallel 36bit flat bed\$90
UMax 2020p / 2020U.....\$175/250
Acer 620P / 620S/620U.....\$140/160/160
MicroTek X6 USB/ X6-EPP / X6-EL.....\$195/195/380
OEM 600x1200 flat scanner.....\$85
AGFA Snapscan 1212P / 1236S/1212U.....\$140/160/285
Canon scan 320p/623p/630U.....\$145/190/188

CAMERA / CAPTURE

Miro Dv300 PCI / Studio 400 PCI.....\$1030/298
Miro DC 30 Plus\$1190
Canon A5 Zoom / A500.....\$635/735
Kodak DC220 ZOOM / De265 Digital.....\$790/1100
ATI TV-tuner with FM.....\$130
Logitec Quicam VC / Home /pro.....\$100/140/185
Creative WebCamIII USB\$100 in special

ZIP / TAPES / ORB

Seagate TR-4 4-8G int/ext\$260/360
Seagate DAT 4-8G 4mm int/ext.....\$960/1150
SONY DAT 5000i 4mm 4G-8G drive.....\$930
HP DAT 12/24G\$1350/2390
ViPower PCMCIA Reader int for desktop\$90
ZIP 100M int eide /parallel.....\$90/155
ZIP 100M scsi int/ext/ USB.....\$165/210/210
Zip 250 Parallel/ USB\$250/250
Zip disk / Jaz disk 1G / Jaz 2G.....\$15/110/160
JAZ traveler SCSI to Parallel adapter.....\$50
ORB 2.2G int EIDE / disk\$250/60
ORB 2.2G ext. Parallel with disk\$330
ORB 2.2G ext. scsi with disk\$330
Traven TR1/TR3/TR4.....\$20/25/35
LS120 super drive int. / disk\$90/45
DAT disk DDS-2 / DDS-3\$25/40
Stick drive PCMCIA w/ 40Mdisk\$390/20

NETWORKS / UPS

16 bit ISA comb 10BT / 32bit PCI comb.....\$18/20
32 bit PCI 10/100BT Ethernet.....\$22
D-Link DE-530CT 10/100BT\$22
Intel PCI Pro 10/100 / Server Pro.....\$65/130
3COM PCI 3C905 100BT.....\$68
BNC/Terminator/T.....\$3
Coaxial 10ft/20ft/50ft/100ft.....\$6/9/25/35

Hub 10BT 5 port/ 9port/16port.....\$45/ 55/120
Hub 100BT 4 port / 100BT 8 port\$75/110
Hub 10/100-8port.....\$160

Hub OfficeConnect 3C16700 8P 10BT.....\$110
Hub OfficeConnect 3C16702 16p 10BT.....\$250
Hub OfficeConnect 3C16750 8P 10/100BT.....\$290
Hub OfficeConnect 12p 100BT\$490
Hub500 SP-II 10/100BT 12p 3C16610.....\$880
Hub SP-II 10/10024p 3C16611.....\$1580

Hub HP 100BT 24 port (QTY limited)\$680
Hub HP 10/100BT 12/24port.....\$1280/1990
Hub D-Link 10BT DE805 5p / DE809 8p.....\$70/95
Hub D-Link 10BT DE812 12p / DE816 16p.....\$200/230

Hub Intel InBusiness SH100T 100BT 8p.....\$260
Hub Intel InBusiness Pus 10/100BT 8p.....\$380
Router Intel Internet station SR10TSP\$580
Router Intel Internet Express 8100/9100/9200\$WEB
Switch Hub 3COM/Intel ... list on WWW.ATIC.CA

NT 4.0 Server 5 /10\$950/1250
NT 4.0 Server 25\$2390
NT 4.0 client access license/each.....\$45
NT Workstation 4.0 / license.....\$210/560
MS Backoffice server V4.5 SB/Pro.....\$1800/2200
MS SMS v.1.2 10/25 users.....\$1420/2200
MS SNAv3.0 w/5 users.....\$1680

UPS

UPS 300/500/650.....\$150/180/280
UPS Smart 450/700/1000.....\$350/530/660
UPS Smart1400/2200/3000.....\$820/1290/1990
SurgeArrest Person 7/ w-tel.....\$25/30
SurgeArrest Pro 7/ w-tel.....\$37/47
SurgeArrest Net 7/ w-tel.....\$40/55

Photo album software, take three*Continued from page 38*

with sound and standalone player as an executable.

Cons: Does not handle other media files like video, animations. Setting image keywords may be tedious.

Out of the box: A small 18-page manual gets you started on a system that is fairly intuitive to use.

Overall rating: 4.2 out of 5

At first glance PhotoRecall is quite different from Jasc's Media Center. PhotoRecall has a second, standalone window for the catalogue

or photo album and it does not support the multimedia file types like animations and video, instead sticking to image and sound files (and sound files are strongly linked to images). But a second look shows some similarities between the two programs.

PhotoRecall processes images at a rate of 420 per minute (our tests involved a 12 GB drive, the processing of more than 2,000 images in the album) and offers the same methods of populating an album as the Jasc product: namely, directory scanning, file at-a-

time or scanner/digital camera input. And images in the photo album can have comments and keywords added (but there is no way to set keywords for a group of images as in Media Center), then searched or sorted based on the keywords. PhotoRecall also has slideshow and Web output options comparable to Media Center.

However, PhotoRecall adds some distinctive features here. First, PhotoRecall allows users to set an image as wallpaper. Also, as noted sound clips can be linked to specific images and a

slideshow created. Slideshow creators who have used 35mm colour slides will be familiar with these features. More significantly, the slideshow created by PhotoRecall can be saved as a standalone executable file, which you can send to others by email or give away on floppy diskette. The user just double-clicks on the show.exe icon and a complete slideshow is available, without having to install the PhotoRecall software on the user's PC.



PhotoRecall has other thoughtful features, such as the ability to produce reports on the contents of an album, publish to the Web with a variety of settings, and make simple edits with G&A's Darkroom by simply double-clicking on an image. It is also easy to drag and drop an image from PhotoRecall into any popular image-editing program, like PhotoPaint, Photoshop, or Painter. Finally, PhotoRecall makes it easy for users to send images by email—either as slideshows or as individual pictures—with attached comments. In sum, if you are a 35mm photographer looking for a program that—in addition to cataloguing your growing collection of images—allows you to quickly distribute images in a variety of nifty ways, look no further. Photo Recall is more than equal to the task—and at a good price.

Photo Explorer Gizmo

From: Play Inc.

Tel: 800-306-PLAY. <http://www.play.com>

Street price: \$60 (for full Gizmos MegaPak)

Pros: Snazzy and simple—catalogues 14 popular image file types, which can be dragged and dropped into other apps or printed out.

Cons: Minimal feature set.

Out of the box: Very simple operations

Overall rating: 3.5 out of 5



Play's Photo Explorer, part of the Gizmos MegaPak, takes a minimalist approach to image catalogues/albums. It supports 14 popular image filetypes including BMP, GIF, JPEG, and TIFF. Photo Explorer works like Windows Explorer, cataloguing all the images on a direc-

Continued on page 51

FREE!

DOMAIN REGISTRATION

*

Start
to Finish
in Under
2 Min!

WWW.GETDOMAIN.COM


Blazingly FAST Domain Registration

Register, Reserve, and Activate
your Domain Name
(yourcompany.com)

Today!!

WWW.GETHOSTING.COM

Complete, Friendly, and Easy to Use,
Hosting Solutions from one of Canada's
Largest Hosting Companies!



CADVision
INTERNET
www.cadvision.com

- ✓ 30 Day Money Back Guarantee
- ✓ Same Day Setup
- ✓ Online Hosting Toolkit Management
- ✓ Phone and Email Technical Support

info@getdomain.com
1-888-343-INET(4638)

*Does not include Agency fees.



It's so EASY!

Over
40,000
Companies
have
registered
their Internet
Domain Name
by using
GetDomain.com.

Easy to use,
7 step process,
allowing
anyone to
reserve their
Domain Name
over the
Internet!

Best of
all its Fast
and Free!

Try it Today!

The Proven Winner in Motherboards



Everything else is just a peripheral!

M865FC-ATX

VIA694X mainboard with ATX form factor designed.

The board with advanced performance through the support for AGP 4X, 133MHz FSB, PC133 SDRAM and ATA-66. This board is designed for socket 370 processors including the newest FC-PGA Pentium III processors as well as the Celeron PPGA.

- Slots : 4 PCI slots, 1 ISA slot and an AGP slot.
- Chipset VIA VT82C694X & VT82C596B Bios Vendor Award L2 Cache PBRAM
- Memory RIMM 0 DIMM 3 Max. Memory 1.5GB
- Chip N/A IO Interface Memory N/A

Supports Plug and Play function, PS/2 keyboard and PS/2 mouse connectors, Dual USB Ports, One - EPP/ECP mode parallel port, Two - 16550 high-speed serial I/O port, Audio Ports (Line-in, Line-out, Mic-in, CD-in and game port), SPDIF In/Out header for digital audio interface, Dual PCI IDE interfaces - support four IDE devices (PIO mode 4, DMA Mode 2, Ultra DMA 33/66), Supports 360K-2.88M Byte, 3 Mode FDDs or LS120, ATX Power Supply Connector

- Ports, headers and others IrDA Cable header, Green, HDD, power indicator LED headers, CPU and Case Fan headers, LAN Card Wake Up/Internal Modem Ring Wake-Up headers

M771LRM

Mainboard with brand new FlexATX form factor designed based on Intel 810E chipset.

- Support the FC-PGA Pentium III processors as well as Celeron PPGA processors.

- Highly integrated with several new technologies and special features such as Magic Setting IV, Suspension Indicator, LAN/Modem Power On, Keyboard Power On and Hardware Monitoring capabilities.

- Chipset Intel 810E Bios Vendor Award L2 Cache PBRAM N/A

- Memory DIMM 2 SIMM 0 Max. Memory 512MB.

- Chip Embedded in i810E IO Interface Memory Shared Memory

- I/O interface

Supports Plug and Play function, PS/2 keyboard and PS/2 mouse connectors, Dual USB Ports and LAN connector, One - EPP/ECP mode parallel port, One - 16550 high-speed serial I/O ports, VGA Connector, Audio Ports

(Game/MIDI port, Line-in, Line-out and Mic-in), Dual PCI IDE interfaces - support four IDE devices (PIO mode 4, DMA Mode 2, Ultra DMA 33/66), Supports 360K-2.88M Byte, 3 Mode FDDs or LS120, -ATX Power Supply Connector, Ports, headers and others

- SPDIF In/Out header for digital audio interface
- IrDA Cable header, COM Port header, Two CD-In headers
- Green, HDD, power indicator LED headers

- LAN Card Wake Up/Internal Modem Ring Wake-Up headers
- Fax/Modem DAA Module

56Kbps Fax/modem DAA Module, Supports V.90, V.34, V.32bis, V.32, V.22bis, V.22, Supports Auto

Fallback and MNP 5, V.42bis data compression with 115200 compatible Virtual UART, Requires 16

MB RAM and WIN 95/98/NT

- LAN Chip PCNet DM9102

- Slots ISA 0 PCI 2 ISA/PCI

Shared 0 TV Out/LCD Panel Link Riser 1

M754LR

The advanced features of Ali Aladdin Tr72 mainboard include:

- Socket 370 processors support the newest FC-PGA Pentium III processors as well as the Celeron PPGA

- All Celeron are automatically configured using firmware

- Two DIMM slots for 3V SDRAM 168-pin memory modules

Support for 66 MHz, 100 MHz and 133MHz memory bus, Maximum installed memory can be 2 x 256 MB = 512 MB

- Three 32-bit PCI slots

- Onboard IDE channels - Support for Bus mastering and UltraDMA 33/66 modes

- Power Supply and Power Management

- Provides AT/ATX power connector

Support for Green PC standard, Suspend Switch, and Keyboard Power On/Off (needs Win98 key board), Support Wake on Modem, Wake on LAN and Wake on Alarm

- Built-in Graphics System :

3D Hyper Pipelined Architecture: Parallel Data Processing (PDP) and Precise Pixel Interpolation (PPI)

Full 2 D H/W and Motion Video Acceleration, Up to 1600x1200 in 8-bit color at 85 Hz refresh, H/W Motion

Compression Assistance for S/W MPEG2 decode

- Sound System - Meets PC98 audio specification

Full duplex playback and recording with built-in 16-bit CODEC, Downloadable Wave-table Synthesizer supports Direct Music

- Onboard I/O Ports - Floppy disk driver port with 1Mb/x transfer rate.

One serial port with 16550-compatible fast UART, One parallel port with support for ECP and EPP, Two USB ports, one PS/2 port (for mouse) and one infrared port (optional)

- Hardware Monitoring

Built-in hardware monitoring for CPU temperature and fan speeds, Supports AMI's Desk Client Manager (ADCM)

- Onboard 10/100M LAN Adapter

LAN controller integrates Fast Ethernet MAC and PHY compliant with IEEE802.3u 100BASE-TX, 10BASE-T and ANSI X3212 TP-PMD standards, Compliant with

ACPI 1.0 and the Network Device Class Power Management 1.0, High Performance provided by 100Mbps

clock generator and data recovery circuit for 100 Mbps receiver

- Fax/Modem DAA Module Option

56Kbps Fax/modem DAA Module, Supports V.90, V.34, V.32bis, V.32, V.22bis, V.22, Supports Auto

Fallback and MNP 5, V.42bis data compression with 115200 compatible Virtual UART, Requires 16 MB RAM

and WIN 95/98/NT

M766LRT

The key features of the Intel 810 mainboard include:

- Socket-370 Processor Support

The PPGA Celeron provides Pentium-II performance with integrated level 1 and level 2 cache memory, PPGA Celerons run from 300 MHz

through to 533 MHz, Supports a 66 MHz front side systems bus, All Celeron are automatically configured using firmware,

- Two DIMM slots for 3VSDRAM 168-pin memory modules

Support for 66 MHz and 100 MHz memory bus, Maximum, installed memory can be 2 x 256 MB = 512 MB

- Three 32-bit PCI slots

- Onboard IDE channels - Support for Bus mastering and UltraDMA 33 modes

- Power Supply and Power Management

- Provides AT/ATX power connector

Support for Green PC standard, Suspend Switch, and Keyboard Power On/Off (needs Win98 key-board)- Support Wake on Modem, Wake on LAN and Wake on Alarm

- Built-in Graphics System :

3D Hyper Pipelined Architecture: Parallel Data Processing (PDP) and Precise Pixel Interpolation (PPI), Full 2 D H/W and Motion Video Acceleration, Up to 1600x1200 in 8-bit color at 85 Hz refresh, H/W Motion

Compression Assistance for S/W MPEG2 decode

- Sound System - Meets PC98 audio specification

Full duplex playback and recording with built-in 16-bit CODEC, Downloadable Wave-table Synthesizer supports Direct Music

- Onboard I/O Ports - Floppy disk driver port with 1Mb/x transfer rate.

One serial port with 16550-compatible fast UART, One parallel port with support for ECP and EPP, Two USB ports, one PS/2 port (for mouse) and one infrared port (optional)

- Hardware Monitoring

Built-in hardware monitoring for CPU temperature and fan speeds, Supports AMI's Desk Client Manager (ADCM)

- Built-in LAN Adapter

Onboard 10/100M LAN Adapter, LAN controller integrates Fast Ethernet MAC and PHY compliant with IEEE802.3u 100BASE-TX, 10BASE-T and ANSI X3212 TP-PMD standards, Compliant with ACPI 1.0 and the Network Device Class Power Management 1.0, High Performance provided by 100Mbps clock generator and data recovery circuit for 100 Mbps receiver

- Fax/Modem DAA Module Option

56Kbps Fax/modem DAA Module, Supports V.90, V.34, V.32bis, V.32, V.22bis, V.22, Supports Auto

Fallback and MNP 5, V.42bis data compression with 115200 compatible Virtual UART, Requires 16 MB RAM

and WIN 95/98/NT

HOUSTON TECHNOLOGIES



1-888-221-0644



www.houstontechnology.com

Boards are sold without processors. Intel logos are strictly for visual representation of processors supported by the respective boards. Pricing is based on suggested retail pricing, and your local dealer may change prices without notice. All pricing is bareboard or bundled with processor only, and does not include cooling devices.

HT-0600

When you want it now... get the Internet **to go!**



Getting online has never been easier or faster! You get all the basics, like Internet browsers, email addresses and personal web site, plus special bonus software. It's your Complete Internet Access Kit ready for pick-up.

Includes everything you need to experience the Internet!

- Microsoft® Internet Explorer 5.0, Netscape Communicator 4.5
- Virus Protection Software
- Parental Control Software
- Multiple email addresses, plus email forwarding and aliasing features
- 56Kbps access
- 5MB Personal Web Site
- 7 x 24-hour toll-free technical support
- Exclusive! Free Network-wide roaming – over 300 access points across Canada and the US

msn. Now customize your online experience with the power of msn.ca

**Get 30 days
FREE Internet access
plus FREE registration
(\$25 value!)**

Available at these fine retailers.

**LONDON
DRUGS**

FUTURE SHOP
DISCOUNT SUPERCENTERS

RadioShack.
You've got questions. We've got answers.

COMPUCENTRE

**COMPUTER
City**

STAPLES
BUSINESS DEPOT

STAPLES
The Office Superstore

**Business
DEPOT**

**BUREAU
EN GROS**

AT&T Canada

The network the world works on.

All logos and trademarks are the property of their respective owners.™ AT&T Corp. used under license. Microsoft, MSN and the MSN logo are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Two paths to multi-megapixel quality

Kodak and Olympus are among several manufacturers offering 2 megapixel digital cameras. Each company, however, has its own ideas about what constitutes a premium design.

By David Tanaka

If you scan the spec sheets of the Kodak DC-290 and Olympus Camedia C-2020, you might conclude that these cameras are pretty much the same. Both have 3x optical zoom lenses, both capture 2.1 megapixel images, and both offer the option of saving high-resolution images as uncompressed TIF files. From that common ground, however, they rapidly diverge. Make no mistake: both take high quality pictures that will satisfy most photographers, they just go about it in two distinct ways.

If you are looking to accessorize your computing with a digital camera, these devices are worth considering. However, this tale of two cameras could just as easily have been the tale of 10 cameras. Unlike film cameras, where a given dollar amount will give you comparable features from a variety of manufacturers, digital cameras that cost about the same can vary widely in physical design and features.

Another factor to keep in mind is that digital camera evolution is occurring quickly and that means models change frequently. Earlier this year, many camera makers announced 3 and 4 megapixel cameras, some of which are already available in retail stores.

Kodak DC290 Zoom

From: Kodak Canada
<http://www.kodak.ca>
Estimated street price: \$1,300
Pros: Fast image processor. Excellent colour rendering. Ships with generous 20 MB memory card, NiMH batteries and charger.
Cons: Imprecise zoom control. Somewhat bulky.



My initial impressions of the Kodak DC265, the precursor to the 290, were not favourable. It was too big to be a pocket camera, but didn't have the features (such as extensive manual exposure controls) that serious amateurs have come to expect in a premium camera. But first impressions can be deceiving. After working with the 265, I grew to appreciate the ergonomics as well as the technology within.

Outwardly, the DC290 is similar to the DC-265, but it has a few features that make it a worthy successor. It will take higher-resolution pictures and can save images in an uncompressed TIFF format.

This camera has a lot of good features, but one of the most impressive is the speedy image processor. To save even an uncompressed 6 MB

file took just a few seconds. The camera's control and setup menus are comprehensive and easy to navigate, although the colour LCD screen, which doubles as the auxiliary viewfinder, is virtually impossible to read outdoors in bright light. However, controls for commonly-used functions such as image quality (resolution) and flash options are located on a separate monochrome readout, which is easy to read even in bright light.

The worst feature of this model is the zoom control. The zoom motor is very fast but the control lever is imprecise. That combination makes accurate framing of a specific zoom point difficult. I found I was constantly missing the stop point that would frame the scene the way I wanted.

I would recommend this camera to anyone who likes to take lots of pictures, and appreciates advanced camera features, but doesn't treat photography as a serious hobby in itself. The camera does not have the user-controllable options serious photographers might want, such as the choice between aperture priority or shutter priority modes. However, some manual adjustments to exposure control are possible, and the camera generally does an admirable job of handling a number of exposure conditions.

Olympus Camedia C-2020 Z

From: Olympus (distributed in Canada by Carsen)
<http://www.olympus.com>
Estimated street price: \$1,300



Pros: Traditional 35 mm camera "feel." Many user controllable exposure options. Variable sensitivity equal to ISO 100 to ISO 400. Ships with NiMH batteries and charger.
Cons: Standard memory card (8 MB) offers limited storage for high-resolution images.

Anyone who appreciates the feel of a good 35 mm rangefinder camera will like the Camedia C-2020. Olympus's many years of camera design shine through in this model, and it could easily be mistaken for a film camera. The main power/mode switch mimics the shutter speed dial on film cameras, and it even has lugs for attaching a gen-u-ine neck strap (which is included) rather than one of those puny wrist straps found on most digital cameras.

The C-2020 also works more like a traditional camera, offering a wide range of exposure controls. The camera's sensitivity can be set to replicate three film speeds: ISO 100, 200 and 400. You also have a choice of metering

modes, as well as the option of selecting automatic, shutter priority or aperture priority exposure control. The 3x optical zoom lens is equal to a 35-105 zoom in 35 mm terms.

Saving a picture on the Olympus in uncompressed TIFF format results in a 5.5 MB file. While the image quality is very good, the camera took a long time to process and save the image.

The Olympus has a few limitations. First, the capacity of the memory card that ships with the unit is 8 MB, so you can take just one uncompressed image (and a few compressed ones) before you have to unload the card. This is an easy problem to solve—just ship a bigger memory card, like the 20 MB card Kodak includes with its camera.

More difficult to solve is the pokiness of the image processor. After taking a picture using the uncompressed image setting, the camera's busy light flashed for 30 seconds before it was ready to take another picture. The highest-quality compressed setting (least amount of compression) still produces images of good quality, with just minor delays between shots, so this will be a non-issue for those not interested in saving images in uncompressed format.

This model will serve the point-and-shoot crowd very well, but it also gives the more serious photographer the ability to control many exposure settings.

Compressed vs. uncompressed images

Both these cameras allow you to save images as uncompressed TIFFs. We see the ability to store in uncompressed format as a desirable feature, although not everyone will care about it. So, what's the big deal about uncompressed images?

Image files can be huge. Each uncompressed image from the Kodak DC-290 takes up 6 MB; Olympus's uncompressed image files take up 5.5 MB each.

Because storage cards are very expensive (currently about \$100 for a 16 MB card), image compression is one of technologies camera makers use so they can sell a camera at a reasonable cost that will hold more than just a couple of digital images. Most digital camera makers have used JPEG compression to reduce the files to a manageable size. The reduction in file sizes is significant. For example, the file size for the Kodak DC-290 goes from 6 MB uncompressed to 500KB or less depending on how much compression you specify.

JPEG is known as a lossy method of data compression, which means that during compression, image information is discarded. It's a fact that JPEG images always have less picture information than uncompressed images, but the visual impact of that depends on the type of image, and the amount of compression that's being applied. Camera makers will typically offer users a choice between saving images at low, medium or high compression (the higher the compression, the smaller the file, but the more information discarded).

We've taken compressed and uncompressed pictures of the same scene with the same cam-

era, and inspected the images at high magnification (1,000x). When you blow up a picture that much, you can compare a common feature from both images, pixel by pixel. In every case, we could see differences between a compressed and an uncompressed image, but those differences did not automatically mean that the compressed image always looked inferior. When printed snapshot size on a photo-quality inkjet (we used the Lexmark JetPrinter 5770 for our tests), the differences were not noticeable in many cases. Even when printed at larger sizes, the images were quite impressive. However, some compression artefacts along edge details are noticeable.

340 megs and nowhere to go

While we were testing the cameras, we obtained two devices in the new CompactFlash II (CF II) format: a SanDisk 160 MB card, and an IBM 340 MB microdrive. (CF II cards are the same length and width as the original CompactFlash format, but are only half as thick.)

We were not, unfortunately, able to test them in the cameras reviewed above, because neither camera has a CF II slot. The Kodak uses a Type I CF slot, while the Camedia uses a SmartMedia card. Sixteen megabyte cards in both CF and SmartMedia formats currently cost between \$100 and \$120, while 64 MB cards cost are \$350 to \$400. The 160 MB CF II memory card has a suggested retail price of approximately US\$500, according to a SanDisk representative, while IBM's 340 MB microdrive sells for US\$450. IBM expects to bump the capacity of the microdrive to 1 GB by the end of this year.

Doing some rough math, a 160 MB CF II card could hold 25 or more uncompressed images from either camera, had they a slot to accommodate it, and anywhere from a few hundred to several hundred compressed images. The microdrive would store more than 50 uncompressed images.

We have been using both CF II storage devices with a Canon PowerShot Pro70, one of the few digital cameras with a CF II slot (in fact the Canon has one CF II slot and one standard CF slot). With the Canon's high capacity battery, it is a pleasure to be able to shoot 50 or 60 pictures during an afternoon without having to worry about finding a computer to download images from a full memory card, or running out of battery power. (The 160 MB storage card will hold more than 400 high-resolution images. We're not sure exactly how many pictures you could store on a microdrive, because the Canon's counter stops at 999 pictures.)

The PowerShot Pro70 was a premium prosumer camera when it was introduced about 18 months ago, but we've seen it discounted in Toronto-area stores to as low as \$799—a good sign that a new model is on the way. It's a 1.7 megapixel unit, and limited in user-controllable exposure modes compared to more recent prosumer cameras. However it has good optics and does save images in uncompressed format. □



www.icicomputer.com

(Visit our website for latest price, special & quotation) Email: ici@icicomputer.com

TEL: 273-1368

SALES: (604) 303-0705 TECH: (604) 273-9550 FAX: (604) 278-5268

1780-4311 Hazelbridge Way, Richmond, BC V6X 3L7 Business Hour: Mon-Sat: 10-6:30, Sun: 11-6 Supporting Better Business through the BBB

TRADE IN your old computer
get up to **\$150 Credit**
towards ICI new system

Toshiba 4424 CD-RW & 4X DVD Combo \$398
Sony 8432 IDE CD-RW kit \$288
BASF/ Sony CD-R Media (10 pc) \$12/16

Broadband Cable Modem/ ADSL Router
-Built-in Firewall + 5 port Hub
-one IP Address for entire network **\$238**

IntelPentium III DreamMachinefor PowerUser

Pentium III Power User

ASUS P3V / Gigabyte 6VXE7 M/B	P-III-650
133MHz FSB & UDMA66 Ready	1338
64MB PC100MHz SDRAM	\$39.80/mo*
10.2GB Ultra66 HDD	P-III-667
Panasonic 1.44MB FDD	178
ATI Rage 3D 8M AGP Video	\$41.80/mo*
15" N-I L-R SVGA Monitor	P-III-700
Acer 107 Win 98 Keyboard	1268
ATX Tower w/ 250W P/S	\$44.80/mo*
Acer Wheel Mouse & Pad	P-III-733
48x UDMA CD-ROM	1298
Acer 3D Wave Stereo Sound	\$45.80/mo*
120W Stereo Speakers	

Pentium III Dream Machine

ASUS P3V / Gigabyte 6VXE7+ M/B	P-III-650
133 MHz FSB & UDMA66 Ready	1328
64MB PC100MHz SDRAM	\$46.80/mo*
10GB Ultra66 HDD	P-III-667
Panasonic 1.44MB 3.5" FDD	1368
Riva TNT2 32M 4X AGP Video	\$47.80/mo*
Samsung 750S 17" 24 Monitor	P-III-700
Acer 107 Win 98 Keyboard	1468
ATX Tower w/ 250W P/S	\$51.80/mo*
Acer Wheel Mouse	P-III-733
Creative 52X CDROM Drive	1498
SoundBlaster PCI 128 52X CDROM	\$52.80/mo*
280W Stereo Speakers	

Pentium III DVD Theatre

Asus P3V4X / Gigabyte 6VX-4X M/B	P-III-650
133 MHz FSB & UDMA 66 Ready	1678
128MB PC100MHz SDRAM	\$58.80/mo*
20GB UDMA66 HDD	P-III-667
Panasonic 1.44MB FDD	178
NEC AS70 17" 27 Monitor	\$60.00/mo*
Riva TNT2 32M 4X AGP	P-III-700
Multimedia Keyboard	1798
ATX Tower w/ 250W P/S	\$63.00/mo*
Microsoft Wheel Mouse	P-III-733
Asus 8X DVD Drive	1828
SoundBlaster Live 1024	\$63.80/mo*
Altec Lansing Spkr+Subwfr	P-III-800
	2038
	\$71.80/mo*
	P-III-866
	2368
	\$82.80/mo*

Pentium III CD-Creator

ASUS P3V / Gigabyte M/B	P-III-650
133MHz FSB & UDMA 66 Ready	1788
128MB PC133 SDRAM	\$62.80/mo*
20GB Ultra66 HDD	P-III-667
Panasonic 1.44MB FDD	1828
Riva TNT2 32M 4X AGP	\$63.80/mo*
Viewsonic E771 17" Monitor	P-III-700
Multimedia Keyboard	1908
ATX Tower w/250W P/S	\$66.80/mo*
Microsoft Wheel Mouse	P-III-733
Sony 8x4x32 CD-RW	1938
SoundBlaster Live 1024	\$67.80/mo*
Altec Lansing Spkr+Subwfr	P-III-800
	2138
	\$75.00/mo*
	P-III-866
	2468
	\$86.00/mo*

All P-III systems come with 5-year service & 2-year parts warranty and one month FREE internet

Options: Windows 98SE +\$138 • Acer 56K V.90 V/F/Modem (HW) +\$50 • Acer 10BT Ethernet Card +\$18 • MS Windows 2000 Pro +\$208 • MS Office 2000 SBE +\$288 • MS Office 2000 Pro +\$468

Power/ BudgetMaximizer

AMD Athlon(K7) PowerMax

Celeron Net-Surfer

ECS Dual-Slot Mainboard	C-500MHz
64MB PC100MHz SDRAM	660
10GB Ultra66 HDD	\$23.00/mo*
Panasonic 1.44MB FDD	C-533MHz
3D 8M AGP Video	680
Acer 107 Win 98 Keyboard	\$23.80/mo*
17" ATX Tower	C-566MHz
MS Trekker Mouse + Pad	750
48x CD-ROM	\$25.50/mo*
3D Wave Stereo Sound	
120W Stereo Speakers	
56K Modem & 10/100 BaseT LAN	
15" SVGA Monitor +\$170	

Celeron WorkHorse

Gigabyte AGP Mainboard	C-500MHz
133MHz FSB & UDMA66 Ready	978
64MB PC100MHz SDRAM	\$34.50/mo*
10.2GB Ultra66 HDD	C-533MHz
Panasonic 1.44MB FDD	998
ATI Rage 3D 8M AGP Video	\$35.00/mo*
Samsung 750S 17" 24 Monitor	C-566MHz
Acer 107 Win 98 Keyboard	1068
17" ATX Case w/ 250W P/S	\$37.50/mo*
Acer Wheel Mouse + Pad	
48x U-DMA CD-ROM	
Acer 3D Wave Stereo Sound	
120W Stereo Speakers	

Athlon Dream Machine

AMD Athlon (K7) CPU	K7-550
Gigabyte Athlon M/B	1278
64MB PC100MHz SDRAM	\$44.80/mo*
10GB Ultra66 HDD	K7-650
Panasonic 1.44MB 3.5" FDD	138
Riva TNT2 32M AGP	\$46.00/mo*
Samsung 750S 17" 24 Monitor	K7-700
Multimedia Keyboard	1368
ATX Tower w/ 300W P/S	\$48.00/mo*
MS Wheel Mouse	K7-750
Creative 52X CD-ROM	148
SoundBlaster PCI 128 52X CD	\$49.80/mo*
280W Stereo Speakers	K7-800
	1538
	\$53.80/mo*

Athlon DVD Theatre

AMD Athlon (K7) CPU	K7-700
Gigabyte Athlon M/B	1638
128MB PC133MHz SDRAM	\$57.50/mo*
20GB Ultra66 HDD	K7-750
Panasonic 1.44MB 3.5" FDD	1698
Riva TNT2 32M AGP	\$59.50/mo*
Samsung 750S 17" 24 Monitor	K7-800
Multimedia Keyboard	1818
ATX Tower w/ 300W P/S	\$63.80/mo*
MS Wheel Mouse	K7-850
Asus 8X DVD	1948
SoundBlaster Live 1024 8X DVD	\$68.00/mo*
MLi460 Speakers + Subwoofer	K7-900
	2228
	\$78.00/mo*

All Celeron & AMD systems come with 3-year service & 1-year parts warranty and one month FREE internet

Options: Windows 98SE +\$138 • Acer 56K V.90 V/F/Modem +\$50 • Acer 10BT Ethernet Card +\$18 • MS Windows 2000 Pro +\$208 • MS Office 2000 SBE +\$288

CPU/RAM

16M 72pin EDO 2x8/ 4x4	\$60/70
32M 72pin EDO 2x8/ 4x4	\$108/120
32M PC100 SDRAM OEM/ Major	\$50/55
64M PC100 SDRAM OEM/ Major	\$88/98
128M PC100 SDRAM OEM/ Major	\$168/188
256/ 512M PC100 SDRAM	\$360/788
64M PC133 SDRAM OEM/ Major	\$98/105
128M PC133 SDRAM OEM/ Major	\$188/198
256/ 512M PC133 SDRAM	\$370/860
128/ 256M PC100 ECC SDRAM	\$215/408
128/ 256M PC133 ECC SDRAM	\$220/418

AMD CPU	
K7 550/ 600/ 650	\$208/260/268
K7 700/ 750/ 800	\$318/360/468
K7 850/ 900/ 950	\$598/868/1038
Intel CPU	
Celeron 500/533/566	\$148/160/198
P-III 600/650/667	\$348/368/378
P-III 700/733/750/800	\$468/478/590/690
P-III 850/866	\$998/1008

Motherboards

Athlon (K7) Motherboard	
ASUS K7M	\$218
Gigabyte GA-7 IXe	\$188
Microstar MS-6195	\$188

Celeron / P-III Motherboard	
ABIT VA6/ VT6	\$128/160
Asus P3V/ P3V4X	\$128/168
Asus P2-99/ P3B-F	\$145/185
Asus P2BD/P2BS/P2BDS	\$388/448/648
Gigabyte 6VXE+/ 6VX-4X	\$118/148
Intel CA810EA/ CA810EAL	\$198/248
Intel N440BX/ L440GX (server)	\$708/750

Drives & Controllers

Fujitsu (UDMA66 IDE/ U2W SCSI)	
10.8/ 13/ 17/ 20G	\$138/160/168/188
10/13/20/27G (7200rpm)	\$178/198/260/338
9.1/ 18.2G U2W SCSI	\$318/498
IBM (7200rpm IDE/ U2W SCSI)	
20/27G U-DMA 7200rpm	\$250/318
9G/ 18G U2W SCSI	\$338/568
Maxtor (Ultra 66 IDE)	
10.2/ 15/ 20G	\$138/160/188
27/ 40/ 60G	\$260/338/448
15/ 20/ 27G 7200rpm	\$188/238/278
30/ 40G 7200rpm	\$298/388
Quantum (UDMA66 IDE/ U2W SCSI)	
LM 15/ 20/ 30G 7200rpm	\$198/238/318
Atlas IV 9.1/ 18.2G U2W SCSI	\$328/548
Seagate (U2W SCSI)	
Barr 9/ 18G U2W SCSI	\$468/768
Cheetah 9/ 18G U2W SCSI	\$468/768
Western Digital (U-DMA IDE)	
10/ 13/ 20/ 30G	\$148/168/188/268
15/ 20/ 27G 7200rpm	\$198/248/318

Adaptec (SCSI Adapter)	
2930U / 2930U2	\$138/328
2940 U2W / U2W Kit	\$328/388
TekRam 310/ 390F SCSI Adapter	\$68/148

Tape Backup

Tecmar Ditto Max Pro 10G Int.	\$318
Onstream 30G IDE/SCSI Int.	\$408/688
Onstream 50G SCSI Int.	\$968
Onstream 30G Disc (3-pack)	\$138
Seagate 8GB TR-4 Int. IDE/SCSI	\$298/368
Seagate 8GB DAT SCSI Int.	\$738

Scanners

Acer 620P / 620U / 620PT	\$138/148/248
AGFA Snapscan 1212P/ 1212U	\$138/148
Canon 330P (-\$30 rebate)	\$108
Canon 630P(-\$30)	\$148
Canon 630U(-\$30)	\$168
Epson 610 / 636U / 1200U	\$218/278/348
HP 4200C / 5300 USB	\$268/388
HP 6300C / 6350C USB	\$515/628
Primex 600P (-\$45)	\$78
Visioneer OneTouch 7600 USB	\$168
Visioneer Colorado 19200 USB	\$128

CD / DVD / Sound

Acer 40x / 48x / 52x CD-ROM	\$50/55/68
Creative 52x / Toshiba 48x	\$68/88
Asus 8x DVD / LG 8x DVD	\$178/178
Pioneer 16x IDE / 6xSCSI DVD	\$208/198
Sigma DVD Controller PCI	\$118

Acer 3D Wave PnP Sound	\$22
Diamond MX300	\$110
SoundBlaster Ensoniq/ 128 PCI	\$38/50
SoundBlaster PCI 512/ Live 1024	\$70/78
SoundBlaster Live Platinum	\$268
SoundBlaster Live Xgames	\$138

ZIP / JAZ / LS120

ZIP 100M IDE / Para / USB	\$88/148/178
ZIP 250M IDE/ Para/ SCSI	\$198/248/248
ZIP 100M / 250M Disc	\$13/25
JAZ 2G SCSI Int. / Ext.	\$448/460
JAZ 1G / 2G Disc	\$115/120
JAZ SCSI to Parallel Adapter	\$60
LS120 Super FDD Int. / Ext.	\$98/228
LS120 Disc	\$13

Modems/Camera

Acer 56K V.90 Voice/Fax PCI (HW)	\$48
USR 56K V.90 V/F/M Int. SW/ HW	\$60/108
Creative WebCam Para / USB	\$98/88
Creative WebCam Go USB	\$198
Intel PC Camera (USB)/Pro	\$118/178
Logitech QuickCam Express USB	\$68

Spkr/ Mice/ KB/ Cases

USB Adapter / Hub	
PCI to USB Card	\$40
USB 4 Port Hub	\$55
Speaker	
120/ 260/ 800W + subwoofer	\$15/25/38
Altec ACS 33 / 45 / 54 / 48	\$68/98/108/178
Altec ACS ADA 305 / 880	\$238/368
Creative 4 point FPS 1000/2000	\$108/218
Creative Theatre 5.1	\$388
Yamaha MS 30 speaker/subwoofer	\$90
Yamaha M28 speaker & subwoofer	\$98

Mouse	
Logitech 2B/ 3B/ wheel mouse	\$12/18/20
MS Intellimouse / USB	\$28/32
MS Optical wheel mouse	\$98
Keyboard	
Acer 107 / Fujitsu 8725	\$13/20
Logitech Cordless KB & Wheelmouse	\$128
Logitech iTouch Pro (KB & mouse)	\$168
MS Natural Keyboard / USB	\$38/68

Case & Fan	
AT 15" / 19" Case & 250W P/S	\$38/48
ATX 17" / 18" Case & 250W P/S	\$50/60
ATX 18" Case & 300W P/S	\$90
Removable HDD Drawer	\$28
External HDD/CD-Rom Holder	\$80
Slot Fan / HDD Fan	\$15/18

Printers

Color Printer	
Canon 1000SE/ 2100 (-\$20/-\$30)	\$78/108
Canon 3000 (-\$30)	\$198
Canon 5100 / 6100 (-\$0/-\$30)	\$178/288
Epson 440 / 670 (-\$45/0)	\$118/138
Epson 740 / 740i (-\$75/-75)	\$148/188
Epson 760 / 750 (-\$45/0)	\$198/368
Epson 850/860/870(-\$0/75/0)	\$608/218/408
Epson 1160/1200/1270(-\$75/0/0)	\$560/678/678
HP 840 / 895	\$268/360
HP 930 / 950 / 970	\$298/428/568
HP 1120 / 1220 / 2000	\$535/648/678
Lexmark Z11 / 3200	\$98/148
Lexmark Z31 / Z51	\$178/248

Laser Printer	
Brother 1030 / 1240DX	\$388/450
Brother 1270N (Network Ready)	\$698
Brother 4350 / 6800MFC	\$568/748
Brother 2400C/ 2400CN Color	\$2688/3198
HP 1100A/ 2100/ 2100TN	\$550/978/1378
HP 1100A/ 3100C MFC	\$698/968
HP 3150	\$828
HP 4050 / N	\$1598/2068
HP 4050 TN	\$2288
HP 5000/ N	\$2098/2988
HP 5000 GN	\$3738
HP 8000/ N	\$2968/3688
HP 8000 DN	\$4330
HP 8100/ N	\$3788/4198
HP 8100 DN	\$4848
HP 4500/ N Color	\$3538/4198
HP 4500 DN Color	\$5398
HP 8500/ N Color	\$8368/9498
HP 8500 DN Color	\$11998
Lexmark Optra 1625/ 1625N	\$1458/1828
Lexmark Optra 1855/ 1855N	\$1588/2028
Samsung 5100A/ 6050 (-\$50/-50)	\$298/398
Samsung 4500C MFC	\$428

*Lease based on 36-month, 10% buyout. • All prices reflect 2% cash discount and are subject to change without prior notice • All trademarks are the property of their respective owners

ICI Book-PC

Ideal for Internet Surf & Office Workstation
(Amazingly Small: in Notebook Size)

64MB RAM **10.2G HDD** **52X DR OM** **Intel 810**
56K V90 Modem **10/100 Fast Ethernet** **3D A/V Video** **3D Stereo Sound**
TV out (composite & S-Video) **Keyboard/Mouse/Speaker**

Intel Celeron
500MHz CPU
\$688
272x295x82mm

intel®

Authorized
Solution
Provider
For 2000

TELEPHONE:
273-1368
SALES: (604) 303-0705
TECH: (604) 273-9550
FAX: (604) 278-5268
Web: www.icicomputer.com
email: icip@icicomputer.com



NetworkSolution

- Intel Authorized Solution provider.
- Total networking & Internet Solution.
- Internet sharing: 56K, Cable modem, ADSL.
- File sharing, printer sharing.
- Full range Networking support: cabling, installation, routers, switches, hubs.
- Virtual private networking.
- We plan and install network for business and home.
- PLEASE CALL FOR A FREE ON-SITE CONSULTATION.

CD Writers

Creative 8432 Int. IDE Kit (8x4x32)	\$328
HP 8250 Int. IDE Kit (4x4x24)	\$268
HP 9310i Int. IDE Kit (10x4x32)	\$388
HP 9210i Int. SCSI Kit (8x4x32)	\$378
HP 9210e Ext. SCSI Kit (8x4x32)	\$498
HP 8210e Ext. USB Kit	\$398
HP 820e Ext. SCSI/PCMCIA	\$498
Plextor 8432 Int. IDE CD-RW Kit	\$338
Sony 8432 Int. IDE CD-RW Kit	\$288
Yamaha 8424 Int. IDE/Kit	\$318/368
Yamaha 8424 Int. SCSI/Kit	\$338/388
Yamaha 8424 Ext. SCSI Kit	\$548
CD-R/ RW Media	
BASF/Sony CD-R (10pc)	\$12/16.80
Princo 8X CD-R (10/100pc)	\$12/118
Princo 80min CD-R (1/10pc)	\$2/18
BASF/Sony CD-Rewriteable	\$3.8/6.8

ICI LinuxNet Server

Complete Server Solution:

- Connect all your computers to the Internet (using one account)
- Firewall solution included
- Website hosting (Intranet or Extranet)
- E-mail server: manage company e-mail
- Fax server: send and receive faxes
- File server: share large files easily
- Browser based setup: zero effort maintenance

Complete Hardware Solution:

- Pentium III 600MHz CPU
- 64 MB SDRAM
- 10 GB Hard Drive
- Dual 10/100 Ethernet card

Complete Software Solution:

- Newlix Server
- 25 client licenses

\$1338

Purchase before June 30, 2000
and get VPN solution for FREE

NoteBok / MobileSolution

IBM

i1420 C-433	32M	4.8G	13HPA	24X	56K	\$1698
i1460 C-433	64M	4.8G	14.1TFT	DVD	56K	\$2688
i1480 C-466	64M	6.4G	14.1TFT	DVD	56K	\$2898
A20m PIII-500	64M	6G	12.1TFT	24X	56K+LAN	\$3168
A20m PIII-700	64M	12G	14.1TFT	24X	56K+LAN	\$4468
A20p PIII-700	128M	18G	15TFT	DVD	56K+LAN	\$5968
T20 PIII-650	128M	6G	13.3TFT	24X	56K+LAN	\$4768
T20 PIII-700	128M	12G	14.1TFT	DVD	56K+LAN	\$6068

Acer

506DX C-433	32M	4.8G	12.1HPA	24X	56K	\$1598
514T C-466	64M	4.8G	12.1TFT	24X	56K	\$2468
514TXV C-466	64M	6G	14.1TFT	DVD	56K	\$2728
730TXV PIII-450	64M	6G	14.1TFT	DVD	56K+LAN	\$3228
732TXV PIII-500	64M	9G	14.1TFT	DVD	56K+LAN	\$3388
734TL PIII-600	64M	12G	15TFT	24X	56K+LAN	\$3898
735TLV PIII-650	128M	12G	15TFT	DVD	56K+LAN	\$4218
736TL PIII-650	128M	18G	15TFT	24X	56K+LAN	\$4218

HP HANDHELD PC

HP Jornada 540 (16M/548 (32M))	\$648/778
HP Jornada 680 (16M/56K/690 (32M/56K))	\$1180/1298
HP Jornada 820 (16M/ 56K/ 640x480)	\$1330

3Com

PalmPilot IIIe/ IIIxe/ IIIc	\$218/338/598
PalmPilot V/ Vx	\$448/548

TOSHIBA

4270DVD C500	64M	6G	14.1TFT	DVD	56K	\$2998
4270ZDVD C500	64M	12G	15TFT	DVD	56K	\$3448
4260XDVD PIII-450	64M	12G	14.1TFT	DVD	56K	\$3638
4300 PIII-600	64M	12G	14.1TFT	DVD	56K	\$4278
8100 PIII-500	64M	12G	14.1TFT	DVD	56K	\$4298
8100 PIII-650	128M	18G	14.1TFT	DVD	56K	\$4998

NoteBok Add-On's

PCMCIA CARD

Adaptec 1350 Mini SCSI Parallel Port Kit	\$98
Adaptec 1460D/1480A SlimSCSI Kit	\$170/245
Intel Pro100 LAN CardBus (Realport)	\$128
Intel Pro100 LAN+56K Modem Cardbus Realport	\$298
Linksys 10BT Ethernet PCMCIA	\$78
MegaHertz 3CCFEM556 56K Modem+10/100	\$308
Xircom Realport 56K V.90 + 10/100 BT	\$398

PORTABLE CD-ROM & CD-WRITER

HP 820e 4X4X20 CD-RW PCMCIA/SCSI	\$498
Micro Solution Bantam 24X CD-ROM	\$238
Micro Solution Bantam 24X CD w/Sound	\$285
Micro Solution 4X4X20 CD-Writer/Dualport	\$418/448

NOTEBOOK MEMORY & HDD & CASE

32/ 64/ 128M	\$80/120/238 & up
Micro Solution Backpack 1.44MB FD	\$168
IBM 6/ 12/ 18/ 25GB 2.5" HDD	\$248/348/525/768
Toshiba 6.4/ 12/ 18GB 2.5" HDD	\$248/348/525
Targus Nopac CN01/CN20	\$41/30

Display Centre

Video Card

3D Labs Oxygen VX1 32M AGP	\$318
Asus 3800 TNT2 32M/ w/3D Glasses	\$198/268
Asus 6600 GeForce 32M Deluxe	\$318
Asus 6800 GeForce 32M DDR Deluxe	\$348
Asus GeForce 64M Pure/ DDR	\$278/418
Asus V7700 GTS 32M DDR	\$478
ATI Rage 3D 8M/ Xpert 128 16M AGP	\$50/108
ATI Xpert 2000 32M AGP	\$118
ATI Rage Fury 32MB/ 32MB Pro	\$168/178
ATI Rage Fury MAXX 64MB 4xAGP	\$268
ATI All-in-wonder 128 16M/ 32M	\$228/318
ATI All-in-wonder Pro 32M	\$360
Creative GeForce 32M/ Pro 32M	\$328/378
Diamond Stealth III 16M/ 32M	\$88/108
Matrox Millennium G400 16M/ 32M	\$160/188
Matrox G400 32M Dual Head/ Max	\$238/288
Matrox G400 TV 16M	\$398
Voodoo3 2000/3000/3500 16M	\$138/198/278

LCD Panel

NEC 1525V / 1525M 15"	\$1298/1498
NEC 1525X/ 1525S 15"	\$1768/2448
NEC 1810-1 18"/ 2010-1 20"	\$4198/6398
Panasonic LC50 15"/ LC90S 19"	\$1550/5678
Samsung 570S/ 570B	\$1298/1398
Viewsonic L700 15"	\$1328
Viewsonic VE 150/ VP 150	\$1388/1550
Viewsonic VPA 150 15"	\$1598
Viewsonic VG 150 15"	\$1538
Viewsonic VPD 150/ VP 151	\$1498/2098
Viewsonic VP181 18" (digital)	\$4298

Monitors

AOC 17" 7Glr .26 / 19" 9Glr .26	\$288/468
Acana/Proview 15" / 17" / 19"	\$168/268/438
Mitsubishi 19" DP91/ 22" DP200	\$798/1448
Mitsubishi 17" DP710S / 19" DP900U	\$578/948
NEC 17" AS70/ A700+ / E750	\$308/378/628
NEC FE700 / FE700M / FE750	\$398/468/498
NEC FE950 / FE1250	\$698/1268
NEC FP950 / P1250+	\$798/1368
Panasonic 17" E70/ SL75 / PL70	\$318/388/488
Panasonic SL95 19"/ P110 21"	\$638/1168
Samsung 550S 15"/ 750S 17" .27	\$188/268
Sony E200/ G200	\$548/598
Sony 19" E400 / G400	\$768/868
Sony E500 / G500 / F500	\$1498/1598/2528

Viewsonic Monitors

E771 17"	.27mm	1280x1024	\$318
E773 17"	.25mm	1600x1280	\$378
EF70 17"	.25mm	1600x1280	\$398
G773 17"	.26mm	1280x1024	\$388
GS773 17"	.22mm	1280x1024	\$428
PF77 17"	.25mm	1600x1280	\$528
PF775 17"	.25mm	1600x1280	\$478
PS775 17"	.25mm	1600x1280	\$468
E790 19"	.26mm	1600x1280	\$528
GS790 19"	.26mm	1600x1280	\$598
PF790 19"	.25mm	1600x1280	\$668
PF795 19"	.25mm	1920x1440	\$828
PS790 19"	.25mm	1600x1280	\$718
P810 21"	.25mm	1600x1280	\$1168
P815 21"	.25mm	1800x1440	\$1268
PF815 21"	.25mm	1920x1440	\$1298

Network Products Centre

IntelProductLine 3COM & D-Link

Network Adapter

Intel 8460B 10/100 Management Adapter	\$65
Intel 8470B 10/100 Server Adapter	\$138
Intel 8472B 10/100 Dual-Port Server Adapter	\$288
Intel 8490 Gigabit Server Adapter	\$928

Hub & Switch

Intel In-Business SH10T5 5 Port Hub (10BT)	\$70
Intel In-Business SH10T8 8 Port Hub (10BT)	\$88
Intel In-Business SH100TX4 4 Port Hub (10/100)	\$145
Intel In-Business SH100TX8 8 Port Hub (10/100)	\$255
Intel In-Business SH101TX8 8 Port 10/100 Hub	\$280
Intel In-Business SS101TX4 4 Port 10/100 Switch	\$238
Intel In-Business SS101TX8 8 Port 10/100 Switch	\$338
Intel Express 330T Stackable 16 Port Hub (10/100)	\$768
Intel Express 330T Stackable 24 Port Hub (10/100)	\$1138
Intel Express 410T Standalone 16 Port Switch (10/100)	\$880
Intel Express 410T Standalone 24 Port Switch (10/100)	\$1170
Intel Express 460T Standalone 16 Port Switch (10/100)	\$1350
Intel Express 460T Standalone 24 Port Switch (10/100)	\$1650
Intel Express 520T Scalable 12 Port Switch (10/100)	\$1910
Intel Express 550T Scalable Routing Switch	\$2288

Printer Server

Intel Netport Express 10/100 Ext. Printer Server 1 Port	\$198
Intel Netport Express 10/100 Ext. Printer Server 3 Port	\$438
Intel InBusiness Printer Station 10/100 2 Port	\$228

InBusiness Station

Intel InBusiness Internet Station	\$468
Intel InBusiness E-Mail Station	\$968
Intel InBusiness Storage Station 12G/24G	\$1268/1768
Intel InBusiness Small Office Network Station (8 port Hub / 13G Storage & Backup / E-Mail / Firewall / Printer Server)	\$1798
Intel InBusiness Small Office Network Plus Station (same as above, with additional 13G for mirroring)	\$2468

Virtual Private Network

Intel Shiva VPN Gateway Express	\$5678
---------------------------------	--------

Network Adapter

3COM 3C905B-TX 10/100 PCI Adapter	\$68
Acer 10BT Combo/ 10/100 PCI Adapter	\$18/25
D-Link DFE-530TX 10/100 PCI Adapter	\$25

Home/Office Network Kit

D-Link DFE-905 4 Port 10/100 Hub/2xNIC/2xCable	\$155
Linksys 5 Port 10BT Hub/2xNIC/2x cable	\$78
Linksys EtherFast Cable/DSL Router (Built-in 4-Port 10/100 switch, Firewall & Single IP Address Feature)	\$268

10 BaseT Hubs

3COM 3C19260 5 Port Hub	\$60
3COM 3C16440 SS II Entry Hub 12 Port	\$220
3COM 3C16441 SS II Entry Hub 24 Port	\$338
3COM 3C16700 OfficeConnect 8/TPO	\$108
D-Link DE-805 TP/C 5 Port Hub	\$55
D-Link DE-809 TC 8 Port Hub	\$68

100Mbps Hubs & Switches

3COM 3C16750 OfficeConnect 8 Port 10/100BT	\$268
3COM 3C16751 OfficeConnect 16 Port 10/100BT	\$488
D-Link DSH-5 10/100 5 Port Hub	\$118
D-Link DSH-8 10/100 8 Port Hub	\$188
D-Link DSH-16 10/100 16 Port Hub	\$348
3COM 3C16951 SS-II 10 Switch 1100 12 Port	\$950
3COM 3C16950 SS-II 10 Switch 1100 24 Port	\$1360
D-Link DL-SS-8 8 Port 10/100 Switch	\$248

APC Power Protection

BackUPS 200/300/500M	\$128/138/188
BackUPS Pro280B/350/420/650	\$200/250/330/400
BackUPS Pro 1000/1400	\$535/688
SmartUPS SU420/SU620/SU1000	\$350/435/715
SmartUPS SU1400/SU2200/SU3000	\$930/1310/2078

Network Cables

10/100 BaseT Cable 10/25/50/100ft	\$8/15/25/38
10/100 BaseT Cable Bulk per ft / per 1000ft	\$.30/198
Crimping Tool: RJ45/ BNC	\$25/30

Vopt99 a fast disk defragmenter

Continued from page 38

to print out the topics you need. The online help offers useful recommendations, in the form of tips, for managing your hard disks.

A pie chart in the main window of Vopt99 shows the percentage of free space for the drive you have selected for defragmenting. While defragmenting, Vopt99 shows the progress graphically—much like the Details view in both Defrag and Speed Disk. It shows the amount of free space (in megabytes), and space occupied

by cookies, downloaded files, and the Internet history of the selected drive. Also shown are the number of fragmented files and gaps.

Performance

The most notable feature of Vopt99 is its speed—especially if you defragment your hard disks often. This encourages frequent use. (Golden Bow suggests daily defragmenting!) Speed matters, because you should defrag when other applications are not running. Vopt's speed may be just the answer for system

administrators. Vopt99 defragments FAT16 and FAT32 partitions.

An automatic scheduler allows you to schedule defragmentation. Vopt99 includes options for listing files that are fragmented, and for deleting cookies. It also has a feature for deleting temporary files you select from a list. I often find and delete files with the extension *.tmp, but was surprised to find Vopt's list of temporary files contains files with many other extensions.

Windows NT does not come with a defrag-

mentation utility, but you can now buy VoptNT (same price as Vopt99), which is capable of cleaning up NTFS and FAT 32 partitions. Golden Bow is also working on a Windows 2000 version of Vopt.

Golden Bow has been making defragmenters for 14 years, which is reassuring because this is a category of software where reliability really counts.

Customer support

Customer support for this product is via email. Registered users fill out a form on Golden Bow's Web site describing their problem, for which they receive an email response.

What I would like to see in a future version

I would like the temporary file deletion list that shows the path, size and date of the temporary files. This would make it easier to choose which files to delete. I would also like Vopt to offer some options on how to optimize program files and directories.

Summary

Vopt is a fast defragmenter that will encourage you to use it. How many of us have systems slowed by fragmented files and hard disks cluttered with temporary files and cookies? Vopt99 deserves to be better known and frequently used to keep your computers optimized. My experience with this product is quite limited, and I make no claims about its safety, but Golden Bow says you will not lose data even if your computer crashes while defragmenting! □

Chris J. Metten, B.Com. is a freelance technical writer who writes user manuals and online help for software, hardware user manuals, and operation and maintenance manuals for machinery. He can be reached at techwrite@telus.net.

Monsoon blows a 950 MHz storm

Continued from page 38

basic. The system ships with Logitech's Cordless Desktop I-Touch package, which communicates with the receiver unit via radio frequency, allowing you to use both mouse and keyboard from across the room without wires getting in the way.

On the software side, the Monsoon comes with Windows 98 Second Edition, as well as the Microsoft Plus Pack. For protection of data, McAfee's Virus Scan is also included. For those who want to take full advantage of the system's multimedia abilities, the machine also comes with a software DVD player for watching movies.

We benchmarked the machine using BAPCo's Sysmark98 test suite, and the Monsoon achieved an overall Sysmark 98 rating of 357 (office productivity was 342, and content creation, 379), which blows well past any previous machine we've had a chance to benchmark. You can certainly see the difference in software DVD playback, which tends to be a bit jerky and pixelated on slower machines. The Monsoon handled playback admirably, with excellent picture quality throughout.

The \$3,799 price tag doesn't include a monitor, though you can certainly add one to the Monsoon package (ours shipped with a Samsung SyncMaster 753 DynaFlat monitor, which adds another \$349 to the package price).

For what you get, though, the high cost is justifiable. The Monsoon delivers top-notch performance, and gives us a pretty good idea of what kind of performance we can expect when we break the 1 GHz barrier.

—Sean Carruthers

next GEN

COMPUTERS LTD

713-8538

fax 604 713-8539

email nextgen@axion.net

Mon-Fri 10:30am-6:30pm

Sat 10:30am-6:00pm

Leasing & Financing Available

#5-111 West Broadway,

Vancouver, B.C. V5Y 1P4

Celeron System

SiS630 Chipset Socket 370/Slot 1 M/B
2 USB, Serial, Parallel Ports
32 MB SDRAM PC100
4.3GB Ultra DMA66
1.44 MB Floppy
Windows Keyboard
16bit Sound onboard
56K V.90 Fax Modem
8MB 3D AGP Video Accelerator onboard
140W Multimedia Stereo Speakers
17" ATX Tower Case/ 44x CD-ROM

Celeron 500 \$569

Celeron 466/500 \$559/569
Celeron 533/ 566 \$585/Call
Celeron 667/ 700 Call

Summer Special

Gigabyte 6VX7+ PC133, ATA 66 for P-III
Gigabyte 5AX Super 7 ATA 66 for K6-II
64 MB SDRAM PC100
8.4GB Hard Drive
1.44 MB Floppy Drive
Windows 98 Keyboard
56K Int. V.90 PCI Fax Modem
PCI Sound Card w/wavetable
3D Pro AGP 8MB Video Accelerator
44x CD-ROM / Amplified Speakers
17" Monitor Inclusive/ Tower Case
One Month Free Internet

P-III 600 \$1129

P-III 550/ 600/ 650 \$Call/1129/1169
P-III 700/ 730 \$1279/1299
P-III 750/ 800/ 850 \$1469/1479/1879
K6-II(3D) 500/ 533 \$869/885
K6-II(3D) 550 \$905
Intel Celeron 466/ 500 \$929/945
Intel Celeron 533/ 566 \$955/999

AMD Athlon System

Gigabyte GA-7VM VIA KX133 Chipset
ATA 66, 2 USB, 2 Serial, 1 Parallel Port
10.0GB ATA66 Hard Drive
64 MB PC100
48x CD-ROM
Windows 98 Keyboard
1.44 MB Panasonic Floppy
ATI Rage IIC, 8MB, AGP
AC97 Audio
Tower Case w/ 300W p/supply
Mouse w/pad / Stereo Speakers

Athlon 700 \$935

Athlon 600/650 \$Call/895
Athlon 700/750 \$935/1025
Athlon 800/850 \$1149/1319
Athlon 900/950 \$1595/1815
Athlon 1000 Mhz Call

• AMD Premier Partner •

Super System

Asus P3V4X Slot 1 ATX 100/ 133 FSB
Asus P5A ATX 100MHz M/B for K6-II/ III
128 MB SDRAM PC100
20.0GB Hard Drive
Creative Labs 52x
Windows 98 Keyboard
56K V.90 Fax / Modem
1.44 MB Panasonic Floppy
Nvidia 32MB, TNT2, M64 Chipset Video
Multimedia Speakers
Creative Labs Sound Blaster PCI-64
18" ATX Tower Case
Logitech PS/2 Mouse
One Month Free Internet

P-III 733 \$1309

P-III 550/ 600/ 650 \$Call/1169/1189
P-III 700/ 733 \$1299/1309
P-III 800/ 850 \$1509/1929
K6-II (3D) 500/ 533 \$875/889
K6-II (3D) 550 \$919
Intel Celeron 500/533 \$999/1009
Intel Celeron 566/700 \$1049/1199

UPGRADE your computer with

Intel CPU Package

Gigabyte Socket 370 AT 133MHz
ATA66 M/B, 32MB PC100 SDRAM

Celeron 466 \$300
Celeron 500/533 \$320/335

+ \$45 for 8MB Video Card & \$17 for PCI Sound Card

AMD K6 3D CPU Package

Matsonic Super7 100MHz M/B
8MB AGP Video, 32MB SDRAM
On Board PCI Sound, 56K V.90 Modem

K6-II (3D) 500/533 \$245/259
K6-II (3D) 550 \$285

CPU with Motherboards

Celeron 466 w/Gigabyte AT 133MHz M.B.Call
Celeron 500 w/Gigabyte AT 133MHz M.B.Call
Pentium-III 550 w/Gigabyte M.B.Call
Pentium-III 600 w/Gigabyte M.B.\$439
Pentium-III 700 w/Gigabyte M.B.\$589
Pentium 233 MMX w/ Super 7 M.B.Call
AMD K6-II 500(3D) w/Super 7 M.B.\$169
AMD K6-II 533(3D) w/Super 7 M.B.\$189
AMD K6-II 550(3D) w/Super 7 ATA66M.B.\$209
AMD Athlon 600/ 700/ 800 w/ M.B.\$409/475/679
Cyrix MII 333 / 400\$139/165

Hard Drives • Storage

Samsung 8.4/ 10 / 15 / 20\$125/135/159/179
WD UDMA 10.2/13/20 2MB Buffer \$145/169/199
Maxtor 10/ 15/ 20/ 30 5400RPM \$139/169/185/249
Maxtor 10/ 15/ 20 7200RPM Series \$169/185/235
Quantum 15.0/ 20G 7200rpm\$207/245
LS-120 Laser Floppy Drive\$85
Zip Drive 100 / 250MB Int.\$75/169

Video Cards

SiS 4MB / 8MB PCI\$35/47
ATI Rage IIC 4M / 8M, AGP\$43/49
ATI Xpert 98 Rage Pro / 99 Rage 128 AGP 8M \$60/89
ATI Xpert 128 AGP 16MB AGP\$109
ATI Xpert @Play AGP 8M\$69
ATI Xpert 2000 AGP2X/ Pro 32MB\$120/140
ATI Rage Fury / Pro 32MB AGP w/ TV OUT \$155/199
Nvidia TNT2 Vanta 16M M64 / 32M\$79/112
Nvidia TNT2 Rage 128Pro 32M\$132
Matrox G400 16M / 32M, AGP\$149/189
Graphics Blaster Riva TNT2 Value 32M\$159
Asus V6600 GeForce 256 DLUX 32M\$299
Asus V6800 DDR DLUX GeForce 256\$335
Asus GeForce 256 Pure 64M\$269
Asus GeForce 256 DDR Pure 64M\$409
Asus V7700 GTS 32MB DDR Pure\$469
Creative RIVA TNT2 Pro 128 32M, AGP\$209
Creative Labs 3D GeForce 32M DDR\$379
Logitech Dig.Camera / Sharp PC Camera \$65/Call
ATI TV Wonder PCI\$99

Memory

4M 30 pinCall
4 / 8 / 16 / 32 EDO 72 pinCall
32 / 64 / 128M SDRAMCall
32/ 64/ 128/ 256M SDRAM PC100/133Call

Sound Cards • Speakers

Sound Card PCI Crystal / ESS\$19/21
Creative Ensoniq PCI-64 bit\$35
Sound Blaster PCI 128 / Live value\$44/70
Diamond Monster MX300 3D, PCI\$87
Speakers SB 689/ 3D 105 with subwoofers \$35/55
Altec Lansing ACS 22 / 45-2 / 48\$39/89/189
Multimedia 4-point Surround Speaker System \$89

Monitors

AOC 15"/17" (0.25dp, 1600x1200 Res.) \$179/269
Proview 15" / 17" / 19"\$195/275/419
Samsung 15" (550S) / 17" (750S)\$189/285
MAG 15" / 17"Call
Panasonic 17" E70i .27 / 19" SL90 .25 \$319/635
Sony 15" E100 (0.25) / 17" E200 (0.24) \$299/525
NEC 17" 0.27dp / 0.25dp\$Call/385
Viewsonic E771/ E773/ PF75/ PF790 \$315/375/485/779
Optquest Q51 / Q73 / Q95\$215/310/509

Motherboards

Asus P3B-F/P2 99ATX/P2 99BAT slot1 \$180/140/140
Asus 7VM/ GA-7VM Slot A\$235/165
Abit BF6 / ZM6 / BE6-II / BP6 \$169/135/195/205
Asus P3V-B / P3V4X / ABIT VA6 \$125/159/125
Super7's AT SYE / Gigabyte ATA 66 \$95/103
Super7's ATX Gigabyte GA 5AX / Asus P5A \$105/120

CD-ROM • CD Writer

Acer 40x / 48x / 52x\$53/60/65
Creative 52x/ Panasonic 40x/ Samsung 48x \$63/55/60
Toshiba 40x SCSI / Pioneer 36x SCSI \$139/108
CD-RW Sony / Yamaha / PlextorCall
Creative(Bx4x32) / HP(10x4x32) CD-RW IDE \$335/395
Pioneer 10x / 16xCall
DVD-ROM Toshiba 8x / LG 8xCall

Scanners • Printers

AcerScan 620P / 620UT / 640U\$129/160/135
Brother / Samsung Laser PrinterCall
BJC 2100 USB & Parallel Printer\$119
Epson 440 / 660 / 740 Printer\$150/189/219
Lexmark Z11 / Z31 / Z51 Printer \$105/175/239
HP 840C / 930C / 1100 Printer \$235/309/569

Fax Modems

56k V.90 PCI with voice/ Hardware control \$25/40
USR 56k Int. V.90 voice / without voice \$49/55
Acer 56k with dual standard PCI / ISA \$46/67

This Month's Special

Book PC System
Celeron 466, video, sound, modem
network, TV-out, 32MBPC100, 4.3GB
Floppy Drive & 52XCDROM

\$549

Network products also available.

Corporate Clients Welcome.

• Call for current prices • All prices and product availability subject to change without notice • All advertised prices reflect 3% cash discount • Not responsible for typographical errors • All brand and trademarks are property of respective manufacturers.

Quality products at lowest wholesale prices

The CANADIAN Computer Store

Surf: <http://www.cancomputer.bc.ca/> for latest products & prices

***** Millennium Sales ***** Millennium Sales ***** Millennium Sales ***** Millennium Sales ***** Millennium Sales ***** Millennium Sales ***** Millennium Sales *****

Elite System	Celeron System	Power Works Station	Athlon System	Professional Station	Alpha Net Server
AMD K6II 533MHz CPU Super 7 Motherboard 64MB PC100 RAM Fujitsu 6.4GB Hard Drive Panasonic Floppy Drive 8M 3D Video Integrated 56K FaxModem + free Internet Delta 48x CD ROM Drive PCI 3D Audio on-board 140W Stereo speakers Alpha 15" Tower Case 98 Keyboard & Mouse	Intel Celeron 533 CPU SIS 620 Motherboard 64MB(PC100) SD RAM Fujitsu 10.2GB Hard Drive Panasonic Floppy Drive 8M 3D Video on-board 56K FaxModem, free Internet Delta 48x CD ROM Drive PCI 3D Audio on-board 140W Stereo speakers Alpha 15" ATX Tower Case Win98 Keyboard & Mouse	Intel Pentium III 667MHz GigaByte PC133 Motherboard 64MB PC133 SD RAM Maxtor 15GB ATA66 Hard Drive Panasonic Floppy Drive ATI Xpert 98 Video 8M 3D Motorola 56K FaxModem, free Internet Creative 52x CD ROM Drive Crystal 3D Audio 140W Stereo Speakers Alpha 16" ATX Tower Case 250W 98 Keyboard & Scroll Mouse	AMD Athlon K7-750 CPU Asus K7V(PC133) Motherboard 128MB PC133 RAM Maxtor 20GB 7200 Hard drive Panasonic 1.44MB Floppy Drive ATI Xpert 2000 Video 32M USR 56K FaxModem, free Internet Creative 52x CD ROM Drive AC97 Audio 260W Stereo Speakers Alpha 19" ATX Case 300W 98 Keyboard & Scroll Mouse	Intel Pentium III 733 MHz Asus P3V-4x Motherboard Fast 128MB (PC133) RAM Maxtor 20GB 7200 hard drive Panasonic 1.44MB Floppy Drive Riva TNT2 video 3D 32M USR 56K FaxModem, free Internet Creative 52x CD ROM Drive SB Live Value GNT 5000 Speakers, sub-woofer Alpha 17" ATX Case 250W 98 Keyboard & Scroll Mouse	Intel Pentium III 650MHz CPU Intel L440GX MB, Dual U2W SCSI Dual CPU capable 128MB ECC Memory, 2GB max Fujitsu SCSI U2 hard drive 18G Panasonic 1.44MB Floppy Drive 2MB video on board Toshiba SCSI CD ROM 40x Intel EtherExpress Pro on board NetServer Case ATX 300W, hot swap capable Win98 Keyboard & Mouse
\$520.00	\$589.00	\$899.00	\$1269.00	\$1379.00	\$2359.00

System Options (with System purchase only)			System Upgrade Options: Add		
15" IBM G54 monitor 0.28dp	\$185	Samsung CD ReWriter 6x4x24x	\$229	64M->128MB RAM PC100	86
17" Impression monitor 0.27dp	255	Canon BJC1000 printer (after 20 reb)	69	64M->256MB RAM PC100	257
19" Proview monitor 0.25dp	399	USB Scanner 36bits 600x1200	86	128M->256MB RAM PC133	180
		Logitech Web Camera	66		

***** The Legend continues ***** The Legend continues ***** The Legend continues ***** The Legend continues ***** The Legend continues ***** The Legend continues *****

HARD DRIVES & Controllers

Fujitsu 6.4/10.2/13/17/20G	119/139/159/175/195
Maxtor 15/30/40G	165/259/359
Maxtor 15/20/30/40G7200rpm	195/239/309/399
Quantum 13/17/20/26G	195/219/245/309
Quantum 7200rpm 10/15/20G	199/215/259
W.D. 13/20/30G	169/199/299
W.D. 20/30/40G 7200rpm	239/299/399
SCSI Quantum 9/18G 7200rpm	339/539
SCSI Quantum 9/18/36G 10K	499/769/1279
SCSI Fujitsu U2W 9.1/18.2G	319/489
SCSI Fujitsu 10K 9.1/18.2/36G	459/689/1269
H.D. mobile rack plastic/steel/SCSI	15/22/29

Inkjet Printers

Canon BJC50/85	475/385
Canon BJC1000/2000SE(after \$20 reb)	65/99
Canon BJC 2100/3000(after \$30 reb)	119/189
Canon BJC5100 11"x17"	179
Canon BJC6100 (after \$30 reb)	259
Epson Stylus440(after US\$30/50 reb)	99
Epson 760/860/900 (after rebate)	175/199/399
Lexmark 3200/5770	129/379
Lexmark Z11/Z31/Z51	95/145/239
Printer Adaptor	25

Laser Printers

Brother HL1030 10ppm	375
Brother HL1240/1660E/2060	465/1179/1499
Fujitsu Laser PP10V/16DV/20W	599/859/1439
HP LaserJet 1100	559
Samsung 5100A/6050/6000(after Reb)	289/379/449

Scanner

Acer 320P/640U USB	89/119(after US\$20 rebate)
SilitekUSB 600x1200dpi	89
Canon 330P/630U	88/149(after 30 rebate)
Epson 610U/Perfection photo 1200U	209/439

Zip/Floppy Drive

1.44MB Floppy Drive	17
Zip Drive 100MB	75

CASES

15"/19" Tower Case w/230w	29/39
16"/18"/19" ATX Tower w/250w	38/46/48
19"/24" ATX Tower w/300w	59/79
Power Supply 230/250/300W	25/29/45
Hot swappable Power Supply 300Wx2	435

CPU

Intel MMX 233/Cyrix MX300	75/43
Intel PIII500/533B/533EB	305/305/299
Intel PIII 550E/550/600/ 600B	325/325/399/359
Intel PIII 600E/600EB/650/667	389/329/369/339
Intel PIII 700/733/750/800/866	429/659/669/969
Celeron 500/533/566/600	145/149/209/call/969
AMD K6II 500/550	89/115
AMD K7 600/650/700	259/269/299
AMD K7 750/800/850/900/1G359/459/599/869/1969	

MEMORY

EDO 72pin 16/32M	69/108
SDRAM(PC100)32/64/128/256M	53/82/169/339
SDRAM(PC133)32/64/128/256M	59/86/179/359

MOTHERBOARDS

SIS Super 7 Motherboard w/video,sound	105
Intel Sk370 w/video, sound	89
SIS630 PIII (133) w/video, sound, modem	115
AMD Iron Gate M.B. w/sound,modem,lan	169
Abit BF6/BE6-2/VA6	159/197/125
Abit KA7/BP6	229/159
Gigabyte 6VXE/6VX-4x	109/139
Gigabyte Athlon GA7	199
ASUS P2-99/P3B-F	149/189
ASUS P3V/p3v-4X	135/165
ASUS P5A Super 7 AT/ATX	119/129
ASUS Athlon K7M/K7V	209/239
Acer AX63/64Pro	115/139
MicroStar K7Pro/6195	189/189
MicroStar Super7 5169	109

NETWORKING

3-COM 905B PCI 10/100TX	69
D-Link 538TX PCI	25
Acer/Surecom Ethernet (PCIorISA)	16/14
Acer/Surecom Ethernet PCI 10/100 BaseT19/17	
Soho PCMCIA Networkcard 10or10/10049/83	
10M Hub Accton 5 ports	29
10M Hub 8 ports Acer/Accton	45/45
100M Hub Soho 4 ports	45
100M Hub Wisecom 8 port	89
10/100 Dual Speed Hub Soho 5 ports	99
10/100 Dual Speed Hub Acer 8 Port	128
Ethernet RG58/RJ45 6'/30'/50'/100'5/9/12/19	
Ethernet RJ45 1000' strand	99

MONITORS

15" Samsung LCD Panel	1299
15" Viewsonic LCD VE/VP150	1329/1479
15" Acana/Proview/Azura/Samtron 0.28	179
15" Sceptre Dragon D50X w/speakers	199
15" Sony 110GS /Mag 570FD 0.25dp	309/269
15" Viewsonic Optquest Q51/Q55	209/219
17" Acana/KDS/Impression 0.27dp	259
17" Mag 786FD 0.24dp	439
17" AOC 7Glr 0.25dp	289
17" Acerview G772/Proview 0.25dp	319/279
17" GoldStar Flatron 0.24 775FT/795FT	389/429
17" NEC FE700	399
17" PanaSync E70i/PL70/SL75	319/479/339
17" Samsung 700NF(Flat)/700IFT(after \$50reb)	389/419
17" Sony E200/G200	519/569
17" Optquest Q71/Q75	299/399
17" Viewsonic E771/E773/G773	319/379/389
17" Viewsonic EF70/PS775/PF775	385/459/469
19" GoldStar 995E	499
19" Proview 0.25dp/Samtron 0.26dp	399/429
19" Viewsonic GS790/PF790/Q95	599/669/489
19" Sony G400/E400 .25dp	839/739
19" Samsung 900NF(Flat) 0.25dp (after 50Reb)	599
21" Viewsonic Optquest Q115 0.25dp	959

VIDEO

Logitech QuickCam Home/Express	85/69
SIS PCI 4M / ATI PCI 4M	39/49
SIS AGP 8M/8M TV out	43/52
Asus 3800 TNT2 M64/TVR/Deluxe	129/225/265
Asus V6600 Geforce 32M/Deluxe	259/299
Asus V6800 Geforce 32M Pure/Ultra	289/349
ATI TV Wonder	95
ATI AGP All-in-wonder 128 16/32M	215/289
ATI AGP All-in-wonder 128 Pro 4x 32M	344
ATI AGP XPRT98/Xpert 99 8M	55/85
ATI AGP Xpert 128 16M/2000 32M	109/115
ATI AGP Fury32M/FuryPro/MAXX 64M 159/165/245	
Creative GeForce256 AnnihilatorPro	389
Matrox G400 16M/32M	165/169
Matrox G400 32M Dual 300/366 MHz	219/285
Nvidia TNT2 32M/32MTV	109/125
PowerColor Geforce 32M w/TV	319
S3 Savage4 Pro AGP 16M/TV	69/79
Savage4 AGP 32M	109
Voodoo III 2000/3000/3500	135/169/329

CD-ROM

Acer 52x/48x	59/55
Asus 50x/40x	68/63
Creative52x	59
Delta 48x/Cyber 36x	52/42
CDRW Goldstar/Samsung 4424	219
CDRW 8432Yamaha/Panasonic/Acer 369/279/279	
CDRW 8432 Plectro/Creative	339/339
CDRW HP 8250/9310i	269/389
CDRW Sony 10x4x32	369
External Sony CDRW 4x2x6	389
SCSI CDRW Yamaha 8432	369
DVD/CDRW Combo Memorex	359
DVD III Pioneer 16x	209
DVD III Sony/Panasonic 6x	159
DVD III SCSI Pioneer 6x	195
TecRam 310 SCSI Adaptor	54

Multimedia

16 bit 3D sound card/Acer AW37	15/17
AOpen AW744 Optical Fibre 4 Channel	47
A Sound 3D PCI sound card	17
Aureal Vortex 1/SuperQuad	28/65
Sound Blaster Ensoniq/PCI128/LiveValue32/44/68	
Speakers 120w/500w Subwoofer	9/40
Speakers Flat Panel w/Subwoofer 600W	42
Speakers: Altec Lansing ACS45.2/ACS5482/95	
Speakers: Creative Cambridge/GNT 5000119/53	
Microphone/Headphone w/mic	8/18

FAX/MODEMS

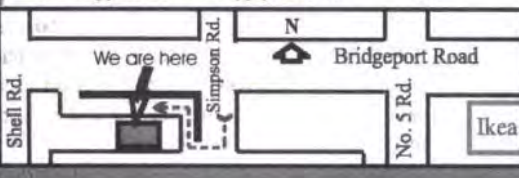
Motorola 56K V.90 DataFax Voice	23
Acer 56K V.90 Voice PCI/ISA	37/66
Diamond Supra 56K V.90 Voice	45
USR 56K V90 PCI	49
USR 56K Hardware modem PCI/ISA	75/89
External FaxModem 56K	89

Keyboard/Mouse

Win95 / Fujitsu/IBM Keyboard	11/18/27
Natural Keyboard	17
2 button Mouse Serial/PS2/USB	6/6/15
Genius/WHN Scroll Mouse	12/14
Logitech 2 Button/scroll Mouse	9/17
PS2 mouse(transparent)/Trackball	8/28
A4 Finger/Wireless Mouse	29/29

Misc.

USB 4 Port Hub/USB Adaptor	39/29
External CD/Hard Dr. kit parallel	99
CDR/CDRW (10 pieces)	15/25
Zip disk / 120MB Floppy	12.9/10.9



#5-11240 Bridgeport Road, Richmond, B.C. Phone: (604)303-2488 Fax: (604)303-2497

Business hours: 11:00 am to 6:00 pm Monday to Friday

12:00 noon to 5:00 pm Saturday

All prices are cash discounted.

Warranty: 1 year parts & 3 years labour

Prices are subject to change without notice



#21-12391 Bridgeport Rd.
Richmond, B.C. V6V 1J4
Tel: (604) 244-0793
Tech: (604) 244-8793
Fax: (604) 244-9762
Web: www.addax.bc.ca
Mon-Sat 10am-6pm

ADDAX

Financing & Leasing

Computer Inc.

Monthly Special

IBM 10.1G Ultra DMA Hard Drive/135
IBM SCSI 4.56G Hard Drive 229
NEC 17" AS70 .27mm Monitor 289
VoodooIII3500 all-in-one Video Card/249
Ricoch 8x4x32 IDE CD-RW Kit 299
Panasonic 8x4x32 CD-RW IDE Kit..269
HP 1220CXI Printer 13"x19"(\$50)..599*
Epson 670 Color Printer 139
Canon Value Pack.....29

Prices are subject to change without notice! System are Internet Ready with 1 month FREE access, 3 years labor & 1 year parts warranty!

Premium System	Workstation	Super Deal	Home Theater	Athlon System
PentiumIII 533/650 \$1219/1269 PentiumIII 667/700 \$1279/1349 PentiumIII 733/750 \$1369/1529 PentiumIII800/850 \$1599/1929 Intel PII Celeron 466 \$1069 Celeron 500/533 \$1079/1089	Intel Celeron 466 \$769 Celeron 500/533 \$779/789 PentiumIII 600 \$999 PentiumIII 650 \$1029 PIII 700/750 \$1099/1269 PIII 800/850 \$1329/1669 Intel i810 Chip MB w/both Slot 1 & Socket 370 on Board 32MB PC-100 SDRAM 10.2G Ultra DMA Hard Drive Panasonic 1.44MB Floppy Drive Intel i810 3D AGP-2x Video 3D Sound w/Digital audio Interface 52x Multiread CD-ROM Win98 Enhanced Keyboard Artech 2B 520 DPI Mouse & Pad 15" Tower Case w/Power Supply 56k V.90 Fax Modem 10/100Mb Auto switch LAN Card 120W Amplified Speakers 15" SVGA/Digital/LR/NI Monitor	Pentium III 600 \$1569 PIII 650/667 \$1579/1585 PIII 700/733 \$1679/1699 PIII 750/800 \$1849/1899 PIII 850/867 \$2239/2449 Asus P3V133 MB w/ATA66/133 FSB 128MB PC-100 SDRAM 20.4G Ultra DMA66 Hard Drive Panasonic 1.44MB Floppy Drive S3 Savage4 AGP 3D 32M Video Pioneer/Afreedy 10X DVD ROM SB Live w/Digital out Sound Card Packard Bell Internet Keyboard Microsoft Wheel (Net) Mouse & Pad ATX Tower Case w/Power Supply 56k V.90 Voice Fax Modem 3D-FX1 500w Speaker w/subwoofer 17" AOC .25mm 1600x1200 Monitor	AMD K7 Athlon CPU: 650/700MHz \$1439/1479 750/800MHz \$1529/1629 850/900MHz \$1769/1999 950/1000MHz \$2199/3099 Impression771AS MB VIA 4X AGP 128 MB PC-100 SDRAM 20.4G Ultra ATA/66 Hard Drive Panasonic 1.44MB Floppy Drive S3 Savage4 AGP 3D 32M Video Pioneer/Afreedy 10X DVD ROM AC97 3D Sound Card Integrated Packard Bell Internet Keyboard Microsoft Wheel (Net) Mouse & Pad ATX Tower Case w/Power Supply 56k V.90 Voice Fax Modem 3D-FX1 500w Speaker w/subwoofer 17" SVGA/ NI/LR/Digital Monitor	AMD K7 Athlon CPU: 650/700MHz \$999/1039 750/800MHz \$1089/1189 850/900MHz \$1329/1579 M800LMR ATA66/200MHz FSB MB 32MB PC-100 SDRAM 10.2G Ultra UDMA/66 Hard Drive Panasonic 1.44MB Floppy Drive S3 Savage4 AGP 3D 16M Video Card 52x Multiread CD-ROM AC97 3D Sound Card Integrated 56k V.90 Fax Modem Integrated 10/100Mb LAN Card Integrated Win98 Enhanced Keyboard ATX Tower Case w/Power Supply Microsf 2B PS2 Mouse & Pad 120W Amplified Speakers 15" SVGA/Digital/LR/NI Monitor
Acer Aopen AX63Pro MB w/Ultra DMA66 & upto155Mhz FSB 64MB PC-100 SDRAM 20.4G Ultra DMA/66 Hard Drive Panasonic 1.44MB Floppy Drive S3 Savage4 AGP 3D 16M Video Creative 52x CD-ROM Creative Ensoniq 128 Voice Sound Windows98 Enhanced Keyboard Microsoft PS2 2B Mouse & Pad ATX Tower Case w/Power Supply 56k V.90 Voice Fax Modem 120W Amplified Speakers 17" SVGA/ NI/LR/Digital Monitor				
With system purchase only: Windows 98 SE Full Ver. CD & Manul/\$139 MS Office 2000 SB/\$280 Pro/\$370 Premium/\$459 Windows 2000 Pro.....\$190 NT 4.0 Workstation /\$170 MS Mouse 2B/Wheel(net) \$8/\$18 MS Natural Keyboard \$38				

Rogers @ Home high speed cable internet Service Kit special (first month free) \$19

Memory	Motherboards	Drives & Controllers	CPUs
72 Pin 8/16/32/64/128M EDO... 29/62/109/189/399 PC-100 SDRAM 32/64/128/256M .. 48/84/169/349 PC-133 SDRAM 64/128/256M 94/179/359	Masonic M756 upto 64M AGP/3D Sound/56k.....\$139 Elite-P6BME(M863) w/3D Sound/56k Modem.....99 Matsonic MS7157 w/VIA 4X AGP/3D Sound.....129 Gigabyte GA-7LXE/7VX/6VX-4X 175/195/149 Impression 771AS K7/VIA 4X AGP/3D Sound..159 ABIT VA6/VT7/BF6 115/149/155 ABIT BE6II/BP6/KA7 179/189/225 Acer Aopen AX63Pro w/Norton Anti-Virus.....119 Acer Aopen Ax64 4xAGP/Norton Anti-Virus....139 Intel 810 Chip w/4M AGP/3D Sound/56k/LAN/129 ASUS P3B-F/CUBX/P2B-LS 179/199/519 ASUS P3V133/P3V4x/4CUV4X..... 135/169/169 ASUS P3C-E/P3C-2000268/209 ASUS PIII P2B-S/P2B-DS/P2B-D.....439/629/389 ASUS Athlon MB K7M/K7V209/229 Asus 512k Cache P5A-B/P5A-A 124/134 FIC 1M Cache VA503+PA2013 119/138 Masonic w/1M cache/3D Sound/upto 8M AGP/119	Fujitsu/Maxtor/seagate/Samsung: 6.8/10.2/15.2G \$119/134/158 20/30.7/40G/61.2178/244/328/444 7200rpm 15/20/30/40G..... 179/235/294/378 Quantum/Western Digital: 10.2/13/20/30G 145/169/195/269 7200rpm 9.1/15/20.5/30G...169/199/238/339 SCSI: QT AtlasIV U2W 9.1/18/36G...\$288/488/1089 Seagate U2W 9.1/18/50G 399/689/1289 IBM 9LP U2W 9.1/18G.....339/529 Adaptec 2940UW/29160 U2W269/379 Adaptec 2903B SCSI Controller 49 Tekram SCSI 315(Ultra) w/Boot-Rom.....59	Intel Pentium MMX 233 \$79 Cyrux M2(MMX) 333/366/400..... 45/69/79 AMD K6II 500/550 82/115 AMD K7- 650/700/750/800... 257/299/359/449 K7- 850/900/950/1000..... 588/838/1029/1899 Pentium III 533/550 Call PentiumIII 600/650/667/700...325/335/339/439 PIII 733/750/800/850..... 469/579/619/999 Celeron 466/500/533/566 129/145/165/199
Video Cards	Sound Cards & Speakers	Networking	Modems
Jaton 3D AGP 4M/ 8M \$29/48 Pine 3D PCI 4M/8M..... 48/58 Power Color 32M Riva TNT2/TV out108/128 Asus 3800 TNT2 Combat /Magic/Pure.109/139/199 Asus V3800 TVR/TVR Delux..... 229/259 Asus V6600 GeForce256 32M Pure/Delux...259/309 Asus V6800 Pure/Delux299/359 VoodooIII 3000(TV out)/3500 All-in-one... 169/239 Voodoo III 2000 AGP/PCI 119/139 Savage4 16M/32M79/109 ATI All-in-Wonder Pro 8M AGP/PCI155/159 ATI All-in-Wonder 128 AGP 16M/32M 208/278 ATI All-in-Wonder 128 Pro 32M 4X AGP 339 ATI Xpert 98 8M/Play PC2TV..... 52/89 ATI Xpert 32M 2000/2000Pro 118/139 ATI Rage128 16M /32M Fury(PC2TV)..... 109/159 ATI Fury Pro 32M/Fury Maxx 64M..... 189/269 Matrox Millennium G400 AGP 16M/32M154/198 Matrox Millennium G400 32M Dual/Max..... 238/278 Matrox Millennium G400 32M Marval 399 TV Tuner & Video Capture w/Remote Controll..129	3D Sound Card ISA/PCI15/18 Aueal Vortex/Diamond MX300/Mx400 79 SoundBlaster PCI 3D/PCI 128 31/43 SoundBlaster Live Value/PCI 512 67/69 GNT Spks. W/subwoofer 5000/7000 52/75 Speakers 120W 8 Creative EPS1000 4Points Surround Spc 98 Yamaha MS30(w/subwoofer) 88 Altec Lansing ACS45.2/48/54 84/165/94 Kinyo Flat Panel Speakers w/Subwoofer 54 3D-FX1 500w Speakers w/Subwoofer 34	Surecom Ethernet Card 10/100Mb..... \$13/17 Surecom 10Mb HUB 5/8/16..... 29/42/109 Surecom 100Mb HUB 5/8/16..... 89/129/299 D-Link 530TX 10/100M Wake on LAN...23 3COM 3C905-TX 100MB PCI 64 Cable Assembly 15/25/50ft 9/12/19 Terminator/RJ45 Connector3/1 USB HUB 4 Port 38	Impression 56k PCI Voice Fax/Modem \$23 PCI 56k Voice Diamond Supra/GVC..... 54/44 Acer 56K Voice V90 PCI/ISA 32/64 USR ISA Real Modem V.90 Voice 115 USR PCI 56k V.90 Real Modem/Voic..... 84/92 USR 56k V.90 PCI Win Modeem/Voic.. 45/54 56k Voice Ext. Retail Box 99 Cardinal 128K ISDN 129
Monitors	Keyboards & Mice	Printers & Scanners	Zip Drivers
SVGA 15"/17"/19" \$179/249/409 AOC .25mm 1600x 17" 7Glr/19" 9Glr..... 269/409 Sony .25mm E200/G200 518/568 Sony E400/G400 738/819 MAG 17" 786FD/19" 810FD 418/718 NEC 17" FE700 .25mm Flat Screen 384 NEC Accusync AS50/AS70/AS90 219/299/549 Samsung Flat Screen 753DF/955DF359/569 LG Goldstar 775F/795FT..... 389/428 ViewSonic17" Q71/G773 299/389 ViewSonic17" E771/E773/PS775 315/374/468 ViewSonic EF70/PF790389 /659 ViewSonic 19" Q95/E790/PS790 489/499/699 ViewSonic 21" G810/P815..... 1089/1249 Mitsubishi Dimond Plus71/91 519/769 Acer 772 17" .25mm 309 Panasonic E70/SL75/SL95299/385/595	Win98 Keyboard PS2/AT \$11/12 PackardBell Multimedia Net Keyboard 19 Fujitsu KB 8725/4725 18/58 Logitech Cordless Keyboard & Mouse Kit 139 Artech 520DPI Mouse 2 B/4D(2 Wheels) 6/25 AOC Finger Trackball Mouse 29 Logitech Mouse 2B/First mouse(wheel mouse).9/18	HP 610/840/895C/930C..... \$149/239/378/299 HP 950C/1220CXI*(\$50) 439/599* Lexmark Z11/Z31/Z51/3200.... 99/159/235/139 Lexmark Printer 2 year extended warranty...19 Canon 1000*/2000*(20)/2100*(30)...78/89/109 Canon BJC 5100/6100..... 189/288 Canon BJC 50/85 469/379 Epson 440*/670/760*(\$45)..... 104*/139/194* HP Laser 1100/2100/3150 559/969/849 Brother HL1020/1240/1250DX.. 329/459/539 Brother MFC -1970/4350/7150...389/569/519 Brother 2400 Color Laser 2289 HP Scanner 4200/5300 199/389 Acer 320P/620P/620U*(\$30)...99*/135/119* Plustek 600CP/1200CU..... 89/149	Iomega Zip IDE 100M Int./Disk \$74/13 Iomega Zip IDE 250M Int./Disk 148/25 LS120 (120M) Super Drive 2x/Disk88/14 Iomega 2G Jaz Diver SCSI 499 Iomega 2G Jaz Disk/2G Tape 125/25
Notebooks	CD-ROM & CD Writer	Accessories	Cases & Misc.
Acer507T CL466/4.8G/64M/12.1"TFT/56K/24x/\$1779 Acer514TXV CL466/6G/64M/14"TFT/56K/DVD/\$2739 Acer730TXV PIII450/6G/64M/14"TFT/56K+LAN/DVD/\$3229 Proxel P3-550/6G/64M/8x DVD/56k/14.1" TFT..\$3269 FujitsuE6150/CL450/6G/64M/14"TFT/56k/24x..... \$2939 FujitsuE6520/P3-450/6G/64M/14"TFT/56k/24x..... \$3259 Toshiba4270X/DVD CL500/6G/64M/14"TFT/DVD/3199 Toshiba4270Z/DVDCL500/12G/64M/15"TFT/DVD/3849 Toshiba4070CDS CL366/4G/64M/13"DSTN/24x...2079 2.5" Hard Drive 6.4/12G..... \$279/399 144Pin SDRAM 32M/64M/128M..... \$79/119/219 PCMCIA 56KFax/Networking Card \$79/59	Aston 50X/52X/56X \$55/58/74 52X Acer/Creative 52x 62/62 SCSI Toshiba 40X CD-ROM 124 Panasonic PD Drive w/650M Rewritable disk..139 Panasonic 8x4x32 IDE Kit 278 Sony CD-RW IDE 8x4x32 Drive/Kit 274/289 Plextor 8x4x32 Retail Box 328 Ricoch 8x4x32 IDE Kit(Software)..... 299 Yamaha 8x4x24 CD-RW Kit IDE/SCSI... 368/388 HP CD-RW 9310i 10x4x32 Retail box 378 Acer CD-RW. 8x4x32 Kit 319 8X DVD-ROM Panasonic 169 10X DVD-ROM Afreedy/Pioneer 199 Blank CD w/case Writable/Rewritable..... 1.6/3.9 Blank CD w/Case 80 Minute 1.9 Logitech USB Video Conference Kit 79	Canon Ink Cartridge BCI-21B /BCI-21C... 9/14 Canon BC-22 Photo Kit 59 Epson Ink Jet Paper (photo quality)15 Epson Printer Cartridge Black/Color14/19 Brother toner TN-200HL/TN-300HL..... 39/39 Refill Kit for Canon,HP,Epson,Lexmark...Call * AFTER REBATE Leasing rate is based on 36 month, 10% buyout and financing is available. All listed prices (reflect 3% cash discount), quantities and specifications are subject to change without notice. All system are tested and burned-in for 48 hours before shipping.	USB Port Controller PCI.....\$39 Ultra DMA66 Hard Drive Controller 59 15/19" Tower Case w/PS 29/42 25" Full Size Tower Case w/PS 79 17/19/25" ATX Tower Case 250w PS..39/48/82 Power supply AT/ATX/Power core 29/39/2 1.44M Floppy Drive Panasonic 17 Removeable Hard Drive Rack 16 5.25" Rack for 3.5" Device6 Hard drive Cooling fan 19 Secondary Case Colling Fan/Slots Fan... 12/19 CPU Cooling Fan K6/PIII 10/19 AMD K7 Ball Bearing Cooling Fan 20 Printer Cable Bi-directional 5 SCSI Hard Drive Cable 3/5 Head 5/8 PS/2 Mouse & Keyboard Adaptor 5 Switch Box for 2/4 Printers 29/39 Switch Box for 2/4 Computers.....29/39 LPT2 Printer Card/Enhanced 17/25
Software	Upgrade Special		
Corel WordPerfect 2000 Suite 39 Corel Draw 8/9 99/199 Microsoft Work Suit 2000 139 Lotus SmartSuite Millennium 19 Set up multiple computers to share one internet account 30	Pii CL533+Intel 810i MB w/3D Sound Card+ +56K Fax+Video(DVD ready)+LAN Card..289		

Photo album software, take three
Continued from page 42

tory and allowing you to double click on a sub-directory and catalogue or view any images there. Images in Photo Explorer can be enlarged, printed, dragged and dropped onto any programs that use pictures. In fact, that is the chief attraction of Photo Explorer—it allows you to see your images and get them into programs that use them. But that is all. It offers no Web publishing feature, ability to set images as wallpaper, or to create slideshows—just quick viewing of your image assets.

ACDSee version 3.0
From: ACD Systems Canada
PO Box 730, Victoria, BC, V8W 2P9
<http://www.acdsystems.com>
Price: free (30-day trial), \$74.93 (downloadable)
Pros: Adds ability to edit/modify image files, and makes it easy to add notes and keywords. Right-clicking on an image brings up most options of all systems.
Cons: A bit slower (320 vs. 410 images/minute) on cataloguing. Only handles image files—no video, sound, animation or other multimedia file types.
Out of the box: Easy CD-ROM install. Minimal manual does not prepare user for dealing with three programs.
Overall rating: 4.3 out of 5

ACDSee is available as photo album trialware from several download sites. A number of dig-

ital camera stores recommend it to their customers. ACDSee catalogues all the image files in a directory at a rate of about 320 images per minute, but once a thumbnail catalogue is created—as in Jasc's Media Centre and PhotoRecall—ACDSee can redisplay an album of thumbnails in about half a second. ACDSee automatically keeps that thumbnail catalogue up to date as images are later inserted or deleted from the directory. Media Centre and PhotoRecall both require the user to request a refresh. However, ACDSee does not allow users to move the thumbnail images around within an album, which the other programs do.

Using ACDSee to drag and drop one or more images into Web development tools like Front Page 2000 or Macromedia Dreamweaver was a cinch. This feature is most helpful when developing a Web page or a presentation, when you want to try out several images. Drag and drop certainly makes trial and error a lot less error prone. ACDSee takes this a step further by really taking advantage of the right-click functions of a two-button mouse.

The pop-up menu is rich with possibilities—print, cut, move, copy, delete, rename, describe, and properties, which are also available in Media Center and PhotoRecall. But ACDSee has added such conveniences as

Wallpaper (make an image your PC's background wallpaper), Convert (convert the image's filetype into one of a half dozen including GIF, JPG, PNG, and TIFF) and PhotoEnhance. ACDSee has a built-in image editor. Compared to Jasc's Paint Shop Pro it is underpowered (it lacks masks and layers, and has minimal effects). But ACDSee has improved the latest version in two critical areas beyond the good cropping and sharpen/despeckle features.

First ACDSee's PhotoEnhancer allows very strong hue/saturation/lightness controls. Add to this brightness/contrast/gamma/white-point/blackpoint sliders, and the most common photo retouching tools are available and in very good form in ACDSee. As well, the program has the ability to search the album of images for specific words used in the keywords list or anywhere in the description or comments fields, then display the filtered album of images. A slideshow of the resulting images is just a right mouse click away. However, users cannot add their own sounds (as in PhotoRecall) or other customizations (as in Jasc's Media Centre).

Conclusions
So how do you pick just one of these programs? Photo Explorer alone does not justify the price of Play's Gizmo MegaPak, but in

combination with say the clock, calculator and calendar tools, Gizmos is a good buy for users who just wanting a simple way to see and move (drag and drop) their image/picture files into WordPerfect, PowerPoint, Dreamweaver or other applications into which they want to insert images.

Jasc Media Center and G&A PhotoRecall allow users to manage images with keywords, create several albums with overlapping images (albums of executive photographs may have some common images with a collection of corporate images), and search keywords within an album. PhotoRecall excels in producing output in slideshows, with sounds and a standalone slideshow viewer. Media Center supports more Web development filetypes—sounds, video, animations, plus the widest selection of image filetypes (more than two dozen).

ACDSee provides a wealth of capabilities beyond our baseline expectations but is not clearly superior to its main rivals from Jasc and G&A. So we leave it to readers to match their specific needs to the these four excellent photo album programs. Whatever your image cataloguing needs, there is now a wealth of solutions. □

Jacques Surveyer is a writer and consultant who can be reached at jbsurv@inforamp.net.

INTODUCING THE NEW SMALLEST
COOLEST DIGITAL CAMERA FOR \$849
THE NEW POWERSHOT S100
DIGITAL ELPH



FREE CASE WITH
THIS COUPON!



E-MAIL SALES@BROADWAYDD.COM

#102 1055 WEST BROADWAY CAMERA(JUST WEST OF OAK) DYLAN

ALWAYS THE BEST PRICE ON DIGITAL
WE CARRY DIGITAL PRINTERS, SCANNERS,
CAMERAS, DIGITAL VIDEO AND SOFTWARE

BROADWAY CAMERA

TEL(604)733-9282
FAX(604)738-9800

UPGRADEABLE Desktop Replacement Notebooks





Perfect Family Notebook

- 12.1" SVGA Display
- 466 MHz Intel Celeron
- 24x CD-ROM

EUROCOM 5100-C3

Starts at **\$1,749.00**



Slim, Light & Cool

- Cool Silver
- Under 5lbs / 1.5" thin
- up to 800 MHz Pentium III

EUROCOM 3420

Starts at **\$2,499.00**



Pure Power

- 14.1" XGA TFT Display
- up to 800 MHz Pentium III
- up to 36 GB Hard Drive

EUROCOM 3100-C3

Starts at **\$2,699.00**



Luxury, Comfort & FireWire

- 15.1" XGA TFT Display
- up to 800 MHz Pentium III
- up to 43 GB Hard Drive

EUROCOM 8500-PS3

Starts at **\$3,399.00**

"Beautiful to behold"
Laptop Buyer's Guide and Handbook

Design
YOUR
Notebook

www.eurocom.ca
EUROCOM
1-877-EUROCOM
(613) 224 6122 ext. 302

AMD K6/K7 Systems

AMD K6-II / K7 700/750/800 CPU
Asus P5A/ Gigabyte K7 Motherboard
64MB PC100 SDRAM
Maxtor 15GB UDMA Hard Drive
Riva TNT2 AGP Video Accelerator, 32MB
56K V.90 Int. Voice Fax Modem
Panasonic 1.44 MB Floppy Drive
Windows 98 Keyboard
Samsung 17" 750S 1280x1024 Monitor, 24(H)mm
17" Tower Case w/ CSA Approved P/S
Acer 40X Int. CDROM Drive
16-bit 3D Stereo Sound Card
120W Amplified Stereo Speakers
Microsoft Trekker 2-button Mouse

\$959 K6II 500
\$1199 K7 650
\$1249 K7 700
\$1339 K7 750

Intel 440BX chipset Performance Systems

Intel Cel 466/500/533/ PIII 600/650/700 CPU
Intel 440BX Chipset AGP Motherboard
64MB PC100 SDRAM
Fujitsu 10GB UDMA Hard Drive
Diamond Speedstar AGP Video, 16MB
56K V.90 Int. Voice Fax Modem
Panasonic 1.44 MB Floppy Drive
Window 98 Keyboard
17" NI SVGA 1280x1024 Monitor, 25mm
17" ATX Tower Case w/ 230W P/S
Acer 40X UDMA CDROM Drive
16Bit 3D Stereo Sound Card
120W Amplified Speakers
Microsoft Trekker 2-button Mouse

\$985 Cel 466
\$1015 Cel 500
\$1029 Cel 533
\$1199 PIII 600
\$1249 PIII 650

Intel Pentium III Business Systems

PIII 600/650/667/700/733MHz CPU
ABIT VA6 VIA Chipset Motherboard
64 MB PC133 SDRAM Memory
Fujitsu 20GB UDMA Hard Drive
Riva TNT2 3D AGP Video, 32MB
Viewsonic E771 17" Color Monitor .27mm
Panasonic 1.44 MB Floppy Drive
Windows 98 Keyboard
16" 250W Deluxe Tower Case
Acer 40X UDMA CDROM Drive
3D PCI Stereo Sound Card
120W Amplified Speakers
Microsoft Trekker 2-button Mouse

\$1295 PIII 600
\$1349 PIII 650
\$1375 PIII 667

Upgrade Options:
64MB-128MB +\$85 17" Viewsonic EF70 +\$85
Canon BJC 1000 +\$65 (After Rebate)

Intel Pentium III Deluxe Systems

Intel PIII 600/667/733/750/800 MHz CPU
Asus P3V4X VIA Chipset Motherboard
128 MB PC133 SDRAM Memory
Quantum 20GB 7200rpm Hard Drive
ATI Expert 2000 AGP Video, 32MB
Panasonic 1.44 MB Floppy Drive
Fujitsu 8725 Windows Keyboard
16" Deluxe Tower Case
Logitech Wheel Mouse
Creative 52X Int. CDROM Drive
Sound Blaster Live Value Sound Card
Deluxe Speakers W/Subwoofer

\$1299 PIII 600
\$1369 PIII 667
\$1429 PIII 733
\$1549 PIII 750

Options:
17" Viewsonic E771 .27/19" PF790.25 \$309/665

ComCanada

COMPUTERS

3090-8888 Odlin Crescent, Richmond B.C. V6X 3Z8

MON-SAT 10:00-6:00 SUNDAY CLOSED

e-mail:salesrep@infinet.net

Tel.: 604-273-5618

Fax: 604-273-7218



Celeron 466 System Special

Intel 440 Chipset AGP M/B
64MB PC100 SDRAM
Fujitsu 6.4GB UDMA Hard Drive
ATI Rage II AGP Video, 8MB
Panasonic 1.44MB Floppy Drive
107 Key Windows 98 Keyboard
Samsung 17" 750S 1280x1024 Monitor .24(H)mm
16" ATX Tower Case w/230W P/S
Acer 40X UDMA CDROM Drive
16Bit 3D Stereo Sound Card
56K Int. Voice Fax Modem V.90
120W Amplified Speakers
Microsoft Trekker 2-button Mouse

\$849 - 300*
\$549 After Rebate
Options:
Lotus Smart Suite 2000 + \$29
MS Windows 98 + \$135
Canon 2100 USB Printer + \$115

Intel Pentium III 600 MHz System Special

Intel Pentium III 600 MHz CPU
Asus P3V VIA Chipset M/B
64 MB PC133 SDRAM
15GB UDMA Hard Drive
3Dfx Voodoo 3 3000 AGP, 16MB
Panasonic 1.44MB Floppy Drive
Windows 98 Keyboard / 120W Speakers
Samsung 17" 750S 1280x1024 Monitor, 24(H)mm
14" ATX CSA Approved P/S Tower Case
Acer 40X UDMA CDROM Drive
16Bit 3D Stereo Sound Card
Microsoft Trekker 2-button Mouse

\$1299 - 300*
\$999 After Rebate
Options:
56K V.90 Int. Voice Fax Modem + \$29
64MB upgrade to 128MB + \$85
Canon 2100 USB Printer + \$115

Samsung Multifunctional Machines

MJ 4500C 5 in 1 Injet Color Machine
Printer + Scan + Copy
+ Fax + PC **\$299**

SF5100P 6 in 1 Laser Machines
Printer + Scanner + Copier
+ PC Fax + Facsimile
+ E-mail Function **\$449** - 50*
\$399 After Rebate

Promotional Price while quantities lasts

Monthly Specials

3COM 3C905 100 NIC	\$69
Fujitsu 6.4GB UDMA Hard Drive	\$125
Fujitsu 20GB UDMA Hard Drive	\$185
Maxtor 30G (7200rpm) Hard Drive	\$305
IBM 4G U2W SCSI Hard Drive	\$199
Pioneer 10X DVD Drive	\$205
Acer 640U Color Scanner	\$125
Viewsonic E771 17" SVGA Monitor .27	\$309
Viewsonic 15" 14750 Monitor .25	\$685
Samsung 15" 750B LCD	\$1249
56K V.90 Int. Voice Fax Modem V.90	\$35
USR 56K V.90 Int. PCI Voice Fax Modem V.90	\$55
Altec Lansing ACS45.2	\$80
Lexmark Z11 Color Printer	\$95
HP 840 Color Printer	\$229
HP 970 Color Printer	\$545
Epson 760 Color Printer (After \$45 Rebate)	\$150
Brother HL 1030 Laser	\$375
Brother 1250 DX Laser	\$545
Brother 1240 DX Laser, 12ppm	\$449
Brother 1270N Laser, 12ppm	\$695

Monitor

Proview 17"/19"	\$259/459
Acerview 54e/77xe/G772 \$209/279/299	
Samsung 17" 750S, .27mm	\$265
Samsung 17" 753 DF .20mm	\$355
Viewsonic E771	\$309
Viewsonic EF70 17" .25mm	\$389
Viewsonic PS775/PF775	\$489/465
Viewsonic E790/PF790	\$495/665
Panasonic SL75/SL95	\$395/815
Sony G200/G400	\$599/849
Sony E400	\$735
NEC AS70/FE700	\$275/379

Hard Drive

Maxtor 6.4/8.4GB	\$125/139
Maxtor 15.0/20.0GB	\$160/185
Maxtor 20.0/30.0GB 7200rpm \$235/305	
Quantum 15/20GB 7200rpm \$199/245	
Quantum 30GB 7200rpm	\$345
IBM 30/40GB 7200rpm	\$315/419
IBM 4.5GB U2W SCSI	\$199
IBM 9.0/18GB U2W SCSI	\$409/545
Fujitsu 6.4/10GB	\$125/139
Fujitsu 20GB	\$185
Fujitsu 27GB 7200rpm	\$325
Seagate Cheetah U2W SCSI 9.1G	\$450
Seagate Cheetah U2W SCSI 18.2G	\$750
Seagate Barracuda U2W SCSI 9.1G	\$389
Seagate Barracuda U2W SCSI 18.2G	\$519
Quantum Atlas IV U2W SCSI 9.1G	\$295
Quantum Atlas IV U2W SCSI 18.2G \$495	

Backupdevice

Panasonic 8432 CD-Rewriter	\$275
Acer 8432 CD-Rewriter	\$319
HP 8250i CD-Rewriter	\$269
HP 9110i CD-Rewriter	\$325
HP 9310i CD-Rewriter	\$385
CDR Media 10PK	\$14.99
ZIP Drive 100/250MB Int. IDE \$79/145	
ZIP Drive 250MB Ext. Parallel/SCSI	\$259
ZIP Disk 100MB	\$14
Panasonic LS120 120MB Drive	\$99
LS120 Disk	\$15
HP Surestore 14G Ext.	\$385
HP Surestore 5G Int. Tape Drive	\$239
Sony 24G Ext. DAT	\$1269
Onstream 30G Int. Tape Drive	\$419

Scanner

Canon 630U	\$175
Acer 320U /640U	\$115/125
HP 3300C/5200C	\$169/175
HP 5300U/6300U	\$399/525
HP 6350C	\$645
HP 6390C	\$1145

Modem

USR 56K V90 Int. PCI (Win)	\$55
USR 56K V90 Int. PCI (Hardware)	\$95
USR 56K V90 Int. ISA (Hardware)	\$105
56K PCI Voice/Fax V90	\$27
Acer 56K V90 PCI INT. Voice/Fax	\$39
Diamond Supra 56K Int. Voice	\$59

Printer

Brother HL 1030 Laser	\$375
Brother HL 1240DX	\$449
Brother HL 1250DX	\$545
Brother HL 1270N Laser	\$695
Brother MFC-4350MC	\$545
Canon BJC 1000/2100USB	\$65*/122
Canon BJC 5100	\$165
Canon BJC 6100	\$269*
Epson Stylus 440/670	\$109*/139*
Epson Stylus 760/860	\$150*/199*
HP 840C Color	\$229
HP 950C Color	\$429
HP 970C Color	\$545
HP 1220CXI	\$665
HP Laserjet 1100/1100A	\$565/725
HP 5000N Laser	\$3050
HP 8000N Laser	\$3750
HP Laserjet 4050TN	\$2299
Lexmark Z11	\$95
Lexmark 3200	\$129
Lexmark Z31 Color	\$245

*After Rebate

Multimedia

Acer 40X CD-Rom Drive	\$55
Acer 52X CD-ROM Drive	\$69
Creative 52X CD-ROM Drive	\$69
Panasonic DVD 8X Drive	\$175
Pioneer DVD 10X Drive	\$205
Pioneer DVD 16X Drive	\$219
Toshiba DVD-3 KIT	\$269
SB Compatible Sound Card	\$19
SB 128PCI Sound Card	\$49
Sound Blaster Live Value	\$75
Creative PCWorks4-PT SPK w/woofer	\$105
Altec ACS 45.2 SPK w/Subwoofer	\$89
Yamaha M28 w/Subwoofer	\$120
GNT 5000A SPK w/Subwoofer	\$58
Pair of 120W Speakers	\$12

Network

3COM 3C905 10/100 NIC	\$69
Intel 10/100 NIC	\$69
Acer 10BT NIC	\$19
D-Link 10/100 NIC	\$25

Video Card

Asus V6600 Pure, 32MB	\$329
Asus V6800 Deluxe, 32MB	\$359
Asus V7700 Geforce-2, 32MB	\$459
ATI Xpert 98(8M)/99(8M) AGP	\$65/89
ATI Xpert 2000, 32MB	\$115
ATI Rage Fury 32M AGP	\$195
ATI All-in-Wonder 128, 16MB	\$225
ATI All-in-Wonder 128Pro, 32MB	\$375
ATI Rage Fury Max, 64MB	\$295
3D fx Voodoo 3000 (Retail)	\$199
3D fx Voodoo 3-3500 AGP, 16 MB	\$250
Matrox G400 D/H 32MB	\$229

Motherboard

ASUS P5A/P5AB	\$125/119
ASUS P3V4X	\$169
ABIT VA6 VIA w/ Audio	\$130
ABIT VT64X VIA	\$155

Notebook

IBM i1420 C433/32M/4.8G/24X/56K/12.1HPA	\$1,788
i1482 C500/64M/12G/DVD/56K/14.1TFT	\$3,090
i1540 C433/64M/4.8G/24X/56K/12.1TFT	\$2,449
390X PIII450/64M/12G/24X/56K/14.1TFT	\$3,369
390X PIII500/64M/12.0G/24X/56K/15TFT	\$4,299
600X PIII650/64M/12G/DVD/56K/13.3TFT	\$5,449

Toshiba 4070CDS C366/64/4.3/24X/56K/13.1DSTN	\$2,050
4260XDVD PIII450/64/12/DVD/56K/14.1TFT	\$3,715
4270XDVD C500/64/6/DVD/56K/14.1TFT	\$3,149
4270ZDVD C500/64/12/DVD/56K/15TFT	\$3,835
8100DVD PIII650/128/18/DVD/56K/14.1TFT	\$4,800

Acer 517TE PIII366/64M/4.1G/24X/56K/13.3TFT	\$2,899
506DX C433/32M/4.8G/24X/56K/12.1HPA	\$1,699
514TXV C466/64M/6G/DVD/56K/14.1TFT	\$2,849
723TXV PII400/64M/10G/DVD/56K/14.1TFT	\$3,849

Fujitsu E5140 C433/64M/6.4G/24X/56K/13.3TFT	\$2,499
E6530 PIII500/128M/10G/DVD/56K/14.1TFT	\$4,495

Upgrade Specials

133MHz VIA Chipset MotherBoard	
32MB PC100 SDRAM - 14"ATX Tower Case	
3D AGP Video Card, 4MB	
Intel Celeron 466/500	\$345/375
Intel Celeron 533	\$395

Limited quantity. Prices are cash discounted and subject to change without notice. Call for the current prices.



PowerSonic

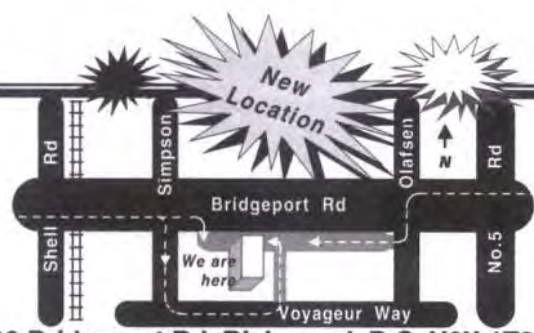
We have been servicing customers in great Vancouver area for 4 years.

104-11400 Bridgeport Rd, Richmond, B.C. V6X 1T2

Business Hours: Mon ~ Sat 10:00am - 6:30pm

Tel: (604) 214-9316, 214-9326

Fax: 214-9317

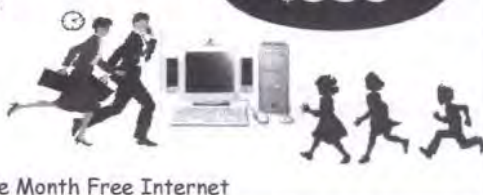


Monthly Special

Intel Celeron 500 System

\$639

PentiumIII Motherboard ATA66
64M PC100 SDRAM
AGP Video / 48x CDROM
6.4G Hard Drive / 1.44M FDD
Keyboard / Mouse / ATX Case
3D Sound / 140w Speakers
56K V.90 Voice/Fax Modem + One Month Free Internet



It's time to upgrade!

Labor Included

K6II-500 + Super7 MB + Video + Sound
+ 64MB SDRAM.....**\$309**
Celeron 500 + i810 MB + Video + Sound
+ 64MB SDRAM + ATX Case **\$419**



Prices are cash / Interac discounted.

Price and availability subject to change without notice. We reserve the right to correct typographical errors. All trademarks & brands are properties of their respective owners. MicroSoft products will be sold with new system only.

Super Buy - While quantity last -

BASF Blank CD w/Case.....**\$1.49**
17" .25 7GLR AOC Monitor.....**\$259**
Keyboard + Mouse Combo.....**\$18**
Panasonic 8432 CDRW.....**\$279**
Wireless Wheel Mouse.....**\$26**
PCMCIA Network Card.....**\$49**

All systems are backed with 3 years installation labor/ 1 year parts warranty plus 1 month free Internet.

Home Officer

K6II-500.....\$509

K6II-550.....\$529

Super7 100mhz Motherboard
32M 100mhz SDRAM
8MB 3D AGP Video
6.4G ATA66 HDD
48X CDROM / 1.44M FDD
Mouse / Keyboard
3D Sound / 140w Speakers
56K V.90 Voice/Fax Modem

Athlon K7 Master

K7-650.....\$1079 lease \$39/mth

-700.....\$1119
-750 / -800.....\$1169 / \$1269

Gigabyte K7 Motherboard
128M 133mhz SDRAM
32M AGP Video Card
13G 7200rpm HDD / 1.44M FDD
48X CDROM / 300w ATX Case
Logitech Mouse / Keyboard
3D Sound / 140w Speakers
56K V.90 Voice/Fax Modem

PIII Partner

Celeron 500.....\$719

-533 / -566.....\$729 / \$779
P3-550E / 600EB.....\$889 / \$899
-667EB / 733EB \$919 / \$1009

Pentium III 133mhz Motherboard
64M 133mhz SDRAM
ATI 8MB AGP Video Card
6.4G ATA66 HDD / 1.44M FDD
48X Ultra DMA CDROM
Logitech Mouse / Keyboard
3D Sound Card / 140w Speakers
56K V.90 Voice/Fax Modem

PIII Commander

P3-550E.....\$1119 lease \$40/mth

-600EB / 667EB.....\$1129 / \$1149
-733EB / 800EB.....\$1239 / \$1479

Asus PIII 133mhz Motherboard
128MB PC133 SDRAM
32MB AGP Video Card
13G 7200rpm HDD / 1.44M FDD
48X Ultra DMA CDROM
3D sound Card / 140w Speakers
Logitech Mouse / Keyboard
56K V.90 Voice/Fax Modem

Dream Machine

P3-733.....\$2629 lease \$95/mth

-800.....\$2869
Asus PIII 133mhz Motherboard
256MB 133mhz SDRAM
Asus V6800 GeForce 32M AGPx4
40G 7200rpm HDD / 1.44M FDD
16X DVD / Panasonic 8432 CDRW
Sound Blaster Live value
Altec 54w Subwoofer + 4Speakers
Logitech Wireless KB & Mouse
USR 56K V.90 Voice/Fax Modem

Leasing / Financing available.

Please check our web site www.powersonic.bc.ca for updated prices.

Price and availability subject to change without Prior notice.

CPU

OverClocker's Favorite CPU Cooler	29
Asus 370 to Slot1 CPU Adapter 100/133mhz	25
Celeron 500 / 533 / 566(II)	149 / 159 / 209
100mhz PIII-550E / 700E	309 / 419
133mhz PIII-600EB / 667EB	319 / 339
133mhz PIII-733EB / 800EB	429 / 669
133mhz PIII-866EB	969
K6II-450 / 500 / 550	85 / 95 / 115
Athlon K7-550 / 650	199 / 249
Athlon K7-700 / 750	289 / 339
Athlon K7-800 / 850	439 / 569
Athlon K7-900 / 950	819 / 989
Intel Pentium 233mmx	79

MEMORY

	16M	32M	64M	128M	256M
100mhz SDRAM	49	95	175	349	
133mhz SDRAM		99	185	359	
72pin EDO	65	105	185		

MOTHERBOARD

ATA66 PCI Controller Card	45
Super7 (AT) + Creative Sound 2DIMM 2SIMM	105
Super7 + 8M Video + Sound + Modem	129
Asus Super7 P5A (ATX)	125
Asus Super7 P5AB (AT)	119
Asus K7V Athlon KX133 ATA66	225
ABIT KA7 Athlon KX133 ATA66	225
Gigabyte 7VX Dual Bios KX133 w/Audio	199
PIII i810 + AGP + Sound ATA66 (ATX)	129
Asus P3V4X 133Mhz ATA66	159
Asus CUV4Xm 133Mhz ATA66 S370 w/Audio	159
Asus P3BF 440BX	179
Gigabyte 6VXE+ 133Mhz ATA66	109
Gigabyte 6VX4X 133Mhz ATA66 Dual Bios	139
Gigabyte 6VX7-4X 133Mhz ATA66 S370	139
AOOpen AX63Pro / AX64 133Mhz ATA66	109 / 135
ABIT BP6 Dual CPU ATA66	199
ABIT VA6 133Mhz ATA66 w/Audio	119

HDD / LS120 / ZIP

5400rpm 6G 8G 10G 15G 20G 30G 40G	
Fuj/Max 119 139 149 169 189 249 349	
7200rpm 10G 13G 15G 20G 30G 40G	
Max/Fuj 169 179 189 239 299 389	
QTM/WD 179 199 249	

LS120 2x 120mb Super Drive / Disk	89 / 14
Zip 100MB Int IDE Drive / Disk	85 / 13
Zip 250MB Int IDE Drive / Disk	159 / 25

VIDEO

Asus Geforce 64M 256 / DDR pure	269 / 399
Asus V6600 / V6800 GeForce 32M	299 / 339
Asus V7700 GTS DDR 32M pure	459
Asus V3800 TNT2 / Pro 32M pure	129 / 179
Asus V3800 TNT2 Ultra 32M pure	199
Creative Annihilator Pro DDR 32M	399
Creative Geforce II 64M	call
Matrox G400 Dual VGA 32M / 16M	239 / 169
Diamond Savage4 32M / 16M AGP	99 / 89
Sniper TNT2 32M AGPx4 / Pro	109 / 129
Sniper TNT2 32M AGPx4 TV In&out / out	149 / 129
ATI Xpert 98 8M / 128 16M AGP	55 / 119
ATI Xpert@play PC2TV 8M AGP / PCI	69 / 89
ATI Fury Pro 32M / Maxx 64M AGP	199 / 319
ATI All-in-Wonder 128 16M AGP / PCI	209 / 235
ATI All-in-Wonder 128 32M AGP / PCI	289 / 309
ATI All-in-Wonder PRO 128 32M	359
ATI TV-Wonder Tuner & Capture Card PCI	99
3dfx Voodoo3 2000 16M AGP / PCI	129 / 139
3dfx Voodoo3 3000 16M AGP / TVout	179 / 199
PCI 8M 3D S3 Trio	59
Logitech Quickcam Exp / Web USB	59 / 119

AUDIO

Crystal 3D Sound Card ISA / PCI	17 / 19
Sound Blaster Ensoniq / PCI 128	31 / 44
Sound Blaster Live value / Platinum	69 / 269
Multimedia Speakers	8 & up
GNT5000A Subwoofer + Speakers	52
Cambridge Subw + 4 Speakers SRSound	109
Altec Lansing ACS33w / 45w / 48w	59 / 89 / 165
Altec ACS54w Subw + 4 Speakers (Black)	95
Microphone / Headset Mic + Vol Control	6 / 12

CD-ROM / CDRW / DVD

48X Liteon / Aopen CDRW	56 / 58
52X Creative / 50X Asus	63 / 69
Adaptec EZ CD Creator	19
Panasonic 8x4x32x CDRW IDE	279
Creative 8x4x32x CDRW IDE	319
Yamaha 8x4x24x CDRW IDE / SCSI	339 / 339
Sony 10x4x32x CDRW IDE	299
HP 8x4x32x CDRW IDE9110	329
HP 10x4x32x CDRW IDE9310	379
8X Asus DVD	179
16X Pioneer DVD	219
Sigma Hollywood DVD Decode Card	call
Blank CD Recordable / Rewritable	1.49 / 3.5
Blank CD Spindle 50pcs / 100 pcs	59 / 99
80min Blank CD Recordable	2.5 & up
Platinum 8xRecordable CD	15 / box

MODEM / NETWORK

Motorola 56K V.90 V/F WinModem PCI	25
AOOpen 56K Voice Modem ISA / PCI	69 / 45
USR 56K WinModem / Voice PCI	49 / 55
USR 56K HardWare Modem / Voice PCI	79 / 99
PCMCIA 56K V.90 Modem	79
Surecom Ethernet 10mbps / 100mbps PCI	15 / 22
AOOpen RJ45&BNC Combo 10mbps PCI / ISA	19
AOOpen Fast Ethernet Card100/10mbps PCI	23
D-Link 530TX 100/10mbps PCI	23
3COM 3C905 100/10mbps PCI Wake-on-lan	69
Surecom PCMCIA Network Card 10mbps	49
Surecom PCMCIA Network Card 10/100mbps	79
Surecom HUB 5 / 8 Port 10mbps	35 / 49
Surecom HUB 5 / 8 Port 100/10mbps	69 / 139
USB HUB 4 port in different colors	49
Network Cable 10 / 20 / 30 / 50' / 7 / 10 / 15 / 19	

MONITOR

AOC .28 Low Radiation	179
Samsung / Optquest	199 / 219
ViewSonic / Sony	239 / 299
17"	
AOC .25 7GLR	259
ViewSonic .27 E771 / .25 EF70	315 / 389
.25 PF775 / .25 PS775	479 / 469
.27 M70 / .26 GS773	409 / 419
.27 Q71 / .25 Q75	309 / 409
Sony .24 G200 / .24 E200	569 / 519
Samsung .27 750S / .24 753DF	279 / 359
.25 700NF	429
NEC .25 FE700 / .27 AS70	389 / 329
Panasonic .27 E70i / .25 PL70	309 / 479
19"	
AOC .26 9VLR	379
ViewSonic .26 E790 / E790Black	519 / 569
.26 GS790 / .25 PS790	599 / 719
.25 PF790 / .25 PF795	669 / 799
Optquest .27 Q95	499
Sony .24 G400 / .24 E400	829 / 749
Samsung .26 900SL / .26 950P	539 / 499

PRINTER / SCANNER

Canon BJC-1000* / 2000* Color	call
Epson Stylus 440 / 660	149 / 199
Lexmark Z11 / Z31 / 3200	99 / 175 / 145
Okipage 6W Digital LED Printer 6ppm	239
Samsung 5100A 8ppm 4MB 1200dpi	329
Brother Laser HL-1030	369
Acer 620S / 640U / 640BU	139 / 129 / 169
Acer 620UT USB Transparency Capable	209

Keyboard & Mouse

Keyboard + Mouse Combo	18
Color keyboard + Mouse Transparent	25
Internet Keyboard / Logitech	19 / 35
Chinese Keyboard (blue / white)	19
Fujitsu 8725 Keyboard	18
Logitech Cordless KB&Mouse	129
MS Natural / Internet Keyboard*	35 / 29
MS Wheel Intellimouse*	24
Wireless Mouse with Wheel	26
2B Serial / PS2 Mouse	8
Wheel Mouse / Logitech	12 / 18
TrackBall Mouse / Finger TrackBall	29 / 25
USB Mouse	10
PS2 ↔ AT Keyboard Adapter	5
Keyboard Drawer	18

Cable

Cables for Monitor/KB/Mouse/Modem etc	7
Magnetic Shield Monitor Cable	19
Printer Cable (Bi-Directional) 6' / 15'	7 / 15
IDE Cable 18" / 33" / ATA66	3 / 6 / 9
SCSI Cable with 3 / 5 / 7 Connector	6 / 8 / 12
SCSI External Cable	19 & up
Power Cord / Split / Bar	2 / 3 / 9
5x6BNC RGB VGA Cable	25

Others

Ethernet Cable Crimp tools / Tester	26 / 79
486 / Pentium / AMD CPU fan	9 / 8
Dual Fan CPU Cooler for K7 CPU	25
Slot Fan ideal for OverClocking	15
CPU Cooler ideal for OverClocking	15 & up
Heatsink Compound / Thermal Paste	2
Case Fan 3pin / 4pin Ball Bearing	15 / 12
HDD Cooler / HDD Ventilator	17 / 29
Mobile Rack w/ fan / ATA66	17 & up / 35
Mounted Frame for FDD / HDD	6
Switch Box for Printer 2 / 4 port	15 / 19
Switch Box for Monitor 2 / 4 port	15 / 19
Switch Box for System 2 / 4 way	28 / 39
Printer Card / Enhanced	16 / 24
Monitor Screen Filter 15" / 17" / 25" / 39" & up	25 / 39 & up
SCSI Card DC315U / DC390F	55 / 129
SCSI Adaptec 2906 / 2930U	79 / 139
15"-25" Case AT / ATX Various Styles 29&up	
Power Supply AT 230w / 250w	25 / 30
Power Supply ATX 250w / 300w	35 / 50
Anti-Static Wrist Strap	9
PS2 Port / USB Port for Motherboard	6 / 16
PCI to USB Converter Card	45
MS Windows98 Upgrade 2nd Edition	129
MS Windows2000 Professional*	199
Norton Anti Virus 2000	39

More than just a mouse or keyboard

When it comes to interacting with your computer, there's a lot more to consider than simply point and click

By Ross MacDonald

Largely taken for granted, as we are dazzled by more glamorous peripherals, the lowly keyboard and mouse—or track-

ball—are, along with the monitor, the devices with which we become most intimate in the course of our computing. The advent of the Internet, as well as the corresponding expansion of tasks we now regularly do on our com-

puters, has led many of us to consider more seriously the comfort, convenience and design of these most primary input devices.

Computer manufacturers too have been looking closely at the mouse and keyboard in

attempts to balance optimum comfort and usability with reasonable cost. In terms of design, you now see numerous shapes and sizes of mice and trackballs, largely to accommodate individual taste and comfort but also because different shapes and sizes are best suited to different tasks.

Technologically speaking, there has been a push toward cordless devices as well as the more recent implementation of "force feedback"—a technology that actually communicates physical sensation to match what's happening on screen. While force feedback was immediately adopted by gamers (steering wheels that let you "feel" the bumps in the road, or joysticks that recoil when shooting), the technology is slowly being adapted to standard productivity applications too, so that we can feel when the pointer is over an icon or hot spot.

"Logitech is currently putting a very strong emphasis on cordlessness," says Brian Ritchie, a representative for this major manufacturer of mice, trackballs, keyboards and gaming paraphernalia. "We feel that the fewer wires you have on your desk the better, and radio input [Logitech's wireless devices operate using a radio frequency, or RF, signal] devices like keyboards, trackballs and mice certainly help to keep the work area clear." Apparently, the public likes the idea of wireless devices too. "If you look at cordless in general and the reason there's such a wide variety of cordless products, it's simply because people want them. That's evident both by sales and the feedback coming in to the industry," he says.

Mice come in various shapes and colours to appeal to a broad range of tastes. Trackballs offer even more variety: button and ball placement as well as body shape can create completely different computing experiences. I use a large-balled Logitech Trackman Marble FX in which the ball is controlled by my index finger and the buttons pressed by thumb and ring finger. Things get a bit confusing when I visit a friend who uses a small-balled trackball controlled by the thumb with the buttons falling under my index finger and other digits.



1266 West Broadway, Vancouver, B.C. V6H 1G6 (Oak & Granville)
Business Hours: Mon-Sat 11:00-19:00 • Sun 12:00-16:00

Generic sales & service
COMPUTER

TEL (604) 731-1218 FAX (604) 731-1273 Visit us @ www.genericcomputer.bc.ca

Special

Basf 74min./650MB CD-R (10 pcs.) \$9.9
Canon BJC-1000B/SE Color printer \$49*

All systems come with:
1 year parts and
2 years labour warranty
& 1 month Free Internet

Intel Celeron 466

Pentium II AT M/B
32MB SDRAM
1.44MB Floppy Drive
6.4GB UDMA Hard Drive
36X UDMA EIDE CD-ROM
AGP SVGA Video Card
Integrated Stereo Sound
56K V.90 F/D/V Modem
Win Keyboard & Mouse
Amplified Speakers
15" AT Tower Case
\$479
Best Deal in Town!

Intel PIII-500

P II/III MotherBoard
64MB PC100 SDRAM
1.44MB Floppy
10.2GB UDMA Hard Drive
40X UDMA EIDE CD-ROM
8MB AGP SVGA Video Card
PCI 3D Sound
56K V.90 F/D/V Modem
Win Keyboard & Mouse
Power Amplified Speakers
16" ATX Tower Case
\$749
Intel PIII Powered

Intel PIII 600EB

Aopen AX63pro VIA Apollo ATX M/B
128MB PC100 SDRAM
1.44MB Floppy
13.2GB UDMA/66 EIDE HD
44X UDMA EIDE CD-ROM
nVidia TNT 32MB AGP Video Card
SoundBlaster Ensoniq PCI
56K V.90 F/D/V Modem
17" ATX Tower Case w/250W
Multimedia Keyboard
PS/2 Wheel Mouse
260W Multimedia Speakers
\$999
133 FSB
Powered by nVidia TNT2

Intel PIII 733EB

ASUS P3V VIA Apollo ATX M/B
128MB PC133 SDRAM
1.44MB Floppy
20.2GB UDMA/66 HD
44X UDMA EIDE CD-ROM
ATI Xpert2000 32MB AGP Video Card
SoundBlaster Live! Value
56K V.90 F/D/V Modem
19" ATX Tower Case w/250W
Multimedia Keyboard
Logitech Wheel Mouse
Altec Lansing ACS33 Sub+Spk
\$1299

AMD Athlon 700

Asus K7V KX 133 M/B
128MB PC100 SDRAM
1.44MB Floppy Drive
PCI 128 Sound
44X UDMA EIDE CD-ROM
13GB (7200rpm) UDMA/66 HD
ATI Rage Fury 128 w/32MB PC2TV
56K V.90 F/D/V Modem
16" ATX Tower Case w/CWT 300w P/S
Win Keyboard & Mouse
Power Amplified Speakers
\$1199

Windows 98 SE CD & Manual (OEM)

\$129
Windows 2000 Pro
CD & Manual (OEM)
w/System Purchased ONLY
\$199

Samsung SF-5800P

All-In-One 600dpi Laser Jet
\$449*
17" Samsung 700 IFT
Flat Tube 1600x1200 .25 dp
\$329*
17" Samsung 750S
1280x1024 .27 dp
\$259

Accessories

Blank CD/80min. \$0.69/1.19
BASF CD/CD-R-W. \$0.99/\$4.49
Memorex 74min. CD-R (10pcs) \$9.9
Amplified Speaker \$9
Logitech wheel Mouse \$15
100MB Zip Disk/1.44MB FDD \$12/17
Win98 PS2/AT Keyboard \$9
5Com Palm V/ VX \$419/499

Web Camera (USB)

CreativeWeb Cam Go \$189
Liteon PC Camera \$119
Logitech Home Camera \$119
Logitech QuickCam Express \$59

Case

15" Tower w/230W AT \$29
16/17/19" Tower w/250W ATX \$39/45/49

Modem & Network Adaptors

Int./Ext 56K V.90 D/F/V \$25/79
Aopen ISA 56K V90 non-win \$65
USR PCI win/ISA non-win 56K V90 \$55/99
PCMCIA 56K v90 \$79
Ethernet ISA Adaptor Card \$15
D-Link 530TX PCI 10/100 \$22
Intel Pro 100 PCI \$75
PCMCIA 10T Adaptor \$59
3-Com 3C905-B NIC \$65
D-Link 5/8 port 10/100 Hub \$49/69
3-Com OfficeConnect 4/8 \$69/109
RJ-45 cable 10/25/50ft \$5/10/15

Motherboard

Asus P5A / P5A-A Super7 ATX \$125/135
Aopen AX63 / AX64 VIA Coppermine \$119/139
Abit VA-6 / VT6 w/128 Sound \$129/155
Abit BF-6 / BE-6 II/BI-6 \$159/179/199
Abit KA7 K7 ATX KX133 \$219
Asus CUBX 1440BX ATX \$189
Asus P3B-F / 1394 1440BX \$179/269
Asus P3V-4X / CUV-4X M AGP \$155/159
Asus K7M K7 ATX KX133 \$229
Asus P2B-D / S / DS \$369/445/629

CPU & RAM

Celeron 466/500/533 \$129/149/169
Celeron II 600 \$Call
PIII 500/ 550/ 600/ 633/ 600 (PC133) \$Call
AMD K6-2 450 / K6-3 400/ 450 \$85/115/Call
AMD Athlon 500/ 550/ 600/ 650/ 700 \$Call
32/ 64/ 128MB PC100 SDRAM \$Call

Sound Card & Speakers

Sound Blaster 128 PCI \$45
SB Live Value/ Live Platinum \$68/249
Aureal Vortex 1 / Vortex 2 A3D PCI \$52/68
Creative Cambridge PCWork 4point Speaker with Subwoofer/ FPS2000 Digital \$99/189
Creative Home Theatre 5.1 \$349
Altec Lansing ACS33 w/Subwoofer \$55
Altec Lansing ACS45.2 w/Subwoofer \$79
Altec Lansing ACS64 4 point w/Subwoofer \$89
Altec Lansing ACS48 w/Subwoofer \$175

Monitor

15" Samsung 550S .28dp SVGA \$185
17" NEC AS70 .27dp \$299
17" Samsung 750S .27dp/750B .26dp \$259/319
17" MAG XJ 768FD .24dp \$389
17" OptiQuest Q73 / V75 \$439/499
17" Viewsonic E771 .27dp/PP775 .25dp \$305/465
17" Viewsonic EF70 .25dp \$389
17" LG 775 1024x768/795+1600x1024 \$359/439
17" NEC FE700 .25dp \$385
19" Samsung 700NF .25dp \$429
19" Samsung 950S/900SL \$469/499
19" Samsung 900NF .25dp \$629
19" Sony G400 .24dp Flat Tube \$619
19" NEC FE950 .25dp 1792*1344 \$649
19" Viewsonic E790 .26dp \$499
19" Viewsonic PS790/PP790 .25dp \$689/659

Video Adaptors

ATI Rage Fury AGP 32MB PC2TV \$159
ATI All in Wonder 128 16/32MB AGP \$199/289
ATI All in Wonder 128 Pro 16/32MB AGP \$239/339
ATI Rage Fury Maxxx 64MB AGP \$259
ATI TV Wonder Tuner \$90
Asus TNT2 V3800 TVR 32MB/ Ultra \$239/269
Asus GeForce 32MB V6800/ Delux \$319/349
Asus GeForce DDR 32MB V6800/ Delux \$289/399
Asus GeForce-II V7700 \$Call
Diamond Viper II 32MB W/ TV out \$209
Creative GeForce Annihilator Pro w/32MB AGP \$369
Voodoo3 3000/3500TV in/out 16MB AGP \$169/269
Matrox Millenn. G400 16/32MB Single Head \$159/209
Matrox Millenn. G400 32MB/Max Dual Head \$239/279

Hard Drive (IDE)

6.4/10.2/13.2/17.2 GB \$119/135/159/175
20.4/30.4/40.2GB (5400rpm) \$189/249/349
Maxtor 13.3/30.4/40.2GB (7200rpm) \$189/299/389
Quantum 13.3KX / 20LM (7200rpm) \$189/239
Seagate 20.5GB (7200rpm) \$229

CD-R & CD-Rewriter

100MB Int. IDE Zip Drive \$69
40X UDMA CD-ROM \$49
Creative 52X EIDE CD-ROM \$59
Pioneer 16X DVD 40 CD Int. IDE \$219
Samsung 6x4x24 int. IDE \$219
HP 8250i 4x4x24 int. IDE \$259
Acer 8432 8x4x32 int. IDE \$279
Panasonic 8x4x32 int. IDE \$279
HP 9110i 8x4x32 int. IDE \$319
Yamaha 8x4x24 int. IDE/SCSI \$319/349
Plextor 8x4x32 int. IDE \$329
HP 9210 8x4x32 int. SCSI \$529

Printer Fax & Scanner *after mail-in rebate

Canon 1000/2000 Color \$49*/149*
Epson 670 Color \$129
Epson 740 Photo Color \$155*
Canon 5100 Color \$229
HP Deskjet 1100CXI Prof. Printer \$559
HP Deskjet 1120CXI Prof. Printer \$659
HP 1100A All-in-one Printer P/F/S/ \$629
MAG DTS-3060P 36-bit \$79
HP 6300C SCSI/USB Scanner 1200dpi \$509
HP 4200C/5200C (USB Scanner) \$189/259
Acer 320P Scanner \$99

* Price & spec. are subject to change w/o notice • All prices reflect to cash discount • All product names, trademarks are properties of their respective owners •

Game controllers, including steering wheels, were some of the first PC devices to incorporate force feedback technology.



However, there is some pragmatism behind many of these design variations. In the case of large versus small trackballs, larger, heavier balls are easier to manipulate because they have greater surface area and momentum. This makes them well-suited to applications like graphics or multimedia. The smaller version work very well in less pointer-intense contexts like spreadsheets and word processing. Button placement, on the other hand, is strictly a matter of taste, although you'll find most manufacturers try to make the button locations as natural as possible.

Compaq Computer Corp. operates an internal consulting group called the Human Factors Lab that studies the efficiency and usability of product design. One interesting thing the lab has discovered is that the drivers and settings for input devices are at least as influential as the physical design itself, says Meera Manahan, who manages the lab.

"Ergonomics is one of those very flexible words in our vocabulary right now," she says, "but we do quite a lot of testing on input devices at the Human Factors Lab to look at many different characteristics: everything from auditory feedback and tactile feedback to the colour and how the device will help you input more accurately and quickly. But, we also go to great pains to figure out the optimal driver settings for these devices—pointer speed and acceleration, keyboard key travel and feedback, even audio feedback when clicking or typing. We've found that those things influence the usability of an input device over time as much as the hardware design itself... if not more."

It's a similar story at Microsoft Canada, according to Natalie Tehrani, marketing manager for hardware. "The software that comes with mice is becoming more and more sophisticated. We've found research showing that heavy computer users like to customize their mouse settings, for example. So you'll now find there is more possibility in the software to customize settings and alter features to suit individual needs and tastes. There's even a feature now that will tell you how far your mouse has travelled. People like stuff like that."

Clickety-clack

Despite being restricted by the ubiquitous QWERTY layout, keyboards too are subject to a great deal of variety, with twists, turns and undulations to the keyboard body that tacitly claim to relieve wrist strain, and tilt features and wrist rests added for comfort.

However, in addition to the logical introduction of cordless keyboards—which are now quite common—more recent innovations have focussed on greater interactivity with software through keyboard shortcuts.

"When we did research on how people are using their computers today and what they are using them for, we found that the PC environment was changing, mostly because Internet use is very high," says Tehrani. "We also found that multimedia use of computers is growing too as people watch DVD or listen to music from their CD-ROM player while working, or any number of things."

Out of the research came products like the Natural Keyboard Pro with built-in Internet buttons for forward and back, or favourites, plus programmable hot keys for one-button email or application launching.

Microsoft's current line of keyboards also includes single-button access to multimedia



Microsoft Natural Keyboard Pro

functions like play, pause, and volume. These controls are in the form of an additional row of clearly marked buttons across the top of the keypad, above the standard function keys. Logitech employs the same concept in its new keyboard models but uses symbols (which the user must decipher) instead of words to indicate the function of each button.

Further differences, however, indicate just how many choices are now available to the shopper. Microsoft's Natural Keyboard Pro connects either through the standard PS/2 port or by USB. This model also incorporates two additional USB ports so users can attach additional devices without having to crawl under their desks to access ports at the back of the PC.

Logitech's Cordless Desktop Pro includes a cordless wheel mouse in the box and adds software for MP3, which is tied directly to the keyboard's multimedia buttons.

Teaching mice new tricks

When Microsoft introduced the IntelliMouse optical, it dispensed with the ball. This mouse can be moved over any surface (no mouse pad required) with the optical laser monitoring the movement and translating it into smooth on-screen pointer motion. With no moving parts, optical devices of all stripes are guaranteed to last longer while eliminating the frustrations of having to remove and clean the ball and rollers whenever the device inevitably sticks or stops responding.



Microsoft IntelliMouse Optical

The optical mouse "works through a chip that processes movements at 18 million instructions per second, which gets rid of the ball," according to Tehrani. "With focus groups we found that people were getting really frustrated with the ball in their mice: they were banging it on the table; it was getting gummed up; they were losing precision over time because of heavy use. So we see people moving toward optical [mice]. The adoption rates have already been huge. The general trend, the larger trend, is definitely toward optics." Tehrani intimates that Microsoft is working on integrating the technology into trackballs next.

"Everybody likes optical," says Logitech's Ritchie. "Not because it works better, but because it's cool. Logitech's line on optical is that we recognize a market out there, so we are adapting to those market needs. You'll see that [Logitech optical devices] in the future."

Optical is not the only new variation on input devices. Another technology, which

Continued on page 57



Hey Boss
They are Back!

No Setup Fee
Too!

Web Hosting

No Gimmick. No Hidden Charge.

Millennium Offer!

Full Features Web Hosting Service For ONLY \$5/month

Register Now!

and get all these features:

- NO SETUP FEE!
- www.yourname.com (.net, .org or .ca)
- 20 MB of Web Storage
- 20 you@yourname.com Email Accounts
- 20 Configurable Email Forward
- Email Autoresponders
- Unlimited Email Alias
- Unlimited Traffic/Hits/Updates
- Unlimited FTP Access
- Free Email Support
- 24/7 Access To Web Content
- Web-based Account Control Panel
- Ultrafast Fibre Optic Backbone
- Pre-pay Period: 12 months

For domain transfer, a \$15 one-time transfer fee will be applied.

Get New Domain

for as low as \$US15/year!

dollarhost
Making Web Hosting Affordable

info@dollarhost.com - www.dollarhost.com - 604.608.6868

GIGABYTE MOTHERBOARD

World Wide Awards

- **GA-6X7-4X**
"PERFORMANCE WINNER"
By *Tom's Hardware May 2000*
- **GA-7VX**
"Recommended"
By *Vtr-Hardware May 2000*
- **GA-7VX**
"Recommended"
By *Overclocker's Workbench May 2000*
- **GA-7VX**
"Recommended"
By *BXBoard May 2000*
- **GA-6VX7+**
"Editor's Choice"
By *PC Magazine April 2000*
- **GA-6VXE+**
"Value" award
for Australian customer "Forte" system
By *PC Authority April 2000*
- **GA-GF2560**
"Recommended Hardware Prize"
By *Planet Geforce April 2000*
- **GA-6VX7-4X**
"Bronze Award"
By *Hardware Info April 2000*
- **GA-GF2560**
"Recommended"
By *SharkExtreme April 2000*
- **GA-BX2000+**
"BEST OF TECH-Empfehlungen" Germany
By *PC Direkt Magazine April 2000*

The Best R&D!

Industry Leaders
Intel®/VIA

Flexibility
Pentium III®/Athlon

New Generation
AGP 4X

Creative Sound

Dual BIOS™

3 DIMM

EasyTune™
Overdrive Your CPU Speed
Under windows 95/98 Environment



The **First** company to
win this award
3 years in a row

Intel® Pentium®III, Socket 370 **AGP 4X** **SDR**
GA-6VX7-4X VIA Appollo Pro Family



- Supports Socket 370 and other compatible processor
- Auto/66/75*/83*/100/112*/124*/133/140*/150* MHz
- Supports CPU multiplier 3.0/3.5/.../8.0
- 3 DIMMs up 768MB SDRAM
- Provides AGP 4X slot
- AC97 audio & AMR slot
- Supports 4 USB ports
- Supports Ultra ATA 33/66 IDE device
- Supports ACPI & STR (Suspend-To-RAM)
- H/W monitoring & PC99 connectors
- Creative CT5880 PCI sound (optional)
- 3Com 930 LAN (optional)

AMD® Athlon™, Slot A **AGP 4X** **SDR**
GA-7VX VIA KX133 Chipset



- Supports AMD® Athlon 200MHz FSB processors
- Slot A with AGP 4X slot
- AC97 audio & AMR slot
- 3 DIMMs up 1.5GB SDRAM
- Creative CT5880 PCI sound
- Supports 4 USB ports
- Supports Ultra ATA 33/66 IDE device
- Includes DualBIOS™
- Supports ACPI & STR (Suspend-To-RAM)
- Supports USB device wake -up
- H/W monitoring & PC99 connectors
- PC99 Connectors

Intel® Pentium®III, Socket 370 **AGP 4X**
GA-6VM7A+ VIA Appollo Pro Family



- Supports Socket 370 and other compatible processor
- Auto/66/75*/83*/100/112*/124*/133/140*/150* MHz
- Supports CPU multiplier 3.0/3.5/.../8.0
- 2 DIMMs up 512MB SDRAM
- Provides AGP 2X slot
- AC97 audio & AMR slot
- Supports 2 USB ports
- Supports Ultra ATA 33/66 IDE device
- Enhanced ACPI for Win98/2000
- H/W monitoring & PC99 connectors
- Creative CT5880 PCI sound
- Micro ATX

Please call for your nearest dealer

Exclusive
Distributor

PE
Peripheral Express

Vancouver Office
Tel: (604) 273-8281
Fax: (604) 273-4172

Calgary Office
Tel: (403) 250-8281
Fax: (403) 250-8329

Toronto Office
Tel: (905) 513-5777
Fax: (905) 513-5770

Montreal Office
Tel: (514) 956-1234
Fax: (514) 956-1099

GIGABYTE

Ergo product highlights

Logitech Cordless Desktop Pro

- Uses RF cordless technology.
- Ergonomic twists and turns (on keyboard and mouse).
- Built-in scrolling/zooming wheel on mouse.
- Built-in wrist rest on keyboard.
- Four dedicated Internet shortcut buttons.
- Seven dedicated multimedia shortcut buttons.
- One-touch "suspend" of your computer system.

Microsoft Natural Keyboard Pro

- PS/2 and USB connectivity.
- Ergonomic twists and turns.
- Built-in wrist rest.
- Eight dedicated Internet shortcut buttons.
- Seven dedicated multimedia shortcut buttons.
- Separate dedicated My Computer and Calculator shortcut buttons.
- One-touch "suspend" of your computer system.
- Two built-in USB ports.

Microsoft IntelliMouse Optical

- Optical technology means no moving parts.
- Works on virtually any surface (no mouse pad required).
- Comfortable, ergonomic design.
- Can be used with left or right hand.
- Scrolling/zooming wheel.
- Programmable buttons for common tasks.

Microsoft Cordless Wheelmouse

- Uses RF technology.
- Larger, comfortable body design.
- Can be used with left or right hand.
- Scrolling/zooming wheel.

Logitech WingMan Force Feedback Mouse

- Tactile feedback from display.
- Ergonomic body design.
- Joystick and wheel emulation drivers.
- Includes three games (Heavy Gear II, Gruntz, Railroad Tycoon II).

Logitech Trackman Marble FX

- Extremely comfortable ergonomic design.
- Built-in wrist rest.
- Larger, heavier control ball for easy pointer control.
- Additional button to convert ball movement to scroll or zoom functions.

—Ross MacDonald

More than just a mouse or keyboard

Continued from page 55

actually adds dimension to your computing experience, is making its way into stores is force feedback.

Though this technology, as noted above, has been implemented mainly in gaming peripherals, non-gamers can also enjoy its enhancements as mice incorporating force feedback are now available. These mice will "knock" and "vibrate" to deliver physical sensation when the pointer hits a relevant spot on the display.

Unfortunately, in order to accomplish this, the mouse itself has to be harnessed to a dedicated platform that houses all the mechanics in a relatively bulky form factor. Mouse movement is highly restricted too, but it does work surprisingly well.

"We can look forward to a lot of different products that will incorporate different technologies to allow people to use their mouse or joystick in ways above and beyond how they've used them in the past," says Ritchie. "If, for example, a Web site is marketing cloth, a force feedback mouse will enable you to actually feel the different types of cloth. There are quite a few Web sites out there getting into this now. It's not just a fantasy." □



Logitech
Cordless Wheelmouse

THE BEST VALUE IN PROJECTORS!

A FREE 400MHz notebook with every projector sold!



Projector ML-800
\$6,490 MSRP



Notebook 970-P comes with
a detachable transparent
LCD Panel \$3,595 MSRP

**Our projector makes sharp
images and pictures on any
wall at any distance.**

**It simply outperforms
all other LCD projectors**

Schedule a live demo with us today!

OMIKRON

#135 3757 Jacombs Road Richmond B.C. Canada V6V 2R3

TEL # (604) 278-6356

FAX # (604) 278-6746

E-mail omikron@omikron.bc.ca

For detailed specs visit our Web Site www.omikron.bc.ca

750MHz PIII!

The iNote returned a sparkling score of 267 overall on the Sysmark98 test suite With a 750MHz and 128MB RAM we anticipated this unit's benchmark scores would be high, and they were ..."

The Computer Paper,
June 2000

www.inotecanada.com

iNote®



Canada's mobile desktop

15" TFT
14" TFT
13" TFT
12" TFT
750MHz
700MHz
650MHz
600MHz
550MHz
533MHz
12GB
6GB
DVD
CD
to 320MB
Win2000
Win98
Linux

from
2399

Call for dealer near you
1-800-663-9272

Distributors since 1989

IMPAQ

Integrating notebooks since 1991

www.impaqtech.com

Philip K. Dick forever

NB—*Blade Runner* and other works by this science fiction master continue to attract new generations of readers, and this site, philipkdick.com offers a provocative mix of reference and review to keep his readers informed and amused. Online here are the Encyclopedia Dickiana, E Dika, and PKDweb. Five years in the making, the site includes extensive reference material on PKD's novels, short stories, and other writings, original PKD-inspired essays, fiction and analysis. Another fun feature is the "news" where events that really happened but seem inspired by ideas in Philip K. Dick novels are posted, including research on "god" particles, flocks of dead birds falling out of the sky, and image manipulation by CBS Evening News. Also included is the latest on the Dick novel *Minority Report* in production by Steven Spielberg starring Tom Cruise.

<http://www.philipkdick.com/>

IPC Business Solutions

At IPC Business Solutions, we understand that your job is to run a business, not learn and try to install new technology. That's why IPC now offers a better and complete set of solutions to fit your business needs! From intranets to the Internet, let us help you make your mark on a global scale.

IPC Business Solutions provides the tools to enhance customer relations and increase your productivity, which in turn equals profit for your business.



Need

IPC BUSINESS SELECT SERIES

"ASK US ABOUT WINDOWS 2000 UPGRADES"

SELECT C 500

- Intel® Celeron™ Processor 500 MHz
- 64MB SDRAM
- 10.2 GB Hard Drive
- 40X CD ROM
- Intel 3D AGP Graphics**
- 10/100 LAN Network Ready
- Integrated 3D Sound
- Amplified speakers
- 17" Monitor



Model Shown only Applies to sku# BF1-K-1-500-31

\$899

AFTER \$50 MAIL-IN REBATE

BF1-K-1-500-31

UPGRADE PKG. 1

- 128 MB SDRAM
- 15 GB Hard Drive

\$129*

UPGRADE PKG. 2

- 19" Monitor
- Norton Anti-Virus 2000

\$275*

SELECT 3 750

- Intel® Pentium® III processor @ 750MHz
- 64MB SDRAM
- 15 GB Hard Drive
- 12X DVD
- 300W Speakers w/ Subwoofer
- nVidia TNT 32MB AGP Video
- 10/100 LAN Network Ready
- Norton Anti-Virus 2000
- Corel® WordPerfect® Office 2000
- Canon BJC 3000 Colour Printer
- 17" Monitor



\$1999

AFTER \$100 MAIL-IN REBATE

\$69
month[†]

BF2-A-3-750-34

UPGRADE PKG. 1

- 128 MB RAM
- 600W Speakers w/ Subwoofer

\$115*

UPGRADE PKG. 2

- 19" Monitor
- Microsoft Internet Keyboard

\$279*

SELECT 3 550

- Intel® Pentium® III Processor 550 MHz
- 64MB SDRAM
- 10.2 GB Hard Drive
- 40X CD ROM
- Intel 3D AGP Graphics**
- 10/100 LAN Network Ready
- Amplified Speakers
- Corel® WordPerfect® Office 2000
- Norton Anti-Virus 2000
- 17" Monitor

\$1149

AFTER \$50 MAIL-IN REBATE

\$41
month[†]

BF2-H-3-550-32

UPGRADE PKG. 1

- 128 MB RAM
- 20 GB Hard Drive

\$155*

UPGRADE PKG. 2

- Toshiba 4X DVD/ 4X CD-RW

\$389*

SELECT 3 800

- Intel® Pentium® III processor @ 800MHz
- 128MB SDRAM
- 15 GB Hard Drive
- 12X DVD
- 300W Speakers w/ Sub-woofer
- Intel 3D AGP Graphics**
- 10/100 LAN Network Ready
- Norton Anti-Virus 2000
- Corel® WordPerfect® Office 2000
- Hewlett Packard HP1100 Laser Printer
- 17" Monitor



\$2399

AFTER \$100 MAIL-IN REBATE

\$82
month[†]

BF2-H-3-800-35

UPGRADE PKG. 1

- 256 MB SDRAM
- 20 GB Hard Drive

\$219*

UPGRADE PKG. 2

- Toshiba 4X DVD / 4X CDRW
- Microsoft Internet Keyboard

\$299*

SELECT 3 650

- Intel® Pentium® III processor @ 650MHz
- 64MB SDRAM
- 10.2 GB Hard Drive
- 48X CD ROM
- 300W Speakers w/ Subwoofer
- Intel 3D AGP Graphics**
- 10/100 LAN Network Ready
- Corel® WordPerfect® Office 2000
- Norton Ant-Virus 2000
- 17" Monitor

\$1299

AFTER \$50 MAIL-IN REBATE

\$46
month[†]

BF2-H-3-650-33

UPGRADE PKG. 1

- 256 MB SDRAM
- 15 GB Hard Drive

\$315*

UPGRADE PKG. 2

- 19" Monitor
- 12X DVD ROM

\$339*

SELECT 3 933

- Intel® Pentium® III processor @ 933MHz
- 256 MB SDRAM
- 20 GB Hard Drive (7200 RPM)
- 12X DVD ROM
- 600W Speakers w/ Sub-woofer
- NVidia GeForce 256 32MB AGP Video
- Intel 10/100 LAN Network Ready
- Norton Anti-Virus 2000
- Corel® WordPerfect® Office 2000
- Canon BJC 3000 Colour Printer
- 19" Monitor



\$3449

AFTER \$150 MAIL-IN REBATE

\$117
month[†]

BF1-A-3-933-36

UPGRADE PKG. 1

- 384 MB SDRAM
- IOMEGA ZIP Drive

\$275*

UPGRADE PKG. 2

- 17" LCD Flat Panel Display Monitor

\$4699*

All Systems Above include: • 56K V.90 Modem • Keyboard + Mouse • Windows 98* (w/ cd) • Integrated 3D Sound
• 90 Days Free Internet Access From Look Communication***

Systems must be registered on-line to receive full system warranty benefits. Select series comes with a three year parts and labour warranty. Please refer to the warranty card included with your system for specific details regarding your warranty coverage. Technical support for software and operating systems are for a period of 90 days from original date of invoice. Toll Free technical support hours are from Monday to Friday, 9:00 AM to 11:00 PM, Eastern Standard Time. Onsite service not available in all areas. Configuration are subject to change without notice, and prices may vary in differing regions. Shipping charges and applicable taxes are not included in prices shown. Shipping is FOB Markham, ON. Due to CRTC regulations in Canada, downloading is restricted to speeds less than 56kbps, and connection times may vary. Intel, the Intel Inside logo and Pentium are registered trademarks and MMX and Celeron are trademarks of the Intel Corporation. IPC and the IPC logo are registered trademarks. Systems may not be exactly as shown. Price shown is upgrade price. Windows 98 comes preloaded on all systems. **Shared memory architecture with main system memory. †Lease price based on 48 month period OAC. ***Required valid credit card for Internet account sign-up, customer is responsible for cancellation with Internet Service Provider, communication charges may apply. ^ Does not include in-wall wiring installation. * Limited to 4 workstations, installation charges may apply.



Solutions?

SMART START NETWORK



IPC NewMega Server

- Intel® Pentium® III Processor @ 550 MHz
- 64 MB PC100 SDRAM
- 6.4 GB Hard Drive
- 56K V.90 Modem
- 40x CD ROM
- 10/100 LAN Network ready
- File Server
- Web Server
- Email Server
- Firewall
- Newlix Office Server Software Pre-installed

Call for More Details

CC1-N-3-550-01



Model Shown only Applies to sku# BF1-K-500-31

2 Workstations

- Intel® Pentium® III Processor @ 550 MHz
- 64 MB PC100 SDRAM
- 6.4 GB Hard Drive
- 48x CD ROM
- 10/100 LAN Network ready
- Enhanced 2D and 3D graphics
- Creative Labs SoundBlaster PCI 128V
- Dual USB connectors
- Corel® WordPerfect® Office 2000
- Windows 98
- 15" Monitor

CC1-Y-550-02



FREE Network Cards

- We will provide FREE network cards for your existing systems*

\$119/mo[†]
\$3499
Includes:
 • Newlix Server (A)
 • 2 Workstations (B)
 • 1 Hub
 • Cables[^]
 • Network Cards for your existing PC's*



Options

Additional Workstations

- Intel® Pentium® III Processor @ 550 MHz
- 64 MB PC100 SDRAM
- 6.4 GB Hard Drive
- 48x CD ROM
- 10/100 LAN Network ready
- Enhanced 2D and 3D graphics
- Creative Labs SoundBlaster PCI 128V
- Dual USB connectors
- USR 56K V.90 Modem
- Windows 98

Monitor extra
 CC1-Y-550-03

\$1149
 or \$39/mo[†]

Power Workstations

- Intel® Pentium® III Processor @ 800 MHz
- 128 MB PC100 SDRAM
- 10.2 GB Hard Drive
- 48x CD ROM
- Intel 10/100 LAN Adapter
- nVidia TNT 32MB AGP Video
- Windows 98

Monitor extra
 CC1-E-800-04

\$1599
 or \$54/mo[†]



IPC Business Solutions

- e-mail solutions@IPC.ca
- Phone 1-877-827-7679
- Fax 1-905-472-8945

IPC Direct

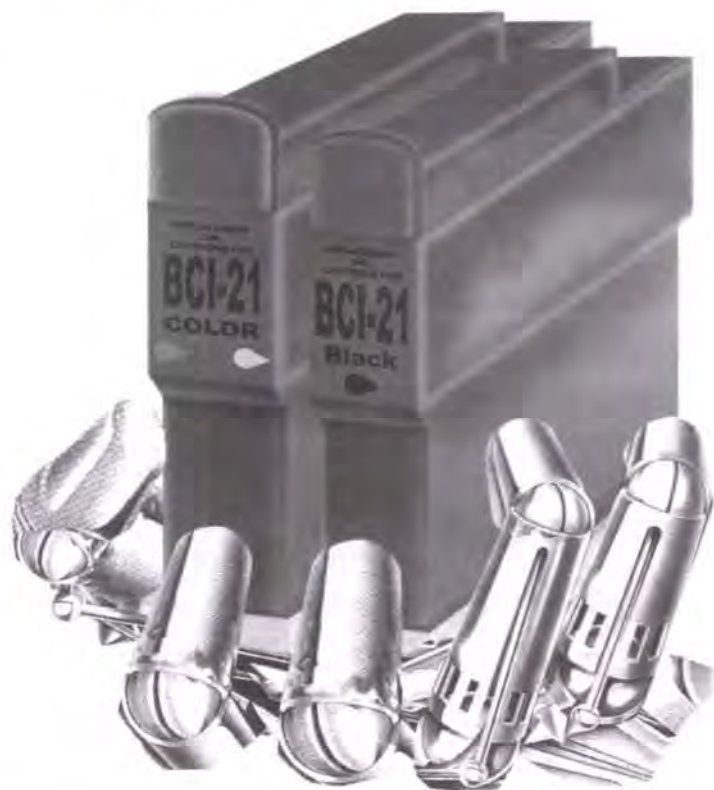
www.ipc.ca
 ORDER ONLINE ANY DAY, 24 HOURS A DAY
1.888.446.4472
 MON-FRI 8AM-10PM • SAT 10AM-6PM

Systems must be registered on-line to receive full system warranty benefits. All systems come with a two year parts & labour warranty, unless otherwise specified (please ask your representative for more details). Please refer to the warranty card included with your system for specific details regarding your warranty coverage. Technical support for software and operating systems are for a period of 90 days from original date of invoice. Toll Free technical support hours are from Monday to Friday, 9:00 AM to 7:00 PM, Eastern Standard Time. Configuration are subject to change without notice, and prices may vary in differing regions. Shipping charges and applicable taxes are not included in prices shown. Shipping is FOB Markham, ON. Due to CRTC regulations in Canada, downloading is restricted to speeds less than 56kbps, and connection times may vary. Intel, the Intel Inside logo and Pentium are registered trademarks and MMX and Celeron are trademarks of the Intel Corporation. IPC and the IPC logo are registered trademarks. Systems may not be exactly as shown. price. †Lease price based on 42 month period OAC. ^ Does not include in-wall wiring installation (100 feet Maximum). * Limited to 4 workstations, installation charges may apply.

IBS-0600

Smart Idea! Choice!! Savings!!! You!!!!

Only Pay 30% And Get 100%
Quality On Inkjet Cartridges



visit our site
www.inkjetmart.com

Paying too much for inkjet cartridges?
www.inkjetmart.com guarantees high quality
products with up to 70% savings on all your inkjet
cartridge needs.
Our friendly and helpful staff from our Retail Sales,
Mobile Sales or Internet Sales Service guarantees
100% customer satisfaction and convenience.
Want to find out more?
Simply visit us at www.inkjetmart.com
or call us at (604)708-8320

TOLL FREE
1-888-2833-INK

Address: 4855 Main Street, Vancouver, B.C. V5V 3R9, Canada.

MULTIMEDIA TECHNOLOGIES

365 W. BROADWAY 872-0400 MON-SAT 10-6, SUN 11-5
THE BEST SOFTWARE STORE. WWW.SOFTWAREBC.COM

- easy to deal with
- large inventory
- match prices
- great selection
- more in stock
- special orders
- fast shipping

CHILDREN

BARBIE FASHION DESIGN	19
BARBIE SUPER SPORTS	19
CRAYOLA CREATIVITY	19
DAVIDSON BL 3RS 4-6	24
DAVIDSON BL 3RS 9-12	24
DAVIDSON KIDPHONICS 2	19
DAVIDSON MATH BL 4-6	19
DAVIDSON MATH BL 6-9	19
DAVIDSON MATH BL 9-12	19
DAVIDSON MATH BL ALG	19
DAVIDSON MATH BL GEO	19
DAVIDSON MATH BL PRE ALG	19
DAVIDSON READING 84-6	19
DAVIDSON READING 86-9	19
DAVIDSON READING 88-12	19
DAVIDSON READ BL VOC	19
DAVIDSON SPELLING BL	19
DAVIDSON WRITING BL 6-9	19
DK - AMAZING ANIMALS	9
DK - THE WAY THINGS WK14	9
FREDDI FISH 1	9
FREDDI FISH DLX COL	29
JUMPSTART 1ST GRADE	14
JUMPSTART 2ND GRADE	14
JUMPSTART 3RD GRADE	14
JUMPSTART 4TH GRADE	14
JUMPSTART 5TH GRADE	14
JUMPSTART 6TH GRADE	14
JUMPSTART BABY	24
JUMPSTART KINDERGART	14
JUMPSTART KIND READ	14
JUMPSTART MUSIC	14
JUMPSTART PRE K	24
JUMPSTART TODDLER	24
JUMPSTART TYPING	19
KID PIX STUDIO	9
LEGO ISLAND	14
LIV BK-ARTHUR'S 3DAY	14
LIV BK-ARTHUR'S READ	19
LIV BK-ARTHUR'S TEACH	14
LIV BK-ARTHUR'S COMP	14
LIV BK-DR SUSS ABC'S	14
LIV BK-DR SUSS CATHA	14
LIV BK-DR SUSS GREEN	14
LIV B-JUSTGRANDMA&ME	14
LIV BK-ARTHUR'S GAMES	14
MADLINE RAINY DAY	24
MADLINE THINKING	24
MATH BLASTER 1ST GR	9
MATH BLASTER 2ND GR	9
MAVIS BEACON TYPING	19
MS MAGIC SBUS ANIMALS	19
MS MAGIC SBUS BUGS	19
MS MAGIC SBUS H BODY	19
MS MAGIC SBUS RAINF	19
MS MAGIC SBUS SOLAR	5
POKEMON BLUE	24
POKEMON RED	24
PRO 1 HIGH SCHOOL ENG	29
PRO 1 HIGH SC MATH	29
PRO 1 HIGH SCHOOL SCI	29
PRO 1 MIDDLE S L ARTS	19
ROCKET'S NEW SCHOOL	19
RUGRAT'S ADVENTURE	14
SABRINA SPELLBOUND	14
SESAME ST BABY	14
SESAME ST ELMO'S ART	19
SESAME ST ELMOS'S PRE	19
SESAME ST TODDLERS	19
SESAMEST COOKIE MNST	19
SNAP ON TOOLS GEARHD	29
STORYBOOK WEAVER	19
WHERE CARMEN-WORD	24
WHERE CARMEN SAN DLX	19
WHERE IN TIME CARMEN	19
WHERE WORLD CAR.MATH	24

ACCELERATED X LINUX	129
APPLIX STANDARD OFFICE	149
APPLIX SPREADSHEET	79
APPLIX WORD	79
BEOS BIBLE	39
BEOS 5	74
BRU FOR LINUX	299
CALDERA OPEN LINUX	49
CIVILIZATION CALL TO P	34
COREL LINUX	49
COREL LINUX DELUXE	99
COREL OFFICE SUITE 2K	149
COREL OFFICE ST 2K DLX	249
COREL WP SUITE 8LINUX	39
ERIC'S SOLITAIRE LINUX	29
FREE BSD 3.4	36
FREE BSD COMPLETE 4	59
HACKERS HANDBOOK	14
HACKERS KRONICKLEZ	14
HACKERS TOOLKIT	14
HACKERS - UNDERWORLD	14
HACKS & CRACKS	14
HEAVY GEAR II FOR LINUX	49
HERETIC 2 FOR LINUX	39
HEROES MIGHT MAGIC 3	49
LINUX BUSINESS APPS	34
LINUX GAMES & ENT	95
LINUX GRAPHIC.SND&MM	9
LINUX OFFICE APPS	9
LINUX SCIENCE & TECH	9
LINUX SYSADMIN&DEV	9
LINUX JOURNAL	6.5
LINUX WEB TOOLS	29
MANDRAKE 7	59
MASTER HACKER	14
NETWORKING CD BKSHLF	89
OREILLY LINUX BKSHLF	89
OPEN BSD 2.6	39
PERL	34
PERL CD BOOKSHELF	69
QUAKE 3 ARENA - LINUX	59
RAILROAD TYCOON II	59
RED HAT 6.2 - STANDARD	99
RED HAT 6.2 - DLX	99
RED HAT 6.2 - PRO	199
SLACKWARE 7	24
STORM LINUX 2000	49
SUSE LINUX 6.4	49
XESS SPREADSHEET	79

\$9.95 SALE

ASTEROIDS	9
BATTLEZONE	9
BETTER HOMES GARDEN	9
BURPPE 3D GARDEN DES	9
CARD GAMES+ SOLITAIRE	9
CARDS & DICE	9
CASINO DLX 2	9
CHAOS GATE	9
COMMANDOS	9
DARK FORCES	9
DUKE NUKEM 3D ATOMIC	9
HOYLE SOLITAIRE	9
HYPER 3D PINBALL	9
INTERSTATE 76	9
JACK GOLF 6	9
KLINGON HONOR GUARD	9
LARRY CASINO	9
LIFE	9
MAGIC CARPET PLUS	9
MASTER COOK DELUXE	9
NASCAR RACING 2	9
ODD WORLD	9
PBA BOWLING	9
POWER CHESSE	9
POWERBOAT RACING	9
RALLY CHAMPIONSHIP	9
RAYMAN	9
RED BARON 2	9
ROCKY MOUNTAIN TROPHY	9
SCREAMER 2	9
RAMA	9
SILENT THUNDER	9
STAR WARS REBEL ASS	9
TOTAL ANNIHILATION	9
THE CROW	9
TOMBRAIDER 2	9
TOP GUN FIRE AT WILL	9
TROPHY BASS 2	9
TROPHY RIVERS	9
TROPHY BUCK	9
ULTIMATE STRATEGY	9
UNREAL	9
ULTIMATE STRATEGY	9
WEBSTERS DICTIONARY	9
YOU DON'T KNOW JACK 2	9
YOU DON'T K J MOVIES	9

\$5 SALE

AMERICAN TALKING DICT	5
BATTLESHIP	5
BODYWORKS	5
BRIDGE OLYMPIAD	5
COMPTON'S ENCY 99	5
COMPTON'S WORLD ATLAS	5
COREL WILD CARDS	5
CROSSWORDS	5
DISCOVERY CH - SHARKS	5
DOOM 2 - VIRTUAL PETZ	5
DOOM 2	5
ELMER'S 3D CASTLE	5
ENCARTA 98	5
FLIGHT UNLIMITED	5
GRADE BUILD-ALG 3	5
GROUPE ENCY 99	5
HOYLE CLASSIC BOARD	5
HOYLE'S CHILDREN'S COL	5
INDIAN IN CUPBOARD	5
MARIO'S EARLY YEARS	5
MATH WORKSHOP	5
MAYO CL SPORTS HLTH	5
MAYO CL FAMILY PHARM	5
MASTER COOK 2	5
MOTO RACER	5
MS BOOKSHELF 98	5
MS CREATIVE WRITER 2	5
MS HALLMARK GREETING	5
MS MAGIC 5 BUS SOLAR	5
MUPPETS COLLECTION 1	5
MUPPETS COLLECTION 2	5
OCEANS BELOW	5
OREGON TRAIL 3	5
PEDIATRICIANS ASSIST	5
PHYSICIANS ASSISTANT	5
POOL GAMES	5
PRINT MASTER SUITE	5
PRO 1 MULTIMEDIA FRENCH	5
READER RABBIT DEV 3	5
READER RABBIT 1ST GR	5
RED BARON 2	5
SESAME ST KINDERGART	5
SMART GAMES	5
SORRY	5
SPACE QUEST 6	5
STORYBOOK WEAVER	5
THINKING THINGS 3	5
ULTIMATE DOOM	5
UNIVERSE BEYOND	5
WILLIAM SONOMA COOK	5
YUKON TRAIL	5

LINUX

ACCELERATED X LINUX	129
APPLIX STANDARD OFFICE	149
APPLIX SPREADSHEET	79
APPLIX WORD	79
BEOS BIBLE	39
BEOS 5	74
BRU FOR LINUX	299
CALDERA OPEN LINUX	49
CIVILIZATION CALL TO P	34
COREL LINUX	49
COREL LINUX DELUXE	99
COREL OFFICE SUITE 2K	149
COREL OFFICE ST 2K DLX	249
COREL WP SUITE 8LINUX	39
ERIC'S SOLITAIRE LINUX	29
FREE BSD 3.4	36
FREE BSD COMPLETE 4	59
HACKERS HANDBOOK	14
HACKERS KRONICKLEZ	14
HACKERS TOOLKIT	14
HACKERS - UNDERWORLD	14
HACKS & CRACKS	14
HEAVY GEAR II FOR LINUX	49
HERETIC 2 FOR LINUX	39
HEROES MIGHT MAGIC 3	49
LINUX BUSINESS APPS	34
LINUX GAMES & ENT	95
LINUX GRAPHIC.SND&MM	9
LINUX OFFICE APPS	9
LINUX SCIENCE & TECH	9
LINUX SYSADMIN&DEV	9
LINUX JOURNAL	6.5
LINUX WEB TOOLS	29
MANDRAKE 7	59
MASTER HACKER	14
NETWORKING CD BKSHLF	89
OREILLY LINUX BKSHLF	89
OPEN BSD 2.6	39
PERL	34
PERL CD BOOKSHELF	69
QUAKE 3 ARENA - LINUX	59
RAILROAD TYCOON II	59
RED HAT 6.2 - STANDARD	99
RED HAT 6.2 - DLX	99
RED HAT 6.2 - PRO	199
SLACKWARE 7	24
STORM LINUX 2000	49
SUSE LINUX 6.4	49
XESS SPREADSHEET	79

PRODUCTIVITY

ACT 2000	69
ADOBE ACROBAT V 4	159
ADOBE ILLUSTRATOR 9	CALL
ADOBE PAGEMAKER 6.5+	399
ADOBE PHOTOSHOP 5.5	429
ADOBE PREMIER	499
COREL DRAW 7	39
COREL DRAW 8	64
COREL DRAW 9	119
COREL WP SUITE 8	19
COREL WP OFFICE 2000	24
COREL WP 2000 PRO	59
COREL WPOP2KPRO WDR	109
CREATE A CARD PLUS V 4	19
DRAGON NAT SPK PREFV4	199
DREAMWEAVER V3	174
DREAMW V3+ FIREWORKS	299
DRUMBEAT	179
EASY CD CREATOR V4.02	39
EASY CD CREAT V4 DLX	139
FIREWORKS VERSION 3	174
FIRST AID 2000	9
FLASH 4	174
FREEMAN	174
LABELS UNLIMITED V2	14
LOST & FOUND	9
LOTUS SMART SUITE MIL	19
MACMILLAN333K CLIPART	19
MCAFFEE VIRUS SCAN 4	19
MCAFFEE VIRUS SCAN 5	24
MCAFFEE OFFICE	39
MS FRONTPAGE 2000	199
MS OFFICE 2000 SM BUS	399
MS OFFICE 2K SM BUS UP	289
MS OFFICE 2K STD UP	289
MS OFFICE 2000 PRO	579
MS OFFICE PRO 2000 UP	399
MS OFFICE PRO 2K PREM	649
MS PHOTODRAW	99
MS PUBLISHER 2000	139
MS VISUAL BASIC 6 PRO	219
MS WINDOWS 2K PRO UP	299
MS WINDOWS 2K PRO	429
MS WIN 98 UPD 2ND ED	129
MS WINDOW S 98 2ND ED	239
MS WIN NT SERV10USR	649
MS WORKS 2000	69
MS WORKS SUITE 2000	139
MYOB 9 ACCOUNTING	139
NORTON ANTI VIRUS 2000	249
NORTON CLEANSEWEEP	29
NORTON INTERNET SEC	44
NORTON SYS WK 2K PRO	44
NORTON UNINSTALLER	9
NORTON UTILITIES 2000	29
OMNIPAGE PRO 10	149
PAINTER CLASSIC	29
PARTITION IT	34
PAINTSHOP PRO 6	149
PARTITION MAGIC 5	49
PC ANY HOST & R 9	99
PRINT ARTIST 4 PLATINM	24
PRINT SHOP 6 DELUXE	29
PRINTMASTER PREMIER7	34
PROCOMM PLUS 32	19
QUICKEN 2000 STD	44
QUICKEN 2000 DELUXE	64
QUICKEN 2000 HMBUS	79
QUICKEN 2000 SUITE	99
QUICKBOOKS 2000	144
QUICKBOOKS PRO 2000	249
SIMPLY ACCOUNTING V 8	149
SYSTEM COMMANDER	59
TALKWORKS 3	199
TURBO CADD V5	64
ULEAD VIDEO STUDIO	39
ULEAD PHOTO IMPACT	19
ULEAD GIF MANIA	19
ULEAD COOL 3D	19
ULEAD FACE FACTORY	19
ULEAD WEB RAZOR PRO	39
VIBO TECHNICAL 5	99
WEBTRICITY	34
WINFAX 9 BASIC	19
WINFAX PRO 9	69
WINFAX 10	149

GAMES

3D ULTRA MINIGOLF DLX	19
AXIS & ALLIES	14
MS AGE OF EMPIRES	9
MS AGE OF KINGS	39
ALPHA CENTAURI	24
BALDUR'S GATE	29
BLEEM - PLAYSTATION EM	39
CABELLAS BIG GAME 3	24
CHESSMASTER 7000	19
CIVILIZATION-CALL TO P	19
DAIKATAN	49
DARK REIGN #2	49
DESCENT 3	19
DIABLO	14
DUNE 2000	14
EUROPEAN AIR WAR	29
EVERG. RUINS KUNARK	44
FREESPACE 2	39
GABRIEL KNIGHT 3	29
GAME CRACKER	14
GAME PROGRAMMING KIT	14
GRAND THEFT AUTO 2	39
GUNSHIP	49
HALF LIFE	19
HALF LIFE ADRENALINE	69
HALF LIFE GAME OF YR	49
HALF LIFE OPPOSING F	39
HEROES 3 - SHADOW D	49
HOMEWORLD	39
HONG KONG MAHJONG	14
IMPERIUM GALACTICM2	54
JANES P-A18	49
JEOPARDY	19
KINGS QUEST 8	19
LINKS LS 2000	49
MAHJONG GOLD	14
MDK 2	49
MESSEIAH	29
MIGHT & MAGIC 8	49
MILTON BRADLEY BOARD	14
MOBILE RALLY 1	19
MONOPOLY	24
MORTTH	24
MS MOTOCROSS MAD 2	59
MS COMBAT FLIGHT SIM	39
MS FLIGHT SIM 2000	39
MS FLIGHT SIM 2000 PR	84
MS MIDTOWN MADNESS	29
MS REVENGE OF ARCADE	14
MS MONSTER TR MAD 2	19
NASCAR 2000	39
NEED 4 SPEED PORSCH	39
NOCTURNE	19
NHL 2000	29
NOX	39
PARKER BROS CARD	14
PHARAOH	44
PLANESCAPE TORMENT	34
QUAKE 3	54
ROLLERCOASTER TYCOON	34
ROLLERC TY CORK FOLLI	24
RAINBOW 6 GOLD	39
RED ALERT	19
RISK 2	34
RIVEN	19
ROGUE SPEAR	54
ROGUE SPEAR-URBAN OF	29
SCRABBLE V1	19
SCRABBLE V2	34
SEGA RALLY 2	44
SHOGUN	CALL
SIMCITY 3000 UNLIMITED	54
SIMS	34
SOLDIER OF FORTUNE	49
STARCRRAFT	24
STAR LANCER	59
STAR TREK ARMAHA	49
SUPERBIKE 2000	54
TETRIS PLAYERS 2000	19
THIEF 2 METAL WORLD	49
TIBERIAN SUN	39
TIBERIAN SUN - FIREST	34
TOMBS RAIDER 2	9
TOTAL ANNIHILATION K	14
TYCOON COLLECTION	49
ULTIMATE MOTORCY COL	34
UNREAL TOURNAMENT	34
VAMPIRE MASQUERADE	49
WHEEL OF FORTUNE	19
WHEEL OF TIME	19
WHO WANTS MILLIONAIRE	19
WHO WANTS MILLION #2	29

REFERENCE

3D HOME DESIGN SUITE	3
BIBLE LIBRARY	1
CANADIAN STUDENT ENCY	2
CANADIAN ENCY DLX	9
CAN & WRLD ENCY 2000	6
COMPLETE LAND DES	2
COMP SAVVY 6CD INST	1
COMPTON'S ENCY 2000	1
COMPTON'S REF COL	5
ENCARTA 2000	2
ENCART 2000 DLX	6
ENCARTA 2000 REF ST	1
ENCY BRITANNICA 2000	3
FAMILY BIBLE COLLECTN	2
FAMILY TREE MAKER	2
GARDENING	9
HERBS FOR HEALTH	1
LANGUAGE CANTONESE	1
LANGUAGE DUTCH	1
LANGUAGE FRENCH	1
LANGUAGE GERMAN	1
LANGUAGE GREEK	1
LANGUAGE HEBREW	1
LANGUAGE HUNGARIAN	1
LANGUAGE INDOONESIAN	1
LANGUAGE ITALIAN	1
LANGUAGE JAPANESE	1
LANGUAGE KOREAN	1
LANGUAGE MANDARIN	1
LANGUAGE POLISH	1
LANGUAGE PORTUGUESE	1
LANGUAGE RUSSIAN	1
LANGUAGE SPANISH BEG	1
LANGUAGE SPANISH INT	1
LANGUAGE TAGALOG	1
LANGUAGE VIETNAMESE	1
LEARN IRISH	1
LEARN TO SPEAK ENGL	2
LEARN TO SPEAK FRENCH	9
LEARN TO SPEAK GERMAN	1
LEARN TO SPEAK SPANISH	1
MATH MASTER	1
MAVIS BEACON TYPING	10
MUSIC MAKER	2
NATIONAL GEOGR 30CD	1
PC STITCH	1
STANLEY HOME IMPRVMT	2
SUNSET WESTERN GARDN	1
TAI CHI	1
TYPE & LEARN CHINESE	1
TYPE & LEARN FRENCH	1
TYPE & LEARN GERMAN	1
TYPE & LEARN GREEK	1
TYPE & LEARN HIRAGANA	1
TYPE & LEARN ITALIAN	1
TYPE & LEARN KATAKANA	1
TYPE & LEARN SPANISH	1
WEBSTERS DICTBATHES	1
YOGA	1

aspert

Technologies Inc

http://www.aspert.com
Email: sales@aspert.com
Service HotLine (604) 232-0891
Sales HotLine (604) 232-0328



proud to be the member of BBB

**** Visit our web site to see the latest computer systems, equipments, & computer parts.**

NO Interest NO Payment *OAC for 6 Months

Millennium SPECIAL

ASPERT PIII 667

INTEL PENTIUM III 667MHZ PROCESSOR
64 M SDRAM MEMORY PC 133
PANASONIC 1.44 FLOPPY DRIVE
52X CDROM DRIVE
20G ULTRA ATA-66 HARD DRIVE
RIVA TNT2 32M AGP VIDEO
SB ENSONIQ PCI 128 SOUND
WINDOWS 98 PS/2 KEYBOARD
INTERNET WHEEL MOUSE
ASPERT MID TOWER ATX CASE
140W MULTIMEDIA SPEAKER
17" 0.27 SVGA MONITOR
WINDOWS 98 SE OR LEXMARK Z11 COLOR PRINTER
ROGER@HOME READY
LOTUS Smartsuit Millennium w/WordPro, Lotus123, ORGANIZER

S/N: ASP2K0601
lease \$55/m **\$1459**

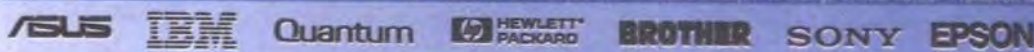
INTEL PENTIUM III 733MHZ PROCESSOR \$1,559
INTEL CELERON 566MHZ PROCESSOR \$1,299

AMD ATHLON 700 ECHO	ASPERT BOOK PC 533	AMD 650MHZ STATION	PIII 667 GAMER
Athlon 700mhz w/Enhanced 3D Now Technology 128MB PC133SDRAM PANASONIC 1.44 FLOPPY DRIVE 52X CD ROM DRIVE 20GB ATA-66 Hard Drive RIVA TNT2 32M AGP VIDEO AUREAL VORTEX A3D SOUND WINDOWS 98 PS/2 KEYBOARD LOGITECH 2B PS/2 Mouse ASPERT MID TOWER CASE/300W MULTIMEDIA STEREO SPEAKER NEC FE700 17" 25DP FLAT Win 98 SE CD & Manual or Lexmark Z11 Printer ROGER @HOME READY Lotus Smartsuit Millennium w/ WordPro, Lotus123 ORGANIZER	INTEL 810E CHIPSET MOTHERBOARD INTEL CELERON 533 PROCESSOR 64M PC 100 MHZ SDRAM PANASONIC 1.44 FLOPPY DRIVE 52X CDROM 6.4G UTRA ATA 66 HARD DRIVE INTERGRATED 8M AGP VIDEO WINDOWS 98 PS/2 KEYBOARD INTERNET WHEEL PS/2 MOUSE MID TOWER ATX CASE MULTIMEDIA STEREO SPEAKER 15" 0.28 SVGA MONITOR WINDOWS 98 SE CD & MANUAL OR LEXMARK Z11 1200 dpi COLOR PRINTER	AMD ATHLON 650MHZ PROCESSOR 64M PC 100 MHZ SDRAM PANASONIC 1.44 FLOPPY DRIVE 52X CDROM 15G ULTRA ATA-66 HARD DRIVE ATI XPERT 98 8M AGP SOUND BLASTER PCI ENSONIQ 128 WINDOWS 98 PS/2 KEYBOARD INTERNET WHEEL PS/2 MOUSE ASPERT TOWER 300W ATX CASE MULTIMEDIA STEREO SPEAKER 15" 0.28SVGA MONITOR WINDOWS 98 SE CD & MANUAL OR LEXMARK Z11 1200 dpi COLOR PRINTER	INTEL PENTIUM III 667 MHZ PROCESSOR 128M 100 MHZ SDRAM PANASONIC 1.44M FLOPPY DRIVE 8X DVD ROM DRIVE 20G ATA-66 HARD DRIVE ATI RAGE 128 FURY 32M CREATIVE LIVE VALUE! IBM MULTIMEDIA INTERNET LOGITECH PS/2 KEYBOARD ASPERT TOWER CASE USR 56K PCI V90 MODEM NEC AS70 17" 0.27 MONITOR LATEC 2414 SPEAKER W/SUBWOOFER WINDOWS 98 SE CD&MANUAL OR LEXMARK Z11 COLOR PRINTER LOTUS SMARTSUIT MILLIENNIUM w/WORDPRO, LOTUS 123, ORGANIZER
S/N: ASP2K0601 lease \$55/m \$1777	S/N: ASP2K0605 lease \$34/m \$888	S/N: ASP2K0603 lease \$49/m \$1299	S/N: ASP2K0602 lease \$71/m \$1877
AMD ATHLON 800MHZ \$1,999 AMD ATHLON 750MHZ \$1,869	INTEL CELERON 533 PROCESSOR \$929 17" 0.27 MONITOR ADD \$109	PANASONIC 8X 4X 32X CDRW ADD \$269 17" 0.25 1600X1200 MONITOR ADD \$149	INTEL PIII 800 MHZ PROCESSOR \$2,249 INTEL PIII 733MHZ PROCESSOR \$1,999

ONE Month FREE Internet Access with Purchase of Any System

Aspert System Warranty: 3 year labour & 1 year parts. Extend Warrants available. Prices are already discounted for cash payment. Prices are subject to change without notice. Promotion last without notice. All logos and trademarks are the properties of their respective owners.

PARTS



MOTHERBOARD

ABIT VT6/NA6	\$159/125
ASUS P3V/P3V4X	\$135/179
ASUS K7M/K7V	\$199/238
ASUS CUBX	\$192
AOPEN AX63PRO	\$115
AOPEN AP59PRO	\$129
AOPEN AX6B/AX6BC	\$179/146
GIGABYTE GA6BXC	\$129
GIGABYTE GA6VX-4X	\$158
GIGABYTE 7IX	\$189
EPOX MVP3G-5	\$153
TYAN S1854(Dual Slot)	\$153
ODI ADVANCE 9	\$128

MEMORY CPU

INTEL PIII 600/650/667/733/750/800/866	CALL !
INTEL CELERON 433/466/500/533/566	CALL !
AMD ATHLON 600/650/700/850	CALL !
AMD K6-2 450/500/533	CALL !
64M/128M/256M SDRAM	CALL !
64M/128M/256M RAMBUS RDRAM	CALL !

DVD-ROM

PIONEER 16X DVD	\$239
TOSHIBA 12X DVD	\$219
AFREY10X DVD	\$189
CREATIVELAB 8X ENCORE	\$329
PANASONIC 8X DVD	\$189

IDE CD-ROM

ACER 50X/40X	\$89/55
AOPEN 52X	\$59
ASUS 50X	\$73
CREATIVELAB 52X	\$64
KENWOOD TRUE 52X CDROM	\$139
LITEON 52X	\$66
MITSUMI 48X CDROM	\$65
PANASONIC 40X	\$69
TOSHIBA 48X	\$89
TOSHIBA 40X(SCSI)	\$139

IDE CD-WRITER

HP 9310i 10X/4X/32X	\$389
HP 8250i 4X/4X/24	\$269
PANASONIC 8432 CDRW	\$269
PLEXTOR 8432 CDRW	\$339
YAMAHA 8424E CDRW	\$359
SONY 140EX 8X/4X/32X CDRW	\$289

SCSI CD WRITER

HP 9210i	\$382
YAMAHA 8424S(BARE)	\$397
PLEXTOR 12432	\$507
MICROSOLUTION 4X/4X/20(EXT)	\$482

VIDEO CARD

ASUS V6600 Geforce Pure/Deluxe/64MB	\$245/294/315
ASUS V6800 DDR Pure/Deluxe/64MB	\$281/336/467
ASUS V7700 Geforce2 32M AGP	\$495
ATI RAGE FURY PRO 32M (OEM) /TV Out	\$159/\$186
ATI RAGE FURY MAXX 64M	\$239
ATI ALL IN WONER 128 16/32M (OEM)	\$201/27
CREATIVE LABS 3D ANNIHILATOR 2	\$479
MATROX G400 DUAL HEAD/ MAX	\$265/286
MATROX G400 MARVEL 16M RETAIL	\$395
3DFX Voodoo3 2000 PCI/AGP	\$137
3DFX Voodoo3 3500 w/TV TUNER	\$280
3DFX Voodoo3 5500 64MB (NEW!!!)	\$449

IDE HARD DRIVE

FUJITSU 6.4G(5400)/13G(7200rpm)	\$116/213
MAXTOR 15G/20G	\$156/175
MAXTOR 15G(7200RPM)	\$176
MAXTOR 30G(7200RPM)	\$284
MAXTOR 40G(7200RPM)	\$383
QUANTUM LM15G/LM 20G	\$192/239
WD 20G(2M)(7200rpm)	\$235
SEAGATE 28G (7200)	\$326

MODEM

USR 56K V90 D/F/V PCI	\$55
56K PCMCIA MODEM	\$79
AOPEN 56K D/F/V PCI	\$35
AOPEN 56K D/F/V ISA	\$69

SOUND CARD

AUREAL VORTEX2/SQ	\$42/66
SOUNDBLASTER LIVE VALUE	\$69
SOUNDBLASTER LIVE PENTIUM	\$259
LABTEC 2414 SPEAKER	\$59
S8 4POINT FPS1000/2000	\$99/239
YAMAHA M20/M8	\$99/59
ALTEC LANSING ACS33/45.2	\$59/84
Diamond MX300	\$53

PRINTER

HP1100/2100	\$546/986
HP 970C/950C	\$569/431
HP 3150	\$869
BROTHER 1240/1030	\$465/376
BROTHER 1250/1270	\$554/731
BROTHER MP-21C	\$468
EPSON 440/660	\$116/139
EPSON 760/860	\$179/199
LEXMARK Z11/ Z51	\$99/237
LEXMARK E310/Z31	\$499/175
LEXMARK 3200	\$128

MONITOR

VIEWSONIC E771/E773	\$317/\$373
VIEWSONIC E790/PF775	\$509/476
OPTIQUEST Q95/Q75	\$484/399
MAG F0786	\$413
NEC FE700/FE950	\$389/643
NEC A900/E900+	\$649/989
PANASONIC E70/SI70	\$305/408
MITSUBISHI PLUS70/72	\$629/634
MITSUBISHI PRO 900U	\$1,118
SAMSUNG 750S/700NF	\$292/466
SAMSUNG 950P/900SL	\$519/549
SONY E200/G200	\$513/572

SCSI HARD DRIVE

IBM 9.1G/18G	\$364/669
IBM 18.2G/36G(10K)	\$812/1257
SEAGATE BARRACUDA 9.1G/18.2G	\$423/749
SEAGATE CHEETAH 9.1G/18.2G	\$631/1027
QUANTUM ATLAS IV 9.1G/18.2G	\$399/699
FUJITSU 9.1G/18G	\$309/499

SCANNER

ACER 620UT	\$179
AFGA 1212U/P	\$129/125
EPSON 636U	\$266
VISIONER 6100U	\$139
VISIONER 7600U	\$189
UMAX 2100U	\$165*
HP 5200C/6300C	\$350/499

TAPE BACKUPS

ONSTREAM 30G/50G DIGITAL DRIVE	\$412/855
TECMAR DITTO MAX 10G IDE INT/EXT	\$289/329
SEAGATE TAPESTOR TR4 8G INT	\$289
SEAGATE TAPESTOR TR5 4G	\$465
SEAGATE TAPESTOR TR4 20G(SCSI)	\$341
ORB 2.2G Removable Disk Drive(scsi)	\$339

SOFTWARE

OFFICE 2000 SBE /PRO	\$279/459
NORTON ANTI VIRUS 2000	\$39
WORDPERFECT 2000	\$39
MS WORKSUIT 2000	\$149
WINDOWS 2000 PRO	\$199
REDHAT LINUX 6.0	\$59
ADOBE ADOBE 4.0	\$349
SIMPLY ACCOUNTING 7.0	\$149
MYOB 9.0	\$149
QUICKBOOK 8.0 PRO	\$229
PC ANYWHERE 6.0	\$129
NORTON SYSTEM WORKS 2000	\$119

* After Rebate

ASPERT e-Commerce Business SOLUTIONS

- StoreKeeper POS System
- StoreManagement System
- Enterprises Management System
- Internet Sales Solution
- Computer Telephony System

Tel : 732-0380 Fax : 737-1337

Mobility Solution

NOTEBOOK

FUJITSU LIFEBOOK	
E-5140 C433/ 64M/ 6.4G/ CDROM/ 13.1TFT/ 56K MODEM/ WIN98	\$2,469
E-5320 P1366/ 64M/ 10G/ CDROM/ 13.3TFT/ 56K MODEM/ WIN 98	\$2,878
E-6320 P1366/ 64M/ 10G/ CDROM/ 13.3TFT/ 56K MODEM/ WIN 98	\$3,399

TOSHIBA	
2610 DVD, C433, 64M, 6.0G, 12.1TFT, WIN98	\$2,499
4270X DVD C500 64M 6G 14.1 TFT 6X DVD WIN98	\$2,499

IBM NOTEBOOK	
I 1421 C466, 32M, 4.8G, 24X CDROM, 56K MODEM, 13"HPA, WIN98	\$1,619
390X 2626 J0U P1400, 64M, 6.4G, 24XCDROM, 15.1TFT, 56K MODEM, WIN98	\$3,788
I 1460 C433, 64M, 4.8G, DVD, 14.1 TFT, 56K MODEM, WIN98	\$2,699

NOTEBOOK UPGRADE AVAILABLE, CALL FOR DETAIL

MOBILE PRINTER

BROTHER MP-21C COLOR 2.5PPM, 720DPI, PCMCIA, PWR/DATA	\$489
CANON BJC-50 BUBBLEJET 5.5PPM, 720X360DPI	\$499

PORTABLE PROJECTOR

INFOCUS LP400 DLP PROJ 700 LUMENS SVGA 800X600 6.8LBS	\$3,569
INFOCUS LP755 POLY-SI LCD PROJ 1000 LUMENS XGA 1024X768	\$7,409

PCMCIA/CARD BUS MODEM

LINKSYS PCMC100 ETHERFAST 10/100 BT PCMCIA CARD	\$129
3COM MEGAHERTZ 10/100+ 56K MODEM GLOBAL CARD BUS	\$319

PORTABLE CD-ROM

MICRO SOLUTIONS 24X READER DUAL PAR/PC CARD, BACKPACK BANTUMPALM IIIX CONNECTED	\$482
---	-------

PALM

PALM IIIE CONNECTED	\$219
PALM IIIX CONNECTED	\$329

ASPERT Service Center

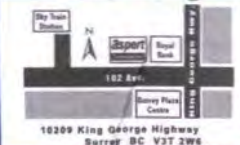
EASY:
4 LOCATIONS TO SERVICE YOUR PC.

Fast & Friendly Service
BBB MEMBER

EXPERIENCE PROFESSIONAL
A+ MCSE, CNE, MCP NETWORK +
Trained technician ON STAFF

WE OFFER:
REPAIR
UPGRADE
MAINTENANCE
NETWORKING SUPPORT
INSTALLATION

Surrey Broadway Richmond E. Hastings Burnaby



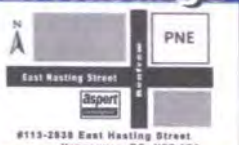
Tel: (604) 589-0328
Fax: (604) 589-0339



Tel: (604) 737-3998
Fax: (604) 737-1337



Tel: (604) 232-0328
Fax: (604) 232-0318



Tel: (604) 216-0380
Fax: (604) 216-0381



Tel: (604) 216-0380
Fax: (604) 216-0381

Opening Soon!

Business Hours:
Mon-Sat 10:00am-6:00pm

Daytek Number 1 in Canada

LCD Panel
monitor



Vista V19P
19" Perfectly
Flat Diamondtron,
0.25AG, 95KHz,
Max 1600x1200



Vista V17P
17" Perfectly
Flat Diamondtron,
0.25AG, 95KHz,
Max 1600x1200

DT-95S
19", 0.26,
95KHz, Max
1600x1200



DT-77P/75P
17", 0.27/0.25,
95KHz, Max
1600x1200



DT-77A/75A
17", 0.27/0.25,
70KHz, Max
1280x1024



DT-1536D
15", 0.28, 54KHz,
Max 1024x768



DAYTEK monitors – first in sales,
first in value.

1-877-DAYTEK-1
3 2 9 8 3 5

Web: <http://www.daytek.ca>

E-mail: info@daytek.ca

DAYTEK
A DAEWOO COMPANY

Vancouver • Toronto

All dimensions shown are CRT size, viewable size is smaller.
Diamondtron is a trademark of Mitsubishi Electronics.



By Dave Chapelle

When science writers first began writing about on flat-panel displays, some predicted they would become the wall art of the future. Imagine hanging a flat-panel display on your living room wall, connecting a small computer somewhere out of the way, and displaying your favourite images. You could change the art to suit your mood or to impress your guests. By loading a fish tank screen saver, you could enjoy a giant aquarium without ever having to feed the fish or clean the tank.

The wall-sized televisions Ray Bradbury described in his 1953 novel *Fahrenheit 451* suddenly seem not so futuristic. While it's true that a few devices have come along that use flat screens for more artistic purposes (Sony's electronic picture frame comes to mind), the most common applications are as replacements for the cathode ray tube (CRT) computer monitors.

The advantages of flat-panel displays over traditional CRT monitors are clear. Flat panels take up less space on a desktop, emit hardly any radiation, and have no difference between stated size and real viewing area. For many users they are easier to look at, which results in less eye fatigue.

Taking up less desktop area is a distinct advantage flat-panel displays have over cathode ray tubes. ATX cases, which are found on most new computers, are wider than the AT cases they replace. Add speakers and a 17-inch monitor, and free desktop space disappears. Flat-panel displays require much less room.

With flat-panel monitors, you also get all the screen real estate you pay for. A 15-inch CRT monitor has roughly only 34.5 cm (13.5 in.) of actual viewing area. A 17-inch CRT monitor has only about 40 cm (15.75 in.) of viewing area. Flat-panel displays have no such discrepancy. For a 15-inch flat-panel display, the viewing area is the full 15 in.

Begone, bad old rays!

Two major concerns users have with CRT monitors are flicker and radiation. In a CRT monitor, electrons are "beamed" many times a second at the back of a screen coated with phosphors. Light is created when electrons strike the phosphor coating, and between passes of the beam the phosphor patches dim somewhat, creating flicker. Staring at such a monitor for long periods of time can result in eye fatigue.

This is less of a problem with TFT displays, because there is no residual fading between refresh cycles—each pixel element is either on or off. What can be slightly problematic is the

analogue-to-digital conversion necessary when using a flat-panel monitor with an analogue graphics card. Because the analogue signal isn't as precise as a digital signal, the TFT monitor sometimes has to decide which one of two pixels is the best match, and if it chooses differently between refresh cycles, a bit of flicker can result. Because of that, the technology isn't quite perfect yet, but this concern should disappear as more people move towards the digital flat-panel technology on the graphics card end.

Some users worry about the electromagnetic and radio frequency emissions from CRT monitors. CRT manufacturers have already done a lot to address these issues, with shielding technology that eliminates much of the radiation. There are still some professions, like science and medicine, where any amount of radiation is unacceptable, and the TFT monitor fits in nicely.

The good new rays

Flat-panel displays are very different. Instead of creating light, they control it. Flat-panel displays emit only minuscule amounts of light radiation from the liquid crystal cells. Users can sit as close as they like without fearing for their eyesight, and use less power in the process, to boot.

Liquid crystals are compounds that flow like liquids while maintaining a crystalline order. Liquid crystal molecules control the direction of polarized light according to how they are aligned. By applying an electric field, the alignment of these molecules can be controlled.

There are two types of flat-panel display: active matrix and passive matrix. In a passive-matrix display, horizontal and vertical electrodes activate the pixels. In an active-matrix display, silicon thin film transistors (TFT) are used to activate each pixel. The transistors supply the necessary control that allows the liquid crystals to rotate and either pass or block light. Active-matrix TFT flat-panel displays are best for desktop computers because they have better resolution, a brighter display, and a wider viewing angle.

Sandwiched between two glass panels that are polarized on the exteriors, the liquid crystals act as light switches, blocking light or allowing it to pass depending on the rotation attitude of the cell. Light emanating from behind the display passes through the first polarizer and is rotated with the alignment direction of the liquid crystal. As the light reaches the second polarizer, it can be passed or blocked, depending on the attitude of rotation. Transparent conductors on the inner surface of the glass plates are used to control the electric field on the cell, and thus the direction

Keep it flat!

Flat-panel monitors were once considered too expensive for anything but specialized applications. While the prices are still higher than cathode ray tube designs, you can now almost say LCD and affordable in the same breath.

of the liquid crystal molecules.

The construction of liquid crystal displays (LCDs) means that lines can only be as close together as the actual pixels. This is known as convergence. A vertical line consisting of sections of red, green, and blue will be straight, but not perfectly aligned. Because each colour pixel is physically right next to the others, the different coloured lines will not touch exactly end-to-end. This is only noticeable upon very close inspection during certain uses. All of the monitors sampled in this month's Test Lab had excellent vertical convergence with no noticeable horizontal discrepancies.

Between two and three million transistors make up each active-matrix LCD TFT screen. When juggling this many tiny items there are bound to be defects. Even the most stringent quality control standards are going to let some microscopic defects through the manufacturing process. As these defects show up directly on the user's screen, more care is required when choosing a display.

Consumers are used to high quality control standards for CRT monitors. We buy them, uncrate them, and expect that they will perform properly. When purchasing an active-matrix flat-panel display monitor, however, it's a good idea to try to view the specific monitor you will be buying before taking delivery.

In the eye of the user

The best way to determine which product suits your needs is to examine as many displays as possible. Beauty really is in the eye of the beholder. When discussing colour, brightness, sharpness, and tint, opinions vary. One person's beige is another's taupe, and what appears turquoise to some is aquamarine to others. For years I drove a green truck that was registered as teal, but I'd like a dollar for every person who referred to it as blue. For this reason our testing can only be subjective. Since you are the one who has to look at it, you should be the one to decide which monitor you want.

I sometimes borrow a notebook computer with an active-matrix TFT screen. It feels like I can stare at that screen all day, which makes up for the smaller keyboard. When in front of a 15-inch CRT monitor I am constantly looking away to rest my eyes. However, as everyone's eyesight is different, not everyone will feel the same way. Many users find LCD displays more difficult to look at than CRTs.

Supply and demand

Why haven't flat panels completely usurped the market from CRTs? Is it because customers consider the prices too high? Or are the prices too high because demand is currently low? Flat

FLAT-PANEL MONITORS

	Apple Studio Display	 Hewlett-Packard Pavilion FX70	IBM T55A	KDS Radius S-3F	LG Electronics 500LC	NEC MultiSync LCD 1525V
Dimensions (WxHxD) cm	39.9x49x24.9	41.8x39.4x21.7	41.3x38.1x20.4	40.4x38.7x20.3	40.5x36.2x18.2	37x32.5x15.1
Weight (kg)	5.5	8.2	6.5	5.55	5.6	4
Maximum resolution	1,024x768	1,024x768 85 Hz	1,024x768 75 Hz	1,024x768 75 Hz	1,024x768 75 Hz	1,024x768 60 Hz
Recommended resolution	1,024x768	1,024x768 75 Hz	1,024x768 60 Hz	1,024x768 75 Hz	1,024x768 75 Hz	1,024x768 60 Hz
Pixel pitch (mm)	NA	0.297	0.297	0.297	0.3	0.3
Horizontal viewing angle (degrees ±)	60	NA	NA	70	60	55
Vertical viewing angle (degrees ±)	45	NA	NA	60\55	45	40
Tilt angle down (degrees)	10	5	4	NA	5	5
Tilt angle up (degrees)	45	35	41	NA	30	33
Power consumption (Watts)	35	42	30	30	40	25
Contact	800-538-9696	800-387-3867	800-465-7999	888-537-9001	888-542-2623	800-632-4636
Web site	www.apple.ca	www.hp.com	www.can.ibm.com	www.kdscanada.ca	www.lge.ca	www.nectech.com
Warranty	3 years	1 year	3 years	3 years	3 years	3 years
Price	\$1,949 SRP	\$2,237 street	\$2,119 SRP	\$1,502 street	\$1,499 SRP	\$1,549 ESP

	Phillips 150B	Princeton APP 520	Samsung 570 S	Samsung 570 P	 Sceptre ST 15B	 Tatung L5CBS	Viewsonic VP151 ViewPanel
Dimensions (WxHxD) cm	40.2x41.8x17.6	38.8x40.6x20	38.5x43.2x17.9	38.5x40.6x17.9	33.9x33.9x12.5	39.8x37.5x19.5	41.6x43.1x23.9
Weight (kg)	5.5	4.79	5.7	5.7	3.1	4.8	8.5
Maximum resolution	1,024x768 75 Hz	1,024x768 75 Hz	1,024x768 75 Hz	1,024x768 75 Hz	1,024x768 75 Hz	1,024x768 75 Hz	1,024x1,024 60 Hz
Recommended resolution	1,024x768 60 Hz	1,024x768 75 Hz	1,024x768 60 Hz	1,024x768 60 Hz	1,024x768 70 Hz	1,024x768 60 Hz	1,024x768 60 Hz
Pixel pitch (mm)	0.297	0.297	0.297	0.297	0.29	0.297	0.297
Horizontal viewing angle	75	60	55	55	40	60	80
Vertical viewing angle	50\55	55	60	60	10\30	45\55	80
Tilt angle down (degrees)	2	5	5	5	15	0	5
Tilt angle up (degrees)	32	27	20	20	15	20	15
Power consumption (Watts)	38	42	30	36	38	NA	35
Contact	800-479-6696	800-747-6249	800-726-7864	800-726-7864	800-788-2878	800-827-2850	800-888-8583
Web site	www.pcstuff.phillips.com	www.princetongraphics.com	www.samsung-monitor.com	www.samsung-monitor.com	www.sceptre.com	www.tatungca.com	www.viewsonic.com
Warranty	3 years	3 years	3 years	3 years	3 years	3 years	3 years
Price	\$1,699 ESP	\$1,649 SRP	\$1,799 SRP	\$1,999 SRP	\$1,649 SRP (converted)	\$1,499 SRP	\$2,379 SRP

panel prices have not come down as much as industry analysts once predicted. A good quality 17-inch CRT monitor with a three-year warranty can be purchased for a street price of less than \$400, while active matrix TFT monitors have yet to fall below \$1,400, and some exceed \$2,000. Three excellent CRT monitors can be purchased for the price of one excellent LCD. This explains some of the weak demand.

The manufacturing process also contributes to the higher cost of flat-panel displays. The difficult business of aligning more than two million microscopic liquid crystal and transistor cells correctly results in a portion of units not meeting specifications. Monitors that do not meet strict quality control standards must be scrapped. If manufacturing processes improve we can expect the yield of good units to increase. This should allow manufacturers to relax prices.

Why haven't prices come down as expected? We asked representatives from the major manufacturers.

Dave Walsh, vice-president of sales and marketing for NEC Technologies Canada, says the radical price reduction of first quarter 1999 will not be repeated in the near future. He says improvements in glass production over the past three years increased the yield of quality flat-glass panels. He expects there will be what he calls a "natural price erosion" of 10 to 20 percent by monitor manufacturers over the

next year or two. As decision-makers in organizations become aware of the advantages TFT flat-panel monitors have over CRT monitors, demand will increase.

Matthew Ki, computer products manager for Samsung Electronics Canada, says demand for flat-panel displays is not great in North America or developing nations—yet. Demand for TFT LCDs in Asia and Europe currently meets or exceeds supply. Why should manufacturers lower prices for a North American market that is not interested, when they are getting good prices for current production capacity? Ki feels that by 2002 manufacturing output should increase. Manufacturers with major market shares in Europe and Asia will attempt to establish themselves as dominant suppliers of TFTs in North America and developing nations. As they compete for shares of the North American market, we can expect manufacturers to begin aggressively reducing prices.

A worldwide glass shortage is the reason David Philp, director of sales and marketing for LG Electronics Canada, offers for the high cost of LCDs. A great deal of glass is required to produce monitors, he says, and the situation is not helped by the high worldwide demand for notebook computers with TFT screens. Much of the production capacity for flat-panel displays already goes into notebooks.

As well, the way active-matrix TFT LCDs are

made means individual pixels cannot be repaired or replaced, says Philp. So, if a customer returns an LCD under warranty with six or more pixels not functioning, the entire unit must be scrapped. This represents a considerable investment, usually over \$1,200. The customer must then be given a new unit—a cost borne by the manufacturer.

In contrast, a CRT monitor returned under warranty can usually be repaired, and quite often without replacing the actual tube. In the unlikely event the entire CRT has to be scrapped, the manufacturer loses only a fraction of the cost of replacing a competitive flat-panel display.

How we tested

The computer system used to test the flat-panel displays was a 600 MHz Pentium III with 128 MB RAM, and a Quantum 13.6 GB hard drive. An ATI Rage 128 AGP video card with 32 MB of video RAM was used to drive all the monitors. All of the models were tested at 1,024x768 resolution setting. The refresh rate of the video card was left at the optimal setting, except where mentioned.

Windows 98 Second Edition was the operating system used. Windows 98 found and identified each monitor on boot up. For the tests, all models were first installed as Plug and Play monitors. Where noted, software drivers were added later.

We compared the picture quality as it appeared from our test platform and (perhaps unfairly) the picture when connected to older video cards. We also looked at features, price, specifications, dimensions, and how easy each monitor was to move around. Obviously not all users are interested in paying for a swivel or detachable base, multilingual on-screen display (OSD), or multimedia options.

One thing that became clear during our testing was that when you're in the market for a flat-panel display, it's important to make sure your video card is up to the job. When we tried some of the evaluation samples on other computers using typical PCI video cards, the results were mixed. Streaking occurred with some units, and other times colours were not as vivid as with the ATI AGP video card. If you're going to invest thousands of dollars in a monitor, a video card upgrade adds only a small amount to the total purchase, but can make for a display that is far superior.

Software from Displaymate Technologies (<http://www.displaymate.com>) was used to test all the units. The Obstacle Course, part of DisplayMate for Windows version 1.2, is a demanding test of a monitor's ability to handle different signals. With the possible exceptions of graphic artists and video editors, most users would not place such extreme demands on their monitors.

Continued on page 65

NOTE BOOKS, ATHLON, CELERON, PIII SYSTEMS



Our 11th Year!!

* Cash price only, credit card users add 2.5%
Member of Mutual Exchange Canada

4317 FRASER ST., VANCOUVER, B.C. V5V 4G4 • TEL: (604) 872-7337/FAX: 872-2524 • Hours: Mon-Fri 10:30am - 6:00pm, Sat. 10:00am - 4:00pm

ACER 430TVX Notebook

Intel Pentium III 450
14" TFT SVGA, 10/100 NIC
6G Hdd, 64 meg RAM
TouchPad Mouse, 56k Modem
Lithium Ion Battery
Internal Floppy & 6x DVD
Windows 98, PCMCIA slot
Built-in Sound & Speakers
6.8lb, silver finish

One Demo **\$3299**

Entry System

Intel 810 chipset
Intel Cache 810 AGP
64meg ram, 8.4G Hddisk
PS/2 Mouse and Keyboard
52x CD-ROM, Floppy Drive
16bit Sound, 100w Speakers
14" Tower Case 250w PS
ACER 56k V.90 Fax/Modem
Use your own monitor

Celeron 533 **\$699**

Intel Celeron Systems:

10G Hddisk, 1.44mg Floppy
52x CD-ROM, Sound Max
Intel 810 AGP Cached memory
17" LowRad SVGA Monitor
Win 98 keyboard, Mouse
64meg SDRAM, 56K Fax/Modem
Windows 98 with Manual
14" ATX Tower
160w spkrs

533 MMx **\$1149** 566 MMx **\$1199**

Intel Pentium III Starters:

10G Hddisk, 1.44mg Floppy Dr
52x CD-ROM, 128bit Sound
RIVA TNT-2 32meg AGP
17" SVGA Monitor, 27dp
PS/2 Win 98 keyboard, Mouse
64meg SDRAM, 56K Fax/Modem
Windows 98 with Manual
16" ATX Tower, 160w spkrs

PIII 533MMx **\$1439** PIII 667MMx **\$1479**

Printers, CDRWs

Canon BJC3000 New Separate Inks	\$229
Canon BJC2100SE Color (New)	\$129
Lexmark 3200 Color inkjet 1200dpi	\$149
Epson Stylus 760 Color inkjet printer	\$229
HP 840 Color Inkjet New	\$229
HP 930 Color Inkjet Ret3 technology	\$309
HP 1100 Laser Printer, 8ppm	\$579
HP 2100 Laser Printer 10ppm	\$999
Sony 32x/8x/4x CD-RW internal	\$339

Special of the Month

Athlon 700MMx, ASUS Board

128meg PC133Mhz Ram 168pin
Maxtor 15G 7200rpm Hddisk ATA-66
1.44mg Flpy drive, SB 128 PCI
RIVA TNT-2 32meg AGP
52x CD-ROM Drive, 160watt Speakers
Win 98 Keyboard, Netmouse & pad
Samsung 17" 750s .24 hdp SVGA Monitor
Windows 98 SE on CD-ROM
10/100mb/s Network card

Special
\$1699

Intel Pentium III Athlon (K7) Systems:

- Windows 98 SE with Manual
- Quantum 20G ATA-66 Hddisk 7200rpm
- 128meg SDRAM PC133mhz Ram
- 16" Tower case ATX tower case
- Logitech Netmouse, Win 98 Keyboard
- ACER Hardware 56K V.90 Modem
- Riva TNT-2 32mg AGP x TV Out
- ASUS P3V4X or ABIT KA7 Athlon board
- 52X CD-ROM, 1.44mg Floppy drive
- Samsung 750S 17" NI SVGA monitor .24dp
- 2xUSB, EIDE, Serial and Printer Ports
- Sound Blaster 128PCI, 160watt Spkrs

Upgrade Options:

• Maxtor 30G 7200rpm Hddisk	\$89	• GeForce DBR 32mg	\$269
• Windows 2000 Professional	\$89	• Sound Blaster Live Value	\$39
• NEC FE700 Flat .25dp 17"	\$89	• 10X DVD-ROM Upgrade	\$139
• Samsung 900NF 19" Flat .20	\$399	• Cambridge Sound Works w Subwfrs	\$59

Less than major brand, better components

Speed		Price
Pentium III	533MMx	\$1789
Pentium III	667 MMx	\$1829
Pentium III	733MMx	\$1959
Pentium III	800MMx	\$2139
Pentium III	850MMx	\$2559
Athlon K7	700MMx	\$1869
Athlon K7	750MMx	\$1919
Athlon K7	800MMx	\$2039
Athlon K7	850MMx	\$2189
Athlon K7	900MMx	\$2469
Athlon K7	1KMMx	\$3729

Prices Subject to Change Without Notice
Lease Available from 12-65 Months



Member of the Better
Business Bureau

**2 yr Parts & Labor
Warranty**

SuperData

1237 West Broadway, Vancouver, BC., V6H 1G7

Tel: (604)732-7998 Fax: (604)732-7908

Email: sale@super-data.com

www.super-data.com

ON-LINE
PRODUCTS
LIST..

WEEKLY
UPDATED
PRICES &
SPECIALS..!



7th year in
Same Location

EPSON



HEWLETT
PACKARD

Quantum

AOpen

ViewSonic

intel

Canon

FUJITSU

AMD K6

Pentium-III Screamer

- ASUS (CUV)P3V4X 133MHz
- VIA 133A 4x AGP
- 128Mb SDRAM PC-133
- 20GB EIDE UDMA/66 7200rpm
- 3.5" 1.44Mb Floppy Drive
- nVidia TNT2 Pro 4x AGP 32MB
- 48x EIDE CD-ROM Drive
- Creative Lab Live sound card Digital
- Creative works Cambridge w/Subwoofer
- Win98 107-key keyboard
- Logitech 2 Buttons Wheel Mouse & Pad
- Acer 56k V.90 internal Fax Modem
- 17" ATX Mid Tower Case 250w
- CTX 17" Pure-Flat FD Trinitron Monitor
- 2 Year Parts & Labor Warranty

Pentium 3-550/600	\$1750/1780
Pentium 3-650/700	\$1800/1830
Pentium 3-733/750	\$1845/1999
Pentium 3-800/833	\$2199/2250

Celeron Gamer

- Acer AX64 Pc133 UDMA66
- VIA 133A 4x AGP
- 64Mb SDRAM PC-100
- 10Gb UDMA66 Hard Drive
- 3.5" 1.44Mb Floppy Drive
- nVidia TNT2 Pro 4x AGP 32MB
- 48x EIDE CD-ROM
- On Board AC '97 Audio
- Juster 3D Speaker w/Subwoofer
- Win98 107-key Keyboard
- PS/2 Wheel Mouse
- 56K PCI Voice fax/modem internal
- 17" ATX Tower Case
- 17" SVGA 0.25 Digital Monitor
- 2 Year Parts & Labor Warranty

Celeron500	\$1099
Celeron533	\$1109
Celeron-II 566	\$1159
Pentium-III 500	\$1249

AMD Super Socket-7

- Acer MX59 Pro ATX Mainboard
- 512K L2 PB Cache
- Apollo MVP4, UDMA66 ready
- 64Mb SDRAM PC-100
- 8.4GB EIDE UDMA/66
- 3.5" 1.44Mb Floppy Drive
- Integrated Advanced 2D/3D AGP
- 48x EIDE CD-ROM
- Integrated Sound Onboard
- 160 Stereo Amp. Speaker w/Subwoofer
- Win98 107-key keyboard
- AOpen PS/2 Mouse & Pad
- 56K PCI Voice fax/modem internal
- 17" ATX Tower Case CSA PS
- 15" SVGA 0.28 Colour Monitor
- 1 Year Parts & Labor Warranty

AMD K6-2 500	\$799
AMD K6-2 533	\$809
AMD K6-2 550	\$829

AMD Althon K7

- Gigabyte CA7ix K7 Althon ATX
- With UDMA 66/ 200Mhz Bus
- 128Mb SDRAM PC-133
- 20Gb Ultra DMA 66 7200RPM
- 3.5" 1.44Mb Floppy Drive
- nVidia TNT2 Pro 4x AGP 32MB
- 50x EIDE CD-ROM Drive
- Sound Blaster Live Value Digital
- Stereo Speaker w/Subwoofer
- Win98 enhanced keyboard
- PS/2 Wheel Mouse & Pad
- 10/100Mbps PCI Network Card
- 19" ATX Tower Case CSA 300W PS
- CTX 17" Pure-Flat FD Trinitron Monitor
- 2 Year Parts & Labor Warranty

AMD K7-650/700	\$1650/1699
AMD K7-750/800	\$1749/1850
AMD K7-850/900	\$1999/2299
AMD K7-950	\$2499

SAMSUNG SyncMaster 753DF
\$359
* 17" (16" Viewable)
* 0.20mm dot pitch
* 1280x1024@65Hz
* DynaFlat-Infinity Flat Tube

HP 9310i
Read: Up to 32x
Write: Up to 4x (CD-RW)
Up to 10x (CD-R)
Buffering 4 MB
\$389

CTX PR705F
Pure-Flat CRT
17" FD Trinitron®
(16" viewable size)
0.24mm-0.25mm pitch
Aperture Grille,
1600 x 1200, 67Hz
1280 x 1024, 78Hz
\$389

nVidia™ TNT2 Pro 128
True 128 bits
2x / 4x AGP
300MHz RAMDAC
32MB High Speed
\$139

SOHO Value Workstation
■ i810 AGPset ATX Mainboard
■ Ultra DMA/66 Ready
■ 64Mb SDRAM PC-100
■ 10Gb UDMA66 Hard Drive
■ 3.5" 1.44Mb Floppy Drive
■ On Board i810 AGP Video
■ 48x EIDE CD-ROM
■ On Board i810 PCI Sound
■ Stereo Speaker w/Mini Subwoofer
■ Win98 107-key Keyboard
■ PS/2 Wheel Mouse
■ 56K PCI Voice fax/modem internal
■ 17" ATX Tower Case
■ 15" SVGA 0.28 Digital Monitor
2 Year Parts & Labor Depot Warranty

ARTEC Ultra 2000
Optical 600 x 1200 dpi
36 bit True Color Slim USB
\$99

Maxtor DiamondMax Plus
40GB 7200rpm
2MB 100MHz Buffer
UltraDMA 66 interface
\$399

CD Recordable
1-9 10+
CD-R74.....\$1.20 1.05
CD-R80.....\$1.69 1.65
CD-RW.....\$1.90 1.80

EPSON Stylus Color 740
\$216
US \$50 MAIL-IN REBATE

SONY CRX140E
■ 8X CDR
■ 4X CD-RW
■ 32X Read
■ 4MB Buffer
■ Software
\$280

Bonus:
■ Windows 98 SE (OEM)
■ Star Office Pre Load w/CD
■ One Month Free Internet
Celeron 500 \$ 980
Celeron 533 \$ 999
Celeron 566 \$1050

All prices & spec. are subject to change without notice! Prices base on CASH discounted. Credit card +2.5%

Keep it flat

Continued from page 63

Apple Studio Display

From: Apple Canada
Tel: 800-538-9696. <http://www.apple.ca>
Suggested retail price: \$1,949



The screen tilts up and down and swivels left and right. The left-right swivel feature is handy when you need to get behind a machine to plug it in. The adjustable base allows the screen to be raised 11 cm (4.3 in.). At 39.4 (15.5 in.) wide, the base is unusually large. If a user does not want, or does not have room for the base, it can be removed and replaced with a smaller picture frame stand, which is included. The base and border surrounding the screen are made of translucent white plastic.

OSD controls are on the bottom of the screen, where they can be easily manipulated.

Tilt adjustment is -10 degrees and +45 degrees. Swivel adjustment is ± 45 degrees. Viewing angle is ± 60 degrees horizontally and ± 45 degrees vertically.

A two-port USB hub is built into the Studio Display.

The picture was excellent, possibly because the monitor was designed for the video card that is installed in the test platform (the ATI Rage 128 is standard in all Apple G4 comput-

ers, though this monitor can certainly be used with Windows-based PCs). Flicker was barely noticeable, even in the most demanding stages of the test.

Hewlett-Packard Pavilion FX70

From: Hewlett-Packard Canada
Tel: 800-387-3867. <http://www.hp.com>
Estimated street price: \$2,237



This unit is a soft grey color with the control buttons for the OSD tactfully hidden out of the way on the bottom left of the display panel. The FX70 comes with both analogue and digital interfaces, making it ready to go if you switch to a digital graphics card.

As this is a multimedia monitor, the base contains speakers from Polk Audio, ported for better bass frequency response. The stereo speaker input jack is on the rear of the base. The stereo audio cable also has a subwoofer connector.

The display will tilt -5 degrees and +35 degrees, so it can be viewed easily by someone standing above it. Viewing angle information was not available from Hewlett-Packard at press time.

Picture quality was generally very good, though some flicker was noted in portions of the test when refresh was set to "optimal." Reducing the refresh rate from 85 Hz to 75 Hz decreased the amount of flicker appreciably.

IBM T55A

From: IBM Canada
Tel: 800-465-7999. <http://www.can.ibm.com>
Suggested retail price: \$2,119



The sleek black finish of the model we looked at is certainly different from traditional computer beige. It is also available in pearl white. The 5 cm (2 in.) bezel surrounding the screen seems large, however.

The unique controls on this unit are easy to find and use. They are unobtrusively placed at the front, directly under the outside

For the big picture, try LaCie's Electron 22 Blue

Got a couple thousand dollars to blow on a high-quality monitor, but don't want to go the flat-panel route? We recently had a chance to look at LaCie's Electron 22 Blue monitor. Designed for graphics professionals, this CRT display provides a huge 51 cm (20 in.) of actual viewing area.

Electron 22 Blue

From: LaCie Canada
Tel: 416-530-2545. <http://www.lacie.com>
Estimated price: \$1,899

The Electron 22 Blue has a Natural Flat Aperture Grille. LaCie claims the Natural Flat tube eliminates distortion and reduces reflection because the projected image is flat.

The image on a 100 percent flat screen more closely resembles how an image appears on paper.

The monitor stands 50 cm (19.7 in.) tall, 50 cm (19.7 in.) wide, and 48.2 cm (19 in.) deep. The round base has a diameter of 25.5 cm (10 in.), which is a relatively small footprint for such a large monitor. The display can swivel 180 degrees and tilt up or down at any position through swivel.

On-screen display buttons are located on the front panel beneath the screen. On the rear there are two upstream and three downstream USB ports, two video ports, and the power cord jack.

This digital monitor's on-screen display offers users almost too much control over the image. After spending considerable time adjusting the controls, we found it was easier just to use auto-adjust.

We ran our evaluation unit through DisplayMate Technologies' (<http://www.displaymate.com>) Video Obstacle Course, part of DisplayMate for Windows Multimedia Edition 2.0. The obstacle course is a demanding test of a monitor's ability to handle different signals. Most users will never subject their monitors to extreme tests like this, but as the Electron 22 Blue was designed with graphics pros in mind, we thought it appropriate.



LaCie's Electron 22 Blue CRT monitor with hood attached.

The Electron 22 Blue performed admirably at different refresh rates and resolutions. Colours were very bright and sharp. The view was particularly brilliant when we cranked the resolution all the way up to 1,600x1,200. Even tiny text was readable. Screen regulation was also impressive at various settings, with virtually no picture wobble.

When a user's eyes are moving off-screen and back, or inspecting the outer edges of an image, the dark blue colour of the exterior makes the transition easier than traditional computer beige of most monitor cases. A three-sided blue hood, which is black inside, can be attached with Velcro to the case to reduce glare from overhead lights and improve brightness. The hood also helps to keep lighting conditions consistent.

The estimated price of the Electron 22 Blue rivals the price of some 15-inch active-matrix flat-panel monitors. In this price range some users might be tempted to purchase a flat panel, for size and radiation reasons. However, serious graphics professionals and users who appreciate truer colour will prefer the bigger screen and better colour reproduction offered by a CRT monitor. The distortion-free flat screen is a bonus.

The Electron 22 Blue comes with a three-year warranty.

—Dave Chappelle

NOTEBOOK-CITY

The Laptop Specialists



Lowest Prices in Canada!

Over 200 Models Available

WWW.NOTEBOOK-CITY.COM

Memory/Hard Drive
Modems/Ethernet Cards

Acer	Acer
TravelMate 341TV	TravelMate 732TXV
-PIII 500MHz -6.0 GB HDD -64MB Memory -12.1 TFT -2.5MB VDO Ram -6X DVD Rom -16 Bit Audio w/speaker -10/100 PCMCIA integrated ethernet adapter -56K Fax Modem -4.1 pounds / 1" thin -1 Year Warranty	-PIII 500MHz -9Gig. Hard Drive -64MB Memory -14.1 TFT Screen -8MB SDRAM -6X DVD Rom -16 Bit Audio w/speakers -56K Fax Modem -10-100 ethernet adapter -1 Year Warranty
\$3089	\$3549

Acer	Fujitsu
TravelMate 735 TLV	LifeBook E5520
-Pentium III 650MHz -12GB Hard Drive -128MB Ram -15" TFT Screen -8MB SDRAM Video -6x DVD-Rom -16Bit Audio w/speakers -56K Fax/Modem -10-100 ethernet adapter -1 Year Warranty	-PIII 450 -10 Gig. Hard Drive -64MB Ram -13.3 TFT Screen -2MB VDO Ram -24X CD-Rom -16Bit Audio with Speakers -56K V.90 Modem -1 Year Warranty
\$4369	\$3699

TOSHIBA	TOSHIBA
2590 CDT	2675 DVD
-Celeron 400 -6.4 GB. Hard Drive -64Mb of Ram Memory -12.1 TFT Screen -2MB VDO Ram -16Bit Audio with Speaker -24X CD-Rom -56K Fax/Modem -1 Year Warranty	-PIII 450 -6.0Gig. Hard Drive -64Mb of Ram Memory -12.1 TFT Screen -2MB Video RAM -DVD ROM -16Bit Audio with Speakers -56K V.90Fax Modem -1 Year Warranty
\$2190	\$2590

TOSHIBA	TOSHIBA
2655 XDVD	4260 XDVD
-Celeron 466 -6.0GB Hard Drive -64MB Ram -14.1" TFT Screen -2MB Video RAM -DVD Rom -16Bit Audio with Speakers -56K V90 Fax Modem -1 Year Warranty	-PIII 450 -12.07Gig. Hard Drive -64Mb Ram -14.1 TFT Screen -8MB Video Ram -DVD Rom -16Bit Audio with Speakers -56K V90 Fax Modem integrated ethernet -1 Year Warranty
\$2990	\$3990

Buy & Lease OnLine
Order Yours Today

TOSHIBA

FUJITSU

HEWLETT-PACKARD

Acer

IBM

Complete Price List

WWW.NOTEBOOK-CITY.COM

115A-12830 Clarke Place, Richmond, BC. V6V 2H1

Tel: (604)303-8609 Fax: (604)270-1671

Call Toll Free (888) 222-8082

edge. A light touch on any of the buttons produces the OSD. Settings can be locked or unlocked by holding a button for 10 seconds.

Screen tilt is -4 degrees and +41 degrees. Viewing angle was not available from IBM at press time.

There was noticeable flicker during the full resolution portion of the test. This was true of every unit we examined, though, and should not be a problem under any but the most demanding uses. Otherwise, the picture was high quality and suitable for most applications.

KDS Radius S-3F

From: KDS Canada
Tel: 888-537-9001. <http://www.kdscanada.ca>
Estimated street price: \$1,502

KDS has produced a monitor with smooth, futuristic styling. This unit looks great and is aggressively priced. Speakers are built into the base, which is removable for mounting on the wall.

OSD controls are hidden, yet easily accessible on the right rear of the panel. One touch of the auto-tune button centered the display.

Viewing angle is typically ± 70 degrees horizontally and ± 60 degrees vertically. The screen tilts, but exact specifications were not available by press time.

While the colours appeared somewhat faded when we connected this display to a plain PCI video card, they were brilliant on the test bench machine, and the picture quality was very good.

KDS Advance Replacement Express Service warranty offers customers a replacement unit directly from the factory in case of problems.



LG 500LC

From: LG Electronics Canada
Tel: 888-542-2623. <http://www.lge.ca>
Suggested retail price: \$1,499

LG Electronics is a major manufacturer of LCD screens. It is likely that other models we tested contained LG screens.

The base of the 500LC has a cutout for video and power cables to pass through on their way to the interface, which tucks everything away quite nicely.

User controls are small buttons tastefully



located beneath the front of the screen, out of the way but still easy to reach and use.

Screen tilt is -5 degrees and +30 degrees. Viewing angle is ± 60 degrees horizontally and ± 45 degrees vertically.

There was noticeable flicker during the demanding full resolution test and at Windows shutdown, but otherwise picture quality was very good and for the price, this is a good buy.

NEC MultiSync LCD 1525V

From: NEC Canada
Tel: 800-632-4636. <http://www.nectech.com>
Estimated street price: \$1,549



Anitec Computers

Intel Celeron 500/Pentium III 450/Pentium III 500 - \$1099/\$1299/\$1359

SPECIAL!!



1 Month Internet FREE!

Pentium III mainboard
Intel Pentium III/Celeron CPU
64MB PC100 SDRAM
6.4Gb UDMA hard drive
Panasonic 1.44Mb floppy
8Mb 3D AGP video
10/100M network card
44X EIDE CDROM drive
3D 16bit Stereo sound
100w stereo speakers & Mic
56K V.90 voice Fax/Modem
Windows keyboard & mouse
17" digital monitor
Windows 98SE Full Version

2607 Kingsway Vancouver B.C. V5R 5H4
Ph: (604)435 2038 Fax: (604)435 1298
Business Hours: Mon.-Sat.: 10-6; Sun.: close
www.aniteccom.com; anitec@aniteccom.com

Anitec
computer technology

NEC FE700

.25dpi flat 17" monitor
\$379

Samsung 700NF

flat 17" 1600 .25dpi
\$395

SONY

8432 CD ReWriter boxed
\$269

IBM 20Gb H.D.

7200rpm 2m cache
\$235

ACT Power Series

Celeron 500-\$968 lease \$34/m

PiII 550- \$1099 lease \$42/m

ACT 17" ATX 250W tower w/ 2 fans

Asus/MSI Pentium III/III mainboard

Intel Pentium III/III processor

PC100 64mb 168pin SDRAM

ATI Xpert 98 8M AGP card

Fujitsu/Maxtor 13Gb ATA66 HD

Panasonic 1.44mb floppy drive

Acer/Delta 48x CDROM drive

Creative PCI 128 sound card

motorola 56k V.90 voice fax/

modem/Stereo subwoofer speakers & Mic

Win98 keyboard & Netmouse

Upgrade/Options:

Samsung 750S .27 17" monitor +\$275

NEC FE700/Windows 98 +\$385/\$139

ACT Super Series

PiII 600EB - \$1299 or \$45/n

PiII 667EB - \$1349 or \$47/n

ACT 17" ATX 250W tower w/2 fans

Gigabyte GA6V7-4X 133M AGP 4x M/E

Intel Pentium III 133M Coppermine CPU

PC133 128Mb Fast-SDRAM

Snipper TnT2 Pro 128bit 32Mb AGP

Maxtor 15Gb 7200RPM ata66 H.D.

Panasonic 1.44mb floppy drive

Creative Lab 52XCDROM drive

PC97 stereo sound system

USR 56k V.90 fax/modem

3D-FX1 500W subwoofer speakers

PackardBell Internet K/B; Wheel mouse

Upgrade/Options:

Samsung 753DF 17" flat monitor+\$309

Windows 98 full version SE +\$139

ACT Premium Series

PiII 650E-\$1599 lease \$56/m

PiII 700E-\$1678 lease \$59/m

ACT ATX 18" 250W tower W 2nd fan

Asus P3V4X/4X 133M AGP 4x M/B

Intel Pentium III Coppermine CPU

PC100/133 128mb SDRAM

Matrox G400 Max SH 32Mb AGP

IBM 20Gb 7200RPM 2Mb H.D.

Panasonic 1.44M FD drive

Creative Lab 52X CDROM drive

Sound Blaster Live value

USR 56k V.90 PCI voice fax/modem

Cambridge FPS1000 4 points speakers

Microsoft Elite keyboard & Intellimouse

Upgrade/Options:

Samsung 700NF flat 17" monitor +\$395

Windows 98SE/2000 Pro. +\$139/\$199

ACT Athlon Series

K7/550-\$999 lease \$35/m

K7/650-\$1069 lease \$37/m

ACT 300W 19" tower two fans

Asus K7 Athlon mainboard

PC100 64Mb SDRAM

Maxtor 10Gb ata66 hard drive

48X CDROM drive

Panasonic 1.44Mb FD

ATI Xpert 98 8Mb AGP

CreativeLab PCI 128 sound card

PCI 56K V.90 voice fax/modem

Windows98 K/B and mouse

500W Subwoofer speakers

Upgrade/Options:

Impression 17" .27 17" monitor \$239

AOC 25 1600x1200 17" monitor \$259

Windows 98SE +\$139

ASUS

P5A/B(ATX/AT 100M) \$128/118

P599vm(ATX video&sound)

\$129

P3V4X(Via133) \$159

CUBV4/CUBX \$169/189

P3BF(440BX) \$178

ME99VM(Video S370) \$139

P3W (i810E) \$179

P2B-D(ATX 440BX Dual) \$369

P2B-DS(ATX DUAL SCSI) \$679

BIOSTAR

7MKA-BI(200MHz,K7) \$289

M8TWC(S370) \$145

M5ALC(Super 7) \$109

M8TXA(S370) \$159

FIC

VA503+(AT mvp3 agp 1M) \$119

VA2013(ATX mvp3 1M) \$135

SD11(atx slot A Athlon) \$169

MATSONIC

M756(all-in-one, slot+PGA) \$119

M790(atx sound slot1) \$129

M721(atx, via133, sound) \$139

ABIT

ZM6/BM6(S370) \$139/159

VA6(Via133) \$119

VT6X4(Via 133 4xagp) \$145

BE6/2(ata66 slot1) \$175

BP6(Dual S370 ata66) \$189

KA7(via133,k7,sound) \$219

Motherboard Warehouse

ACER

AX59Pro 1M(2xDimm&sim) \$119

MX59Pro 512k ATA66 \$139

MX3W(i810 ATA66 V&S) \$169

MX3ZA(ZX ATI 8Mb) \$189

AX6BC(ATX BX AGP) \$145

AX63(via133 ata66) \$119

AX64Pro(Via133 4X ata66) \$179

AX66C-L(i820 ata66 Dimm) \$189

QDI SPEEDEASY

Advance 5/133M ata66 slot1 \$119

Advance 10/133 ata66 socket \$149

SPACEWALKER

591P (AT, super7, dimm&sim) \$109

H661P(ATX 440BX) \$159

SOYO/M-Tech

6BA+III/IV(BX ata66) \$169/209

6VCA(via133 slot1 ata66) \$169

7VCA(via133 pga ata66) \$169

7AIA(ATX via133 Athlon) \$229

EPoX

G2/G5(ATX 1/2M via) \$139/169

7KXA(K7 Via133) \$219

GIGA-BYTE

GA 6BX2000+(dual BIOS) \$179

GA 6BX/D(BX Sin/Dual) \$139/259

GA 6BXU/6BXDU(U2W) \$539/649

GA6VX4X/6VX74X(via133 4x) \$128

GA6CX(i820 RIMM) \$call

GA7IXE (ATX Slot A Athlon) \$179

TYAN

Trinity371(BX Slot1&S370) \$149

Trinity400(VIA133 Slot1&S370)

MicroStar

MS6163Pro(ATX BX) \$149

MS6195(ATX Slot A Athlon) \$179

MS BX master(BX ata66) \$189

MS6309(via133 pga ata66) \$135

MS 6199VA(Via133) \$119

MS6905 adaptor V1.1/V2.0 \$19/25

Retail boxed cpu Pentium III slot1: 650e/700e/750e/800e: \$379/459/599/669

3 years warranty FC-PGA: 550e/650e/667eb/700e: \$319/349/309/419

(with Fan, Heatsink, Manual, Logo) Celeron : 500/533/566a/600a: \$149/149/219/call

AMD K7
K6/2-533/550: \$89/119*OEM
K7-550/600: \$209/249
K7 650/700: \$249/289
K7 800/1G: \$469/call

PRINTER/SCANNER

INKJET:

HP610/840 \$149/229

HP930/970 \$289/559

HP1220/2000 \$659/659

Canon 2000/3000 \$99/229

Epson 440/660 \$109/129

760/700/EX \$229/354/569

Lexmark3200/5770 \$159/389

Z11/Z31/Z51 \$599/\$159/\$239

LASER:

HP1100/2100 \$589/969

Lexmark E310 \$569

Brother1240 \$459

SCANNER:

Colorado 600P /U \$99/\$120

ACER 620U/UT \$129/\$169

HP6300 \$589

MONITOR

Viewsonic

E771E/E773 \$318/379

E790 \$509

E770/PF775 \$389/469

PS790/PF795 \$679/659

SONY E200/E400 \$489/769

MAG 786/796 \$399/419

NEC FE700/750 17" \$379/499

Hansol 710P/900 \$319/469

Samsung 750s/900sl \$275/529

753DF flat \$319

700NF/900NF \$395/619

LG795FT/775 flat \$419/389

AOC .26 1600x1200 \$269

Acer G772 17" /99sl19" \$309/499

Impression 17" .27 \$239

FAX/MODEM

Motorola PCI V.90 voice \$25

USR V90 win/hardware \$49/99

SupraMax PCI v90 voice \$59

Digicom 56k/Acer 56k \$49/39

VIDEO CARD

ATI(AGP)

Xpert98 8Mb \$49

Xpert128 /2000



TOMO COMPUTER INC.

www.tomocomputer.com

Email: tomo@tomocomputer.com

TEL: 270-0366 TECH: 270-8322 FAX: 270-0377

Business Hours: Mon-Fri: 10:00AM-7:00PM SAT-SUN: 11:00AM-5:30PM *CALL FOR LATEST PRICE*

Westminster Hwy.
Cooney Road
Ackroyd Road
No. 3 Road

165 8100 ACKROYD RD.
Richmond BC V6X 3K2

POWER/BUDGET MAXIMIZER

Celeron Net-Surfer

ELITE P6SET-ML DUAL SLOT, ATX, AGP
64MB PC133 SDRAM
8.4GB UDMA66 HD
AOPEN 48X IDE CDROM
1.44MB FLOPPY DRIVE
3D SVGA AGP O/B
16BIT 3D SOUND O/B
56K V90 PCI MODEM O/B
10/100 NETWORK O/B
WIN98 KEYBOARD
3B MOUSE
17" ATX CASE W/250W P/S
140W SPEAKER
SAMSUNG 15"550S MONITOR

C-500Mhz
\$776

C-533Mhz
\$788

C-566Mhz
\$822

Celeron WorkHorse

GIGABYTE 6VX7+
64MB PC133 SDRAM
10.2GB UDMA66 HD
DIAMOND S540 16MB AGP
1.44MB FLOPPY DRIVE
48X IDE CDROM
SB ENSONIQ 128 Sound
WIN98 KEYBOARD
3B MOUSE
17" ATX CASE W/250W P/S
140W SPEAKER
SAMSUNG 15"550S MONITOR
56K V90 PCI MODEM

C-500Mhz
\$909

C-533Mhz
\$922

C-566Mhz
\$963

C-600Mhz
\$1038

INTEL PIII PREMIUM SYSTEM FOR POWER USER

PIII POWER USER

GIGABYTE 6VX7-4X
64MB PC133 SDRAM
13GB UDMA66 HD
DIAMOND S540 16MB AGP
1.44MB FLOPPY DRIVE
52X IDE CDROM
AC97 Sound O/B
WIN98 KEYBOARD
3B MOUSE
17" ATX CASE W/250W P/S
140W SPEAKER
SAMSUNG 17"750S MONITOR
AOPEN 56K PCI MODEM

PIII 600Mhz
\$1198

PIII 667Mhz
\$1212

PIII 700Mhz
\$1298

PIII 733Mhz
\$1316

PIII DREAM MACHINE

ASUS P3V-4X MAINBOARD
128MB PC133 SDRAM
20GB 7200RPM HardDrive
1.44MB FLOPPY DRIVE
SNIPER TNT2 32MB AGP4
SB LIVE VALUE
52X IDE CDROM
Win98 Keyboard
3B MOUSE
18" ATX CASE W/250W P/S
140W SPEAKER
SAMSUNG 17" 750S MONITOR
AOPEN 56K PCI MODEM

PIII 600Mhz
\$1495

PIII 667Mhz
\$1510

PIII 700Mhz
\$1595

PIII 733Mhz
\$1605

PIII IDE RAID POWER

IWILL VD133PRO MAINBOARD
128MB PC133 SDRAM
15GB 7200RPM ATA66 HD X2
CREATIVE 52X CDROM
1.44MB FLOPPY DRIVE
AC97 PCI Sound O/B
SNIPER TNT2 PRO 128 32MB
Win98 KEYBOARD
3B MOUSE
18" ATX CASE W/250W P/S
140W SPEAKER
SAMSUNG 17"750S MONITOR
AOPEN 56K PCI MODEM

PIII 600Mhz
\$1652

PIII 667Mhz
\$1668

PIII 700Mhz
\$1758

PIII 733Mhz
\$1768

** All Systems come with 5-year service & 2-year parts warranty and one month FREE Internet ** Prices are already discounted for cash payment** Prices are subject to change without notice**
Options: Windows98SE +\$129 *D-LINE 538TX 10/100 NIC +\$24 *MS Windows2000 Pro +\$199 *MS Office2000 SBE/PRO +\$285/465 *HP 610C PRINTER.....\$135

AMD POWER MAXIMIZER

AMD WORKHORSE

Gigabyte GA-55MM MotherBoard
64MB PC133 SDRAM
8.4GB UDMA66 HD
64BIT 3D AGP O/B
32BIT 3D Sound Card O/B
1.44MB Floppy Drive
48X IDE CDROM
Win98 Keyboard
3B Mouse
17" ATX CASE W/25W P/S
140W Stereo Speaker
SAMSUNG 15" MONITOR
AOPEN 56K V90 PCI MODEM

K6-2 450
\$728

K6-2 533
\$738

K6-2 550
\$760

AMD K7 POWER MAX

ASUS K7V KX133 MainBoard
128MB PC133 SDRAM
20G 7200RPM ATA66 HD
SNIPER TNT2 32MB AGP4
AC97 SOUND O/B
1.44MB Floppy Drive
CREATIVE 52X IDE CDROM
WIN98 Keyboard
3B Mouse
18" ATX CASE W/250W P/S
140W Speaker
SAMSUNG 17"750S MONITOR
AOPEN 56K PCI MODEM

K7 700Mhz
\$1500

K7 750Mhz
\$1548

K7 800Mhz
\$1648

K7 850Mhz
\$1798

NOTEBOOK/MOBILE SOLUTION

ACER

341T P3-500 64MB 6G 6XDVD/12TFT 56K \$2950
342T P3-500 64MB 9G 24X/12TFT 56K \$3080
343T P3-500 128MB 12G DVD/12TFT 56K \$1581
600TER P3-600 64MB 12G 24X/13TFT 56K \$3470
732TLV P3-500 128MB 12G 6XDVD 15TFT 56K \$3860
732TXV P3-500 64MB 9G 6XDVD 14TFT 56K \$3370
734TL P3-600 64MB 12G 24X 15TFT 56K \$3967

ASUS

L7200 C-366 32MB 6G 24X/12.1TFT 56K \$2185
L7300 PII366 32MB 6G 24X/13.3TFT 56K \$2405
L7300E P3-500 64MB 6G 24X/13.3TFT 56K \$2405
L8400 P3-500 64MB 6G 6XDVD 14TFT 56K \$3250
L8400 P3-500 128MB 12G 6XDVD 14TFT 56K \$3470

FUJITSU

E6150 C-450 64MB 6G 24X/14.1TFT 56K \$2700
E6520 PII450 64MB 6G 24X/14.1TFT 56K \$2985
E6530A PII500 64MB 9G 24X/14.1TFT 56K \$3410
E6550 PII650 128MB 12G 6XDVD 14.1TFT 56K \$4545

IBM THINKPAD

11492 P3-500 64MB 12G 6XDVD 15TFT 56K \$3898
11540 C-433 64MB 5G 24X 12TFT SBPRO 56K \$2395
390X P2-400 64MB 6G 24X 15TFT 56K W98 \$3565
390X P3-450 64MB 12G 24X 14TFT 56K W98 \$3899
390X P3-450 64MB 12G 24X 15TFT 56K WINNT \$3999
390X P3-500 64MB 12G 24X 15TFT 56K WINNT \$4325
A20M C-500 64MB 6G 24X 12TFT 56K WIN98SE \$2825
A20M P3-500 64MB 6G 24X 12TFT 56K WIN98SE \$3170

TOMO SPECIAL

SAMSUNG 750S .24 17".....\$268
SAMSUNG 753DF FLAT .20.....\$348
SAMSUNG 700NF FLAT .25.....\$420
PROVIEW 19" .25.....\$399
SIGMA HOLLYWOOD+ DVD CARD.....\$125
YAMAHA 8X4X24 IDE CDRW.....\$299
AOPEN SPORT HUB 10BT.....\$39
DLINK DFE90S NETWORK KIT.....\$145
SURECOM SPORT 10BT HUB.....\$36
10 CDR DISKS GOLD.....\$15
SB LIVE PLATINUM BOX.....\$248
CAMBRIDGE FPS1000 4PS.....\$99
SIMPLY ACCOUNTING V7.0.....\$149
ACAFEE VIRUSSCAN DELUXE V5.0.....\$145
NORTON ANTI VIRUS 2000.....\$59
LOGITECH WIRELESS KB&MOUSE.....\$118

PRINTER

INKJET COLOR PRINT: Printer Price is before rebate
CANON BJC100SE/2000SE.....\$78/115
BJC 2100/5100/6100 USB.....\$121/170/275
EPSON 440/660.....\$145/190
EPSON 740/740i USB.....\$205/240
HP 610.....\$135
LEXMARK Z11/3200.....\$95/121
LEXMARK Z31/Z51.....\$139/229
LASER PRINTER
BROTHER 1030/1040DX.....\$362/446
SAMSUNG 5100A/6050.....\$330/415
SAMSUNG 4500C MFC.....\$305
HP 1100/2100.....\$545/959

DIGITAL CAM

CANON DIGITAL CAMERA
S10/S20/A50.....\$880/1140/619
CANON POWERSHOT PRO70.....\$689
CANON DIGITAL CAMCORDER.....\$1228
CANON SCAN FS27C.....\$705
CANON CD-300 DIGITAL PRINTER.....\$445

SCANNER

HP 3300C/4200C.....\$140/181
HP 5300C/6300C.....\$392/510
EPSON 610/636U.....\$198/255
EPSON 1200U/PHOTO.....\$319/415
CANON FB330P.....\$115
CANON FB630P/630U.....\$149/169
CANON FS2710.....\$773
VISIONEER 5300/6100 USB.....\$120/135
VISIONEER 7600/8600 USB.....\$147/282

LCD PANEL

SAMSUNG
570STFT 15"/.29/1024X768.....\$1268
531TFT 15"/.29/1024X768.....\$1230
700TFT 17"/.26/1028X1024.....\$3762
800TFT 18"/.26/1024X768.....\$4192
ADI 6L 15"/.29/1024X768.....\$1355
ACERVIEW 15"F51E.....\$1417
PANASONIC15" LC50S.....\$1586
SONY M151WT/1024X768 XGA.....\$2070
VIEWSONIC VE150 15"/1024X768.....\$1335
VIEWSONIC VE150B 15"/BLACK.....\$1382
VIEWSONIC VPD150 15"/DIG.....\$1445
VIEWSONIC VP181 18"/ANG/DIG.....\$4243
LG 500LC 15"/800LC 18".....\$1473/3999

MEMORY

LIFETIME WARRANTY

PC100
32M/64M/128M/256M.....\$50/95/168/335
PC133 64M/128M/256M.....\$95/185/355
ECC PC100 128M/256M.....\$198/378
ECC PC133 128M/256M.....\$205/392
72PIN EDO 8M/16M/32M.....\$33/66/115
72PIN REG 8M/16M/32M.....\$33/66/115

MotherBoard

3 Year Warranty

PENTIUM /K6/K7 MOTHERBOARD
ASUS P5A-B(AT)/P5A-A(ATX).....\$120/135
ASUS P3V/P3V-4X.....\$125/175
GIGABYTE GA-55MM AV/K6.....\$120
ASUS K7M/K7V (AMD K7).....\$220/235
GIGABYTE GA-7VX (KX133).....\$199
CELERON/PIII MOTHERBOARD
ABIT BF6/BE6-2/VA6.....\$155/189/118
ASUS P3V/P3V-4X.....\$125/175
ASUS CUBX/CUV4X-M.....\$191/155
GIGABYTE 6VXE+/6VX-4X.....\$110/138
GIGABYTE GA2000+ATA66/BX440.....\$164
GIGABYTE 6VX7-4X 1394.....\$195
IWILL VD133GOLD SCSI ON BOARD.....\$205
IWILL PRO (IDE RAID 0,1).....\$215

Hard Drive

3 Year Warranty

5400RPM
SAMSUNG 8.4/10.2/15GB.....\$126/137/157
FUJITSU 10.2/13G/20G.....\$139/152/185
FUJITSU 10.2/13/20GB.....\$153/167/190
MAXTOR 10/15/20GB.....\$139/167/185
MAXTOR 30/40GB.....\$247/338
7200RPM
SEAGATE 20/30GB.....\$235/290
QUANTUM 13/20GB.....\$215/250
MAXTOR 13/15/20GB.....\$177/187/235
MAXTOR 30/40GB.....\$290/382

SPEAKER

1 Year Warranty

JUSTER 140W SPEAKER.....\$10
MIDLAND ML 460/480.....\$40/55
ALTEC ACS33/56/95.....\$65/146/39
ALTEC ACS 45.2/48/54.....\$95/158/99
PC WORKS 2PTS.....\$63
PC WORKS FPS 1000/2000.....\$99/185
YAMAHA MS30/M40.....\$75/66
MULTIMEDIA EGG SHAPE SPK/BLUE.....\$25

VIDEO CARD

1 Year Warranty

PCI VIDEO CARD
SIS 4MB/S3 TRIO 3D 8MB.....\$36/55
ATI TV WONDER.....\$99
ASUS TV BOX W/REMOTE.....\$91
ATI ALL-IN-WONDER 128
16/32MB PCI.....\$228/310
AGP VIDEO CARD
3D LABS OXYGEN Vx1 32MB.....\$277
ASUS 3800 TNT2 DELUXE 32MB.....\$255
ASUS 6600/6800 32MB DLUX.....\$330/405
ASUS 6600/6800 64MB PURE.....\$305/445
ATI RAGE FURY MAXX 64MB.....\$360
ATI ALL-IN-WONDER
128 16MB/32MB.....\$205/285
128 PRO 32MB.....\$355
DIAMOND
S540/Z200 32MB.....\$97/188
MATROX G400 DH 16/32MB.....\$165/220
MATROX G400 MAX 32MB.....\$271
MATROX G400 TV 16MB.....\$385
POWERCOLOR
S3 SAVAGE 4 16MB.....\$67
SNIPER TNT2 16/32MB.....\$89/115
TNT2 32MB TV/128 PRO.....\$124/127
GEFORCE 32MB TV.....\$285
3DFX
VOODOO3 3000/3500.....\$185/269
GIGABYTE
TNT2/TNT2 PRO 32MB.....\$119/149
GEFORCE256/G400 32MB.....\$289/175

CD/DVD/CDR

1 Year Warranty

CDROM
AOPEN 48X/52X.....\$55/59
CREATIVE 52X CDROM.....\$62
Toshiba 40X SCSI Int.....\$120
DVD ROM
Aopen 10X DVD.....\$220
AFREY 8X DVD.....\$199
ASUS 8X DVD.....\$205
PIONEER 10X/16XDVD.....\$220/235
CD-RW
SAMSUNG DVD+CDRW 4424.....\$340
YAMAHA 8X4X24 CD-RW IDE.....\$299
PLEXTOR 8X4X32 CD-RW IDE.....\$335
SONY 8X4X32 CD-RW IDE.....\$276
HP 9310I 10X4X32 CD-RW IDE.....\$379

SOUND CARD

1 Year Warranty

YAMAHA X-WAVE.....\$19
SB ENSONIQ 128.....\$32
SB LIVE VALUE/PLATINUM.....\$69/248
DIAMOND MX300/MX400.....\$107/79

SCSI CARD

1 Year Warranty

ADAPTEC 2906/2930U.....\$80/135
IWILL 2930U.....\$59
IWILL 2936UW/2935LVD.....\$105/202
PROMISE UDMA66 BOX.....\$49
PROMISE FASTTRACK66 IDE RAID.....\$155

MODEM

1 Year Warranty

ACER 56K V90 VOICE PCI (HW).....\$45
ACER 56K V90 PCI (SW).....\$35
AOPEN 56K TRUE HARDWARE ISA.....\$65
AZURA 56K PCI (SW).....\$28
USR 56K V90 PCI/VOICE PCI.....\$45/55
USR 56K V90 VOICE/FAX PCI (HW).....\$95

NETWORK

1 Year Warranty

ACER 101 ISA/210 PCI 10BT.....\$18/18
SURECOM 10/100 NIC.....\$19
DLINK TX538 10/100 NIC.....\$25
3COM 3C905 10/100 NIC.....\$68
INTEL P1L8460B PRO 10/100.....\$75
ACER 5PORT HUB.....\$39
3COM 3C19260 5PORT HUB.....\$60
DLINK DE805 5PT/DE809 8PT.....\$68/88
SURECOM HUB 5/8/16.....\$36/47/109
SURECOM EP3509 VPN ROUTER.....\$285
3COM USB 10BT NETWORK.....\$90
3COM 3C16750 8PORT 10/100.....\$299
DLINK DEF-905 NIC KIT 10/100.....\$145
LINKSYS CABLE/DSL ROUTER.....\$249

WEB CAM

1 Year Warranty

LOGITECH USB
EXPRESS/VC/PRO.....\$68/105/180
LOGITECH USB HOME.....\$128
INTEL
PC CAM USB/PRO.....\$110/178
KODAK DVC325 USB.....\$138
VIDEOBLASTER WEBCAM III USB.....\$85
VIDEOBLASTER WEBCAM III PAR.....\$85
VIDEOBLASTER WEBCAM GO USB.....\$198
KENSINGTON VIDEOCAM.....\$75
KENSINGTON VIDEOCAM VGA.....\$105

MONITOR

3 Years Warranty

AZURA
15"/17".....\$170/255
SAMSUNG
550S 15"/.28.....\$182
750S/753DF 17"/.27/.24.....\$268/349
700NF/900NF.....\$420/530
950P/900SL.....\$488/530
NEC
FE700/FE750 17".....\$389/485
FP950 19".....\$860
SONY
E100 15"/E200 17".....\$295/510
E400 19"/E500 21".....\$738/1415
G200 17"/G400 19".....\$565/825
G500 21"/500PS 21".....\$1520/1585
PANASONIC
17" SL75/PL70.....\$331/468
19" SL95/21"SL101.....\$615/1080
VIEWSONIC
E651/E655 15".....\$222/230
E771/E773 17".....\$318/375
E790/E790B(BLACK) 19".....\$507/560
EF70 17".....\$379
PF775/PS775 17".....\$475/460
PS790/GS790 19".....\$710/585
P815/P817 21".....\$1230/2060

KB/MISC/CASE

1 Year Warranty

VIDEO INPUT DEVICE
DAZZLE Digital Video Editor.....\$128
DAZZLE Firewire 1394 PCI.....\$128
USB 4PORT HUB.....\$40
MOUSE
LOGITECH WHEEL.....\$18
LOGITECH Cordless Mouse.....\$59
MS WHEEL/OPTICAL.....\$25/69
AOPEN WHEEL MOUSE.....\$12
KEYBOARD
107 KEY KEYBOARD.....\$12
FUJITSU 8725/4725.....\$18/59
IBM Multimedia KB.....\$25
MS NATURE KEYBOARD.....\$35
MS INTERNET KEYBOARD.....\$29
LOGITECH Cordless iTouch.....\$118
CASE
ATX 17"/18".....\$40/55
In Win 24" W/300W P.S.....\$125

Keep it flat*Continued from page 66*

NEC Technologies is another major manufacturer of LCD screens. It is likely that other models we tested contain NEC screens. This particular model uses a special space-saving base, making it an extremely compact unit.

By removing a plastic cover from the rear of the unit, the video and power cables can be plugged in. The cover can then be left off or replaced. While probably not a design consideration, future editions of this arrangement might allow for wall mounting, if the base were also removed. This model had the lowest-sitting mount of the units we tested.

Screen tilt is -5 degrees and +33 degrees. Viewing angle is ± 55 degrees horizontally and ± 40 degrees vertically.

The maximum refresh rate of 60 Hz may be on the low side for some users. The image was very bright with no discernable errors, though a bit of flicker was detected. Adjusting the RGB controls in the OSD made this flicker less apparent. Overall, this is a high-quality display for a reasonable price.

Philips 150B

From: Philips Canada

Tel: 800-479-6696. <http://www.pcstuff.philips.com>

Estimated street price: \$1,699

On this monitor, the OSD controls are on the right side. They include a rotary control that seems easier to use than buttons, and the manual contains enough instructions to allow everyone to tune the image to his or her satisfaction.

The base allows for tilt and swivel, and is removable for wall mounting with the option-

al wall-mount kit. On the rear is a USB bay for plugging in an optional USB hub.

Philips offers a 48-hour model-to-model swap during the first year of the warranty.



During years two and three repairs are made within five working days.

Screen tilt is -2 degrees and +32 degrees. Viewing angle is ± 75 degrees horizontally and ± 50 degrees +55 degrees vertically.

When connected to a PCI video card the image colours were faded slightly, but during general use with a newer card, picture quality was very good and suitable for most applications.

A more expensive model, the 150P, comes with multimedia features built in.

Princeton APP520

From: Princeton Graphics

Tel: 800-747-6249. <http://www.princetongraphics.com>

Suggested retail price: \$1,649

Princeton's APP520 uses a space-saving design,



which is an excellent feature for desktops with extremely limited space.

Control buttons on the rear of the right side are easily manipulated. Some minor adjustments were necessary before carrying out the tests.

Screen tilt is -5 degrees and +27 degrees. Viewing angle is ± 60 degrees horizontally and ± 55 degrees vertically.

There was pronounced flicker during some of the more extreme tests at the monitor's recommended refresh rate, and at the Windows shutdown screen. Lowering the refresh rate to 60 Hz improved this, and adding the software drivers made no discernable difference.

The APP520 comes with a three-year warranty that includes 48-hour advanced replacement.

Samsung SyncMaster 570S

From: Samsung Canada

Tel: 800-726-7864. www.samsungcanada.com

Suggested retail price: \$1,799



Samsung is another major manufacturer of LCD screens, and it is likely that other models we tested contain Samsung screens.

You can put the old phone book away with this model, as this screen can be raised or lowered 5 cm (2 in.). The video and power cables interface with the unit directly in front of the base. However, this appears to restrict swivel movement slightly.

Screen tilt is -5 degrees and +20 degrees.

Continued on page 70**FULL SERVICE COLOCATION**

Internet Data Centers Inc.

Redundant backbones

24-hour guarded facility

24-hour system monitoring

Secure custom sized cages

Firewall

Tape archiving

BRINGING YOUR SERVERS TO THE WORLD

Generator backed power

Load balancing service

24-hour secure access

Industry certified engineers

Equipment health monitoring

P.O. Box 12096
Suite 2388, 555 West Hastings Street
Vancouver, British Columbia
Canada V6B 4N5
Web: <http://www.idc-inc.net>

Phone: (604) 687-5336
Fax: (604) 687-4328
Email: info@idc-inc.net

**GOLDTREE**
COMPUTER SYSTEMS**Cost Effective Rack Mount Solutions**Rack Mount
Accessories

Enclosures



Servers and RAID Enclosures



Controller Racks



TOSHIBA



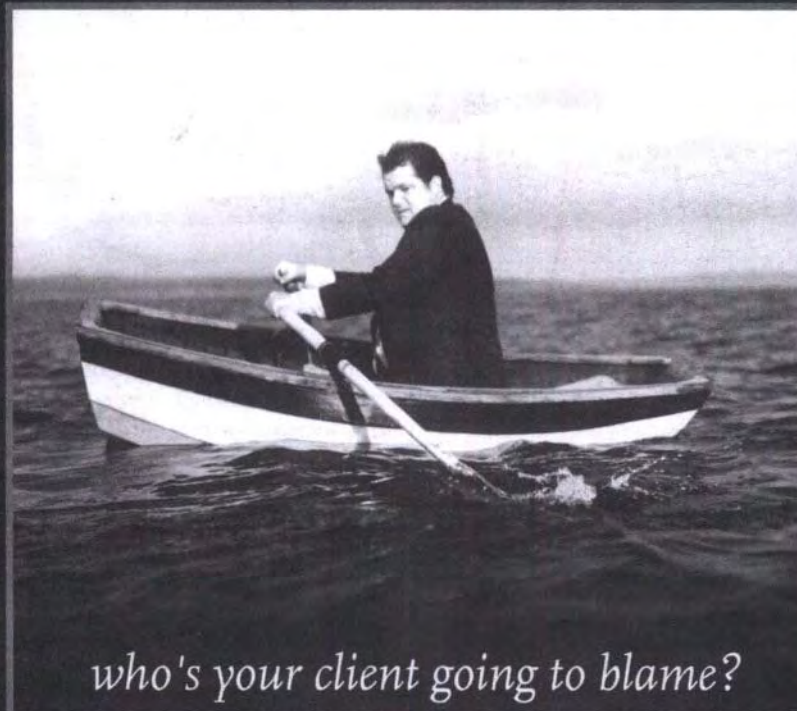
3COM



Teksens

737 Gatensbury Street, Coquitlam B.C. Tel: 687-0495
Email: info@goldtree.net

*When the web hosting service
that you recommend
screws up*



*Don't squander your reputation
on a Web-Hosting Service
that can't deliver.*

Plan I Unix
5MB space
2 POP3 emails
1 alias
1 autoresponder
setup fee \$25.-
Monthly \$8.95*

Plan II Unix/NT
20MB space
10 POP3 emails
10 aliases
2 autoresponders
setup fee \$30.-
Monthly \$11.95*

Plan III Unix/NT
50MB space
20 POP3 emails
20 aliases
3 autoresponders
setup fee \$40.-
Monthly \$14.95*

Plan IV Unix/NT
100MB space
30 POP3 emails
30 aliases
5 autoresponders
setup fee \$50.-
Monthly \$29.95*

FrontPage 2000 / PHP / Perl / ASP / CGI / SSL / MS Access

Do your research. Get the Details.
info@esswebservices.com



ESS Web Services

www.esswebservices.com

Keep it flat

Continued from page 68

Viewing angle is ± 55 degrees horizontally and ± 60 degrees vertically.

Control buttons on the bottom front of the border are easy to see and use. Holding a button for five seconds locks or unlocks the settings. Picture quality is excellent overall.

Samsung SyncMaster 570P

From: Samsung Canada

Tel: 800-726-7864. <http://www.samsungcanada.com>

Suggested retail price: \$1,999

The "P" in this model number stands for plus. This multimedia monitor from Samsung also has a base that allows the screen to pivot 90 degrees—an excellent feature for users, such as



—Sean Carruthers

The future of flat**SyncMaster 150MP takes multimedia to the next level**

A lot of lip service has been paid to "convergence" over the last number of years, but true convergence technologies have always seemed to be just around the corner. We received a pre-production LCD monitor from Samsung that indicates one direction for future convergence appliances.

When it comes to multimedia, the Samsung SyncMaster 150MP goes a step further than many of the other monitors that claim to be multimedia-ready. In addition to incorporating stereo audio, the rear of the 150MP features input for composite video, S-Video, and an antenna for off-air television. Though it also has a built-in tuner, the monitor as a whole isn't much larger than standard flat-panel displays.

A remote control comes with the monitor, and allows the user to flip between the computer, two different video signals, and picture-in-picture mode (allowing users to watch TV while working). Standard on-screen display controls—like brightness and contrast—can also be accessed from across the room via the remote.

The monitor has a tilting base, but can also be mounted on a wall.

The 150MP isn't available yet, and a few kinks still need to be worked out, but when the device becomes commercially available (hopefully midway through the year) it's expected to retail for \$2,499.

those doing graphics work or desktop publishing, who prefer to work in portrait mode.

In addition to the necessary video, transformer, and power cables, this unit includes two stereo cables with mini-plugs, and a stereo mini-plug for RCA cable.

On the rear of the multimedia pivot base there are additional jacks for microphone out and sound in. On the side are jacks for microphone in and headphones out. Additional controls include On/Off/Volume, Bass, Treble, and Microphone On/Off.

Screen tilt with the multimedia pivot base is -5 degrees and $+20$ degrees. Viewing angle is ± 55 degrees horizontally and ± 60 degrees vertically.

As with the 570S, control buttons on the front bottom of the border are easy to see and use. Holding a button for five seconds locks or

unlocks the settings. Although a slight blockiness may appear in portrait mode at certain refresh rates, picture quality is otherwise excellent.

Sceptre ST15B

From: Sceptre Technologies Inc.

Tel: 800-788-2878. <http://www.sceptre.com>

Suggested retail price: \$1,649 (from US\$1,099)



This is the smallest and lightest unit we tested. The screen is surrounded by a striking 1.3 cm (0.5-inch) silver border and supported on a black base. Sceptre engineers were able to slim this model down to an anorexic 3.8 cm (1.5

Your One-Stop Shop for Customized PCs

PRIMEX

Tel: 438-8900 Fax: 438-8266 Tech: 438-8267

Store Hrs: Mon-Sat 10am-6:30pm Sunday & Public Holidays Closed

電腦綠洲



Specialized in Repairs & Upgrades
Network consultation & installation
15 years experience in repairs & networking

5 YRS OPENING CELEBRATION MONTHLY SPECIAL

NEC AS70 17" Monitor \$280
Samsung 750S / 700IFT \$289/425
Legend 440ix chipset Dual CPU & SCSI Adaptec 10/100 Ethernet \$129
Asus P3V133 / P3V4X / CUV4X \$125/165/179
Gigabyte GA-6VX-4X / 6VX7-1394 (IEEE-1394) \$149/189
LG 4x4x24 / HP 9110i / Plextor 8x4x32 \$199/319/329
6.4 / 10 / 20GB Hard Drive \$110/125/175
Cannon BJC2100 USB Printer / Ezonics EZ dual cam \$129/185
Okipage 6W Laser Q Printer \$219

Primex DV CAM Multi System**Piii 550 MHz \$1699**

- Gigabyte 6VX7-1394 PC133
- 128MB PC100 Memory
- Quantum 20GB LM 7200rpm (2MB C) HD
- 52X UDMA 66 CD-ROM Drive
- nVidia TNT2 32MB AGP TV in & out
- Creative SB Live Value • Panasonic 1.44MB Floppy
- NEC AS70 17" Monitor • 2B Mouse w/ Wheel
- MS Internet Win98 Keyboard
- Subwoofer Speaker System • 56K V.90 V/F Modem
- Primex 17" Super Case 250W

UPGRADES:

- Ulead Software for Camcorder +\$55
- IEEE 1394 Cable +\$25
- 256MB / 512MB / 768MB +\$290/555/925
- DVD 8X / 16X +\$139/215

Intel Deluxe**P-III 550 MHz over to 616 MHz \$1099**

- Asus P3V4X / Gigabyte 6VX7-4x Pro 133
- 64MB PC-133 SDRAM
- 6.4GB UDMA 66 Hard Drive
- 52X CD-ROM U-DMA Drive • SB PCI 128bit Sound
- nVidia TNT2 32MB AGP Card
- 56K V.90 Voice/Fax Modem • 3.5" 1.44MB Floppy
- Multimedia Stereo Speakers w/ Subwoofer
- Multimedia Internet Keyboard • 2B Mouse w/ wheel
- Primex 17" ATX Case w/ 250W

UPGRADES: DVD 8X / 16X +\$189/215

- 128MB PC133 SDRAM +\$115
- 10.2GB / 20GB Hard Drive +\$35/89
- 15" .28 / NEC AS70 17" Monitor +\$180/280
- Ethernet Card (Rogers/ADSL Ready) +\$25
- TNT2 32MB AGP TV (In/Out) +\$65

Leasing Available. All systems come with 1 month FREE Internet access
3 years labor & 1 year parts limited warranty for all systems

Athlon K7 Dream Faster**AMD K7 700/750/800 MHz \$1129/1199/1299****AMD K7 850/900/950 MHz \$1499/1789/1991**

- Althon K7 Slot 1 MB • 64MB PC-100 SDRAM
- 10.2GB UDMA 66 HD • 44X UDMA CD-ROM
- Creative 64bit 3D Sound
- nVidia TNT2 32MB AGP Video Card
- Motorola 56K V.90 V/F Modem
- Panasonic 1.44 Floppy • 2B Wheel PS/2 Mouse
- 120W Multimedia Stereo Speakers
- Multimedia Internet Keyboard
- Primex 17" ATX Case w/250W

UPGRADES:

- DVD 8X / 16X +\$189/215
- 128MB / 256MB PC100 SDRAM +\$99/265
- 20GB / 30GB Hard Drive +\$65/145
- 15" .28 / NEC AS70 17" Monitor +\$180/285
- TNT2 AGP 32MB TV (In/Out) +\$65

Intel Home Net Power**Celeron 500 / 533 MHz \$555/585****Celeron 566 / PIII 550 MHz \$655/799**

- PIII BX MB (Linux, NT, Y2K Ready)
- 32MB PC100 SDRAM • 6.4GB UDMA 66 HD
- 44X CD-ROM • 32bit 3D Wave Table Sound
- 3D Video Accelerator 8MB AGP Video
- 56K V.90 V/F Modem • Panasonic 1.44 Floppy
- 120W Multimedia Stereo Speakers
- Standard Win98 Keyboard • 2Button Mouse
- Primex 15" AT Case w/ 230W

UPGRADES: DVD 8X / 16X +\$189/215

- 64 / 128MB PC100 SDRAM +\$55/115
- 10.2 / 20GB Hard Drive +\$35/89
- 15" .28 / NEC AS70 17" Monitor +\$180/280
- TNT2 32MB AGP / TV (In/Out) +\$115/165
- Voodoo III 2000 / 3000 / 3500 AGP +\$129/178/266

All prices are 3.5% cash discounted. Subject to change w/o notice

Motherboard

Abit PIII VAG / VT6X4 / BF6 / BEG V.2 \$129/149/169/189
Abit PIII BX6 V.2 / BP6 \$179/199
Asus P3W-E / CUV4X \$149/160
Asus P3B-F / P3B-1394 \$189/265
Asus P5A-B / SYE / Gigabyte 5AA (AT K6) \$119/99/110
Asus 440 / K7V (Athlon K7) \$219/229
FIC SD11 / Microstar 6196 K7 (Athlon K7) \$165/179
Gigabyte 6VX7-4X / CA-6VX7-1394 \$139/189
Houston M766 / P6BME / M741LMRT \$99/99/115
Houston M756MRT \$115

CPU Pentium/ AMD Series call**Printer / Scanner**

Canon BJC 1000/2000/5100/6100 \$99/129/199/319
Canon MFC 8640/C530/C5500/L6000 \$299/399/399/666
Epson 440/660/740/1270 \$150/199/249/666
Brother HL1030/1240DX/1270N \$377/460/739
Okipage 6W Laser Q Printer \$219
Agfa USB Scanner \$109
Acer 620P / 620U / 620S Scanner \$129/139/149

Modem

USR 56K V.90 PCI / Hardware PCI / Voice \$65/85/85
Acer V.90 PCI F.V. / ISA V.90 work for Linux \$65/75
Motorola 56K V.90 Data/Fax/Voice ISA \$29.99

Monitor Please call for all Monitor Price

Samsung Syncmaster 750S / 700IFT .20 Flat \$285/429
NEC AS70 .27 / FE700 17" Monitor \$285/399
Acer 15" .28 / 17" .27 / 19" .26 \$185/269/425
Viewsonic 17" E771 / E773 .27 \$323/420
Viewsonic 17" PF775 .25 Perfect Flat \$500
Viewsonic 19" PF790 / PS790 \$669/699
Sony CPD-210GS / Optique17" Q71 / Q95 \$485/289/479

Networking & Controllers

3COM 3C905 10/100BaseT PCI Link \$69
Acer ISA/PCI 10 / D-Link 10/100 \$25/29
Cable 15' / 25' / 50' (Customized) \$13/20/29
Adaptec SCSI 1505/2940UW/29160U2W/1800S \$75/290/339
UDMA 66PCI 2Port Card / Fastrack66 IDE Raid \$45/219
IEEE 1394 Firewire 400MB/S Card / 1394 Cable \$85/28

Accessories

Blank CD-RW / CD-R 80 mins \$3.50/1.99
Blank Mini CD-R 180MB / Second USB Port PCI \$2.50/35
Second Printer Port PCI / ISA \$39/25

We can find any part for you. Please call

Hard Drive

Maxtor/Fujitsu/Seagate/Samsung/Quantum/WD
6.4 / 10.2 / 15 / 20G \$115/130/159/179
Quantum KA/WD/Maxtor/IBM (7200rpm)
10 / 20 / 30 / 40 / 60G \$175/239/299/389/699

Sound Card & Speakers

16bit PnP / SB Ensoniq PCI \$19/39
Sound Blaster PCI 128 / Live Value \$49/76
800W Subwoofer system w/ 4 Spkrs \$55
GNT 5000A Subwoofer Speakers system \$55
Cambridge FPS 1000 / 2000 \$109/220
120W PMPO Speakers \$9.50
Microphone / Headset w/ Mic \$6/19

CD ROM / DVD Kit/ CD Writer

Samsung / Toshiba 4XWR 4X DVD 24XR \$359/449
Creative Labs 52X CD-ROM \$69
44X / 48X / 52X CD-ROM \$55/60/65
8X / 10X / 16X DVD Bare Drive \$165/175/215
HP 8250i / 9110i / 9310 \$259/335/379
LG 4424 / Plextor 8432 / Panasonic 8432 \$235/349/299
Sony 8x4x32 / 10x4x32 \$299/379

Mouse / Keyboard / Case

Logitech Cordless Keyboard & Mouse \$129
Fujitsu 4725 / 8725 104 PS/2 Keyboard \$69/25
MS Internet KB / MS Mouse \$25/25
Packard Bell Multimedia Keyboard \$15
AT 15" / ATX 17" / 19" / 24" Tower Case \$35/45/55/87

Video Card

PINE SIS 3D 4M / 8MEG 2X AGP / PCI \$39/55/59
S3 3D Virge / ATI 4MB AGP / PCI for Linux \$48/46
Savage4 16M / TNT2 128bit 32M AGP \$88/135
ATI Rage Fury 32M AGP / Maxx 64M \$159/249
ATI AGP 8M Xpert 98 AGP / PCI \$66/99
ATI Xpert128 16M / Xpert2000 32M \$115/129
ATI AGP All-in-Wonder 128 16 / 32M Pro \$215/279/349
Voodoo III 2000 / 3000 / 3500 \$129/166/295
Creative Riva TNT 16M/TNT2 32M AGP/Ultra \$109/169/249
nVidia TNT2 M64 32M / TV Out / TV In & Out \$109/125/175
Matrox Millennium G400 32M S / Dual AGP 4X \$199/235
Gladiac GeForce2 32M DDR 4X AGP \$489

Memory 32/64/128MB call

A-POWER

NOW WITH TWO LOCATIONS TO SERVE YOU
BURNABY RICHMOND
PHONE: 604.570.0766 PHONE: 604.273.8868
FAX: 604.299.2544 FAX: 604.273.8280

TECH: PROBLEM@A-POWER.COM
EMAIL: POWER@A-POWER.COM

TECHNICAL APPOINTMENTS CALL 604.273.8792
OPEN MON TO SAT: 10AM TILL 6:30PM

www.a-power.com

adaptec

ATI

3dfx

ASUS

VIDIA

LEXMARK

matrox

Microsoft

Quantum

HEWLETT
PACKARD

Seagate

AP700-WORK	AP700-SOHO	AP700-HOME	AP700-ATHLON	AP700-PRO
• AMD® K6-2™ 500 MHz • 64MB PC100 100MHz SDRAM • ASUS ATX MAINBOARD w/UDMA-66 • 6.4GB ULTRA-ATA 66 HD • 50x EIDE int CDROM DRIVE • 1.44 PANASONIC FLOPPY DRIVE • INTEGRATED 8MB AGP VIDEO • INTEGRATED 32BIT PCI SOUND • CHOICE BETWEEN THE MOTOROLA 56K MD OR D-LINK 10/100 NIC • WINDOWS 98 107 KEY PS2 KEYBOARD • WINDOWS 2 BUTTON PS2 MOUSE • 140 WATT MULTIMEDIA SPEAKERS • MID-TOWER ATX CASE w/250W SUPPLY	• INTEL® CELERON™ 500A MHz • 64MB PC100 100MHz SDRAM • GIGABYTE GA-6VX7-4X ATX MB w/UDMA66 • 10GB ULTRA-ATA 66 HD • ACER 52x EIDE int CDROM DRIVE • 1.44 PANASONIC FLOPPY DRIVE • ATI XPERT 98 8MB AGP • INTEGRATED PCI SOUND • MOTOROLA 56K MD OR D-LINK 10/100 NIC • WINDOWS 98 107 KEY PS2 KEYBOARD • WINDOWS 2 BUTTON PS2 MOUSE • 140 WATT MULTIMEDIA SPEAKERS • MID-TOWER ATX CASE w/250W POWER • 15" .28 SVGA MONITOR	• INTEL® PENTIUM® III 600MHz 133FSB • 64MB PC133 133MHz SDRAM • GIGABYTE GA6VX-4X ATX w/UDMA-66 • 15GB ULTRA-ATA 66 HARD DRIVE • ACER 52x EIDE int CDROM DRIVE • 1.44 PANASONIC FLOPPY DRIVE • ATI XPERT 2000 32MB AGP • INTEGRATED PCI SOUND • ACER 56K MD OR D-LINK 10/100 NIC • IBM MULTIMEDIA PS2 KEYBOARD • AOPEN 2 BUTTON PS2 MOUSE w/WHEEL • 450 WATT SPEAKERS w/SUBWOOFER • MID-TOWER ATX CASE w/250W POWER • AOC 17" .25dp 1600x1200 MONITOR	• AMD® ATHLON™ 700MHz PROCESSOR • 128MB PC100 100MHz SDRAM • ASUS K7-V ATX MB w/UDMA-66 • 15GB 7200RPM ULTRA-ATA 66 HD • CREATIVE 52x EIDE int CDROM DRIVE • 1.44 PANASONIC FLOPPY DRIVE • SNIPER 2 TNT2 PRO 32MB AGP VIDEO • INTEGRATED PCI SOUND • ACER 56K MD OR D-LINK 10/100 NIC • FUJITSU 8725 PS2 KEYBOARD • AOPEN 2 BUTTON PS2 MOUSE w/WHEEL • 450 WATT SPEAKERS w/SUBWOOFER • MID-TOWER ATX CASE w/300W POWER • AOC 17" .25dp 1600x1200 MONITOR	• INTEL® PENTIUM® III 733MHz 133FSB • 128MB PC133 133MHz SDRAM • ASUS CUV4X ATX MAINBOARD w/UDMA-66 • 30GB 7200RPM ULTRA-ATA 66 HD • PIONEER 16x EIDE int DVDROM DRIVE • 1.44 PANASONIC FLOPPY DRIVE • ASUS 6800 GeForce 32MB AGP • YAMAHA YXG-50 INTEGRATED PCI SOUND • USR 3COM v90 56K PCI MODEM • MICROSOFT PS2 INTERNET KEYBOARD • MICROSOFT PS2 INTELLIMOUSE w/WHEEL • CREATIVE PC WORKS 2 POINT SPK w/SUB • 19" ATX TOWER CASE w/250W POWER • VIEWSONIC 19" Q95 27dp MONITOR
\$559.00	\$859.00	\$1,279.00	\$1,499.00	\$2,269.00
PERFECT FOR INTERNET SURFING! UPGRADE: 15" 1280x1024 +\$175	HAVE ALL YOUR REPORTS DONE IN A FLASH! UPGRADE: 17" .25dp 1600x1200 +\$99	LEASING AVAILABLE FOR \$50/MONTH UPGRADE: TO 128MB PC133 +\$85	LEASING AVAILABLE FOR \$59/MONTH UPGRADE: 10x DVD w/SOFTWARE +\$119	LEASING AVAILABLE FOR \$89/MONTH UPGRADE: SB LIVE! & ACS 54 SPKS +\$89

COME DOWN AND PURCHASE ANY OF A-POWER'S PRE-DESIGNED OR CUSTOM BUILT SYSTEMS AND RECEIVE ONE FREE MONTH --EQUIVALENT TO 50 FREE HOURS-- OF UNRESTRICTED 56K-LINE DIALUP INTERNET ACCESS PROVIDED BY INFINET COMMUNICATIONS™!

PURCHASE ANY OF OUR A-POWER SYSTEMS AND GET A SPECIAL ROGERS@HOME KIT (FREE INSTALLATION & TWO MONTHS SERVICE) FOR AN INTRODUCTORY UPGRADE PRICE OF JUST \$19 DOLLARS!! SEE IN STORES FOR DETAILS.

MILLENNIUM SLIM SYSTEM

SAVE SPACE, TIME, AND INCREASE PRODUCTIVITY!
CHECK OUT SYSTEMS THE SIZE OF TEXT BOOKS!

VISA WE ACCEPT
INTERAC | VISA | MASTERCARD

MILLENNIUM SERVER SYSTEM

MEET ALL YOUR DEMANDS WITH A SYSTEM CONFIGURED TO CARVE YOUR DIGITAL DESIGNS OR BE THE HOST FOR AN ENTIRE ADMINISTRATION.

\$259.00

INTEL I810 ATX MAINBOARD
52x EIDE int CDROM DRIVE
1.44 PANASONIC FLOPPY DRIVE
INTEGRATED INTEL 8MB 128BIT VID
INTEGRATED 32BIT SOUND
INTEGRATED 56K V90 MODEM
INTEGRATED 10/100 NETWORK CARD
BOOKPC SIZED SLIM ATX CASE
DIMENSIONS: 3.5"x10.75"x12.0"
WINDOWS 98 PS2 KEYBOARD & MOUSE

UPGRADES:
• PROCESSORS: CEL466 FROM \$125
• HARD DRIVES: 6.4GB FROM \$115
• MEMORY: 32MB SDRAM FROM \$49

\$3,699.00

DUAL INTEL® PENTIUM® III 733MHz 133MHz
512MB PC133 133MHz ECC SDRAM DIMM
SUPERMICRO P3DM6 MAINBOARD
5G CHEETAH 18GB 10,000RPM DRIVE
PLEXTOR 40x int UW SCSI CDROM DRIVE
1.44 PANASONIC FLOPPY DRIVE
ATI XPERT 98 8MB AGP VIDEO
INTEGRATED SOUND
INTEGRATED DUAL U160 SCSI CONTROLLER
INTEL 82559 NETWORK INTERFACE CARD
FUJITSU 8725 PS2 KEYBOARD
MICROSOFT PS2 INTELLIMOUSE w/WHEEL
SUPER MICRO SC760 w/300 WATT POWER
ASK ABOUT OUR 90DAY NO PAYMENT PLAN!

NETWORKING

FIND ALL THAT YOU NEED TO NETWORK YOUR SYSTEMS OR LINK FROM A MAIL SERVER TO FULL INTERNET CONNECTIONS!

3COM 3C905B 10/100 PCI NIC	\$65
3COM 3C16750 10/100 8 PORT HUB	\$199
3COM 3C1651B 10/100 16 PORT HUB	\$329
ACER 10BASE-T NIC ISA/PCI COMBO	\$19
ACER 5PORT/9PORT 10BASET HUB	\$37/\$55
D-LINK 10/100 NIC (RETAIL)	\$23
D-LINK 10/100 PCMCIA NIC	\$85
D-LINK DSH 10/100 5/8PORT HUB ..	\$105/\$159
D-LINK DSH 10/100 16/32PORT HUB ..	\$289/\$759
D-LINK 8/15 PORT SWITCH	\$439/\$949
INTEL 10/100 PCI NIC	\$59
LINKSYS BEFSR11 2PORT 10/100	\$169
LINKSYS BEFSR41 4PORT 10/100	\$249
15'/25' R145 (STRAIGHT OR XLINK)	\$9/\$12
35'/50' R145 (STRAIGHT OR XLINK)	\$15/\$19

Processors & memory

FOR LATEST PRICES ON PROCESSORS & RAM,
CALL OUR OFFICE OR CHECK OUR WEBSITE

Mainboards at & atx

ABIT BE6-II 440BX ATX	\$179
ABIT BF6/VA6 ATX	\$155/\$115
ABIT BP6 ATX	\$185
ABIT VT6X4/KA7 ATX	\$145/\$219
ACER AX63PRO/AX64 VIA ATX	\$115/\$139
ACER AX68C/AX68+ 440BX ATX	\$125/\$269
ASUS FC-PGA PROCESSOR ADAPTOR	\$25
ASUS CUV4X ATX	\$169
ASUS P3B-F/P2-99 ATX	\$175/\$135
ASUS P2B-D/P2B-5/P2B-05 ..	\$369/\$429/\$629
ASUS P3V4X/P3VB VIA ATX	\$159/\$125
ASUS P5A ATX SUPER 7 ATX	\$125
ASUS P5-99VMA ATX w/VIDEO & AUDIO ..	\$129
ASUS K7-V ATX	\$225
GIGABYTE GA-6BXDU/GA-6VX-4X	\$589/\$135
GIGABYTE GA-6VX7+/GA-6VX7-4X ..	\$109/\$129
GIGABYTE GA-7VX ATX	\$195

IDE storage devices

FUJITSU 6.4GB	\$115
FUJITSU 10.2/15.0GB	\$129/\$159
FUJITSU 17.3/20.0GB	\$169/\$179
IBM DESKSTAR 15GB 7200RPM	\$209
IBM DESKSTAR 20.0/30GB 7200RPM	\$245/\$329
IBM DESKSTAR 45.0/60GB 7200RPM	\$419/\$629
MATROX 10.2/15.3GB	\$135/\$155
MATROX 20.0/30.7GB	\$175/\$239
MATROX 40.0/61.4GB	\$329/\$439
MATROX 15.0GB 2M 7200RPM	\$175
MATROX 20.0/30.7GB 2M 7200RPM ..	\$229/\$289
MATROX 40.9GB 2M 7200RPM	\$379
QUANTUM LM 10.2/15.0GB	\$165/\$195
QUANTUM LM 20.5/30.0GB	\$229/\$359
SEAGATE 15GB 7200RPM 2M CACHE	\$195
SEAGATE 20/30GB 7200RPM 2M CACHE ..	\$229/\$289
WD 8.4/10GB	\$129/\$139
WD 15.0/20.4GB	\$159/\$189
WD 30.7GB 5400RPM 2M CACHE	\$259
WD 15.0/20.5GB 7200RPM	\$189/\$239

SCSI devices

IBM 9.1/18GB U2W SCSI 10KRPM	\$469/\$699
QT ATLAS IV 9.1/18.2GB SCSI 7200RPM	\$299/\$509
QT ATLAS V 9.1/18.3GB SCSI 7200RPM	\$329/\$499
QT ATLAS 10K 9.1/18GB SCSI 10KRPM	\$475/\$729
QT ATLAS 10K-II 10KRPM 8M CACHE	\$CALL
SEAGATE CHEETAH 9.2/18.2GB U160	\$489/\$709
SEAGATE CHEETAH 36.4/73.4GB ..	\$1219/\$2099
TEKRAM 315U/390F PCI SCSI KIT	\$55/\$125
ASUS SC875 UW SCSI-3	\$149
ADAPTEC 29160/39160 BOX	\$299/\$499

ROM drives

AFFERY 50x/CREATIVE 52x CDROM	\$55/\$62
ACER 40x/52x INT IDE CDROM	\$52/\$59
PLEXTOR ULTRAPLEX 40x INT SCSI CDROM	\$159
TOSHIBA 40x INT SCSI CDROM	\$125
AFFERY DVD 8x/10x INT IDE ROM	\$169/\$179
AOPEN DVD 10x INT IDE ROM SLOT	\$189
PANASONIC DVD 8x INT IDE ROM	\$179
PIONEER DVD 16x INT IDE ROM	\$205
PIONEER DVD 6x INT SCSI ROM	\$185
CREATIVE CDWR 8432 IDE RETAIL	\$315
HP CDWR 8250 24x4x4x INT IDE RETAIL ..	\$259
HP CDWR 9210 32x8x4x INT SCSI RETAIL ..	\$369
HP CDWR 9310 32x10x4x INT IDE RETAIL ..	\$379
HP CDWR 8210E 6x4x4x EXT USB RETAIL ..	\$329
PLEXTOR 32x8x4x INT IDE RETAIL	\$329
PLEXTOR 32x12x4x INT SCSI	\$499
SONY CDWR 32x8x4x INT IDE	\$269
YAMAHA 24x8x4x INT IDE DRIVE/KIT	\$299/\$319
YAMAHA 24x8x4x INT SCSI DRIVE/KIT	\$315/\$339

Sound cards & speakers

CREATIVE ENSONIQ PCI	\$32
CREATIVE SB PCI 128 (w/4 SPK SUPPORT) ..	\$43
DIAMOND MX400 PCI MONSTER SOUND	\$69
SB LIVE! VALUE (w/DIGITAL OUT)	\$67
SB LIVE! X-GAMER/PLATINUM RETAIL	\$129/\$255
140W SPKS/IJSTER 450W SPKS w/SUB ..	\$9/\$29
ALTEC ACS 33/54 SPKS w/SUB	\$59/\$85
CREATIVE 5.1 DTT 2500 5SPKS w/AMP	\$345
PC WORKS 2/4 POINT SPKS w/SUB	\$57/\$93
PC WORKS FPS 2000 SPKS w/SUB	\$179

Monitors (crt & digital)

AOC 17"/19" .25 1600x1200	\$265/\$389
LG GOLDSTAR 17" 795FT/19" 995E	\$419/\$489
MAG 17"786FD/19" 810FD .24	\$419/\$719
MITSUBISHI DIAMOND PLUS 17"/19"	\$549/\$749
NEC 17" A570 .27 1280x1024	\$279
NEC 17" FE700/19" FE950 .24	\$375/\$639
OPTIQUEST 17" Q71/19" Q95	\$299/\$479
PANASONIC 17" E70/SL751	\$309/\$389
PANASONIC 19" SL95/SL101 21"	\$609/\$1089
SAMSUNG 17" 700NF/19" 900NF*	\$385/\$569
SAMSUNG 15" 550S/17" 750S	\$189/\$279
SONY 17" E200/G200	\$519/\$569
SONY 19" E400/21" E500	\$739/\$1389
SONY 19" G400/21" G500 .24	\$805/\$1509
VIEWSONIC 17" E771/E773	\$309/\$369
VIEWSONIC 17" EF70/PF775	\$385/\$469
VIEWSONIC 19" E790 .26	\$509
VIEWSONIC 19" PF790 .25	\$655
VIEWSONIC 21" G810/PF815	\$1059/\$1229
VIEWPANELS CALL FOR PRICING!	CALL!

Video cards

POWER COLOR TNT2 PRO 32MB AGP	\$129
ASUS 3800U TNT2 PURE/ULTRA	\$129/\$205
ASUS V6600 GeForce 32MB/DELUXE	\$249/\$299
ASUS V6800 GeForce DDR/DELUXE	\$289/\$339
ASUS V7700 GeForce 2 32MB BOX	\$469
ATI XPERT 98 8MB AGP	\$55
ATI XPERT 2000 32MB AGP	\$109
ATI FURY PRO 32M/MAXX 64MB BOX	\$145/\$249
ALL-IN-WONDER 128 16/32MB AGP	\$209/\$279
ALL-IN-WONDER 128 PRO 32MB OEM/BOX	\$339/\$349
CREATIVE GeForce II 64MB AGP	\$449
ELSA GLORIA II 64MB AGP RETAIL	\$969
MATROX G400SH 16M/32M	\$139/\$189
MATROX G400DH 32M/MAX RETAIL	\$239/\$269
MATROX G400 MARVEL TV RETAIL	\$389
OXYGEN GVX1 32MG AGP RETAIL	\$1049
OXYGEN VX1 32MB AGP RETAIL	\$279
VOODOO 3 2000/3000 16MB AGP BOX	\$129/\$195
VOODOO 3-3500 16MB AGP w/TV BOX	\$255
VOODOO 5 5500 64MB AGP BOX	\$419
LOGITECH QUICKCAM EXPRESS/WEB USB	\$65/\$129

Accessories & cases

IBM/MS/LOGITECH INTERNET KB	\$25/\$29/\$35
FUJITSU 4725/8725 PS2	\$59/\$119
WIN98 STANDARD/INTERNET PS2 KB	\$9/\$19
MICROSOFT INTELLIMOUSE PS2*	\$25
MICROSOFT INTELLIEYE EXPLORER RETAIL ..	\$85
AOPEN PS2 MOUSE w/WHEEL	\$15
17"/19"/24" ATX CASE w/250W PS	\$45/\$55/\$69
18" 4 - 3 1/2" BAY ATX CASE w/250W PS ..	\$59
INWIN 16"/24" ATX CASE 300W	\$75/\$129
FLOPPY DRIVE	\$17
100MB IDE ZIP DRIVE	\$75
MS WINDOWS 98SE/NT4.0 WS*	\$135/\$189
MS WINDOWS 2000 PROFESSIONAL OEM* ..	\$199
MS OFFICE 2000 SBE/PRO	\$289/\$429
BASF/SONY WRITABLE CD DISCS*	\$1.29/\$1.69

Modem devices

MOTOROLA 56k PCI V90 MODEM	\$23
ACER 56k v90 PCI/ISA MODEM	\$33/\$65
USR 56k v90 PCI INT WIN MODEM	\$45
USR 56k v90 PCI INT FULL MODEM w/VOICE	\$92
ACER 56k v90 VOICE/FAX/DATA EXTERNAL ..	\$79

Printers & scanners

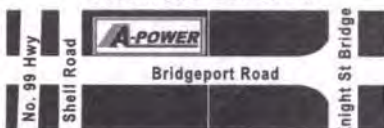
CANON 1000/2000 BUBBLEJET**	\$79/\$99
CANON 3000/6100 BUBBLEJET**	\$209/\$279
EPSON 440/660**	\$109/\$129
EPSON 740/760**	\$139/\$179
EPSON STYLUS 860/PHOTO 750*	\$199/\$359
LEXMARK Z11/Z31 COLOUR	\$99/\$149
LEXMARK Z51/3200 COLOUR	\$239/\$129
HP 840C	\$229
HP 930C/1220CXI	\$299/\$655
HP 1100/2100 LASER	\$539/\$959
EPSON 610U/636U	\$209/\$259
EPSON 1200U 1200x2400 SCANNER	\$329
BROTHER HL-1030/1250DX	\$369/\$539
HP 3300C/4200C SCANNER	\$169/\$255
HP 5300C/6300C SCANNER	\$329/\$499
UMAX 2000P/JU 32BIT	\$139/\$169
UMAX 2100U/2400S	\$145/\$399
ACER 320P/U 600x300**	\$69/\$79
ACER 620P/640U**	\$79/\$99

Burnaby Location



3764 East Hastings St
Burnaby, BC V5C 2H5

Richmond Location



#101-11211 Bridgeport Rd
Richmond, BC V6X 1T3

NOTEBOOK CENTRE

FOR NOTEBOOK RAM & HD PRICES CALL!
CHECK OUR WEBSITE FOR A LARGER
SELECTION OF BRANDS AND MODELS

ACER 507T	CEL-466/ 64MB/ 4.8GB/24xCD/14.1TFT/56K ..	\$1,799
ASUS F7400/D500	PIII-500/ 64MB/12.0GB/6xDVD/14.1TFT/56K ..	\$3,699
FUJITSU E6150	CEL-450/ 64MB/ 6.0GB/24xCD/14.1TFT/56K ..	\$2,699
IBM 1422	CEL-500/ 32MB/ 6.0GB/24xCD/13.0HPA/56K ..	\$1,799
TOSHIBA 4270X	CEL-500/ 64MB/ 6.0GB/6xDVD/14.1TFT/56K ..	\$3,069
TOSHIBA 8100 TECLA	PIII-500/ 64MB/12.0GB/6xDVD/14.1TFT/56K ..	\$4,829

Copyright © 2000 Registered trademark of A-POWER COMPUTER LTD. All Rights Reserved. All product names & trademarks are properties of their respective owners. All prices are in CAD dollars and reflect a 3% pre-cash discounted price. All prices are subject to change without notice or obligation. Shipping and applicable taxes are not included in prices shown. Mail-in rebates are offered by the manufacturer and have no affiliation with A-Power. Leasing available for systems \$1000 or greater OAC, final rates are set by the leasing agent. A-Power assumes no liability or responsibility for any errors or omissions in the content.

*Sold with system only
**Price reflect an offer
mail-in rebate

Tech Enterprise

Technology Solutions for Small Business • Connecting Home & Work

Bring on that light, bright light!

It's show time as more and more businesses discover the value of visual presentations. And if you're in the market for a presentation projector, the offerings are getting lighter, brighter and increasingly affordable.

By Tom Venetis

The mantra smaller, lighter and brighter is driving the strong growth of the projector market in Canada. A recent Evans Research Corp. study showed that, in Canada, this market grew 41 percent in 1999 over the previous year, and will continue to show strong growth well into 2002.

The Toronto-based research firm pegs this growth on several factors, including improved image quality and ease of use, and a continued drop in prices. These trends are particularly true for portable projectors—the growing popularity of which can also be attributed to their dropping weight. Many companies are now manufacturing projectors that tip the scales at less than 4.5 kg (10 lb.), and in some instances even less than 2.5 kg (5 lb.).

This has made many of these ultra-portable projectors, as they are often called, a popular item for mobile professionals and sales people. By bringing along their own projector, they no longer have to worry whether their notebook PC will be compatible with the bulkier projectors often found in corporate boardrooms. Instead, they plug their lightweight projector into their notebook and start their presentation.



Compaq's ultra-portable MP1600 projector

"With my job as the notebook product manager, I travel around quite a bit and I do a lot of presentations to various sized audiences," says Peter McNeill, product manager for mobile computing with Compaq Canada Inc., in Richmond Hill, Ont. "When I first started doing it in 1997, we did not have portable projectors—or they were not very portable. So I would go in with my notebook and I'd keep my fingers crossed whenever I approached the projector that was there. I'd have to fiddle around with it and hope I could get it up and running."

Compaq recently entered the growing portable projector market with its MP1600. Using Digital Light Processing (DLP) technology from Texas Instruments, the projector is designed to provide up to 600 lumens with up to 90 percent uniformity in the projected image. The

Continued on page 76

NetWinder a good thing in a small package

With Microsoft's Pocket PC and other handheld platforms extending the power of the PC to devices weighing a few hundred grams, it takes a lot to amaze these days, but the NetWinder from Rebel.com manages to pull it off.



LAN LINE

The NetWinder is a full-featured Linux server that weighs around 1 kg (2.2 lb.) and can serve 100 users. You can think of the NetWinder as a network and Internet appliance, since it is so easy to set up and to work with. A few minutes of configuration were all I needed before I was able to use it on my LAN as an Internet gateway. Some of its other uses, as an email server or firewall, will of necessity take more effort and time, but it is always easy to work with.

Rebel.com used to be the hardware division of Corel before being spun off. While Corel retains a sizeable investment in it, Rebel.com is an independent company that makes its own decisions. An example of this is that NetWinder runs the Red Hat Linux distribution, not Corel Linux.

What a server does and how it works are both more important than how it looks, but I confess to being fascinated by the NetWinder's appearance. The NetWinder series consists of rack-mount and compact desktop versions. I tested the latter, a model called the OfficeServer, which has 64 MB of RAM and a 10 GB drive. Like the others in the series, it has an external power supply, which helps to partially explain its slim dimensions—of 5x24x15 cm (2x9.5x6 in.)—and its light weight (noted above). It has ports to connect a mouse, keyboard and monitor. It also has a serial port for an external modem, parallel port support for a printer, external CD-ROM or Zip drive, and two Ethernet ports (one 10Base-T and the other 10/100Base-T).

Although this computer could be used as a Linux workstation, it is really intended to be used as a server, and to be configured and administered over the network via a Web browser—which is how I'm using it in my tests.

The external power supply is a partial explanation for its tiny size. Another reason is the CPU, a 32-bit, 275 MHz StrongARM RISC design, which uses far less power than most Intel or AMD processors. Consequently, the NetWinder doesn't need a huge heat sink or fan(s), which means it is happy in a much smaller case. In keeping with the appliance philosophy, the NetWinder has no expansion

Continued on page 91

Connecting VCs and startups

You finally worked out how to make a \$1 million on the Web. Now, the only problem is accessing the capital to get your idea off the ground.

By Tom Venetis

Conventional wisdom in the "new economy" would say that having a dot-com attached to a company name is enough to start the money flowing in from investors and venture capitalists.

And certainly that seemed the case only a short while ago. As soon as an Any-name.com company started up or an established brick-and-mortar firm started an Internet-based venture, those with money to invest stampeded to their doors or bought their stock in record numbers when they went public.

But since technology and dot-com stocks started to take a beating in April, Internet-based startups have been finding it harder to get the funding they need to either launch or



to move into the next phase of their growth. That's not because there are no longer any investors out there. In fact, there are probably more investors now looking to put their money into Internet-based businesses than ever before. The difference is that they are being much more careful in assessing potential investments.

"A lot of people think they can scribble an idea on a napkin, show it to a venture capitalist and they will hand over a million bucks," says Nick Jones, co-founder of the Toronto-based UpstartCanada.com (<http://www.upstartcanada.com>).

Because investors are much more careful in where they are going to invest, Internet startups need to become more savvy in how they present themselves. They need to begin concentrating on sound business fundamentals, such as how they are going to make money and turn a profit if they hope to get the necessary funds they need, Jones suggests.

Jones ought to know what he is talking about. When he worked with Chapters Online, one of his duties as a business development

Continued on page 88



Internet Gateway

604 654 6088 { tel
604 669 8489 { fax
1 800 453 1286 { toll free

We are open
Monday to Friday 9 AM to 9 PM
Saturday 9 AM to 6 PM.

web

news

chat

mail

fatwire

pure internet

Use Fatwire to realize the internet's full potential. Powered by ADSL technology, Fatwire is a high-speed internet connection with greater consistency and security than cable.



high-speed internet
instant connection
talk and surf
consistent speed
secure line

Fatwire Business

- Speeds up to 4Mb/second
- 16 static IP addresses
- 20 hours of dial-up access
- 20 e-mail addresses
- 20 MB of web space with virtual server

\$150* per month

Please check www.fatwire.net for the latest updates on Fatwire.

info@fatwire.net

*Modem and traffic charges not included

TTY



Internet Gateway
is now equipped
with TTY
machines for the
hearing impaired.

www.fatwire.net

Building our world around you

Corporate Internet Access

corporate@intergate.ca

IntroWeb Package

10 MB web storage
Custom domain name
5 POP accounts
Unlimited email aliases
No traffic charges

\$19⁹⁵
per month

Web Server Package

Includes all benefits of the
INTROWEB PACKAGE but with
- 30 MB web storage
- 10 POP accounts

\$39⁹⁵
per month

Basic Package

56K dial-up access
Up to 300 hrs/month usage
20 MB web storage
5 POP accounts
No traffic charges

\$29⁹⁵
per month

Server Colocation

State-of-the-art server facilities
High speed OC3 backbone
Static IP addresses
No setup fee

\$250
per month

Plus Package

Includes all benefits of the BASIC PACKAGE plus
a custom domain name (www.yourcompany.com)

\$44⁹⁵
per month

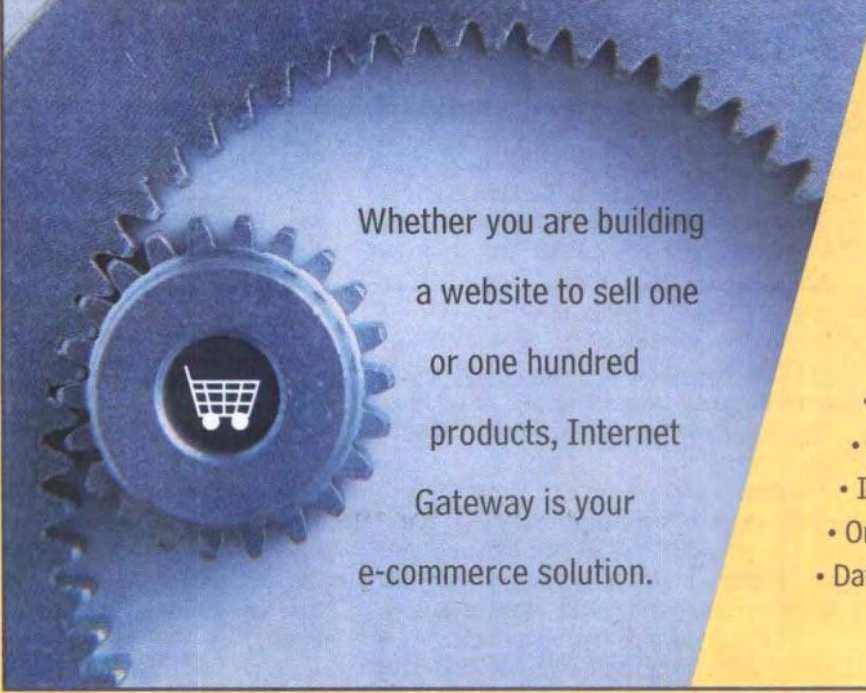
Domain Registration

More than 30,000 domain
names are being registered
each day. Call or visit us to
register your own domain name
today while it is still available.

.com
.net
.org

E-Business Services

ebusiness@intergate.ca



Whether you are building
a website to sell one
or one hundred
products, Internet
Gateway is your
e-commerce solution.

E-Commerce Turnkey Solution

- Custom store design
- Shopping cart
- Catalog management
- Inventory control
- Order tracking
- Database... and much more

Planning to enhance your existing site?

- Custom web design
- Custom programming
- Log-in module
- IG-Cart™ - shopping cart capability

Call for a free consultation today!

Call Now

654-6088

www.intergate.ca

Internet Gateway Corp., 889 West Pender Street, Suite 800, Vancouver, BC, Canada V6C 3B2

fast
OC-3
BACKBONE



DAZED AND CONFUSED ABOUT BUILDING A GREAT WEBSITE?

WEB SITE DEVELOPMENT

If the buzzwords of web technologies are starting to seem overwhelming, talk to the experts at *HomeBase Internet*. We can assist you with your database solutions or build you a web database from scratch. Our friendly, knowledgeable staff can help get you started, or build your entire web structure for you, letting you concentrate on what you do best...making money at your own business.

Competitive web hosting rates starting from just \$25/month. Training, consulting and web site building from \$75/hour. Call the experts at *HomeBase Internet* now and get your database on the web.

Customer Quote

"You won't find a better group of people who will stretch hard when needed to make your site work."—Dale W. Lerch, Sierra Stained Glass Studios, Inc.

TRAINING • CONSULTING

• SITE BUILDING

• FILEMAKER WEB HOSTING

HomeBase INTERNET

WEB SITE HOSTING

• FEATURES

- Powerful Mac and PC servers
- 6 OC3 Internet Connections
- Lasso or Web Companion
- SSL Secure Server Available
- UPS Backup
- Physically Secure Site
- ICASA Certified Firewall
- Switched Network
- Daily Backup
- Co-location for your Server
- Money-back Guarantee
- Reseller Program



• RATES

Plan	Storage	Bandwidth	Setup	Monthly
Basic Website	25 MB	200 MB	\$25	\$25
Fast Entry Basic Plan	25 MB	200 MB	\$49	\$49
Fast Entry Deluxe Plan	100 MB	1 GB	\$49	\$49
BizPlan - 1 Database	100 MB	1.5 GB	\$106	\$54
BizPlan - 2 Database	200 MB	2 GB	\$150	\$66
BizPlan - 3 Database	300 MB	3 GB	\$154	\$75
BizPlan - 5 Database	300 MB	4 GB	\$460	\$229
BizPlan - 8 Database	500 MB	5 GB	\$299	\$299
Web Companion 4	50 Databases		\$299	from \$149
Server Co-Location	Call			from \$149
Microsoft Terminal Server	Call			from \$65
QuickTime Streaming	Call			from \$65

Call Toll Free 1-888-748-0668
TEL 604-638-0668, FAX 604-638-0666

Email: sales@hbase.net

Web: www.hbase.net

PO Box 12066, 555 W Hastings St.
Vancouver BC, V6B 4N5

FileMaker® Pro is a Registered Trademark of FileMaker, Inc. Lasso is a Registered Trademark of BlueWorld Communications.

Bring on that light, bright light!

Continued from page 73

MP1600 also offers XGA (1,024x768 pixel) resolution and an AutoSync feature to automatically scale the projected presentation to fill the screen whether the information is displayed using VGA (640x480), SVGA (800x600), or SXGA (1280x1024) resolution.

A key feature of many of these new ultra-portable projectors is their ability to handle multimedia and interactive information. In order to handle that kind of rich media, the MP1600 comes with an optional video adapter allowing the presenter to switch between computer and video inputs. This eliminates the need to set up a separate video presentation.

Margie Leslie, business tools marketing manager with Mississauga, Ont.-based Microsoft Canada, says that as presentation creation software has become easier to use and more powerful, many more business people are adding media-rich elements to their presentations. That is why Microsoft has released a set of business tools for use with its standard Microsoft Office tools, allowing users to create and manipulate graphics, organizational charts, or project timelines for use in PowerPoint presentations. The tools—Visio, Project, PhotoDraw and MapPoint—can be purchased individually.

Compaq is not the only manufacturer looking to incorporate multimedia support into its projectors. Late last year, Toronto-based Epson Canada Ltd. released its own line of portable projectors that can handle a range of multimedia material. The line includes the PowerLite 710, 700 and 500 models.

"You have a set of projectors that can handle all the different resolutions, video and PowerPoint," says Stan Klebanoff, national sales manager with Epson. "Our projectors can handle a picture within a picture, so you can have a video running with the PowerPoint presentation running in the background."

The projectors come with built-in speakers, but external ones can be attached for better sound. The PowerLite 500 and 700 deliver up to 800 lumens each, while the 710 projects up to 1,000 lumens. The PowerLite 500 offers up to SVGA resolution, and the PowerLite 700 and 710 can deliver native XGA resolution. The most powerful of the trio, the PowerLite 710, weighs just 2.6 kg (5.8 lb.).

A distinguishing feature of Epson's line of projectors is their use of a three-LCD projection system. Klebanoff says this system allows for better image quality, colour saturation and brightness compared to DLP-based projectors.

"DLP technology works on a single micromirror device chip that has mirror pixels that will reflect or not reflect light," Klebanoff says. "But in order to get the red, green and blue needed to make a colour image, you have to put a red, green and blue colour wheel in front of it. The problem is that you are only shooting one colour at any one time so 65 to 70 per-

cent of the light is lost. So you have to beef up the power output in order to get a bright projection but the colour saturation goes way down."

With LCD-based projectors, three LCD panels are placed around a glass prism with the light split into red, green and blue individually. The colours are combined in the prism and a full colour image is sent to the screen.

However, not everyone agrees that LCD technology is superior to DLP. Walnut, Calif.-based ViewSonic Corp. believes both technologies offer benefits to users of portable projectors. The reason LCD has been at the forefront is that the technology has been in the market longer and thereby has become accepted among more users of portable projectors.

"It is a mature product," says Jeff Klass, director of sales for advanced products with ViewSonic. "DLP technology was introduced around 1995, so it's about five years old. People often equate age with colour uniformity and clarity of image. But it's really up to the user what is best for them, DLP or LCD."

Klass says ViewSonic has tried to incorporate both technologies into its line of portable projectors in order to give users a choice.

Recently, ViewSonic refreshed its Office Theater line of products by releasing its PJL855 and PJL1035 ultra-portable projectors. The PJL855 weighs only 4.5 kg (9.9 lb.) and its LCD projection system can offer up to 900 lumens with 800x600 resolution. The PJL855 features a back-lit wireless remote with image freeze and zoom capabilities as well as a built-in mouse and laser pointer. The PJL1035 is a XGA projector (weighing

the same as the PJL855) that is equipped for most PCs, laptops and handheld computers. It offers up to 750 lumens with a 100:1 contrast ratio, and a white point setting similar to a cathode ray tube (CRT) display. Other features include a wireless remote with built-in mouse and laser pointer.



ViewSonic PJL855 ultra-portable LCD projector

One company that has decided to focus almost exclusively on the DLP technology for its portable projectors is Wilsonville, Ore.-based InFocus.

Lisa Kaylie, product-marketing manager for InFocus, says DLP allows the company to deliver portable projectors that meet the increasing demand for portable projectors that are both lightweight and feature-packed.

Mountain View, Calif.-based Pacific Media Associates recently released a study that says the worldwide revenue for the data-video pro-

Continued on page 84

BRAND NEW SAMPLE & USED PARTS DEAD & DAMAGED UPGRADES



CE COMPUTER OUTLET Tel: (604) 278-2633 Fax: (604) 278-2661
118-4800, No.3 Road, Richmond, B.C. Canada V6X 3A6

STORE HOURS Monday-Friday 11:00am - 7:00pm - Saturday 11:00 am - 6:00pm
Sunday & Holidays closed

INTEL PENTIUM SYSTEMS

INTEL PENTIUM II/III SYSTEMS

PIII - 550	\$1380
PIII - 600	\$1440
PIII - 650	\$1440
PIII - 667	\$1480
PIII - 733	\$1580

- * With Intel CPU & fan
- * ASUS P3V4X Motherboard (133MHZ)
- * 64MB SDRAM (168 Pin)
- * 10.2GB HDD (UDMA)
- * 1.44MB (3 1/2") Floppy
- * ATI Xpert98 w/8MB AGP Video Card
- * 15" N/I L/R SVGA .28dp Monitor
- * 48x CD ROM
- * Sound Blaster LIVE! (Value)
- * 460 W/ Speakers w/ Subwoofer
- * ATX Case
- * Windows 95/98 Keyboard
- * Logitech 2 button Mouse & Pad

PENTIUM SYSTEMS

CELERON 500A	\$950
CELERON 533A	\$995
PIII - 550	\$1170
PIII - 600	\$1230

- * With Intel CPU & Fan
- * Pentium Motherboard
- * 64MB SDRAM (188 Pin)
- * 10.2 GB HDD (UDMA)
- * 1.44MB (3 1/2") Floppy
- * AGP Video
- * 15" N/I L/R SVGA .28dp Monitor
- * 48X CD-ROM
- * 3D Sound
- * 140W Speakers (Amp)
- * ATX Case
- * Windows 95/98 Keyboard
- * Mouse & Pad
- * 56K Fax Modem (v.90)

System Upgrades

Modem	Monitor	Hard Drive/Memory
56K Fax/Voice Internal (v.90) +\$48	15" to 17" 0.28dp +\$180	(please call)

Prices subject to change without prior notice **Cash and Carry**

THREE YEARS LABOUR AND ONE YEAR PARTS WARRANTY FOR SYSTEMS

We do Trade-ins, Repairs,
System Upgrades

We carry New and Used
Computer Components

樣品和舊電腦 舊零件 損壞的電腦和零件 全新電腦和大量零部件

主機板 顯示器 機箱 磁碟機 記憶體 電腦用品 軟體 電腦升級 電腦系統

CASE FLOPPY DRIVE COMPUTER ACCESSORIES RAM MOTHERBOARD MONITOR

\$0 web hosting

(WITHOUT AD BANNER)

IF you're paying for web hosting, you are overpaying. Come join the lead and get COST-FREE, BANNER-FREE web hosting service:

- www.YOURDOMAIN.com IHOSTING
- 20MB web storage + FTP access
- unlimited you@yourdomain.com POP email accounts + email forwarding

A rebatable \$35 fee is applied for domain transfer. (see our web site for details.)

Own your domain name for as low as \$15/year.

} \$0



www.doteasy.com

Platform News

Macintosh • Linux • Windows • Palm • Emerging Trends

Jon 'maddog' Hall talks Linux

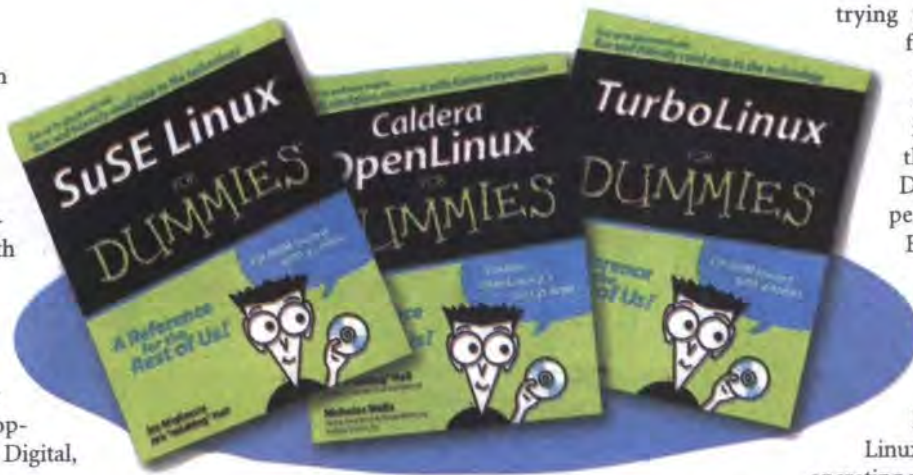
By Jeff Evans

For the last six years, Jon "maddog" Hall has been one of the strongest and most effective supporters of the Linux open-source operating system in North America. With more than 25 years of experience in the computer industry, Hall has a master's degree in computer science, and has held senior technical, software development and marketing jobs at Digital, Bell Labs and Compaq.

Maddog also has more than 17 years experience with the Unix community, and a personal history that seems to have primed him with the determination to see an open-source operating system done right.

Since meeting Linux pioneer Linus Torvalds in 1994, maddog has become a friend of the Torvalds family, and is the godfather to Linus and Tuve's two children.

Maddog is currently the executive director of Linux International (<http://www.li.org/>), the non-profit body that promotes the development of the Linux operating system. Hall lectures and teaches widely on Linux and is also



one of the most prolific and popular authors of Linux-related books, including several *For Dummies* titles.

In mid-May, canadacomputes.com editor Jeff Evans had the opportunity to interview maddog, who was in Toronto to attend the Linux Canada conference and exposition.

JE: How did you meet Linus Torvalds and get involved in Linux?

JMH: I had been involved with the Unix operating system for about 17 years, and was quite active in Unix user group activities. I was

trying to get some guy over from Europe to talk about this Linux open source operating system for the 1994 meeting of the Digital user group DECUS in New Orleans. I persuaded DEC [Digital Equipment Corp.] management to fund Linus to visit the U.S. and talk about Linux.

I met Linus, and had my first shot at using Linux. I find that using an operating system for the first time is a bit like playing a piano. After a bit, you can tell if your instrument is a good one. After I tried Linux I thought, "Hey, this is good!"

I discussed the possibility of Linux doing Linux for Alpha-based computers. Linus said he was very interested but that he was having trouble getting a developer's unit from DEC, so he was going to develop Linux for the IBM PowerPC instead. He was doing everything on his own time, his own old PC at his desk, and he had no money. I contacted DEC, and got him an Alpha computer right away. So Linux was developed for Alpha, not PowerPC.

Continued on page 82

WordPerfect Office for Linux a desktop contender

By Issie Rabinovitch

I finally received Corel WordPerfect Office 2000 for Linux. I had asked for the Deluxe Edition, but ended up with the Standard Edition. This is due to cutbacks at Corel, no doubt. (This is meant as a joke, obviously, but it is a legitimate reference to the financial problems Corel continues to suffer).

Corel WordPerfect Office 2000 for Linux

From: Corel Corp.

<http://www.corel.ca>

Price: \$149 (standard), \$199 (deluxe)

Rebate (before Jan. 1, 2001): \$20 (standard), \$40 (deluxe)

Since I have the Corel Linux OS running on one of my computers, it didn't take me long to install the suite. In fact, once I found a knife to cut through the shrinkwrap, opened the package and extracted the CD-ROM, it took no more than six minutes to do the installation. I've been using the software for a week, during which time I've gone through many of the typical tasks performed with an suite of office applications. I'm continuing to work with WordPerfect Office 2000, which will surely lead to additional insights over time, but I already have enough information to write this review.

As noted above, WordPerfect Office 2000 for Linux is available in two different editions. Both contain the downloadable version of the Corel Linux OS, as well as WordPerfect 9, Quattro Pro 9, Corel Presentations 9 and CorelCentral 9. The Deluxe Edition offers more clipart images, fonts and photos, as well as some games, Netscape Communicator and Paradox 9, Corel's relational database. For the relatively modest price difference (\$50), I would recommend the Deluxe Edition as the better value, even if you don't think you need a relational database.

The minimum system requirements on the software side are Linux Kernel Release 2.2 or higher, and X-Windows. Any recent distribution of Linux should work, although obviously Corel is making it as easy as possible for users to choose its distribution. On the hardware side, Corel specifies a minimum of a 166 MHz Pentium with 32 MB of RAM, but it recommends a 200 MHz Pentium with 64 MB of RAM. For a typical installation, 300 MB of disk space is required. Other requirements include a CD-ROM drive, VGA monitor, mouse or tablet, and an Ethernet card for network connectivity.

Many people will be surprised at the high minimum requirements, since it is widely believed that nothing more than an old 486-

Continued on page 82

Mac News

Apple delays final release of OS X

By Justin Siemens

The Apple World Wide Developer Conference kicked off May 15 in Los Angeles, with chief executive officer Steve Jobs delivering the keynote. During the event, it was announced that the schedule for the retail version of Mac OS X (<http://www.apple.com/macosx/>) has been pushed back six months. It was previously announced that OS X would be shipping in final form this summer, possibly at MacWorld in July, and that Apple would begin installing it on all new Macs in January 2001. The new schedule has the full version of OS X coming out in January and being included on all new Macs at the same time. To tide over curious Mac users everywhere, there will be a public beta release of OS X this summer, which will be available for free when downloaded from Apple's Web site. For those without broadband Internet access, it may also be available on CD-ROM for a small fee. This public beta strategy should allow Apple to work out as many bugs as possible before they begin to



Though OS X is delayed, Apple will release a free public beta this summer.

install the OS on new Macs next year. A price for the final, full version of OS X has not been set.

iMovie free

Since Apple began giving away iMovie (<http://www.apple.com/imovie/>) for free at the end of April, more than 150,000 copies have been down-

loaded. iMovie is a video-editing package, which can best be described as a light version of Apple's professional product, FinalCut Pro. (Final Cut Pro retails for \$1,499, and is obviously priced out of the realm of most home users.) iMovie allows users to combine clips from multiple sources, along with titles, sound effects and multiple soundtracks. The finished movies can then be saved as QuickTime clips for distribution via the Web or on CD, or the videos can be exported back to a camcorder to watch on TV. Previously, iMovie was available only with the purchase of an iMac DV or iMac DV Special Edition. For people looking to get into video editing, iMovie is certainly worth a look, especially since most other packages cost hundreds of dollars. iMovie requires a Mac with a PowerPC processor, and a FireWire port.

Update fixes HotSync-MacOS conflicts

Palm Computing has released version 2.6.1 of the Palm Desktop, which works with all Palm

Continued on page 79

Apple delays final release of OS X

Continued from page 78

Computing handhelds, as well as the Palm-compatible Handspring Visor handhelds. This is the first version to be released with support for both lines of computers. Also, the new update fixes a HotSync problem with Mac OS 9.0.4. Since the release of Mac OS 9.0.4 many people have been unable to sync their Palms with their Macs due to changes Apple made to some of the serial-USB libraries. The update is available for free from <http://www.palm.com>.

Apple technician training kit released

Available in the U.S. for about two months, Apple Canada is now offering the AppleCare Technician training kit from the Apple Canada online store (<http://www.apple.ca/store>). The kit costs \$449 and includes a self-paced program that consists of CD-based training materials and diagnostic tools, as well as reference documents from Apple's technical library. The course is a light version of

New 3Dfx cards coming for Mac

3dfx (<http://www.3dfx.com>) has announced that the next generation of Voodoo graphics accelerators for Mac are due out this summer, and should be shipping in July. With the unfortunate omission of an AGP model, the new cards look set to blow away ATI's Rage 128 Pro, the current king of the hill of graphics cards for the Mac. The two new Mac models are the V4500 PCI and the V5500 PCI. The Voodoo 4 4500 PCI features a single VSA-100 CPU and 32 MB of graphics memory. The Voodoo 5

5500 PCI features dual VSA-100 CPUs, which share a total of 64 MB of high-speed graphics RAM. The prices for these cards have not been officially set, but 3dfx has stated that the V4500 is expected to retail for under US\$200 and the V5500 for around US\$320. Missing from the Mac lineup are the dual-CPU V5000 AGP, and the quad-CPU V6000 AGP. However, unlike the PC version, both Mac 3dfx cards will feature a DVI output for use with digital LCD monitors. Also, for the first time 3dfx will offer Mac drivers with native support for 2D and

3D acceleration as well as OpenGL, QuickDraw, QuickTime, RAVE and Glide acceleration. These cards feature the option of full-screen anti-aliasing, which drastically reduces the jaggies in 3D games. These cards are out to set the standard for 3D performance that will be unmatched—at least until ATI comes out with its new offerings sometime before the end of the year. □

Justin Siemens is a Macintosh IT specialist based in Vancouver, B.C. He can be reached at jsiemens@mac.com.



MGE's Pulsar Ellipse UPS systems take advantage of the power-saving features of Mac OS 9.0.4.

what Apple has offered for a significantly higher price to authorized Apple repair shops in the past. Once you have completed the course, you'll be well equipped to upgrade and troubleshoot your own Mac. Should you want to go one step further and hire your services out to others, you must pass Apple's service certification exam, at an additional cost. The exams are offered by many educational institutions in Canada, and cost approximately \$150 (the fee varies from school to school). The training kit is a great idea for someone who wants to learn more about what makes their computer tick, or who is planning a career in trouble-shooting and tech support.

UPS system enhanced for Mac

U.S.-based MGE UPS Systems (<http://www.mgeups.com>) has released a new line of UPSes (uninterruptible power supplies) that are the first to take advantage of the advanced power-saving features in Mac OS 9.0.4. Called the Pulsar Ellipse, the systems function as normal UPSes but with the addition of a USB port for interfacing with any USB-equipped PowerMac. By using the USB port, the UPS allows the Mac to run as if it were a laptop, so users can tap into the Mac OS power manager to make the most out of the UPS battery. In the event of a power failure, the UPS automatically switches the Mac to battery power, and lets users know in minutes how much power they have left. When it's down to the last few minutes, the device saves all the current work and shuts down the computer safely to protect the files. The systems are capable of providing from 10 to 60 minutes of power, and require Mac OS 9.0.4 to function.

NU-AGE

Affordable Computer & Communication Products

Authorized Dealer

COMPAQ

HEWLETT PACKARD

IBM

AST

MasterCard

VISA

AMERICAN EXPRESS

Celeron PPGA370 466/533/566 Internet Systems

Asus Intel 440BX Chipset CUBX Motherboard Support UltraDAM/66 and Floppy Controller 2x16550 UART serial, 1 Parallel Port & 2x USB 64MB PC100 SDRAM exp. to 1.0GB Panasonic 1.44MB Floppy Drive ATX Mid-tower 16" CSA w/250W P/S Fujitsu 10.8GB Ultra EIDE Hard Drive 5400rpm ATI Xpert98 AGP2 w/8MB RAM Video Card AOpen 48X EIDE CD-ROM Acer 56K Flex V.90 Internal F/M/V PCI Bus Ensonic 128 PCI Audio Card w/30 Stereo Spkr. Samtron 15" (55E) FS N/I LR Monitor Mitsumi 104 Key keyboard PS/2 Logitech First + PS/2 w/ Wheel Mouse

\$1088 / 1128 / 1188

Pentium III 667/ 733 MHz (FC-PGA) Graphic Systems

Asus VIA Apollo Pro133A Chipset P3V4X M/B Support Ultra DAM/66 and Floppy Controller 2x16550 UART serial, 1 Parallel Port & 2xUSB 64MB PC133 SDRAM exp. to 1.0GB Panasonic 1.44MB Floppy Drive ATX Mid-tower 16" CSA w/250W Power Supply Quantum 15GB Ultra EIDE Hard Drive 7200rpm Mitsumi 104 Key keyboard PS/2 NEC AccuSync 17" (AS70) FS N/I Monitor 0.27dpi Asus V3800 TNT2 M64 Bulk 32MB Pure AGP4 SB 128PCI Sound Card w/ Altec Lansing ACS-22 Spkr Asus 50X IDE CD-ROM Drive Tray Load Acer 56K Flex V.90 Internal F/M/V PCI Bus Logitech First + PS/2 w/ Wheel Mouse

\$1690 / 1780

Pentium III 550E/650 MHz (FC-PGA) Power Systems

Asus Intel 440BX chipset CUBX Motherboard Support UltraDam 66 and Floppy controller 2x16550 UART serial, 1 parallel port & 2x1BS 128MB PC100 SDRAM exp.to 1.0GB, 512 PB cache Panasonic 1.44MB Floppy drive ATX Mid-tower 16" CSA w/250W Power Supply Quantum 15.0GB Ultra EIDE Hard Drive 7200rpm ATI XPERT2000 AGP2 Video w/32MB Asus 40X EIDE CD-ROM 3COM USR 56Kx2 V.90 Internal F/M PCI SoundBlaster 128PCI sound card w/Altec Lansing ACS-22 spk NEC AccuSync 17" (AS70) FS N/I monitor 0.27dpi Fujitsu 8725 - 104 Key keyboard PS/2 Microsoft Intelli-Mouse w/Wheel PS/2

\$1690 / 1720

Pentium III 800EB/866EB MHz (SECC2) Super Power Systems

Asus Via Apollo Pro133A Chipset P3V4X M/B Support UltraDAM/66 and Floppy controller 2x16550 UART serial, 1 parallel ports & 2xUSB 128MB PC133 SDRAM exp.to 1.0GB, 256KB cache Panasonic 1.44MB Floppy drive ATX Mid-tower 16" CSA w/ 250W P/S Quantum LM 20.4GB (7200RPM) Ultra EIDE HD Asus V6800 DDR Pure nVidia Video w/32MB- AGP4 Asus 50X IDE CD-ROM Drive Trayload 3COM USR 56Kx2 V.90 Internal PCI F/M SoundBlaster Live Value PCI + Yamaha MB Stereo Spkr Viewsonic PF775 17" FS SVGA Monitor Microsoft Natural keyboard PS/2 Microsoft Intelli-Mouse w/Wheel PS/2

\$2568 / 2828

FREE 1st Month Internet Access by Infinet Group

Monthly Special

Princo 650MB Silver CD-R Diskette with Jewel Case

\$1.00

We support and service

Trained and tested to provide superior NetWare Support

3Com™ net Working Partners program Networking Partner

We support and service:

- Novell NetWare • Windows for Workgroups • LANtastic Windows NT •

We're Keeping Up with Your Networking Needs

Networking Products

Backoffice Small Business Server w/5 CAL. . . \$1950

MS Windows NT Server w/5 clients. . . \$1150

MS Windows Workstation OEM. . . \$279

MS Exchange Server w/5 clients. . . \$1225

Novell Netware V5.0 w/5 Clients. . . \$1490

3Com 905B TX 10/100BT PCI Card. . . \$85

Acer 10 Base T 5-Port Hub. . . \$48

Intel Express Pro 10/100BT PCI Card. . . \$90

3Com USB Ethernet Interface 3C19250. . . \$89

3Com Off.Conn.8Port 10/100B Switch 3C16734A \$279

Linksys Cable/DSL Router w/4 Ports BEFSR41. . . \$285

3Com Home Connect ADSL Modem PCI 3CP3617 \$319

3Com Home Connect ADSL Modem Ext. 3CP3647 \$392

HP 170X External Print Server w/1 Par. Port. \$220

Xircom RealPort 10/100+56K Combo PCMCIA \$522

MegaHertz 10/100+56K V.90 Combo PCMCIA \$465

Accessories

3M 17" Anti-Glare Filter \$109

APC Surge-Arrest P-Bar \$24.50

HardDisk Removable Rack \$28

IDE Data Cable for DMA66 \$15

Jewel Case for 2 CD \$1.50

SuperDuster \$12

DefCon Notebook Security \$65

Princo CD-R Disk \$1.00

TDK CD-R Diskette \$2.00

Princo Re-Writable CD Disk \$2.85

Princo 80 Min CD-R Disk \$1.85

CD Labeling Kit (50 Label+Software) \$35

KA0 InkJet Paper-100/pk \$3.25

Memorex Printer cover (27"D x 19"W x 10"H) \$2.50

Multi Media World

AOpen 48X / 52X CD-ROM . . . \$56/62

Asus 40X / 50X IDE CD-ROM . . . \$65/75

HP 8250i Int. IDE CDWR 4x4x24x . . . \$279

HP 9110i IDE CDWR 8x4x32x . . . \$339

Yamaha Int. 8424 CDWR 8x4x24x IDE Value Kit \$445

Creative PC-DVD Encore 8X w/DXR3 . . . \$349

Sony DVD Baredrive 5x/32x IDE . . . Call

Sigma Design Hollywood+PCI Decoder w/SW \$135

Sound Blaster 128 PCI . . . \$48

Sound Blaster Live Value . . . \$78

Altec Lansing Speakers. . . Call

Yamaha Magnetically Shielded Speakers . . . Call

Notebook

Acer Travelmate 506DX \$1699

Intel Celeron 433aMHz, 32MB SDRAM, 4.8GB Hard Drive, 12" HPA Display, 24x CD-ROM, 56K V.90 Modem and MS Windows 98

ASUS L7300/D366 notebook \$2690

Intel Pentium II 366MHz, 32MB SDRAM, 4.1GB Hard Drive, 13.3" TFT Display, 24x CD-ROM, 56K V.90 Modem and MS Windows 98

Toshiba Tecra 8100 (PT810C-11C52) \$5479

Intel P3-500MHz, 64MB SDRAM, 12.0GB Hard Drive, 14.1" Active Matrix Colour Display, 6x DVD-ROM, 56K Modem and MS Windows 98

IBM ThinkPads 390X (2626M0U) \$4740

Intel P3-500MHz, 64MB SDRAM, 12.0GB Hard Drive, 15.0" Active Matrix Color Display, 24x CD-ROM, 56K Modem and MS Windows 98

Monitors

ADI G500 15" FS N/I LR 0.25 \$275

ADI Provista 17" FS N/I LR 0.26 \$330

MAG 786FD 17" FS 0.24 Triton \$445

NEC FE750 17" MULTI-SYNC 0.25 \$480

NEC FE950 19" MULTI-SYNC 0.25 \$660

Optquest Q95 19" 0.26 \$505

Samsung 750S 17" 0.27 1280x1024 \$319

Sony E200 17" Multiscan 0.25 1600x1200 \$527

Sony G400 19" Multiscan 1800x1440 \$860

Viewsonic E773 17" 0.25 \$389

Viewsonic G5790 19" 0.25 1600x1200 \$600

Viewsonic PF775 17" 0.25 \$499

Viewsonic PF790 19" 0.25 \$695

Printers

Epson Stylus Photo 750 720x1440dpi \$369

HP 840C Deskjet Color \$235

HP 895Cxi Deskjet Color \$375

HP 950C Deskjet Color \$449

HP 970Cse PhotoRet III Printer \$579

HP 3150 Laserjet All-in-One Centre \$875

HP 4050 Laserjet (16MB, 17ppm) \$1,660

HP 2100 Laserjet (4MB, 10ppm) \$998

HP 1100 Laserjet \$569

Ink-Jet Refill for Canon/Epson/HP Call

Modems

3COM/USR 56K X2 V.90 Int. Fax/Data PCI \$55

Acer 56K V.90 Int. Fax/Voice (PCI) \$45

SupraMax 56is Int. K56 Flex PCI \$69

Flatbed Scanner

HP 5200C FlatBed Scanner Parallel/ USB \$275

HP 6350C FlatBed Scanner Parallel/USB \$650

Visioneer OneTouch 6100B Parallel \$119

Visioneer OneTouch 7600 36bit Parallel \$138

Visioneer OneTouch 7600 36bit USB \$142

Palm Pilot

3Com Palm Vx w/8MB Organizer \$539

3Com Palm III-C w/8MB Organizer \$610

3Com Palm III-E w/2MB Organizer \$213

AGP Video Cards

AOpen PG128+ S3 Trio3D 4MB AGP \$36

AOpen PA700 S3 w/16MB AGP4 \$75

Asus V6600 GeForce DLUX 32M TV-O/P AGP4X \$379

Asus V6800 GeForce DDR Pure 32M AGP4X \$429

ATI XPERT-2000 w/32MB RAM AGP2X \$132

ATI Rage Fury w/32MB SGRAM AGP \$189

ATI Rage Fury Maxx 64MB AGP4X Rage128 Pro \$398

Millennium G400 32MB 300MHz Bulk AGP2x/4x \$198

Viper IIZ200 32MB S3 Savage2000 AGP4X \$249

Hard Drives

Fujitsu 6.4 / 10.8GB 5400rpm IDE \$123/139

Maxtor 30.0 / 40.0GB 7200rpm IDE \$310/419

Quantum LM 15.0/20.0GB 7200rpm IDE \$210/270

Quantum 5.1/30.0GB LCT10 5400rpm IDE \$129/297

Western Digital Ultra IDE Call

Ultra / Ultra-2 Wide SCSI Hard Disk Call

RAM

4MB SIMM 70NS 30PIN Call

8 / 16 / 32MB EDO 60NS 72PIN Call

32 / 64 / 128MB PC100 SDRAM 168PIN Call

64 / 128 / 256 MB PC100 SDRAM 168PIN Call

Notebook Memory (Compaq/IBM/Toshiba) Call

Removable Devices

OnStream D130 30GB Dig. Tape Dr. IDE Int \$425

Iomega ZIP 100MB Ext. USB Port \$179

Iomega ZIP 250MB Ext. Parallel Port/SCSI \$269

Iomega JAZ Ext. SCSI 2.0GB \$469

Drifto Max 10.0GB Int./Ext. (Parallel) \$329

Digital Devices

Agfa ePhoto 780C Digital Camera w/2MB \$359

Epson PhotoPC 750Z Digital Camera \$829

Kodak DC215 Digital Camera \$475

Epson 850Z Digital Camera \$1,098

TEL 739-0883 | FAX 739-2027 | EMAIL nuage@nuageplus.com | #101-1668 West Broadway, Vancouver, B.C. V6J 1X6

Business Hours: Mon-Fri 9:00-6:00 Sat 11:00-5:00 Free Parking At Rear Above prices reflect 2% cash discount. Prices subject to change without notice. All products name, trademarks are properties of their respective owner. 3% for Amx payment.

We are now DCC Technologies

Previously known as Discount Computer Club

Canon Video Camcorders



The Canon XL1 puts you on the cutting edge of technology and the brink of history. The first Mini DV with interchangeable lenses, it's an incredibly versatile and creative tool.



The Canon GL1 offers unmatched optical technology for superior image quality and shooting versatility.



Shooting both digital stills and digital videos, the Optura is the perfect fusion of Canon's expertise at photography and command over advanced digital imaging technology.



Introducing the Canon Elura...the ultimate Personal Imaging Companion that's two cameras in one. Shoots digital video and digital photos and fits inside your pocket.

Canon

When purchased with a DCC NLE system, an instant rebate of \$100 to \$250 will be applied to all Canon camcorders. Please check our website www.dccetek.com for detail.

Dual Pentium III 866MHz Workstation

Power workstation for Animation and 3D Graphics

Intel OR840 Dual Pentium III ATX motherboard
Intel 840 chipset supports UDMA66, 4X AGP and Rambus RAM
Dual Intel® Pentium® III 866MHz CPU (boxed model)
Kingston 256MB RAMBUS RIMM
Panasonic LS-120 120MB floppy drive
3Dlabs Oxygen GVX210 w/64MB RAM and dual monitor support
Quantum Atlas V 18GB Ultra 160 SCSI HD (7,200RPM, 160MB/sec)
Plextor UltraPlex 40X internal Ultra SCSI CD-ROM
Adaptec Ultra 160 SCSI controller
In-win 24" full ATX tower w/300W Power supply
Fujitsu 4725 104key keyboard and Logitech 3-button mouse
Sony G500 21" FD digital monitor (0.24, 2048X1536@75Hz)
Windows NT Workstation V.4 (FREE upgrade to Windows 2000)
2 Year warranty (Parts & Labour)



\$8990

** Please call for other customized configurations.

Realtime Digital video editing Station

Supreme system for professional non-linear editing

ASUS P2B-D 440BX AGP Dual Pentium III motherboard
Dual Intel® Pentium® III 600MHz CPU (boxed model)
256MB 168pin ECC PC100 SDRAM DIMM w/SPD EEPROM
Panasonic LS120 120MB floppy and ASUS 40X internal CD-ROM
Canopus Xplode AGP Video card w/32MB RAM
Quantum Fireball 15GB UltraATA66 system drive
Adaptec 19160 Ultra 160 SCSI controller
Quantum Atlas IV 36GB Ultra 160 SCSI video drive
Canopus DV-Rex DV/Analog video capture card w/RT option
In-win Q500 24" full ATX tower case w/300W Power supply
Microsoft 2-button intellimouse and internet keyboard
Windows NT Workstation V.4 (FREE upgrade to Windows 2000)
Viewsonic P815 21" digital monitor
2 Year warranty (Parts & labour)



\$9250

3D & DV hardware

3Dlabs Create w/Permedia 3 & 32MB RAM	225
3Dlabs Oxygen VX1 w/GLINT R3 CPU & 32MB (bulk)	279
3Dlabs Oxygen GVX1 AGP w/GLINT R3, G1 & 32MB	1050
3Dlabs Oxygen GVX1 PCI w/GLINT R3, G1 & 32MB	1490
3Dlabs Oxygen GVX210 w/dual CPU & 64MB RAM	2180
Creative Labs Annihilator2 GeForce2 w/32MB	429
Diamond Fire GL1 w/IBM 256-bit graphics engine	959
Matrox Millennium G400 Max dual monitor w/32MB	289
Matrox Marvel G400-TV video capture w/Avid cinema	419
Matrox RT2000 realtime NLE system w/Premiere RT	1799
E&S Lightning 1200 w/31MB & REALImage1200 CPU	560
E&S Tornado 3000 w/62MB & REALImage1200 CPU	1850
ATI All-in-wonder 128 w/32MB and TV Tuner	329
Pinnacle Studio DC10+ PCI video capture card	315
Pinnacle Studio DV Firewire Video capture card	149
Pinnacle Studio MP10 w/realtime MPEG1 encoding	379
Pinnacle Studio 400 external video capture device	189
MiroVideo DC1000 real time MPEG-2 encoder	2799
MiroDC30 Pro w/Premiere 5.1 & breakout box	1150
MiroVideo DC50 w/Premiere 5.1 & After Effect	2490
MiroVideo DV200 w/Adobe Premiere 5.1	670
MiroVideo DV300 w/Adobe Premiere 5.1	1080
MiroVideo DV500 w/Adobe Premiere 5.1	1390
Canopus Amber MPEG2 encoder w/DVD-RAM	3295
Canopus DV-Rex-M1 DV/Analog capture card	3090
Canopus DV-Raptor DV capture w/Premiere 5.1	699
Canopus Xplode video w/32MB and 3D effect engine	599
Canopus RT option w/Xplode video for DV-Rex	1450
Newtek Video Toaster NT uncompressed video editing	4390
Digital Origin EditDV 2.0 w/Firewire capture card	1150
Digital Origin MotoDV Studio 2.0 w/Premiere 5.1	740
Digital Origin MotoDV digital video capture card	590
Medeo VideoRaid 26GB 2/26 System (18MB/sec)	1350
Medeo VideoRaid 51GB 4/51 System (36MB/sec)	2290
Medeo VideoRaid 78GB 6/78 RT System (60MB/sec)	3390
Medeo VideoRaid 150GB 6/150 RT System (60MB/sec)	4790

DV500
Real-time, native DV editing solution
Hardware DV codec
Connect both DV and Analog devices
Export MPEG-2 I/P stream for DVD,
interactive CD-ROMs and internet delivery

\$1390

ELSA Gloria II
nVidia QuadPro chipset w/64MB SDRAM
7 million triangle per second
Peak texture fill rate of 540 million pixel/sec
Supports OpenGL ICD, NT, Win 2000 and Linux

\$990

DV-Rex MEGA Bundle
DV audio & video editing system w/RT option
Xplode 3D AGP video card w/32MB
supports multi channel audio
Supports DV and Analog editing
Breakout box included

\$4090

Matrox RT2000
Realtime nonlinear editing solution
Broadcast quality 3D DVE and 32-bit uncompressed animated
graphics in a native DV editing environment.
MPEG-2 output for DVD, video CD,
and web video streaming applications
1394 and analog output for tape distribution

\$1799

OXYGEN GVX210
100% Geometry and Lighting Acceleration
Dual GLINT R3 Rasterizers w/Gamma G2 CPU
64MB RAM and 256MB Virtual Textures
Dual monitor support
PowerThreads SSE Drivers

\$2180

Video Toaster NT
Capture, edit and output to uncompressed video
Real-time uncompressed D1 recording
Component, Y/C and Composite I/O
Chroma, color and luma keying
Complete 3D animation, modeling and rendering suite

\$4390



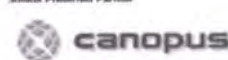
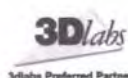
DCC
TECHNOLOGIES

Your digital creation center

2/F, 145-4471 No.6 Road, Richmond, B.C. V6V 1P8
Tel : 604.821.1108 Fax : 604.821.0813

Web: www.dccetek.com
eMail: info@dccetek.com

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



All prices reflect 2% CASH discount.
All prices are subject to change without notice.
All trademarks are the properties of their respective holders.

ComPu-2000 Technology Inc

COMPAQ
Authorized Dealer
& Service Provider

IBM Business Partner
Authorized
ThinkPads & PC300
Warranty Provider

Apple
Authorized Dealer

BBB member
Same Location
Since 1993

Microsoft OEM
System Builder
Program

Home PC Intel Celeron 533MHz

Celeron 533MHz Processor
Slot-1 & S370 Motherboard
16" ATX Tower Case w/230W PS
64MB SDRAM PC100
6.4GB EIDE Hard Disk
3.5" 1.44MB Floppy Drive
8MB AGP Video
15" SVGA .28mm monitor
48X CD-ROM Drive
3D 16bit sound
120W Speakers
56K Int. V.90 V/Fax/modem
Win98 Keyboard, & PS/2 mouse
WordPerfect 8 Suite
1-yr parts & 3-yr labor carry-in warranty

LEASE FROM
\$32/Mo*

WP 8.0 Suite
Included!

Not Exactly as Shown

Best Value! \$899



Office PC Intel PIII-500MHz

Intel PIII-500MHz Processor
Asus P3V133 Motherboard
ATX 16" Tower Case 230W PS
128MB SDRAM PC100
10GB EIDE UDMA Hard Disk
3.5" 1.44MB Floppy Drive
ATI Xpert 2000 32MB AGP
17" SVGA .28mm Monitor
52x CD-ROM Drive
3D 16bit Sound Card
Juster 3D-FX1 Sub-woofer Spk
56K Int.V.90 Voice/Fax/Modem
or
10BT PCI Network Card
Win98 Keyboard & PS/2 Mouse
1-yr parts & 3-yr labor carry-in warranty

LEASE FROM
\$57/Mo*

ADSL or
Roger Wave
Ready!

Not Exactly as Shown

Fast! \$1588



Pro PC Intel PIII-600MHz

Intel PIII-600MHz Processor
Asus P3V4X Motherboard
ATX 16" Tower Case 230W PS
128MB SDRAM PC100
20GB EIDE UDMA Hard Disk
3.5" 1.44MB Floppy Drive
Power Color Sniper TNT2
32MB AGP TV/out
Viewsonic EF70 17" SVGA .25mm
DVD 16x Drive or Acer 4424
SB Live! Value OEM Sound Card
Altec Lansing 45.2 Speakers
56K Int.V.90 Fax/Modem or 10BT PCI Network Card
Win98 Keyboard & PS/2 Mouse
1-yr parts & 3-yr labor carry-in warranty

LEASE FROM
\$83/Mo*

ADSL or
Roger Wave
Ready!

Not Exactly as Shown

Awesome Performance! \$2188



Fast 350MHz G3 Processor
128MB SDRAM
6.0GB EIDE UDMA Hard Disk
24x CD-ROM Drive
56K Fax/Modem
Apple KB & Mouse
built-in Stereo Speakers
Vertical PC software with
Windows 98 SE
1-yr Apple Warranty

LEASE FROM
\$72/Mo*

ADSL or
Roger Wave
Ready!

Best of both Worlds!

\$1949

Point-of-Sales Solutions

- Cash Drawers
- Receipt Printers
- Barcode Printers
- Barcode Scanners
- Programmable Keyboards
- Hand Held Computers
- Portable Data Terminals
- Touch Screen Displays
- Electronic Scales

BusinessVision

BusinessVision II
for DOS
\$399*

BusinessVision Encore
for Windows
\$1195*

BusinessVision 2000
for Windows
\$3995*

Complete Point-of-Sales
Hardware and Software
Solutions. Call 436-2333
for more information.

Network Products

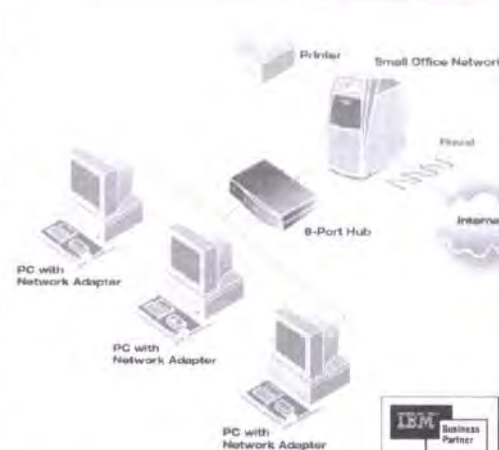
Novell Netware

Netware v3.2 5/10 users \$1450 / 3020
Netware v3.2 25/50 users \$5250 / 8040
Netware v3.2 Enhancement Pak \$495
Netware 5.1 Server Plus 5 users Lic. \$1615
Netware 5.1 5/10 additive Lic. only \$1200 / 1720
Netware 5.1 25/50 additive Lic only \$3795 / 6560
Netware Small Business v5.0 Server w/5 users ... \$1560
Netware Small Business v5.0 Connection Lic. \$85

Microsoft Windows NT

Windows NT Server v4.0 w/5 clients Lic. \$1075
Windows NT Server v4.0 w/10 clients Lic \$1510
Windows NT Workstation v4.0 \$425
Windows 2000 Server w/5 clients Lic \$1340
Windows 2000 Server w/10 clients Lic \$1590
Windows 2000 Professional \$420
BackOffice Small Biz Server v4.5 w/5 clients \$2035
BackOffice Server v4.5 w/5 clients \$4235

Small Office Network Solutions



The ComPu-2000 Small Office Network is
the ideal way to cost-effectively connect
PCs and provide shared access to files,
printers and the Internet. Increase
productivity and communication
through enhanced employee collaboration.

**Call Franklin or Clement at
436-2333 for a free
on-site consultation.**

We service : IBM, Compaq
and Toshiba Notebooks.

Apple Macintosh G4/400/450/500

3D/Graphics/Digital Video/Multimedia



**Mac G4
500MHz!**

starts at

\$2339.99

Power Mac G4/400MHz \$2339.99
400MHz/64MB/10GB/DVD/16MB AGP/56K/100BT

Power Mac G4/450MHz \$3599.99
450MHz/128MB/20GB/DVD/ZIP/16MB AGP/56K/100BT

Power Mac G4/500MHz \$5049.99
500MHz/256MB/27GB/DVD-RAM/ZIP/16MB AGP/100BT

Apple Studio Display

Apple 15" Studio Flat-Panel Display (Graphite) \$1499
Apple 17" Studio Display (Graphite) \$549
Apple 21" Studio Display (Graphite) \$2299
Apple 22" Cinema Display (Graphite) \$5999

3 Year AppleCare Protection Plans

Apple PowerMac G4 Computers & Apple Displays .. \$299
Apple PowerBook Computers \$299
Apple iMac DV / SE Computers \$159
Apple iBook Computers \$229

iBook
Black Tie
Optional.



**New
366MHz
iBook!**

starts at

\$1949.99

G3 300MHz iBook Classic \$1949.99
32MB/3.2GB/24x56K/12.1TFT Tangerine or Blue

G3 300MHz New iBook \$2349.99
64MB/6.0GB/24x56K/12.1TFT Tangerine or Blue

G3 366MHz SE iBook \$2599.99
64MB/6.0GB/24x56K/12.1TFT Graphite

Apple

**New
500MHz
PowerBook!**



The new PowerBook. Makes desktop mobile anywhere.

G3/400/64/6.0GB/DVD/56K/14.1TFT \$3479

G3/500/128/12.0GB/DVD/56K/14.1TFT ... \$4899

G3 PB RAM 32/64/128MB \$call*

VST Internal Zip for G3 PowerBook \$399
VST G3 Series Lithium-Ion Battery \$289
VST 4GB Expansion Bay Hard Disk \$829
VST Internal SuperDrive for G3 PB \$339
Newer FireWire 2 Go for G3 PowerBook \$249



**iMac SE.
The Re-birth of
Cool!**

starts at

\$1479.99

iMac Blue Berry 350MHz \$1479.99
64MB/6.0GB/24x56K/15" Blue only

iMac DV 400MHz (apple promo*) \$1799.99
64MB/10.0GB/DVD/56K/15"/5 colors

iMac SE 400MHz \$2249.99
128MB/13.0GB/DVD/56K/15"/Graphite color

**USB from A to Z
call for other devices**

Macally iMouse 1 button USB \$29
Macally iVoice USB Microphone Adapter \$call
Macally iWave USB Slim Speakers \$call
Macally iBall Trackball for iMac \$69
Macally iHub USB 3 port mini Hub \$69
Newer Tech uDrive 1.44MB \$149
Gravis GamePad Pro USB \$39
Newer Tech uSCSI Adapter \$129
PowerPrint USB to parallel cable kit \$139
Keyspan USB to Serial Adapter \$99
iDock iMac Stand \$219

KEYSPAN macally Farallon

Storage Devices

LaCie Pocket Drive FireWire & USB 6GB / 18GB \$549/\$1049
LaCie Ext. FireWire Hard Disk 20GB / 35GB \$749/\$1049
LaCie Ext. USB 7200RPM HDD 13GB / 20GB \$449/\$549
LaCie 5.2GB DVD-RAM \$1079
LaCie Ext. USB 4x4x24x CDR-W \$439
LaCie Ext. FireWire 8x4x24x CDR-W \$579

Digital Video Solutions

DVRaptor DV audio & video editing solution \$1120
Digital Origin MotoDV Studio \$1040
miroVideo DV300 \$1070
miroVideo DC1000 \$3440
Pinnacle Studio DC10+ PCI Video capture card \$310
Pinnacle Studio MP10 w/realtime MPEG1 encoding \$369

G3 / G4 Processor upgrades

Newer MAXPower G3 240-266MHz 750 w/512 Cache \$449
Sonnet Crescendo G3/PCI 266MHz 512K Cache \$319
Sonnet Crescendo G4/PCI 350MHz 1MB Cache \$899

Mac Software

Mac OS/9 \$139
Adobe InDesign \$999
Adobe GoLive! \$449
Adobe Web Collection \$1440
Adobe Publishing Collection \$1440
Adobe Design Collection \$2279
Adobe Pagemaker/Photoshop/Illustrator \$729/879/549
Adobe Photoshop upgrade \$289
Quark Xpress/Final Cut Pro \$1189/1299
Virtual PC w/PC DOS or Windows 98 \$139/\$299

ACER

June/July/00



**Knowledgeable F/T & P/T
Mac sales & Tech.
required. Fax
resume to
436-2619.**

Service: 436-2999

Canon

Fax: 436-2619

HEWLETT
PACKARD

LEXMARK

info@compu2000.com

Tel: 436-2333

2811 Kingsway, Vancouver, B.C., V5R 5H9

All prices, specs and stock level subject to change without notices. All prices are cash, debit card or certified cheques only. Credit cards, please add 2%.

Mac Station

www.macstation.com

The Best Selection of Macintosh products in Greater Vancouver



We're Expanding Again!

Visit our newest location at
1286 Pacific Boulevard in
Vancouver - right in the
heart of Yaletown!

Mac Station **Burnaby**
#207A - 3430 Brighton Avenue
420-5224 or 1-877-900-MACS

Mac Station **Maple Ridge**
22353 Lougheed Highway
466-0190 or 1-800-563-MACS



Mac Station **Vancouver**
1286 Pacific Blvd,
806-6227



Authorized Reseller
and Service Provider

Apple, the Apple Logo, and Macintosh are registered trademarks of Apple Computer, Inc.

WordPerfect Office for Linux a contender

Continued from page 78

based computer is needed for Linux. The reality is that a modern graphical user interface on any platform requires significant processing power. I used a system powered by a 200 MHz Pentium Pro and a fast 7,200 rpm SCSI hard disk drive for my tests. That gave performance better than the typical 266 MHz Pentium II-based system, yet I often found myself wanting more power.

The package includes a 400-page printed and bound user guide, a rare touch in this millennium. However, you will scarcely need it to perform the installation. After logging in as root (the super or master user account that every Linux system has), you run setup from the CD-ROM. As with Windows, there's more than one way to run setup, but the obvious methods work. Trust your instincts, unless you enjoy reading manuals.

You will be presented with the choice of a complete or minimal setup. A minimal setup will install the bare minimum of files required to run the applications. Unless you have very little disk space, choose the complete setup, which installs the suite with the most common settings. No configuration or additional choices are required.

The Corel Application Installer keeps you informed of the progress of the installation via a graphical display, which encourages you to register your software and to go to a Corel Web site for additional information. Read quickly, because the entire installation will be over in five minutes on a fast computer. For the more technically inclined, a text window keeps you informed, in real time, of steps like which files are being unpacked, which files are being read, and so on.

The installation procedure doesn't search for previous versions of the applications. I have WordPerfect 8 installed on my system and I expected to be asked whether it should be removed. That didn't happen, although I think it would be a desirable feature. I intend to remove WordPerfect 8 myself in a couple of weeks since WordPerfect 9 supersedes it in every way.

From the standpoint of features, this suite is fully competitive with Microsoft Office and Lotus SmartSuite. It is as compatible as anything on the market, but the compatibility falls short of 100 percent.

WordPerfect 9 reads and writes a huge number of file formats, from things like DisplayWrite, MultiMate, Professional Write, Volkswriter, WordStar and Xywrite, to Ami Pro (versions 1.2 to 3.0), Word (from versions 4.0 through 5.5 for DOS to versions 1.0 through 2000 for Windows), and WordPerfect (from versions 4.2 for DOS to current versions).

Although Word is just one of several dozen supported formats, for most people it is prob-

ably more important than all others combined. I tried opening a wide variety of Word files and the text always came through. However, highly formatted documents don't always display as they should. The same holds true in the opposite direction (opening WordPerfect files in Word).

Compatibility with older WordPerfect formats is essentially complete. WordPerfect 9 uses the same file format as WordPerfect 6.1, 7 and 8, and was trouble-free on my hundreds of old WordPerfect 5.1 files.

WordPerfect 9 has what might be termed real-world compatibility. You can send people files in the formats they can handle and they won't even know what you used to produce them. However, if you deal with organizations or individuals who use Word 2000, for example, and you often roundtrip documents in which formatting is critical, you may find that nothing short of using the actual application your business partner uses will suffice.

WordPerfect 8 for Linux was written from the ground up as a Linux program, but the applications in this suite were produced using a different methodology, one that works with existing Windows code to produce Linux applications. That must surely be the reason for the less-than-stellar performance I've observed.

On my 200 MHz Pentium Pro system, I found performance was acceptable in all parts of the suite, with the exception of Quattro Pro 9. Calculation speeds for anything other than very small spreadsheets were unacceptably slow. Quattro Pro 9 for Windows is much faster, as is StarOffice for both Windows and Linux, so I think a solution for this performance problem should be close at hand.

I was able to save files on a diskette, take them to one of my Windows computers and load the files. This worked just as well in the opposite direction. On a local-area network (LAN), things are even easier. I was able to retrieve files produced by Windows computers and save files that Windows computers were able to use. Just as no one on the Internet can tell if you're a dog, no one on a LAN knows the OS you're using.

I noticed the first time that I tried to shut down my system that applications aren't X11-aware, which means you have to save your work prior to logging out. This is unlike Windows applications running under Windows, where the OS notices unsaved work when you are logging out and offers to perform the save operation for you.

For now, the bottom line on Corel WordPerfect Office 2000 for Linux is that it works well, despite occasional sluggishness. It is as compatible as any suite on the market and is a bargain. It is even more of a bargain at the street price, which I encourage you to investigate yourself. □

Jon 'maddog' Hall talks Linux

Continued from page 78

JE: You became a personal friend of Torvalds?

JMH: We met a few more times, including once in France. In the U.S., I took him to a Red Sox versus Yankees game, which he really liked. His wife Tuve seemed to like me, and eventually they made me godfather of their two children.

JE: You seemed to have become a Linux booster in parallel to your day job at DEC. How did you balance the two interests, job and Linux?

JMH: I was working for DEC and talked it [Linux] up at DEC. I was convinced that it was a great low-end operating system, very economical compared to the US\$2,600 for a Unix licence. Plus it had the source code included [and] didn't need a separate compiler. As hardware got cheaper for high-end systems, the cost of Unix OS was approaching, and then exceeding the cost of basic hardware.

When Linus started off, he was trying to create a desktop OS. Then an amazing thing happened. Linux came to be used on servers—a perfect server solution. The existence of the

Continued on page 85

THE REAL CANADIAN PC RETAILERS

Career Opportunities with Canada's PC Leader!

We are looking for...



- * IPC Direct Call Centre Representative
- * PC Centre Retail Managers & Sales Representative
- * IPC Corporate Outside Sales & Inside Support Representatives
- * Technical Support Team
- * Customer Support Representative



PC Chips Corporation Human Resources
150A Bullock Drive, Markham, Ontario L3P 1W2



e-mail: jobs@ipc.ca



fax: 1-905-472-8945

If you are interested in joining us, please send your resume via mail, fax, or email.
PC Chips Corporation is proud to be an Equal Opportunity Employer

Only Those selected for an interview will be contacted. No phone inquiries or agencies please.



Vanco

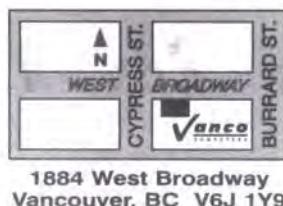
COMPUTERS

Sales, Service, Repair, Network, Web Design

Tel: (604)732-5691
Fax: (604)732-4608

www.vancocomputers.com(new)
vanco@vancocomputers.com

Tue - Fri : 11 to 7
Sat & Sun : 11 to 5
MONDAY CLOSED



BEST DEAL IN B.C.

♦ All Systems have 3 years labor & 1 year part warranty plus 1 month free Internet.
Full Financing or Lease Available. ♦
* lease based on 36 months, 10% buyout.

Finance from 3 to 36 months (3% to 16%)

AMD K7 650MHz \$1299
700/ 750/ 800 ..\$1349/1399/1499
850/ 900/ 950 ..\$1649/1899/2089

CREATIVE BLASTER PC
Celeron 400/ 466/ 500 ..\$1269/1289/1299
PIII 500/ 550/ 600 ..\$1459/1509/1539
PII 400/ PIII 700/ 750 ..\$1399/1689/1829

Intel PIII 600EB \$1399
PIII 533EB/ 650/ 733EB ..\$1389/1419/1499
PIII 800/ 866EB ..\$1749/2039
Celeron 466/ 500/ 533 \$1219/1249/1259

Intel Celeron 400MHz \$599
466/ 500/ 533/ 566 ..\$629/649/659/699
Intel PIII 500/ 550E ..\$799/819
PIII 600EB/ 650/ 700 ..\$799/869/909

System Options (Hardware)
10→15→20GB HD ..\$15/+15
20→30GB HD ..\$70
64→128MB RAM ..\$60
15"/17" Samsung 750S+\$175/265
Sony 48X→8X DVD ..\$119
Canon 1000/2100 ..\$79(-20)/129(-30)
MS Natural/Internet KB ..\$25
36Bit Scanner ..\$99
Panasonic 8X4X32 CDRW ..\$285
HP APOLLO 1220C Printer ..\$75

System Options (Software)
Windows 2000 ..\$99
Norton Works2000+Anti Virus ..\$59
MS Office2000ProFull/SBE+\$475/285
Works Suite 2000 (6 Programs)+\$139
Word Perfect 2000 ..\$29

ASUS K7V ATX M/B With Sound
128MB SD-RAM PC-133
20GB Ultra DMA Hard Drive
1.44 Floppy Drive
Asus 32MB AGP Video Card
450W Speakers + Subwoofer
48X SONY CDROM Drive
56K V.90 Fax/Voice Modem
Windows Keyboard
2B + Wheel Mouse
ATX 300W Tower Case
MS Windows 98, 2nd Edition

Bring your lowest quotation on any configuration & get it even lower

Lease \$63/mth*

Creative Blaster ATX PIII M/B + Radio
64MB SD-RAM PC-100
20GB Ultra DMA Hard Drive
1.44 Floppy Drive
Creative 32MB AGP VIDEO
Creative Sound Blaster LIVE!
Creative 4Point FSP 1000
52X Creative CDROM
56K V.90 Creative Modem
Creative ATX 250W Tower Case w/RM
Creative Win Keyboard & Wheel Mouse
MS Windows 98, 2nd Edition

Lease \$47/mth*

Asus CUV4X 133MHz W/Sound
128MB SD-RAM PC-133
20GB Hard Drive ATA66
1.44 Floppy Drive
Asus V3800-32MB AGP Video
Asus 8X/40X DVD ROM Drive
450W Speakers + Subwoofer
56K V.90 V/ F/ Modem
Windows Keyboard
2B + Wheel Mouse
ATX 250W Tower Case
MS Windows 98, 2nd Edition

Buy All Parts from us GET FREE ASSEMBLING

Lease \$58/mth*

BX PII-III All in One M/B
64MB SD-RAM PC-100
10GB Ultra DMA H.D.
8MB AGP Video
48X CD-ROM
1.44 Floppy Drive
3D Sound Pro
140W Speakers
56K V.90 Fax/Voice Modem
Windows Keyboard
3 Button Mouse
ATX 250W Tower Case

Lease \$37/mth*

Finance \$47/1135 (36/24/12 months)

Finance \$48/72/136 (36/24/12 months)

Finance \$46/70/134 (36/24/12 months)

Finance \$33/42/79 (36/24/12 months)

Wholesales prices to public

56K V.90 Fax/Modem ..\$24
Samsung 570B TFT LCD ..\$1369
17" ATX Tower w/250W CASE ..\$39
ATA66 Ultra Controller Card ..\$47
48X SONY CD ROM Drive ..\$65
HP APOLLO 1220 Color Printer ..\$75
5 Ports Hub 10BT ..\$38

Plexwriter 8x4x32 ..\$335
Ricoh 6x4x24 Sesi w/Card ..\$299
Panasonic 8x4x32 ..\$285
Creative 8x4x32 CDRW IDE ..\$319
HP 8250i CDRW 4x4x24 ..\$265
HP 9310i CDRW 10x4x32 ..\$375
Toshiba CDRW-DVD ROM 4424-4 ..\$449

FIREWIRE IEEE 1394 PCI CARD ..\$99
20GB 5400rpm ATA66 ..\$179
20GB 7200rpm HDD ..\$239
TV Tuner/Capture/Radio w/Rimut ..\$99
Asus 8x/ Pioneer 16x DVD ..\$185/219
Proview 19" .26 ..\$419
17" Samsung/FUNET (.24H) ..\$265/249

REFILL YOUR CARTRIDGE NOW & SAVE \$\$\$

UPGRADE

Celeron 433A / PIII 600EB

ATX 250W Tower Case, 64M PC100, 8M Video, 3D Sound, 56K V90 Modem w/Voice (w/ installation)

\$419 / 609

CPU • RAM

Call for Today's Update Prices

AMD K6II 450/500/533/550 ..\$85/92/95/115
K7 550/ 600/ 650/ 700 ..\$209/249/259/309
K7 750/ 800/ 850/ 900/ 950 ..\$369/469/619/879/1069
Intel PII 400 / P-233MMX ..\$259/79
Intel PIII 500/ 550/ 600/ 700 ..\$319/329/369/519
Intel PIII 600/ 650/ 700/ 750 ..\$319/329/369/519
Intel PIII 600/ 650/ 700/ 750 ..\$319/329/369/519
Celeron 400/433/466/500/533 ..\$119/125/139/149/169
IBM MII 300/ 333/ 366/ 400 ..\$49/55/65/75
30Pin SIMM 1M/ 4M ..\$2/15
72Pin 4/ 8/ 16/ 32/ 64M ..\$12/28/69/115/189
PC 100MHz 32/64/128/256/512 ..\$53/99/175/345/775
PC 133MHz 64/ 128/ 256M ..\$95/185/359

HARD DRIVE • FLOPPY • ZIP • JAZ

Quantum LM (7200) 10.2/15/20/30 ..\$169/195/229/369
Samsung 8.4/ 10.2/ 15.3/ 20.4 ..\$128/139/159/179
Fujitsu (ATA66) 4.3/ 6.4/ 8.4/ 10.2 ..\$109/119/129/139
Fujitsu (ATA66) 13/ 17.3/ 20/ 27 ..\$165/175/185/265
Fujitsu 7200rpm 10/ 13/ 20/ 27 ..\$175/189/235/299
WD(5400) 8.4/ 10/ 13/ 20/ 30 ..\$133/139/159/189/279
WD(7200) 10/ 15/ 20/ 30 ..\$162/195/249/319
Maxtor Max 10/ 15/ 20 ..\$139/165/185
MaxtorMax 30/ 40/ 61 ..\$249/339/449
Maxtor 7200 Maxplus 10/ 13/ 15 ..\$169/179/189
Maxtor 7200 Maxplus 20/ 30/ 40 ..\$239/299/389
Cooler Fan for Hard drive 3.5"/5.25" ..\$15
Removable Hard Drive Rack with Fan/U66 ..\$24/32
1.44 Floppy 3.5" Drive/Disk 10/25/50PK ..\$19/59/18
LS 120MB 2X Floppy Drive/ Diskette ..\$89/14
Zip 100M Diskette ..\$15
Zip Drive100M Int/ Ext P/S/U ..\$79/139/145/155
Zip Drive 250M Int/ Ext P/S/U ..\$149/225/229/249

MONITORS

TVM 15/17 .27/ 19" .26 ..\$169/265/435
Panasonic15/ 17" .25/ 19"SL95 ..\$259/479/615
Funet 15"/ 17" .27/ 17" .25 ..\$189/249/299
Samsung 550S/ 750S / 950SL ..\$189/265/539
Samsung 700NF/ 900NF ..\$409/635* (-50)
LG 775N/ 775FT/ 995E .26/ 912U ..\$275/389/489/565
MAG 15".25 / 17"786FD.24/19"810FD ..\$259/419/725
Hansol 15/ 17" .27/ .26 / 19" .26 ..\$199/269/289/429
Proview 17" .27/ .25/ 19" .25 ..\$259/269/399
Optquest Q51/ Q71/ Q75/ Q95 ..\$215/309/395/495
Viewsonic17"E771/ 773/ EF70 .25 ..\$319/389/389
Viewsonic 19" PS790/ GS790 ..\$699/589
AcerView 15"/ 17" .27/ .26/ 19" ..\$219/279/399/519
SONY 15E100/ 17E200/ 19"E400 ..\$299/519/749
AOC 15/17/17".25 / 19" .26 ..\$179/249/265/399
KDS 15" .25/17" VS-71/19VS-195 ..\$209/279/469
NEC 17AS70/ FE700 ..\$305/385

Guaranteed Lowest Prices

Important Read & Save

- Prices are cash/ Interac 3% discounted
- We will try to match or beat any competitor's price*. Just ask for it.
- Ask for new items with Best Price
- We buy or trade in your old sys. or parts
- Phone order and shipping available for outside Lower Mainland

MOTHERBOARD

Super 7 Motherboards

Gigabyte GA5AX/ GA5AA ..\$109/106
MSI MS-5169 Ali 512K ATX/ 5184 MVP3 1M AT ..\$107/119
VIA APOLLO MVP4 w/Video & Audio AT ..\$109
SYE MVP3 AT DIMM/SIMM AT/ ATX Power ..\$109
ADOpen AX59 Pro ATX 1M/512k cache ..\$114/105
Asus P5A AT/ ATX/ Sound ..\$119/123/134
Microstar 5169 ATX/ 5184 AT 1M Aud ..\$109/119
Tyan S1590/ 1598 ..\$135/142

K7 ATX Motherboards

Asus K7M/ K7V/ ABIT KAT ..\$205/229/219
MSI 6195 K7 Pro/ Gigabyte 7IX/ 7VX ..\$175/175/199

Pentium II & III Motherboards

Elite P6STP 4XAGP / P6BAT133 w/Sound ..\$129/109
ABIT BEG-II/ BF6/ ZM6/ VA6/ VT6 ..\$195/159/135/119/149
Impression Oceanic slot 1 & S370 ATX i440BX ..\$122
Gigabyte BX2000/ 6VX7-4X ATA66 FCPGA ..\$165/139
Asus CUV4X/ P3V133/ P3V4X/ P3C2000 ..\$175/129/165/215
MSI 6153/ 6199/ 6309 4X VIA Apollo Pro 133 ..\$119/119/139
Aopen AX63/ MX64Pro VIA 133 MHz UDMA66 ..\$115/125

MODEM

Many Brands 56K V90 Voice Modem ..\$25 & up
USR 56 PCI 3595/ 3594/ 2976/ 2977 ..\$48/56/95/85
BLASTER Modem 56K V90 VOICE ..\$48
Acer PCI V90 SM/ P(HardWare)/ ISA ..\$36/49/65
Acer 56K External USB/ P ..\$75/95
PINE USB 56K V.90 EXT. ..\$89
PINE 56K Rockwell / ESS ..\$29/28
Motorola 56k V.90 PCI ..\$25

NETWORK

Acer ISA/PCI 10/PCI 100 Mbps ..\$18/19/24
10 Base-T Hub 5/ 8/ 16Port ..\$37/47/95
D-LINK 10/100BPS Hub 5/8/16/24 ..\$125/179/359
GVC 10BT/10-100 Mbps ..\$29/33
PCMCIA Ethernet Card 10BT/10-100 ..\$55/75
Acer 9/ 16 Port Hub ..\$62/145
Intel 10-100/ 3Com 905 BTX ..\$79/75
D-Link 10-100Mbps ..\$27
Cables, Adaptors, Accessories, Switches, Tools

VIDEO • CAPTURE CARD

PINE SIS PCI 4M/ 8M/ Matrox G200 8M PC ..\$39/52/89
S3 Trio 3D 8M PCI/ Diamond Viper330 4MAGP ..\$59/39
AOPEN AGP 4M/ 8M/ TNT2 32M ..\$46/56/179
Matrox G400Mill AGP32SH/ DH/ MAX ..\$185/235/275
ATI Xpert 98/ 99 AGP 8M ..\$61/84
ATI Xpert 128 16M/ Xpert2000 32M ..\$109/119
ATI Rage Fury 32M/ PRO/ MMX 64M ..\$159/205/245
ATI All in Wonder 128 AGP PRO/32M/16M ..\$345/289/209
ATI TV Wonder & Capture Card ..\$99
Voodoo III 2000/ 3000TV/ 3500TV&FM Tuner ..\$125/175/259
Creative GeForce 256 Annihilator 32DDR ..\$399
RIVA TNT2 M64 32M/ TV Out ..\$109/139
Asus V3800PURE/ V6600 (ULTRA DELUXE) ..\$129/349
ASUS V6800 GEFORCE 256DDR 32MB/ DL ..\$359/409
ASUS TV BOX ..\$97
ELSA WINNER II 32MB w/3D-REV. ..\$139

SOUND CARD • SPEAKERS • MIC

3D Sound / Yamaha 3D PCI ..\$15/25
ACER AOPEN AW320/ AWE37 ..\$36/25
AUREAL VORTEX1/ 2 S-QUAD DIG. ..\$35/68
S-Blaster Ensonic/PCI 128/PCI 512 (box) ..\$33/45/99
S-Blaster Live Platnum/ Value Digital ..\$255/69
S-Blaster Live MP3+ / XGamer(BOX) ..\$139/135
Creative PC works 4 Points/ 2 Points ..\$99/65
Altech Lansing ACS 33/ 45.2/ 54/ 48 ..\$65/89/99/149
Yamaha M8/ M30/ MSW10/ Surround ..\$55/79/99/155
Juster 3D140/ 280/ 500W w/Woofers ..\$12/18/35
GNT 5000/ 7000/ 1400H ..\$59/69/39
Mic/ Headphone with Mic ..\$9/13

MISC • Cases • SCSI

All kinds of cable, switch, networking supply, battery & accessory at lowest prices

17"/ 19"/ 24" ATX New Designs ..\$39/44/69
CPU Fan 3P/ PS/ P II/ Case Fan ..\$15/12/11/12
Inwin Case A660-A500-S500/ Q500N ..\$79/125
Keyboard Win / Many brands ..\$12 & up
MS Natural Elite/Internet/PRO USB (w/sys) ..\$29/25/55
USB 4 Port Hub/ Card ..\$59/39
USB Camera ..\$69 & up
Mouse 2/ 3 Button Designer ..\$7/8
Mouse Pad/ Many kinds & colors ..\$2 & up
Logitech 2B/ 3B + Wheel/ USB ..\$8/18/22
Logitech cordless desktop/ Pro ..\$119/159
MS Intell/ USB/ explorer ..\$27/32/95
Internet Mouse with Scroller Serial/PS2 ..\$14
Firewire IEEE 1394PCI Control Card ..\$99
Joystick/Gamepad ..\$9 & up
Printer Cable/IEEE High speed any size ..\$8-14&up
IDE/ ATA66/ SCSI Cable ..\$2.5/15/7
Tekram390/ F/ U2B/ U2W ..\$69/119/219/275
Adaptec 2903/ 06/ 30/ 40UW ..\$59/75/127/299

CD-ROM • CD WRITER • CDR • DVD

44X/ 48X/ 52X ..\$54/56/59
Acer 40X/ 52X/ 4X4X24/ 8X4X32 ..\$57/62/239/295
Creative 52X/ CDRW 8X4X32 ..\$68/325
Toshiba 48X/ S/ 4X4X24X4 (DVD+RW) ..\$85/129/449
Plextor 8X4X32 CDRW (BOX) ..\$339
LG 4X4X32/ 8X4X32 CDRW Int ..\$259/329
SONY 48X/ 8X4X32/ 10X4X32 CDRW ..\$65/329/359
HP 8250i / 9110i/ 9310i ..\$265/329/379
Yamaha 6416S / 8424S / IDE ..\$299/329/349
Blank CDR: BASF/ Sony/ Princo(10 pcs) ..\$14/20/15
Blank CDR: Kodak/ TDK/ Memorex(10) ..\$19/18/14
Rewritable74/ 80 minutes Blank CDs ..\$3/4
Make CDWriter→Ext. Kit SCSI/IDE/USB ..\$89/99/109
AOpen DVD Writer w/SCSI Card ..\$879
Pioneer 10X / 16X ..\$199/219
8X Panasonic / Afreedy / ASUS ..\$175/180/185

PRINTERS

*Save up to 70% on Printer Ink/ TonerCartridges
Canon BJC 1000/ 2000SE/2100 ..\$79*/119*/129*(-20)
Canon BJC 3000/ 5100/ 6100 ..\$189/185/285*(-30)
Epson 440/ 660/ 740i-760 ..\$149*/199*(-45)/329(-75)
Epson 870/ 1160*/1270 Photo ..\$399/625*(-75)/659
HP 610/ 840/ 930/ 950/ 970 ..\$149/225/295/435/569
HP 725C Multifunction ..\$549
HP Laser 1100/ 2100 ..\$559/979
Brother MFC 1870/ 1970/ 7050 ..\$319/369/459
Brother Laser 1240/ 1250/ 1270N ..\$459/549/719
Brother HL 1660E/ 2060/ N ..\$1179/1495/1799
FUJITSU 10V/ 16DV/ 20w ..\$599/839/1429
SAMSUNG QL5100A/6050 ..\$325*/425*(-50)
Lexmark Z11/ Z31/ Z51/ 3200 ..\$99/149/239/129
Lexmark 5770/ Optra E310 ..\$379/549

SCANNERS • DIGITAL CAMERA

Acer 320P/ 320U ..\$99/115
Acer 620P/ 620S/ 620 USB ..\$135/145/129
HP 3300/ 5200/ 6300C/ 6390C ..\$139/269/509/1129
Canon Scan 330P/ 630P/U ..\$119*/159*/179*(-30)
Epson 610/ 636U/ 1200U ..\$209/265/329
6P/ 12P Vigor 600x1200 Scanner ..\$89/99
UMAX 2000P/ USB/ 2400S2 ..\$135/179/419
Mustek 1200CU/ 600USB/ 9636LS ..\$115/99/135
Epson Dig.Camera PC750Z/ 800/ 650 ..\$639/759/399
Canon Powershot A50/ S10/ S20 ..\$629/879/1139
Canon Digital Printer CD200/ 300 ..\$369/459

SOFTWARE

Many Software (Guaranteed Lowest Prices)
Games on sale ..\$12.99 & up
PC Anywhere V 9.0 Host & Remote ..\$129
Office Pro OEM* 97/ 2000/ SBE ..\$149/479/295

* CHECK OUR NEW WEB-SITE FOR MORE DETAILS & TODAY'S PRICE & ITEMS NOT LISTED. (Price may change without notice)

Bring on that light, bright light!*Continued from page 76*

jector category is expected to reach nearly US\$5 billion this year, which represents a 26 percent increase over 1999.

In order to capture a piece of this market, InFocus recently launched its LP335 notebook projector. This 2.16 kg (4.8 lb.) DLP model can deliver up to 1,000 lumens with XGA resolution. It comes equipped with both digital and analogue connectivity options and is HDTV compatible.

Kaylie says the HDTV compatibility will become a much sought-after feature once

users start to incorporate more graphic and media-rich content in their presentations, which demands higher quality projection.

"Right now we are not seeing many people using things like audio and video on their presentations," Kaylie adds. "But as more people become familiar with the technology, we will see them move to use them and they will want the kinds of features we are now seeing in portable projectors coming onto the market."

NEC Technologies Inc. also recognizes that portable projectors will have to offer greater

support and sharper images if they are to keep up with users' demands.

In April, NEC announced plans to incorporate its proprietary Vortex Technology in its MultiSync VT lightweight projectors. Vortex Technology is designed to help projectors display CRT-like image quality for greater depth, detail, colour and contrast in the projected images. These image-enhancing features are particularly important since models in the MultiSync VT line have a variety of video input options.

"It is enhancement technology that works with four different subsets of the image," says Bob Guentner, product marketing manager with NEC's projection group, which is based in Itasca, Ill. "The technology will give you better

uniformity of whiteness so we can provide better colour saturation and even better colour display so you don't get different shadings. There is also gamma correction that works with LCD panels and the light source to correct for Red and Blue on the screen and improve image detail enhancement. There is also improved colour separation and an expanded grayscale."

Currently, Vortex Technology is available in the MultiSync VT440 and the MultiSync VT540 projectors. The MultiSync VT440 can project up to 110 lumens and is XGA compatible. It accepts NTSC, PAL, SECAM and HDTV video input. The MultiSync VT540 can project up to 1,000 lumens and is SXGA compatible. □



InFocus LP335 notebook projector

DREAMWEB Interactive

WEBSITE: www.dreamwebinteractive.comE-MAIL: sales@dreamwebinteractive.com

3 to 200MB-Flexible Packages

Free Domain Name Registration and Transfer

Shopping Cart, CGI - Bin Directory

Onsite, Online Training & Setup & FTP access

Free Form Mail-Counter, Search Engine

Professional/Accessible Technical Support

Multiple Internet Backbone Connections

Frontpage Extension, Real audio/Video

Dual Powered Backup Generators

30 DAY Money Back Guarantee

Interactive **W**ebSite Design

E-Commerce Solution

Specialized In Custom DataBase

Customized Script

CD Rom Production, 3D Animation

WebHosting

www.your name.com Starting @ \$15.00 Cdn
CALL TODAY (604) 214-9592

NO HYPE, NO GRIPE, FAST DEPENDABLE SERVICE

1ST in Vancouver with WEB Mail

1ST with Block Hour Packages

1ST with Online Training

1ST month FREE* !!

Striving to be your 1ST CHOICE for your ISP in BC



* minimum 3 month contract



Information Gateway Services

www.vanc.igs.net

700 - 555 West Hastings Street, Vancouver, BC V6B 4N5

VANCOUVER * OTTAWA * TORONTO * COBourg * HAWKSbury * KITCHENER * WATERLOO * MADAWASKA * PETERBOROUGH
 OSHAWA * MIDLAND * RENFREW COUNTY * BARRIE * PERTH * SMITH FALLS * KINGSTON * WINDSOR * BELLEVILLE * CORNWALL

Jon 'maddog' Hall talks Linux*Continued from page 82*

Linux open-source community meant that when you needed a new device driver written, you could pick someone [a programmer], and get the driver done without a need for either party to have a source code licence.

DEC management couldn't see the forest for the trees, though.

I helped our engineering group port Linux to Alpha, and began to write articles on Linux. The Linux community responded, since I was one of the first few people from the professional computing community who said, "This is good." People remember things like that.

JE: How were you selected to be the executive director of Linux International?

JMH: The heads of all the new Linux companies wanted an honest broker, not one of themselves, to try to keep what happened to Unix [the fragmentation of the OS into proprietary "flavours"] from happening to Linux.

JE: So, for the uninitiated, why should people take Linux seriously?

JMH: What operating system do you use?

JE: Windows 98, with MS Outlook, MS Office...

JMH: How often does it crash?

JE: Well, I'm having some trouble with our email server currently... maybe six or eight times a day.

JMH: There are documented cases of Linux systems being up and running for three years. Linux users are very surprised if the system ever locks or fails. Reliability is the key requirement for any serious computing system, whether a server or a desktop. Linux is also a true multitasking operating system. It's available for a free download, and if you're patient, you can get free bug fixes. And it offers freedom from Microsoft.

For consumers to find Linux en masse, two things have to happen. First, the tier-one PC makers like Dell, Compaq and IBM will offer Linux pre-installed as an operating system choice. Second, it has to be visible at the store level, which is difficult. Stores only have so much shelf space and they order on the basis of volume of systems sold.

In 1994, there were about 125,000 Linux users. In 1999, about 12 million. The estimate for Linux systems in 2000 is 20-25 million.

JE: What's the future of Linux?

JMH: The particular OS in a lot of ways is irrelevant, except that it has to be reliable, secure and efficient. If Microsoft is broken up into an OS company and an Office [Microsoft's suite of business-productivity applications] company, to be true to their shareholders, the Office division should develop software for Linux the same way they do for the Mac.

There are about 350 million Microsoft Windows PCs in the world and about six billion people. Maybe 40 percent of the people alive today may die without making a phone call, much less using a PC. However, for the rest, access to computers and the Internet is going to be important.

The Chinese government is moving to Linux, because they believe that it will allow

them to develop a domestic software industry, which you can't do if you rely on Microsoft. Also, you can run Linux on a refurbished \$75 computer, surf the Web and do business applications.

JE: Are you interested in becoming a Linux millionaire?

JMH: I've turned down a lot of chances to make a lot of money [from Linux startups].

JE: What about all the open-source community members who were shut out of the Red Hat IPO (initial public offering) last summer (many who tried to subscribe to the stock issue found out they didn't qualify to buy the stock)?

JMH: Well, Red Hat made some mistakes. But, quite frankly, the first time any company tries something new, breaks new ground, there are surprises.

For one thing, there are investment laws in countries like Germany and Austria, which make it difficult to participate in an American IPO. Also, under the "friends and family" conditions, you still require some amount of money to invest.

I found out later that I was supposedly on two lists of Red Hat Linux community "friends and family" who were supposed to be offered the chance to participate in the IPO. I was never contacted. I'm not going to go around the rest of my life being mad at someone because they screwed up.

I've been good friends with Red Hat since they started. I knew them when they were college students and I was working for DEC. I treated them to a good time on the DEC marketing budget. There wasn't any conspiracy, it was just one of those "Oh, s---" sort of things.

In five years, everyone will know about Linux, because of ubiquitous computing: handhelds, wireless, Internet everywhere.

JE: What's in the future for you?

JMH: I'd like to set up the maddog School for Microcomputers and Microbreweries, someplace where you can see the sun setting in the ocean. It'd be an incubation facility, for ideas, starting businesses and bringing them to fruition. A small number of students and visiting faculty.

JE: What's your favourite beer?

JMH: I'm not too much on dark beer, I prefer light amber, bitter, or light ale.

JE: Let me know when you get the school going. I'd like to attend, as either instructor or student. Thanks, maddog.

Books by Jon 'maddog' Hall:

Published by CDG Books (<http://www.cdgbooks.com>):

Caldera OpenLinux For Dummies

Co-author, Nicholas Wells, 1999, 384 pages. Estimated online price: \$30.39.

Linux For Dummies, Second Edition

1999, 384 pages.

Estimated online price: \$27.99.

Red Hat Linux For Dummies

Co-author Paul G. Sery, 1999, 384 pages.

Estimated online price: \$32.29.

TurboLinux For Dummies

Co-author Justin Ryan, 2000, 384 pages.

Estimated online price: \$30.39.

Strong

COMPUTER INC.

101-1926 West Broadway,
Vancouver, B.C. V6J 1Z2

Tel: (604) 739-0438

Fax: (604) 739-0436

Business Hours:

Mon.-Fri. 10:30-18:00 Sat. 12:00-17:00

Intel Pentium III (256K Cache)		Intel Celeron (128K Cache)	
533MHz	\$1210	466MHz	\$1050
600MHz	\$1240	500MHz	\$1070
667MHz	\$1260	533MHz	\$1080
733MHz	\$1400	566MHz	\$1010
800MHz	\$1600	600MHz	\$1230

Motherboard:

- VIA Apollo Pro 694X 133MHz FSB Clock Chip Set, UDMA-66, 4X AGP
- On Board 4 USB Ports, 1 4X AGP Slot, 2 Channel UDMA-66, 1 Channel Floppy Drive,
- 2 Serial Ports, 1 Parallel (SPP/EPP/ECP) Port, AD 1881 Ac97 CODEC 3D Sound Controller
- 64MB SDRAM 168pin DIMM PC-133
- 15GB Ultra DMA-66 Hard Disk Drive 7200rpm 2MB Cache
- 1.44MB 3.5" Floppy Disk Drive
- 48X Speed Internal CD ROM Drive
- ATI Expert 128 16MB 2D/3D Graphics Accelerator AGP
- 56K ITU-T V.90 and K56Flex Internal Fax/Data/Voice Modem PCI
- 17" Tower Case w/250W CSA Power Supply ATX
- 107 Key Windows98 Enhanced Keyboard PS/2
- 2 Button Mouse w/Scroll Wheel PS/2
- 100W External Shielded Computer Speakers
- Microsoft Windows 98SE (CD, OEM)
- Free One Month Internet Access (By Infinet Communications Group)
- 2 Year Parts and Labour Warranty

Upgrades (from above systems): 128MB SDRAM DIMM \$85, 20GB U66 7200rpm HDD \$50, GNT5000A w/Sub-Woofer Speaker System \$50, 10X DVD Drive \$140, Windows 2000 Professional \$60

Add to above system: Samsung 550S 15" 0.28 SVGA Monitor \$195, KDS 17" 0.27 SVGA Monitor \$270, KDS 17" .25 Flat Trinitron SVGA Monitor \$380, Internal 100 MB/250MB Zip Drive \$85/170, Canon Bubble Jet 1000/2000/5100 Color Printer \$110/150/240, Epson Stylus 670/760 Color Inkjet Printer \$135/225, HP DeskJet 840c/880c/895c Color Printer \$245/310/370, Laser Printer: HP LJ1100 \$565/Brother HL-1040DX \$380/Samsung QL-6050 \$450

* Free Estimate on Repairs and Upgrades * Prices subject to change. Please call for the latest prices.

All products names, trademarks and registered trademarks are properties of their respective owners.

星強
電腦公司

www.
Hunjet Computer Accessories Ltd.
.com

e-mail: sales@hunjet.com
318-13988 Cambie Road
Richmond, B.C. V6V 2K4

For Dealers / Distributors Only Tel:(604) 273-0715 Fax:(604) 273-0718 Toll Free: 1-888-818-9585

At Hunjet, we stand for best Service, Quality and Price!

Distributors of:

SURECOM ISO 9001
Simply Better Networking

INTELLINET
QUALITY NETWORK PRODUCTS

ICNETWORK
QUALITY NETWORK PRODUCTS

5 / 8-Port 10/100 M N-Way Switch
16 / 24-Port 10/100 Dual Speed Rack Hub / Switch

5 / 9 / 17-Port 10 BaseT Hub
5 / 8-Port 10/100 Dual Speed Hub

PCMCIA V.90 56K Modem Adapter
PCMCIA Ethernet Adapter, 10 BaseT
PCMCIA Ethernet Adapter, 10/100 Dual Speed

PCI Ethernet Card 10 BaseT, Rtl 8029
PCI Ethernet Card 10 BaseT/2, Rtl 8029
PCI Ethernet Card 10/100, Rtl 8139B

Video Splitter
KVM Switch
Switch Box

Wire Tie
Adapter
Gender Changer

Speaker
USB Product
Keyboard

Monitor Filter
Mouse Pad
Mouse

Wall Plate
Cable Tester
Patch Panel
RJ45 Component
Networking Cable
CAT.5 Keystone Jack

Flat Cable
IEEE Cable
SCSI Cable
Data Cable
Monitor Cable
Printer Cable
Keyboard Cable
Null Modem Cable
Cat.5 Patch Cable

ISO 9002

MANHATTAN
FINEST QUALITY COMPUTER PRODUCTS

Over 500 Kinds of
Cables and Accessories in Warehouse

Welcome to Apply for Regional Distributors.



NEW TYPE

COMPUTER WORKSHOP



Mon-Fri : 11:00am-6:30pm

Sat-Sun : 11:00am-5:00pm



Intel Celeron 466MHz

\$659

Intel PIII 600EB

\$1439

AMD K7 700MHz

\$1589

SYSTEMS

Nextype Station



- Eurone Super 7 Main Board (AMD K6-2 CPU)
- Eurone Slot 1 Main Board (100MHz Celeron/PIII)
- 64MB SDRAM DIMM 168Pin PC-100 w/ SPD
- Panasonic 1.44 Floppy Drive
- 10GB UDMA/66 Hard Drive
- 3D PCI Sound Onboard w/ Speaker & Microphone
- Onboard 8MB Share RAM AGP Video
- 32X CD-ROM Drive
- 56K Fax Modem Voice int. V.90
- Mini ATX Tower Case
- 107 Key Keyboard
- Corel WordPerfect Suite 8 Free
- 2 Button Mouse w/ Mouse PAD
- Axion Internet Access Kit (30 Days Free Internet)

Intel Celeron	
433/500/533	\$655/669/689
AMD K6-2	
380/450	\$568/585
AMD K6-2	
450/500/533/550	\$589/599/605/619

- AcerOPEN Main Board
- 128MB SDRAM DIMM 168Pin PC-100 w/ SPD
- Panasonic 1.44 Floppy Drive
- 15GB UDMA/66 7200rpm Hard Drive
- AcerOPEN 3D PCI Sound Card
- AcerOPEN 501 Speaker & Microphone
- Nvidia TNT2 M64 32Mb AGP
- AcerOPEN 48X CD-ROM Drive
- AcerOPEN 56K Fax Modem Voice int. V.90
- AcerOPEN 15"/18" ATX Tower Case
- AcerOPEN 107 Key Keyboard
- Microsoft Windows 98 Second Edition
- AcerOPEN 2 Button Wheel Mouse w/ Mouse PAD
- Axion Internet Access Kit (30 Days Free Internet)

Intel Celeron	
466/500/533/566	\$1279/1289/1309/1333
Intel Pentium III Coppermine	
600E/650E/667	\$1526/1550/1455
Intel Pentium III Coppermine	
700/733/750/800	\$1559/1569/1765/1798

- Asus K7V/AcerOPEN AK72 KX133 Main Board
- 128MB SDRAM DIMM 168Pin PC-100 w/ SPD
- Panasonic 1.44 Floppy Drive
- 20GB UDMA/66 Hard Drive
- Aureal Vortex 2 A3D PCI
- Altec Lansing ACS-33 w/ Subwoofer
- Asus V6600 Geforce 256 32Mb AGP
- AcerOPEN 48X CD-ROM Drive
- AcerOPEN 10/100 Network Card
- 18" ATX Tower Case
- AcerOPEN 107 Key Keyboard
- AcerOPEN 2 Button Wheel Mouse w/ Mouse PAD
- Axion Internet Access Kit (30 Days Free Internet)

AMD Athlon K7	
500/550/600	\$1489/1499/1569
AMD Athlon K7	
650/750/800	\$1579/1659/1729
AMD Athlon K7	
850/900/950	\$1869/2122/2294

One Year Parts & Three Year Labour Warranty (System only). All Systems are tested and burned-in for 48 Hours before shipping. Leasing Available.

Monthly Special

D-Link 10/100 Network Card

\$19

Princo 8x CD-R 10's In BOX w/ Case	\$15
Panasonic 8x4x24x CD-Rewriter IDE	\$285
Acer 8x4x32x CD-Rewriter 8MB BUFFERS IDE	\$325
Matsonic MS7381SGM AT MB (Celeron PII PII VGA Sound Modem)	\$109
Eurone 7060V i440BX ATX (Celeron PII PII 8MB VGA Sound)	\$99
AcerOPEN AX59 Pro 1Mb Cache Super 7 ATX	\$109
Abit VA6 VIA 133 w/ Sound ATX	\$125
Abit BP6 Dual Celeron ATX	\$189
Logitech MouseMan Wheel USB/PS/2	\$55

286/386/486/586

to Faster System

FREE Installation



UPGRADE

Eurone M598 Main Board, 32MB SDRAM, 8MB AGP Video Share RAM & Sound

Matsonic MS7381SGM, Sound, 8MB AGP Video Share RAM, 56K Modem, 32MB SDRAM

■ AMD K6-2 380/450	\$259/269	■ Celeron 466/500	\$349/365
■ AMD K6-2 500/533/550	\$289/302/315	■ Celeron 533	\$379

Government & Corporate purchase orders welcome. Price subject to change without prior notice. All prices are Cash Discounted, 3.0% extra for other payments. All product names, trademarks, and registered trademarks are properties of their respective owners.

Notebook

PCMCIA CARD

■ Linksys 10Mbps Network Card	\$69
■ DLinksys 10/100Mbps NIC	\$99
■ Xircom RealPort 10/100 + 56K	\$450
■ Xircom Credit Card 10/100	\$199
■ Xircom Credit Card 56K	\$189

NEW PARTS TYPE

Acer Travel Mate 507T

- Intel Celeron 466MHz
- 64MB SDRAM
- NeoMagic 2200 AGP 2.5MB Video
- 12.1" TFT Display
- 4.8GBb Hard Drive
- 24X CD-ROM
- PCI 3D Sound
- 56K V.90 FaxModem

\$1799

Check for other notebook model and upgrade goto www.ntcw.com

MAINBOARD

Slot 1 Main Board	
Abit VA6 VIA Pro 133 w/ Sound	\$125
Abit TV6X4 VIA Pro 133A w/ Sound	\$149
AOpen AX6BC i440BX	\$139
AOpen MX64 VIA Pro 133A w/ Sound	\$129
AOpen AX64 Pro VIA Pro 133A w/ Sound	\$159
AOpen AX64 VIA Pro 133A w/ Sound	\$135
AOpen AX63 Pro VIA 133	\$109
Asus P3V4X VIA Pro 133A 4X AGP	\$155
DFI PB50-V3 VIA 100MHz AT	\$105
Eurone 7060V i440BX 8MB VGA/Sound	\$119
Eurone M756MRT VGA/Audio/Modem	\$119
Gigabyte GA-6VX-4X VIA 133A w/ Sound	\$139
Slot A Main Board (AMD Athlon)	
Asus K7V VIA KX133 Chipset	\$235
AOpen AK72 KX133 Chipset	\$209
Gigabyte GA-7VX KX133 Chipset	\$209
Socket 370 Mainboard	
Asus CUBX i440BX w/ UDMA/66	\$198
Asus CUV4X VIA 694Z PC133 & VCM	\$179
Abit BP-6 Dual Celeron UDMA/66	\$195
Microstar MS-6309 VIA Pro 133A w/ Sound	\$139
Tyan VIA 9694X ATX	\$139
QDI Advance 9 VIA 133 w/ Sound	\$159
QDI Advance 10 VIA 133A w/ Sound	\$159
Twin Socket 370 & Slot 1 Mainboard	
Matsonic MS7381SGM VGA/Audio/Modem	\$115
Euron M756MRT SiS 530 VGA/Audio	\$125
Socket 7 Main Board	
AOpen AX59Pro MVP3 1M Cache	\$115
Eurone M598 VGA/Sound/Modem AT	\$115

CPU & MEMORY

AMD K6-2 380/450/500/550	\$59/75/82/115
AMD Athlon K7 500/550	\$239/249
AMD Athlon K7 600/650/700	\$259/265/319
AMD Athlon K7 750/800/850	\$389/509/669
AMD Athlon K7 900/950	\$950/1050
Celeron PPGA/FC-PGA	
Intel Celeron 466/500/533	\$145/159/169
Intel Celeron FC-PGA 566	\$205
Pentium III Coppermine 133MHz L2 256K	
Intel Pentium III 600EB/667/733	\$335/345/419
Intel Pentium III 800EB/866	\$669/969
Pentium III Coppermine 100MHz L2 256K	
Intel Pentium III 550E/600E	\$334/379
Intel Pentium III 650/700	\$399/419
Intel Pentium III 750/800	\$619/669
Intel Pentium III 850	\$995
32/64Mb SDRAM PC-100	\$59/95
128/256Mb SDRAM PC-100	\$175/339
64/128Mb SDRAM PC-133	\$109/189

NETWORK & MODEM

AOpen Combo 10Mbps PCI/ISA	\$19/18
AOpen 10/100Mbps PCI	\$29
AOpen 10/100Mbps PCI Bus Master	\$45
AOpen 5 Ports 10Mbps Hubs	\$49
AOpen 5 Ports 10/100Mbps Hubs	\$99
DLink 10/100Mbps NIC	\$29
DLink 8 Ports 10/100Mbps Switch Hubs	\$159
DLink 24 Ports 10/100 Switch Hubs	\$420
Linksys 5 Ports 10/100 Mbps Hubs	\$105
3Com 10/100Mbps PCI w/ WakeOnLAN	\$75
AOpen FM56-ITU/2 ISA FaxModemVoice	\$65
AOpen FM56-PM PCI FaxModemVoice	\$45
Hacker Card (Data Recovery, Mult-Boot)	\$35



Cooling System

VCP08 PPGA, K6II/III Cooler Ball Bearing FAN 3 pin	\$15
FKP32 PPGA, FC-PGA, K6II/III Cooler Ball Bearing FAN 3 pin	\$28
FLK32 K7 Athlon, SECC, Cooler Dual Ball Bearing FAN 3 pin	\$29
VOS32 K7 Athlon, PIII, SECC, SECC II Cooler Ball Bearing 3 pin	\$38
FA420 Video Card, Chipset Cooler Ball Bearing FAN	\$9
FAC08 Video Card, Chipset Cooler Ball Bearing FAN	\$12

DP5-5G5, FC-PGA, K6II/III Cooler Ball Bearing FAN 3 Pin	\$25
DP5-5F51 PPGA, FC-PGA, K6II/III Cooler Ball Bearing FAN 3 Pin	\$16
DP2-5G52-M3 K7 Athlon, SECC Cooler Ball Bearing FAN 3 Pin	\$19

MONITOR & VIDEO

Impression 5 Plus 15" 7SP 17"	\$199/259
Viewsonic E771 17" 0.27mm	\$312
Viewsonic EF70 17" 0.25mm	\$389
Viewsonic E790 19" 0.26mm	\$509
Viewsonic PF775 17" 0.25mm AG	\$499
Viewsonic PS790 19" 0.25mm	\$709
Viewsonic PF790 19" 0.25mm	\$675
Viewsonic PF795 19" 0.25mm	\$809
Viewsonic G810 21" 0.25mm	\$1150
Viewsonic P810 21" 0.25mm MPRII	\$1255
Viewsonic P815 21" 0.25mm	\$1260
Viewsonic PT813 21" 0.28mm	\$1459
Viewsonic P817 21" 0.26mm TC095	\$2150
AcerOPEN PA300 16Mb w/ 3D Glass	\$169
3Dfx Voodoo 5 5500 AGP	\$445
Matrox G400 16Mb Dual Head AGP	\$179
Asus V7700 Geforce2 GTS 32MB	\$485
Asus V6600 Geforce 32Mb	\$289
Asus V6600 Deluxe Geforce 32Mb	\$345
Asus V6800 Geforce 32Mb DDR	\$355
Asus V6800 Deluxe Geforce 32Mb DDR	\$399
Nvidia TNT2 M64 32Mb / TVOut	\$119/125
SiS 6326 8Mb AGP	\$49

MULTIMEDIA

AOpen AW320 PCI 3D Sound Card	\$38
AOpen AW744 Pro 4 SP Digital in & Out	\$59
AOpen 48X/52X CD-ROM	\$59/65
Panasonic 8X DVD-ROM	\$49/65
Pioneer 10X DVD-ROM Slot Load	\$189
Aureal Vortex 2 PCI / SuperQuad PCI	\$209
Creative Labs Sound Blaster Live Value	\$65
Creative Labs Sound Blaster Ensonic	\$35
Altec Lansing ACS33 w/ Subwoofer	\$69
Altec Lansing ACS54 4 Speaker w/ Sub.	\$99

HARD DRIVE

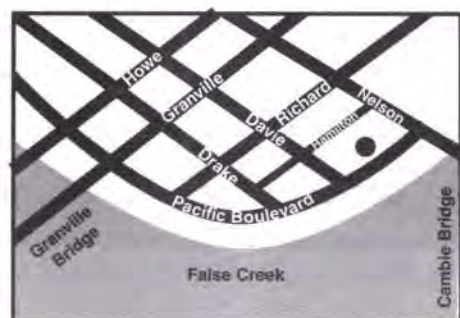
5400RPM UDMA/66 Hard Drive	
Maxtor 10Gb/15.2Gb	\$135/169
Maxtor 20Gb/30Gb/40Gb	\$185/259/359
Samsung 20.4Gb	\$175
7200RPM UDMA/66 Hard Drive	
Quantum Fireball LM 15Gb/20Gb	\$199/249
Maxtor 15Gb/20Gb	\$189/229
Maxtor 30Gb/40Gb	\$295/385

SCSI Adapter

Tekram DC315U Ultra SCSI PCI	\$59
Tekram DC-390F Ultra Wide SCSI PCI	\$139

Software(System Only)

Microsoft Windows 98 Second ED.	\$139
Microsoft Windows 2000 Professional	\$199
Microsoft Office 2000 Small Business ED.	\$299
Microsoft Office 2000 Pro. ED.	\$499
Corel Linux Deluxe w/ WP 8	\$89
Red Hat 6.1 Deluxe Edition	\$79



1179 Pacific Blvd., Vancouver, B.C.



NEW TYPE
COMPUTER WORKSHOP

Tel : 899-0328
Fax : 899-0373

Website: www.ntcw.com
E-mail : sales@ntcw.com

140-4471 No.6 Road, Richmond, BC, Canada V6V 1P8
Tel: (604) 821-1228 Fax: (604) 821-0813
Web: <http://www.dmac.bc.ca>
Email: sales@dmac.bc.ca
Hours: Mon-Fri 10am - 6pm, Sat 1pm - 5pm



discount MAC CLUB



Authorized
Value Added Reseller

Educational Software:
Electric Image, Symantec, Macromedia, NetObjects, etc.
Special Authorizations:
Maxon, La Cie, Hammer Storage, Terran Interactive, Steinberg, etc.

All prices reflect 2% cash-discount and are subject to change without notice.
All brands, logos, and trademarks are the properties of their respective holders.

400MHz iMac DV Promo Package

Apple Color iMac DV
400MHz G3 PowerPC Processor
512K Backside L2 Cache
128MB Memory
AGP 2x, 8MB Video SGRAM
10GB Hard Drive
Slot-loading DVD-ROM Drive
Internal V.90 56K Modem
10/100BaseT Built-in Ethernet Port
15" ColorSync Display
Stereo Speakers by Harman Kardon
Two USB Ports
Two Firewire Ports
USB Keyboard and Mouse
MacOS & Software Bundle
Epson Stylus Color 740 Inkjet Printer
(Bonus: US\$50 Mail-in Rebates)



\$1999
Leasing Available

iBook - the Portable iMac Package

Apple 300MHz G3 iBook
300MHz G3 PowerPC Processor
512K Backside Level 2 Cache
12.1" TFT Active Matrix Display
128MB Memory
4MB Video SGRAM
6GB Hard Drive
24x-speed CD-ROM Drive
10/100 BaseT Built-in Ethernet Port
Internal K56Flex/V.90 56K Modem
Single build-in mono speaker
16-bit stereo sound output
One USB Port
Optional 11-MBS Air Port wireless networking card
Apple Trackpad
Software Bundle
Apple AirPort Card for wireless network



\$2649
Leasing Available

Power Macintosh G4 Package

Apple G4 / 400 Minitower
400MHz G4 PowerPC Processor
1M Backside L2 Cache
192MB PC100 SDRAM
10GB Hard Drive
DVD-ROM w/ Video Playback
ATI Rage 128 Pro w/16M AGP 2x
10/100BaseT Built-in Ethernet Port
Internal V.90 56K Modem
Two USB Ports
Three High-Speed Firewire Ports
USB Keyboard and Mouse
Mac OS 9
Internal 100MB Zip Drive
Internal PCI SCSI Card
Apple 17" Studio Display



\$3299
Leasing Available

Firewire PowerBook G3/400

Apple G3/400 PowerBook
400MHz G3 PowerPC Processor
1MB Backside Level 2 Cache
14.1" TFT Active Matrix Display
128MB Memory
8MB Video SGRAM
6GB Hard Drive
DVD-ROM w/ Video Playback
10/100 BaseT Built-in Ethernet Port
Internal K56Flex/V.90 56K Modem
S-Video and VGA Output
Two USB Ports
Two Firewire Ports
One PC Card Slot
Infrared technology port (4-Mbps IrDA)
Apple Trackpad
Apple AirPort Card for wireless network



\$3899
Leasing Available

New Arrival

Adobe InDesign 1.5	1099
Apple 22" Cinema Display	5999
LaCie PocketDrive 6G/18G	599/1099
Monsoon MM-700 Flat Speakers	199
Adaptec 29160 Ultra160 SCSI Card	449
Xircom 4-port USB PCI Card	69
Connectix Virtual PC w/ Win 2000	479
iProof PowerRip 2000	349
Intego Net Barrier (Firewall Software)	115
Apple Works 6	125
Harman Kardon iSub	149
Mac OS 9	135
IBM Via Voice	125
Epson 5700i USB Laser Printer	599
Norton Util 5 and Anti Virus 6 Bundle	169
Wacom Graphire 4x5 USB Tablet	139
IREZ Kitter USB Camera	169

USB Devices

Epson Stylus 740i (After US\$50 Rebate)	189
Epson Stylus 740 (After US\$50 Rebate)	165
Epson Stylus Photo 1270 USB Inkjet	719
Epson Stylus Photo 870 USB Inkjet	439
Microtech USB-SCSI Adapter	105
Brother HL-1050 USB Laser Printer	599
Logitech QuickCam VC	109
Gravis Gamepad Pro USB	39
Iomega 250MB Ext. USB ZIP Drive	259
Macally iMouse	35
Macally iBall	50
Macally iKeyboard	65
Interex 4-port USB Hub (New Low Price)	39
Agfa SnapScan 1212U Scanner	169
AsanteTalk Ethernet to LocalTalk	149
PowerPrint USB/Parallel Cable	149
Logitech USB Wheel Mouse	55
Keyspan USB/Serial Adapter	110
iDock iMac Stand	239

SCSI Cards

Adaptec 2930U SCSI Card	139
Adaptec 2906 SCSI Card	79
OrangeMicro 930U SCSI Card	125
Adaptec 29160N Ultra160 SCSI Card	449

Lifetime Warranty Memory

32MB 72pin SIMM	139
32MB 168pin DIMM	169
64MB 168pin DIMM	329
64MB SDRAM	99
128MB SDRAM	199
256MB SDRAM	399
32MB SO-DIMM	79
64MB SO-DIMM	119
128MB SO-DIMM	229
256MB SO-DIMM	499

CPU Upgrade

Crescendo 240-250MHz/512K L2 G3	299
Crescendo 240-266/512K NuBus G3	299
Crescendo 300MHz/512K PCI G3	299
Crescendo 450MHz/1M PCI G4	999
XLR8 Mach Carrier G3 400MHz	719
XLR8 Mach Carrier G4 350MHz	1079
XLR8 Mach Carrier G3/G4 PCI Card	219

Modems

Apple Int. 56K Modem	149
Global Village Int. 56K Modem	149
Bestdata USB Ext. 56K Modem	149
USR Sportster Ext. 56K	139
Global Village Teleport Ext. 56K	139
Diamond SupraExpress Ext. 56K	129
Viking 56K PC Card Modem	169

Storage Devices

LaCie 4x4x24 USB CDRW	449
Iomega 250MB Ext. SCSI Zip Drive	249
Iomega 2GB Ext. Jaz Drive	499
IBM Ultrastar 9.1GB UltraSCSI HD	449
9.2GB Barracuda Ultra160 SCSI HD	399
18.4GB Barracuda Ultra160 SCSI HD	599
Yamaha 8424 CDRW Ext. w/ Toast 4	599

Network Cards/Hubs

Asante 10/100 PCI Ethernet Card	75
Asante 10BT NuBus Ethernet Card	129
Asante 10BT PDS Ethernet Card	119
Asante 10BT ComSlot Ethernet Card	109
Netgear 4-port 10BT Hub	59
Allied Telesyn 8-port 10/100BT Hub	489

Oldmac.com



GRAND OPENING
Exclusively sponsored by Discount Mac Club, Oldmac.com is a Used Macintosh Systems and Peripherals Exchange Center for the Greater Vancouver Macintosh Community. The service is absolutely FREE.

Visit www.oldmac.com today and browse through the best deals online. Or simply register with us and you may start advertising your equipments in just a split second.

iTools

With iTools, you can make the Internet safer for your children, email friends with your new @Mac.com email account, share your photos and iMovies, and even create your own web site. Best of all, iTools are free for Mac OS 9 users. Get a copy of Mac OS 9 now and sign up at www.Apple.com today! Mac OS 9 - \$135

New URL

You may now visit our web site at our new domain:
<http://www.dmac.bc.ca>

Email:
sales@dmac.bc.ca

Networking & E-Commerce Programs

Now registering at Northwest Digital

Web Commerce Program™

Let the experts at Northwest Digital, Vancouver Film School and Deloitte & Touche LLP show you how Internet technologies can be fully integrated into a company's operating structures. The program will focus on technical skills transfer and will cover everything from concept and design to real-time inventory control and automatic transaction processing.

SEPTEMBER Full-time program, Burnaby Campus
OCTOBER Part-time program, Burnaby Campus
NOVEMBER Full-time program, Burnaby Campus

IT Office Specialist Program™

Gear up for the networked office environment. Be an advanced user of Microsoft Office (Word, Excel, PowerPoint, Outlook) and learn the basics of web design, computer hardware and network support.

SEPTEMBER Full-time program, Richmond Campus
OCTOBER Full-time program, Burnaby Campus

Network Integration Specialist Program®

Achieve certifications from Microsoft, Cisco and CompTIA with this intensive program focused on developing network and computer service support skills. Covers client, server, network operating system, router and switch technology.

JULY Last intake to cover Windows NT 4.0 & Windows 2000
SEPTEMBER Full-time program featuring Windows 2000 MCSE track
OCTOBER Part-time program offered in conjunction with BCIT

APPLY TODAY!! Call 270-7261



education for the e-generation
www.nwdbc.com

J&L COMPUTER

486 Kingsway,
Vancouver, B.C. V5T 3J9
Tel: (604) 263-2377
Tel: (604) 708-2178
Fax: (604) 264-9663
www.jlcomp.com

- * Match Price
- * Good Services
- * Great Selections
- * Special Orders
- * Quick Shipping



7966 Granville Street
Vancouver, B.C. V6P 4P2
Tel: (604) 267-2261
Fax: (604) 267-2263
www.peoplemm.com

Visit Our Web Sites For The Latest Software Availability !!!

Games		ONLY \$3.50	ONLY \$6.95	ONLY \$9.95
Abomination	12.95	10 Classics Card Games	Abrams In 142 Tanks	Caesars - BlackJack/Craps
Age Of Empires	12.95	A Literary History	Amazon Trail 2	Conqueror AD 1086
Age Of Empires 2	47.95	Adam-Inside Story	Blown Away	Compton Encyclopedia 99
Age Of Wonders	34.95	British Literature	Broken Sword	Front Lines - Combat Games
Alien VS Predator	19.95	CardShop Plus	CD Extra	Hand Painted Textures *
Allegiance	52.95	Cyclones	Cyberstorm	Magic Carpet 2
Asheron's Call	36.95	DogZ	EA Compiled (10 Games)	Maximum Roadkill
Baldur's Gate	32.95	Evel Kinevel	Grolier Encyclopedia 99	Mech Warrior 2
Battle Zone 2	38.95	Fisherman's Paradise	Hunter Hunted	MIDI Classics
Bleem - Playstation Emulator	38.95	Front Page Sports - Golf	Lode Runner	MS Encarta 98 / 500 Nations
Bust-A-Move 4	42.95	History Through Art	Mavis Beacon Typing	NBA Live
Card Games 2000	19.95	Lunics	MS Encarta 98	Red Baron 2
C&C - Firestorm	38.95	Mad Dog 1 or 2	MS Golf 2.0 / Football	Spec Ops
Chessmaster 7000	19.95	Pandemonium	Panzer General	Star Trek: A Final Unity
Creatures 2	14.95	Survey Of Animal Kingdom	Pitfall	Theme Park
Codename Eagle	48.95	World History	Scrambler	Top Gun: Fire At Will
Dakota	49.95		World Hockey	WarCraft
Dark Reign 2	Call			
Diablo	18.95			
Diablo 2	Call			
Die Hard Trilogy 2	28.95			
Dilbert's Desktop Games	19.95			
Doorn II	19.95			
Dragon - Order Of Flame	28.95			
Dungeon Keeper Gold	14.95			
Earth 2150	52.95			
Everquest: Ruins Of Kunark	43.95			
Evolution	52.95			
Europe In Flames	49.95			
Final Fantasy VIII	46.95			
F1 2000	24.95			
Gabriel Knight 3	21.95			
Grand Prix Legends	37.95			
Grand Theft Auto 2	34.95			
Grim Fandango	52.95			
Gunship Control	38.95			
Gunship 1	45.95			
Half Life - Game Of The Year	32.95			
Half Life Opposing Force	47.95			
Heroes III - Shadow Of Death	44.95			
Homeworld	19.95			
HK Mahjong 2000	19.95			
Hyper 3D Pinball	19.95			
Icwind Dale	27.95			
Interstate 82	49.95			
Imperium Galactica 2	46.95			
James F/A 18	16.95			
Jeopardy	16.95			
Legacy Of Cain	18.95			
Lemmings	14.95			
Light House (PC/MAC)	42.95			
Links LS 2000	42.95			
Majesty	38.95			
Martian Gothic: Unification	52.95			
MDK 2	12.95			
Mech Commander	49.95			
Messiah	52.95			
Metal Fatigue	16.95			
Motocross Madness 2	16.95			
MS Baseball 2000	38.95			
MS Combat Flight Simulator	49.95			
MS Flight Simulator 2000	72.95			
MS Flight Simulator 2000 Pro	16.95			
MS NFL Fever 2000	16.95			
MS NBA Inside Drive 2000	48.95			
Might & Magic VIII	18.95			
Monopoly	11.95			
Myst	43.95			
Nascar Legend	14.95			
Nascar Racing 1999	32.95			
Nascar Racing 3	44.95			
Need For Speed 5: Porsche Unleashed	14.95			
Nocturne	44.95			
Nix	49.95			
Operation Art Of War: Century Warfare	14.95			
Pandora Directives	19.95			
Pinball Madness 2000	48.95			
Quake 3	Call			
Reach For The Star	14.95			
Return To Kronador	18.95			
Revenant	19.95			
Riven (PC/MAC)	48.95			
Shadow Watch	48.95			
Shogun: Total War	48.95			
Siege Gamapack (Siege Pinball)	14.95			
Sim City 3000	48.95			
Sim City 3000 Unlimited	53.95			
Sims	45.95			
Slope Zero	18.95			
Soldier Of Fortune	52.95			
Soulbringer	54.95			
Spec Ops 2	14.95			
Star Craft	32.95			
Star Craft Battlechest	54.95			
Star Lancer	52.95			
Star Trek: Armada	49.95			
Star Trek: Hidden Evil	29.95			
Star Trek: Klingon Academy	Call			
Star Trek: Klingon Honor Guard	14.95			
Star Wars: Force Commander	48.95			
Star Wars: Rogue Squadron	32.95			
Tachyon: The Fringe	47.95			
Terminus	Call			
Tetris Gold	17.95			
Thief II - Metal Age	47.95			
Tiger Woods 99	11.95			
Tiger Woods 2000	42.95			
Tomb Raider 4	38.95			
Total Annihilation Kingdoms	12.95			
Trick Style	15.95			
Ultima IX Ascension	26.95			
Ultima Online 2nd Age	27.95			
Unreal Tournament	39.95			
Vampire: The Masquerade	56.95			
Vegas Fever	29.95			
Virtual Fighter	14.95			
WarCraft 2 Deluxe (w/Expansion)	16.95			
Wheel Of Fortune	19.95			
Wheel Of Time	19.95			
Who Wants To Be A Millionaire 2	26.95			
You Don't Know Jack 2	9.95			

Connecting VCs and startups

Continued from page 73

manager was to go over all the in-bound business development plans to see which ones might be potential investment opportunities.

"As I was looking at all the plans that were coming into Chapters, I realized that many were not very well laid out. They did not know what the issues were or even where to begin describing what it is they wanted to do," Jones adds.

In response to this, Jones decided that what was needed was a kind of boot camp where Internet startups could get the skills they needed to successfully approach a venture capitalist or investor. In mid-May, Jones hosted just such an event, a two-day camp with a variety of seminars on how someone looking to start an Internet business should go about getting the necessary funding.

One of the things attendees discovered is that having a business plan is no longer enough to open an investor's wallet.

"The business plan describes the company, what they do, what the market is and how they will reach it," Jones says. "But a big part of it as well is how to go about getting financing. You can't just pitch to anyone who will listen. You have to look at what kind of money you need and then look at who might be able to provide that funding. Some venture capitalists only do bio-tech companies and \$100-million deals. So if you show up with your \$1-million online play, they won't even look at it."

Making sure ventures meet the right investors is the goal of Toronto-based The Banyan Effect (<http://www.thebanyaneffect.com>).

Paul Charbonneau, a partner with The Banyan Effect says his firm acts as a screen for both the company and investor, filtering out companies and investors that are not suited for each other.

"A venture capital company may only want to deal with a company that has been in business for two years, has shown sustained income and has been willing to invest their own money in the business," he adds. "Others may only want to invest a maximum of \$3 million, while another may want to invest \$15 million, but only after the company they are interested in has received its first round of financing."

Todd Smith, a partner with The Banyan Effect adds that, while capital is important, often a more pressing problem is getting the right technical people and executives on board to help a company continue its growth.

The Internet is littered with stories of Internet startups that have good ideas but can't get the people they need to pull it off, or don't have the right executive mix to get the company out of the garage and out onto financial Main Street.

"The biggest challenge is the shortage of talent," Smith adds. "Not just the skills perspective, but also the right talent from the point of view of the culture of the company. It is not always easy to get the right people who can fit with a company's culture."

Venture players

In an effort to overcome some of the money and talent issues, some venture capital companies have launched their own Internet startups. These firms often have a large stake in the companies they start, only spinning them off into independent entities when they have achieved their business legs.

Toronto-based Exclamation Inc. (<http://www.exclamation.com>) acts as an Internet incubator, focusing on developing companies in-house. Companies it has created include bigtree.com, points.com and ThinOffice.com. Bigtree.com, an office supply company, allows small- and mid-sized businesses to search and buy supplies online at volume discount prices.

"We have a pool of capital and a group of strategic partners that help us start each business," says Christopher Barnard, president of Exclamation Inc. "We then go out and look for professional management for the ideas that we come up with and then arm [the nascent company] with the infrastructure, support and an

employee who will help them build the company up as fast as possible before helping them find outside financing and resources."

Exclamation starts three or four such companies each year.

Toronto-based Bright Spark Inc. (<http://www.bspark.com>) is a combination of a venture capital fund and incubator, which works with companies that are at the earliest stages of development. The company looks to invest and help grow companies that work in the software and Internet sectors of the economy. Many times, these companies are simply just a good idea or an early version of a possible product.

"Typically, it is a group of two to four people and we help them take an idea and make that idea into a business," says Rick Nathan, founder and managing partner with Bright Spark. "We will give them a bit of seed capital and move them into our office. In the course of four to six months, we look at potential alliances, figure out a marketing plan, get a Web site up, if they are Web-based, and at the same time, we will recruit for them the right management and technological team."

Nathan sees this approach as helping overcome many of the problems startups have, particularly in putting together a solid business plan and getting the right team in place.

Already, Bright Spark has some five companies on the go, with one that was scheduled to make its public debut in mid-May. □

Because investors are much more careful in where they are going to invest, Internet startups need to become more savvy in how they present themselves.

Check how your salary rates

NB—Check how your salary rates in your industry and by location. Salary.com provides compensation information online and users will find salary reports covering virtually every occupation. You can look up salaries through the salary wizard (and maybe get a few surprises), get advice on how to earn more, find a job or get information targeted at human resource professionals.

<http://www.salary.com/>

Reseller Inquires Welcome!!!

Online & Connected

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

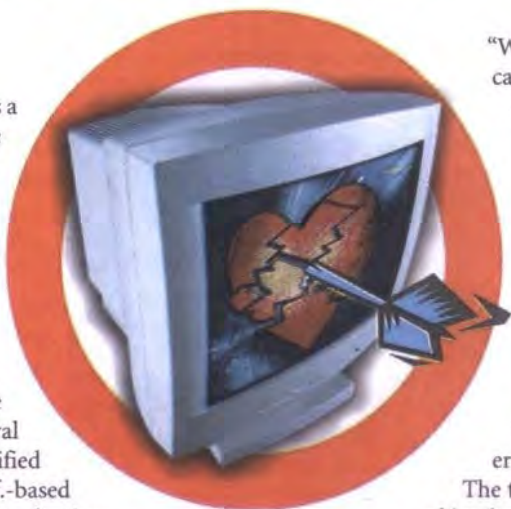
Love bug a wake-up call for cyber-terrorism foes

When the I Love You computer virus hit computers around the world in May, it caught the attention of more than the corporate IS teams who were left scurrying to fix the damage—it opened the eyes of national security and terrorism experts.

By Tom Venetis

To security experts, the love bug was a disturbing glimpse of the damage computer-savvy terrorists and extremists could inflict on the computing systems we depend on daily.

The love bug is estimated to have caused millions of dollars in damage to corporate email networks. In some cases, the virus forced companies to take systems off-line as they struggled to bring the attack under control. In the U.S., it is reported that some 14 federal agencies were affected with some classified systems being harmed. Santa Clara, Calif.-based Network Associates Inc. estimates that the bug affected 80 percent of computers in Germany and 70 percent of computers in the U.K.



"When you have an event like that, you can't help but ask yourself 'What if a dedicated group of extremists bent on pursuing their cause targeted some very large companies that are dependent on the Internet?'" says Jim Comeau, head of the economic and information security unit at Canadian Security Intelligence Service (CSIS) in Ottawa. "What if somebody, for political reasons, decides to put out viruses that are targeted at specific types of computer systems or types of information? The types of attacks we see are only limited by the imagination."

Cyber-terrorism, as it is sometimes called, has been of growing concern for national security departments in

both the U.S. and Canada. Last year, a special Senate Committee on Security and Intelligence heard from CSIS officials that as Canadian society becomes increasingly dependent on the Internet and computers, the threat to critical systems being attacked electronically by terrorist groups, organized crime, politically motivated extremists or even foreign intelligence agencies becomes an increasing possibility.

Entry-level skill required

What worries intelligence experts most about cyber-terrorism is that it does not require a great deal of programming sophistication to carry it out. The Senate committee was told that, "a perpetrator of an information operations attack could be anyone with a computer, a modem connected to a telephone line, and a motive to cause harm."

In April, John Gannon, chairman of the U.S. National Intelligence Council told the Columbus Council on World Affairs that cyber attacks against sensitive systems are becoming

Continued on page 103

Free calls... or busy signal?

Tired of paying hefty charges for long-distance calls? Actiontec thinks its new InternetPhoneWizard can help.

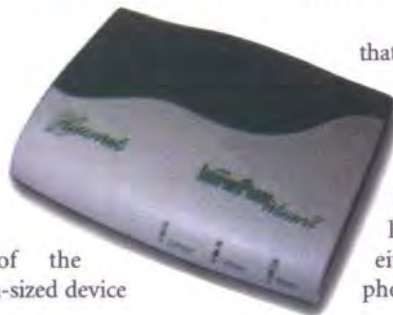
By Sean Carruthers

Free long-distance telephone service through the Internet has been an intriguing promise for years—one that Actiontec's latest solution comes close to delivering. But the Net itself, with its multi-hopping style of delivering data, undermines the potential of this product.

Actiontec USB InternetPhoneWizard

From: Actiontec Electronics, Inc.
Tel: 408-752-7700.
<http://www.actiontec.com>
Estimated retail price: \$150

The hardware portion of the InternetPhoneWizard is a modem-sized device



that plugs into the USB port of a Windows 95/98 machine. It has a jack for attaching a telephone handset, and an analogue pass-through to either a modem or a phone jack. The device

allows PC-to-PC or PC-to-landline telephone calls, although to take full advantage of the device, users need two phone lines, or a phone line and high-speed Net access (ADSL or cable). It's worth noting that, even though InternetPhoneWizard looks like an external modem, it does not double as one, so you will still need a separate way to connect to the Net.

Continued on page 90

MDI ADSL
High Speed Internet
Mega

GO
now

\$39.88/mo
No long waiting list

TEL: 604 602 9168

www.mdi.ca

FAX: 604 602 9108

Free calls... or busy signal?*Continued from page 89*

With two lines, the InternetPhoneWizard allows users to be online, making an Internet phone call, while still able to take analogue calls by hitting the # key twice—a procedure similar to that used in call-waiting. Actiontec calls this feature I-Phone Switch technology, and has applied to patent it.

The service layer that makes Internet telephony possible is handled by what is

known as an Internet telephony service provider (ITSP), of which there are several operating in North America. The InternetPhoneWizard uses deltathree.com as the default ITSP, but you can use another provider if you have an account. It's also worth noting that deltathree.com cannot be used from behind a firewall, though other ITSPs can be configured for such use.

The process of making an Internet

phone call is simple enough: with your telephone connected to the device, you dial the number either using the phone dial pad or the onscreen display. Once the call is established, the box encodes your voice as you talk, and sends it to the ITSP's server. That server passes the data over the Internet to another server near the receiving end, which decodes the signal to analogue and makes a connection to the existing telephone service at the far end. The

person receiving the call does not have to be on the Internet, since the ITSP switches the call to the existing landline phone service.

With the deltathree.com service, Internet phone calls within North America are absolutely free to those who purchase the product. Charges start accruing, however, when calling outside of North America. Germany, for example, is eight cents a minute (in US currency). Chad is an expensive \$1.27 a minute. For Immarsat calls, it shoots up to \$7.50 per minute. Most of Western Europe is 10 cents a minute or less, and rates are slightly higher in Eastern Europe and in Asia. A list of rates can be seen at <http://www.deltathree.com>.

On the other hand, users who travel outside of North America and have Internet access can call North America for free (minus any local connection charges), because the software only cares about the destination of the call, not the origin. Therefore, if you're in Germany and calling back to Canada, there would be no charge.

Slightly ahead of the bandwidth

Though long-distance Internet telephony looks good on paper, the actual experience is less than perfect. The main problem is with delays caused by routing the digital data through the Internet. Because your signal doesn't travel directly from point A to point B—it may be routed via Chicago, Boulder and Boca Raton (depending on how the backbone is routing)—it can take a while for the packets to reassemble on the receiving end. This manifests itself in a delay, much like international overseas phone calls from the old days, when signals had to bounce off a few satellites, going thousands of kilometres out of their way, in addition to having travelled the thousands of kilometres of wires and circuitry.

Even local or short distance Internet telephony calls are affected by this delay. If you were in Vancouver and wanted to place a phone call to Victoria, you'd suffer a one- or two-second delay throughout the conversation, depending on the volume of network traffic at the time you call.

If you're contemplating purchasing an Internet telephony device, the real consideration is your ability to deal with that delay, which can be quite an obstacle in holding a coherent conversation. If you're like me, you'll probably find it easier to just pay the long-distance charges.

Unfortunately, international calls over the Internet are even worse. During testing, we tried calls to a few places overseas, and the delay was so severe that our parties always hung up before realizing there was actually someone on the line. With the currently minimal delays on standard international long-distance calls, the cost becomes the major factor. Are excessive delays really worth the savings?

It's important to note that these problems are a product of the hardware itself. The InternetPhoneWizard is an interesting and well-thought-out device. In many ways, it's simply a product ahead of its time, waiting for the day when there's enough bandwidth to easily handle phone calls on top of everything else. Admittedly, it's a fun toy in the interim, as long as the person at the other end of the call is willing to put up with the inevitable timing problems. □

The Right Internet Solution

for your Business

PrismNET

internet Services

Dial-up Internet Access,
Dedicated Lines, T1, OC-3,
OC-12, Co-Location,
Web Hosting, Internet
Marketing, E-commerce,
Streaming Media, Web Design,
Internet Security.

call now!

270-7135

Vancouver

Toronto

Seattle

Toll free 1-888-73PRISM

Fax 604.270-7211

Email sales@iprism.com

www.iprism.com

Suite 120-8740

Beckwith Rd. Richmond

BC, Canada V6X 1V5

NetWinder a good thing in a small package

Continued from page 73

In fact, the case isn't meant to be opened, nor does it need to be.

The first step in working with the NetWinder is connecting the 10/100 Ethernet port to a hub or switch. Next, the power cord is connected to the back of the NetWinder, and plugged into an electrical outlet. It has no on/off switch. As the computer begins to boot up, you can set the volume control to a midway position so you can hear the synthesized voice say, "Welcome to NetWinder." That's the signal that you can begin your work. In the ordinary course of events, you won't ever need to power down.

I took the included QuickStart CD-ROM to a computer (any computer will do) on my network, and went through the first phase of the configuration. The NetWinder scans the network and suggests an IP address for itself. It also forces you to go through several pages of information. The only way to get to the next stage of the configuration is to page through the documentation. This is done to minimize the chance of impatient users making a mistake.

Once the initial, simple configuration is done, you enter the NetWinder's IP address (typically a non-routable address like 192.168.0.1) in your browser and log into the menu with the default administrator account.

There are numerous easy-to-use menus in Administration Mode. The top-level choices are: Users, Groups, Hosts, System, Services, Network, Options, and Help. To configure the NetWinder for the Internet, begin in Network. The OfficeServer supports the following methods of connecting to the Internet: xDSL modem, cable modem, ISDN router, ISDN Terminal Adapter, and dial-up or permanent modem connection. I decided to use my cable modem.

I connected my modem to the 10Base-T port on the NetWinder, then turned on the modem. In the Network menu Ethernet settings of the QuickStart utility, I chose Change These Parameters and entered some of the values supplied by my Internet service provider (ISP). Although the cable companies use DHCP, they always assign the same IP address. I entered that IP address and netmask for the 10Base-T settings. I kept the 10/100Base-T settings as they were, and in the Network Settings area, I entered the values I had been assigned by my ISP for client ID, domain name, DNS servers, and Gateway. I saved these values to activate the changes. Users of Sympatico HSE (High Speed Edition) who occasionally run into compatibility issues since that service switched over to PPP over Ethernet (PPPoE), should note that NetWinder supports PPPoE.

The documentation recommends that NetWinder be used as a DHCP (dynamic host configuration protocol) server. If you choose that option, NetWinder will automatically assign IP addresses to computers on your network. If, like me, you prefer to assign addresses manually, you can easily turn off the DHCP service.

For a workstation on your network to connect to OfficeServer, it needs a valid IP address and netmask, and the address of the NetWinder computer. If you choose to do this manually, you will go to Network in Control Panel. After entering the IP address and netmask, you will enter the IP address of the NetWinder device in the Gateway and

DNS Configuration tabs. After rebooting the computer, you will finish your configuration work in your Web browser. In Microsoft Internet Explorer, you will go to the Internet Options of the Tools menu, and choose automatically detect settings in the LAN Settings menu. In Netscape, choose Edit, Preferences, Advanced, Proxies, Direct connection to the Internet. That's all you need to do to take care of Web browsing.

The NetWinder is capable of much more, including file and printer sharing, email services, Web site hosting, remote access, and firewall security. The required software is already installed. Although there are easy-to-use menus to configure everything, anything involving security on a device that's connected to the Internet needs to be treated with considerable care and respect.

If you already have a good computer with

two Ethernet cards, you can achieve many of the same results with a product like the e-smith server & gateway, reviewed in the April issue of *TCP*. However, for an integrated hardware and software solution with excellent support and appliance-like convenience, the NetWinder I tried is a very good value at \$2,395. Other configurations are available, as is much more information, at <http://www.rebel.com>. □

When things get rough, a good host thinks of everything.



Trust NetNation to keep your Web presence afloat.



One month free with promo-code: cpap-3427
Toll Free 1 888 277-0000
International + 1 858 546 8946
Email sales@netnation.com

www.netnation.com

Web Hosting | ASP/AIP | E-Commerce | Domain Name Registration

©2000 NetNation Communications, Inc. All rights reserved. Offers subject to change without notice. NetNation and the NetNation logo is a trademark of NetNation Communications, Inc. All other trademarks are property of their respective owners.

San Diego
London
Vancouver

Careers & Training

IT Career Trends • Productivity Tips and Tricks • Book Reviews • Tutorials

Put yourself in command

By Helen Bradley

Excel is great for managing all sorts of data—and chances are you have lots of worksheets that you use regularly. In this column I'll show you how to create a fun and useful command centre for Excel that puts your most frequently used files at your fingertips every time you open Excel.

If you follow these steps, you'll end up with a worksheet that opens whenever you start Excel and contains text and image links to all your worksheets. All you need do is to point and click to open the file you want. The command centre will stay open, allowing you to select it anytime to open any other file that is linked to it. One word of warning though, this will be so useful that everyone at work will be asking you about it, so be prepared to show them how to create their own.

Your Excel command centre is a standard Excel worksheet that behaves like a Web page. You add images and text to the worksheet, then link them to the workbooks and files you use most often or that you need to access quickly. You'll see how you can set this file to open whenever you open Excel so you'll always have your files on the screen and accessible with one click. Another bonus is that all the files you use, whether they be Excel, Word or even Access documents can be linked, and thus opened, via this single command centre.

The instructions that follow show you how to create your command centre in Excel 97/2000. As well, I've included

instructions for creating the same type of command centre in Lotus 1-2-3.

Creating the Excel workbook

Begin by creating a new workbook (click the New button on the toolbar) and removing all but one of the sheets from it. To do this, click the sheet tab of the first sheet to remove, then hold the Shift key as you click the last sheet. With all the sheets selected, choose Edit, Delete Sheet, then OK.

You'll get a better presentation if you turn off the gridlines and scrollbars for this sheet, so you limit the area of the workbook you'll be using to what's visible on the screen. This way you won't have to scroll around the screen to find things. To do this, choose Tools, Options, the pick the View tab and deselect the following checkboxes: Gridlines, Row & Column headers, Horizontal Scroll Bar, Vertical Scroll Bar, and Sheet Tabs. Click OK to confirm these settings.

To make the screen look attractive, add a background image or colour to the worksheet. To add a background image, choose Format, Sheet, then Background and choose an image—it will automatically be tiled if it isn't big enough to fill the worksheet area. You can also set a background colour for the worksheet by first selecting the entire sheet (press Control + A), then use the Fill Color button on the Formatting toolbar to fill the cells, or choose Format, Cells, Patterns and choose a colour.

For each file you want to open you'll have an image as well as a text link. So you'll need images that relate to the topics of the



Create this Excel workbook so frequently used files can be opened quickly and easily.

worksheets. You can use images from a clip art collection or check out what's available at Microsoft's Clip Gallery Live (<http://cgl.microsoft.com/clipgallerylive/>). From this site, you can search for images and download them into your clip art collection. It's new Search By Style feature groups clip art by the drawing style, which allows you to find images that will look good together.

To add an image to your worksheet—from your clip art col-

Continued on page 97

Linux for Newbies: Part 12

Home networking: Part 1

By Gene Wilburn



This beginners series, based on Red Hat Linux 6.x, has alternated between system setup information and the basic Unix knowledge needed to make your use of Linux more

enjoyable and interesting. We've gone through setup and connecting to the Internet, and we've looked at essential Linux utilities, basic system administration, and fundamental security issues.

As we close out the first year of the column, we'll begin to move on to more intermediate and advanced topics. The next three installments (starting with this one) will focus on home networking. This month we'll cover the basics. Next month we'll focus on Samba (cre-

ating a Linux server that can be seen in Windows Network Neighbourhood), and in the following month, we'll look at connecting your entire home network to the Internet using IP Masquerading and firewall rules.

It's common these days to have two or more computers per household, especially in homes that have kids using computers for homework and for Internet communications. When you purchase a new PC, you may have kept the old

one around. You may have a mixed PC/Mac environment, and you might even have a portable you bring home from the office.

Whenever you have more than one PC in the home environment, it makes sense to think in terms of networking them together to share resources such as printers and disk space, and to be able to move files easily from one system to another.

Continued on page 93

SAVE

at least

20% off

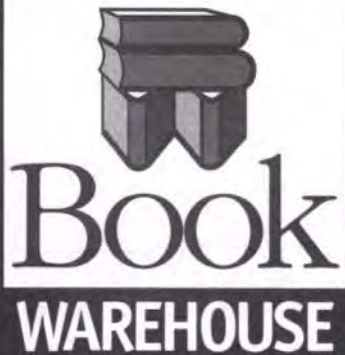
Publishers' list price on
every computer book.
Everyday!

PRICES AS
LOW AS THE
NOTES I
BLOW!



TOP 10 HOT TITLES!

	other stores	OUR PRICE
Flash 4 Windows & Mac Visual QuickStart	\$28.50	\$22.80
HTML 4 for the WWW 4th Ed Visual QuickStart	29.95	23.96
JavaScript for WWW 3rd ED Visual QuickStart	26.95	21.56
Photoshop 5.5 Win/Mac Vis QuickStart+ImageReady	29.95	23.96
Illustrator 8 Windows & Mac Visual QuickStart	29.95	23.96
Flash 4 Magic w/CD	67.95	54.36
Flash Web Design: The Art of Motion Graphics	67.95	54.36
Designing Web Usability	67.95	54.36
Dreamweaver 3 Win & Mac Visual QuickStart	29.95	23.96
Director 8 & Lingo Authorized for Mac/Win w/CD	74.95	59.96



**Book
WAREHOUSE**

MORE BOOKS FOR YOUR MONEY™

632 West Broadway 872-5711 • 2388 West 4th Ave 734-5711 • 1181 Davie St 685-5711 • 4444 W10th Ave 221-5744 • 1524 Lonsdale Ave 904-5711 Open 10am 10pm 7 days a week. FREE coffee!

Home networking: Part 1

Continued from page 92

Linux can easily participate in a home network, and, in fact, it can become the central server for the entire home. With Samba, Linux can look like an NT server to Windows PCs. With Netatalk, it can participate in a Macintosh environment. And, of course, it can do both at the same time. You can also do this with an expensive NT server, but Linux generally has better performance and the cost is right. All the software you need either comes on your Linux CD-ROM, or is available for download, for free.

Networking hardware

The basic hardware you need for a home network is a hub, some network interface cards (NICs), and some twisted-pair Ethernet cables. You need one NIC for each workstation (and possibly two NICs for your server, as we'll see in the third installment of this home-networking series). Many new Windows and Mac PCs come with a NIC installed. A couple of years ago, 10Base-T (10 Mbps) NICs and hubs were standard. Today, the industry is moving towards broad acceptance of 100Base-T (100 Mbps). Most current cards are 10/100 and can work on both types of networks.

For a home network, you are unlikely to need anything faster than 10Base-T, but if you're purchasing a new NIC, you might as well get 10/100 to allow you to move to a faster network in the future.

NICs, for Intel PCs, come in a variety of types and generations. Older PCs require ISA NICs, while new ones generally use PCI NICs. If you have acquired an older server, it might even be EISA based, requiring an EISA NIC. Most portables use PC Card (PCMCIA) network adapters.

Before purchasing a NIC, you should check the hardware compatibility guide at <http://www.redhat.com/support>. Linux supports a broad range of NICs, but some are better supported than others. If you choose a well-supported brand and model, it makes integration easier.

I've used a variety of NICs in Linux boxes and have had good luck with most of them. Intel EtherExpress Pro NICs are a good match for busy servers, but for home machines cards such as those made by D-Link or SMC (such as the EZ series) work well and are reasonably priced.

For a home network you can use one of the little 10 Mbit minihubs you find in computer stores for under \$50. Minihubs tend to come in five- or eight-port models.

Unless you want to invest in good crimping tools, purchase pre-made lengths of twisted-pair Ethernet cables with RJ45 connectors already attached. They come in a variety of pre-made lengths, but you should always get them a little longer than the distance from your PC or Mac to the hub so you have some slack for putting the cable behind furniture or changing the location of your workstations.

The hub is the centre of your home network. If you have a couple of workstations in the same room, all you need to do is connect each workstation's NIC to the hub and you'll have the hardware part done (assuming you've eliminated any IRQ conflicts, etc., with the NICs).

If you want to connect computers in different rooms in your home, you will have to investigate drawing cable through your house, or consider wireless solutions—which are tidy but somewhat expensive and generally slower than cable.

TCP/IP network addressing

When you have installed the hardware bits and connected the wires, you're ready to begin adjusting your operating system software. The first thing you need to do is lay out the organization of your home network.

Almost all networking today is TCP/IP based and probably everyone has seen a typical IP address, such as 192.168.45.33. With IP, certain ranges of addresses define a "network"

and every node on the network has a unique number (IP address).

There are connectivity rules and methods that allow individual networks to be connected to other individual networks, allowing a user on one network to communicate with a user on another network. Multiply these connection points by thousands upon thousands and you've got an extremely large shared network called the Internet.

When IP addressing was first invented, it seemed there were so many numbers allocated

initially that they would never run out. Then came the explosion of Internet usage and now official IP numbers, reserved for registered domains, are in short supply.

That, however, is a problem for businesses and ISPs, not for homes. Fortunately, the standards bodies also reserved a few series of "private" IP numbers that were designated as numbers that would never be used in public. There are three classes of these private num-

Continued on page 101

Systems

NETPRO COMPUTER

"Financing and Leasing Available"

Ph:604-874-0786

Fax:604-874-0787

www.netprocan.homepage.com

netpro@post.com

**Intel NetStarter 466**

Intel Celeron Processor
Pentium II Mainboard
 Integrated 8MB AGP VIDEO
 Integrated 16 bit 3D sound
 32MB PC100MHz SDRAM
 6.4 GB Ultra DMA HDD
 1.44 MB Floppy Drive
 15" Tower case
 40X CDROM, Win98 keyboard
 2 Button Soft Touch Mouse
 Multimedia speakers
 56K V.90 Fax Modem /OB
 Celeron 500/533/566/600 \$520/549/599/635

\$470
Best Deal

Netpro Multimedia Special

With 15" SVGA Monitor

	Intel	Price
Motherboard	Celeron 466	\$715
32MB 100MHz SDRAM	Celeron 500	\$745
8.4GB Ultra DMA HDD	Celeron 533	\$799
1.44 MB FDD	Pentium III 500	\$899
56K V/Fax Modem	Pentium III 550	\$949
MPEG 8MB AGP Video	Pentium III 600	\$1025
3D Sound/OB		
48X CD-ROM	AMD	
120 Watts Speakers	K6-II 500	\$689
Win98 Keyboard	K6-II 550	\$749
2Button Soft Mouse		
17" ATX Tower Case		

Netpro Power System

Asus Pentium III Mainboard
Pentium III 600MHz
128 MB PC100 SDRAM
16 Bit Sound Card
32 AGPMB Video Card
20GB Ultra DMA HDD
 1.44 MB Floppy Drive
 17"ATX Tower Case
 17" SVGA .27mm Monitor
48X CDROM
 Win 98 Keyboard / 2 Button Soft Mouse
 120w Multimedia Speaker
 56K V.90 Fax/Modem

\$1049

Pentium III Power

Pentium III Mainboard
Pentium III 500MHz CPU
8MB SIS chipset AGP video card
64MB SDRAM PC100
10GB Ultra DMA HDD
 1.44 MB Floppy Drive
 17"ATX Tower Case
 16bit 3D sound /OB
48X CDROM
56K V.90 Fax/Modem
 Win 98 Multimedia Keyboard
 2 Button Soft Mouse
 Multimedia Speakers
Pentium III 550/600 \$789/\$889

\$739
Super Deal

ATHLON K7 SYSTEM

AMD Athlon K7 650MHz CPU
Gigabyte GA-7VM Motherboard
10 GB Ultra DMA Hard Drive
64MB SDRAM PC100
ATI Rage IIC 8MB AGP
 16bit 3D Sound Card
 1.44MB Floppy Drive
 17"ATX Tower Case
48X CDROM, 56K v.90 Fax/Modem
 Win98 Keyboard
 2 Button Soft Mouse
 Multimedia Speakers
K7 700/750/800 \$924/999/1099

\$849

Hard Drive / Zip Drive

Fujitsu 6.4/8.4/10/15/17.0/20GB	\$115/129/135/160/175/199
Quantum LM 15/20/30GB	\$205/245/375
Maxtor 5400 rpm 10/15/20/30/40GB	\$135/165/189/259/349
Maxtor 7200 rpm 13/15/20/30/40GB	\$175/189/239/299/399
Samsung 6.4/8.4/10/15/20	\$115/129/139/159/179

Video

S3 Virge 4MB AGP	
8MB AGP/PCI	\$47/47
ATI Rage Fury PC2TV 32MB	175
ATI RageFury Pro 32MB Video in & out	\$199
ATI ALL IN Wonder 128 16/32MB AGP	215/315
ATI TV Wonder Tuner	\$89
Asus TNT2 V3800 TVR 32MB/Ultra	\$259/269
Diamond Viper II 32MB x/TV out	\$205
Voodoo 3 3000/3500 TV in & out	\$175/265

CD-ROM / CD Writer

48x UDMA	\$51	ACER 8432 8X4X32	\$275
CREATIVE 52X	\$58	PIONEER 16X DVD	\$215
LG 4X4X24 INT. IDE	\$239	AFERY 10X DVD	\$180
HP 8250 4X4X24 IDE	\$255	PANASONIC 8X DVD	\$195
HP 9110 8X4X32	\$325		

Printer & Scanner

Canon BJC1000/2000 Color	\$93/110
Canon BJC 2100/3000 Color	\$125/225
Lexmark Z11/Z31/Z51	\$95/139/249
Brother HL-1030 laser 10ppg	\$375
Brother HL-1240DX/1250DX	455/549
Epson Stylus 440/670/740/740I	\$145/159/215/249
Epson Stylus 440/670/740/740I	\$145/159/215/249
HP 330C/6350C Scanner	\$215/525
600X1200 Parallel 36 bit flat bed	\$89
Acer 620P/620S/620U	\$139/155/155

Sound Cards & Speakers

16 bit sound card	\$17
Sound Blaster Ensoniq PCI	\$43
SB Live Value/Live Pentium	\$66/243
Aureal Vortex 1/Vortex 2 A3D PCI	\$30/67
Creative Cambridge PCWork 4point Speaker	
w/Subwoofer/FPS 2000 Digital	\$98/186
Creative House Theatre 5.1	\$345
Altec Lansing ACS33 w/subwoofer	\$56
Altec Lansing ACS45.2 w/subwoofer	\$78
Altec Lansing ACS54.4 point w/subwoofer	\$88
Altec Lansing ACS48 w/subwoofer	\$170

MotherBoard

Abit VA6/BP6 ATX AGP PII/PIII	\$119/190
Abit VT64X/KA7	\$155/225
Asus P3B-F 440BX AGP PII/PIII 233-600	\$190
Asus P3C 2000/P3CWE 1820	\$218/285
Asus P3V 133/P3VX/K7V	\$125/160/230
ATX/AT Celeron M/B with a/b AGP, Audio, modem	\$110
Socket 7 ATX With AGP, Audio	\$110
ASUS K7M/MSI 6195 for AMD Athlon K7	\$220/199
Gigabyte M/B for AMD Athlon K7	\$179
Book-PC 2000 Case/52x/Video/Audio/56	\$275

Monitors

15" .28 DP Digital/17" .28 DP	\$169/239
15" SAMSUNG 550S .28 DP	\$184
17" NEC AS90 .27 DP	\$289
17" SAMSUNG 750S .24/17" 753DF .20	\$279/369
17" MAG XJ768FD .24 DP	\$385
17" OTIOQUEST Q73/V75	\$435/495
17" VIEWSONIC E771 .27DP/PF775 .25 DP	\$300/460
17" NEC FE700 .25DP/FE 750	\$380/485
17" SONY E 200/220GS	\$485/585
19" SAMSUNG 700 NF .25 DP	\$384
19" SAMSUNG 950S/900SL	\$465/495
19" SAMSUNG 900NF	\$625
19" VIEWSONIC E790/PS790/PF790	\$495/685/655

Memory

SDRAM PC100 32/64/128MB	\$45/79/165
SDRAM PC133 32/64/128MB	\$54/89/175
EDO RAM 16/32MB	\$Call

CPU

Pentium II 300/400	\$159/Call
Pentium III 500/550/600/650/700	\$Call
Intel Celeron 466/500/533/566/600	\$130/149/175/225/249
AMD K6 II 500/533/550	\$85/99/125
AMD Athlon K7 600/650/700/750/800/850/900/950	\$Call

CASE

15" Tower w/230 W AT	\$27
16/17/19" Tower w/250 W ATX	\$37/43/49

Upgrade Special

Intel Pentium System
 Gigabyte Motherboard
 32 pc 100 ram
 Celeron 466 \$299
 Celeron 500 \$325/345
 +43 8mb video card, + 16 sound card
AMD K6 II System
 Gigabyte 7 Socket Motherboard
 32 pc 100 ram
 AMD K6 II (3D) 500/533/550 \$239/Call/275

Networking • Modem

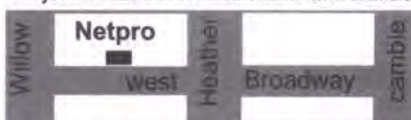
56K modem v90	\$24
Aopen ISA 56k v90 INT	\$63
USR 56K v90	\$95
RJ 45 Cables 10/25/50	\$4/9/14
D-link 530 TX PCI 10/100	\$21
PCI 10 Base T	\$15
10/100 Base T	\$20
5/9 Port Hub 10 Base T	\$35/49

Accessories

Mouse ps2/AT	\$09	Win 98 Keyboard ps2/A	\$08
Wheel Mouse	\$14	Stereo Speaker	\$8

Networking products also available
 Corporate clients welcome
 Financing and Leasing Available

All systems come with one month free internet software



745-West Broadway Unit 101 VAN.
 MON-SAT:10:00 A.M. to 6:00 p.m.

All prices and products availability subject to change without notice Prices reflect 3% cash discount. Not responsible for typographical errors. Brand name trade marks belong to their respective companies.



May 2000 monthly drawing
Winner: Tel# 2863 \$100
June: 8356 \$50
Cheung: 3228 \$25
Henry: 3228 \$25

Join June 2000 Monthly Drawing
1) Our Customers
2) Fax/Email a quotation to us with your phone No.
3) Come to our company to fillup a drawing form

WORLDWIDE

COMPUTER CORP.

(PREVIOUSLY NEWTECH)
COMPUTER LTD.

我們會說：
普通話、
廣東話、
ENGLISH



WN worldwide group



Email: www@worldwide.bc.ca
Web: <http://www.worldwide.bc.ca/>

VANCOUVER Store →→→
6596 Victoria Drive, TEL: (604)327-2003
Vancouver, B.C V5P 3X9 FAX: (604)327-0081
Hours: 10:00am - 6:30pm, Closed Sundays & Holidays

←←← **RICHMOND Store**
1104-12811 Rowan Place, TEL: (604)270-7299
Richmond, B.C V6V2S6 FAX: (604)270-6366
Hours: 9:30am - 6:00pm, Closed Sundays & Holidays



9 years in Business;
Subject to manufacturer warranty;
Surcharge for credit cards;
Customers pay shipping (Sales or Repair)

Warranty:
System: 2 years labour, 1 year parts
(Extended warranty available)
Parts: Common Electronic items:
Same or next business day: 100%
refund / replace; after next business day
to 10th calendar day: 85% refund /
replace.

Retail Store; Wholesale Price; Please check web sites for current price and items

Special rate for labour or upgrade

WorldTech AMD K6-II 500

- ◆ATX 17" Case
- ◆Aopen 40X CD-ROM
- ◆AMD K6-II 500 CPU(K6II-550 +\$50)
- ◆CPU Cooling fan
- ◆1.44 MB Floppy Drive
- ◆6.4GB IDE Hard Drive(8.4GB +\$15)
- ◆32MB SDRAM PC100(64MB +\$40)
- ◆56K Int/Voice/fax/V90/Modem
- ◆Gigabyte GA-55MM / Matsonic
- ◆with built-in Sound/Video

\$495 or \$CALL

WorldTech Celeron 500

- ◆ATX 17" Case
- ◆Aopen 40X CD-ROM
- ◆Intel Celeron 500 CPU (533 +\$15)
- ◆CPU Cooling fan
- ◆1.44 MB Floppy Drive
- ◆8.4GB IDE Hard Drive (10.2GB +\$15)
- ◆64MB SDRAM PC100
- ◆56K Int/Voice/fax/V90/Modem
- ◆Elite P6 Motherboard
- ◆w/Sound & Video
- ◆w/Network

\$599 or \$CALL

WorldTech PIII 550E

- ◆ATX 19" Case
- ◆50X CD-ROM
- ◆Intel PIII 550E CPU (600E +\$70)
- ◆CPU Cooling fan
- ◆1.44 MB Floppy Drive
- ◆10.2GB IDE Hard Drive(13.3GB +\$20)
- ◆128MB SDRAM PC100
- ◆56K Int/Voice/fax/V90/Modem
- ◆Gigabyte 6VX7 (6VX7-4X +\$30)
- ◆Creative Ensoniq Sound Card
- ◆ATI Xpert@98 8MB AGP Video

\$988 or \$CALL

WorldTech Athlon K7-700

- ◆ATX 19" Case
- ◆50X CD-ROM
- ◆AMD K7-700 CPU (750 +\$100)
- ◆CPU Cooling fan
- ◆1.44 MB Floppy Drive
- ◆13.3GB IDE Hard Drive(17.4GB +\$20)
- ◆128MB SDRAM PC100
- ◆56K Int/Voice/fax/V90/Modem
- ◆Gigabyte 7VM (Asus K7M +\$30)
- ◆Built-in Sound
- ◆ATI Xpert@128 16MB AGP Video

\$1098 or \$CALL

WorldTech PIII 600EB

- ◆ATX 19" Case
- ◆50X CD-ROM
- ◆Intel PIII 600EB CPU (677 +\$60)
- ◆CPU Cooling fan
- ◆1.44 MB Floppy Drive
- ◆17.4GB IDE Hard Drive(20.4GB +\$30)
- ◆128 MB SDRAM PC133
- ◆56K Int/Voice/fax/V90/Modem
- ◆Gigabyte GA-55MM (Asus K7M +\$30)
- ◆S.B. Live! value PCI Sound Card
- ◆ATI Xpert@2000 32MB AGP Video

\$1165 or \$CALL

WorldTech Complete System (Special+full feature)

- ◆Elite/Aopen/Gigabyte Motherboard
- ◆with built-in sound/video
- ◆win98 keyboard
- ◆140W Speaker
- ◆Generic Mouse
- ◆Acana 15" Monitor
- ◆Canon 1000SE Printer

\$812*

*After \$20 Printer rebate.

Bundle A: \$28

- (purchased with any system)
- 140W Speaker
- Win98 Keyboard
- Generic Mouse W/Pad
- Microphone W/Stand

Bundle B: \$60

- (purchased with any system)
- 320W Speaker
- Fujitsu 4725 Keyboard
- MS Tracker Mouse 2b W/Pad
- Microphone W/Stand

Bundle C: \$108

- (purchased with any system)
- 320W Speaker
- Fujitsu 4725 Keyboard
- Logitech 1st Mouse w/wheel W/Pad
- Microphone W/Stand

Bundle D: \$125

- (purchase with any system)
- 3D-105 405W Speaker w/Subwoofer
- MS Internet Keyboard
- M.S. Intelli-Mouse w/wheel W/Pad
- Microphone W/Stand w/joystick

Bundle E: \$148

- (purchased with any system)
- GNT 7000A Speaker w/Subwoofer
- M.S. Natural Keyboard
- M.S. Intelli-Mouse w/wheel W/Pad
- Microphone W/Stand w/joystick

Download/view our price list

(1)Common Items +systems (2)Complete Items
Product introduction in Chinese: www.pconline.com.cn

Backup Drive

- IOmega ZIP DR EXT Para/USB \$call
- IOmega ZIP DR EXT Scsi \$call
- IOmega/PANASONIC ZIP DR INT IDE \$103/\$75
- IOmega ZIP DR PLUS ext/int. 250MB \$call
- LS 120 Internal IDE \$112
- 1.44MB Floppy Drive \$19

Tower Case

- ATX 17" 985B/ST3/787 \$45/\$41/\$41
- ATX 19"787deluxe/ 985B/ST4 \$50/\$55/\$52
- ATX 24"250W/300W \$79/\$89
- ATX 18" 320K blue/white \$49/\$49

CD ROM

- Acer 40x/Aopen 40x \$55/\$55
- Vintech 50x \$60
- Aston 52x/Free 50x \$59/\$59
- Creative 52x \$65
- Panasonic 40x \$57

CDWriter

- Creative 8432 \$396
- HP8250/HP9310i IDE \$273/\$392
- Sony 8/4/32 \$368
- Yamaha 8424 int EIDE / SCSI \$408/\$423
- Panasonic 8432 \$275

DVD ROM(bare)

- LG 8X/Creative Labs 10X \$call
- Panasonic 8x / Hitachi 6x \$199
- PIONEER 6x SCSI/10x IDE \$call
- Toshiba 8x / NEC 8x \$call

SCSI Controller Card

- Adaptec 1505 \$call
- Adaptec 2940U/2940UW \$call
- Adaptec U2W \$call
- Adaptec 2944 uw Differential \$call
- Asus sc 200/875 \$call
- Diamond Fire Port 40 \$call
- Diamond Homeless Card \$call

CPU Processor

- AMD K6 II 500/550 \$84/\$125
- AMD K7 600/650 (Box) \$call/\$308
- AMD K7 700/750/800 (Box) \$307/\$405/\$524
- Intel P-233 MMX \$82
- Intel Celeron 466/500/533 \$143/\$157/\$162
- Intel Celeron 566 \$205
- Intel PIII 500/500E \$288/\$312
- Intel PIII 550E/550 w/Fan \$call/\$316
- Intel PIII 600E/650/700 w/Fan \$380/\$388/\$487
- Intel PIII 750/800 \$596/\$653
- Intel PIII 850 \$930

Hard Drive

- Fujitsu 6.4GB IDE (discontinue soon) \$122
- Fujitsu 10.8GB IDE \$139
- Fujitsu 13.6GB/17.2GB IDE \$164/\$180
- Maxtor 10.2GB/15GB \$152/\$183
- Maxtor 13GB/13GB 7200RPM \$170/\$185
- Maxtor 17.2GB/20GB 7200RPM \$205/\$252
- Maxtor 27GB/27GB 7200RPM \$308/\$327
- Maxtor 30GB/40GB \$316/\$368
- IBM 20.4GB 7200RPM \$265
- For SCSI Hard Drive Please Call \$call
- Quantum 3.2GB / W.D. 1.6GB \$80/\$65

Keyboard

- Fujitsu 4725 \$58
- Fujitsu 8725 \$19
- M.S. Natural Elite \$32
- Generic WIN 98 Keyboard \$11
- M.S. Internet Keyboard \$30
- LITE-ON INTERNET \$30
- Logitech Cordless iTouch (KB & Mouse) \$call
- Turbo Media Enhanced Win98 Keyboard \$20
- MS USB Keyboard \$call

Memory

- 16MB 72Pin Regular \$66
- 16MB 72Pin EDO \$66
- 32MB 72Pin Regular \$120
- 32MB 72Pin EDO \$118
- 32MB SD DIMM (PC 100) \$call
- 64MB SD DIMM (PC 100) \$call
- 128MB SD DIMM (PC 100) \$call
- 256MB SD DIMM (PC 100) \$call

Modem

- USR 56K Int/Vo/fax/DOS/PC/V90 \$77/\$52
- Aopen 56K Int/Vo/ISA/V90 \$67
- Aopen 56K Int/Vo/PCI/V90 \$35
- Motorola 56K V90 \$26

Monitor

- Acana 15" \$170
- Acana 17"/Acana 19" \$290/\$470
- Acer 15" 51E/77c (1 yr labour) \$268/\$348
- Acer 17" 77E/78E \$340/\$423
- ADI 15" 4P \$260
- ADI 17" GT-56 \$385
- AOC 17" 28 \$245
- AOC 19" \$384
- Daytek 17" 1726D \$295
- Sony 17" 210G \$call
- NEC 17" A700 \$call
- NEC 17" E700/E750 \$call
- Proview 15" \$196
- Proview 17" 25mm \$292
- Proview 19" \$570
- Samsung 17" 753DF.20mm \$348
- LCD tft flat monitor \$call
- Mag /ViewSonic/Optquest \$check

Voxon /Hitachi/Samsung/Tvm \$check

Motherboard

- Abit BE6-II/BFG/BMG \$199/\$167/\$163
- Abit BP6 (DUAL CPU SLOT) \$215
- Asus K7M \$222
- Asus P3B-F/P3B-F1 (PIII PC 100) \$192
- Asus P3C-2000 \$236
- Asus P3V-4X / P3V \$180/\$130
- Asus P2-99 \$145
- Asus P5A (AMD K6 II PC 100) \$131
- Asus P5A-A (w/Audio) \$139
- Gigabyte 5AX/5AA (AMD K6 II PC 100) \$115/\$112
- Gigabyte 6VXE + 6VX7 + (PIII PC100) \$115/\$118
- Gigabyte 6VX7-4X \$145
- Gigabyte BX2000 + ZX7/LA7 \$178/\$134/\$125
- Gigabyte 55MM V+S \$115
- Gigabyte 7IXE \$178
- Matsonic 7348 All-in-one (snd + mdm + vdo + net) \$122
- Elite P6-SET-ML All-in-one \$115

Mouse

- Aopen 2B PS/2 \$8
- Generic mouse/with wheel \$5/\$9
- Genius net mouse \$13
- Logitech 2B PS/2 /Serial \$9
- Logitech 3B PS/2 \$14
- Logitech 1st Mouse w/ Wheel \$16
- Logitech Cordless Mouseman Plus \$call
- Mitsumi 2B w/Wheel \$11
- MS Intelli mouse PS/2 \$27
- MS Cordless Mouse \$call
- USB 3B Mouse \$11

Printer(some w/rebate)

- Canon BJC-5100 \$call
- Canon BJC-1000/2000(after rebate) \$74/\$103
- Canon LBP-1760 \$call
- Epson 440/Epson 660(after rebate) \$97/\$125
- Epson Photo 700/740 \$call
- Epson 850/900 \$call
- Epson LQ-870/670 \$610/\$473
- Epson LQ-570/LX-300 \$347/\$245
- HP 1100 Laser \$568
- HP 895 C/6PLaser \$call
- Brother/ Lexmark/Okidata \$check

Scanner

- Acer/UMAX/HP /Epson/Micotek/IBM/AGFA \$check

Sound Card

- Acer AW37 ISA \$19
- CREATIVE Ensoniq \$36
- Diamond mx-300 PCI \$call
- SoundBlaster 128 PCI \$48
- SB Live PCI retail \$call
- SB Live VALUE PCI \$74
- Asound 32bit PCI \$18

Video Card (PCI)

- S3 TRIO 8MB \$58
- SIS 4MB \$39

Video Card (AGP)

- Asus V3800 TNT2 32MB AGP \$133
- Asus V6600 GeForce256 32MB AGP \$325
- ATI Xpert@98 8MB AGP \$67
- ATI Xpert@128 16MB AGP \$110
- ATI Xpert@2000 32MB AGP \$118
- ATI All In Wonder@128 Pro 32MB \$366
- ATI Rage128 Fury Retail \$185
- ATI Rage Fury MAXX 64MB \$439
- Matrox G400 16MB/32MB \$168/\$229
- Generic RIVA TNT2 32MB \$127
- Generic RIVA TNT2 16MB \$88
- Creative Labs Savage4 32MB \$128
- Creative Labs GeForce Pro 32MB \$399
- S3 Trio 4MB \$35
- Voodoo III2000/3000 AGP \$129/\$178

Add On TV Tuner & Conference

- ATI TV Tuner ISA (For ATI only)/Asus TV Box \$call
- Intel create and share USB \$call
- Logitech quickcam usb/kodak dvc-323 USB \$call

Networking

- Acer/Surecome/Generic Com. PCI Network Card\$18
- Acer/Surecome/Generic Com.ISA Network Card \$18
- Dlink 10/100Mbps PCI Network Card \$29
- Generic 10/100Mbps PCI Network Card \$23
- Dlink DE-660CT PCMCIA 10Mbps NIC \$60
- Dlink Network Kit \$call
- USB Network Adaptor \$call
- 4-port/8-port Hub \$45/\$call
- USB Hub \$call

Speaker

- Altec Lansing ADA305/3D-105 405W \$185/\$call
- Cambridge Sound \$check
- Generic 140W/320 \$10/\$28
- GNT 5000A/7000 w/Subwoof \$55/\$66
- Logitech soundman extreme \$call
- Yamaha M15/Zenon ZN-6000 \$75/\$55

Others

- Promise UDMA66 IDE Controller Card \$call
- UDMA66 IDE Cable \$8
- UDMA66 IDE Mobile Rack \$call
- ASUS SMART Cooling Fan \$9
- 566 CPU Ball Bearing Cooling Fan \$6
- Headphone w/Mic/ Mic w/Stand \$8/\$5
- Adaptor for socket 370 to slot1 (celeron)(.....from) \$11
- 1.44MB Floppy Disk/Zip Disk \$4/\$13
- Printer Card ISA (EPP/ ECP/Cables) \$15
- Blank CD/Blank CD extra/Rewritable CD \$1.9/\$4/\$10
- Floppy1.44MB Disk box(holder) \$2

Year 2000 Daily Special

The following items and price only valid on June 6, 2000 (Today).
Check WEB for price and items
chang everyday (Daily Special
Section).

- Epson Stylus 440 \$96
- Canon BJC-1000SE \$88
- Canon BJC-5100 \$189
- AOC 19" \$388
- Samsung 753DF \$335
- Viewsonic EF70 \$392
- NEC FE700 \$379
- ABIT BE6 Motherboard \$169
- USR 56K PCI (Hardware) \$72
- Quantum 3.2GB \$80
- Western Digital 1.6GB \$65

Special Price (system or larger sales) + coupons

- MS WIN98 SE/WIN2000 CD \$3 OFF
- CANON 1000/2000 \$3 OFF
- HP9310/HP8210+ \$5 OFF
- Samsung 17" \$5 OFF
- DAYTEK 15" \$5 OFF
- DAYTEK 17" \$5 OFF
- OPTIQUEST \$5 OFF
- ANY EPSON PRINTER \$3 OFF
- ANY SCANNER \$5 OFF
- CANON 4400 \$3 OFF
- SPEAKER 140W \$1 OFF
- SPEAKER 320W \$2 OFF
- ANY KEYBOARD \$1 OFF
- ANY MOUSE \$1 OFF
- ANY MICROPHONE/JOYSTICK \$1 OFF

See WEBSITE
For current Price
Price on AD
announced on
6th June 2000
and valid up to
15th June 2000 only



Overclocking your computer?

AMK SERVICES

Extend the life of your computer, by adding better cooling. We have over 90 different types of Heatsinks and fans for your CPU, video card, hard drives and your monitor. Avoid lockups due to excessive heat.

Pentium III / SECC Heatsinks

Alpha P3125S	\$69.99
Globalwin VOS32	\$39.99
AMK 2x60	\$39.99
Vantec 5030	\$24.99

Athlon/ Pentium II

Alpha 7125	\$69.99
Globalwin VOS32	\$39.99
Globalwin FLK32	\$24.99

PPGA/ 370

Alpha 6035MFC	\$39.99
Alpha PEP66T	\$49.99
Globalwin FDP32	\$24.99
Globalwin FEP32	\$24.99

Hard Drive Coolers

Just cooler TT-900	\$34.99
Vantec HD-3	\$19.99
Ultimate HD cooler	\$29.99
Globalwin I-Storm II	\$39.99

Video coolers

JustCooler monitor fan	\$19.99
Video ram Heatsinks	\$2.99 ea
Globalwin FAC420	\$14.99
Globalwin CAF12	\$24.99
Globalwin CBF32	\$24.99

Price and configurations subject to change.



AMK
810 monster case comes
with 9 Fans in total
741 CFM

Come checkout our LAN party game room, BYOC
and play Half Life, Quake, etc with up to 30 players.

Quote

"If you're in the market for a new case and want one that is overclock ready without any work on your end, the AMK-0334 is a great choice."

Moto www.thetechzone.com

18" LAN-0334-250w	\$109.99
19" AMK-0334-250w	\$109.99
24" OCD-0334-300w	\$149.99
19" AMK-3333-250	\$129.99
24" OCD-3333-300	\$149.99
Upgrade to 300 watt + \$20	
Upgrade to 450 watt + \$115	
Carry handle	\$20.00
Other cases and configurations available	

4631 East Hastings Street Burnaby BC

Phone: 604-299-5221

WWW.AMKCOMPUTERS.BC.CA

LOCAL AREA NETWORK HANDS-ON LEVEL 1

This course is perfect for those who want to gain an understanding of networking in the workplace. Learn how to set up and configure computer networks in this entry-level **credit** course (CITX 1140).

Topics include:

- peer-to-peer and client/server applications
- network operating systems
- server selection
- cable and media installation
- performance/system management issues

July 24 - 28 (Mon-Fri)

8:30 am - 4:30 pm

BCIT Burnaby campus

CRN #29336

\$349

To register, call (604) 434-1610

For more information:

visit www.bcit.ca/~ee

or call (604) 432-8637



BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Daily hi-tech product reviews!

canada
computes.com
www.canadacomputes.com

Product Reviews |



meet Wayne Flooters

Wayne just told his boss at the printing press to take his job and "shove it," liquidated all his savings, bought a one-way ticket to Los Gringos, Texas and left his wife of 36 years with a decidedly one-sided divorce settlement.

"Why" you might ask?

After a year and a half of incessant chatting about a myriad of subjects ranging from swing dancing to the rise and fall of arena football, Wayne is convinced he's found his true soul mate in an internet chat room and he's travelling across the continent to be with her in her little cabin under the big, bright stars of the Lone Star State's endless evening skies.

Well, Wayne, we wish you only the best of luck, because "cutiepie126" is really a 54 year old trucker named Mort.

☒ Wayne: Have you seen the ultimate accessories and peripherals at CDD.com?

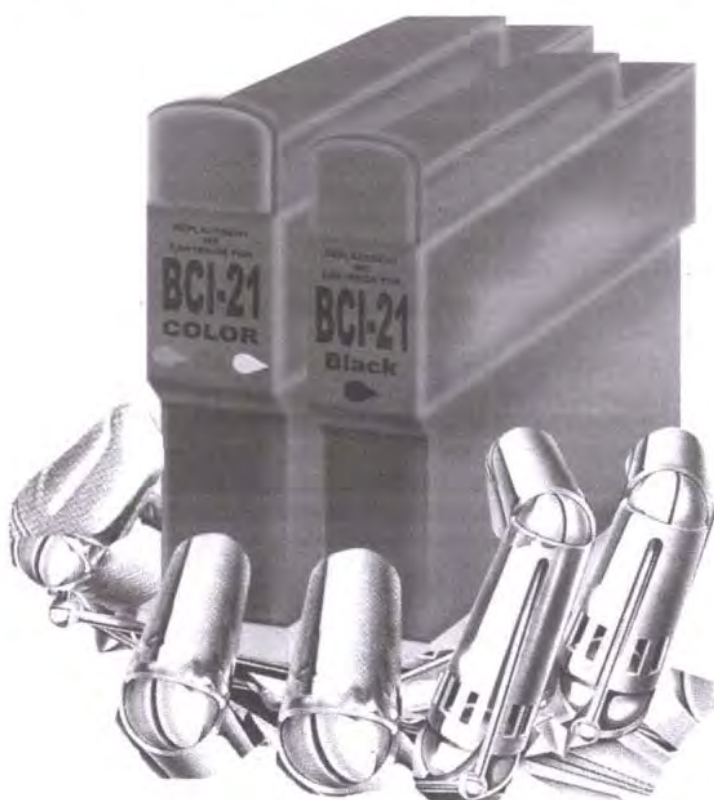
Computer
Discount Depot.com

We'll sell a computer to anybody.

This is a fictional account designed to drive traffic to the website: www.cdd.com. Any reference to any person, living or dead, is coincidental.

Smart Idea! Smart Choice!! Smart Savings!!! Smart You!!!!

**Only Pay 30% And Get 100%
Quality On Inkjet Cartridges**



**visit our site
www.inkjetmart.com**

Paying too much for inkjet cartridges?
www.inkjetmart.com guarantees high quality
products with up to 70% savings on all your inkjet
cartridge needs.

Our friendly and helpful staff from our Retail Sales,
Mobile Sales or Internet Sales Service guarantees
100% customer satisfaction and convenience.
Want to find out more?

Simply visit us at www.inkjetmart.com
or call us at (604)708-8320

**TOLL FREE
1-888-2833-INK**

Address: 4855 Main Street, Vancouver, B.C. V5V 3R9, Canada.

net *active* System Consulting
Tel: (604)688-3083
e-mail: info@netactive.bc.ca

Complete Internet Solution web design

Additional Service

- * E-Business package
- * Custom Programming
- * Advertising Banner
- * Animation Banner
- * Site Maintenance Package

- * Graphic Design
- * Multimedia Image
- * Shopping cart
- * Site promotions

Domain Registration

Millennium Special

All these **E-Business** Service features for ONLY \$39.99/month

- * www.yourname.bc.ca
- * 3 homepages design
- * 2 logo/Graphics design
- * 300 word count per page
- * 50 items per page
- * 5 you@yourname.bc.ca Email account
- * Free 12 months hosting

www.netactive.bc.ca

MEMORY HOUSE INC.

#3-3671 Viking Way, Richmond, B.C. V6V 2J5
Tel: (604) 821-1178 (604) 821-1107
Email: mhi@intergate.bc.ca
<http://www.memoryhouseinc.com>



Competitive Pricing!

- Specializing in wholesale and distribution
- SDRAM 168PIN PC133, PC133, PC100, 144PIN Notebook RAM
- EDO, Fast Page, True Party
- Intel-Coppermine, Katmai, CELERON, PENTIUM
- AMD-Athlon, K6II
- **LIFETIME WARRANTY** on Memory Module
- Notebook Harddrive

**FACTORY
DIRECT**



ALL PRODUCT NAMES, TRADEMARKS AND REGISTERED TRADEMARKS ARE PROPERTIES OF THEIR RESPECTIVE OWNERS.

Put yourself in command

Continued from page 92

lection or from those you've downloaded—choose Insert, Picture, then Clip Art. Alternately, choose From File to access an image that is on your hard disk. Add one image for each worksheet you want linked to your command centre. Open and size the images and arrange them in your worksheet.

To improve the look of the images, remove any borders and make them transparent if possible (this will depend of the format they are in). To do this, select each image in turn, right-click and select Format Picture. Select the Colors and Lines tab, set Fill Color to No Fill, and Line Color to No Line. Click OK to confirm these settings. Options will be greyed out if they aren't available for a particular image type.

At this stage you must save your file into the directory that you plan to store it in. This must be done prior to creating hyperlinks to other worksheets, so choose File, then Save. At the same time, check to make sure all the files you want to open from your command centre

are in the folder(s) in which you intend them to stay. If they aren't, move them into the correct folder(s) before continuing.

Making the links

Now you're ready to link each image to a workbook or another type of file. To do this, select each image in turn and choose Insert, then Hyperlink. In Excel 97, click in the Link To File Or URL box and click Browse. Locate the file you want to open every time you click this image, and click OK. Should you want to link to a named location in that file—a bookmark in a Word document or a named range in an Excel workbook, for example—click in the Named Location In File area and click Browse. You'll see a small box appear with the options you can select from that are available in the file you have chosen to link to—this can be different for each file you choose. Make your selection from the list and click OK.

In Excel 2000 the Hyperlink dialogue has undergone a makeover from the one used in Excel 97. From the options in the Link To list,

click the Existing File Or Web Page button, then click the File button to browse for a file on your hard drive. Select the file and click OK. Click the Bookmark button, select the place in the file you want to be positioned at when the file opens, then click OK. You can also set a ScreenTip for the link so a text description of the file will appear beside the cursor when you hold your mouse over the image. To do this, click the ScreenTip button, type the ScreenTip text describing the file you're linking to the image, then click OK. Click OK again to return to your worksheet.

Once you've linked the first image to the file it will open, save your file and test the link by first clicking away from the image once so it is not selected. Now hold your mouse pointer over the image and wait until it turns into a pointing hand. Click the image once and wait while the hyperlinked file opens. If you selected a bookmark or named range, you'll be positioned in that place in the file when it opens.

You will notice that the Web toolbar is visible on the screen so you can simply click the Back button to return to your command cen-

tre file. Or click the Window menu and choose the command centre file name from the list of open files. You can now repeat this process of creating and testing the hyperlinks for each image on your worksheet.

When all the images are hyperlinked you may also want to add text links—as you would on a Web site. Adding text links means you don't have to rely on the ScreenTips to remind you which files images are linked to, and that other people can easily understand and use your command centre.

To add a text link, click the cell to type the text in. You'll find you won't be able to see the cells as there are no gridlines, so approximate the right place, click there and type your text. To create a hyperlink anchored to this text, click in the cell containing the text to select it and choose Insert, then Hyperlink. Repeat the process you used to link the images to files, select the desired files and the place in the file that you want to be taken to when the file opens. You'll repeat this for every text link you want to create on your command centre. ➤



CRYSTAL COMPUTER LTD.

4551A Kingsway, Burnaby, BC V5H 2A7
Tel: (604)436-4551 Fax: (604)436-4000
email: info@crystalcomp.bc.ca
web: http://www.crystalcomp.bc.ca
Mon-Fri: 10am - 6:30pm
Sat: 10am - 5:30pm
Sun, Holidays: By appointment



100M ZIP IDE \$73	Wireless keyb w/mouse \$53	Motorola PCI Modem \$25
Logitech wheel PS2 \$17	Azure 15" Monitor \$170	Creative 52X CDROM \$60
Altec Lansing 45.2 \$90	RIVA TNT2 32M AGP \$115	KDS 17" vs-7i mon. \$266
HP 8250 CDRW \$265	SB LIVE! 1024 \$70	Gas lift steno chair \$39

ACCESSORIES/CASE/CPU

15"AT/17"ATX/18"ATX/24"ATX \$34/38/46/82
6" CABLE/P-FAN/P-II-FAN/RACK/CPU \$4/8/10/17/CALL

DISKS/DRIVES/CDROMS

CDR/CDRW/FDD/120M/ZIP/ZIP EXT \$0.8/3/17/100/73/145
FUJITSU 6.4/8.4/10.2/13.2/17 \$120/140/150/180/240
QUANTUM LM15/20G 7200RPM \$220/265
MAXTOR 5400:10/15/20/30/40 \$141/175/198/259/350
MAXTOR 7200:13/15/20/30/40 \$179/195/250/302/395
ACER 40X/52X/CL52X \$52/62/62
HP 8250I 4X4X24 IDE/9310I CDRW 10X4X32 IDE \$265/389
ZIP 250M EXT PAR /100M EXT PAR \$238/140

KEYBOARD/MOUSE

98/MS ELITEL/ USB/FUJITSU 4725/8725 \$10/26/52/59/19
BASIC MOUSE/LOGITECH WHEEL MOUSE PS2 / USB \$5/18/23
MS INTELLI MOUSE PS2/USB \$26/36

MEMORY/MODEM/MONITOR

16E/32E/PC-100:32/64/128 \$65/125/48/88/165
MOTOROLA PCI VOICE/MODEM BLASTER \$25/45
ACER PCI/ACER ISA/USR PCI-VOICE \$44/69/59
AOC 15"/AOC 17"/AOC 19" \$178/270/469
OPTIQUEST Q71/VIEWSONIC E771/G790 \$299/310/640

S7-VALUE

Super 7 Mainboard
8M AGP Video & 3D Audio
56K V.90 Modem
32M PC-100
1.44M FDD, 6.4G HDD
17" ATX Case, 40X CDROM
98 KEYB, Netmouse, Pad
15" MON. & 100W Speaker
K6-2-500 \$689
K6-2-533 \$706
K6-2-550 \$725

WINDOWS 98 OEM CD
Second Edition with
system purchase only
\$125

P3-VALUE

P-II Mainboard
8M AGP Video & 3D Audio
56K V.90 Modem
32M PC-100
1.44M FDD, 6.4G HDD
17" ATX Case, 40X CDROM
98 KEYB, Netmouse, Pad
15" MON. & 100W Speaker
CEL 466/500 \$779/789
CEL 533 \$805
533E \$958
550E/600E \$989/1059
Other Call

BookPC: \$769Up

S7-POWER

GIGABYTE 5AX 512K
Xpert 98, PCI Sound Card
PCI 56K V.90 Modem
64M PC-100
1.44M FDD, 10G HDD
18" ATX Case, 40X CDROM
98 KEYB, Netmouse, Pad
17" KDS 0.27 Monitor
500W Subwoofer Speaker
K6-2-500 \$969
K6-2-533 \$986
K6-2-550 \$1005

Althon K7: \$1319Up

P3-POWER

MB support coppermine
Xpert 98, PCI Sound Card
PCI 56K V.90 Modem
64M PC-100
1.44M FDD, 10G HDD
18" ATX Case, 40X CDROM
98 KEYB, Netmouse, Pad
17" KDS 0.27 Monitor
500W Subwoofer Speaker
CEL 466/500 \$1019/1039
CEL 533/546 \$1059/1159
550E/600E \$1237/1309
600E/650E \$1270/1319
667E/700E \$1339/1480
733E/750E/800E Call

More items and system prices on web site.
We do troubleshooting, upgrades, networking.
* 2% Surcharge on Master Card, 3% on Visa Card * **LEASING AVAILABLE**

EPSON EPSON EPSON EPSON EPSON EPSON EPSON

Tricera Computer



4th Avenue
5th Avenue
Free X Parking
Tricera
Broadway
Granville

Monday - Friday 9AM - 5PM
203 1836 West 5th Ave - Vancouver - 733-5702

EPSON Scanners



Best quality...dollar for dollar

Wacom Intuos
"the" ArtPad

EPSON Stylus1520

17" x 44" Paper sizes
www.tricera.com

EPSON SUPPLIES

Large sizes (Low prices)

- Photo paper
- Glossy paper
- Ink cartridges
- Photo card stock
- Photo transparencies
- Iron-on transfer sheets
- Adhesive photo sheets
- Banner paper - 17" x 45'
- Back-lit plastic - large size

EPSON SUPPLIES

EPSON Dealer

Color Ink Jet

Warranty

Repair

Center

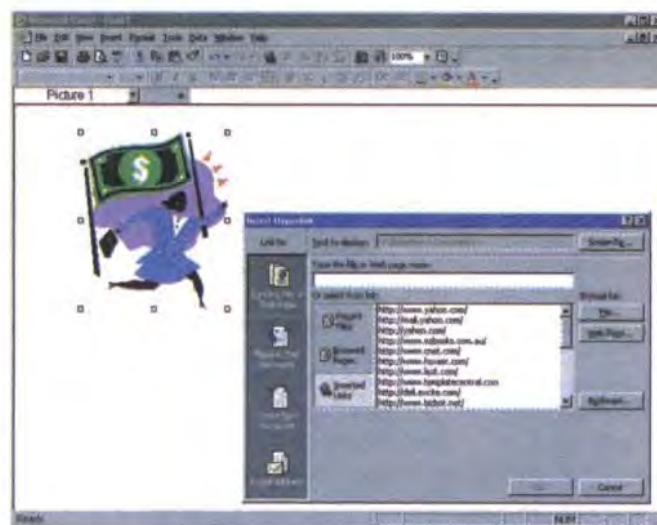
EPSON EPSON EPSON EPSON EPSON EPSON EPSON

When you hyperlink text you'll see that the format of the text changes to Excel's special hyperlink format and, if you had formatted your text some other way, this formatting has been lost. Excel uses Styles in much the same way they are used in word processing software. Hyperlinks are always formatted using the built-in Excel Hyperlink style. If you prefer some other format, you can change the appearance of hyperlinks by altering the style itself. To do this, choose Format, Style, then from the Style Name drop-down list, choose Hyperlink, click Modify, and click the Font tab. Make your choices from the dialogue, and under Underlining, choose None if you prefer that your hyperlinks not be underlined. Click OK twice to confirm your choices and return to your workbook.

Final touches

If you wish, you can protect this sheet and the workbook itself so they cannot be altered by accident. This is a good idea if you're sharing the file with novice users. To do this, choose Tools, Protection, then Protect Sheet. Select all the checkboxes (don't set the password unless you really need one) and click OK. Now choose Tools, Protection, Protect Workbook, enable both the Structure and Windows checkboxes and click OK. Save your file again.

To set this file so it will open whenever Excel is loaded, simply place a shortcut to the file in



The command centre uses simple hyperlinks to connect the images and text to the files they open.

Excel's Xlstart folder. To do this, open Windows Explorer, locate the Xlstart folder, which is probably at C:\Program Files\Microsoft Office\Office\XLstart. Right-click inside the folder and select New, then Shortcut. Either type the filename and path of your command centre file in the Command Line area or, better still, choose Browse and, from the Files As Type list, select All Files. Now locate and select the command centre file on

your disk and click Open. Select Next, then Finish in the Create Shortcut dialogue. If you close Excel then open it again, the worksheet will automatically load and all your frequently used files will be only one click away.

This command centre is a great project to build and use at home and is invaluable in the workplace allowing new and infrequent users to easily find the files they need most often.

Lotus 1-2-3

You can create a similar command centre using Lotus 1-2-3 if you follow the basic concepts used for the Excel version using the relevant Lotus commands. To insert an image, choose File, Open, from the Files As Type drop-down, list select All Files (*) and locate the image you want to use from your hard drive. Choose the Combine With Current Workbook checkbox, choose Combine, then click in the worksheet where the top left corner of the image should appear. You can also add

an image to a worksheet by copying it to the Clipboard and pasting it into your worksheet.

To remove the border from an image, select it, right-click, then choose Drawing Properties. Choose the Color, Pattern And Line Style tab, then set the Border Line style to None.

Create hyperlinks to text or images by selecting the cell or image and clicking Create, then Hyperlink. From the Action drop-down list choose Go To Another File, click Browse, locate the file to link to, click Open, then OK.

Select the entire worksheet by clicking the letter A in the top left corner and choosing Sheet, Sheet Properties, then the Color, Pattern And Line Style tab. Choose a Background colour, then select the View tab, deselect the Grid lines and Sheet frame checkboxes, then select View, Set View Preferences, then the View tab. Deselect the checkboxes for Sheet Tabs and Scroll Bars, then select OK.

Choose File, User Setup, 1-2-3 Preferences, File Locations and make a note of the folder listed in the Automatically Opened files area. This is the folder you should save the file into so it will open automatically whenever you load Lotus. □

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

E-Class Systems:
AMD K6II 533 \$850

- Asus P5/99VM MicroATX Motherboard
- On-Board AGP Video card
- Build-in PCI Audio
- 64MB PC100 SDRAM
- 10GB UDMA66 HDD
- 1.44MB FDD
- 15" SVGA Monitor, 28dpi
- Logitech Wheel Mouse PS/2
- Win98 Keyboard
- 15" ATX Tower case
- Creative 52x IDE CDROM Drive
- 100watts Speakers
- 56k V.90 Internal PCI Voice Fax Modem

Check the quality & service. Call us for a complete quote on system upgrades, parts and products. We will custom make the system to fit your budget and need.

Leasing Available

2 yr. warranty

Govt. & Corp. P.O. welcome

Celeron 466 System: \$999

- Intel Celeron 466MHz Processor
- Gigabyte i810E MicroATX Motherboard
- On-Board AGP Video card (4MB)
- On-Board PCI Audio
- 64MB SDRAM
- Fujitsu 10GB UDMA66 Hard Drive
- 1.44MB Floppy Drive
- TTX 17" SVGA Monitor, 25dpi
- Win98 keyboard
- Logitech Wheel Mouse PS/2
- 15" ATX Tower Case
- Creative 52x IDE CDROM
- 100 Watts Speakers
- 56k V.90 PCI Voice Fax Modem

Upgrade to:

Intel Celeron 500MHz	+\$20
Intel Celeron 533MHz	+\$30
Intel Celeron 566MHz	+\$80
Intel Celeron 600MHz	+\$120

S-Class Systems:

AMD K7 700Mhz	\$1683
AMD K7 750Mhz	\$1735
AMD K7 800Mhz	\$1838
AMD K7 950Mhz	\$2594

Intel Pentium III 600	\$1679
Intel Pentium III 667	\$1730
Intel Pentium III 700	\$1788
Intel Pentium III 750	\$1954
Intel Pentium III 800	\$2148

System Configuration:

S-Class:

- ASUS K7V ATX Motherboard
- w/ on-board PCI Audio

P-Class:

- ASUS P3V4X Mainboard, 133Mhz FSB
- 64MB PC100 RAM
- Panasonic 1.44MB FDD
- Maxtor 13 GB UDMA66 HDD, 2MB, 7200rpm
- 32MB AGP 4X AGP Video card
- 17" Monitor, 25dpi, 1280x1024
- 15" ATX Case with 230W. PS
- Win 98 Keyboard
- Logitech WheelMouse PS/2
- 52x IDE CDROM Drive
- Sound Blaster PCI 128 sound card
- 100Watts Speakers
- 56k V.90 Internal Voice Fax Modem
- MS Windows98 (OEM)

Pentium III G-Class System: \$2718

- Intel Pentium III 667Mhz Processor, 133Mhz FSB
- ASUS P3V4X ATX Motherboard
- 128MB SDRAM PC133
- 1.44MB FDD
- Maxtor 20GB UDMA66 Hard Drive, 2MB, 7200rpm
- ASUS V6600Deluxe 32MB GeForce256 Video card
- Samsung 19" Monitor, 26dpi, 1600x1280
- 15" ATX case with 250W. PS
- Creative 52x CD ROM Drive
- Logitech Internet Keyboard
- Logitech Wheel Mouse, PS/2
- Yamaha 8424 Internal EIDE CD-Writer
- Sound Blaster Live Value Sound card
- Attec Lansing ACS33 Sound system, w/ subwoofer
- USR Sportster 56k Winmodem
- MS Windows98 (OEM)

Prices subject to change without notice. Please call for the current prices.

JRS COMPUTERS INC. Suite 288, 8136 Park Road. Richmond, B.C. V6Y 1T1 Tel : (604) 273-8852 Fax : (604) 273-3186 Email: jrsc@telus.net

Mon. To Fri.: 10:30 - 6:30
Sat. & Sun.: Closed

Call Toll Free 1-877-ME-AHEAD 1-877-63-24323 • e-mail: info@ahead.bc.ca

Surrey Campus - 121-9801 King George Hwy.
Tel: (604) 581-5502

New Downtown Campus Opened - 308-595 Howe Street
Tel: (604) 609-0406

Diploma/Certification Programs:

- E-Commerce Internet Professional New
- Oracle Specialist (DBA)
- Oracle Developer New
- Cisco Networking CCNA/CCNP New
- Web Publishing & Design New
- Network Professional (MCSE/A+)
- Programmer/Analyst (C++/Java/VB)
- AS/400 Programming/Operations New
- A+ Computer Technician
- Multimedia Development Internet / Comm
- Microsoft Certified Solution Developer
- CAD Specialist (AutoCAD)
- Computerized Accounting
- Computer Business Applications

Instructor Led and 1 to 1 Classes
Short Courses: Windows NT/98/95, MS Word, Excel, Visual basic, C++ & Java

Day & Evening Classes

Authorized Academic Training Program

Powered Network

Authorized TESTING CENTER

Academic Initiative

Business Partner

Oracle DBA starting soon. Reserve a seat now for downtown



CSP Computer

439-9100 Fax: (604) 439-9180

Business Hours: Mon-Fri: 9:30am - 6:30pm Sat-Sun: 11:00am - 5:30pm

COMPUTER SYSTEMS

www.cspcomputer.bc.ca E-mail: csp@cspcomputer.bc.ca



-- FREE DELIVERY --

LEASING & FINANCING ARE AVAILABLE

- OFFICE & HOME NETWORKING
- COMPUTER REPAIRING & SERVICE
- WEB PAGE DESIGNING & HOSTING
- CD-WRITER & COMPUTER RENTAL

More than 20 types of Case you can choose for your system!

Super Value - Gigabyte Super7 M.B. 32MB PC100 SDRAM 3 PCI 1 ISA Slot/ 2 USB Ports - Fujitsu 6.4GB UDMA66 H.D. - Integrated 8MB 64Bit 3D AGP - Motorola V.90 56K Modem - AOPEN 40X UDMA CDROM - Integrated 32Bit 3D Sound 1.44 Panasonic Floppy Drive 140W Stereo Speaker - Win98 Keyboard/ Logitech Mouse 15" ATX 250W Mini Tower Case Cyrix M300 / M333 \$489 / 499 AMD K6II 500 / 550 \$519 / 569	Office Assistant - Houston Celeron / PIII Motherboard 3 PCI Slot / 2 USB Port 64MB PC100 SDRAM - Integrated 3D AGP - Fujitsu 6.4GB UDMA66 HD - V.90 56K Modem / 10-100BT LAN - AOPEN 40X UDMA CDROM - Integrated PCI 3D Sound Card - Panasonic 1.44 Floppy Drive 140W Stereo Speaker - Win98 Keyboard/ 2B PS2 Mouse 16" 250W ATX Tower Case Celeron 466/ 500/ 533 \$579/ 589/ 599 PIII 500 / 550 / 600 / 650 / 700 \$739/ 759/ 799/ 829/ 899	Power Station - Matsonic 133MHz ATA66 PIII Motherboard - PC 100 64MB SDRAM 1 AGP 4PCI 2ISA Slot/ 2USB - Fujitsu 10GB UDMA66 HD - Motorola V.90 56K Modem - ATI 3D 8MB AGP Video 48X UDMA CDROM / 1.44 Floppy - Integrated 32 Bit 3D Sound 500W Subwoofer Speakers - MTEK Win98 Keyboard - Logitech PS2 Mouse W/Pad 17" 250W ATX Tower Case Celeron 466/ 500/ 533 \$679/ 699/ 719 PIII 500/ 533/ 550/ 600/ 650 \$869/ 879/ 889/ 939/ 999	Super Power - Gigabyte K7 Athlon Motherboard - PC133 64MB SDRAM - Fujitsu 15GB ATA66 H.D. - Riva TNT2 32MB 3D AGP - Motorola V.90 56K Fax/Voice Modem - AOpen 48X CDROM 32Bit PCI 3D Sound - Panasonic 1.44 Floppy 500W Subwoofer Speaker - MTEK Win98 Keyboard - Logitech PS2 Mouse - Special Cooling Design 18" 250W ATX Tower Case K7 550/ 600/ 650/ 700/ 750 \$979/1019/1029/1069/1129	Super ATHLON - Asus K7V / 200 MHz / 4X AGP M.B. - PC133 128MB SDRAM - Fujitsu 20GB UDMA66 H.D. - Asus Riva TNT2 32MB AGP - AOpen V.90 56K PCI Fax Modem 8X DVD / 1.44 Floppy - Creative SB PCI 128 Sound 800W Subwoofer Speaker - MTEK Win98 Keyboard - Logitech PS2 Mouse w/ Pad - Powerful CPU Cooling Kit - Special Cooling Design 19" 250W Tower Case/ Case Fan K7 600/ 650/ 700/ 750/ 800 \$1269/1279/1319/1369/1459
--	---	--	--	---

UPGRADE OPTIONS

- Upgrade to 64MB RAM\$39
- 15" .28 / .24 SVGA Monitor\$179/189
- Upgrade H.D. to 10.2/15/17G \$15/45/55
- 17" 1280x1024 .27 SVGA Monitor \$249
- Win98 SE/ 2000 Full Version\$129/199
- 10.2G to 15/ 17/ 20GB H.D.\$29/39/59
- AOC 17" .28 / .25 SVGA Monitor \$249/275
- Viewsonic E771/ Opquest Q95 \$309/399
- 64MB to 128MB PC100 SDRAM ...\$79
- CDROM to 4424/ 8432 CDRW \$199/229
- PCI 128 to SB Live Value\$29
- 17" .27 / AOC .26 19"\$249/399
- CDROM to 8X / 16X DVD ...\$135/149
- Riva TNT2 to All-In-Wonder 128 32M \$159

Upgrade Packages

- Upgrade 386 + 486 + Pentium
- To Cyrix MII 300 / 333.....\$199/205
 - To AMD K6II 500 / 550.....\$249/279
- With:
- Houston 598 Super 7 Motherboard
 - 32MB RAM
 - 8MB Video/Sound
 - 56K V.90 Fax Modem
- To Intel Celeron 466 / 500 / 533\$269/ 289/ 299
- To Intel Pentium III 500/ 550 / 600\$459/ 479/ 529
- With:
- Houston Technology M766 Motherboard
 - 32MB PC100 RAM / 8M Onboard AGP
 - 56K v.90/10/100 Lan/PCI 3D SoundCard

MONTHLY SPECIALS

- 32 / 64MB PC100 SDRAM ...\$45/79
- Quantum LM20G 7200rpm HD. \$235
- AOC 17" .25/ 19" .26 Monitor \$279/399
- MS Win2000 Professional\$199
- 10/100 BT PCI Ethernet Card ...\$19
- 10BT 5 / 8 Port Hub\$39/55
- PCMCIA 10/100BT Ethernet ...\$59/89
- 800W Subwoofer Speaker\$45
- 500W Flat Panel Subwoofer ...\$45
- VoodooIII 2000 16MB PCI\$135

Demo Machine For Sale

- PII 233 10G/32M/CDROM/56K/1.44 \$399
 - P200 MMX 3.2G/16M/CDROM/1.44. \$299
- * With KB, Mouse, Sound & Warranty

NoteBook Specials

- Asus 7350 PIII 500/ 6G/ 64MB/ 6x DVD 56K/ Win98/ 13.3 TFT ...\$2769
- Asus 8450 PIII 500/ 6G/ 64MB/ 6x DVD 56K/ Win98/ 14.1 TFT ...\$3319
- Acer 507DX C466/ 4G/ 32MB/ 24x CD 56K/ Win98/ 12.1 HPA ...\$1699
- Acer 507T C466/ 4G/ 32MB/ 24x CD 56K/ Win98/ 12.1 TFT ...\$1799
- Fujitsu E6150 C450/ 6G/ 64MB/ 24x 56K/ Win98/ 14.1 TFT ...\$2899
- Toshiba 4270X DVD C500/ 6G/ 64MB 6X DVD/ 56K/ 14.1 TFT ...\$3239
- Toshiba 4270Z DVD C500/ 12G/ 64MB 6X DVD/ 56K/ 15.1 TFT ...\$3989

Dream Machine

- Asus P3B-F / Abit BE6 Ver.II M.B.
 - PC100 64MB SDRAM
 - Fujitsu 17GB UDMA66 H.D.
 - ATI Expert 2000 32MB AGP
 - Motorola V.90 56K PCI Fax Modem
 - Creative 52X CDROM
 - Panasonic 1.44 Floppy Drive
 - Creative SB Ensoniq PCI Sound
 - 500W Flat Panel Subwoofer
 - MTEK Win98 Keyboard
 - Logitech PS2 Mouse w/ Pad
 - 18" 250W ATX Tower Case
- PIII 500/550/600/650/700 \$1099/1119/1159/1199/1279

CSP Premium

- Asus P3V4X 133MHz Motherboard
 - PC133 128MB SDRAM
 - Quantum LM 7200rpm 20G H.D.
 - ATI Fury Pro 32M/ Video In & Out
 - 3Com USR V.90 56K Modem
 - Pioneer 16X AC-3 DVD ROM
 - Creative SB Live/ V Sound Card
 - Panasonic 1.44 Floppy Drive
 - Altec Lansing 45.2 Subwoofer
 - Logitech Internet Keyboard
 - Logitech Wheel mouse
 - 300W 19" Tower Case
- PIII 500/550/600/700/800 \$1669/1699/1719/1799/2039

Order and pickup at the same day or next day! All above systems come with 1-year parts & 3-year labour warranty and 1 month FREE internet

CPU

- PIII 500 / 550 / 600 (Slot 1).....\$289/299/349
- PIII 650 / 700 / 750 / 800\$389/429/649/969
- PIII 533 / 600 / 800 (PC-133)\$299/349/689
- PIII 600 / 700 / 750 PGA\$329/429/649
- Celeron 466 / 500\$125/145
- Celeron 533 / 566\$155/209
- AMD K6-2 450 / 500 / 550\$79/85/119
- Athlon K7 550 / 600 / 650\$199/259/269
- Athlon K7 700 / 750 / 800\$299/359/449
- Athlon K7 850 / 900 / 1000\$599/859/1999
- CYRIX MII 300 / 333 / 400\$45/52/75
- Intel 200 / 233MMX\$75/85
- CPU Fan AMD/ PPGA / PIII\$8/9/14
- PPGA-Slot 1 Bridge.....\$12

*Call us for the latest prices on CPU & RAM

MOTHERBOARDS

- ASUS P3B-F / P3C 2000\$179/229
- ASUS P3V4X ATA66 133MHz\$165
- ASUS K7M / K7V\$219/229
- ASUS CUV4X with Audio\$179
- ASUS P5A ATX / A-B AT\$129/126
- ASUS P599VM Super7/Sound/Video\$129
- ABIT BE6 II ATA66 / KA7 w/ Audio\$185/219
- ABIT VA6 / VT6\$139/149
- ABIT BF6 / WX6\$169/185
- Gigabyte GA-71XE ATHLON\$179
- Gigabyte Super7 w/ Sound/ AGP\$109
- Matsonic 7112C ATA66 w/Audio\$105
- Microstar MS6182D\$155
- Tyan 1832DL DUAL PIII / 1837\$269/769
- Tyan 2380S with Audio\$215
- Houston Technology
- M8631 IntelI810/SOUND/56K\$89
- M7631 IntelI810/AGP/SOUND/56K/LAN\$109
- M766 AT/AGP Video/PCI SOUND/56K\$105
- M771 PGA&FC-PGA With VGA/Sound\$125

MEMORY

- PC100 32 / 64 / 128MB\$49/82/165
- PC100 256 / 512MB\$359/869
- PC133 64 / 128 / 256MB\$85/169/329
- PC66 32 / 64 / 128MB\$59/99/189
- EDO (72pin) 16/32/64MB\$66/119/189

VIDEO CARDS

- ATI 3D Charger/Xpert98/99 8MB.....\$57/65/85
- ATI Xpert 2000 16/32MB\$109/125
- ATI Rage Fury / Pro 32MB\$165/175
- ATI Rage Fury MAXX 64MB\$309
- ATI All-in-Wonder 16/32MB/PCI\$209/299
- Asus V3800 TNT2 32MB / Ultra\$135/259
- Asus 6600/Delux/ 6800/Delux.....\$259/299/299/369
- Creative TNT2Pro 32M/TNT2 16M.....\$209/99
- Creative GeForce II/ GeForce Pro.....\$399/379
- Matrox G400 32M D.H. / Max.\$209/295
- G400 16M / 32M S.H.\$139/175
- Marvel G200 / G400 TV\$369/399
- VoodooIII 2000/3000 16MB\$139/189
- VoodooIII 3500 TV & FM TUNER.....\$279
- Oxygen VX1 / GVX1\$275/1050
- S3 TRIO 8MB/VoodooIII 16MB PCI.....\$55/135

MODEMS & NETWORKING

- AOpen 56K V90 Win/PCI/ISA\$39/47/69
- AOpen 56K Voice/Fax Ext. Modem\$109
- Motorola 56K V90 PCI\$29
- 3Com USR 56K PCI / ISA\$68/98
- DIAMOND Suprasst 56i PCI\$45
- 3Com 3C905 10/100 BT NW Card.....\$75
- Surecom 10/100BT Network card\$19
- Surecom 5/8/16 Port HUB\$42/55/98
- DLink/3Com905 10/100M PCI.....\$35/75
- DLink 10BT 5/9/12 Port HUB\$59/75/199
- DLink 100BT 5/8/16P HUB.....\$119/159/299
- Tools,RJ45/BNC Crimping.....\$19
- PCMCIA 56K V.90 Fax/Modem\$89

HARD DRIVES & STORAGE

- Fujitsu 6.4/ 10.2/ 13GB\$119/139/155
- Fujitsu 15/ 17/ 20.4GB\$165/175/189
- Quantum 10.2/15/20/30GB\$139/175/199/299
- Maxtor 10/ 15/ 20.5/ 30GB\$136/165/189/249
- WD 6.4/15/20/30GB\$125/169/199/269
- 7200 RPM H.D.
- Fujitsu 13.6 / 20.4 / 27.3GB\$199/229/269
- Quantum LM15/20/30GB\$199/235/389
- Maxtor 15 /27/30/40GB\$185/295/319/389
- IBM Deskstar 15/30/60.....\$219/339/659
- SCSI Ultrall IBM9/18/36G\$349/539/1169
- ATA 66 IDE Cable.....\$9.99
- Panasonic 1.44 Floppy Drive\$20
- Panasonic 2x LS 120 Drive\$105
- Zip Drive 100 / 250M.....\$ 95/169
- Onstream 30GB Int. IDE Tape Drv.....\$409
- Quantum DLT4000 Tape Drv.....\$1999

SOUND & SPEAKERS

- Creative SB16/ Ensoniq / PCI 128\$32/35/43
- Creative Live Value / Platinum.....\$73/249
- SB X-GAMER / MP3\$139/145
- Diamond MX400 OEM / Box\$75/129
- Altec Lansing 45.2 / 48 / 54\$ 95/175/119
- Creative 4PT. Surround Sound.....\$99
- Creative Desktop Theater5.1.....\$359
- 450W Subwoofer / 140W Stereo.....\$35/12

CASES & KEYBOARDS

- ATX 250W 15" / 17" / 19"\$42/46/53
- ATX 24" / AT 230W 15" Case\$79/35
- Fujitsu 8725 KB\$22
- MTEK Win98 KB\$12
- 300W/ 250W ATX/ 230W AT\$49/35/29
- Logitech Cordless Keyboard & Mouse\$129
- Logitech Internet Keyboard\$38
- Logitech PS2/ A4 Tech Serial Mouse.....\$9/8
- Chinese Win98 keyboard.....\$19

CD-ROM & DVD

- AOpen 40x/48x UDMA CD-Rom\$52/57
- Creative 52x\$65
- Sony 48x\$69
- Toshiba 40x IDE / SCSI\$76/136
- Panasonic / Asus / Afreedy 8x DVD\$189
- Pioneer 16x DVD\$219
- Sigma Hollywood Plus DVD DecodeCard.....\$115

CD WRITERS

- Mitsumi / LG / Acer 4x4x24x\$259
- Panasonic IDE 8x4x32x\$289
- HP 8250 / 9110 / 9310I\$259/329/399
- Yamaha 8x4x24x / Box\$299/355
- Yamaha 8424 SCSI Int./Ext.\$399/439
- Yamaha 8424 SCSI Kit for PC & Mac\$499
- Sony 8x4x32 / 10x4x32x\$299/389
- Plextor 8x4x32x/10x4x32x\$339/515

PRINTERS & SCANNERS

- Canon BJ1000/ 2000/ 5100\$79/99/129*
- Epson 440/670/740/860\$109/149/219/239*
- Lexmark Z11 / Z31/ 3200\$99/159/139
- HP 610CL / 840/ 930C\$155/239/309
- HP LJ 1100/ 2100\$559/979
- Samsung QL5100/ 6050\$319/419*
- Acer 320U/ 620P/ 620U\$109/139/45
- Canon 330P/ 630P/ 630U\$95/139/159*
- HP ScanJet 4200C/ 6300 USB\$199 /539
- Microtek X6 Parallel 1200dpi.....\$179
- Printer 2-Way Switch\$16

NOTEBOOK ACCESSORIES

- SDRAM Memory 3.3V 32M / 64M.....\$95/125
- EDO SO DIMM 3.3V 32 / 64M\$139/245
- Toshiba 6.4 / 10 / 12GB\$269/329/390
- IBM 3.2GB / 8.1GB\$ 249/339
- IDE ROM External Case\$89

MONITORS

- ViewsonicE771 / E773/E790\$319/389/525
- GS773/ GS790/G810\$409/599/1159
- P810 / P815 21" .25\$1159/1259
- PF775 / PF790 /PS790.25\$489/689/709
- L700/VE150/VP150 LCD\$1289/1299/1499
- OptquestQ55/Q71/Q95\$229/299/499
- Mac Adapter for Viewsonic Monitor\$29
- Sony E200/E400/E500\$499/749/1469
- Sony G200/G400/G500\$579/849/1559
- Samsung 550S/750S/750B\$185/289/339
- Samsung 700/ 900 NF\$449/659
- Samsung 950P/1100P+\$499/1099
- MAG 786FD/796FD 17" .24\$419/469
- Mitsubishi DScan70/72/900U\$469/549/989
- NEC AS70/FE700 / FP950\$299/399 /799
- ADI 5P/E55/E66/G1000\$269/319/519/1155
- ProviewPX772/PX786/PX986\$269/385/399
- Hitachi CM643/761/811\$599/879/1365
- Panasonic E70/PL70/SL95\$309/489/629

SOFTWARE

- BackupExec V8.0 for Single Server\$796
- BackupExec V8.0 for ExchangeClient.....\$729
- MS NT Server 4.0 SClient\$1029
- NT4.0 Workstation\$269
- Win2000 Server 5 Client\$1780
- Simply Accounting 7.0\$169
- MS Office 97/2000 Pro/SmBus\$159/469/279

CONTROLLER CARDS

- Adaptec 2906/ 2930\$89/139
- Adaptec 2940 Ultra / Ultra2\$259/429
- Tekram DC390F / 390U2W SCSI\$125/269
- ABIT / ASUS ATA66 PCI Card\$59
- Parallel Port Card (Lpt2 & Lpt3)\$25
- USB Port PCI Card\$49

DIGITAL CAMERAS

- Logitech QuickCam Exp./ Home\$69/119
- Epson 7502/800/8502/3000Z\$689/789/1069/1339
- Canon CD300 / S10 Deluxe\$499/929

Call us for prices of other parts not listed. All prices reflect 3% cash discount and are subject to change without prior notice.



ATOP Computer

www.atop.bc.ca

Email: atop@atop.bc.ca

Financing & Leasing Program Available

Surrey Store



Langley Store



Business Hour: Tue-Sun 10am-6pm Monday Close

BBB Member Store

Surrey Location: #10083 136A ST. (E. Whalley Ring Rd.) Surrey BC Tel: 930-4838 Fax:930-4848

Langley Location: #20188 Fraser Hwy. Langley BC

Tel: 514-9130 Fax:514-9133

AMD K6-II-500Mhz	AMD Athlon 700Mhz	Pentium Celeron 533Mhz	Pentium III 677Mhz	PC Quotation
AMD K6-II-500Mhz w/ 3D Now Gigabyte GA-5AX MB w/ATA66 64M PC-100 SDRAM Panasonic 1.44M Floppy Drive 6.4G 5400RPM ATA66 HD Afreedy 50X CDROM Drive ATI Xpert98 8M AGP Video Card X-w ave 3000 Pci Audio Card ESS 56k v90 PCI w inModem 17" ATX case w /250W Pow erSupply Win98 PS2 KeyBoard A4 PS2 Wheel Mouse w /Pad Juster 140W Speaker AOC 17" 7Glr .25mm Monitor (3yrs w ty)	AMD Athlon 700Mhz CPU w /Dual Fan ASUS K7V 133Mhz ATX MB 128M PC-133 SDRAM Panasonic 1.44M Floppy Drive 20G 7200RPM ATA66 HD Creative 52X CDROM Drive RIVA Tnt2 m64 32M AGP4X Video Card Creative SB Live Value Audio Card 3COM USR 56k v90 PCI w inModem 18" ATX Case w /300W Pow erSupply Win98 PS2 Internet KeyBoard Logitech PS2 Wheel Mouse w /Pad GNT5000A Speaker w /Subw oofer(3Ps) AOC 17" 7Glr .25mm Monitor (3yrs w ty)	Intel Pentium Celeron 533Mhz CPU Gigabyte 6VX7-4X PIII MB 64M PC-100 SDRAM Panasonic 1.44M Floppy Drive 10.2G 5400RPM ATA66 HD Afreedy 50X CDROM Drive ATI Xpert2000 32M AGP Video card VIA97 Pro Audio Chip ESS 56K v90 F/V PCI Modem 17" ATX Case w /250W Pow erSupply Win98 PS2 KeyBoard A4 PS2 Wheel Mouse w /Pad Juster 3D-FX1 Speaker w /Subw oofer AOC 17" 7Glr .25mm Monitor (3yrs w ty)	Intel PIII 677 Coppermine 133SB CPU Asus P3V4X PIII ATX MB 128M PC-133 SDRAM Panasonic 1.44M Floppy Drive 20G 7200RPM ATA66 HD Creative 52X CDROM Drive RIVA Tnt2 m64 32M AGP4X Video Card Creative SB Live Value Audio Card 3COM USR 56k v90 PCI w inModem 18" ATX Case w /250W Pow erSupply Win98 PS2 Internet KeyBoard Logitech PS2 Wheel Mouse w /Pad GNT5000A Speaker w /Subw oofer(3Ps) AOC 17" 7Glr .25mm Monitor (3yrs w ty)	Visit our web site : www.atop.bc.ca for online PC quotation. We hope you find this PC quotation to be valuable information for you.
\$989	\$1799	\$1189	\$1799	

MS Window 98 2nd Edition CD & Manual Add \$139Window 2000 CD & Manual Add \$209 w/Systems Only

All systems come with Three years labor & one year parts warranty.

► Please call us or visit our web site www.atop.bc.ca for current prices ◀

Mainboards	CPU & RAM	Drives	Video	Monitor
AMD K6-II Super 7 M/B Asus ATX P5A/P5A-B.....\$129/125 Epox MVP3 AT.....\$129 Epox MVP3-G2 w /ATA66.....\$149 Gigabyte GA-5AA AT w /ATA66.....\$110 Gigabyte GA-5AX ATX w /ATA66.....\$115 Pentium Slot1 PIII & Celeron M/B Asus P299B/P3B-F.....\$149/189 Asus P3VB/4X.....\$129/169 Abit BF6/BE6 II.....\$169/195 Abit VA6/VT6 w /Audio.....\$129/159 Gigabyte GA-BX2000.....\$149 Gigabyte GA-6VXE+ ATX.....\$115 Gigabyte GA6VX-4X w /Audio.....\$145 Socket 370 PIII & Celeron M/B Abit P6B Dual Celeron ATX.....\$215 Asus CUV4X.....\$179 Asus CUBX.....\$199 Gigabyte GA-6VX7+.....\$115 Gigabyte GA-6VX7-4X w /Audio.....\$145 Asus converter Board\$25 AMD Athlon SlotA M/B Asus K7V ATX w /Audio.....\$239 Asus K7M ATX\$215 Abit KA7 ATX.....\$229 Gigabyte GA-7IX ATX\$179 Modems & Sound Aopen V.90 56k w in PCI.....\$49 Creative V.90 56k w in PCI\$49 ESS V.90 56k w in PCI.....\$29 GVC V.90 56k w in PCI.....\$49 USR V.90 56k PCI w in.....\$69 USR V.90 56k PCI Hardw are.....\$110 Sound Aureal 8820/8830/Digital.....\$39/53/75 Aureal SQ1500/SQ2500.....\$105/145 Creative PCI 128/Live Value.....\$55/79 SB Live MP3+/X-Gammer.....\$139 SB Live Platinum.....\$269 Xw ave 3000 PCI 128\$25	Call For latest prices CPU Pentium w/Fan Celeron 500/533/566.....\$160/180/200 PIII600/650/667/700.....\$360/380/400/450 PIII733/750/800.....\$500/600/700 PIII 850/866.....\$900/950 CPU AMD w/Fan K6-II-450/500/550 w /Fan.....\$95/105/139 CPU AMD Athlon w/o Fan K7 650/700/750.....\$265/310/390 800/850/900.....\$500/50/950 Athlon Dual fan.....\$25 SDRAM 32/64M PC-100 SDRAM.....\$59/89 128/256/512M PC-100\$165/340/790 64/128M PC-133.....\$105/180 256/512M PC-133.....\$360/850 64/128M PC-100 w /ECC.....\$109/199 CD & DVD CDROM Asus 50X.....\$79 Creative 52X.....\$69 50X CDROM IDE.....\$59 DVD ROM Creative 8X DVD kit.....\$359 8X DVD/10X DVD.....\$189/199 Pioneer 16XDVD.....\$229 Sigma PCI Decode Board.....\$139 CD Writer Creative 8432 8x/4x/32x.....\$349 HP 8210e External USB cdw riter.....\$399 HP 9310i 10X cdw riter.....\$409 HP 8250/9310i cdw riter.....\$269/385 HP 9210i 32x/4x/8x SCSI cdw riter.....\$389 Panonic 32X/4X/8X IDE cdw riter.....\$309 Plector 8432 IDE CDRW.....\$349 Yamaha 8424VK IDE/SCSI.....\$379/399 Yamaha 8424 SCSI PC Kit.....\$479 Sony 32x/4x/8x IDE/SCSI Kit.....\$419/399 74 Min/80min CD-R.....\$2/2.5 CDRW Disk.....\$5	5400rpm Drive Fujitsu 6.4/8.4G.....\$129/139 10.2/13/17/20G.....\$149/170/190/205 Maxtor 15/20.....\$180/205 Maxtor 30/40/60G.....\$279/379/499 W.D. 6.4/8.4.....\$135/145 W.D. 10.2/13G.....\$159/179 W.D. 20G/30G.....\$219/325 7200rpm Drive Fujitsu13G/20/27G.....\$199/249/319 Quantum LM 15G/20G.....\$219/259 W.D. 15/20.....\$225/259 Maxtor 13/15/20/.....\$199/209/249 Maxtor 30/40G.....\$329/429 SCSI Fujitsu 9.1/18G.....\$509/799 W.D.9.1/18G.....\$499/749 Floppy & Zip Panasonic 1.44M Floppy.....\$22 Panasonic LS120 Int.....\$99 IOMEGA Int. Zip 100/250M.....\$85/185 100M Zip Disk/120MLS Disk.....\$12/16 Misc. Mouse Logitech 2B/w heelmouse.....\$9/19 MS intellimousePS2/Cordless.....\$29/59 Keyboard Logitech Cordless I-touch K&M.....\$129 w in98/Internet Keyboard.....\$15/35 MS/Natrual Elite keyboard.....\$45/25 Case 17"/19" ATX Case w /250w\$50/60 18"/19" ATX Case w /300w\$85 Speakers Juster 140W/320W speaker.....\$14/31 Altec ACS54 w /Sub 5ps.....\$105 Creative FPS1000/2000.....\$109/229 Yamaha M30W.....\$89 Juster 3D/FX1 w /Subw oofer.....\$57/40 GNT5000A w /Subw oofer.....\$59	ATI Xpert98/99 8M AGP.....\$69/99 Xpert128 16M/2000 32M.....\$120/129 All-in-w onder 8M/128 16M.....\$169/235 All-in-w onder 128 32M.....\$329 Rage Fury 32MPro.....\$189/219 ATI Rage Maxx 64M.....\$269 Diamond Viper IZ200 32M S3 Savage2000.....\$249 Savage4 S540 16M/32M\$99/145 Matrox G400 32M Dual Max.....\$285 G400 Single/Dual 16M.....\$159/179 G400-TV 16M AGP.....\$399 Creative Annihilator GeForce2 32M.....\$479 3Dfx VoodooIII 2000/3000 AGP.....\$145/185 VoodooIII 3500-TV 16M AGP.....\$269 Voodoo5 64M AGP.....\$449 Other Asus V3800Tnt2/Del 32M.....\$189/239 Asus V3800Ultra/Del 32M.....\$215/265 Asus V6600 Deluxe 32M.....\$365 Asus V6800 32M DDR Pure.....\$365 Asus V6800 32M DDR Deluxe.....\$419 Asus V7700 Pure 32M.....\$499 S3 Trio3D/2X 4M/8M AGP.....\$42/59 TNT2 m64 32M/TV.....\$119/139 Network & SCSI Ethernet Card & Cable 3COM 3C905TX 10/100 PCI.....\$79 D-Link 530TX+ 10/100 PCI.....\$29 Surecom 10M/100M PCI.....\$17/19 Surecom 5ports Hub/8ports.....\$45/55 Surecom 5ports 100M Hub.....\$99 RJ45 Cat5 Cable (1' to 15').....\$10 SCSI Adaptec 2903.....\$95 Adaptec 2930 w /50pin Cable.....\$149 Adaptec 29160 SCSI card.....\$469	ADI 17" View point .28dpi.....\$309 17" GT56/G700.....\$389/449 19" G910.....\$739 AOC 15" .28dpi 1024X768.....\$199 17" 7Glr .25mm 1600X1200.....\$295 19" 9Vlr .26dpi 1600x1200\$409 NEC 15" AS70 .27mm 1280X1024.....\$319 17" FE700/FE750 .25mm.....\$429/539 19" AS90/FE950.....\$589/739 Panasonic 17" E70V/SL75/PL70.....\$329/409/499 19" SL95 .25dpi 1600X1200.....\$649 Sony 17" E200/G200 .24mm.....\$549/609 19" E400/G400 .24mm.....\$789/879 Samsung 17" 750S .27dpi.....\$309 17" 700NF .25mm.....\$409 after\$50rebate 19" 900NF .25mm.....\$629 after\$50rebate Optiquequest 17" Q71/Q75.....\$329/429 19" Q95/21"Q115.....\$529/1029 ViewSonic 17" E771/G773/PF775.....\$329/399/499 19" E790/GS790/PF790.....\$539/619/699 21" P810/P815.....\$1219/1329 Printers & Scanners Canon BJC 1000/2000SE.....\$99/129 Canon BJC 5100/6100.....\$209/329 Epson 440/660/760.....\$159/199/239 HP 610/840/930C.....\$149/239/389 Lexmark Z11/Z31/Z51.....\$109/189/255 Lexmark 5770 photo.....\$379 Scanners Acer 640p/640u.....\$145/155 Canon 330p/630U.....\$129/199 Epson 610/636U.....\$219/279 HP scanner

*Prices based on Cash/Interac/Draft.*All Prices reflect 2% cash discount*Prices are subject to change without notice*Limited quantity*

Not responsible for any typographical error

Home networking: Part 1

Continued from page 93

bers: A, B and C. In this column we'll only concentrate on Class C, the most popular class for small networks (any good network book will explain the difference in TCP/IP network classes).

The Internet standards bodies have reserved 192.168.0-255 for private use. That means that for your home network, you can choose any range from 192.168.0 to 192.168.255. That's 256 choices (0-255). Within each of these networks, you can have 256 devices attached. Actually it's only 254 choices because the first and last number of the range are almost always reserved.

If you've not set up a home network before then just follow this recipe: your home network is going to be 192.168.0.0-255. The address 192.168.0.0 is reserved as your "network" address and 192.168.0.255 is reserved as your "broadcast" address. By convention, you should also reserve 192.168.0.1 as your gateway address. Make this the address of your Linux box, or the Linux box you intend to use to connect to the Internet if you have more than one Linux machine.

In a Class C network, the subnet mask is 255.255.255.0. I'm going to skip the mathematics involved with subnet masking. You can look it up in a networking book if you are interested (and it really is quite interesting, if you enjoy knowing how things work).

So, let's say your home network consists of a Linux box, a Windows 95 PC and a Windows NT workstation. Make Linux 192.168.0.1. Assign Windows 95 192.168.0.2 and Windows NT 192.168.0.3. All have the subnet mask 255.255.255.0. (You can do this with Macs too, but I don't have a Mac, so can't offer details.)

For Red Hat Linux, you can enter the IP number and subnet mask via the X Window Control Panel, by Linuxconf, or by the command-line program netconfig. (Once you get to know networking better, you can do this by hand, editing the networking scripts directly.)

For Windows, use Control Panel, Networking to set the fixed IP Address and

subnet mask. You should give your network a bogus domain name—something that would never be recognized as valid on the Internet. For example, I call my private domain "mynet.all" and my boxes are given names such as "darwin.mynet.all", "wallace.mynet.all", "austen.mynet.all" and "gamer.mynet.all".

We'll assume at this point that you're not yet on the Internet with your entire network, so leave DNS server blank. We'll also assume that you also don't have a DHCP (dynamic host configuration protocol) server—at least not yet.

Once you've filled in these values a few times, it becomes second nature.

Fixed vs. Dynamic IP

After you've gained some experience with home networking, you may want to experiment with DHCP, or the automatic assigning of IP numbers to your non-Linux systems. Linux comes with an excellent DHCP server that eliminates the need to hard-code IP addresses onto all the workstations.

For a home network, hard coding IP addresses is really not a big deal, but having DHCP can be very beneficial if you have a portable PC from work that you want to plug into your home network. It makes your home network very versa-

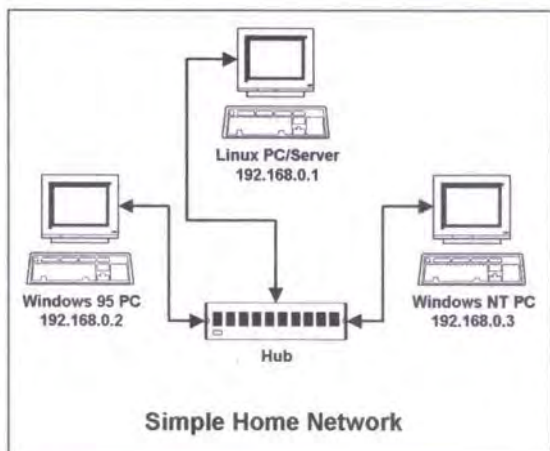
tile, particularly if you plan to connect your home network to the Internet.

Connecting it all together

Once you have all the hardware connected and all the IP addresses entered, your home network should look similar to the diagram. Now for the magic moment. Reboot all your systems so that the networking information is active. Now log into your Linux box. If your Windows PC has been assigned 192.168.0.2, type the following from Linux:

```
$ ping 192.168.0.2
```

Perhaps no thrill in computing is as great as the one you get when you first see the machines on your home network successfully ping one another.



Now go to your Windows PC, open a command prompt and type:

```
C:\>ping 192.168.0.1
```

Congratulations! You have connectivity.

Unless you want to create a DNS (domain name service) on your Linux box to study DNS (a perfectly fine goal), you can keep name resolution simple by adding host tables to the workstations on your network.

In Linux, the host table is /etc/hosts. If your PC is named "charlie" and your Linux machine is named "parker", edit /etc/hosts and add the following:

```
192.168.0.1 parker parker.mynet.all
192.168.0.2 charlie charlie.mynet.all
```

If you have more than two machines, add an entry in the hosts table for each workstation on your network.

For Windows 95 or 98, add an identically configured text file called HOSTS in your windows\system directory. On NT add it to \winnt\system32\etc.

Once you have this in place, you can ping any address machines by name. The hosts table converts names back to IP addresses:

Continued on page 108

2000 Special

FLY COMPUTERS

521 W. 57th Ave. (Cambie at 57th)
Vancouver, B.C. V6P 1R8
Tel: 321-8795 Fax: 321-6516
E-mail: flycom@flycompu.com
Website: www.flycompu.com

Hot Price

\$899

AMD K6II 500
EM 5598 Super 7 Main Board
64MB PC100 SDRAM
6.4GB HD
8M SIS 2X AGP Video
1.44MB FDD/ 40X CDROM
3D Wavetable Sound Pro
56K V/F/D V.90 Modem
125W Speakers/Tower Case
107K WIN98KB/2B Mouse w/Pad
2 USB Port
15" SVGA Monitor
36bit 600x1200 dpi Scanner
Canon BJC1000 Color Printer
AMD K6II 550

\$949

Services, Components, Systems & much more...

Visit us at **www.flycompu.com** for details

Special Printer Ink and Toner refill Package

Service Printer Ink and Toner refill Service

Offer!

all available now at FLY Computers, you can save more than 50% of new cartridge or toner cost.

Notice: Price reflect 3% cash discount and subject to change without notice.

MUTUALTECH Canada

Committed to our Clients

Mutualtech Canada is a large computer component distributor, with over 25 years industry experience. Commitment to our clients is our first priority, and we welcome your business - large or small.

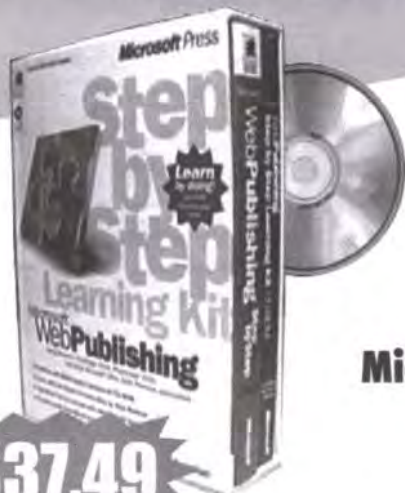
With offices strategically located across Canada as well as a solid relationship with affiliates worldwide (Hong Kong, Calif., Singapore), we are well positioned to provide fast and efficient service. This enables us to source the product you need, at the time you need it.

Eastern Canada: **4-501 Alden Road**, Markham, ON L3R 3L4
Phone: **905-415-8461** • 1-877-399-2719 Fax: **905-415-8462**

Western Canada: **170-4320 Viking Way**, Richmond, BC V6V 2L4
Phone: **604-279-9888** • 1-877-792-0476 Fax: **604-279-8727**

email: sales@mutualtech.com

Microsoft Web Publishing Step by Step Learning Kit



\$37.49

Reg: \$74.99

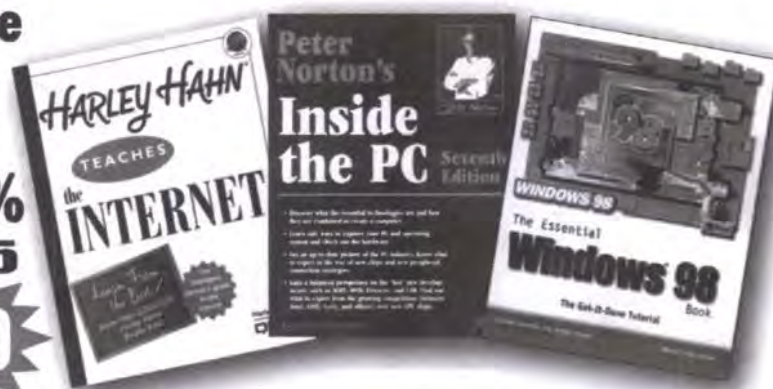
This book and CD-ROM self-paced training kit provide instructions to use FrontPage 2000, PhotoDraw 2000 and more!

Windows 98 Bundle

Harley Hahn Internet
Peter Norton's Inside the PC
Essential Windows 98

**Save Over 80%
Valued at \$106.85**

\$19.99



Microsoft Office 2000 At a Glance

Reg: \$29.99

\$14.99



The fast, visual way to quickly get productive using Office 2000.

Easy PCs 5th edition

Reg: \$28.95

\$6.99



This Visual guide uses pictures rather than lengthy explanations to teach you about PCs.

HALF PRICE COMPUTER BOOKS

Richmond
122-4940 No.3 Rd
231-1922

Vancouver
520 West 8th Avenue
876-1007

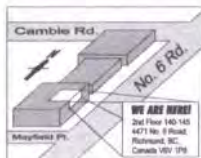
Burnaby
4269 Lougheed Hwy
291-1033

Victoria
160-2950 Douglas Street
(250) 361-4846

TOLL FREE 1-888-663-0063

www.halfpricecomputerbooks.com

140-4471 No.6 Road, Richmond, BC, Canada V6V 1P8
Tel: (604) 821-1228 Fax: (604) 821-0813
Web: <http://www.dmac.bc.ca>
Email: sales@dmac.bc.ca
Hours: Mon-Fri 10am - 6pm, Sat 1pm - 5pm



**discount
MAC CLUB**



Authorized
Value Added Reseller

Educational Software:
Electric Image, Symantec, Macromedia, NetObjects, etc.
Special Authorizations:
Maxon, La Cie, Hammer Storage, Terran Interactive, Steinberg, etc.

All prices reflect 2% cash-discount and are subject to change without notice.
All brands, logos, and trademarks are the properties of their respective holders.

400MHz iMac DV Promo Package

Apple Color iMac DV
400MHz G3 PowerPC Processor
512K Backside L2 Cache
128MB Memory
AGP 2x, 8MB Video SGRAM
10GB Hard Drive
Slot-loading DVD-ROM Drive
Internal V.90 56K Modem
10/100BaseT Built-in Ethernet Port
15" ColorSync Display
Stereo Speakers by Harman Kardon
Two USB Ports
Two Firewire Ports
USB Keyboard and Mouse
MacOS & Software Bundle
Epson Stylus Color 740 Inkjet Printer
(Bonus: US\$50 Mail-in Rebates)



\$1999

Leasing Available

Power Macintosh G4 Package

Apple G4 / 400 Minitower
400MHz G4 PowerPC Processor
1M Backside L2 Cache
192MB PC100 SDRAM
10GB Hard Drive
DVD-ROM w/ Video Playback
ATI Rage 128 Pro w/16M AGP 2x
10/100BaseT Built-in Ethernet Port
Internal V.90 56K Modem
Two USB Ports
Three High-Speed Firewire Ports
USB Keyboard and Mouse
Mac OS 9
Internal 100MB Zip Drive
Internal PCI SCSI Card
Apple 17" Studio Display



\$3299

Leasing Available

iBook - the Portable iMac Package

Apple 300MHz G3 iBook
300MHz G3 PowerPC Processor
512K Backside Level 2 Cache
12.1" TFT Active Matrix Display
128MB Memory
4MB Video SGRAM
6GB Hard Drive
24x-speed CD-ROM Drive
10/100 BaseT Built-in Ethernet Port
Internal K56Flex/V.90 56K Modem
Single built-in mono speaker
16-bit stereo sound output
One USB Port
Optional 11-MBS Air Port wireless networking card
Apple Trackpad
Software Bundle
Apple AirPort Card for wireless network



\$2649

Leasing Available

Firewire PowerBook G3/400

Apple G3/400 PowerBook
400MHz G3 PowerPC Processor
1MB Backside Level 2 Cache
14.1" TFT Active Matrix Display
128MB Memory
8MB Video SGRAM
6GB Hard Drive
DVD-ROM w/ Video Playback
10/100 BaseT Built-in Ethernet Port
Internal K56Flex/V.90 56K Modem
S-Video and VGA Output
Two USB Ports
Two Firewire Ports
One PC Card Slot
Infrared technology port (4-Mbps IrDA)
Apple Trackpad
Apple AirPort Card for wireless network



\$3899

Leasing Available

New Arrival

Adobe InDesign 1.5 1099
Apple 22" Cinema Display 5999
LaCie PocketDrive 6G/18G 599/1099
Monsoon MM-700 Flat Speakers 199
Adaptec 29160 Ultra160 SCSI Card 449
Xircom 4-port USB PCI Card 69
Connectix Virtual PC w/ Win 2000 479
iProof PowerRip 2000 349
Intego Net Barrier (Firewall Software) 115
Apple Works 6 125
Harman Kardon iSub 149
Mac OS 9 135
IBM Via Voice 125
Epson 5700i USB Laser Printer 599
Norton Util 5 and Anti Virus 6 Bundle 169
Wacom Graphire 4x5 USB Tablet 139
IREZ Ritter USB Camera 169

USB Devices

Epson Stylus 740i (After US\$50 Rebate) 189
Epson Stylus 740 (After US\$50 Rebate) 165
Epson Stylus Photo 1270 USB Inkjet 719
Epson Stylus Photo 870 USB Inkjet 439
Microtech USB-SCSI Adapter 105
Brother HL-1050 USB Laser Printer 599
Logitech QuickCam VC 109
Gravis Gamepad Pro USB 39
Iomega 250MB Ext. USB ZIP Drive 259
Macally iMouse 35
Macally iBall 50
Macally iKeyboard 65
Interex 4-port USB Hub (New Low Price) 39
Agfa SnapScan 1212U Scanner 169
AsanteTalk Ethernet to LocalTalk 149
PowerPrint USB/Parallel Cable 149
Logitech USB Wheel Mouse 55
Keyspan USB/Serial Adapter 110
iDock iMac Stand 239

SCSI Cards

Adaptec 2930U SCSI Card 139
Adaptec 2906 SCSI Card 79
OrangeMicro 930U SCSI Card 125
Adaptec 29160N Ultra160 SCSI Card 449

Lifetime Warranty Memory

32MB 72pin SIMM 139
32MB 168pin DIMM 169
64MB 168pin DIMM 329
64MB SDRAM 99
128MB SDRAM 199
256MB SDRAM 399
32MB SO-DIMM 79
64MB SO-DIMM 119
128MB SO-DIMM 229
256MB SO-DIMM 499

CPU Upgrade

Cresendo 240-250MHz/512K L2 G3 299
Cresendo 240-266/512K NuBus G3 299
Cresendo 300MHz/512K PCI G3 299
Cresendo 450MHz/1M PCI G4 999
XLR8 Mach Carrier G3 400MHz 719
XLR8 Mach Carrier G4 350MHz 1079
XLR8 Mach Carrier G3/G4 PCI Card 219

Modems

Apple Int. 56K Modem 149
Global Village Int. 56K Modem 149
Bestdata USB Ext. 56K Modem 149
USR Sportster Ext. 56K 139
Global Village Teleport Ext. 56K 139
Diamond SupraExpress Ext. 56K 129
Viking 56K PC Card Modem 169

Storage Devices

LaCie 4x4x24 USB CDRW 449
Iomega 250MB Ext. SCSI Zip Drive 249
Iomega 2GB Ext. Jaz Drive 499
IBM Ultrastar 9.1GB UltraSCSI HD 449
9.2GB Barracuda Ultra160 SCSI HD 399
18.4GB Barracuda Ultra160 SCSI HD 599
Yamaha 8424 CDRW Ext. w/ Toast 4 599

Network Cards/Hubs

Asante 10/100 PCI Ethernet Card 75
Asante 10BT NuBus Ethernet Card 129
Asante 10BT PDS Ethernet Card 119
Asante 10BT ComSlot Ethernet Card 109
Netgear 4-port 10BT Hub 59
Allied Telesyn 8-port 10/100BT Hub 489

Oldmac.com



GRAND OPENING
Exclusively sponsored by Discount Mac Club, Oldmac.com is a Used Macintosh Systems and Peripherals Exchange Center for the Greater Vancouver Macintosh Community. The service is absolutely FREE.

Visit www.oldmac.com today and browse through the best deals online. Or simply register with us and you may start advertising your equipments in just a split second.

iTools

With iTools, you can make the Internet safer for your children, email friends with your new @Mac.com email account, share your photos and iMovies, and even create your own web site. Best of all, iTools are free for Mac OS 9 users. Get a copy of Mac OS 9 now and sign up at www.Apple.com today! Mac OS 9 - \$135

New URL

You may now visit our web site at our new domain:
<http://www.dmac.bc.ca>

Email:
sales@dmac.bc.ca

Love bug a wake-up call

Continued from page 89

increasingly dangerous because they "require no state sponsorship, and use commercially available equipment and facilities."

The love bug is a good example this. Reports suggest that the virus was the work of a student in the Philippines and was based on a rejected thesis project for his computer class. The program was created to steal passwords and Internet access. The suspect has denied that he deliberately sent the virus, although he has suggested that the virus may have been released "accidentally."

And a diligent search on the Internet will reveal many other programs that can be downloaded and used to attack systems.

While the Senate report would only say there was currently no evidence that Canadian systems had suffered a major cyber-attack, it did suggest that had been several "minor incidents," but it did not elaborate further.

Because of the growing cyber-terrorism threat, several levels of Canada's federal and provincial governments have begun to actively look at ways to defend Canada's critical infrastructure and computer systems.

"What we have done is develop an operational program, to investigate this issue and to identify any threat to Canada's critical information infrastructure," CSIS's Comeau says. "We look at three elements: the actor or person behind the attack—it has to be a foreign government or someone acting on the behest of a foreign government; the second is a terrorist, [one] who belongs to a recognizable group; the third would be politically motivated extremists."

Comeau says his division is not concerned with groups that use the Internet to disseminate propaganda or to recruit members. Such activities would fall under the mandate of other branches of CSIS.

"What we look at is an attack against something," Comeau says. "We are here to protect Canada's critical infrastructure from attack. If somebody is attacking a federal computer system for sabotage, to remove information or to disrupt it, that would be something that would trigger interest from our unit."

One of the issues that agencies like CSIS have to deal with is identifying exactly which parts of Canada's information technology infrastructure are critical or sensitive and, therefore, in need of close monitoring. To address this, the federal government recently created the Critical Infrastructure Protection Taskforce whose task is to not only identify critical systems, but to formulate a coordinat-

ed plan of action for the defence of those systems. The taskforce grew out of the Y2K taskforce that investigated the readiness of Canada's computing infrastructure for the year 2000 turnover. In 1999, the concern was whether critical infrastructures might be disrupted by the date change, and if so, what the social and economic repercussions would be.

"Critical infrastructure is in our view both physical and cyber-based infrastructures whose disruption or destruction would impact on the health, safety or economic well-being of Canadians and have a negative effect on the workings of the government," says James Harlick, executive director of the Critical Infrastructure Protection Taskforce in Ottawa.

Started in April, the taskforce should present its first report this fall.

Paul Teeple, the officer in charge of the technical security branch at the Royal Canadian Mounted Police (RCMP) in Ottawa, says his group has not come across any incidents of an organized attack against a critical system that was perpetrated by a known extremist group or foreign government. While he suggests the potential for such an attack exists, he says attacks from organized criminal groups that have discovered the power of the Internet to both make money and cause harm are more likely.

"There are access attempts that have come from various countries," says Teeple. "We have had some that have come from Russia and these may be individuals as opposed to governments. And just about anywhere in the world we have had access attempts."

Another growing area of concern for security experts is industrial espionage.

Industrial espionage

Today, information is just as valuable a commodity for companies as the physical goods or the services they provide to customers. Getting access to sensitive corporate information can sometimes mean the difference between losing a major bid on a contract or gaining a foothold in an emerging market.

Sometimes this kind of espionage is not simply one company spying on another. It may also involve a country using its intelligence resources to penetrate a foreign business's systems in order to get information that their domestic companies can use to their advantage.

Recently, the European Parliament was presented with a study, *Interception Capabilities 2000*, that suggests the U.S. government has used its Echelon surveillance project, and possibly other security agencies, to gather critical business information on European companies.

Continued on page 108

**NIPPON TECHNOLOGY INC.**
#233 - 13986 Cambie Road
Richmond, B.C. V6V 2K3
Tel: (604) 214-9828
Fax: (604) 214-9829



14" ~ 21" ACER, KTX, ADi, NEC, SONY, DAYTEK, VIEWSONIC.....Free estimates.....

We Repair CD-ROM, DVD-ROM

— Tickets to career advancement in the computer industry today. —



MCSE
(Microsoft Certified System Engineer)
MCDBA
(Microsoft Certified Database Administrator)
MCSO
(Microsoft Certified Solution Developer)
Java 2 & C++

EXTRANC Technologies Inc.

www.extranc.com

E-mail: info@extranc.com

- Fast Pentium Workstations and Servers with 17" monitors (1 Student 1 Computer)
- **Certified** and Experienced Instructors (Microsoft Certified Trainers)
- Flexible week day/evening, weekend schedules
- Class Starts Every Month

APPLY NOW and RESERVE YOUR SEAT!

We Will Beat Any Competitor's Advertised Tuition Fee!

8 2 1 - 1 1 1 4

Unit 1355-8888 Odlin Crescent Pacific Plaza, Richmond, BC

www.intelligentbatteries.com

• Canada's #1 Source For Rechargeable Battery Packs •

• Notebooks • Camcorders • Cell Phones • Cordless Power Tools •

2120-13700 Mayfield Place, Richmond, BC V6V 2E4 Toll Free: 1-888-882-9977 or 604-207-0567

Marketplace

MONITOR REPAIRS

Let The Specialists Handle It

WARRANTY CENTRE FOR WESTERN CANADA



ALL BRANDS WELCOME

FULL OR OUT OF WARRANTY REPAIRS: MONITORS, SCANNERS

CYBERTEC INDUSTRIES INC.

TEL: 233-1000

#108-3840 JACOMBS RD. (BEHIND IKEA)
RICHMOND, BC V6V 1Y6

FAX: 233-1001

WWW.CYBERTEC.BC.CA

Portable World
BUY RELIABILITY!
BEST TOSHIBA PRICES IN CANADA
Call Now! (604) 303-8609 • Toll Free 888-222-8082

TOSHIBA SATELLITE 2655DVD
Intel Celeron 466MHz CPU, Super Brilliant 14.1" TFT Color Display, 64MB RAM, 8.0GB HDD, All-in-One Design, DVD-ROM & FDD, Built-in 56K Fax/Modem, Li-Ion Stereo Sound, Universal AC Adapter, MS Outlook, Encarta 99, Norton Anti-Virus, Quickset, Win 98 & more for only \$114/mo!

BEST EVER! \$2990
Lease for only \$113/mo!

Model	CPU/Batt./CD/Modem	RAM/HDD	Display	Res.	Wholesale	Our Price	Lease
Tecra 8100	PIII 500/Li/DVD/56K	64MB/12.0GB	TFT 14.1"	XGA	\$6290	\$5090	\$193/mo
4260XDVD	PIII 450/Li/DVD/56K	64MB/12.0GB	TFT 14.1"	VGA	\$4390	\$3990	\$151/mo
4300XDVD	PIII 600/Li/DVD/56K	64MB/12.0GB	TFT 14.1"	XGA	\$4990	\$4690	\$178/mo
2655DVD	Cel 466/Li/DVD/56K	64MB/6.0GB	TFT 12.1"	VGA	\$3390	\$2990	\$113/mo
2610DVD	Cel 433/Li/DVD/56K	64MB/6.4GB	TFT 12.1"	VGA	\$2449	\$2349	\$89/mo
2590CDT	Cel 400/Li/24X/56K	32MB/4.8GB	TFT 12.1"	VGA	\$2590	\$2199	\$83/mo
Acer 340T	PIII 450/Li/24X/56K	64MB/6.0GB	TFT 12.1"	VGA	\$2999	\$2799	\$106/mo
Acer 735TLV	PIII 850, Li, DVD, 56K	128MB/12.0GB	TFT 15.0"	VGA	\$4699	\$4399	\$167/mo

All Toshiba and Acer notebooks come with 1 year warranty parts and labor except 3 year for Toshiba Tecra 8100DVD. Free delivery to major centers in BC. Complimentary on-site service within Greater Vancouver. Lowest 36 month lease rates. Fast 4 hour apply & approve by fax. \$10 buy out. All advertised models in stock. Sale prices subject to change without notice. Same day parts and service.

BeeSee.com
Technologies

3181 Main Street
(at Main & 16th)
Vancouver, BC
V5T 3G8

Super Prices !!!
Visit our Web Site:
BeeSee.com
Tel: 871-1198

- All Computer Parts
- All Software Open WEEKENDS!
- PC & Video Games
- PC Repairs
- Network Design Build Custom PC \$\$\$ SAVE \$\$\$
- +++ Qualified Service !!!

www.LaptopCloseout.com

Canada's Clearance source of:
Used & Refurbished Laptops
for pricing and availability please call or visit website
1-800-473-7991

CANADA A-BEST is the branch of manufacturing and distributing A-Best company in Taiwan, provide competitive price for more than 200 kinds of computer peripheral.

CALL GLOBAL & PAY LOCAL!
IP STAR 290 INTER STAR \$445

CONFERENCE SPEAKERPHONE.....	\$149
USB Hub(4/5/7port).....	\$51/\$61/\$77
USB Bay(3USB+1par.+1ser. Ports).....	\$130
USB to IEEE-1284 Printer Cable.....	\$48
USB to Ethernet 10BaseT/100 BaseT Adapter.....	\$61/67
USB PCI Card (2 port).....	\$31
USB Manual Switch (4 port).....	\$31
USB to Modem Adapter.....	\$49
USB to PS/2 Adapter (2 port).....	\$35
USB to MAC (Mac + PS/2 port).....	\$35
USB to Geo/Serial(MD9/8pin)port.....	\$127
USB to RS232 Converter (2 in 1).....	\$42
USB Expender (2 port).....	\$41
PC to TV Converter (1024x768).....	\$195
Video Splitter(2/4/5/8port).....	\$49-\$119
KVM Switch(2/4/8/16port).....	\$131-\$1318
Video Switch (2 to 1).....	\$59
Video Extender (150 m).....	\$195
CPU Switch(1 to 2/4/6/8/16).....	from\$116
CPU Sharing Device(2/6 console to 1).....	\$119
Digital Home Video Laboratory.....	\$129
Console Extender (80 m).....	\$167
Console Converter (Mac & Sun).....	\$119
Parallel Auto Switches.....	from\$19
Serial Auto Switch(2/4 to 1).....	\$21/\$38
Monitor sharer (face off MAC/PC.....	\$94
IP Shaping Devices.....	from\$259
PC Ethernet Transceiver.....	\$47
Mac Ethernet Transceiver.....	\$57
PC Modem Sharer(4 port).....	\$97
Terminal-Host Modem Splitter (3/6 port).....	\$45/\$52
24PC to 8 Printer sharing Network.....	\$67
LAN Tester /UTP Cable Tester.....	\$79 /189
PC-HUB Tester.....	\$65
Modem Guard.....	\$45
LAN Cable Tester & Tracker.....	\$87
RJ48/45/11 Cable Tester-Tracker.....	\$115
Compact Flash Buffer.....	\$141
Portable Hard Disk.....	\$94/139

CANADA A-BEST www.a-best-ltd.com
Tel.(604) 207-7776 Fax(604) 207-7779
120-8771 Douglas St. Richmond, B.C. V6X 1V2
E-mail: cabest@infoserve.net

**Don't miss !
another issue!**

**Call now to
start your
subscription
today!**

The **ComputerPAPER**
A Reader's Digest Publication Canada's Computer Information Source



1-800-465-3517

COMPUTER MEDIA SUPPLIES & PRODUCTION CENTER

Product:

3.5" Floppy Diskette, CDR, Zip, Jazz, Dat Tape & more
3.5" Diskette Case, CD Jewel Case, Envelope, CD Profile, Rack, Tower
CD & Diskette Label (Laser/inkjet/offset)

CD & 3.5" Diskette Duplication

Quality Brand: SONY, TDK, VERBATIM, KODAK, MEMOREX,
FUJI, DYSAN, RITEK etc.

100% data scan & verification
500 copies of CDR per day

CD/3.5" Diskette Services

custom label design, multi-color screen printing, turkey packaging

CD Rom Replication Services

low cost, low minimum requirement

HYUEN 1102-12811 Rowan Place Richmond BC V6V 2S6

Tel: (604)279-8818

Fax: (604)278-3089

website: www.hyuen.com

Email: sales@hyuen.com

Toll Free: 1-888-816-6655

Monitor King

We buy & recycle Monitors

Monitor Repairs

14"	\$64.00
15"	75.00
17"	135.00
19"	199.00
21"	265.00

Monitor Sales

14" VGA	\$49.00
14" SVGA	69.00
15" SVGA	99.00
17" SVGA	189.00

14" SVGA
from \$79

Monitor King

2716 West 4th Avenue
Vancouver, B.C. V6R 1R1
Tel: (604) 733-0101
Fax: (604) 733-0322
Toll free: 1-888-918-5464

103 - 11500 Bridgeport Rd.
Richmond, B.C. V6X 1T2
Tel: (604) 270-2677
Fax: (604) 270-2630
Toll free: 1-888-918-5464

No Fix - No Charge
That's our policy

Pick-up + Delivery \$15.00
(Greater Vancouver)

The Computer Paper
back issues on-line!

Archives



canada
computes.com

www.canadacomputes.com

TOM MONITOR REPAIRS

All Models - All Sizes

14"	\$45.00
15"	\$55.00
17"	\$85.00
19" - 21"	\$195.00

Free pick up and delivery
Three month warranty
7 days a week

#109 8620 Heather St
Vancouver, British Columbia

324-3778 or 813-2199

FREE Long
Distance

Connect your telephone to the internet

- No Computer Required
- Digital Sound Quality
- Full one-year Warranty
- Supports to LAN, Cable or xDSL modem



Pacisun Enterprises Inc.

Tel: (604) 266-3037 www.pacisun.com

930-1200 W, 73rd Ave., Van. BC Canada V6P 6G5

Specializing in computer

MONITOR

Repairs

- ❖ All models from 14"-21"
 - ❖ Free estimates
 - ❖ Free pick-up and delivery
 - ❖ Three month warranty
 - ❖ Monitor loan available
- IBM MACINTOSH NEC ADI SONY HP DELL
MITSUBISHI ACER KDS VIEWSONIC MAG
SAMSUNG DARIUS...

AERO Monitors

116-2323 Boundary Rd. Vancouver

298-4455

e-mail: aero@imag.net

Rebuild Computer Battery Packs

- Rebuild battery packs for notebook computer and other rechargeable battery systems.
- Upgrade battery pack with higher current (mA) capacity cells.
- Battery supplier for UPS Systems.

NiCd, MiMH, Sealed Lead Acid Battery (UPS), Charger and Battery Systems.

D W Technologies Ltd.

132-2323 Boundary Rd.,
Vancouver, BC V5M 4V8

Tel: (604) 205-6928

Fax: (604) 205-6918

E-Mail: dwtl@bc.sympatico.ca

INKJET RE-INKING

PROFESSIONAL QUALITY INKS

PRINTERS~FAXES~PLOTTERS

HP~Canon~Epson~Apple~Apollo~Nec
Lexmark~Xerox~Compaq~Okidata

Service: We can re-ink your empty inkjet cartridges for you, for as low as -- \$5.95 each, ask for our free mailing container. Kits: Re-ink your own cartridges and save even more. We provide all the tools, instructions & inks.

Supplies: Cartridges, Labels & Photo Papers

FREE
CATALOG



WWW.CANADIANLABELS.NET

CALL: 1-800-807-3310



SOFTWARE PRODUCTION SOLUTIONS

- CD-R Media
- Business Card CD
- CD Rom/CD Audio
- Floppy Disks
- MediaFORM CD-R Copier
- AFFEX CD-R Printer
- CD label kit & Supplies
- Duplication
- Silkscreen Printing
- CD-R Inkjet Printing
- Labeling
- Assembling & Packaging
- Digital & Offset Printing

- Quality Service at Competitive Pricing
- Fast turnaround (1500+ CDR copies per day)
- Authorized Distributor for TDK, FUJI, Maxell, Memorex, Dysan, Princo, MediaFORM, AFFEX, Stomper

PROGRESS Media Duplication

A division of PROGRESS Marketing Inc.

www.progressmarketing.com

Email: sales@progressmarketing.com

Toll Free: 1-800-818-6944

140-4471 No. 6 Road, Richmond, B.C. V6V 1P8

Tel: (604) 821-0066 Fax: (604) 821-0110

oh no.
virus.
media crash.
data loss. we can help.

Your data is important to us.
So are you.

1.800.551.3917
(t) 905.479.9938
(f) 905.479.1515

105-590 Alden Road
Markham, Ontario
L3R 8N2
Canada

www.cbltech.com
VIRUS ALERT CENTRE

CBL Data Recovery Technologies, Inc.
The lost-and-found for 1s and 0s.

DATA RECOVERY SERVICE

Start from \$50/hr. Successful rate: 88%
From downed & inaccessible storage devices, hard drive, tape,
removable media, optical devices, ... **FREE** Loaner

All works Guaranteed 11 Years of Quality Computer Service

Call: (604) 681-3770

Toll Free: 1-877-460-3670

www.DataRecoveryBC.COM



Downtown: #500-1281 W. Georgia St. Vancouver V6E 3J7
Tri-cities: 1122 Austin Ave. Coquitlam, BC V3K 3P5
help@DataRecoveryBC.COM Fax: (604) 681-3739

Advertise in The Computer Paper

Call 688-2120 for details

Simmo
The Choice Technology Partner of Small Business
(780) 413-3249

RAM!

Whether your memory needs are Edmonton or England, our pricing, availability and delivery will exceed your needs: on time, every time.

Visit
www.simmco.com for
consistently updated
RAM pricing and
availability

1-800-221-8581 • 11419-106 Ave.
Edmonton, AB • T5H 4H1



Notebooks!

No PST*

See Web for Today's
Best Prices!

FREE Canada-Wide Shipping with
Notebook Orders



**FREE 2 Year
Acer Warranty**

507D 12.1D C466 32MB 4.8GB 24X 56K	\$1689
514TXV 14.1T C466 64MB 6GB DVD 56K	\$2689
340T 12.1 4Lb PIII450 128MB 6GB 24X 56K	\$2689
600T 13.3 5Lb PIII600 64MB 9GB DVD LAN	\$3579
732TXV 14.1 PIII500 64MB 9GB DVD 56K	\$3489
737TLV 15.5 PIII700 128MB 18GB DVD LAN	\$4989



FREE Corel Office 2000 or
Via Voice with Notebook

8100 12.1T C500 PIII450 64MB 6GB 24X 56K	\$2089
8200 13.3 C500 64MB 6GB 24X 56K	\$2489
8600 13.3 PIII500 128MB 6GB 24X 56K	\$2989
8800 15.1 PIII500 64MB 6GB 24X 56K	\$3589

TOSHIBA

FREE Carrying Case with
64MB RAM Upgrade

2140CDS 12.1D K62-450 32MB 4.3GB 68K	\$1769
2610DVD 12.1T C433 64MB 6GB 56K Lilon	\$2549
4270XDV 14.1T C500 64MB 6GB DVD	\$3189
4300 14.1T PIII600 64MB 12GB DVD	\$4489
8100 14.1T PIII500 64MB 12GB DVD	\$4889
3440CT 11.3T 3.4Lb PIII500 64MB 6GB	\$3699

Call for Models Not Listed

REPAIRS: We fix what others cannot ... at a fraction of their rates. Major repairs a specialty: dead notebooks, damaged screens, data recovery, etc. **FREE CANADA-WIDE RETURN SHIPPING ON ALL REPAIRS.**

Live application assistance available Mon. to Fri. 8:30am to 6pm EST. All prices cash-discounted quoted FOB 36 Toronto St. Prices/specifications subject to change without notice. Visa, MasterCard, American Express, Diners Club and Interac accepted. *PST applicable for Ontario residents only.



NOTEBOOK UNIVERSE

36 Toronto Street #104

Toronto, Ontario M5C 2C5

Tel: 416-366-6683 Fax: 416-366-6684

Toll-Free: 1-877-826-0665

E-mail: info@notebookuniverse.com

www.notebookuniverse.com

Marketplace

The One-Off CD Shop



MITSUMI
CD-R

CD-R Pen with purchase
of 100 Mitsui CD-R's

- CD-R Media
- CD-ROM Replication
- CD-R Duplication
- DVD Replication
- Mastering
- Packaging
- Printing
- Diskette Duplication

13-12840 Bathgate Way, Richmond, B.C.
Ph 604.278.5356 Fax 604.278.3486
out of town call 888.454.1544

www.newmediasource.com

QUANTUM MEDIA SERVICES

(WE REFUSE TO BE BEATEN ON PRICE, QUALITY OR SERVICE)

SPECIALIZING IN:

- CD DUPLICATION AND REPLICATION
- SHAPED CDS
- BUSINESS CARD CDS
- PACKAGE BUNDLES FOR BANDS
- ALL CDR MEDIA

CD DUPLICATION \$1.50

Any quantity ... cheaper than blanks!!
(no minimum - any quantity - 24 HR Service)

- We'll beat any competitive price by 10%
- Massive discounts on bulk orders (100 +)

Check us out at www.qmservices.com
OR CALL OUR 24 HR TOLL FREE ORDER AND INFO LINE AT
1-877-438-2692
IN TORONTO DIAL (905) 508-2274
WE SHIP CANADA WIDE

DATA RECOVERY

By Nick Major's DATA RECOVERY LABS

Why do so many corporations, service technicians, small business & computer professional insist on using Nick Majors and his team of experts for all of their emergency recovery needs? SIMPLE - We are just BETTER at what we do than anyone else in the world!

Nick Majors' DATA RECOVERY LABS
(TORONTO, CANADA/BUFFALO, NEW YORK)

The most technically successful facility
available - anywhere - at any price!
Specializing in HIGH-END / TOP PRIORITY JOBS - including
Network Servers, Advanced Operating System problems,
Multi-drive RAID/ARRAY configurations,
Optical Jukeboxes and Tape/DAT recoveries

1.800.563.1167

www.datarec.com

World Wide Translation.com



Translation and Interpretation services are
available on European, Mediterranean,
Middle East, & Asian languages.

TEL : 904 3786

Mac Consultant
Mac OS Multimedia/Database Developer

Phil Kushnir

604/618.PHIL (618.7445)

iMac@home.com

<http://kushnir.dhs.org/>

Your High Quality Hardware Distributor

www.chlsystem.com

Smart Choice! Savings!!



Tel: (604) 279-0033
Fax: (604) 279-0035
chlsys@chlsystem.com

CHL System Distribution Ltd.
150-12830 Clarke Place, Richmond, BC, V6V 2H5

SOHO Skyway

482.1222

Power-up your LAN

Full Service Internet Service Provider since 1996

ISDN, Analog, ADSL

sales@sohoskyway.net www.sohoskyway.net

→ order your ADSL now



Tel: (604)273-5581

Fax: (604)273-1049

E-mail: simmtec@aebc.com

6 Years of Excellence

Best Wholesale prices for memory & CPU's

CPU: INTEL, AMD, CYRIX
MEMORY: 30 PIN, 72 PIN SIMMS, DIMMS, SD RAMS,
RAMBUS RIMM MODULES

SPECIALISTS: PROPRIETARY MODULES FOR PRINTERS
+ NOTEBOOKS FROM A TO Z

LINK ASIA professional platinum

CD-RW Manufactory direct sell

High Quality, Best Service

- > Mini-CD-R 21min/185MB 12x
- > Business Card CD-R 5min/50MB 8x
- > Digital Audio CD-R 80min/700MB 12x
- ◆ CD-RW 80min/700MB 4x
- ◆ CD-R 80min/700MB 12x

Special \$1.09/ea

Other product: CD-R jewel wallet & case

Tel: (604) 231-3725, 786-6365 Fax: (604) 231-3724
#350-4400 Hazelbridge Way, Richmond, BC V6X 3R8

SOURCE

Blow out sales!

Desktop Computers - E-Machine, Daewoo
15" Color Monitor & Win 98 Original CD included
From C\$499.00

Laptop Computer

Toshiba & IBM - From C\$1,199.00

Dealers Only! Limited Quantities and Warranty Apply!

EVERSOURCE TECHNOLOGY INC.

Surrey, British Columbia

Tel: (604) 502-7688 Fax: (604) 502-7686

Toll Free: 1-888-303-WWVV (9988)

E-mail: source@eversource.com

www.eversource.com



IT Systems Inc.
Suite 200-1155 West Pender Street
Vancouver, BC V6E 2P4
E-mail: info@itswebware.com
Website: www.itswebware.com

Applications Available

- e-commerce
- Internet/Intranet Databases
- Mutual Fund & Group RRSP Systems

Providing Complete Business Solutions Utilising:

- Windows NT
- Visual Basic & Visual FoxPro
- SQL Server
- Access

Microsoft Certified
Solution Provider

Year 2000 Consulting

*We put
proven
technology
to work.*

899-9434

Fax: 899-9474

AutoCAD

BY CORRESPONDENCE

AutoCAD Operator Certificate, AutoCAD 2D, 3D
AutoCAD LT, AutoLISP, 3D Studio, MicroStation

ACET Department, SAIT

1301 - 16 Avenue NW

Calgary, Alberta T2M 0L4

Ph: (403) 284-8430

Fx: (403) 284-7077

e-mail: cadd@sait.ab.ca

<http://www.sait.ab.ca/cadd>



ADVERTISEMENT



The
Computer PAPER

A Trade Publication Canada's Computer Information Source

Call **688-2120** for details

Web Site Marketplace

Go Digital



SEARCH ANY TRADER PUBLICATION IN WESTERN CANADA
CHOOSE FROM OVER 6000 VEHICLES • CARS • TRUCKS
VANS • MINI-VANS • 4X4s • RVs • MOTORCYCLES • BOATS
HEAVY EQUIPMENT • FARM EQUIPMENT • AND MORE!

CANADA
TRADER.com

canadatrader.com

Now you can advertise your property on North America's best residential rental web site!

Exposure you can't ignore!

More than one million users see Rent Net apartment and relocations information every month!

Now it's your turn!

Through the Rent Net and partner sites including Yahoo! (the most popular search engine), NBC interactive, USA Today and Classifieds 2000, as well as search engines Excite, Lycos and Infoseek property managers will have access to detailed information, graphics, e-mail, fax and their very own web site!

You will be seen!

More hits - less vacancies

Get your properties on the most comprehensive web site of residential properties in North America. Call your Home Renters Guide sales representative now for information.

Get on the Web: maintain market presence and reduce your vacancies, fast!

A service provided by Rent Net in partnership with Home Renters Guide



HOME
renters
guide

Visit us at www.rent.net

For more Rent Net information just call: Vancouver 604-608-0316

Our promotional campaigns will draw surfers to Rent Net and increase visits to your site!

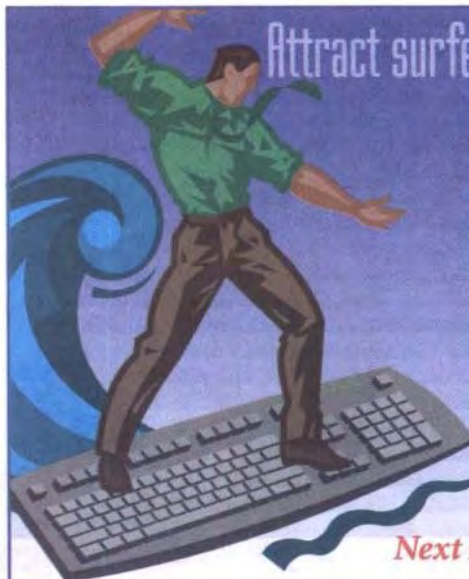
We're going to use the power of our Guide and Trader publications across the province to support, on a continuous basis, the Rent Net web site. With a combined readership of over 225,185 a month, you can be assured that anyone with access in the Internet will soon know about Rent Net!

Daily
technology news!

Daily Headlines



canada
Computes.com
www.canadacomputes.com



Attract surfers directly to your web site!

The ComputerPAPER
Canada's Computer Information Source

Web Site
Marketplace

For more information,
or to place an ad in this section:

Tel.: (604) 688-2120

E-mail: bcsales@tcp.ca

Next Booking Deadline: June 27, 2000

Advertise in

The ComputerPAPER
A Trader.com Publication Canada's Computer Information Source

Web Site
Marketplace

Love bug a wake-up call*Continued from page 103*

This information was then passed on and used by U.S. companies looking to secure important business contracts against local competitors.

As an example, the study cites a "well-informed 1995 press report" that the, "NSA [U.S. National Security Agency] lifted all the faxes and phone calls between the European consortium Airbus, the Saudi national airline and the Saudi government. The agency found that Airbus agents were offering bribes to a

Saudi official. It passed the information to U.S. officials pressing the bid for Boeing Co. and McDonnell Douglas Corp., which triumphed last year in the [US]\$6-billion competition."

The study also suggests that information gathered by U.S. intelligence agencies was used during the 1995 trade negotiations on the import of Japanese luxury cars, French participation in the General Agreement on Tariffs and Trade (GATT) negotiations in 1993, and the Asian-Pacific Economic Conference (APEC) in 1997.

But if private sector companies are now facing ever-greater threats to their systems—either by those looking to either disrupt them or to penetrate them to gain business advantages—they have been slow to put security measure into place.

Fred Cotton, president and chief executive officer of Fred Cotton and Associates in Sacramento, Calif., says many companies often refuse to publicize or report such attacks because they are bad for business. They prefer to deal with the problem quietly.

Dan McLean, research manager for managed network services with the Toronto-based International Data Corp. (Canada) Ltd., says many large companies have reported being hacked in the last 12 months, sometimes by people looking for sensitive corporate information.

"We did not drill down into specifics, [but] it does point to the fact that there are intrusions... that are happening and on a fairly large scale," McLean says.

In order to combat this, many companies are now starting to develop comprehensive security procedures to protect against attacks from both the outside and inside.

Architectural problem?

There is some argument that what makes cyber-terrorism possible is not simply the individuals, groups or foreign intelligence agencies bent on doing harm, it's the computing architecture itself, which is inherently vulnerable to attack.

Austin, Tex.-based, intelligence consulting firm, Stratfor.com (<http://www.Stratfor.com/>), points out in an analysis on its Web site that the PCs of today were never meant to be connected to other machines and the Internet. They were meant to be used by themselves and by a single individual, so security was never a priority. Once linked, PCs and the networks that soon sprang up around them, were open to attacks that would be hard to trace and stop. Contributing to this vulnerability is the fact that the underlying architecture of the system is not transparent to anyone. Even experts can be unclear about what exactly is going on under the hood. This makes it hard to find all the holes and breaches that exist in a network, and close them down.

Terrorists, extremist groups and criminals have now come to understand what many 15-year-old hackers know too well: it is surprisingly easy to write a simple program or get into a system and do a lot of damage because of the way operating systems and networks are constructed today.

"A teenage kid can knock out hundreds of corporate systems because the foundation of modern computing, the operating system, has been in rapid, forced development since the success of MS-DOS. It was designed for one user who would treat it right... Security requires a complete re-engineering of the operating system," advises Stratfor.com.

As the analysts at Stratfor.com are quick to emphasize, a rogue state does not need to launch a nuclear attack in order to inflict damage onto another country. All it needs to do is launch a well-placed virus and down come the systems.

"But how do we retaliate against a virus attack? We depend on computers. They don't." □

Home networking: Part 1*Continued from page 101*

\$ ping charlie

That's a great start. Once the hardware infrastructure is in place and the IP numbers are assigned, you're ready for some fun. In the next installment, we'll take a look at Samba, a Linux networking service that makes Linux look like an NT to your Windows workstations. Samba can be used for file sharing and printer sharing. □

Gene Wilburn (gwilburn@home.com) is a Toronto-based IT manager, musician and writer who operates a small farm of Linux servers. Back issues of this series are available on his Web site at <http://www.northernjourney.com>.

PRINTER SOLUTIONS

"Your Digital Output Specialist"

The Xerox 2000 Product Lineup

Award-winning choices for all your document needs



XEROX CHANNEL ALLIANCE
Peak Partner

Workgroup Printers

For more than 50 years Xerox has been a world leader in document solutions for the office.

Now, with the addition of the award-winning family of **Tektronix** colour printers, Xerox can provide the widest range of network printing solutions for office workgroups of every shape and size.



"The combination of high quality, fast performance, and easy setup gives the Tektronix Phaser 7500K by Xerox a small but important edge over the Lexmark unit and makes it the printer of choice in this category." 5 out of 5 rating in "First Looks - Color Laser Printers" product review by M. David Stone, May 5, 2000

DocuPrint N2125

Speed: 21 ppm
Resolution: 1200 x 1200 dpi
Emulations: Adobe PostScript 3, PCL 5e, PCL 6
Processor: PowerPC 133 Mhz
Paper Sizes: Custom, letter, legal, folio, executive, A4, A6, B5
Media types: paper, envelopes, transparencies, labels and 133 lb. cardstock
Interfaces: 10/100bT, Parallel, USB standard

Price: \$ 2,500

**DocuPrint N2025/N2825**

Speed: 20 ppm (2025) 28 ppm (2825)
Resolution: 1200 x 1200 dpi
Emulations: Adobe PostScript 3, PCL 5e, PCL 6
Processor: PowerPC 200 Mhz
Paper Sizes: Custom, letter, legal, folio, ledger, executive, A3, A4, A5, A6
Media types: paper, envelopes, transparencies, labels and cardstock
Interfaces: 10/100bT, Parallel, USB standard

N2025 Price: \$ 2,900

**DocuPrint N3225**

Speed: 32 ppm
Resolution: 1200 x 1200 dpi IQ
Emulations: Adobe PostScript 3, PCL 5e, PCL 6
Processor: PowerPC 266 Mhz
Paper Sizes: letter, legal, folio, ledger, executive, A3, A4, A5, A6
Media types: paper, envelopes, transparencies, labels and cardstock
Interfaces: 10/100bT, Parallel, USB standard

List Price: \$ 4,600

**DocuPrint N4025**

Speed: 40 ppm
Resolution: 1200 x 1200 dpi IQ
Emulations: Adobe PostScript 3, PCL 5e, PCL 6
Processor: PowerPC 266 Mhz
Paper Sizes: letter, legal, folio, ledger, executive, A3, A4, A5, A6
Media types: paper, envelopes, transparencies, labels and cardstock
Interfaces: 10/100bT, Parallel, USB standard

List Price: \$ 5,400

**Phaser 740 Colour Laser Printer**

Speed: 5 ppm colour; 16 ppm black
Resolution: 600 dpi (opt. 1200 dpi)
Emulations: Adobe PostScript 3, PCL 5c
Processor: PowerPC 133Mhz
Media weights: 16 lb. bond to 90 lb. index
Media type: plain, glossy, labels, cardstock, transparencies
Duplex: optional
Interfaces: 10bT Ethernet, Parallel standard

740N Price: \$ 1,894
(after \$ 750 rebate, while stock lasts)

**Phaser 750 Colour Laser Printer**

Speed: 5 ppm colour; 16 ppm black
Resolution: 1200 x 600 dpi colour
Emulations: Adobe PostScript 3, PCL 5c
Processor: PowerPC 200Mhz
Media weights: 16 lb. bond to 90 lb. index
Media type: plain, glossy, labels, cardstock, t-shirt transfer, transparencies
Duplex: optional
Interfaces: 10/100bT Ethernet, USB Parallel standard

Price: \$ 4,012

**Phaser 850 Colour Solid-ink Printer**

Speed: 14 ppm colour/mono
Resolution: up to 1200 dpi colour
Emulations: Adobe PostScript 3, PCL 5c
Processor: PowerPC 200Mhz
Media weights: 16 lb. bond to 110 lb. card stock
Media types: plain, cardstock, labels, transparencies, envelope
Duplex: optional
Interfaces: 10/100bT Ethernet, USB & Parallel

FREE BLACK INK

Price: \$ 4,195

**Phaser 780 Colour Tabloid Laser Printer**

Speed: 4 ppm colour; 16 ppm black
Resolution: up to 1200 dpi colour
Emulations: Adobe PostScript 3, PCL 5c
Processor: PowerPC 133Mhz
Media sizes: letter, legal, tabloid, tabloid extra, tabloid plus, A3, SRA3, A4, B4, B5, custom sizes
Media weights: 16 lb. bond to 110 lb. index
Media types: plain, cardstock, labels, transparencies, envelope
Interfaces: 10bT Ethernet, Parallel standard

Price: \$ 8,250



(models shown may be different or show optional equipment or accessories)

thinking laser printers • choose printer solutions

Printer Solutions specializes in monochrome and colour printer solutions for workgroup, production, graphics/prepress and wide format output requirements. We offer complete installation, training, authorized service and support for all major printer manufacturers. We also offer computer systems from Apple and Intergraph and professional services such as colour calibration, output management solutions and customized service plans

PRINTER SOLUTIONS • 109-3993 Henning Drive • Burnaby, BC • V5C 6P7

tel: (604) 291.9170 • fax: (604) 291.9190

info@printer-solutions.com • www.printer-solutions.com

apple • epson • genicom • hewlett packard • ibm • intergraph • lexmark • qms • tektronix • xante • xerox

INDEX OF ADVERTISERS

3d Micro	82
A-Power Computers Ltd.	72
Addax Computer Co.	50
AE Electronics	109
Aero Monitors	105
Ahead Institute of Technology	98
AMK Systems	95
Anitec Computer Technology	66
Aspert Technology	61
AT&T	13, 45
ATIC Computer	40, 41
ATOP Computer	100
Auction4it.com	21
Azura	24
BC Institute of Technology	95
BeeSee Technology	104
Bestop Computers	32
Blue Genesis.com	22
Book Warehouse	92
Broadway Camera	51
CADVision Development Corp.	42
Canada A-Best	104
Canadacomputes.com	112
CanadaTrader.com	107
Canadian Computer Store	49
Canadian Labels	105
CBL Data Recovery Technologies	105
CE Outlet	76
CHL System Distribution Ltd.	106
Com Canada	52
Compu 2000	81
ComputerDiscountDepot.com	95
Crystal Computer Ltd.	97
CSP Computer	99
Cybertec Industries Inc.	104
Daiwa	111
Data Recovery Labs	106
Daytek	62
DCC Technologies	80
Dell Canada	2
Diamond Multimedia	8
Discount Mac	87
Dollarhost	55
Domain Direct	7
DotEasy	77
DreamWeb Interactive	84
DW Technologies	105
Elco	71
Epson Canada	10, 11
ESS	69
Eurocom	51
Eversource	106
ExtraNC Technology Inc.	103
Fly Computers	101
Frontier Computer	28, 29
FunCow.com	5
Generic Computers	54
Half Price Computer Books	102
Homebase Internet Publishing Ltd.	76
Houston	43
Hunjet	85
Hyuen Canadian Enterprise Ltd.	104
ICI Computer	46, 47
Impaq Technology	57
Information Gateway	84
Intelligent Batteries Inc.	103
Internet Data Centre Inc.	68
Internet Gateway	74, 75
Intertech Computers	64
iPark Hosting	107
IPC	58, 59, 116
iPrimus	15
Island Key Computers	110
IT Systems Inc.	106
J&L Computer	88
JRS Computers Inc.	98
Karimi Ent.	106
Laptop Closeout.com	104
LG Electronics	39
LinkAsian CD-R	106
Mac Station	82
Magma Communications	33
Maple Oak Computer Solutions	105
MDI Internet Inc.	89
Memory House Inc.	96
Micro-Star International	23
MicroConcept	16, 17, 18, 19, 20
Monitor King	104
Mouse Riders	60
Multimedia Technologies	60
Mutual Tech Canada Inc.	101
Nantron Systems	102
NetActive	96
Netlink Computers	30, 31
NetNation Internet	91
NetPro Computers	93
Network Control	110
New Type Computers	86
NextGen Computers	48
Nippon Technology	103
Northwest Digital Ltd.	87
Notebook Universe	105
Notebook-City	65
Nu-Age Computer Plus	79
Omikron	57
Pacific Online Inc.	112
Pacisun Enterprises Inc.	105
PC Centre	26, 27
PC Planet	34
Peripheral Express	56
Phase 1 Systems	35
Phil Kushnir Enterprises	106
Portable World	104
Powersonic Computers	53
Primex Computers	70
Printer Solutions-Tektronic	108
Prism Internet	90
Progress Media Duplication	105
Quantum Media	106
Registrars.com	113
Rent.Net	107
Rock Computers	36, 37
SAIT	106
Samsung	9, 25
SIMMCO	105
Simmtec Industries Ltd.	106
SOHO Skyway	106
Strong Computers	85
SuperData Technologies Ltd.	64
TCP Subscription	112
The One-Off CD Shop Inc.	106
Tom Monitor Repairs	105
Tomo Computers	67
Ticera Computer Centre	97
Vanco Computers	83
Viewsonic	3
Worldwide Computers	94
www.inkjetmart.com	96
WWWEB Promo	107
YHC Cassette Industrial Ltd.	105
Zoltrix	115

This listing is provided as a service and is subject to change without notice.
The Computer Paper cannot be responsible for errors or omissions.
Please contact the BC Sales office for more information. Tel: 688-2120

Fast and Friendly Internet Services - For you and your whole Family

Opps! It's blocked by Family Net!



Family Safe Internet

BLOCK PORNOGRAPHIC, HATE, VIOLENCE & GAMBLING SITES

\$18.88/m Unlimited
\$10.00/m for 30 hours

www.aebc.com
info@aebc.com

TEL: 279-8867

Find out more at our aebc.com on line shop

AE

ADVANCED ENGINEERING

ADSL

Bus. 1.5 Mb \$64.95/m

ON LINE TRAINING

MCSE, A+ , Web design... From \$6.00/m

ECOMMERCE

<http://ecom.aebc.com>

WEB HOSTING

\$25/m 20Mb

COMPUTERS

Systems, software

HEADSETS

Plantronics Headsets

Monitors



Sony G200
17" Monitor
0.25 \$565

TTX1775 17"
Monitor 0.25
\$320



Viewsonic
E773 17"
Monitor 0.25
\$383



The Computer Company

We Are Authorized Dealer of:

IBM

COMPAQ

**Aptiva
ThinkPad
Deskpro
ARMADA**

***High quality Class-A Blank
CD-R for 4x or 8X**

1 to 50 purchase. \$1.20 each

50 to 100 pcs. \$1.15 each

Over 100 pieces please call

*** Buy any CD-RW Drive, receive
20 pcs blank CD-R for FREE!**

*** Setup Multiple PC's for sharing
Rogers Wave or ADSL!**

- On-Site setup service

- Avoid extra charge from Rogers or Telus

Network Control System.

K6-2 (3D) 500 \$828

PII Celeron-533 \$885

PIII-600 \$1059

PIII-650 \$1129

PIII-700 \$1265

K7-700 \$1135

All Systems include:

64MB Ram

10GB EIDE Hard Drive 1.44 FDD

50X CD-ROM Drive

AGP 8MB Video

56K v.90 Voice Fax/modem

16-bit Sound

Tower Case, Speakers

Win98 Keyboard, Mouse

15" SVGA Monitor .28dpi Hi-res. NI

System Upgrade (New system only)

Add 64MB Memory Add \$97

nVIDIA TNT-2 32M AGP Add \$59

8X DVD ROM Drive Add \$139

17" Monitor Add \$99

**Specialize in - Retail Shop Software
& Hardware for P.O.S. System.**

SPECIAL DEAL for the month:

ACER 620U Scanner \$115

Panasonic 8X DVD Drive \$173

Iomega ZIP Disk \$11 \$11

Logitech QuickCam USB \$59

Okidata 6w 600dpi Printer \$225

ASUS Celeron PGA Board \$39

Iwill PII w/UW SCSI Board \$159

Iwill Dual PIII BX Board \$249

283-13986 Cambie Rd., Richmond V6V 2K3

Tel: (604) 231-9725 Fax: (604) 231-0958

Email: info@network-control.com

Web Site: http://www.network-control.com

Hours: Mon-Fri 9:30am - 6:00pm

Sat 10:30am - 4:30pm

CLOSED Sun & Public Holidays

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.
ADD 4.5% P.W. CREDIT CARD PURCHASES

USER GROUPS

ATTENTION USER GROUPS: Send in your listing (maximum 120 characters) for the August issue by Friday, June 30th, 2000. Submissions runs for one month only in the local edition. The Computer Paper reserves the right not to print submissions which are deemed unsuitable.

ALT.2600 VANCOUVER USER GROUP. Meeting are 1st Friday of each month at Pacific Center Mall by payphones in food court, north of Dunsmuir at Granville 4pm to 9pm. Starts early to catch the evening shift 2600ers. For more information contact Steve via email at <sage@vanbc.wimsey.com> or <sage@rainbow.descon.com>

AMIGA USER GROUP (Panaorama) For meeting times and place call: Ray Norman 589-7199 or Robert Hardy 942-8364. BBS numbers 270-4561.

APPLES B.C. COMPUTER SOCIETY. A User Group for Macintosh and Apple IIs. Macintosh meetings are on 3rd Wednesday of each month at the York House School in Vancouver at 7 p.m. Novice and other special-interest groups are held mid-month. Apple II meetings are on 1st Monday of each month at 7 p.m. at the Century House in New Westminster. For further information call 437-9935 or 299-9597.

ATARI USERS! Vantari, Vancouver, BC V6B 3Y6. Bill Sutherland 988-1450; Don Hatch 433-8055. 2357 Western Avenue, N. Van B.C. V7M 2L4.

EDI USER GROUP. For more information call 532-8204 (preferred), or voice mail 532-8219.

B.C. VAX/VMS Local Users Group (BCVAXLUG) provides a forum for the professional growth and education of its members through the exchange of solutions, ideas, and opinions. User group meetings are held the 3rd Wednesday of every other month at 6:30 p.m. with location to be advised. For further info please call voicemail 276-6966.

CIPS VANCOUVER SECTION. (Canada's largest Association for Computer Professionals). CIPS Members enjoy unparalleled networking and professional development opportunities at our monthly meet-

ings and special events. Discounts offered for student members. PO Box 20522, Howe St. Vancouver, BC V6Z 2N8. Phone (604) 681-2796 or Fax (604) 689-1879 for next meeting date.

FOXSOFT, EDMONTON'S FOXPRO USERS GROUP-second Tuesday, 7:00 pm, Grant MacEwan City Centre Campus, East Wing, Room C-137/C-135, 10700-104th Ave. Contact: Ken Rayner at 437-0315 or Robin Stuart at 460-3712 (days). Info Bulletins on BBS 457-4105.

INDEPENDENT COMPUTER CONSULTANTS ASSOCIATION OF BC. The ICCA is a non-profit association of consultants who provide services in the field of Information Technology. The objectives of the ICCA are to provide a forum where consultants can network with each other, exchange ideas, and improve their business and computer skills. Monthly meetings with speakers. For further information contact us at: PO Box 820, Bentall Station, Vancouver, BC V6C 2N6 tel: 682-2747 fax: 681-0916 email: icca@mindlink.bc.ca / WWW: http://www.icca-bc.org/icca/

LOTUS NOTES. - see "Pacific Notes User Group"

MACWEST COMPUTER SOCIETY. Meetings for members and visitors include PD copy sessions. General meetings: 2nd Wednesday of each month; Beginner's meetings: 3rd Wednesday of each month. 7:30 p.m. at Surrey Conference Centre For messages and information call: 268-9530.

MS ACCESS TECHNICAL USER'S GROUP. For those who want to participate in learning more about MS Access. For information call Greg Hind at 454-0262, or refer to www3.telus.net/ghind/msatug.html

MACROMEDIA USERS GROUP. This group is dedicated to networking and shared learning. The products covered include Flash,

Dreamweaver, Director, Authorware, and Generator. For additional information please call (604) 873-4464 (evenings) or email Rob at: robj@intergate.bc.ca

OBJECTS USER SOCIETY. See British Columbia OpenStep Group (B.C.O.G.).

OPENSTEP USER SOCIETY (VNUS). See British Columbia OpenStep Group (B.C.O.G.).

PACIFIC NOTES USER GROUP (PACNUG) - Lotus Notes users meet the last Wednesday of each month. Contact Delores Beier at 988-2141 or delores-b@awcda.com

PC/MAC USER GROUP. Wanted Professional Photography/Graphic Designers to share, network and learn the latest hardware and software programs. If you are interested please contact: B. Hanington at 874-6980 or email me at: rasta@istar.ca for further info.

PORT COQUITLAM COMPUTER CLUB. Commodore, Amiga & IBM. 1st & 3rd Tuesday, 7:30 p.m., Room 104, George Pearkes Jr. Sec. School, 1390 Laurier Ave., Port Coquitlam. For further information contact: Ed Dyer at 942-0954.

POWER BUILDER. User group being formed. Meetings are planned for first Wednesday. To enroll call Perform System Developers at voice mail 604-264-0247.

SQL SERVER. User group being formed. Meetings are planned for first Monday. To enroll call Perform System Developers at voice mail 604-264-0247.

T.I. 99/4A COMPUTER B.C. 99er Users Group, every Thursday 7-10 p.m. For information, call Ron: 522-2598.

TEENS IN VANCOUVER USER GROUP. For teens under the age of 16 interested in doing computer related projects regularly, WWW, programming, games; anything! The main goal is to share computer knowledge and to make friends. If there are any homeschoolers interested, that would be great. If interested, please call Orton Mak at 926-2835.

VANCOUVER AUTOCAD USERS SOCIETY. 1st Wed. of the month, 7:30 p.m., B.C.I.T. Bby. Campus Bldg. SW5 Room 1850. Contact: Frank Zander (604) 582-8283.

VANCOUVER DELPHI DEVELOPERS ASSOCIATION meets once a month at the InfoCan Management Head Office, on West 8th Ave, 1 block east of Oak St. The meeting is usually on the second or third Weds of the month. Please check website for details, http://www.infocan.com/VDDA.htm. The purpose of the group is to provide a common and regular forum for Delphi developers to get together and discuss Delphi related issues. Admission is free and all notices are sent via e-mail. To have your name added to our distribution list, please send your complete contact information to vdda@infocan.com, Fax: 604-736-5866, contact Maggie LJ (administrator) at tel: 604-736-5888.

VANCOUVER FOXPRO USER GROUP. www.foxpro.org meeting time and location. Info: Kimberley at bccomp@planeteeer.com or Joy at jaytan@itswebware.com.

VANCOUVER GEOGRAPHIC INFORMATION SYSTEMS USER GROUP. Meetings are held on the 1st Wednesday of each month, September through May, at B.C.I.T. Town Square Room 'C' at 7:30pm. Contact Dwight at 940-1518 for information.

VANCOUVER NETWORK USERS GROUP (VNUG) is an official user group recognized by the Netware Users' (International) Assoc. and supported, in part, by Novell. Meetings are held on the third Wednesday of every month at 7 pm at PBSC Computer Training Centre, Hong Kong Bank building 900-885 West Georgia Street. All aspects of the networking environment are discussed and presented with emphasis on the Netware network operating system. The workshop begins at 4:00p.m., buffet dinner at 6:00pm, at 7:00pm is a Q&A session followed by a presentation ending at around 8:30pm. Member, no-member and student pricing applies to the workshop and/or dinner-presentation. For further information or meeting topic announcements call our voice mail at 689-VNUG (689-8684) or Fax us at 689-8656.

VANCOUVER PC USERS SOCIETY (NPCUS), 2nd Thursday, 7pm at the Pacific Space Centre (the Vancouver Planetarium) members free and guests \$5 admission. Excellent Q&A session & feature presentation. Our mission is to educate and inform our members and the

Island Key Computer Ltd
**Island Key Computer is offering sizzling summer specials
from all manufacturers, such as:**

Hewlett Packard Designjet Plotters

Models 450, 750, 1050, 2500, 3500

includes installation, configuration and delivery

Hewlett Packard Laser Printers color/monochrome

Try-before-you-buy 8550 color laser printers

Lexmark introduces new laser color 710 printer

Autodesk upgrade specials - to latest version and more

We offer storage solutions, CD-ROM solutions for servers.

**We also have Systems, Projectors, Peripherals, Printers,
software licensing, leasing and more...**

www.islandkey.com

**TOSHIBA Autodesk
Canon Microsoft**

COMPAQ

3Com

**hp HEWLETT
PACKARD
Expanding Possibilities**

IBM

LEXMARK

COREL

SONY

ViewSonic

**Vancouver
669-8178
sales@islandkey.com**

**Vicoria
250-380-6465
sales@islandkey.com**

CLASSIFIEDS

ADVERTISING IS FREE FOR INDIVIDUALS. For business, classifieds are \$7 per line (40 characters). Send in your ad, along with your payment for the August issue by Friday, June 30th, 2000. The Computer Paper reserves the right not to print submissions.

SERVICES

SEX & INTERNET ADDICTION COUNSELLING Confidential help from a professional therapist, 20 years experience. Peter Silin, MSW, RSW. 874-7764.

HARDWARE

Pentium 100 with 15" monitor, 28.8 fax modem, 5.0 Gb hard-drive, 16 Mb RAM, Speakers. 480\$ call 322-9532 for msg

Raven Printer, 9 pin, dot-matrix, #RP-9105. Asking for 20\$. Firm. (604)847-2516

Thinking of buying an iMac or iBook? ...But too expensive for you? I have a great option for you: the MAC POWERBOOK 1400c: 16/1.2 Gig, 166 Mhz, 11.3" Full colour active matrix display, 12x CD, floppy drive, 2-PC slots/card, ethernet, software, about 2 yrs old. Does just about everything the new machines will do, only cheaper. No taxes. Replacement cost over \$3,100. Offers around \$1,400-\$1,500 considered. Ph. Joel: (604)876-7379

TRAINING

LEARN C, C++, Java, VHDL, HTML and JavaScript Programming by E-mail www.cstutoring.com

USER GROUPS

general public on the current and future issues in personal computing and to provide a social context for the business, educational and personal use of microcomputers. We offer on disk newsletter, educational seminars, special interest groups (see separate VPCUS SIG listings), and more. Call 290-0660 for details and schedule.

THE VANCOUVER SQL Server Users Group is an independent non-profit organization dedicated to providing an information exchange about Microsoft SQL Server. Launching its bi-monthly meetings starting Thursday January 7, 1999 from 6:30pm to 8:30pm. For more information, visit our web site at www.vansql.org. Phone: 899-9434.

VPCUS CLARION-TOPSPEED SIG — Clarion is a full-featured, industrial-strength DOS & Windows application development tool, its superior high level language and re-usable templates produce compilable code and tight EXE's that run fast and are royalty free. This lively SIG attracts a range of participants from seasoned professional programmers to new users and the curious. Meets the 1st Wednesday of every month in Metrotown. Contact John Golka, 736-7762.

VPCUS DBUG (Data Base Users Group) Emphasis is on solving problems of data management with special reference to Paradox. Bring a blank 3.5 inch disk to pick up goodies from the meeting. Meetings for the next few months will be informal, and held at a local pub. Contact Brad Froese, 937-7222, or email: brad_froese@assistsystems.com

VPCUS Educational Seminars — Members \$5, Non-members \$15. Various topics, times and dates. Contact Gwenda Ellwood, 737-8674.

VPCUS HTML AUTHORING SIG — this SIG is a good place to come for informal discussions with other HTML developers or to get advice on building business and personal Web pages. Topics include graphics and HTML, plug-ins, the browser wars, Jamba, connectivity issues and marketing on the internet. Both novice and advanced HTML authors are welcome. We meet on the 2nd Tuesday of each month. Contact Brenda Delaney: bdelaney@interchange.ubc.ca or Virginia

Green: virginia@arts.ubc.ca for meeting info and to get our email list.

VPCUS INTERNET SIG — New to the info highway? Get to know the internet and the Web with an experienced guide. Contact Joe Thompson for details, 685-6945.

VPCUS WordPerfect SIG — Participants share tips and troubleshooting for all versions of WordPerfect for Windows and DOS. Contact Holly Rivers at 731-0039, or email: hollyr@dowco.com

VPCUS NETWORKING SIG — This is the place if you are a network administrator and you need a break from beating your head against a wall, or want to relate with people who actually care what you are talking about. Come and share tips, tricks and support ideas. Currently

on hiatus, we're looking for volunteers interested in getting this SIG going again. Contact Brenda Delaney: bdelaney@interchange.ubc.ca or fax 224-2143 for more information.

VANCOUVER LINUX USER GROUP — A group of students, professionals and computer enthusiasts with a common interest in Linux, UNIX and Open Systems. Linux is a free, yet very powerful operating system for personal computers of all types. Anyone interested is welcome to join VanLUG. For membership information, please visit the Linux in Vancouver Web Site (<http://www.vancouver-webpages.com/van-lug/>), or send messages to: info@linux.bc.ca

VANCOUVER OS/2 USER GROUP. Attended by OS/2 gurus and novices alike. The large and lively meeting is held on the first Wednesday of

each month at the BC Tel Building, 3777 Kingsway, Burnaby and starts at 6:45 pm. Contact Jim Shewchuk 876-4780.

WESTERN CANADA WEBOBJECTS USER GROUP. The WCWUG is a society of business managers and software developers interested in exchanging ideas about building exciting database-driven web sites, using the best Internet application development tools. Send e-mail to info@wcwug.org or visit our web site at <http://www.wcwug.org> for details.

1VFSC. Meeting 1 Sunday a month for LAN flight simulations in New Westminster and each other Sunday evening for Online simming. Details: <http://www3.telus.net/bard/1VFSC>

CALENDAR

AUGUST

BIG COMPUTER SWAP MEET—Saturday August 12, 2000 from 11am to 4pm at the Croation Cultural Center 3250 Commercial Drive, Vancouver. Admission is \$3.00. For more info call (604)521-6304

TRAINING

LANGARA COLLEGE-CONTINUING STUDIES. 100 West 49th Avenue, Van, BC V5Y 2Z6. Phone: 323-5322 Fax: 323-5899. Multimedia Courses for Beginners & Professionals.

HOME BASED BUSINESS EDUCATION CENTRE offers self-employed home-based business seminars taught by Buzz Bezanson. Buzz is a seminar leader, author, newspaper columnist, consultant, and has operated his own successful home-based business for the past twelve years. Call 576-4783 for more info.

INTERNET SEMINARS FOR PROFESSIONAL DEVELOPMENT. Offers introduction to Java Language. Web Site building using Microsoft FrontPage. Distributed objects.

Java & Objects. For time and place of seminars, please see our Internet Home Page at: <http://www.instruct.langara.bc.ca/csw/>

ASPIRE Integrative Remedial Education Society is a non-profit charitable organization (B.C. Reg 525-902-Fed. Charity Reg 0870212-20). Phone (604) 263-4942.

Apollo Mission photography

NB—See the Moon as very few have seen it. The missions of the Apollo astronauts to the surface of the Moon and back yielded 32,000 extraordinarily beautiful photographs—the record of a unique human achievement. Thirty years later, NASA has allowed master Apollo negatives and transparencies to be scanned and published, and this Web site promotes a work created by Michael Light from 129 Apollo images. A Shockwave multimedia presentation gives the visitor a glimpse of some of this work.

<http://www.projectfullmoon.com/>

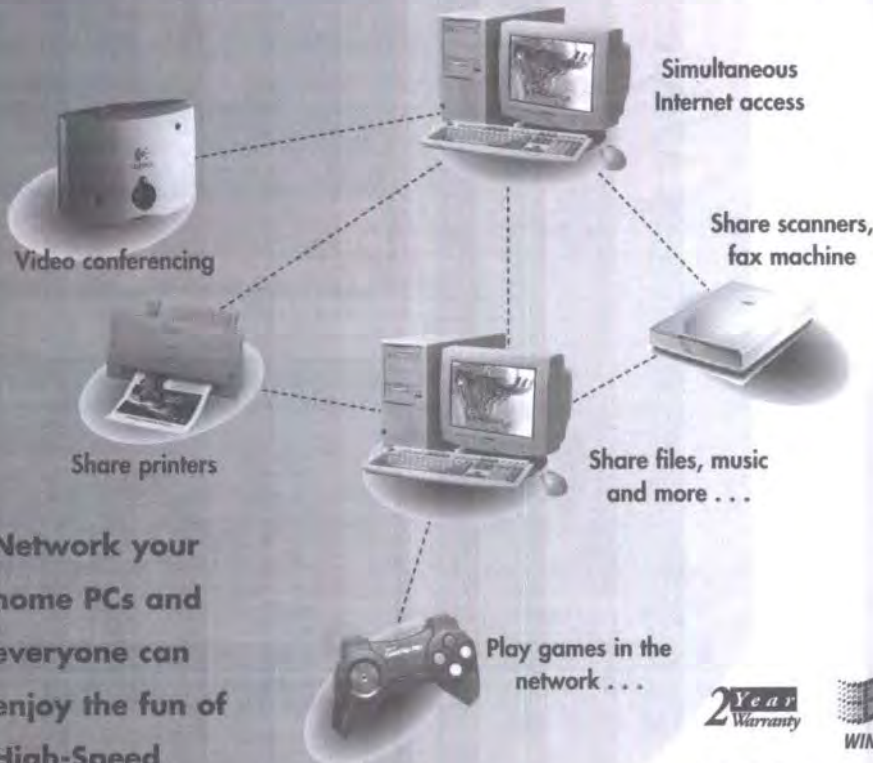
Chicago historians get violent

NB—The goings on at the Web site of the Chicago Historical Society are anything but dull—unless you tend to nod off at the thought of a fatal bombing that changed a nation or a blood-soaked relic from the Lincoln assassination. Two new online exhibits at the site take a close look at some violent American history. "The Dramas of Haymarket" an 1886 Chicago bombing, which the historical society says tore the city apart and spawned a worldwide labour movement. The other exhibit, "Wet with Blood," examines relics related to the 1865 assassination of U.S. President Abe Lincoln.

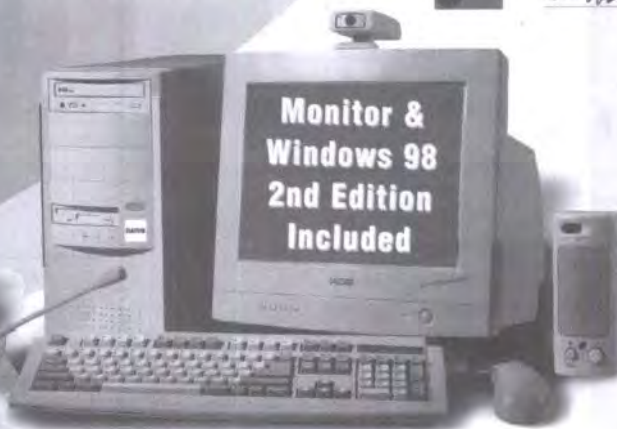
<http://www.chicagohistory.org/>

Network Your Home with PANDEX PC

PANDEX



Network your home PCs and everyone can enjoy the fun of High-Speed Internet highway, share files, printers, scanners and more to increase efficiency.



DAIWA

Microsoft Certified Solution Provider

DAIWA DISTRIBUTION INC.

Unit 11-13, 13520 Crestwood Place,
Richmond B.C. V6V 2G3
Tel: (604) 244-9912
Fax: (604) 244-9986
Tech: (604) 244-9195
Website: WWW.DAIWA.NET
EMAIL: DAIWA.BC@DAIWA.NET

Dealers Welcome

1-877-BC-DAIWA

For further price & upgrade options, please call our authorized resellers:

Sprite Computers
(Surrey)
581-1244

JB Computer Sales
(Vernon)
549-2041

Interaction
(N. Vancouver)
987-3472

Duncan Computer Centre
(Duncan)
746-9715

Specialty Electronics
(Kamloops)
851-9949

First Look Computers
(Delta)
591-1666

Dexton
(Burnaby)
433-9866

GOLD SERIES - Entry Level

- AMD® Super 7 / Intel® Socket 370
- All-in-One Mainboard
- Built-in Video & Audio
- PC-100 32 MB SD DIMM RAM
- 10.2GB UDMA EIDE Hard Drive

*High Speed UDMA-66 Access *

AMD® K6-2 500 \$949

AMD® K6-2 550 \$999

Intel Celeron™ 466 \$1015

Intel Celeron™ 500 \$1039

Intel Celeron™ 533 \$1059

PLATINUM SERIES - Advanced Users

- AMD® Athlon K7 ATX Mainboard
- PC-100 64MB SD DIMM RAM
- 15GB UDMA EIDE Hard Drive
- *High Speed UDMA-66 Access *
- nVidia Vanta 128 16MB AGP Video Card
- Sound Blaster 128 PCI Sound Card

AMD® K7 650 \$1429

AMD® K7 700 \$1485

AMD® K7 750 \$1585

AMD® K7 800 \$1719

AMD® K7 850 \$1915

AMD® K7 900 \$2200

AMD® K7 950 \$2539

DIAMOND SERIES - Professionals

- Pentium® III PC-133 MHz ATX Mainboard
- PC-100 64MB SD DIMM RAM
- 20GB UDMA EIDE Hard Drive
- *High Speed UDMA-66 Access *
- nVidia RIVA TNT2 M64 32MB Video Card
- Sound Blaster Live! Value PCI Sound Card

Pentium® III 550 \$1489

Pentium® III 600 \$1545

Pentium® III 650 \$1559

Pentium® III 700 \$1600

Pentium® III 750 \$1815

Pentium® III 800 \$1895

533B \$1499

600B \$1515

667B \$1575

733B \$1639

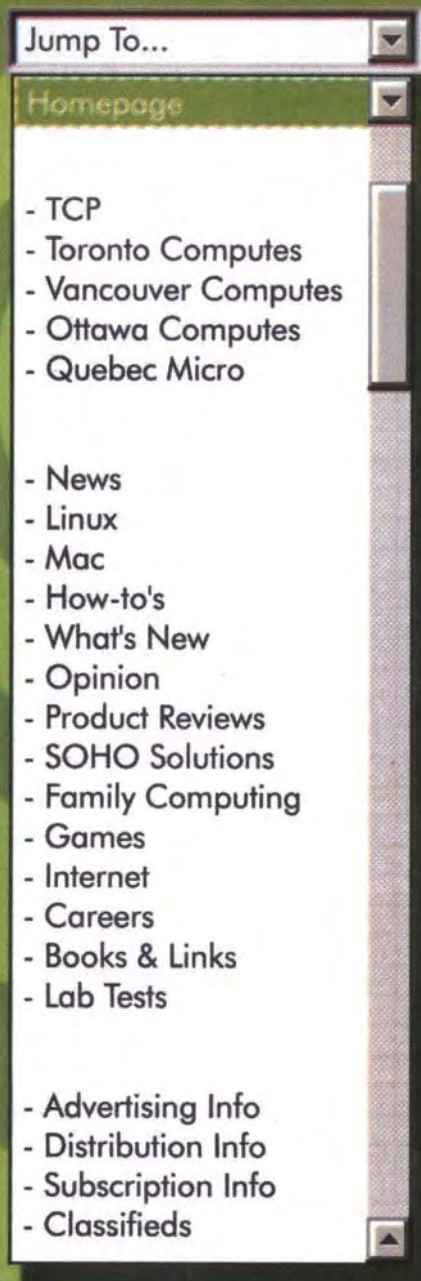
All Above Systems Include:

Panasonic 1.44 Floppy drive, 16" Mid Tower Case, GVC V.90 PCI Voice Fax Modem, 48x IDE CD ROM, MLI 120 Watts Stereo Speakers, Qtronix 107 Win 98 Keyboard, PS/2 Wheel Mouse w/Pad, KDS V5-550 15" SVGA Monitor, Windows 98 Second Edition

Two Year Parts & Labour Depot Warranty

* Nominal charges for installation and consultation may apply to special items. • All Pricing is already cash discounted and subject to change without notice. • All trademarks are the property of their owners. • Products may differ from illustration

**"Finally! A Canadian
tech website everyone
can use and understand."**



*Brought to you by the publishers of:
The Computer Paper & Canada Computes!*

**canada
computes.com**
www.canadacomputes.com

Powerful Windows NT Web Hosting



Our hosting plans offer everything you need, including full support for popular applications such as Access, MS SQL, ASP, Cold Fusion and PERL. With Pacific Online you'll get the fastest, most reliable Web servers, a high speed redundant backbone and a staff of qualified individuals. We can get you up and running in as little as 30 minutes. Visit us on the Web or call today.

Standard Features

- Redundant OC3 Backbone
- 99.9% uptime
- Full e-mail service
- Unlimited FTP access
- Your own CGI directory
- Live Web statistics
- Microsoft FrontPage
- Visual InterDev
- Active Server Pages
- Cold Fusion
- CyberCash
- Password protection
- Daily tape backups
- 24-hour on-site monitoring
- Same-day activation
- No setup fees
- 30 day money back guarantee



call 1-877-503-9870 www.pacific.ca email: info@pacific.ca

PACIFIC ONLINE

Subscribe
Subscribe to
The Computer PAPER
A Trader.com Publication Canada's Computer Information Source



NOW!

Please send me a subscription to **The Computer Paper**

☐ 1 year @ \$34.95 ☐ 2 years @ \$59.90 ☐ 3 years @ \$74.85

Subscriptions to anywhere in the U.S. \$75 (1yr)

International Subscriptions CDN.\$135 (1yr)

I am paying the full amount by ☐ Cheque or money order, payable to The Computer Paper

☐ VISA ☐ MasterCard # ☐ CC _____ Exp. Date: _____

Name: _____

Company (if applicable) _____

Address: _____

City: _____ Province: _____ Postal Code: _____

Phone Number: _____

Email: subscriptions@tcp.ca

Subscriptions are transferable, but non-refundable.

Subscriptions The Computer Paper

99 Atlantic Avenue, Suite 200
Toronto, Ontario M6K 3J8
Phone: (416) 588-6818 Fax: (416) 588-5388
Toll Free: (800) 465-3517

**NEW ADDRESS
JUNE 9!**

625 Church Street, Suite 600
Toronto, Ontario M4Y 2G1
Phone: (416) 923-4200 Fax: (416) 923-9079
Toll Free: (800) 465-3517

Here's one way to
mark your domain



©copyright registrars.com™ 2000

Internet Keyword: registrars.com



Let us show you a *slightly* more sophisticated way. Claim your territory on the internet with domain names. They are very effective marketing tools to help customers find you online. Use them for company names, promotions, products, and even slogans. Mark your domain now.



An ICANN-Accredited Domain Registrar



The Eyes of the Web are upon you

When you're online, everybody wants to own a piece of you—and they have the technology to do it.

Information wants to be free. This was the rallying cry of the cyberpunks who helped promote the public acceptance of the Internet in the early 1990s. The early Web heads helped build up an enthusiastically non-proprietary, non-commercial popular movement, which gave the critical mass of support that let the World Wide Web become truly worldwide. However, as the old saying goes, "Be careful what you wish for—you might get it."

The logical outcome of an open global information network is that information will be free. Potentially, all kinds of information, to anyone. In some cases, the freedom inherent in digital media, to copy and share certain kinds of information, poses a huge threat to corporate and artistic control of intellectual property such as software and music. Millions of MP3 users react to this danger with a simple word: "Cool!"

However, the same technology that enables access to the world library also poses a huge threat to personal privacy. The downside of the wired world is that it makes it possible for Web users' online movements, history, and personal writings to be recorded and analyzed automatically, in unprecedented detail, on a vast scale, for any conceivable purpose. And many of those purposes are potentially harmful to you.

Where everybody knows your name

The digital libertarians of the electronic frontier once envisioned the Web empowering infinite individual access to information and unlimited direct interaction between individuals and communities free from traditional government or corporate con-



Jeff Evans

THE
LAST BYTE

trol. To varying degrees, that has come to pass.

However, many other interested parties have jumped on the Internet as a wonderful tool for snooping on, manipulating, and sometimes harassing, defrauding, or impersonating Web users. With the aid of database technology, tens of millions of electronic dossiers on Web users are being continually created, updated, shared, and used. In most cases this is being done without the consent or awareness of you and me, the people who are being watched.

Some of these uses are fairly benign, such as Web site operators analyzing which parts of their sites are attracting the most traffic so they can focus on providing the most interesting content. Some are obviously malignant including collecting personal information to commit "identity theft," attempting to lure children into illegal activities, or cyber-stalking.

As personal information on Web users becomes a commodity that is bought and sold, the biggest problem is that you have no control at all over what is done with your personal information, once it has been captured and put on the global market.

Who's watching you?

Even as corporations rage against online piracy, they are, at the same time, systematically collecting oceans of personal information on Web users. They are trading, buying and selling that info with other corporations, governments and individuals for purposes ranging from advertising and selling, to "loyalty management" data, to screening potential and current employees. Fortune 1000 companies aren't the only snoopers.

One of the biggest concerns about online privacy is that once personal information is captured digitally, the concept of "information wants to be free" means that anyone—literally anyone—may end up having access to it. No matter what a corporate Web site's privacy policy says, or what Canadian government officials claim about the security of government files, once information exists on a network, it is at constant and great risk of spreading beyond its original location, for purposes beyond its owner's control.

For instance, your Canadian census information, stored in government databases, is supposed to be confidential. However, the legislation governing the census includes an allowance for major political parties to have access to a large part of the data for electioneering purposes. The more agencies that have access to the information, the more likely it is to "leak." Privacy policies are just words. The pressure to use information which is known to exist overcomes privacy barriers. A Web site privacy policy can't prevent hackers who steal the information from misusing it, and few Web sites are truly self-sufficient: their business partners, including advertising services, Internet service providers (ISPs), technology suppliers and others may have access to site user information, and are not bound by the site owner's privacy policy.

Here's a partial list of those who are waiting to watch you when you when you go online:

- **Information brokers and traders:** These are companies that compile and sell information using database and Internet technologies. For a fee you can get an astonishingly complete picture of most people's finances, work history, families, and often even drivers' licence numbers, Social Insurance Numbers, addresses and phone numbers.
- **Internet advertising services:** Most famously, DoubleClick, but also Engage, collect users' personal information (DoubleClick has also bought household purchasing information on most U.S. families) to target ads specifically at the interests of identified Web users.
- **Web site operators:** Amazon.com is likewise being attacked for having quietly collected information

on visitors to its site, which enabled it to get a very good idea of the political, social, and sexual orientations of its visitors.

- **Spammers:** The bottom of the Internet advertising barrel is filled with entrepreneurs who collect masses of email addresses and bombard them with huge numbers of unsolicited email advertising.
- **Identity thieves:** Freelance or organized criminals collect the personal information required to impersonate the victim. Traditionally, the preferred method was to steal the victim's purse or wallet, and use his or her credit cards and other documents to make purchases, or change identities.
- **Stalkers:** Disturbed or criminal individuals who pursue people they wish to dominate or harm, collecting information on them, sending harassing email, impersonating them, and in the case of pedophiles or obsessive fans or suitors, trying to meet the objects of their obsession.
- **Hackers/crackers:** Mostly young men who steal passwords and usernames, either by reading your email for interesting info, or by deception over the phone or email.
- **Governments and government agencies:** In some conspiracy theorists' minds, the biggest online threat to privacy. In fact, U.S. agencies, such as the National Security Agency, quietly analyze most of the world's telecom traffic, but they are rarely interested in the ordinary citizen.
- **ISPs:** These companies have a keystroke-by-keystroke record of where their subscribers have gone—which they are supposed to keep confidential.
- **Other Internet and telecom companies:** Firms that run search engines, for example, can tie queries and sites visited to the IP (Internet Protocol) addresses they came from.
- **Computer hardware and software vendors:** The practice of having a computer chip coded with an ID number, and the inclusion of automatic updating and reporting features in many programs have allowed companies such as Intel, Microsoft, Symantec and RealNetworks to identify what

customers are doing with their products—in some cases without the customers' knowledge.

What to do?

A short list of options to reduce your risk:

- Do a Web security audit of your PC using an online security test service such as ShieldsUp (<http://grc.com/default.htm>).
- Turn off your (Windows) PC's file and network sharing to prevent snoopers from coming onto your system. Use a high security version of your browser (such as the 1,024-bit version of Outlook) and turn its security options to the highest levels.
- Maintain alternate free email addresses (such as can be had at no charge from Hotmail). Change the address if spam starts getting through.
- Consider a personal Internet security software package such as Norton Internet Security 2000, which combines a personal computer firewall, parental content blocking, anti-virus software and options to block Java applets, cookies, ads, "Trojan" programs and other intrusions and nuisances.
- Consider testing or buying an anonymous Web surfing program, such as Anonymizer (<http://www.anonymizer.com/>), which prevents you from being traced by any of the snoopers listed earlier.
- Never give personal information of any kind, and especially not your passwords, usernames, Social Insurance Number, driver's licence number or credit or debit card numbers to anyone.
- Consider using an encryption program such as PrettyGoodProtection (<http://www.pgp.com>) to encrypt your email.
- Check your credit card and other monthly statements carefully for signs of unauthorized use, and act quickly to cancel accounts and follow up any signs of identity theft.

The bottom line is: you are being watched, and you can determine your own level of security and comfort, depending on how much you stand to be harmed by loss of privacy online, and how much trouble you care to take to protect yourself. □

**Zoltrix means quality products
at down to earth prices!**



ZOLTRIX EAGLE CAM USB CAMERA

Eagle Cam will automatically capture up to 30 seconds of video for you, and instantly E-mail it to you at your designated E-mail address, even though you are far away. This software package consists of Internet Phone, Video Email, Internet Video Phone, and Internet Chat. The Zoltrix Eagle Cam's Video Security Software enables you to get an instant message if someone enters into your home or office.



\$65

FEATURES:

- Conexant's latest imagination technology
- Full Colour and Motion Video Capture
- Live Video Conferencing
- Send Video Email
- Capture still pictures that you can send through Email
- Edit and create your own video clips
- Turn Your PC into a complete security Device!

ZOLTRIX GENIE TV CARD WITH FM TUNER



Zoltrix Genie TV turns your computer into your personal entertainment centre! It provides you with Super Quality TV and Video Capture. With programmable IR Remote Control, your favorite programs are just a click away! You can even use it to switch off your computer!

\$85

FEATURES:

- Supports NTSC, PAL, SECAM
- Full motion video capture
- Sizable TV with movable windows
- Auto scan
- Supports Intel InterCast and WaveTop
- Supports closed caption functions
- Supports Microsoft Web TV
- BTSC stereo decode (optional)
- Full DBX noise reduction (optional)
- Compatible with home camcorder
- Wireless IR programmable remote control
- Switch off computer by remote (ATX computer required)
- FM Tuner included



Got a Problem?
Call our toll free technical
support line at
1-877-ZOLTRIX*
FREE! for end users*

Visit our Website for
the latest product news,
updates & drivers at
www.zoltrix.com

Pricing and specifications are subject to error and may change without notice. Call your dealer for current pricing. *Available only to Zoltrix products purchased after March 1st, 1999.

ZL-0600

ZOLTRIX



I... 4 U...



Whether it's for the family, student or the home office, IPC Direct has the deal that fits your budget! All of our systems are packed with everything you need to be productive and have fun at the same time! IPC systems are also loaded with the sizzling technology you hunger after - including Intel® Pentium® III processors, massive hard drives, high-quality audio, video, DVD technology and much, much more! IPC Direct offers toll free nation-wide assistance, 3 years parts and labour, and nation wide localized support! Call and order your IPC system today!

Invest in Your Future



Select • C 566

- Intel® Celeron™ Processor 566 MHz
- 64MB SDRAM
- 10.2 GB Hard Drive
- 40X CD ROM
- Amplified Speakers
- 56K V.90 PCI Modem
- nVidia TNT 16MB AGP Video
- USB Gamepad and Game
- Corel® WordPerfect® Office 2000
- Philips Free Speech 98
- 17" Monitor

IPC e# HF2-A-1-566-37

\$1049 **\$38**
AFTER \$50 MAIL-IN REBATE **month[†]**

Upgrade Pkg. 1

128MB RAM
15GB Hard Drive

\$129[‡]

Upgrade Pkg. 2

19" Monitor
Norton Anti-Virus 2000

\$275[‡]

Select • 3 650

- Intel® Pentium® III Processor 650 MHz
- 64MB SDRAM
- 15 GB Hard Drive
- 12X DVD
- 300W Speakers w/ Sub-woofers
- 56K V.90 PCI Modem
- nVidia TNT2 32MB AGP Video
- TV Max TV Tuner w/Video Capture
- USB Gamepad and Game
- Corel® WordPerfect® Office 2000
- Philips Free Speech 98
- 17" Monitor

IPC e# HF2-A-3-650-38

\$1499 **\$55**
AFTER \$100 MAIL-IN REBATE **month[†]**

Upgrade Pkg. 1

128MB RAM
20GB Hard Drive

\$119[‡]

Upgrade Pkg. 2

Toshiba 4X DVD/ 4X CD-RW

\$275[‡]

Select • 3 700

- Intel® Pentium® III Processor 700 MHz
- 128MB SDRAM
- 15 GB Hard Drive
- 12X DVD
- 600W Speakers w/ Sub-Woofers
- 56K V.90 PCI Modem
- nVidia TNT2 32MB AGP Video
- TV Max TV Tuner w/Video Capture
- Norton Anti-Virus 2000
- Corel® WordPerfect® Office 2000
- Philips Free Speech 98
- USB Camera
- 17" Monitor

IPC e# HF2-A-3-700-39

\$1749 **\$63**
AFTER \$100 MAIL-IN REBATE **month[†]**

Upgrade Pkg. 1

20GB Hard Drive
32MB Matrox G-400 AGP Video

\$175[‡]

Upgrade Pkg. 2

19" Monitor
Microsoft Internet Keyboard

\$399[‡]

Select • 3 866

- Intel® Pentium® III Processor 866 MHz
- 256MB SDRAM
- 20 GB Hard Drive
- 12X DVD
- Hollywood 4 pt. Surround Speakers
- 56K V.90 PCI Modem
- nVidia GeForce 256 32MB AGP Video
- TV Max TV Tuner w/Video Capture
- USB Gamepad and Game
- Norton Anti-Virus 2000
- Corel® WordPerfect® Office 2000
- Philips Free Speech 98
- Canon BJC2000 Colour Printer
- USB Camera
- NEC 17" Monitor

Printer Included



IPC e# HF1-A-3-866-40

\$2849 **\$97**
AFTER \$150 MAIL-IN REBATE **month[†]**

Upgrade Pkg. 1

384MB RAM
IOMega Zip Drive

\$275[‡]

Upgrade Pkg. 2

Toshiba 4X DVD/ 4X CD-RW

\$275[‡]

Common Features: • Windows 98 (Preloaded) w/CD • Integrated 3D Sound • Mouse • Keyboard • **90 Days Free Unlimited Internet Access from Look Communications***

Visit us @ www.ipc.ca & we can custom build one just for you!



1-888-446-4472

Mon-Fri 9-11 EST / Sat 9-4 EST



www.ipc.ca

24 Hours



4 Great Reasons to Buy from IPC

- The IPC Brand has been making Canadians happy for over 15 years.
- Your system is shipped out of Toronto. (not U.S.) You save \$100.
- Pump your money back into Canada. You fuel the Canadian economy.
- IPC is partnered with Canada's largest independent internet service provider; Look Communication (not a U.S. conglomerate) Your dollar stays in Canada



Systems must be registered on-line to receive full system warranty benefits. Select series systems come with a three year parts & labour warranty, unless otherwise specified (please ask your representative for more details). Please refer to the warranty card included with your system for specific details regarding your warranty coverage, complete warranty information available upon request. Technical support for software and operating systems is for a period of 90 days from original date of invoice. Toll Free technical support hours are from Monday to Friday, 9:00 AM to 11:00 PM, Saturday, 10:00 AM to 4:00 PM Eastern Standard Time. ±Onsite service not available in all areas. Configuration are subject to change without notice, and prices may vary in differing regions. Shipping charges and applicable taxes are not included in prices shown. Shipping is FOB Markham, ON. Due to CRT regulations in Canada, downloading is restricted to speeds less than 56Kbps, and connection times may vary. Intel, the Intel Inside logo and Pentium are registered trademarks and MMX and Celeron are trademarks of the Intel Corporation. IPC and the IPC logo are registered trademarks. Systems may not be exactly as shown. Price shown is upgrade price. Windows 98 comes preloaded on all systems. *Where available with Internet Direct's local dial up access points of presence. Outside this area, 50 free internet hours provided. Customers are required to provide credit card for internet access sign up and are responsible for cancellation. **Shared memory architecture from system memory. †Lease price based on 48 month period OAC. *Factory refurbished

IDH-0600

Be on-line all the time.

Get **dedicated Internet access**
from AT&T Canada.

Instant access.

No waiting for e-mail.

No dial-up. No line-up.

No missed opportunities...

See reverse
for details.

For more information, talk to your AT&T Canada
Sales Representative or call us today at

1-877-430-7553

or visit www.attcanada.ca/business/dedicate.html



AT&T CanadaTM

The network the world works on.

The smart solution for your needs.

We have a solution for any type of connection requirement, from basic ISDN to advanced T1. With T1 you can handle large file attachments, transfer extensive video or image files, and even host a corporate Intranet.

Guaranteed access.

With a dedicated line, your service is always available - 99.5% guaranteed[†], or we will refund 25% of your monthly service fee.

Access on the road.

When you're on the road, connect directly to the Internet through 60 local access numbers across Canada, and hundreds of U.S. access points.

Reliable performance and exceptional support.

AT&T Canada offers a high speed, high quality network with multiple Internet connections and monitoring around the clock. Depend on highly-skilled technical support 24 hours a day, 7 days a week, plus access to a valuable on-line library.

Hardware included.

AT&T Canada supplies industry-leading Cisco routers to suit your access needs.

We'll include the monthly business line[‡], plus all necessary hardware and waive the set-up fee – up to \$1,000*.

From as low as **\$295/month**^{**}

^{**}Based on a 5 year contract

AT&T Canada offers a full range of sophisticated, reliable Internet services for businesses of all sizes.

As one of the leading business-focussed global providers, we're committed to bringing you reliable leading edge solutions for all your local, long-distance and Internet needs.

1-877-430-7553

www.attcanada.ca/business/dedicate.html



The network the world works on.

[†]AT&T Corp. used under licence. [‡]Monthly business line included with T1 and ADSL service only. *Some set-up fees exceed \$1,000. Offer covers first \$1,000 only.

^{**}Visit our website for complete details on AT&T Canada's service guarantees. Terms and Conditions apply. Guarantee subject to change. Please quote the following registration code N177.