

Web Browsers: The Best of the Net



November 2008 Volume 21 Number 11 Free

The Computer Paper

The Ultimate Media PC:
Enter Online To Win

Social Networking:
How Not to Get on the Ballot

Photo Sharing:
Making Your Pics Count

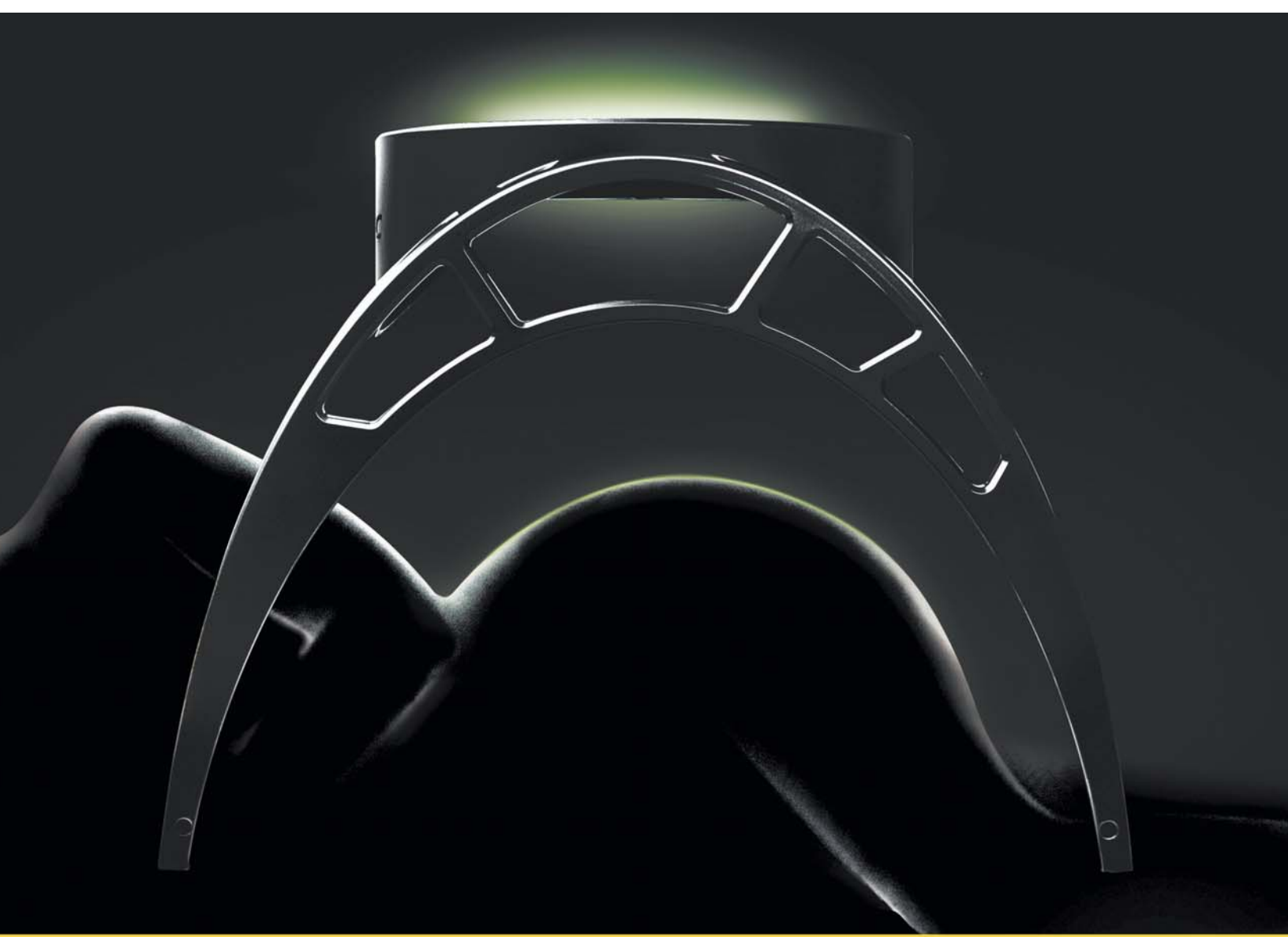
Power Pellets:
Top 10 PC Game Developers



STAYING SOCIAL

From Facebook Apps to Flickr We've Got it Covered

Get fed: The Feed from hubcanada.com



Beauty uncovered.

Elegant. Stylish. Revolutionary. The Antec Skeleton is a case unlike any other. Let the world see the true beauty of your system with this powerfully-cooled open-air enclosure, the first of its kind. Shed your skin with the Antec Skeleton...and dare to think beyond the box. For more information, visit <http://www.antec.com>.



Antec
Believe it.



ATCS™ 840

History Repeats Itself

Cooler Master introduces the world's first all-aluminum ATCS (Active Thermal ConvectionSystem) computer chassis in 1999 and quickly became the de facto of standard in elegant and reliable design. We now bring forth ATCS 840, marking the re-introduction of the ATCS line and builds upon the legacy with the latest advancement in ergonomics and system cooling. The ATCS 840 is set to make history once again.



www.coolermaster.com

V8

EXPERIENCE THE POWER OF 8

Rev up to the latest in cooling technology. The new V8 engine is designed with enough horsepower to out perform any CPU suffering from even the most critical heat conditions. With its 4 sets of aluminum fins and 8 heats pipes, this engine is capable of cooling up to 180w of heat energy. From its stylish design to its top of the line performance, the V8 would out cool the competition. Cooler Master V8 cooler, experience the power of 8.

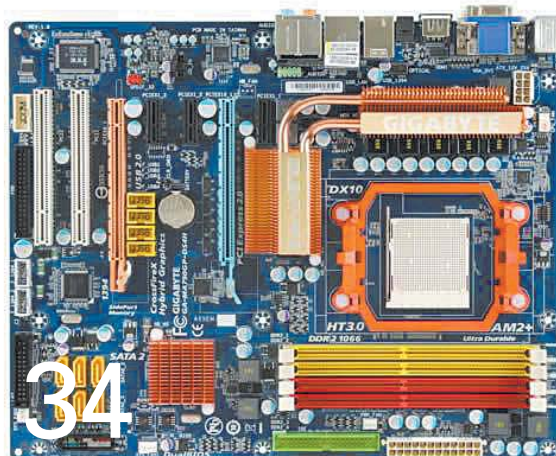


RESELLERS

DISTRIBUTOR



26



34



35

- 6 The Feed**
All the latest from hubcanada.com including mobile film festivals, Earth-friendly tech companies, new products and more
- 12 Social Networking**
Wherein the simple act of knowing people becomes a fine art
- 16 The Anti-Social Net**
Debating the merits of social networking... with a few reasons why not to partake
- 18 In the Lab: Web Browsers**
Browsing for the best of the Net
- 22 Facebook Apps: Awesome or Annoying?**
The popular social networking site offers near limitless customizability... for better or worse
- 23 The Doctor is in**
Your questions answered by the HUB PC Doctor
- 24 Fun with PowerPoint**
Sick of slideshows? Here's how to create a fun game in PowerPoint
- 25 Industry Giant Goes Light-Weight**
Dell's Inspiron Mini 9 marks the company's first foray into netbooks
- 26 Building the Ultimate Media PC pt. 1**
Gathering the parts for the 10-foot PC
- 29 Everybody's Got Something to Hide**
Online anonymity and what you have to lose
- 30 The Online Photo Album**
Finding a needle in the photo sharing haystack
- 32 Online Dating**
Looking for love in all the virtual places
- 33 Deface Book**
With the Social Net, it's easier than ever to ruin political aspirations
- 34 Gigabyte GA-MA790GP-DS4H**
Proving that AMD still has muscle to flex
- 35 Power Pellets: Top 10 PC Game Studios**
These development companies hold the fragile future of PC gaming in their collective hands
- 38 The Last Byte**
The Social Net @ work

HUB: The Computer Paper Volume 21: Number 11
27 Atlantic Ave, Toronto, ON, M6K 3E7
Tel: 416-348-9666 Toll-free: 866-757-0179 Fax: 416-348-9553

Editor-in-Chief Andrew Moore-Crispin
andrew@ppublishing.ca

Editor-at-Large David Tanaka
david@ppublishing.ca

Co-Editor Dorian Nicholson
dorian@ppublishing.ca

Contributing Editors Gord Goble
Mike Palermo
Marc Saltzman
Chad Sapieha
Ray Richards
Helen Bradley

Advertising Sales
Ontario/Toronto Karim Rizk
karim@ppublishing.ca
(416) 348-9666 ext. 252

Montréal (866) 757-0179

Western Canada Vivian Jin
vivian@ppublishing.ca
(604) 696-1389

Business Group

President Scott Piccolo
scott@ppublishing.ca
(416) 348-9666 ext. 226

Key Accounts Manager

Art Director Steve Stoner
steve@ppublishing.ca

Production Co-ordinator Liz Van Der Wee
liz@ppublishing.ca

Webmaster Duane Hass
webmaster@ppublishing.ca

Office Administrator/Accounting Dorina Iovescu
dorina@ppublishing.ca

IT Manager Steve Quinney
steveq@ppublishing.ca

Canadian Publication Mail,
Sales Product Agreement #41037518.
Printed in Canada. ISSN 1710-0143 HUB: TCP (B.C. ed.) ISSN 1710-016X HUB: TCP (Edmonton ed.) ISSN 1710-0178 HUB: TCP (Eastern ed.) ISSN 1710-0186 HUB: TCP (Montreal ed.) ISSN 1710-0194 HUB: TCP (Prairie ed.) ISSN 1710-0208 HUB: TCP (SW Ont. ed.) ISSN 1710-0216 HUB: TCP (Toronto ed.) HUB: The Computer Paper is published monthly by Piccolo Publishing Inc. All rights reserved. Reproduction in whole or in part without the permission of the publisher is strictly prohibited. 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. The opinions expressed in the articles and columns and ads are those of the writer/advertiser and not necessarily those of HUB: The Computer Paper.



500 WATT



600 WATT



700 WATT

certified efficiency | BECAUSE

EARTH MATTERS TO ALL OF US

POWERED BY



EVEREST 80PLUS Series

www.fspgroupusa.com

FSP GROUP

www.allway.ca | www.elcosystems.com | www.eprom.com | www.memoryexpress.com | www.minimicros.com | www.ncix.com | www.wapac.net

ALSO VISIT OUR WEBSITE FOR MORE PROMOTIONS AT [HTTP://WWW.SIGELECTRONICS.COM](http://www.sigelectronics.com)

New MacBook

- Intel Core 2 Duo 2.4GHz processor
- 250GB 5400rpm SATA
- 2GB of RAM
- 13" Glossy LCD Display
- nVIDIA GeForce 9400M Graphics

Cash **\$1665.99**
 Online **\$1669.99**



CHECK
 website for more
Promotion

MacBook Air (XP Package)

- 1.60GHz Intel Core 2 Duo
- 80GB Parallel ATA Drive @ 4200 rpm
- Preinstalled, Mac OS X Leopard & iLife '08
- 13.3-inch Widescreen LED Backlit Display
- Multi-Touch Gestures
- 802.11n & Bluetooth 2.1

Cash **\$1649.99**
 Online **\$1699.99**

Coupon Code: SIG-HUB\$50



- 1.80GHz Intel Core 2 Duo
- 64GB SSD
- Preinstalled, Mac OS X Leopard & iLife '08
- 13.3-inch Widescreen LED Backlit Display
- Multi-Touch Gestures
- 802.11n & Bluetooth 2.1

Cash **\$2599.99**
 Online **\$2649.99**

Coupon Code: SIG-HUB\$50

FEATURED ITEMS

Griffin PowerBlock For iPod / iPhone
 • Connective USB Cable Included
 • USB Wall Plug Included



Cash **\$7.99**
 Online **\$8.99**

Kingston DataTravler



8GB Cash **\$17.99**
 Online **\$18.99**
 4GB Cash **\$11.99**
 Online **\$12.99**

Microsoft Laser 6000 Notebook



- Advanced Laser Tech.
 - Scroll Four Ways
 - Tilt Wheel Tech.
- Cash **\$27.99**
 Online **\$29.99**

LACIE 1TB Designed BY Neil Poulton
 External Hardrive
 USB2.0



Cash **\$169.99**
 Online **\$179.99**

Coupon Code: SIG-HUB\$20

Kensington FM Transmitter
 LiquidFM Deluxe For iPods/iPhone



iPod not Included
DOOR CRASHER
 Cash **\$13.99**
 Online **\$14.99**

tomtom 930 T
 Traffic-Reciever Included



- Preloaded Maps Of Canada, US & Europe
 - FREE Live Traffic
 - Bluetooth Remote Control
 - Bluetooth Hands-Free Calling
 - Built-In FM Transmitter
 - Voice Address Input
- Cash **\$489.99**
 Online **\$499.99**

Kingston MicroSD
 with SD Card Adapter



2GB Cash **\$6.99**
 Online **\$7.99**
 4GB Cash **\$12.99**
 Online **\$13.99**
 8GB Cash **\$24.99**
 Online **\$25.99**

R4V2 / D5T Flash Card



Cash **\$29.99**
 Online **\$34.99**

SONY BDP-S350 Blu-ray Disc Player

- Full HD 1080/60 p & 24p True Cinema Video Output
- Dolby® TrueHD / DTS®-HD bitstream out over HDMI (V1.3)



Cash **\$264.99**
 Online **\$269.99**

Coupon Code: SIG-HUB\$20

Simpletech 250GB



• USB 2.5 Hardrive
 Cash **\$79.99**
 Online **\$89.99**

SONY MDR-NC60



cash **\$109.99**
 online **\$119.99**

SENNHEISER PXC-250



cash **\$99.99**
 online **\$109.99**

Bang & Olufsen A8 Earphones



cash **\$97.99**
 online **\$99.99**

MOTOROLA H500 Headset



cash **\$24.99**
 online **\$25.99**

JAWBONE™ II



cash **\$97.99**
 online **\$99.99**

Canon Authorized Reseller

PowerShot SD990 IS



14.7 MP 3.7x ZOOM 2.5 LCD
 Cash **\$389.99**
 Online **\$394.99**

PowerShot A2000 IS



10.0 MP 6.0x ZOOM 3.0 LCD
 Cash **\$234.99**
 Online **\$239.99**

PowerShot A1000 IS



10.0 MP 4.0x ZOOM 2.5 LCD
 Cash **\$199.99**
 Online **\$204.99**

PowerShot SX110 IS



9.0 MP 10x ZOOM 3.0 LCD
 Cash **\$264.99**
 Online **\$269.99**

PowerShot SD880 IS



10.0 MP 4.0x ZOOM 3.0 LCD
 Cash **\$289.99**
 Online **\$294.99**



New iPod Classic



New Nano 4 / 8GB



New Touch 32GB

CLEARANCE SECTION

- Foxconn GeForce 7900GS 256MB PCI-Express\$89.99 / \$79.99
- Foxconn GeForce 7950 512MB GTOC\$99.99 / \$99.99
- PC Game Enemy Territory Quake Wars.....\$14.99 / \$9.99
- MP10 MG100 MP3 Player 4GB (Titan)\$79.99 / \$69.99
- Body Glove Digital Camera & MP3 Case\$2.99 / \$1.99
- jWin JX-M88 Splash Proof CD Player / radio\$29.99 / \$24.99

- jWin JX-M89 Splash Proof Shower CD Player / Radio\$39.99 / \$29.99
- jWin Digital Photo Frame 7" LCD w/ Built in Memory\$79.99 / \$69.99
- jWin JD-VD625 5.1Ch Karaoke Home Theater System\$99.99 / \$77.99
- jWin JD-VD509 Progressive-Scan DVD Player\$34.99 / \$29.99
- Targus Travel Adapters\$14.99 / \$9.99
- Braun 7680 Syncro System Smart Logic Shaver\$129.99 / \$109.99

- Philips Norelco 8140XL shaver\$119.99 / \$99.99
- Braun 360 complete Shaver\$199.99 / \$189.99
- Panasonic Lumix DMC-FZ18 Digital Camera\$334.99 / \$334.99
- Vizio 37" Wide LCD HDTV 7000:1 8ms (RF)\$579.99 / \$549.99
- V7 40" LCD 1080i HDTV, 16:9 ratio, w/Wall Mount\$699.99 / \$669.99
- Palm m100, III, VII Series Portable Keyboard\$4.99 / \$4.99

We are actively looking for resellers and distributors for referrals in almost all countries. Interested in becoming a part of SIG Electronics reseller? CALL NOW 1(866) 800 8688

STORE LOCATION Richmond Hill: 245 West Beaver Creek, Unit 9 Richmond Hill, Ontario Tel: 1(905)886-8601 Monday to Friday: 10AM - 6PM Saturday to Sunday: 12PM - 7PM
 Brampton/Mississauga: 7700 Hurontario st., Unit 502A, Brampton, Ontario Tel: 1(905)487-0795 Tuesday: 11AM-7PM Thursday to Sunday: 11AM - 7PM Monday & Wednesday: Closed

SIG Electronics reserves the right to withdraw or change pricing without notice. All products are in cash price. We are not responsible for any loss and type error(s). All trademarks and trade names are used to identify entities claiming the marks and names of these products. SIG Electronics disclaims any interest in trademarks and names except its own.



The Feed

from www.hubcanada.com

Breaking News:

Game Developers Conference to Hit BC

By Matt Smith

Building on the success of the first ever Vancouver Game Summit in 2007, the Game Developers Conference (GDC) has announced that it will be coming to Vancouver for Digital Week in May of 2009. The Vancouver Game Summit is dedicated to bringing the Canadian sector into the forefront of game development... www.hubcanada.com/feed/489

Newegg Hatches in Canada

By Dorian Nicholson

Good news arrived recently for those looking to purchase computer supplies or equipment online, as a new e-retailer has come up from the United States looking to expand into the Canadian market. After seven years operating solely in the States, Newegg.com will be broadening its horizons with the launch of Newegg.ca... www.hubcanada.com/feed/495

First Ever Mobile Film Festival Scheduled for '09

By Matt Smith

What if you found yourself attending a film festival and taking your seat beside silver screen icons Robert Redford and Isabella Rossellini? And what if Redford or Rossellini were there to judge movies on their mobile phones? Well, that is likely what is going to take place at the inaugural 2009 Global Mobile Film Festival... www.hubcanada.com/feed/492

Canon and Avril Lavigne Team Up

By Kevin Freeman

Canon has officially paired up with Canadian rocker Avril Lavigne in order to sell its Rebel SLR series and the ELPH compact line of point and shoot cameras. Lavigne made a special appearance to kick off the campaign in downtown Toronto on October 20, hoping to prove that Canon cameras are "the best damn thing"... www.hubcanada.com/feed/514

Macleans OnCampus Virtual Fair Debuts

By Matt Smith

Attending a college or university fair in person is time consuming and the crowds and speaker presentations can make the fair overwhelming. But what if you could attend a university fair without ever having to travel there and stand in lineups? This is what Macleans.ca has created Macleans OnCampus Virtual Fair... www.hubcanada.com/feed/509

GSM Association to Make Broadband Ubiquitous

By Dorian Nicholson

The advent of the Internet has made many tasks easy and convenient to perform

online, from communications, to research, to banking and even working in many cases. The steadily falling price of Wi-Fi laptops and 3G-enabled phones has helped to make the Internet a necessity, not only for all things, but in all places... www.hubcanada.com/feed/493

Panasonic Sponsors WWF's Arctic Program

By Dorian Nicholson

Melting glaciers, stranded polar bears, increased water levels... Anyone who has seen The Day After Tomorrow or An Inconvenient Truth knows the scenario. That's why the WWF's International Arctic Program is working to combat climate change and save the ice caps. Thanks to Panasonic, the program will be getting some much needed support to implement its four-pronged approach to protecting the environment... www.hubcanada.com/feed/500

MS Office '07 Goes Retro With Addintools

By Matt Smith

Tired of trying to memorize your commands for Microsoft Office 2007? Well, Addintools has announced a new face-lift feature for 2007 that brings the interface to something a little closer to the more familiar Office '03. The newest version, v3.93c, sports a light-weight interface that will make MS Office users... www.hubcanada.com/feed/504

New Products:

PSP Launches New Family Bundle

By Dorian Nicholson

In the middle of last month, Sony announced the release of a new package deal for the PSP, a family-oriented bundle that would include Ratchet & Clank: Size Matters, as well as a voucher to download another title from the Playstation Store. The PSP included is also an updated model, the PSP 3000, which features glare reduction... www.hubcanada.com/feed/508

Seagate Unveils Momentus 5400.6 Hard Drive

By Dorian Nicholson

The laptop computer has evolved considerably over the past several years, changing from a device meant to perform a small portion of the tasks a desktop computer can to a machine that is meant to meet or exceed the expectations of modern desktops. In order to do that, portable computers must be able to compete with the hard drive capacity and access speed that desktop PCs have... www.hubcanada.com/feed/490

Nero Releases New Media Software

By Dorian Nicholson

With the release of Nero 9 last month Nero is attempting to provide their customers with a product that is both an improved version of the classic software and also an all-in-one solution that will allow users to manipulate a variety of files in a multitude of ways. Many of the features of the improved software are the result of listening in to what the customers wanted to see... www.hubcanada.com/feed/491

See the full versions of these stories and more only at www.hubcanada.com.



SNT - SATA BACKPLANES



MG CHEMICALS
HEAT TRANSFER COMPOUND



NETWORK TESTING TOOLS



COOLERMASTER
VORTEX 752



ATEN - VGA SIGNAL SPLITTER

Your Ultimate Source for Computer and Entertainment Accessories

www.Allway.ca



Allway Technologies (Ontario) Inc.
Tel: 905-477-0888 Fax: 905-477-0890 Toll Free: 1-888-563-9171
#8 - 200 Cochrane Drive, Markham, Ontario, Canada L3R 8E8

Allway Technologies Inc.
Tel: 604-232-3981 Fax: 604-232-3984 Toll Free: 1-888-633-5656
#5 - 3671 Viking Way, Richmond BC, Canada V6V 2J5

For
Dealers
Only



Your Reliable Computer & Electronics Supplier



Digital
7" / 8.4" Photo Frame



APPLE

iPhone Accessories
iPhone Case / Charger / FM Transmitter



New Arrival - DM Tech

20"/37"/42" LCD TV with DVD Build-in

Professional TV / Video Technology Supportor

KWORLD



Zonet

PS2 / USB Data Switch
Video Splitter

**Networking
System**



From 18U to 42U



**2009 VERSION
ANTIVIRUS
READY**



SURVEILLANCE
SECURITY CAMERA
SECURITY SYSTEM



CAT 6E
Network Cable



HDMI
Video Cable



MIOS

500W / 545W



MIOS

SCC302BS

Mid Tower Case



MIOS

8008WG

Mini Tower



Partner



1353 Britannia Rd. East, Mississauga, ON
Toll Free: 1-866-625-9889
Phone: 905-565-9391
Website: www.tomcom.ca
E-mail: info@tomcom.ca

Our 19th Year!

550 Alden Rd., Unit #110
Markham, Ontario L3R 6A8
Phone: (905) 470-1425

Shop online at
www.greytech.com

GREY-TECH

COMPUTER INC.

HARDWARE • SOFTWARE • ACCESSORIES

Directions & Hours

5 Lights North of Steeles Avenue
1 Block West of Warden Avenue
Hours: Monday - Friday: 9am - 6pm
Saturday & Sundays: Closed

Small Business RAID Server

We know servers and we've been building them for years!

This new Premium pedestal server offers fault tolerance with RAID 5. Should one of its three drives fail, your data is still protected and business continues as usual

\$1399.00

What's Included?

Intel e8500 Core2Duo™ 3.16GHz processor • Intel S3210 server motherboard • 4096MB 800MHz DDR2 memory • Four Seagate 500GB drives • one 250GB for your operating system and programs; three 500GB drives in a protected RAID array for your data • Built-in Intel video controller • Dual gigabit LAN ports • Heavy duty power supply • Antec P182 full tower chassis • DVD Rewriter • Logitech keyboard and optical mouse • Two year parts and labour warranty
Package as listed (IGT-SYS064621) **\$1399.00**

RAIDed Performance Business Bundle

This system features RAID security... Should one of the two included drives fail, your data is protected!

\$1229.00

What's Included?

Intel quad-core Q9550 Core2Quad™ 2.66GHz 1333MHz FSB processor • Intel G45 chipset motherboard • 4096MB DDR2 800MHz memory • Dual Seagate 500GB SATA3 drives in a RAID 1 array for security • 500 watt power supply • Intel X4500 HD graphics controller • Antec 300 tower chassis • Acer 22 inch HD 1680x1050 resolution digital LCD display • DVD Rewriter • Logitech Keyboard • Logitech optical mouse • Your choice of Microsoft XP Professional or Vista Business edition operating systems
Package as listed (IGT-064291) **\$1229.00**

Intel Core2Duo™ Business Bundle with Acronis's True Image disk imaging backup software

- ✓ Acronis data loss protection software included
- ✓ Features Intel's new faster G45 Express chipset
- ✓ 22" widescreen 1680x1050 pixel monitor
- ✓ Microsoft's Windows XP Professional
- ✓ Dual output to LCD plus HDMI device
- ✓ 4GB of high-speed 800MHz memory

FEATURES AND SPECIFICATIONS

- Intel Core2Duo™ e8400 45nm processor
- Intel DG45ID top of the line board
- 4GB of Kingston 800MHz DDR2 memory
- 500GB Seagate SATA3 hard drive
- Intel's new X4500 HD video controller
- Antec Three Hundred tower chassis with super quiet 140mm cooling fan
- Ace quiet heavy-duty power supply
- Acer 22inch widescreen digital monitor with 1680x1050 res.
- LG SATA dual-layer 22x DVD/CD writer with software bundle
- Logitech desktop bundle corded keyboard and optical mouse
- Microsoft Windows XP Pro
- Acronis True Image 11

ATI 4870 GAMERS SYSTEM

750MHz Video Card!

This system features Asus's new P5QL Pro motherboard with Intel's new P43 Express chipset.

- ✓ Excellent gaming on a budget
- ✓ 4GB 800MHz DDR2 memory
- ✓ 22" 5ms widescreen monitor
- ✓ 3.0GHz Core2Duo processor
- ✓ Antec Three Hundred chassis
- ✓ Antec 500 watt power supply

\$1339.00

What's Included?

Intel Core2Duo™ E8400 45nm processor • Asus Intel P43 P5QL Pro motherboard • 4GB of Kingston 800MHz DDR2 memory • 500GB Seagate SATA drive • Asus 750MHz ATI 4870 512mb video card with dual DVI output • Antec Three Hundred gamers chassis • Antec TruePower 550 watt power supply • Acer 22" 5ms wide screen 1680x1050 resolution monitor • 22x DVD/CD writer • Logitech keyboard and optical mouse • Logitech LS21 2.1 speakers • Microsoft Vista Premium
Package as listed (IGT-064787) **\$1339.00**

"GREEN" PC

Featuring Intel's new ATOM processor, this "expandable" bookshelf sized computer is environmentally friendly and much cheaper to run than a standard desktop system.

\$259.00

What's Included?

Intel 1.6GHz ATOM processor • Intel ATOM motherboard • 512mb DDR2 memory • Seagate 80gb hard drive • Integrate business graphics • Small footprint chassis with 120 power supply • 22x DVD writer with software.
Package as listed (IGT-064286) **\$259.00**

LASER PRINTERS

SAMSUNG	
ML2571n (printer/20ppm/1200dpi)	66%
ML2571n (printer/25ppm/1200dpi)	141%
ML3051nd (printer/28ppm/1200dpi)	237%
CLP300 (colour/17ppm/600dpi)	264%
SCX-4521f (laser,printer, fax,copy)	160%
CLX2160 (combination colour printer, colour scanner, and colour copier)	235%

HEWLETT/PACKARD

P1006 (b&w/17ppm/1200 dpi)	89%
P1505 (b&w/24ppm/1200 dpi)	88%
P1505n (lan/b&w/24ppm/1200 dpi)	132%
P2015 (b&w/27ppm/1200 dpi)	263%
CP1215 (colour/12ppm/600 dpi)	136%
CP1515n (lan/colour/12ppm/600 dpi)	219%
3600n (lan/colour/17 ppm/600dpi)	290%
2840 (colour laser,scanner, copier, fax)	880%

POCKET TECH

iPAQ Business Messenger
Introducing HP's newest pocket marvel... the iPAQ 910 messenger smartphone. Combines the best of your mobile phone, notebook, and personal navigation system into a single sleek device.

iPAQ 910 Key features
Quadband GSM/GPRS/EDGE, Wifi, Bluetooth, Integrated GPS technology, 3MP camera, 320x240 display, 416MHz processor, Windows Mobile 6.1 with Office

HP \$457.95

HP iPAQ 510 (Q8 Phone/Mobile)	248%
HP iPAQ 110 (Pocket PC/WiFi)	274%
HP Enterprise 210 (Pocket PC/WiFi)	362%
ASUS R300 (3.5" GPS Multimedia System)	172%
ASUS P527 (Q8 Phone/WiFi/GPS/Mobile)	519%
Palm Z22 (Pocket Organizer)	122%
Palm E2 (Pocket Organizer)	215%
Palm TX (Pocket Organizer/WiFi/Bluetooth)	330%
TomTom One (3.3" Pocket GPS System)	196%
TomTom XL330 (4.3" Pocket GPS System)	266%

PRO Displays

Dell's lineup of professional photo and video editing displays offer excellent performance for a reasonable price. With resolutions up to 2560 x 1600, these displays fit virtually any application demands.

24" Size \$609.00
Model 2408WFP (1920 x 1200)

30" Size \$1649.00
Model 3008WFP (2560 x 1600)

Backed by Dell's Full Service Warranty

\$959

WebSystem System #Q64604

Intel G45 EXPRESS CHIPSET

Notebooks - Notebooks - Notebooks

ASUS® Ultralite Executive Netbook

Looking for the ultimate in portable computing? Asus's new N10J executive netbook might be just what the doctor ordered! With features like "N" wireless networking, Bluetooth, dedicated video controller, 320gb hard drive, 6 hours battery life, and weighing in at only 3.5 pounds, the N10J packs a lot in a tiny package.



- Intel n270 1.6GHz processor
- 2048mb 533MHz DDR2 memory
- Microsoft Vista Business edition plus XP Pro downgrade CD
- 10.2" widescreen display
- 320gb SATA hard drive
- 802.11n wireless and bluetooth
- nVidia 9300M video controller
- Optional external optical drive
- Biometric fingerprint scanner
- Two year global warranty
- Webcam & Caring case

\$860.95

Free downgrade to Windows XP Pro!



Asus Eee 4-Cell NetBook

Intel mobile processor, 1024mb, 16gb solid state drive, 8.9" wide screen display, Intel UMA video, Linux with Office, 802.11b/g Wireless, 2.18lbs
AS-PC900-W047 **\$401.90**

Acer Celeron Netbook

AMD Celeron 2ghz processor, 1GB memory, 120gb hard drive, 15" wide display, Intel X4500 video, Windows Vista Basic, DVD writer
AC-EMD520-2695 **\$500.95**

Lenovo Business Netbook

Intel T5750 Core2Duo™ processor, 1024mb, 80gb hard drive, 15.4" wide display, Intel video, Windows XP Pro, Fingerprint scanner, DVD writer
LE-7650F6U **\$657.95**

MSI Wind 6-Cell NetBook

Intel Atom processor, 1024mb, 80gb hard drive, 10" wide screen display, Intel video, Windows Home, 802.11b/g Wireless, Bluetooth, 2.6lbs, White chassis
MS-U100-053US **\$589.95**

Fujitsu LifeBook A6110

Intel T5550 Core2Duo™ processor, 2048mb, 320gb hard drive, 15.4" wide display, Intel video, Windows Vista Home Premium, DVD writer
FU-A6110A-VP **\$773.95**

Acer Business Netbook

Intel T7550 Core2Duo™ processor, 1024mb, 160gb hard drive, 17.0" wide display, Intel X3100 video, Windows Vista Business edition w/XP Pro, DVD writer
AC-EX7620-6772 **\$739.95**

Acer Aspire 3-Cell NetBook

Intel Atom processor, 1024mb, 160gb hard drive, 8.9" wide screen display, Intel GMA950 video, Windows Home, 802.11b/g Wireless, 2.6lbs
AC-AOA150-1982 **\$390.95**

Asus Ultra-Speed Netbook

Intel P8400 Core2Duo processor, 4096mb, 320gb hard drive, 15" wide display, nVidia 9600M video, Windows Vista Premium edition, DVD writer, Bag, Mouse
AS-M50VM-A1 **\$1259.95**

Fujitsu Notebook/Tablet

Intel P8400 Core2Duo™ processor, 2048mb, 160gb drive, 13.3" touchscreen, Intel video, Windows Vista Premium edition, DVD writer
FU-T1010-E3300 **\$1440.95**

SERVERS

Rackmount 2U Core2Duo™



Server with 320GB Storage

Package as listed **\$709.00**

#Q61133

Multi-RAID 3U Core2Quad™



Server with six 250gb drives

Package as listed **\$2349.00**

#Q64114

Rackmount 1U RAID-1



Ultra Quiet - Low Power

Package as listed **\$799.00**

#Q64062

GREY-TECH EXTERNAL HARD DRIVES

Our new MINI-LINE units come with high quality 3.5" SATA drives in a premium solid aluminum enclosure. With triple interfaces (eSATA, USB 2.0, and Firewire 400), these units work with both MAC's and PC's. They are stackable and can be daisy chained using the dual Firewire ports. Interface cables and power adapter included.

The new PC powered portable MICRO-LINE can fit in your pocket and includes a fast USB 2.0 interface and carry case.



MINI 500GB Desktop (IGT-MINI500PRO2)	129%
MINI 750GB Desktop (IGT-MINI750PRO2)	174%
MINI 1000GB Desktop (IGT-MINI1000PRO)	204%

- Custom made systems available
- Corporate purchase orders welcome
- Prices already cash discounted. Credit cards subject to surcharge
- Prices subject to change without notice
- All products come with full warranty
- We ship insured across Canada
- Order online at www.greytech.com

DVD DUPLICATORS

Push a button and make up to 11 copies of a DVD or CD automatically. Top quality Athena controller allows writing at up to 18x on DVD media.

- ✓ Full self-contained design
- ✓ Uses Pioneer 115 drives
- ✓ Up to 20x DVD burning
- ✓ 64mb built-in cache
- ✓ Supports dual layer
- ✓ One year warranty

Current Models

3-Target Ped (#Q60456)	429.00
5-Target Ped (#Q57097)	499.00
7-Target Ped (#Q56516)	559.00
9-Target Ped (#Q56517)	619.00
6-Target Rack (#Q61349)	629.00
11-Target Ped (#Q59198)	679.00

Hard Drive Option
Store complete images of your DVD's with the optional 80GB hard drive add-in kit... \$60.00

Our 19th Year!

550 Alden Rd., Unit #110
Markham, Ontario L3R 6A8
Phone: (905) 470-1425

Shop online at
www.greytech.com

GREY TECH

COMPUTER INC.

HARDWARE • SOFTWARE • ACCESSORIES

Directions & Hours

5 Lights North of Steeles Avenue
1 Block West of Warden Avenue
Hours: Monday - Friday: 9am - 6pm
Saturday & Sundays: Closed

Seagate

FreeAgent xTreme

External Hard Disk Drives

Seagate's line of FreeAgent™ xTreme external triple interface hard drives offer great protection against system failures, virus attacks, or hard disk failures. Simply plug it in and your ready to go! Includes eSATA, USB, and Firewire interfaces. Automatic backup software for Windows included.

500GB Drive Kit 180⁹⁵
1000GB Drive Kit 256⁹⁵
1500GB Drive Kit 301⁹⁵

(Search for "FreeAgent" on our website)



BluRay Entertainment Computers

Live up the living room with a high-def media center system with remote control powered by Microsoft's Vista operating system!

- Powered by Windows Vista
- Combination BluRay drive and DVD/CD burner with complete software bundle
- HDMI, DVI, and VGA connection ports
- Easy on-screen menus to view movies, photos, and play MP3s & other files
- nVidia high-def graphics controller
- Component-style theatre chassis
- Microsoft remote control & receiver
- Dual 1 terabyte Seagate drives
- Uses your TV as a giant monitor for movies, surfing, work, etc.

AS SHOWN (#Q64402) \$1089.00
2000gb storage, Core2Duo processor, 4gb memory, Blu Ray playback, DVD/CD playback & writing, remote, operating system and utilities.
PORTABLE VERSION (#Q64755) \$899.00
Not shown - as above except in a portable micro-cube format with a single 500gb drive and 2gb of memory. Optionally expandable to two drive.



ViewSonic

Compact High-Definition Televisions

With features like a HDTV tuner and HDMI input, you'd expect to pay a lot more for these new Viewsonic wide screen televisions. Both can be wall mounted!

Model N1630W 16" \$306⁹⁵
Model N1930W 19" \$356⁹⁵



LCD TELEVISIONS

VIEWSONIC N1630W 16" TV. 720p support 1366x768 res. ATSC tuner 296⁹⁵
VIEWSONIC N1930W 19" TV. 720p support 1440x900 res. ATSC tuner 344⁹⁵
VIEWSONIC N2232W 22" TV. 720p support 1680x1050 res. ATSC tuner 402⁹⁵
SAMSUNG 225ms 22" TV. 720p support 1680x1050 res. No tuner 378⁹⁵
VIEWSONIC N2635W 26" TV. 720p support 1366x768 res. ATSC tuner 577⁹⁵
VIEWSONIC N3235W 32" TV. 720p support 1366x768 res. ATSC tuner 722⁹⁵
VIEWSONIC N3735W 37" TV. 720p support 1366x768 res. ATSC tuner. DNX 809⁹⁵
VIEWSONIC N4285P 42" TV. 1080p support 1920x1080 res. ATSC tuner 1214⁹⁵

NETWORKING

WIRELESS ROUTERS/AP
TP-Link Wireless Router WR642G (G108) 32⁹⁵
TP-Link Wireless Router WR941nd 55⁹⁵
Dlink Wireless Router DIR-615 59⁹⁵
Dlink Wireless Router DIR-655 102⁹⁵
Let's you network share a USB printer or hard drive!
Linksys Wireless Router WRT160N 94⁹⁵
Linksys Wireless Router WRT310N 126⁹⁵
WIRELESS ADAPTERS
TP-Link Wireless PCI Card WN651G (G108) 24⁹⁵
TP-Link Wireless USB WN620G (G108) 24⁹⁵
TP-Link Wireless USB WN621N 32⁹⁵
TP-Link Wireless PCI Card WN651N 34⁹⁵
Trendnet Wireless PCI Card 423p (G54) 30⁹⁵
Trendnet Wireless USB 424ub (G54) 30⁹⁵
Trendnet Wireless USB 424ub (G54) 30⁹⁵
Linksys Wireless USBW5600N (G54) 66⁹⁵
Linksys Wireless USBW5600N (G54) 80⁹⁵
Trendnet Wireless PCI Card 623p 71⁹⁵
Dlink Wireless PCI Card DWA-542 68⁹⁵
Dlink Wireless USB DWA-130 59⁹⁵
WIRED ADAPTERS
Trendnet 10/100/1000 Card TEG-PC17XR (PCI) 20⁹⁵
SWITCHES
Trendnet Switch 8port 10/100/1000 TEG-S8TXE 66⁹⁵
SMC Switch 8port 10/100/1000 SMCOS8 63⁹⁵
3Com Switch 8port 10/100/1000 3CSG08 78⁹⁵
Cisco Switch 8port 10/100/1000 S2008 81⁹⁵
Link Switch 16port 10/100/1000 DGS-1016D 178⁹⁵
Dlink Switch 24port 10/100/1000 DGS-1024D 203⁹⁵
Trendnet Switch 16port 10/100/1000 TEG-S160TX 192⁹⁵
Trendnet Switch 24port 10/100/1000 TEG-S240TX 249⁹⁵

WIRELESS ADAPTERS

TP-Link Wireless PCI Card WN651G (G108) 24⁹⁵
TP-Link Wireless USB WN620G (G108) 24⁹⁵
TP-Link Wireless USB WN621N 32⁹⁵
TP-Link Wireless PCI Card WN651N 34⁹⁵
Trendnet Wireless PCI Card 423p (G54) 30⁹⁵
Trendnet Wireless USB 424ub (G54) 30⁹⁵
Trendnet Wireless USB 424ub (G54) 30⁹⁵
Linksys Wireless USBW5600N (G54) 66⁹⁵
Linksys Wireless USBW5600N (G54) 80⁹⁵
Trendnet Wireless PCI Card 623p 71⁹⁵
Dlink Wireless PCI Card DWA-542 68⁹⁵
Dlink Wireless USB DWA-130 59⁹⁵

WIRELESS ADAPTERS

ASUS P1731 Tuner with remote. MCE. PCI 47⁹⁵
HAUPPAUGE 150 for Vista. PCI 72⁹⁵
HAUPPAUGE HD-PVR external USB HD recorder for Satellite or Cable TV HD programs. Hooks up to you computer by USB and to your box by component cables 237⁹⁵

HAUPPAUGE!



Record HD TV on your notebook or desktop system

Hauppauge's new WinTV-HVR-850 is a simple to use USB tuner kit for your notebook or desktop computer. Watch and record both HD and Regular TV broadcasts. Supports upto 1080i resolution and records in MPEG-2 format without losing quality. Compatible with over-the-air ATSC transmissions and analog cable TV services. Bundled with software.

INTEL PROCESSORS

INTEL Pentium Dual Core
2.00GHz (800MHz, 1mb, E2160) 79⁹⁵
2.20GHz (800MHz, 1mb, E2200) 87⁹⁵
INTEL Core2Duo Dual Core
2.40GHz (800MHz, 2mb, E4600) 147⁹⁵
2.70GHz (800MHz, 2mb, E4700) 179⁹⁵
2.53GHz (1066MHz, 3mb, E7200) 146⁹⁵
3.00GHz (1333MHz, 6mb, E8400) 198⁹⁵

MOTHERBOARDS

FOR INTEL PROCESSORS
Asus P5N-EM-HDMI n7700 C2D 88⁹⁵
Asus P5K-SE P55 1333MHz C2D 99⁹⁵
Asus P5QL-PRO P43 1333MHz C2D 107⁹⁵
Asus P5E-VM-DX P43 1333MHz C2D 142⁹⁵
Asus P5Q P43 1333MHz C2D 145⁹⁵
Asus P5E-VM-HDMI C2D 1333MHz C2D 151⁹⁵
Asus P5N-DX P43 1333MHz C2D 164⁹⁵
Asus P5Q-E P43 1333MHz C2D 176⁹⁵
Asus P5E-WS-PR P43 1333MHz C2D 317⁹⁵
Asus P5N-T-DX P43 1333MHz C2D 246⁹⁵
Asus STRIKER Extreme 790 4km 1080p 471⁹⁵
Intel DG31GF P43 1333MHz C2D 121⁹⁵
Intel DG31FD P43 1333MHz C2D 142⁹⁵
Intel DG45FC P43 1333MHz C2D 193⁹⁵
Intel DG45G P43 1333MHz C2D 188⁹⁵
Intel DX48BT2 P43 1333MHz C2D 326⁹⁵

FOR AMD PROCESSORS

Asus M2A-VM AMD 6000 AMD for Athlon 78⁹⁵
Asus M3A-AM AMD 6000 AMD for Athlon 105⁹⁵
Asus M3A32-MVP-WF AMD 6000 AMD for Athlon 213⁹⁵
Asus M3N-HT-DXP-WF AMD 6000 AMD for Athlon 262⁹⁵
Gigabyte GA-M61PM-S2 AMD 6000 AMD for Athlon 61⁹⁵

SCANNERS

Canon Lide100 Photo 1200X2400 62⁹⁵
Epson V200 Photo 4800X9600 88⁹⁵
Epson V500 Photo/Neg 6400X9600 231⁹⁵
Epson V750-M 6400X9600 professional scanner with high-pass optics/firmware 676⁹⁵

HARD DRIVES 2.5"

SEAGATE EIDE (PATA)
160GB (ST9160821A) 5400 RPM 5years 77⁹⁵
SEAGATE SERIAL (SATA)
80GB (ST980825AS) 7200 RPM 5years 106⁹⁵
160GB (ST9160821AS) 5400 RPM 5years 69⁹⁵
250GB (ST9250827AS) 5400 RPM 5years 78⁹⁵
200GB (ST9200420AS) 7200 RPM 5years 86⁹⁵
320GB (ST9320421AS) 7200 RPM 5years 100⁹⁵

SYSTEM CASES

Antec Sonata³
Extreme Quiet! Antec's Sonata³ is one of the quietest cases around and includes their 500 watt high-efficiency power supply!
120mm Cooling Fan Included
Upfront USB, Audio, & eSata ports
18-gauge, built-in dust filter
\$139⁹⁵



HARD DRIVES 3.5"

IDE (PATA)
Seagate 80GB (ST380B15AS) 2mb 5years 47⁹⁵
Seagate 160GB (WD3200JBTL) 8mb 5years 55⁹⁵
WD 320GB (WD3200JBTL) 8mb 3years 100⁹⁵
WD 500GB (WD5000JBTL) 8mb 3years 132⁹⁵
SEAGATE SERIAL (SATA)
80GB (ST380B15AS) 8mb 5years 45⁹⁵
160GB (ST3160B15AS) 8mb 5years 49⁹⁵
250GB (ST3250410AS) 16mb 5years 62⁹⁵
320GB (ST3320620AS) 16mb 5years 74⁹⁵
500GB (ST3500320AS) 32mb 5years 77⁹⁵
500GB (ST3500320AS) Enterprise 105⁹⁵
750GB (ST3750330AS) 32mb 5years 125⁹⁵
1000GB (ST31000340AS) 32mb 5years 149⁹⁵
1500GB (ST31500341AS) 32mb 5years 240⁹⁵

MONITORS

ACER
17" V173 5ms 500:1 4:3 Analog 153⁹⁵
19" V193 5ms 3000:1 4:3 Analog 192⁹⁵
19" X193WB 5ms 2000:1 Digital 153⁹⁵
20" X203 5ms 2500:1 Digital 185⁹⁵
22" X223 5ms 2500:1 Digital 196⁹⁵
24" X243 5ms 3000:1 Digital 340⁹⁵
24" G24 Gaming 5ms 5000:1 HDMI 391⁹⁵
26" X263 5ms 3000:1 HDMI 418⁹⁵
BENQ
22" G220W 5ms 1000:1 Digital 212⁹⁵
24" E2400 2ms 1000:1 HDMI 331⁹⁵
DELL
19" 1908P 5ms 800:1 4:3 Digital 279⁹⁵
20" 2009W 2ms 2000:1 Digital 284⁹⁵
22" 2208W 2ms 2000:1 DVI w/webcam 309⁹⁵
24" 2408W 6ms 3000:1 HDMI 599⁹⁵
30" 3008W 8ms 3000:1 HDMI 1918⁹⁵

POWER SUPPLIES

ACE
Performa 350/450/520 watts 38⁹⁵/58⁹⁵/64⁹⁵
ANTEC
TruePower 550/650 watts (sl-c) 87⁹⁵/113⁹⁵
Quattro 850/1000w (sl-c) 212⁹⁵/251⁹⁵
Signature 850/1000w (sl-c) 209⁹⁵/254⁹⁵
OCZ
GameXstream 700/850w (sl-c) 122⁹⁵/172⁹⁵
PC Power and Cooling
Silencer® Quad 750w (sl-c) 138⁹⁵
SPI (for 2U Racks) 350w 39⁹⁵

OPTICAL DRIVES

Pioneer (DVR-116) 20x +20x +10x DL 33⁹⁵
Liteon (20A4P) 20x +20x -DL 33⁹⁵
LG (GH22NS) 22x +22x -DL SATA 34⁹⁵
LG (GH22LP) 22x +22x -DL IDE w/L 37⁹⁵
Pioneer (DVR-216) 20x SATA DL 35⁹⁵
Liteon USB DVD RW slim external kit 80⁹⁵
Liteon (DH-4015-11) Blu-Ray reader 119⁹⁵
LG (H20L) Blu-Ray/HDD player-DVD RW 153⁹⁵
LG (GBW-H20L) Blu-Ray writer 264⁹⁵
LaCie External Blu-Ray writer PC/MAC 536⁹⁵

SYSTEM CASES

Nspire Economy (with 350 watts) 46⁹⁵
GreyTech CSA Tower (n/p 120mm fan) 37⁹⁵
InWin MCE Micro Desktop (300w) 74⁹⁵
Antec Sonata III (w/500 watts, USB) 139⁹⁵
NZXT Apollo (n/p 120mm led lighting) 89⁹⁵
NZXT Lexa (n/p 120mm led lighting) 117⁹⁵
Antec Fusion Media Center kit with 430 watt power, display, & IR receiver. Super quiet! 199⁹⁵
P182 Aluminum mid tower n/p 159⁹⁵
Thermaltake Tsumami Tower (n/p) 127⁹⁵
Thermaltake DH101 Home Theatre 238⁹⁵



acer 24" GAMING LCD
1920x1200 resolution
Digital Visual (DVI) input
16.7 million colour palette
50000:1 dynamic contrast
3 years warranty
2ms response time
HDMI HDCP port
Square orange bezel
Solid Angled Surfaces! Extreme Contrast!
\$391⁹⁵
Shop online at www.greytech.com

VIDEO CARDS

ASUS
8600GT 540mhz Silent 512m 96⁹⁵
9600GT 650mhz 512m, Silent 2x DVI 150⁹⁵
9800GT 600/725mhz 512m, 2x DVI 162⁹⁵/163⁹⁵
4850 625mhz DDR3 512m, 2x DVI 212⁹⁵
4870 750mhz DDR3 512m, 2x DVI 341⁹⁵
GTX260/280 896mhz/1024m 336⁹⁵/541⁹⁵
BFG
9800GT 625mhz 512m, 2x DVI 172⁹⁵
GTX260/280 896mhz/1024m 322⁹⁵/569⁹⁵
SAPPHIRE
X2400PRO 256m, hdmi 42⁹⁵
3870 DDR4 512m, hdmi 140⁹⁵
4850 625mhz DDR3 512m, 2x DVI 199⁹⁵
4870 750mhz DDR3 512m, 2x DVI 353⁹⁵
Patriot/Sparkle/Chaintech
8600GT 400mhz 512m, DVI, PCIe 89⁹⁵
9600GT 650mhz 512m, 2x DVI 137⁹⁵
9600GT 400mhz 1024m, 2x DVI 136⁹⁵
9800GT 600mhz 512m/1024m, 2x DVI 167⁹⁵/214⁹⁵
4850 625mhz DDR3 512m, 2x DVI 231⁹⁵
4870 750mhz DDR3 512m, 2x DVI 327⁹⁵
4870 750mhz DDR3 1024m, 2x DVI 373⁹⁵
GTX260 576mhz DDR3 896m, 2x DVI 377⁹⁵

PROJECTORS

ACER
X1160 DLP Business Unit 800x600 447⁹⁵
VIEWSONIC
PJ551D DLP Business Unit 1024x768 556⁹⁵
INFOCUS
IN102EP DLP Business Unit 800x600 559⁹⁵
MITSUBISHI
HC1600 DLP Home Theatre 1280x720 985⁹⁵
BENQ
W500 LCD Home Theatre 1280x720 866⁹⁵
PANASONIC
PT-AE2000 Home Theatre 1920x1080 2965⁰⁰
PT-AX200U Home Theatre 1920x1080 1749⁰⁰

DVD / CD CASES

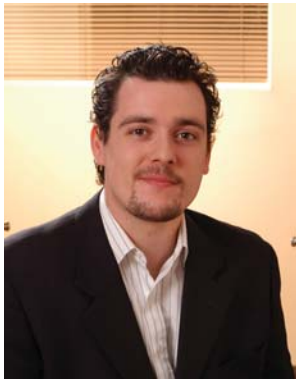
Jewel Case Single Acrylic 29⁹⁵
Pack of 50 111⁹⁵, 100 122⁹⁵, 200 140⁹⁵
Vinyl Case Single C-Shell 25⁹⁵
Pack of 50 111⁹⁵, 100 120⁹⁵, 200 138⁹⁵
Jewel Case Single Acrylic (Slim) 20⁹⁵
Pack of 50 81⁹⁵, 100 163⁹⁵, 200 288⁹⁵
Jewel Case Double Acrylic 35⁹⁵
Pack of 50 113⁹⁵, 100 125⁹⁵, 200 144⁹⁵
DVD Case SINGLE Vinyl (Slim) 25⁹⁵
Pack of 50 99⁹⁵, 100 160⁹⁵, 200 288⁹⁵
DVD Case SINGLE Vinyl 25⁹⁵
Pack of 50 99⁹⁵, 100 160⁹⁵, 200 288⁹⁵
DVD Case DOUBLE Vinyl 25⁹⁵
Pack of 50 99⁹⁵, 100 160⁹⁵, 200 288⁹⁵
DVD Case for 4 DVD's - Vinyl 69⁹⁵
DVD Case for 5 DVD's - Vinyl 75⁹⁵
DVD Case for 6 DVD's - Vinyl 79⁹⁵
DVD Case for 8 DVD's - Vinyl 89⁹⁵

CD and DVD Media

Save on DVD and CD media when your purchase in quantity
Ritek DVD Media
DVD-R 8x 50 pack \$12⁹⁵, 200 pack \$46⁹⁵
DVD-R 8x white inkjet printable to hub surface 50 pack \$12⁹⁵, 200 pack \$50⁹⁵
DVD-DL 4x white printable 25 pack 144⁹⁵
Ritek CD-R Media
Ritek 700mb 50 pack \$13⁹⁵, 200 pack \$54⁹⁵
Ritek 700mb white inkjet printable to hub surface 50 pack \$13⁹⁵, 200 pack \$53⁹⁵



Inkjet Printable CD/DVD Labels
Matt Surface 100 pack \$8⁹⁵, 400 pack \$28⁹⁵
Glossy Photo Surface 50 pack \$16⁹⁵, 200 pack \$64⁹⁵



Parting is such sweet sorrow. 'Tis better to have loved and lost. Goodbye. Fare thee well. Good day sir... I said good day! A thousand other clichés and ways of saying the same thing.

Long time HUB: The Computer Paper readers will recognize this as another parting editorial. That makes it the second that I've written in the five or so years I've been editor of HUB: The Computer Paper and its previous forms and formats. Last time, I wrote my parting editor's letter while sitting on a plane somewhere over the ocean on my way to Kuala Lumpur, Malaysia, where I was to be editor of a city lifestyle magazine. That turned out to be more

of a sabbatical than a true parting of ways, as this editorial now attests. But this time it's a little different.

This time, I've accepted a new editor position in Toronto, working with some great editorial and business minds, friends and in some cases, HUB: Digital Living and HUB: The Computer Paper alumni.

The HUB: TCP reigns are being passed to Dorian Nicholson whose byline you will have seen on our website, www.hubcanada.com, and in print within the pages of the magazine you hold in your hands. Dorian will bring a new way of thinking about the magazine and website and I look forward to seeing them both grow and change under his editorship as, I believe, should you. I've genuinely enjoyed working with him over the past several months and he gets my sincere best wishes. So long as he doesn't try to lay claim to the mountains of pens, USB keys, Halo 3 helmet / DVD case holders, Lego Batman figures and various other PR detritus I've accumulated over the years.

Though I'm leaving the HUB: TCP editor's desk, you can't get rid of me quite that easily.

I'll continue to consult with Dorian and with Piccolo Publishing so we don't lose sight of where the magazine came from and where we hope to take it — things I've

learned a lot about in my years at the helm. That said though, my role will be a small one and it's Dorian's baby now. It's in good hands.

But in true narcissistic fashion, I'd like to talk about me some more.

I'll be working with some sharp minds at Tucows, working on a new user-focused website. This new site will see the benefit of the team's collective years of experience and aims to simplify computing for beginner, novice and intermediate computer users; we'll even have something for the more advanced as we leverage Tucows' huge, downloadable software library to help computer users do more in less time. The concept is for "soft, sticky technology content." We soft launch shortly after this issue of HUB: TCP hits the streets. More on that in the weeks to come.

This new role started when former TCP and HUB: Digital Living products editor Sean Carruthers approached me with the details and as I learned more from general manager Andy Walker, it's fair to say I got excited about this new project. We'll be working together closely and I can't wait to start down this new road and see what possibilities it has in store, to say nothing of the chance to work with friends and colleagues I have a lot of respect for.

The kicker is that I'll be working a mere 700m away from the Piccolo Publishing offices (according to Google Maps) in the Liberty Village neighbourhood that's been such a great place for us to work and play. Moving the HUB office to this new locale represented a change of more than just scenery for the HUB team; it was something of a fresh start. So now, while I am looking forward to some new lunch time, work time and bar time conversations with my new colleagues, I can still meet up with my friends at HUB for lunch, coffee or a couple of pints after work.

Though I am certainly excited to start my new project, I'm disappointed I won't be at HUB to see the improvements, the growth and the new ideas that this publication will enjoy from behind the editor's (rather messy) desk. That said, I'm looking forward to seeing what's next for HUB: The Computer Paper and www.hubcanada.com. Both as a bit-part player and — perhaps more importantly — as a reader.

Enjoy the issue,
Andrew Moore-Crispin
Editor-in-Chief

5 MEG RESIDENTIAL HIGH SPEED INTERNET SERVICE!

- ✓ NO CAPS
- ✓ NO THROTTLING
- ✓ NO CONTRACT
- ✓ MODEM INCLUDED

\$26.95
PER MONTH
FOR 3 MONTHS
(\$29.95 THEREAFTER)

6 MEG BUSINESS HIGH SPEED INTERNET SERVICE!

- ✓ NO CAPS
- ✓ NO THROTTLING
- ✓ NO CONTRACT
- ✓ STATIC IP INCLUDED

\$49.95
PER MONTH
FOR 3 MONTHS
(\$59.95 THEREAFTER)

SHARED HOSTING

- 500 GB Storage
- 3500 GB Transfer/month
- Unlimited email account
- Host 50 domains
- Free setup
- cPanel Hosting

\$4.95
PER MONTH

DEDICATED SERVERS

- 24/7 Tech Support
- 1000 GB Transfer/month
- Reliable Servers
- 99.9% Uptime
- Free setup
- NO contracts

\$59
PER MONTH

COLOCATION

- 24/7 Tech Support
- 700 GB Transfer/month
- Remote Reboot
- 99.9% Uptime
- Free setup
- NO contracts

\$70
PER MONTH

VELCOM
WWW.VELCOM.CA
416-848-7690
866-9-VELCOM

- SHARP TECHNOLOGY
- BLAZING SPEEDS
- STELLAR SERVICE

PROMO CODE:
7690

LIMITED TIME OFFER

velcom.com
Hosting & eBusiness. Simplified.

WWW.VELCOM.COM
416-848-7690
866-9-VELCOM



SMART VISION DIRECT
YOUR SECURITY IS OUR BUSINESS

Leading supplier of CCTV Equipment Installers & Dealers Welcome (Wholesale Prices Available)

The Lowest Prices and Best Quality Guaranteed We'll match any competitor's price!

SAMSUNG

Special \$999.99

Samsung SMT-190DN 19" Color LCD System with 8 Channel DVR and 4 Cameras, Remote View

AVTECH

AVTECH 4 Standalone DVR, MPEG4, USB Back up, 120FPS, Support SATA & IDE HDD, VGA Port, Remote Access **From \$199.00**

AVTECH
Real Time Display!

SED-DVR-CP515
8CH MPEG4 Network DVR

AVTECH 8, 16 Channels Standalone DVR, MPEG4, USB Back up, DVD-RW, Real Time Display, Multiplex, Motion Detection, Remote View and more...
..... **From \$649.00**

MINI MOBILE DVR

224mm/8.8inch
146mm/5.7inch
64mm/2.5inch

New!!! Best 4 Channels Mobile DVR for your Car, Truck, RV, Plane or other mobile vehicle
\$399.00

Vehicle Safeguard - Dash Board Camera/DVR

NEW!!!

Great for Truck Drivers, Law Enforcement & anyone who does a lots of driving
\$199.00

Intelligent Auto Tracking Outdoor PTZ Camera

Auto Tracking Outdoor PTZ Cameras 22x.
Made in Taiwan **Best Seller**

NEW!! IP100

Pan/Tilt IP Camera, Software Support 16 Cameras, Power Over Ethernet, Made in Korea
\$399.00

Mini Video Camera + DVR

HOT SELLER!

Worlds Smallest Audio/Video Camcorder Portable Pocket DVR **\$199.00**

High Resolution Spy Cameras, Clocks, Vandal Proof Domes, PTZ Cameras Wireless or Wired from \$45.00

SVSP939H
540TVL
SVSP10W
SVSP30H
Superior Speed Dome 30x
Audio

420~540 High Resolution New Design Cameras, Mirror Dome, 3 Axis Vandal Proof Dome, Zoom Cameras with Remote Control, Outdoor Heater & Blower Cameras from \$45.00

New!!! Audio
SVD929 Vandal Proof Mini Dome with Audio

New!!!
SVD170 Vandal Proof IR Dome/540TVL

SVB111/540TVL Heater & Blower 540TVL 6~15mm

WR825B
Mobile DVR with 2.5" LCD Screen, 2.4GHz Pinhole Camera Included

Car Plate Reading Camera

Coolsat/Viewsat/Captive Works/SonicView FTA Receivers, Dishes, LNBs, Brackets Direct Importer, Big Wholesale Discount Prices Available (Authorized Distributor for Coolsat, Viewsat, Nfusion) Clone Free...

NFUSION
NOVA

\$199.99 (Special)

NFusion Nuvenio HD
\$499.00

Viewsat MAX HD

DSS Dual LNB
\$9.99 Special

18" 24" 33" 39" Dishes

LCD Wall/Ceiling Mounts for 10~60 inch, Tilt and Swivel from \$35.00

Video Door Phones

CLOSED CIRCUIT TELEVISION
ON PREMISES
CCTV Signs

We repair all used CCTV Equipment * Please call for free quote *****

www.smartvisiondirect.com

270 Esna Park Drive, Unit 11, Markham, On L3R 1H3

Toll Free: 1-866-946-8998 Tel: 905-946-8998 Fax: 905-946-8992

Open: Monday-Friday 9 AM-6 PM • Saturday 10 AM-4 PM

Social Networking

Wherein the simple act of knowing people becomes fine art

According to Internet research firm Alexa.com, social networking goliath Facebook is the world's fifth most popular website. Video-sharing service YouTube sits two spots ahead in third, and Facebook competitor MySpace resides comfortably in seventh. In Canada, Facebook ranks even higher, at number two, while YouTube and MySpace are fifth and fourteenth respectively. What can we glean from all this? We can say that people really, really enjoy using the Internet as a conduit for human interaction.

Considering that the Internet is, ultimately, all about people and communication, one might think that social networking has been part of the landscape since the very beginning. And indeed it has. In fact, both the urge and the facilities to network socially via linked computers existed even before the Internet became a publicly available and publicly accepted entity.

Anyone old enough to remember the early days of the personal computer (hint: think Rubik's Cubes and non-ironic mullets) will likely also remember those first few primitive PC-to-PC societal links. CompuServe, which has since morphed into an Internet service provider of some note, was one. Though it began life in the pre-PC days of the 1970s as a mainframe computer communication solution for the business world, by the late 1980s CompuServe had expanded into the public domain as a hub of sorts for the growing legion of PC proponents and enthusiasts.

You are not alone

CompuServe allowed members to share files and access news and events, but it also offered something far better — interaction. Not only could members send messages to one another via a newfangled technology called e-mail (the concept of e-mail wasn't exactly newfangled, though widespread public access to it was), but they could also communicate en masse via CompuServe's discussion forums.

Numbering in the hundreds and covering oodles of topics, CompuServe's forums proved tremendously popular and paved the way for the modern iterations we know today.

More old school computer user interplay could be found in the form of the "BBS" (Bulletin Board System). Often more local in nature than the CompuServes of the world, BBSes were usually run by hobbyists who carefully nurtured the social aspects and interest-specific nature of their projects and even arranged for in-person meet-and-greets between members.

It was, after all, darned exciting in the early and somewhat isolated days of the PC to know there were other computer fanatics out there who shared the same passions as you.

Soon, commercial online services such as AOL (America Online) grew to prominence, essentially offering most of the features and capabilities the Internet would eventually bring, all within a self-contained but heavily-monitored format. AOL in particular is noteworthy for the member-created communities it encouraged. If there is a true precursor to today's social networking sites, it was likely spawned under the AOL umbrella.

But everything changed as the 1990s marched on. The Internet went mainstream. Personal computers grew from a quirky luxury to a necessity. And social networking became an entity unto itself.

It's debatable which site can lay claim to being the first, though Classmates.com certainly fulfilled some of the modern definition of a social networking site when it launched in 1995. Still, it was primarily a "Who went to my school?" service until much later in its history. Early users could not, for example, create profiles. Nor could they really break free from the site's virtual reunion philosophy. Still,

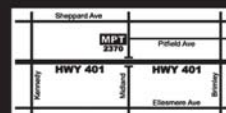
MPT Computers
Incorporated.

2370 MIDLAND Ave. Unit A10, Scarborough, ON, M1S 5C6 Canada

TEL: 416-292-0533 hours: 10am-7pm Mon.Fri., 10am-5pm Sat. closed Sunday

WWW.MPTCOMPUTERS.COM

* 17 YEARS IN BUSINESS * GREAT SERVICE * HONEST ADVICE *



128 CD / DVD wallet
with carry handle
\$9



400 CD / DVD wallet
with dual binder
\$19



200 CD / DVD case
with index & lock
\$19



510 CD / DVD case
with index & lock
\$29



Component to Component
Component to VGA



DVI to DVI
DVI to Component



HDMI to HDMI
HDMI to DVI



Digital Audio Cables
TOSLINK / COAXIAL

Gold Plated Premium Grade Cables - \$15 and up - 6 Feet up to 50 Feet lengths available
100% Money Back Satisfaction Guarantee



2-Way PS/2 KVM
- one monitor, kb, ms
with two computers
\$25



2-Way USB KVMA*
* also switches audio *
\$39



2-Port USB2.0
Peripheral Switch
-one USB device
with two computers
\$29



4-Port USB2.0
Peripheral Switch
\$45



Network Hard Drive
3.5" Enclosure
RJ-45 & USB 2.0
\$59



ENERMAX Power Supply
FMA Dual Fan 460W @ \$69
NOISETAKER 485W @ \$89



ENERMAX SLI Power Supply
INFINITI 650W @ \$169
INFINITI 720W @ \$199



Power Adaptor / Converter
(available for Europe, U.K., or
North America type plug)
\$9



Desktop Memory (RAM)
DDR2 / DDR / SD RAM
\$CALL



Notebook SODIMM
1GB DDR2 667 @ \$35
2GB DDR2 667 @ \$49



7-Port USB 2.0 Hub
with Power
\$22



3-Port USB 2.0 Hub
with card reader
\$22



Laptop / Notebook
Power Cord (2 or 3 prong)
\$9



80GB Digital Photo Bank
with 12-in-1 card reader
high speed USB 2.0
\$119

A Revolution in the World of *Data Storage*

Mediasonic

HUR1-Series

2 Bay Raid + Enclosure

USB 2.0

USB 2.0 & IEEE 1394 A & B

USB 2.0 & Networking



NEW

HRF2-Series

4 Bay Pro Raid Enclosure

USB 2.0 & e - SATA

USB 2.0 & e - SATA & IEEE 1394 A & B



Qnap



QNAP TS-209 Series

2 Bay Hot - swappable
Network-attached
storage

QNAP TS-409 Series

4 Bay Hot - swappable
Network-attached
storage



Coming Soon...

X-MICRO

EVA-310 MP3 Player

2GB MP3 Player with
Digital Voice Recorder
Multi-language user interface



AVGate

AV-1000HD

MKV & H.264 Media Player
Wireless networking &
TV Entertainment



For product details and information on where to purchase
please visit our website at:

<http://www.mediasonic.ca>



The collage features five Sonik Data products:

- DVD-RW Disc:** A green and blue DVD-RW disc with "DVD-RW" and "4.7GB" printed on it.
- DVD-R Disc:** A blue and white DVD-R disc with "8x DVD-R" and "4.7GB capacity" printed on it.
- DVD-R Disc:** A purple and blue DVD-R disc with "DVD-R" and "4.7GB" printed on it.
- microSD Memory Card:** A blue and white microSD Memory Card with "Lightning Series" and "microSD Memory Card" printed on it.
- Secure Digital Card:** A white and blue Secure Digital card with "Secure Digital" and "SD" printed on it.

Media Distributors Canada Inc.
110 Torbay Road Unit 4
Markham, ON L3R 1G6
(905) 477-4029
(905) 477-5937
sales@m-d-c-i.com
www.mediadistributors.ca

By Gord Goble



LINKSYS® by Cisco

Give the Gift

That Ties It All Together: Wireless-N

Streaming Music



Smooth Video

Online Gaming



Wireless Internet



With all the gifts your loved ones will receive this year, why not give something to tie it all together?
A Linksys by Cisco router perfectly complements all the new gadgets, allowing them to connect smoothly and wirelessly.
It's a one-size-fits-all solution to a high-tech world.

Find the perfect gift! Linksys.com/ca/Holiday



FUTURE SHOP

LONDON
DRUGS

Office DEPOT

STAPLES

that was easy:



that was easy:

Linksys, Cisco and the Cisco Logo are registered trademarks or trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries. Other brands are the trademarks or registered trademarks of their respective holders. Maximum performance derived from IEEE Standard 802.11 specifications. Actual performance can vary, including lower wireless network capacity, data throughput rate, range and coverage. Performance depends on many factors, conditions and variables, including distance from the access point, volume of network traffic, building materials and construction, operating system (and) use of wireless products used, interference and other adverse conditions. Copyright © 2006 Cisco Systems, Inc. All rights reserved.



Laptop Closeout.com

Your **BEST** online
source for Laptops



Dell D600 from **\$499**
Dell Inspiron from **\$699**
Dell D520 from **\$749**

From **\$449.00**



Lenovo NC 100 from **\$549**
Lenovo N 100 from **\$599**
Lenovo V 100 from **\$649**

From **\$449.00**



HP NC6000 from **\$499**
HP NC 8000 from **\$499**
HP D 2000 from **\$799**

From **\$449.00**



IBM T41 from **\$499**
IBM T42 from **\$549**
IBM Z60M from **\$549**

From **\$449.00**

Excellent quality Refurbished Laptops at Exceptional Values
Wholesale and Retail

✓ Software Package ✓ Money Back Guarantee
✓ Internet Ready ✓ Up to 70% off

Showroom in Downtown Toronto on Bay & Bloor

70 Yorkville Ave.

416-975-0748

The Anti-Social Net

Debating the merits of social networking... with a few reasons why not to partake

I've heard plenty of great stories that make a strong case for social media websites like Facebook, MySpace and Linked In.

Among my friends is a fellow who travels constantly. Rather than racking up a massive cellphone bill or sending out impersonal, form-style e-mails to all of his friends describing his latest exploits, he simply updates his MySpace profile with pictures and messages about his travels. His friends can check in and see how he's doing whenever they like and type out quick missives if they have something to ask or report about their own lives.

No question; social networking sites can be great tools for keeping people apprised of your life.

They're also becoming a vital part of some professions. My wife, who works in public relations, has a colleague who was asked in a job interview how many Facebook contacts she had.

Real-world repurcussions

This was likely the interviewer's way of taking an impromptu measurement of the degree to which she had integrated personal networking technology into her life, as well as a quick means of determining how connected she was. Few friends — or, worse yet, no Facebook account — would have indicated that she had poor networking skills. (Luckily for her, her Facebook friends list numbered in the high hundreds.)

And, of course, social networking can offer plenty of amusing distractions. Just about everyone I know is hooked on a Facebook application called WordTwist (think Boggle, but with just six letters and online multi-player functionality). As a matter of fact, I recently attended a meatspace (that is to say, offline) party hosted by a WordTwist-obsessed friend in which lovers of the game were organized into groups for a friendly competition.

Despite these and other benefits that come with adopting social networking technologies, I have repeatedly refused to hop on board this particular cultural train.

My aversion to social networking might seem incongruous with my chosen profession — surely a tech journalist ought to be among the first to adopt new web-based services — but it is precisely my experience as a technology enthusiast that originally kept me from joining any online networks.

Caught in a web

My understanding is that most popular cultural websites and online applications are essentially fads that come and go with societal moods. What's more, no one site or service ever becomes the standard for all users — Facebook may be the most popular social network amongst Canadians at the moment, but there are still those who prefer MySpace, Microsoft Live Spaces, LinkedIn, or any of a number of smaller, niche services.

The upshot: I have no interest in taking the time to set up a personal profile on a site that becomes all but defunct a couple of years from now. Nor do I want to take the time to regularly update my profile on half-a-dozen different sites to make sure that my friends who don't happen to use my chosen social network can see what's happening in my life.

Then there's the trolling factor. I realize that plenty of people enjoy using social networking applications to find long lost acquaintances and either reconnect with them or gossip about them with their current chums. This functionality simply doesn't appeal to me. I have no particular desire to connect with friends past. What's more, I prefer that people I once knew not to have the ability to easily find out information about me.

Which leads to an inescapable element of social networking that causes me moderate concern: The ability for anyone — from employers to police investigators — to pass judgement on someone based on what they discover in the information people post on their Facebook or MySpace profiles.

Not 'nSync?

I have a friend who admitted to not hiring someone because he checked out the applicant's Facebook page and disapproved of his musical taste. This is not uncommon. In researching a story I wrote earlier this year about how online searches are being used to screen job applicants, I spoke with several recruiters and a spokesperson from the Human Resources Professionals Association of Ontario. All of them agreed that the Internet has become a valuable tool in helping employers screen candidates, and several noted that pages from social media services are chief among the online resources they check.

"More and more, social networkers who are not obsessively careful face the prospect of identity theft, inadvertently marring their own reputation or even inviting the threat of physical harm," wrote Matt Hartley of the Globe and Mail after conducting a two-month investigation this summer into what can be gleaned about strangers by keeping tabs on their social networking pages.

The random people he tracked were stunned by what he was able to find out about them: everything from cellphone numbers and home addresses to detailed calendars listing personal and social events.

Keeping it private

Of course, many social networking services provide extensive privacy options to let users keep their profiles unsearchable and hidden from everyone save those whom they personally invite to have access. But this rather defeats the primary purpose of social networking, which is to create interconnecting communities that allow people to easily communicate with friends and family, meet new people with similar interests, and connect with professional colleagues to do business.

However, if I'm being completely honest, the real reason I continue to not become involved in social networking is the same reason I've switched off of instant messenger services: time.

Over the years I've watched my friends, family, and colleagues become obsessed with checking their MySpace, Facebook, and LinkedIn profiles. I've seen them spend whole hours on these sites as they play games, comment on friends' pictures, take quizzes, post comments on other users' profiles, and hook up with themed groups. I don't want to knock any of these activities. They all have their own purpose and value.

But they're also serious time drains that I feel I can ill afford to get roped into.

So social networking just isn't my bag. I understand its importance, significance, and value, but, in my case, its benefits simply don't balance out its disadvantages. And if this little treatise doesn't get my friends, family, and colleagues to stop sending me invitations to join their various networks, I don't know what will.

By Chad Sapieha

1000	MRP:HCIOOI 150W ATX12V v2.2 Power Supply	\$239
1001	MRP:HCIOOI 150W ATX12V v2.2 Power Supply	\$259
1002	MRP:HCIOOI 150W ATX12V v2.2 Power Supply	\$259
Monitors		
1003	15" 1600x1200 LCD	\$179
1004	15" 1600x1200 LCD	\$199
1005	15" 1600x1200 LCD	\$274
1006	15" 1600x1200 LCD	\$199
1007	15" 1600x1200 LCD	\$199
1008	15" 1600x1200 LCD	\$199
1009	15" 1600x1200 LCD	\$199
1010	15" 1600x1200 LCD	\$199
1011	15" 1600x1200 LCD	\$199
1012	15" 1600x1200 LCD	\$199
1013	15" 1600x1200 LCD	\$199
1014	15" 1600x1200 LCD	\$199
1015	15" 1600x1200 LCD	\$199
1016	15" 1600x1200 LCD	\$199
1017	15" 1600x1200 LCD	\$199
1018	15" 1600x1200 LCD	\$199
1019	15" 1600x1200 LCD	\$199
1020	15" 1600x1200 LCD	\$199
1021	15" 1600x1200 LCD	\$199
1022	15" 1600x1200 LCD	\$199
1023	15" 1600x1200 LCD	\$199
1024	15" 1600x1200 LCD	\$199
1025	15" 1600x1200 LCD	\$199
1026	15" 1600x1200 LCD	\$199
1027	15" 1600x1200 LCD	\$199
1028	15" 1600x1200 LCD	\$199
1029	15" 1600x1200 LCD	\$199
1030	15" 1600x1200 LCD	\$199
1031	15" 1600x1200 LCD	\$199
1032	15" 1600x1200 LCD	\$199
1033	15" 1600x1200 LCD	\$199
1034	15" 1600x1200 LCD	\$199
1035	15" 1600x1200 LCD	\$199
1036	15" 1600x1200 LCD	\$199
1037	15" 1600x1200 LCD	\$199
1038	15" 1600x1200 LCD	\$199
1039	15" 1600x1200 LCD	\$199
1040	15" 1600x1200 LCD	\$199
1041	15" 1600x1200 LCD	\$199
1042	15" 1600x1200 LCD	\$199
1043	15" 1600x1200 LCD	\$199
1044	15" 1600x1200 LCD	\$199
1045	15" 1600x1200 LCD	\$199
1046	15" 1600x1200 LCD	\$199
1047	15" 1600x1200 LCD	\$199
1048	15" 1600x1200 LCD	\$199
1049	15" 1600x1200 LCD	\$199
1050	15" 1600x1200 LCD	\$199
1051	15" 1600x1200 LCD	\$199
1052	15" 1600x1200 LCD	\$199
1053	15" 1600x1200 LCD	\$199
1054	15" 1600x1200 LCD	\$199
1055	15" 1600x1200 LCD	\$199
1056	15" 1600x1200 LCD	\$199
1057	15" 1600x1200 LCD	\$199
1058	15" 1600x1200 LCD	\$199
1059	15" 1600x1200 LCD	\$199
1060	15" 1600x1200 LCD	\$199
1061	15" 1600x1200 LCD	\$199
1062	15" 1600x1200 LCD	\$199
1063	15" 1600x1200 LCD	\$199
1064	15" 1600x1200 LCD	\$199
1065	15" 1600x1200 LCD	\$199
1066	15" 1600x1200 LCD	\$199
1067	15" 1600x1200 LCD	\$199
1068	15" 1600x1200 LCD	\$199
1069	15" 1600x1200 LCD	\$199
1070	15" 1600x1200 LCD	\$199
1071	15" 1600x1200 LCD	\$199
1072	15" 1600x1200 LCD	\$199
1073	15" 1600x1200 LCD	\$199
1074	15" 1600x1200 LCD	\$199
1075	15" 1600x1200 LCD	\$199
1076	15" 1600x1200 LCD	\$199
1077	15" 1600x1200 LCD	\$199
1078	15" 1600x1200 LCD	\$199
1079	15" 1600x1200 LCD	\$199
1080	15" 1600x1200 LCD	\$199
1081	15" 1600x1200 LCD	\$199
1082	15" 1600x1200 LCD	\$199
1083	15" 1600x1200 LCD	\$199
1084	15" 1600x1200 LCD	\$199
1085	15" 1600x1200 LCD	\$199
1086	15" 1600x1200 LCD	\$199
1087	15" 1600x1200 LCD	\$199

Online orders processed Monday thru Friday
Email: shop@pccanada.com for more info

In the Lab: Web Browsers

Browsing for the best of the Net

The web has become ubiquitous. So much so that we may not even think about how we go about accessing it. Since virtually all PCs come preinstalled with Windows and therefore Internet Explorer, it's easy to ignore the fact that there are other viable alternative web browsers available.

Web browsers such as Safari have been available for years on the Mac, but only a short time on the PC. At the same time, browsers such as Mozilla Firefox have established themselves on both Macs and PCs, and Google's Chrome browser which was released only a couple of months back has a Mac OSX version in the works as well.

This month In the Lab, we are going to test out some of those other browsers — and Internet Explorer, too — to see how they stack up against each other. We'll be focusing on overall usability; security, while an important issue, has been covered previously in HUB and won't be touched in this article.

The browsers will be tested for their ease of use, features and reliability among other things, and will also be put through a simple Java speed test.

This test was found on a website (celtickane.com/webdesign/jsspeed.php) where a simple Java button is set up and various data is collected, most importantly the duration of the test. I took ten tries with each browser after freshly opening them and found the average speed.

There are also results given there, which you may compare with my results, or even your own if you're so inclined.

Internet Explorer (v7.0.5730.13)

Available on: Windows XP SP2 and up (IE 7.0)

Selling point: The first web browser most will lay hands on

Pros:

The default web browser of Windows PCs

World's most commonly used browser

Web developers generally develop for IE standards

Anyone who has used Windows has probably used Internet Explorer (IE). Simply put, it is the browser to beat. Although there are other options for PC users now — thankfully, some might say — IE remains the default web browser for any and all PCs that come with Windows. Because of this, most computer users have had at least some experience with IE, possibly before switching to something different. Regardless, everyone knows what IE is, what it looks like, and some of the basics of what it does, and it therefore deserves some points for being the most widely used web browser in the world.

Produced and developed by Microsoft, IE first came out in 1995 shortly after Netscape Navigator arrived on the scene. The simultaneous presence of these two browsers caused the browser wars of the late '90s, which IE eventually won.

IE 7 is the current version, has seen a decline in overall user base over the past years and has alienated some users by being compatible only with the Windows OS, and, more specifically, only with Windows XP Service Pack 2 and up. Also, there have been reports of instability in the new IE which has proven most reliable with Windows Vista.

Despite those criticisms, Internet Explorer has improved its overall usability in recent times, with version 7 adding tabbed browsing and an RSS reader, two features that were sorely lacking in previous versions.

Cons:

Proprietary to Windows

Version 7 demands Windows XP SP2 or higher

Internet Explorer and Windows are practically joined at the coding hip

IE is not friendly toward customization, either for moving the essential buttons on the toolbar around or for installing plugins.

Accessing browsing history and favourites is similar to previous versions and clearing Internet history is as easy as clicking the first option under Tools.

Opening four tabs in IE (Hotmail, HubCanada, eBay, and Yahoo.ca) took up about 85 MB of memory, which is about average.

Java speed test: 1646.6 ms (avg)

It's a well known fact that IE has trouble with Java. Whether it's a business decision or a lack of foresight, this browser has largely neglected Java. Still, more than a second and a half to pass this test makes IE the slowest browser by more than four times. Ouch.

Firefox (v. 3.0.3)

Available on: Windows, Mac OSX, Linux, Unix derivatives

Selling point: Customizability, plugins

Pros:

Open source

Thousands of add-ons available

Supported by many OS

Originally built on Netscape Navigator code after it went open source, Mozilla Firefox (which is also open source) is now the second most popular web browser in the world. In addition, the release of Firefox 3 was met with more than 8 million downloads the day it was released, which set a Guinness World Record.

If that doesn't speak to its growing popularity then perhaps the sheer volume of add-ons, plugins, and other modifiers will. New ways of customizing Firefox are coming out all the time from sources all over the world, making it one of the easiest browsers to tailor to your specific needs. This is undeniably Firefox's strongest selling point.

Simply go to Tools and click Add-ons and you will get a list of suggested plugins that you can install directly into Firefox. And if you decide you don't like one of them after using, just click either disable to temporarily turn the extension off, or choose uninstall to remove it completely. It's as easy as that.

Once a new plugin is installed it will modify some aspect of your browsing experience after a browser restart — which is unobtrusive as Firefox can easily restore browsing sessions. This modification can range from something simple like Speed Dial, which you can use to turn your home page into a quicklist of frequently visited websites for convenient browsing, to plugins that allow users to navigate through Firefox by using "gestures," mouse movements that function as hotkeys (a la Black and White, if you remember that game).

Firefox also works on a wide range of OSs, from Windows and Mac OSX to a variety of Linux versions.

Firefox 3 also added a searchable and predictive address bar. Type in a few letters found in a site in your history and you can select it in the address bar (hit H for hotmail, etc.) saving time without needing a plugin. Also typing in phrases or words will initiate a Google search, which is convenient.

Yet despite these strong points, even Firefox is not without flaws. For one thing, Firefox is even more resource intensive than IE. When testing the browser with the four tabs loaded to the previously mentioned test pages, Firefox was using up just

Cons:

The sheer number of add-ons can be daunting

Resource intensive

HUB: The Computer Paper is doing another PC giveaway, this time for the multimedia user.

Details are online...

Go to www.hubcanada.com for your chance to win!

Win the Ultimate Media PC!



Internet Explorer



Firefox



Chrome



Opera



Safari

under 100 MB of memory. That's a lot, and that number could easily go up with more tabs or, presumably, with more extensions.

Also, the sheer number of plugins and such make it somewhat daunting to initiate the whole customization of Firefox, and can get a little out of hand. However, too many options is better than having none at all.

Java speed test: 359.8 ms (avg)

Pretty good, especially when compared to IE. In fact, only one browser, Opera, scored better on the Java speed test. However, it was roughly 12 per cent faster on average than Chrome or Safari.

Chrome (v. 0.2.149.30)

Available on: Windows XP SP2 and up

Selling point: Lean, light, and simple

Pros:

Integration with online apps like Google Docs

Incognito browsing for a non-logged session

Uncluttered interface

Cons:

Windows only

Feature-anemic

Scary terms of use

As the newest addition to this battle of the browsers, Chrome, which was put out by the folks at Google not three months ago, has already gained some fans for its novel approach to browsing. Even more simple in interface than Safari, the open source

Chrome's minimalist approach eschews even a Menu bar — although some of the more essential tools are available by clicking on the wrench button to the right of the address field. This grants access to the bookmarks and history as well as downloads.

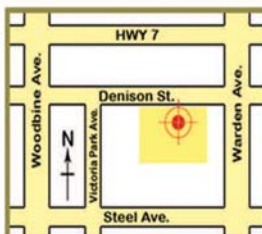
Chrome also showed less stress on the memory when the browser was tested on the four test sites. With four tabs in one window Chrome took up roughly 62 MB of memory, more than 20 MB less than IE, and almost 40 MB less than Firefox. It also seemed to do so in four separate tasks as shown in task manager. This would be due to the safeguarding technology known as "sandboxing" that Chrome employs. What this does is it keeps the resources for each tab separate in case of a fatal error, so if one tab goes down, the whole browser doesn't fall apart as is the case with its competitors whether one is browsing in multiple tabs or multiple windows.

A unique feature offered by Chrome is its integration with online apps. Within the limited menu options is an entry that lets users create desktop, start menu or quick launch shortcuts to online applications. This feature is designed to bridge the gap between online and offline apps.

While early adopters of Google's Chrome browser were required to [from the end user license agreement (EULA)] "give Google a perpetual, irrevocable, worldwide, royalty-free, and nonexclusive license to reproduce, adapt, modify, translate, publish, publicly perform, publicly display and distribute any Content which you submit, post or display on or through, the Services," this was apparently an oversight. A subsequent update of the EULA has removed this sentence, making the browser much more palatable.



Digital Electronic International
825 Denison St. #8,
Markham, ON, L3R 5E4, Canada
We Open: Mon.-Fri.: 9am-6pm
Toll-Free: 1-888-479-3992
Tel.: (905)479-3992
www.digitalelectronic.ca





igi LAND
4675 Steeles Ave. E, Main Flr # 1E8
Toronto, ON, M1V 4S5, Canada
We Open: Mon.-Sun.: 11am-8pm
Tel.: (416)880-4638
www.digiland.ca



Poster Printing \$6.00 Per Sq. Ft.



- 420 ~ 580TVL
- Clear CCD Image
- Infra-Red Night Vision
- Waterproof Metal Casing
From: \$49.00/ea
Weatherproof Bullet Cam

Digital Video Record
- PCI Boards
- Standalone
- 30-480FPS
- Motion Rec
- IE Access
From: \$45.00/ea

AVerMedia

In/Outdoor & Vandalproof & Pan/Tilt/Zoom Dome Cam
- 420 ~ 540TVL Resolution
- With or Without Infra-Red Night Vision
From: \$45.00/ea

Convert Spy Cameras
- Wide-angle Pinhole Lens
- Concealed Cases
- Audio Function
From: \$59.00/ea

Stylish Showcases
- Tempered Glass Top
- Heavy-duty Metal Frame
- Customizable 3D Logo
- Lighted Display Shelf
- All Sorts Of Size & Shape
- Ready To Use!
From: \$349.00/ea

Mobile Ad Banners
From: \$35.00/ea

Color LED Signs
- TEL: ...
- OPEN
- Your Company Name
- Your Working Hours
- Tel. (416) 880-4638
From: \$19.00/ea

Lighted 3D Effect Ad Frame
From: \$79.00/ea



- 420 ~ 540TVL
- 2.5mm ~ 100mm CMT Lens
- Manual & Auto Iris
From: \$59.00/ea
Professional Box Cam

PANSAT 2700
From: \$50.00/ea for 6+ Pcs
- Free TV, No Card Needed
- 18" & 39" Dishes
- Single & Dual Head LNBs
- Cables & Switches
- Accessories

PANSAT
COOLSAT
VIEWSAT

FTA Satellite Receivers

Printing & Lamination Paper & Material
\$59.00/ea

Wytron CD/DVD Duplicator
- Wytron 100/CD/DVD Duplicator Controller
- 10/20/30/40/50/60/70/80/90/100/120/150/180/200/250/300/350/400/450/500/550/600/650/700/750/800/850/900/950/1000/1100/1200/1300/1400/1500/1600/1700/1800/1900/2000/2100/2200/2300/2400/2500/2600/2700/2800/2900/3000/3100/3200/3300/3400/3500/3600/3700/3800/3900/4000/4100/4200/4300/4400/4500/4600/4700/4800/4900/5000/5100/5200/5300/5400/5500/5600/5700/5800/5900/6000/6100/6200/6300/6400/6500/6600/6700/6800/6900/7000/7100/7200/7300/7400/7500/7600/7700/7800/7900/8000/8100/8200/8300/8400/8500/8600/8700/8800/8900/9000/9100/9200/9300/9400/9500/9600/9700/9800/9900/10000/10100/10200/10300/10400/10500/10600/10700/10800/10900/11000/11100/11200/11300/11400/11500/11600/11700/11800/11900/12000/12100/12200/12300/12400/12500/12600/12700/12800/12900/13000/13100/13200/13300/13400/13500/13600/13700/13800/13900/14000/14100/14200/14300/14400/14500/14600/14700/14800/14900/15000/15100/15200/15300/15400/15500/15600/15700/15800/15900/16000/16100/16200/16300/16400/16500/16600/16700/16800/16900/17000/17100/17200/17300/17400/17500/17600/17700/17800/17900/18000/18100/18200/18300/18400/18500/18600/18700/18800/18900/19000/19100/19200/19300/19400/19500/19600/19700/19800/19900/20000/20100/20200/20300/20400/20500/20600/20700/20800/20900/21000/21100/21200/21300/21400/21500/21600/21700/21800/21900/22000/22100/22200/22300/22400/22500/22600/22700/22800/22900/23000/23100/23200/23300/23400/23500/23600/23700/23800/23900/24000/24100/24200/24300/24400/24500/24600/24700/24800/24900/25000/25100/25200/25300/25400/25500/25600/25700/25800/25900/26000/26100/26200/26300/26400/26500/26600/26700/26800/26900/27000/27100/27200/27300/27400/27500/27600/27700/27800/27900/28000/28100/28200/28300/28400/28500/28600/28700/28800/28900/29000/29100/29200/29300/29400/29500/29600/29700/29800/29900/30000/30100/30200/30300/30400/30500/30600/30700/30800/30900/31000/31100/31200/31300/31400/31500/31600/31700/31800/31900/32000/32100/32200/32300/32400/32500/32600/32700/32800/32900/33000/33100/33200/33300/33400/33500/33600/33700/33800/33900/34000/34100/34200/34300/34400/34500/34600/34700/34800/34900/35000/35100/35200/35300/35400/35500/35600/35700/35800/35900/36000/36100/36200/36300/36400/36500/36600/36700/36800/36900/37000/37100/37200/37300/37400/37500/37600/37700/37800/37900/38000/38100/38200/38300/38400/38500/38600/38700/38800/38900/39000/39100/39200/39300/39400/39500/39600/39700/39800/39900/40000/40100/40200/40300/40400/40500/40600/40700/40800/40900/41000/41100/41200/41300/41400/41500/41600/41700/41800/41900/42000/42100/42200/42300/42400/42500/42600/42700/42800/42900/43000/43100/43200/43300/43400/43500/43600/43700/43800/43900/44000/44100/44200/44300/44400/44500/44600/44700/44800/44900/45000/45100/45200/45300/45400/45500/45600/45700/45800/45900/46000/46100/46200/46300/46400/46500/46600/46700/46800/46900/47000/47100/47200/47300/47400/47500/47600/47700/47800/47900/48000/48100/48200/48300/48400/48500/48600/48700/48800/48900/49000/49100/49200/49300/49400/49500/49600/49700/49800/49900/50000/50100/50200/50300/50400/50500/50600/50700/50800/50900/51000/51100/51200/51300/51400/51500/51600/51700/51800/51900/52000/52100/52200/52300/52400/52500/52600/52700/52800/52900/53000/53100/53200/53300/53400/53500/53600/53700/53800/53900/54000/54100/54200/54300/54400/54500/54600/54700/54800/54900/55000/55100/55200/55300/55400/55500/55600/55700/55800/55900/56000/56100/56200/56300/56400/56500/56600/56700/56800/56900/57000/57100/57200/57300/57400/57500/57600/57700/57800/57900/58000/58100/58200/58300/58400/58500/58600/58700/58800/58900/59000/59100/59200/59300/59400/59500/59600/59700/59800/59900/60000/60100/60200/60300/60400/60500/60600/60700/60800/60900/61000/61100/61200/61300/61400/61500/61600/61700/61800/61900/62000/62100/62200/62300/62400/62500/62600/62700/62800/62900/63000/63100/63200/63300/63400/63500/63600/63700/63800/63900/64000/64100/64200/64300/64400/64500/64600/64700/64800/64900/65000/65100/65200/65300/65400/65500/65600/65700/65800/65900/66000/66100/66200/66300/66400/66500/66600/66700/66800/66900/67000/67100/67200/67300/67400/67500/67600/67700/67800/67900/68000/68100/68200/68300/68400/68500/68600/68700/68800/68900/69000/69100/69200/69300/69400/69500/69600/69700/69800/69900/70000/70100/70200/70300/70400/70500/70600/70700/70800/70900/71000/71100/71200/71300/71400/71500/71600/71700/71800/71900/72000/72100/72200/72300/72400/72500/72600/72700/72800/72900/73000/73100/73200/73300/73400/73500/73600/73700/73800/73900/74000/74100/74200/74300/74400/74500/74600/74700/74800/74900/75000/75100/75200/75300/75400/75500/75600/75700/75800/75900/76000/76100/76200/76300/76400/76500/76600/76700/76800/76900/77000/77100/77200/77300/77400/77500/77600/77700/77800/77900/78000/78100/78200/78300/78400/78500/78600/78700/78800/78900/79000/79100/79200/79300/79400/79500/79600/79700/79800/79900/80000/80100/80200/80300/80400/80500/80600/80700/80800/80900/81000/81100/81200/81300/81400/81500/81600/81700/81800/81900/82000/82100/82200/82300/82400/82500/82600/82700/82800/82900/83000/83100/83200/83300/83400/83500/83600/83700/83800/83900/84000/84100/84200/84300/84400/84500/84600/84700/84800/84900/85000/85100/85200/85300/85400/85500/85600/85700/85800/85900/86000/86100/86200/86300/86400/86500/86600/86700/86800/86900/87000/87100/87200/87300/87400/87500/87600/87700/87800/87900/88000/88100/88200/88300/88400/88500/88600/88700/88800/88900/89000/89100/89200/89300/89400/89500/89600/89700/89800/89900/90000/90100/90200/90300/90400/90500/90600/90700/90800/90900/91000/91100/91200/91300/91400/91500/91600/91700/91800/91900/92000/92100/92200/92300/92400/92500/92600/92700/92800/92900/93000/93100/93200/93300/93400/93500/93600/93700/93800/93900/94000/94100/94200/94300/94400/94500/94600/94700/94800/94900/95000/95100/95200/95300/95400/95500/95600/95700/95800/95900/96000/96100/96200/96300/96400/96500/96600/96700/96800/96900/97000/97100/97200/97300/97400/97500/97600/97700/97800/97900/98000/98100/98200/98300/98400/98500/98600/98700/98800/98900/99000/99100/99200/99300/99400/99500/99600/99700/99800/99900/100000/100100/100200/100300/100400/100500/100600/100700/100800/100900/101000/101100/101200/101300/101400/101500/101600/101700/101800/101900/102000/102100/102200/102300/102400/102500/102600/102700/102800/102900/103000/103100/103200/103300/103400/103500/103600/103700/103800/103900/104000/104100/104200/104300/104400/104500/104600/104700/104800/104900/105000/105100/105200/105300/105400/105500/105600/105700/105800/105900/106000/106100/106200/106300/106400/106500/106600/106700/106800/106900/107000/107100/107200/107300/107400/107500/107600/107700/107800/107900/108000/108100/108200/108300/108400/108500/108600/108700/108800/108900/109000/109100/109200/109300/109400/109500/109600/109700/109800/109900/110000/110100/110200/110300/110400/110500/110600/110700/110800/110900/111000/111100/111200/111300/111400/111500/111600/111700/111800/111900/112000/112100/112200/112300/112400/112500/112600/112700/112800/112900/113000/113100/113200/113300/113400/113500/113600/113700/113800/113900/114000/114100/114200/114300/114400/114500/114600/114700/114800/114900/115000/115100/115200/115300/115400/115500/115600/115700/115800/115900/116000/116100/116200/116300/116400/116500/116600/116700/116800/116900/117000/117100/117200/117300/117400/117500/117600/117700/117800/117900/118000/118100/118200/118300/118400/118500/118600/118700/118800/118900/119000/119100/119200/119300/119400/119500/119600/119700/119800/119900/120000/120100/120200/120300/120400/120500/120600/120700/120800/120900/121000/121100/121200/121300/121400/121500/121600/121700/121800/121900/122000/122100/122200/122300/122400/122500/122600/122700/122800/122900/123000/123100/123200/123300/123400/123500/123600/123700/123800/123900/124000/124100/124200/124300/124400/124500/124600/124700/124800/124900/125000/125100/125200/125300/125400/125500/125600/125700/125800/125900/126000/126100/126200/126300/126400/126500/126600/126700/126800/126900/127000/127100/127200/127300/127400/127500/127600/127700/127800/127900/128000/128100/128200/128300/128400/128500/128600/128700/128800/128900/129000/129100/129200/129300/129400/129500/129600/129700/129800/129900/130000/130100/130200/130300/130400/130500/130600/130700/130800/130900/131000/131100/131200/131300/131400/131500/131600/131700/131800/131900/132000/132100/132200/132300/132400/132500/132600/132700/132800/132900/133000/133100/133200/133300/133400/133500/133600/133700/133800/133900/134000/134100/134200/134300/134400/134500/134600/134700/134800/134900/135000/135100/135200/135300/135400/135500/135600/135700/135800/135900/136000/136100/136200/136300/136400/136500/136600/136700/136800/136900/137000/137100/137200/137300/137400/137500/137600/137700/137800/137900/138000/138100/138200/138300/138400/138500/138600/138700/138800/138900/139000/139100/139200/139300/139400/139500/139600/139700/139800/139900/140000/140100/140200/140300/140400/140500/140600/140700/140800/140900/141000/141100/141200/141300/141400/141500/141600/141700/141800/141900/142000/142100/142200/142300/142400/142500/142600/142700/142800/142900/143000/143100/143200/143300/143400/143500/143600/143700/143800/143900/144000/144100/144200/144300/144400/144500/144600/144700/144800/144900/145000/145100/145200/145300/145400/145500/145600/145700/145800/145900/146000/146100/146200/146300/146400/146500/146600/146700/146800/146900/147000

Java speed test: 390.2 ms (avg)

This is an acceptable speed, although not an ideal one. Coming in at the slow end of the four browsers that didn't take an entire second and a half to pass the Java test, Chrome is slightly faster than Safari, but more than fifteen per cent slower than top-ranked Opera.

Safari (v. 3.1.2 (525.21))

Available on: Windows, Mac OSX

Selling point: The Mac's default

Pros:

Simple and efficient by default

Add-ons enable customizability

Developed by Apple, ideal for Mac

Cons:

Many plug-ins aren't Windows compatible

Lack of predictive address bar

Shortcuts common to other browsers don't apply

The Safari browser should be the one most familiar to Mac users, and, conversely, least familiar to Windows users. That's because Apple's proprietary browser only made its debut on Windows PCs in June of last year, controversially bundled with the PC version of iTunes. It was only released in a stable PC version in March of this year and has yet to gain significant traction in the PC world. Since its introduction in early 2003, Safari replaced Netscape Navigator as the Mac's default browser.

The default interface is simple and straightforward. The toolbar at the top has the expected standard buttons (File, edit, view, history, bookmarks, etc.) and the initial layout has a sleek and simple slate grey colour scheme.

However, that isn't necessarily the layout you need to stick with. Safari has its own plugins and add-ons you can install if you wish, many of which can be found at PimpmySafari.com. Unfortunately, the majority of these will only work on Macs at the moment.

There are many different add-ons that give Safari the abilities of other browsers and compensate for its weaknesses (making searchable address bars, history, etc.) but

as far as Windows users are concerned, Safari is pretty bland and bare-bones. For Mac users I'm sure there's more to it but the Windows version is severely limited.

Safari does have a couple of things going for it though. With a built-in RSS feeder, spell checker, and a resizable search bar, there are a few features that Safari has going for it by default. The address bar also doubles as a fairly accurate loading bar, if that helps.

Safari also took up around 75 MB of memory with the four test tabs open. That makes it the second best in terms of efficiency, next to Chrome. Not bad, but I suppose if your Safari was totally "pimped," you might get some different numbers.

Java speed test: 400 ms (avg)

Clocking in at 400 ms, Safari is the second slowest browser to take the Java speed test. With Opera managing to come in at around 330 ms, that means that Safari is 17 per cent slower. On the other hand, it's more than four times as fast as IE.

Opera (v. 9.60)

Available on: Windows, Mac OSX, Linux

Selling point: Speed and customizability

Pros:

One of the oldest browsers

Lots of room for customization

Faster than most

Cons:

Some compatibility problems reported

Killer features have been usurped by other browsers

Opera is one of the oldest web browsers around, and has made a lot of progress over the years. Originally, Opera was not free software, and was only available on trial periods. It then progressed to being ad-driven, and now is completely free.

While it may sound a little strange nowadays to have a browser that one has to pay for to use, there were reasons behind this. For one thing, Opera was the first browser to offer tabbed browsing. Now a feature that is barely worth mentioning — all of the browsers in this article have it — tabbed browsing was revolutionary when it first came out, as were many of the other features in Opera.

Opera also had plugins before Firefox, although Firefox surely has more plugins now.

The thing is, some of the features that you can put into Firefox with add-ons are already ingrained into Opera by default; the two examples of plugins that I gave — Speed Dial and gestures — are available right after installing the browser.

Another feature that Firefox borrowed from Opera is session restores. Whenever Opera is closed, the browser will automatically reopen all of the tabs that you were previously working on along with their contents. Any password-encrypted sites, however, will require you to log back in.

Opera has a handy Panels button to the left of the tabs line, which users may click to access other built-in features. These range from the expected to the innovative, from favourites and history to notes and widgets. Widgets are extra feature-specific windows that users can download in order to be more productive, or possibly less (SimAquarium is a prime example of the latter).

Opera took up about 90 MB of memory with the four test pages open in tabs, which is better than Firefox, but nowhere near as good as Chrome. Still, the fact that Opera is feature rich might have something to do with that, considering all of the things that you can do with it before even installing any add-ons.

Java speed test: 331.6 ms (avg.)

As the fastest browser tested against the Java test, Opera deserves a good tip of the hat. With all of those aforementioned features and potential plugins, the browser still manages to achieve its goal of combining speed and usability. It also, conversely, manages to give a stern wag of the finger to IE, which it thoroughly thumps by being almost five times faster.

Conclusion

While it may be hard or even impossible to pick the "best" of these browsers, each performs differently and has a variety of different features that separates it from the rest of the pack. Depending on your purposes, you may find that you like Firefox for its extensions, or Chrome for its open source nature, or Internet Explorer for its ubiquitous presence.

Our advice is to try the different options out until you find the one that best suits your needs.

By Dorian Nicholson

AA Electronics
(905) 206-0931 PROMOTION VALID FROM Oct 1 - 8, 2008 WWW.AA-E.COM

64-1105S \$29.99ea.	64-1109B \$110.00ea.	64-2102B \$79.99ea.
64-0501 \$14.99ea.	64-1101S \$39.99ea.	64-2102B \$219.99ea.
64-1109B \$110.00ea.		

wholesale price available

LAPTOP BAGS BlowOut SALE FIT up to 17" LAPTOPS
\$19.50ea. \$19.50ea. \$24.50ea. \$19.50ea. \$19.50ea.

HDMI 1.3 Cables!!!

Server Racks

53-6380
33" Dish + 118.7
Single LNB
\$35.96ea
min 10pcs up

We are the dealers for
nFusion VIEWSAT ACTIVEWORK Pansat

Eaglestar.com Dealers Call for Quantity Price
1350 Matheson Blvd Mississauga, Unit #8. L4W 4M1 TEL:(905)206-0931

SAY HELLO TO THE NEW KID IN TOWN

Faster. Stronger. Better.

plus⁺ edition **KBOX**™

FREE UPGRADE
for ALL Original
K1 Heros Owners



NEW
IN STOCK

LESS HEADACHES
JUST MORE TV

DESIGNED AND ENGINEERED IN KOREA

KBOX TEAM HAS THE SOLUTIONS AND WE'RE READY FOR THE FUTURE... HOW ABOUT YOU?

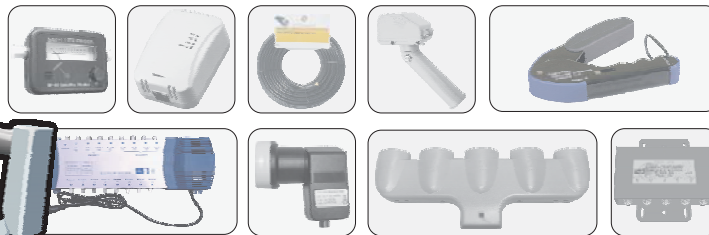
FOR MORE INFORMATION AND DETAILS, PLEASE VISIT US ON THE WEB AT [HTTP://KBOXTEAM.COM](http://KBOXTEAM.COM)

TRANSAT ELECTRONICS SATELLITE

Your **TOTAL**
HARDWARE
Store

ALL ORIGINAL PRODUCTS WITH FULL WARRANTY

KBOX VIEWSAT SONICVIEW CAPTIVEWORKS COOLSAT CONAXSAT TECHNISAT FORTEC MULTISTAR ACER CALAMP INVACOM ZINWELL ECODA EMP CHIETA MOTECK STAB



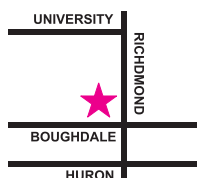
**ATTENTION
DEALERS
AND
INSTALLERS**

**Contact for
Bulk Pricing**

**1135 RICHMOND
LONDON**

Mon-Sat: 10am-7pm
Sun: CLOSED

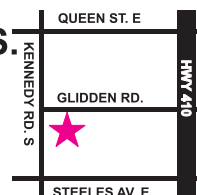
519.204.0658



**158 KENNEDY S.
BRAMPTON**

Mon-Sat: 10am-7pm
Sun: 10am-6pm

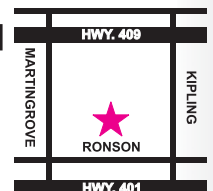
905.451.5999



**24 RONSON
ETOBICOKE**

Mon-Fri: 10am-7pm
Sat: 10am-5pm
Sun: CLOSED

416.235.2600



<http://TransatElectronics.com>

Facebook Apps: Awesome or Annoying?

The popular social networking site offers near limitless customizability... for better or worse

Facebook fans know exactly what to expect when they visit their profile page each day: public wall posts, private messages, and, most of all, invitations to install yet another Facebook add-on, those free third-party applications designed to "enhance" your online experience.

There are literally thousands of applications available and we all have that one friend who has chosen to install each one.

Yes, it seems we're not content to merely let the world know what we're doing at that precise moment ("Marc is eating a sandwich"), catching up with high school flames or showing off photos of our kids to the world — Facebook is now the gateway to movie trivia, vampire bites, booze mail, horoscopes, or a SuperPoke if that doesn't sound too painful for you.

Apply yourself

In all fairness, some of these Facebook applications are pretty cool, such as Where I've Been. This application places a world map on your Facebook profile page so you can show others where you've been, where you've lived or where you want to go to (and with the latter, you might just get a newfound Facebook friend to join you). Similarly, TripAdvisor offers pushpin maps for Facebook users.

We also like iLike, a social music application that lets you share and discover music with other Facebook users: share iTunes playlists with friends, access free MP3s to match your tastes or sign up for concert notifications when your favourite artists are playing near you.

And then there's Video and Super Wall, both of which let you upload videos (including YouTube clips) or get more out of your photos by creating collages and slideshows or by drawing over pictures. According to Facebook, Rock You's Super

Wall has more than 18 million active users each month, making it one of the most used apps of all.

Oh, and when you're bored to tears, MindJolt's nearly 500 playable games can really help make the time fly by with its collection of online puzzle, arcade and strategy diversions.

But for every one of these handy or fun apps, there are 20 annoying ones like Pet Sabotage, so you can hurt a friend's virtual pet; Moods, where emoticons show other Facebook users how you're feeling at that time (like, who cares?); Pig's Milk ("mad experiments and moments of reflection") and the self-explanatory Food Fight! application. Sigh.

Facebook is fun folks, but remember: less is more!

Facebook security and safety tips

On a related note, a recent report published by the Better Business Bureau of British Columbia says young people are exposing themselves to identity theft by posting personal information on the Internet, especially on social networking sites such as Facebook.

If you (or your kids or younger siblings) are spending time on Facebook — and many millions of Canadians are — then take heed to the following tips on better protecting yourself or loved ones from online scams and other dangers.

1. Never give out personal info: Posting your name on your Facebook profile page is perfectly reasonable, but you need not list your address, birth date, phone number, work details or any other private information. Also, be cautious about what kinds of photos you're posting in case they reveal personal info.
2. Close your network: Rather than making your profile public to everyone — meaning all your details pop up if someone types in your name or clicks on your name on someone else's site — you can choose to close your Facebook network to everyone except for a small group of friends.
3. Watch your wall: You might do a good job keeping personal info off your main page but your friends or coworkers might blow it. For example, say you're going on vacation and a dim-witted friend writes on your public wall something like "Dude, have fun in Mexico!" Be sure to remove these comments ASAP.
4. Be wary of forms: When you sign up for many of the third-party Facebook apps you might be asked to fill out info, so companies can collect names for marketing purposes. Don't fill out every field if you don't feel comfortable about it, such as address, phone number, e-mail, and so on.
5. Use e-mail messages: Remember, someone's Facebook wall can be viewed by anyone, so before you post a comment or question to it, ask yourself if it's better as a private e-mail, which only the Facebook user can read.

By Marc Saltzman



MODCOM

Modern Computer Consultants

info@modcom.ca / www.modcom.ca

M-F 9AM - 8PM (Markham) 10AM - 7:30PM (College)
SAT 10AM - 5PM (Markham) 10AM - 6PM (College)
SUN 11AM - 5PM

7310 Woodbine Ave unit #6
Markham, ON L3K 1A4
(Woodbine & Denison)
TEL: (905) 259-0333

298 College Street
Toronto, ON M5T 1R9
(College & Spadina)
TEL: (416) 413-9709

Combo HP 17" Lcd Monitor + HP DC7100 CPU Pentium 4 2.8GHz 512MB 40GB CD Drive XP PRO \$269.99 Acer Aspire One AOA150-1423 Intel Atom Processor XP Home 1GB DDR2 160GB Webcam WiFi \$428.99 42" LCD TV \$659.99 40" LCD TV \$659.99	Viewsat Ultra Satellite Receiver Vs2000 \$139.99 Canon MX300 Print, Copy, Scan & Fax \$59.99 Brother 240C Print, Copy, Scan & Fax \$49.99 LG LN730 GPS Touch Screen 20 Channel \$99.99 Ink Cartridges Starting at: \$4.50	Panasonic 5664 4 Handsets Answer Machine Talking Caller ID Speaker Phone \$79.99 Vista 350 \$39.99 Network Cables Starting at: \$3.99 Laptop Power Supply Acer Compaq Dell Gateway HP IBM Panasonic Sony Toshiba Starting at: \$39.99 Laptop Repairs / Computer Repairs From: \$34.99
--	--	--

(off lease) (ref) (new/ref)

Subscribe to HUB!

HUB: The Computer Paper is offering subscriptions!

Never miss an issue, never be out of the loop.
Always on time and always informative, sign up
for home delivery today at www.hubcanada.com



The Doctor is in

Here's your chance to send your PC woes to our resident Techspert, the HUB PC Doctor

Hi PC Doc,

My computer has an ASUS P4S800-MX SE motherboard and the C: drive connects via IDE.

I tried to replace the IDE drive with a SATA drive, but when I try to install Windows XP it does not see the new drive. I have verified that the SATA drive is working. Is there a setting I need to change so XP can find it?

Thanks,
John

Hi John,

The problem you are encountering is due to the fact that the XP installer doesn't have drivers for the hardware that controls the SATA drive. Without these drivers the installer can't "see" the hard drive, thus the installer can't install XP on it. The solution is fairly easy, but will require a floppy drive and a blank floppy disk, so hopefully you have those. First you will need to download the drivers that Windows requires to be able to use the SATA drive. You can get a copy of the drivers at www.tinyurl.com/P4S800. You will want to click the + sign beside the word RAID, and download "SiS RAID Driver Package Version 3.02 for Floppy Disk maker." Once you have downloaded this, put a blank floppy disk in your disk drive and run the program to create a driver disk.

Once you have made the driver disk you can start installing Windows XP. During the first part of the Windows installation some text will appear at the bottom of the screen that says "Press F6 if you need to install a third party SCSI or RAID driver..." press F6 when this appears. The setup program will detect the floppy disk and the driver on it. Choose to install the driver and then continue the installation. Windows XP setup should now detect your hard drive properly.

Dear PC Doctor,

I finally quit procrastinating and recently did a full back up of my C: (Vista boot) drive. The image (about nine GB) was written on three DVDs. All went well with the first two, but during the verification stage of the third, the computer hung. Does this mean the entire back up is toast and I should try to redo it, or is the data from the first two DVDs recoverable? Is there an easy way to find out what's up? I could live with losing some limited data, but don't want to discover the negative if the time comes. The computer in question is an Acer laptop using an in-house back-up program. Thanks.

J.V.

J.V.

There are a few different reasons the verification could fail. It is possible that it couldn't access one of the files it wanted to verify because it was being accessed by another program. The problem with the verification failing is that you can't be sure what files are not recoverable in the event of failure. If the first two DVDs contain the Vista installation and programs you have installed, and the third, and problematic, DVD contains all your irreplaceable documents and pictures... you see what I mean. You can try the backup again, but you risk running into the same scenario. Backing up your data makes sense, but you may want to examine how important it is to capture your entire Windows installation. Windows tends to get slower as you install and remove software. Many Windows users will attest to how much snappier a fresh install of Windows is on the same hardware compared to a one or two year-old installation.

If you wish to have a complete backup of your hard drive, the best way to make one is using a USB hard drive or second hard drive, and some kind of bootable disk imaging software. While an additional hard drive may seem expensive, hard drives are often more reliable than burnable media. Bootable disk imaging software will make an exact copy of your hard drive, and do so without having to start Windows. This will ensure that everything is captured properly and since the program is on bootable media (like a CD) you can easily restore your Windows installation.

One program that offers the ability to make bootable media is Acronis True Image 11 Home, info available here:

www.acronis.com/homecomputing/products/trueimage/

Once you have an image of your hard drive, you can choose to create a new image whenever you want, and backup important documents to CD/DVD between image creation dates.

Hi Doc

I have a secondary hard drive (older type Maxtor DiamondMax 20 GB) that shows up in device manager as working properly. The problem is that it is not showing up as a second drive in "My Computer." It used to work fine but suddenly disappeared.

I hope you can help me solve this as I had some fairly important things stored on it.

Thanks,
Brian

Hi Brian,

Windows is usually pretty good about keeping track of hard drive letters but given that Windows still sees the device there may be some hope.

Try opening Disk Management by right clicking on "My Computer" and choosing Manage. Along the left hand side of the "Computer Management" window expand the "Storage" category and click on Disk Management. In the top right you should see your disks listed. Assuming Windows is installed on your C: drive disk 0 is the drive that Windows is probably booting from — it should display information stating the Volume is C: the File System as NTFS or FAT32 and the Status as healthy. Look for Disk 1, if it displays the disk as healthy and the file system as NTFS or FAT 32 but has no Volume assigned, right click on the volume and choose Change Drive Letter and Paths and select a drive letter.

If the file system is unknown or unrecognized and the data is important you should take the hard drive to a data recovery company. Be aware though that this can be an expensive solution.

Simon Bolduc is the HUB PC Doctor.

Questions, comments and queries can be sent to pcdoc@ppublishing.ca



More than just an
Internet Provider

COLOSSEUM
MORE THAN JUST AN INTERNET PROVIDER
In Business Since 1994

416-739-7873
WWW.COLOSSEUM.COM

HIGH SPEED DSL INTERNET ACCESS

- UNLIMITED DATA TRANSFER
- 24/7/365 DAYS LIVE TECH SUPPORT
- USE OF A FREE MODEM
- 5 FREE E-MAIL ACCOUNTS WITH SPAM FILTERING

\$29.95
PER MTH* + GST
*Residential Service

COLOCATION SERVICES

- 24/7/365 DAYS LIVE TECH SUPPORT
- 500 GB TRANSFER PER MONTH
- NO SET-UP FEES
- FREE OF CHARGE REMOTE REBOOT

\$69.00 PER MONTH

WEB HOSTING SERVICES

PLEASE CONTACT US FOR DETAILS ON THE MANY GREAT PACKAGES THAT WE OFFER

INTERNET ACCESS SERVICES
T1 - 10Mbps - 100Mbps - 1Gbps



DOMAIN REGISTRATION
STARTING AT \$15.00
INCLUDES .COM, .NET, .CA, .ORG

Fun with PowerPoint

Sick of slideshows? Here's how to create a fun game in PowerPoint

Applications like PowerPoint aren't always all about serious presentations. You can easily put your PowerPoint skills to work and use the program to create fun games that anyone can play. This month we have a small game for you to make. You'll use a range of PowerPoint features that you'd use when creating a presentation but this time the purpose will be entertainment and not work.

In creating this game you'll see how to create random numbers and then use the number to go to a specific slide in your show. You'll see how to write a simple macro and how to attach it to an image. You'll also see how creating a slide show that has no transitions and a single background colour looks more like a regular program and less like a PowerPoint slideshow.

Getting started

The PowerPoint game needs to be static so it looks more like a program with changing elements than a slide show. To create this effect, start with a new presentation and choose View > Master > Slide Master. Set the background color to a neutral dark color by choosing Format > Background and select the colour to use. Remove both text placeholders on the slide and the footer boxes, add a new text box and place the page title into it. Ours reads "Throw the dice & play the game."

Choose Insert > Picture > Clip Art and locate and add six images of boxes or bags onto the slide. These are the images the user will see when they first launch the application. Locate an image of someone throwing dice. This image came from the Microsoft Office Clip Art gallery online. While the animated GIF won't play while you're building the slideshow it will play when you run the show later on.

To make the dice image do something you will need a Visual Basic macro. To create your macro choose Tools > Macro > Visual Basic Editor and choose Insert > Module. Type this code into the module window:

```
Private Declare Sub Sleep Lib "kernel32" (ByVal dwMilliseconds As Long)
```

```
Sub rollDice()  
ActivePresentation.SlideShowWindow.View.GotoSlide (1)  
Dim MyValue  
Randomize  
Sleep 1000  
Beep  
MyValue = Int((6 * Rnd) + 2)  
With SlideShowWindows(1).View  
.GotoSlide MyValue  
End With  
End Sub
```

When you are done, choose File > Close and return to Microsoft PowerPoint. This macro uses a random number routine to return a value between two and seven. Ultimately your slideshow will have seven slides and this macro will display any one of the slides when the appropriate dice number is rolled.

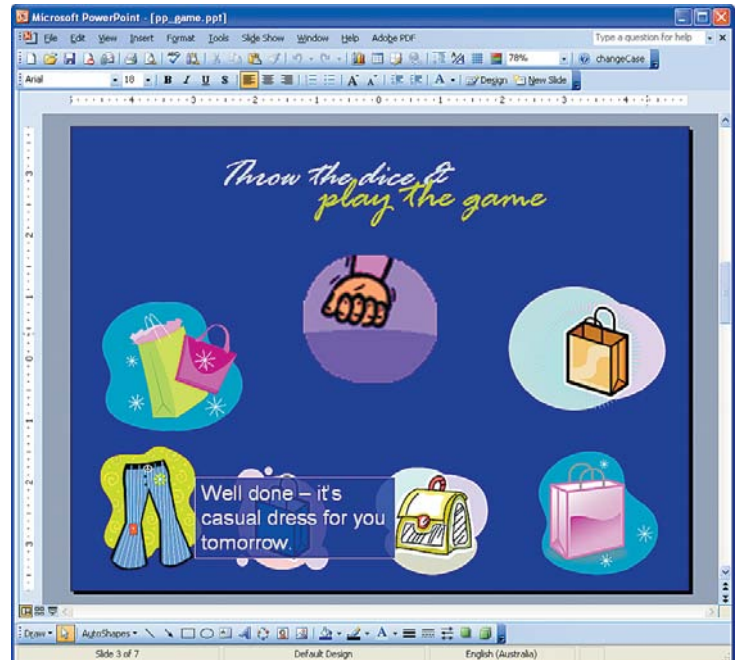
To assign the macro to the dice image, select the image on the slide master, right click it and choose Action Settings. Click the Mouse Click tab, click the Run Macro option and, from the dropdown list, choose rollDice and click OK. You can add a sound to the action by downloading a sound, saving it to disk and adding it to the action in the Play Sound area.

Creating the slides

Once you have added the macro action to your image click the Close Master View button to return to editing your slide. Remove the text placeholders on the slide and then duplicate it by choosing Insert > Duplicate Slide. Repeat five more times until you have seven slides in total.

Slide 1 appears when the presentation is run so you don't need to do anything to this slide. Slide 2 is the equivalent of throwing a one on the die, Slide 3 is equivalent to throwing a two and so on. You now need to configure each of these slides to show the "prize" that you win if you get that number.

Click slide 2 and create a filled rectangle using the rectangle tool from the drawing toolbar and drag it over the first container to hide it. Now locate and add a picture to the slide that represents the win or lose for that roll of the dice. For example, for a prize of casual dress tomorrow you might use an image of some casual clothing.



The game page is set up with an animated GIF and some simple clipart images.

Add a textbox to the slide and type some text explaining the prize.

Repeat this for each of the other slides. For each slide you will want to create a filled rectangle over one of the images on the slide and then add an image representing the prize and the text that describes it. One of the six images needs to be covered up on each of the slides.

When you are done, save your PowerPoint file and you're now ready to test it. To do this choose Slideshow > View Show and click the dice to start the game. Every time you click the dice image a different prize will display.

By default PowerPoint is set to prevent macros from running and you may need to alter your macro security level for this application to work. To do this, choose Tools > Macro > Security and set the level to medium, save your file, close it and exit PowerPoint. Restart PowerPoint and reload the application to test it.

Applying the techniques

The macro in this game can be used in a regular PowerPoint presentation to take you to a random slide. You could use it to create a test that plays differently every time the test is run. Using a slideshow that has essentially the same look for every slide and no inter-slide transitions creates an application that looks more like a program than a PowerPoint slideshow. Here too, you've seen how to use a slide master to configure the look of every slide in the presentation without having to do it manually each time.

By Helen Bradley



Industry Giant Goes Light-Weight

Dell's Inspiron Mini 9 marks the company's first foray into netbooks

Inspiron Mini 9

Dell \$359 - \$569 Price as tested: \$ 569 www.dell.ca

Specs as tested:

Intel Atom N270 1.6 GHz / 533 Mhz FSB processor
Windows XP Home Edition
1.3 MP webcam
1 GB DDR2 SDRAM 800 Mhz
16 GB SSD hard drive
Bluetooth 2.1
802.11g Wi-Fi
4-cell battery

Pros:

Sleek case styling
4-cell battery for ~3.5 hrs uptime
Highly configurable

Cons:

Only two colours available
Strange keyboard layout and dead space
Can be expensive

The latest to jump into the netbook fray, desktop and laptop giant Dell recently released its Inspiron Mini 9.

Some of the bigger manufacturers are steering clear of the netbook category — we can only assume because the profit margins are so low that the manufacturers don't want to cut the bottom out of their existing notebook sales — so it's interesting to see one of the bigger players stepping up. With that said and given some of Michael Dell's recent comments about the 30-minute computing limit for netbooks, the Dell Inspiron Mini 9 does feel a bit like a "me too" product offering that doesn't bring anything truly unique to the table.

Configuration nation

At the upper end of the Mini Inspiron spectrum, a top of the line configured Inspiron Mini 9 with Bluetooth 2.1 capability, 1 GB of RAM, a 1.3 MP webcam and 16 GB solid state hard drive costs \$569. As the sub-\$700 laptop article by Chad Sapieha that appeared in our October issue attests, when you start nearing the \$600 mark the value proposition of a netbook becomes fuzzy.

The case against a top-of-the-line Inspiron Mini 9 as we tested comes when you do the cost-benefit analysis. Sure, it's light at just a hair over 1 kg and could still be considered relatively inexpensive. It has a decent battery life with the 4-cell battery offering about 3.5 hours and looks slick. However, for \$70 less, you could opt for the Dell Inspiron 1525 offering a CD burner / DVD reader, full-sized keyboard and a 15.4-inch screen. Still, the Inspiron 1525 offers a paltry single core processor and 1 GB of RAM, and so suffers under the weight of its charge, Windows Vista Home Basic. It also clocks in at 2.7 Kg.

Lower down the price spectrum are the Inspiron Mini 9 netbooks running Ubuntu, which start at \$359. However, at this bargain price, you'll have to do without a webcam (0.3 and 1.3 MP cams are \$20 and \$40 options, respectively), you'll be stuck with 512 MB RAM (1 GB is \$30 more), a 4 GB SSD HDD (8 GB and 16 GB are \$30 and \$70 respectively). Add in any of the other options and the price tag creeps ever upward, tempting though some of these options may be.

The user experience

Our tester notebook ran smoothly; its 1 GB of RAM and 1.6 GHz Intel Atom processor are more than up to the task of running Microsoft Windows XP Professional. We also like the 8.9-inch screen, sleek rounded edges, comfortable keyboard and excellent mouse track pad with left and right click buttons positioned below the track pad as opposed to mounted on the left and right, as has become increasingly common in netbooks to answer some of the main end user concerns.

However, the bottom-mounted click buttons and near standard-sized keys of the Inspiron Mini 9 come at a cost. Most notable is the fact that the keyboard sacrifices dedicated function (F1 to F12) keys. Perhaps not a major deterrent for some users, but this user has grown accustomed to using the function keys and the shortcuts they provide.

Instead of doing away with these keys entirely, the function keys are secondary positions on the ASDF keyboard row, disposing of the F11 and F12 keys entirely. Given the dead space at the top of the machine taken up by the flat battery that

slots in above the keyboard, I would much rather have seen a compromise struck. They could have opted for a rounded battery pack, as seen in other netbooks like Acer's excellent Aspire One and category creator ASUS' Eee PC line.

On the left side of the Inspiron Mini 9 is an SD/MMC/MS card slot, two USB ports and the power input. On the right side are the headphone and mic inputs, one USB port, VGA out and Ethernet.

We managed to get over three hours of use out of the 4-cell battery with wireless on and we can expect to see an extended life battery before too long. No word on cost though. With three plus hours of battery use, the Inspiron Mini 9 bests many of its competitors, most of which use a 3-cell battery pack in the base configuration and generally offer just over two hours of use.

Deal or no deal?

While a top end Inspiron Mini 9 clocks in at almost \$600, a configured option using Ubuntu as the operating system, opting for 512 MB RAM, accepting the smaller solid state hard drive, and doing away with options like Bluetooth 2.1 and a webcam and the price comes more in line with the competition at around \$350. The fact that it offers some configuration options puts it ahead of the competition in customizability.

If you have stock in Dell, if you have traditionally liked their products, if you want to have some control over how your netbook is put together or if you specifically need left and right click buttons mounted below the mouse trackpad and can sacrifice on keyboard layout, the Inspiron Mini 9 may be just the thing.

The fashion-conscious computing set will need to see more than the black and white case colours before considering the Inspiron Mini 9 as a serious contender though.

For what it's worth, I'll be sticking with the Acer Aspire One I purchased recently.

By Andrew Moore-Crispin



FUJITECH TECHNOLOGIES INC.
180 Steeles Ave. W, Unit 2A, Thornhill, Ontario L4J 2L1
Tel : (905) 604 2270 Offer Valid till 30-Nov-2008
Mon-Fri:10am-7pm, Sat:11am-7pm Major Intersection
Sunday : CLOSED YONGE / STEELES

Do-it-Yourself Wireless Home Security System \$399 Call for Demo NO Contracts NO Monthly Fees Includes: Voice Panel, 1" Door Contact & 1" Motion Sensor 1" Remote Control Optional: Remote Control, Keypad, Smoke Detector Auto dial-out to your preset Cellular/Tel. no. when there is an break-in notifying you of nature of intrusion.	Fujitech \$99⁹⁹ Wireless Internet Anywhere PCMCIA GSM/GPRS Wireless Modem \$9⁹⁹ Webcam Fujitech Twinklecam	\$29⁹⁹ 70W Universal Notebook Adapter / Charger \$14⁹⁹ Class 1 Fujitech USB Bluetooth Adapter, 100M
Fujitech \$9⁹⁹ DB9F + DB25M Support VISTA USB - Serial Cable \$64⁹⁹ VisionDTV With Remote Support HDTV FTA PCI Satellite Tuner Card	Keyboard Stickers Chinese Korean Russian Greek Arabic Hebrew Romanian \$6⁹⁹ Fujitech \$4⁹⁹ Digital Camera Bags FCB-01N	
Fujitech 25M \$14⁹⁹ 50M \$19⁹⁹ 100M \$29⁹⁹ CAT5E Network Cables \$999 2Ghz CPU 512MB DDR 40GB HDD 15" Touch Screen 15" LCD Touch POS System	\$265 Parallel Port With Printer Cable POS Receipt Printer \$105 POS Cash Drawer	\$165 2"20 Characters Multi Language Support Height Adjustable RS-232 Serial Port VFD POS Pole Display
\$64⁹⁹ Keyboard Wedge CCD Barcode Scanner \$99⁹⁹ Keyboard Wedge USB also available Laser Barcode Scanner	\$99⁹⁹ Liquid Cooling Thermaltake BigWater SE	

PC TROUBLE? 

Bring in your PC for a **FREE** indepth PC DIAGNOSTICS. No Obligation.
Please Call for an appointment

Save 50% ON LASER PRINTER CARTRIDGE COSTS.
Laser Toners Refilled for
BROTHER / SAMSUNG / DELL / CANON / OKI
EPSON / MINOLTA / SHARP / HP / LEXMARK

Building the Ultimate Media PC pt. 1

Gathering the parts for the 10-foot PC

When Microsoft introduced its Media Center Edition version of Windows XP in January of 2002, it laid clear another of its battle fronts as the lowly PC made its march from basement to den to family space and, finally, into the living room. Or at least, that was the hope. Windows XP Media Center Edition was never released as a stand-alone operating system. Instead, it was only volume licensed to system builders. And not your local boutique computer shop either; only PC powerhouses like HP, Dell and Sony were able to build systems around this new media-friendly OS.

This move was understandable in many ways. For one, it allowed Microsoft to create a seamless experience and focus its support on a smaller grouping of standardized hardware — TV tuner cards, video cards, audio hardware and the like — and make sure that they worked without issue. However, it also cut off the potential for hobbyist or boutique computer builders to get involved with Windows XP's new media functions. Computer hobbyists tend not to opt for branded machines as they simply don't offer the flexibility for future-proofing, choice of components, upgrades and so on that a custom-built machine does.

While Windows XP Media Center Edition put the media PC movement on the mainstream map, other OS solutions became the driving force within the hobbyist media PC community. Most notably, MythTV, an open source project built on Unix with a large and growing driver base for common (and not so common) media PC components, support for remote controls and TV-friendly interface (among other things) gave the software a strong foothold among the hardcore. MythBuntu, an Ubuntu installation that contributes back to the larger Ubuntu developer community, makes for a system that pulls double duty as both an entertainment interface and, potentially, as a main PC too. The caveat is that, even though Ubuntu is among the friendliest distros going, you have to be comfortable working within Linux.

Windows Vista — at least in the higher end of its product offering, the Home Premium and Ultimate editions — bundles in Media Centre functions and a living room friendly window into video and other content that's most at home when played back on a big plasma or LCD screen, projector or, well, anything bigger than a standard computer monitor. The "10-foot interface," as it's often called.

These media functions, which include recording live TV, watching or authoring DVDs, listening to music and viewing pictures, combined with all the usual Windows Vista standards equate to a computer that really can pull double duty without asking potential users to make the switch. It also means that computer hobbyists and boutique computer shops alike can dip their toes into media PC waters without losing the comfortable Windows operating system environment in the process.

With that in mind, we're going to embark on a two-part series that endeavours to bring you the Ultimate Media PC build, pulling together the components to build a capable media PC that won't feel out of place in the living room. This first instalment will look at the hardware we're going to use (bear in mind, it's subject to change.)

The second instalment will follow along with the actual building process and then put the Ultimate Media PC through its paces.

At the end of the series, we'll give the Ultimate Media PC away to one lucky reader. Contest details and entry form are on our website at www.hubcanada.com.

The Case

Thermaltake

DH-101 VF7001BNS ~\$240

www.thermaltake.com

We'll be opting for Thermaltake's DH-101 from the Digital Home chassis series. As tempting as the DH-102 model is with its 7-inch colour LCD touchscreen is, the \$500 price tag is a little over the top for our needs.

The DH-101 is a stylish chassis with a piano black case and a black, brushed aluminium face. The form factor is more like a desktop than a tower and this, combined with the overall look, make it perfectly suited to a home entertainment centre where a standard tower-format PC would look out of place.

The DH-101 also ships with a full-sized remote for looking after common media PC functions as well as controlling the cursor on screen. We'll still need a mouse, but for simple functions like launching the media front-end to watch, record or schedule TV, play a DVD and so on, the virtual mouse on the Thermaltake remote will suffice.

The Power

Cooler Master

UCP 700W RS-700-AAAA-A3 ~\$165

www.coolermaster.com

As is often the case with custom chassis, ours ships without a power supply unit (PSU). This allows users to choose the best PSU for the application, including choosing the wattage, the cooling method, the noise level and other key concerns. We're opting for the quiet UCP line from Cooler Master and choosing the 700 watt model. 700 watts might prove insufficient in a gaming rig running dual video cards in SLI (nVidia) or CrossFireX (ATI), along with multiple hard drives and other touches. However, our media PC only needs to run a single video card, saving any available PCI and PCIe slots for future expansion. This setup will allow us plenty of room to add in more hardware later on — another video card or more hard drives. Balancing price and performance, 700 watts should be more than sufficient and will still allow some room for future system additions or expansions.

The CPU

Intel

Core2 Quad Processor Q9650 ~\$630

www.intel.ca

The brains in the operation, we're opting for a quad core CPU from Intel, the Q9650 with a 3 GHz clock speed, 12 MB L2 cache and 1333 Mhz bus speed. Built on the 45 nm process, the Q9650 packs a lot of punch on a small die. Packing so many transistors into such small architecture means a healthy speed boost but also, a lot of heat. A good CPU cooler will be a necessity.

With four cores, our CPU will be more than up for whatever tasks we can think to throw at it. With our ideal of recording from multiple sources at once and given that we want to be able to render video quickly and smoothly, the Q9650 is a perfect —



Thermaltake DH-101

if pricey — CPU. We'll also be able to render or record video in the background while doing other computing tasks. An earlier generation CPU would be up to the task and would be an easy way to shave a few hundred dollars off the overall price tag but would sacrifice some of this performance.

The Motherboard

Intel
Media Series DG45ID ~\$145
www.intel.ca

For the sake of simplicity, we're opting for an Intel motherboard to go along with our Intel Core2 Quad processor. And a capable mobo it is. With HDMI- and DVI-out, the DG45ID is ready to hook up to an HDTV display or your standard computer monitor — or both. With six SATA ports, we'll have plenty of space for hard drives and optical drives along with some space for future expansion. Six USB ports plus six USB port headers (for front-mounted USB ports) means we'll have plenty of room to hook up all our digital and video cameras along with other peripherals like a printer, keyboard and mouse.

And as a part of Intel's Media Series of motherboards, it seems an ideal choice. That said, it is in miniATX format, which leaves us with fewer PCI and PCIe slots available for add-in cards. For expansion, we get one PCIe x16 graphics slot, two x1 PCIe expansion slots and a single PCI slot. Not a lot of room to grow but it should still be sufficient.

The integrated graphics solution on the DG45ID is capable of pushing full HD and beyond, up to 2,048 x 1,536 resolution. It also has native support for H.264, VC1 and MPEG2.

Four DDR2 DIMM slots allow for up to 8 GB of DDR2 RAM. We'll be opting for 4 GB in a 2 x 2 GB configuration, leaving two DIMMs open for expansion.

The on-board graphics solution and the fact that it's HD-ready means we could easily get away without using a discrete graphics card. We're adding one in though, which will allow our Media PC to play the latest games, though likely not with all the graphical eye candy turned on.

The RAM

Kingston
KVR800D2N6K2/4G ~\$75
www.kingston.com

A tough choice, we ended up deciding to go with 4 GB of RAM from Kingston's Value RAM series. This 4 GB is spread across two 2 GB DIMMs, leaving us room to expand later up to 8 GB. Kingston's Value RAM series offers an excellent balance of price and performance, and with 4 GB of the 800 Mhz DDR2 RAM, our Media PC should perform well. Doubling the RAM later — a distinct possibility as more is always better — will mean another ~\$75 investment. This choice would serve as an inexpensive and easy upgrade that would provide immediate benefits.

The Tuner

Hauppauge
WinTV-HVR-950Q \$199 (part of Nero Liquid TV)
www.hauppauge.com

While there are internal solutions available, we're opting to use the WinTV-HVR-950Q USB stick TV and HDTV tuner from Hauppauge, included as part of the Nero Liquid TV suite. It's a good thing that the tuner is bundled with Liquid TV / TiVo PC as the WinTV software that ships with Hauppauge products is slow to tune in and far from the most user-friendly software out there.

Included with the bundle is an HDTV antenna for catching free-to-air HDTV broadcasts, an IR blaster for controlling a connected satellite or digital cable box, as well as a TiVo remote.

The Software

Nero
LiquidTV \$199
www.nero.ca

While our friends to the south were enjoying TiVo for several years before it finally arrived in Canada, Nero's LiquidTV / TiVo PC is launching at the same time both south and north of the 49th.

TP-LINK
The Reliable Choice

New Generation Wireless N Great Coverage for Your Entire Home or Office



- Wireless N speed up to 300Mbps
- Whole-Home Coverage
- Excellent performance and high product interoperability

TL-WR941ND
Advanced Wireless N Router



The Reliable Choice in SOHO Networking

TP-LINK is an award-winning global provider of SOHO networking products and No.1 market share holder in China. Committed to provide reliable networking products in Wireless, ADSL, Routers, Switches, Media Converters and Network Adapters for Global end-users, TP-LINK is now growing to become one of the most competitive providers of networking products with aspirations of becoming one of the top 3 networking brands and striving for a larger global market share.

Authorized Distributors of TP-LINK

MAGICLINK CANADA
www.magiclink.ca

MANTRONIC
www.mantronic.com

It's a compelling package: the excellent Nero LiquidTV software, a TV tuner, antenna, IR blaster and all the cables to hook it up in one box, along with a remote and a 1-year subscription to the TiVo service, including the extensive programming guides and scheduling it offers.

The beauty of having TiVo on your PC is that it's easier than ever to get TiVo'd content into other formats and transferred to different devices you own, from iPods or other video-capable digital audio players, to DVD or PSP. While it is possible to get content from a stand-alone TiVo box to your PC legally using TiVo's own software, it's far from a simple endeavour. Recording TiVo content directly to a PC hard drive eliminates the biggest and most problematic step involved: physically moving the content between the TiVo box and the PC.

The Storage

Western Digital

Caviar Black, 1 TB WD10000LSRTL ~\$240

www.westerndigital.com

Our case has three 3.5-inch drive bays (for hard drives) and one 5.25-inch bay for optical media. We're opting for a single 1 TB hard drive but that storage could easily be upgraded later.

The WD10000LSRTL (more easily referred to as the 1 TB Caviar which we'll do from here on) is a SATA drive, as are all modern hard drives on the market. We're opting for Western Digital here given the company's excellent reputation, extensive product line and low drive failure rates.

This is a 7,200 RPM drive with a 32 MB cache with a transfer rate of up to 3 Gbps. Since we'll be doing a lot of recording of live TV as well as transferring home videos to the Media PC (or rather, we would were it not being given away), storage capacity and transfer speed are of utmost importance. While opting for a solid-state drive (SSD) might be tempting given the super-fast access times they offer, the cost-per-GB is too high to be practical. And in a PC whose killer app is going to be recording and playing back TV broadcasts along with home movies, feature films and more, capacity is king.

The Media

Pioneer

4x Blu-ray DVD Burner BDR-202BK ~\$500

www.pioneer.com

Our Thermaltake case only has one 5.25" drive bay — the size required for an internal optical drive. So, we'll have to make sure that our optical drive is a do-it-all device.

We're opting for the Blu-ray burning Pioneer BDR-202BK which, in addition to being bleeding edge with its ability to read and write Blu-ray discs, can handle reading and writing to previous optical media too, specifically, DVD and CD. So in addition to being able to watch the latest Blu-ray movies on the big screen, we'll be able to take HD content straight from an HD-recording camcorder and burn it to disc for archival.

Likewise, we can take HD content recorded to our hard drive and burn off archived copies to Blu-ray discs. That means entire series of some TV shows on one disc. How's that for efficiency?

Coming up

Next month we'll detail the actual build process of our Ultimate Media PC. We'll also install all the requisite software and we'll report on the results of our benchmarking and testing. When that's all done we'll give the Ultimate Media PC away to one lucky reader.

Visit www.hubcanada.com for details and to submit your entry. And good luck!

By Andrew Moore-Crispin

Want to be part of an exciting and dynamic industry?



Come join our team!

HUB: The Computer Paper is currently accepting resumes for National and Regional Sales positions.

Please send all resumes to scott@ppublishing.ca
(subject line "sales position")

Bilingual (French and English) an asset.

HUB The
Computer
Paper

hubcanada.com

Everybody's Got Something to Hide

Online anonymity: The sanctity of your online information

"If you haven't done anything wrong, you should have nothing to hide." This is the commonplace refrain of those who stand opposed to the concept of privacy, if not total anonymity in the wired world of today. I can't tell you how many times I've heard these words spoken or read them in a forum when the topic swings to the latest excess of government surveillance or lawsuits launched by the recording and film industry associations, the RIAA and MPAA respectively. So, how well does this argument stand up? What does the data you inevitably generate as you go about your daily life say about you and how, given that you are a law abiding citizen, is it anything but innocuous?

Currently, the majority of this information resides in a variety of silos, each unaware of other troves of your personal data scattered about the digital domain.

However, in a previous article on the topic of Web 3.0 or the Semantic Web, I endeavoured to outline the nascent attempts to allow servers to talk to each other by employing a mechanism whereby they would understand the nature of the content they contained and the services they were each capable of delivering. This mechanism allows them to cooperate in achieving complex data mining tasks, including building an accurate profile of you.

On the list

This profile is an ever-expanding electronic fingerprint which, as our immersion in the digital world becomes more complete daily, is startling in its breadth and scope. As barriers to information sharing come tumbling down, the view inside your private life becomes all-encompassing. Elements of traditional data recorded include the following: Purchasing history, credit rating, marital status, medical records, travel history, driving record, banking activity, criminal record, and so on.

However, new sources of available data, freely offered up by users online may include: Opinions, political leanings, tastes in entertainment, sexual orientation, physical location, hobbies, religious beliefs, friends, etc.

So what? Still have nothing to hide? Let's turn this argument on its head shall we? If I were to say to you instead, "Would you agree that identity theft is a huge problem and that you should take measures to protect yourself from it?" I'm certain you'd nod your head in concurrence.

Essentially, everyone has something to hide. Whether or not that something is nefarious is another matter entirely and shouldn't really enter the debate.

Let's leave this obvious example aside however, and explore not what might happen, but what has already happened in relation to the misuse of personal data.

One size fits all

You may have heard that our neighbours to the south have concocted this wonderful system that enables them to determine who is a terrorist and who is not well in advance of any crime being committed. As a result of this fabulous, inerrant algorithm which collects data from all available sources and provides you with a resultant score on the terrorist scale, they have now been able to remove over a million prospective air travellers from the rolls of who is eligible to do so. Success! I can hear the clinking of champagne flutes from here.

Small children, political figures, journalists, musicians and the like who have found themselves on the no-fly list, may gain comfort in the fact that, as they take the soul-searching train ride across America (assuming that mode of transport is still available to them), at least the greater good for the greater number has been maintained and prevented them from exercising their newly discovered homicidal proclivities.

In a previous generation it was communists, next came drug users, then pedophiles and terrorists became the hobgoblins of western society. Laws and attitudes change with the times; however, a trend towards ex post facto (after the fact) convictions has been taking place. These are convictions for "crimes" which took place before the act in question had indeed been declared a crime.

A dangerous web

How many people who supported the Taliban before 9/11 monetarily or in fact, online, were subsequently incarcerated despite the fact that these activities, though certainly reprehensible today, were not illegal at the time they were committed.

"Well, good," you might say. "They got what they deserved."

The problem is that these extreme examples elicit extreme reactions. Let's examine the more mundane. Activities need not be illegal to ruin your life should they be

discovered online and brought to public light. The bugbears of prevailing public opinion spawn witch hunts leading to all sorts of unintended consequences.

Post a photo of your child in the bathtub and perhaps you should get ready to be charged with child pornography. Don't expect the paper to report on your subsequently being found not guilty, should that verdict be reached.

Offer some controversial remarks in an online debate and watch your job prospects evaporate as prospective employers probe Google's long memory.

Organize a peace rally online in support of ending an unpopular war and be prepared — years later — to obtain the new security clearance required by your employer should that rally have attracted some "people of interest."

Staying off the radar

The opinion has been proffered that total information awareness equals security. In fact, the opposite is more likely to be the case. Ask any survivor of the Japanese internment camps whether they thought the "nationality" question on the census seemed innocent enough when they were fulfilling their civic duty by completing it. The less your neighbour or government knows about the personal details of your life, the better off you are for it. This is certainly just as true in western democracies as it is in totalitarian and communist states.

So, in this age of ubiquitous monitoring and data gathering how does one undertake online activities with some measure of anonymity? There are many tools at your disposal to obfuscate your location and identity while online including the Electronic Frontier Foundation's Tor (www.torproject.org). For anonymous e-mailing check out Mailinator (mailinator.com) or, for a completely separate and private version of the Internet, why not give Freenet (freenetproject.org) a try. It's time to give Big Brother and his nosy neighbour a little taste of myopia.

By Ray Richards

Web Hosting

from only \$6.99/month! *

*Annual payment required

99.9% Uptime!

We provide the following services:

- Web Hosting
- Website Design
- Graphic Design

Website Builder now available! Create your own website for free using existing templates without any web design experience.

HOSTING BASIC PLAN	HOSTING STANDARD PLAN	HOSTING ADVANCE PLAN
• FREE Setup • FREE Domain • 10 Email A/C • 10 GB/mth	• FREE Setup • FREE Domain • 50 Email A/C • 50 GB/mth	• FREE Setup • FREE Domain • 100 Email A/C • 100 GB/mth
\$9.99 ⇒ \$6.99	\$14.99 ⇒ \$9.99	\$19.99 ⇒ \$14.99

We support Perl, CGI, PHP, SSI, ASP, ASP.NET, MySQL
Please visit our web site for more details

www.iqweb.ca

Tel: 1-866-837-1522 and (416) 628-9793 • Email: sales@iqweb.ca



Payments via cheque accepted
Terms and Conditions apply

Your Web Solutions Provider
From Start To Growth

The Online Photo Album

Finding a needle in the photo sharing haystack

There sure are a lot of photos online, don't ya think? Unless you've spent the last few years off planet, you know that the Net has become a huge repository for digital photographs. Flickr marked the two billionth photo posting more than a year ago. PhotoBucket's image counter is ticking away at over six billion images. This embarrassment of photographic riches can be a problem: How do you find exactly what you are interested in seeing?

At the most basic level every photo hosting site gives you a lot to choose from. Every time you go to your favourite photo site you'll find a fresh batch of images. No heavy lifting required — just click and enjoy. Most sites are designed to provide different images each time you visit and the randomness of presentation is also engaging — you never know what you might see from one session to the next.

Worth 1,000 (key)words

Sites also use non-structured keywording so you can pick virtually any descriptive word that pops into your head and use it to search for images: cities, countries, natural formations, colours, adjectives, months or common objects. The traditional photographic genres like landscape or black-and-white work too.

Sounds good so far, but because of the sheer volume of images being posted even the most (seemingly) unique or obscure keyword can produce hundreds or thousands of hits. To improve search success, you need to cast a net with a finer mesh and go beyond the simple keyword search.

Flickr favours the term “tag” instead of keyword, and on its site you can refine your searches by using tag clusters. Clusters are groups of tags that most often appear together. Implemented by Flickr a few years ago, clusters can refine searches, but can also take you off into a completely different direction. For example, one of the tags clustered around the primary tag “flower” is macro; if you follow macro, you can soon be looking at collections of close up photography

that have nothing to do with flowers.

Other developers have developed new ways to search on Flickr's tagging system. Tag Galaxy (taggalaxy.de) uses a solar system metaphor to visually refine search parameters. Typing in the tag “Canada” shows it as the central “planet” with smaller satellite tags with labels such as Toronto, lakes, BC, and so on orbiting it. Click on one of the satellites and it is promoted to the central body position around which other satellites orbit. Successively clicking on the satellites refines the search, but if you click on the central body the search refinement ends and the interface begins to populate the sphere with thumbnails. You can then spin the “planet” to see all the thumbnails of the search result.

One product of Flickr's data mining efforts is the term “interestingness.” Flickr describes interestingness as “a ranking algorithm based on user behaviour around the photos.” These could include factors such as the number of comments a photo receives, how many times it has been viewed or ranked as a favourite, etc.

From interestingness to searchability

Flickr Hive Mind (fiveprime.org/flickr_hvmnd.cgi) uses interestingness along with tags, tag pairs, groups, users and other data to mine interesting sets of images. When I typed in “bridges” Hive Mind searched Flickr using a number of tags such as HDR (high dynamic range) and architecture; tag pairs such as bridge+night; and a number of users who presumably had made some reference to bridges in their descriptions or comments. Hive Mind is just one of more than 100 tools that have been developed using Flickr's Application Programming Interface.

Other sites are also using social networking technology to refine searchability of images. Last year, for example, PhotoBucket added Digg-ability to its photos, and now its popular images page lists images having the most Diggings.

While Yahoo-owned Flickr is today's dominant photo sharing site, Picasa, now owned by Google, is a

relatively new kid on the block. It has parlayed its photo album software into a photo sharing site. One of Picasa's recent developments is face-based tagging. The site uses clustering technology to group photos with similar faces. This allows you to batch name them rather than finding and naming them one at a time.

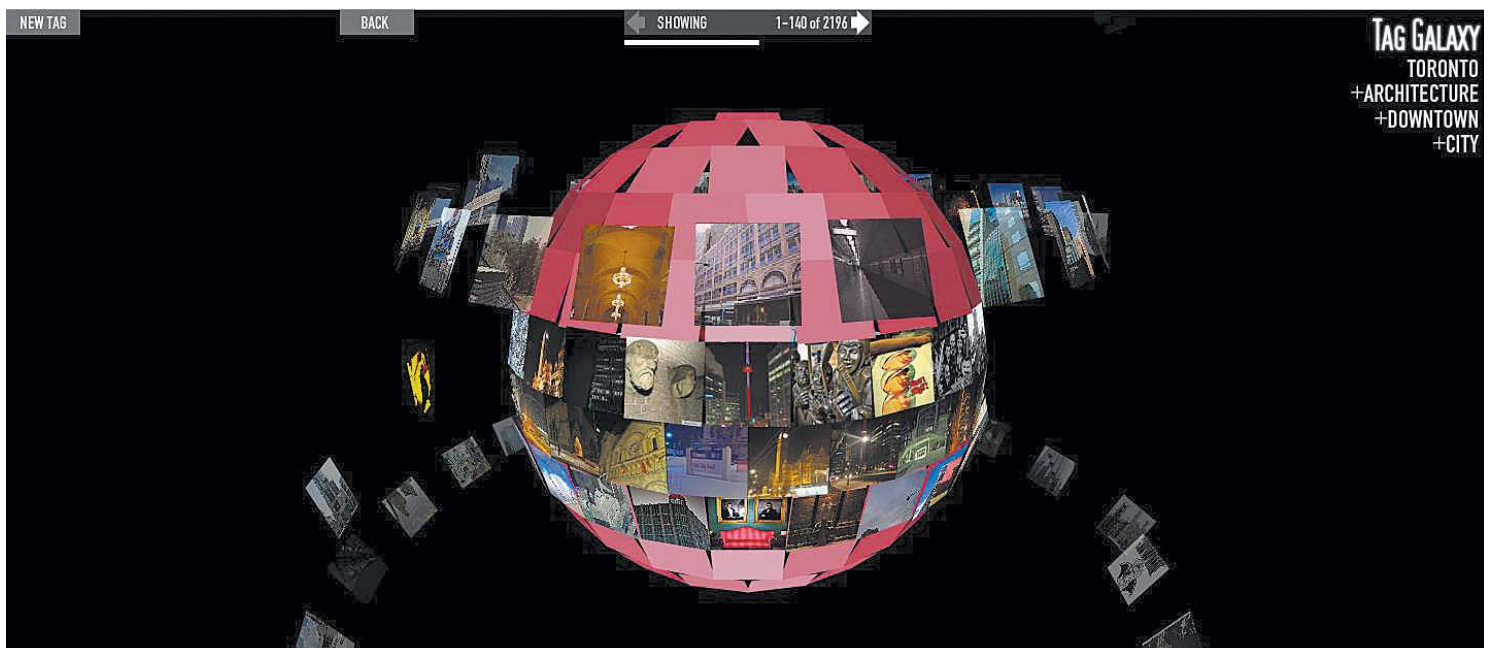
Leaving your prints behind

Google acquired another property called Panoramio, which specializes in geotagged photos. Geotagging has become its own special interest group on many photo sites. For photographers, it helps to write location information into the metadata fields of the images before uploading them to Panoramio — the database automatically scans the fields and maps the images, so uploading to the site isn't much different than uploading regular images. However, it's not essential. You can also geotag after the fact, if you happen to know the location coordinates for the photo, or if it is a landmark location that is easy to locate on a map, such as the CN Tower.

As you might expect, Panoramio uses Google Earth as its mapping engine, and so does Picasa. In addition to geotagged content, Picasa has a game on its home page called Where in the World? that makes good use of Google Earth. It's simple but addictive — random photos appear next to a map of the world and you have to guess where the photo was taken. Flickr has a huge store of geotagged photos and uses Yahoo Maps as the underlying mapping engine, but I've seen one developer who has figured out how to use Google Maps to map Flickr's geotagged images.

With Flickr and Panoramio, geotagged photos are presented differently — a map is the dominant feature with map pins or hot areas to indicate photos that can be viewed at various locations. However you can use the same search tools available in the rest of the site, from simple tags to data mining systems in order to find images.

By David Tanaka



Cisco Training

WinNET Produced 210 CCIEs



Tejas Suthar
CCIE # 8423, Telus



Ravi Chandran
CCIE # 8671, Telus



Kamran Adil
CCIE # 10373, Bell Nexia



Terence Summerville
CCIE # 8927, Infostream



Virgilio Santos
CCIE # 9454, Bell Canada



Santosh Koshy
CCIE # 12028, BT



Darryl Coelho
CCIE # 11992, Bell Canada



S. Kanagasundarajah
CCIE # 12417



Nigel Maharaj
CCIE # 9916, IBM Global Service



Hans Ma
CCIE # 10424, CAA



Raj Thava
CCIE # 10425, Telus



Edwin Lukach
CCIE # 11263



Usman Mahmood
CCIE # 9900, Next Innovation



Giuseppe Giorgio
CCIE # 10422, Next Innovation



Ilankeeran Somasundaram
CCIE # 11904, Stargate



Kaushik Narayanan
CCIE # 12087, Telus



Edward Rajca
CCIE # 11112



Garry Low
CCIE # 11433



Syed Mukhtar
CCIE # 11513



Ganesh Shannugalingam
CCIE # 10662, AT & T



Ahmed Khan
CCIE # 11146



Nadeem Akbar
CCIE # 11610



Fauzan Siddiqui
CCIE # 11653



Amir Syed
CCIE # 12249



Sunil Soporio
CCIE # 11942



Andre Julien
CCIE # 12142, Telus



Sarwar Jamal
CCIE # 11562, Bell Canada



Zar Staroselski
CCIE # 11575, Telus



Snezhny Neshkova
CCIE # 11931, Cisco



Vimal Nanthacumar
CCIE # 12029, Telus



Muhammad Shakil
CCIE # 12143



Craig Henriques
CCIE # 11180, Network Builder



John Lilek
CCIE # 11517



Imran Tauqir
CCIE # 12172, CGI



Abu Uddin
CCIE # 12158, Outsource IT



Ketan Paralkar
CCIE # 12179, Bell Canada



Mahtab Alam
CCIE # 12171, Compugen



Haroon Shafaat
CCIE # 12088, EDS

More CCIEs: -- Names and Numbers --
Lili Zhao, CCIE # 10252
Mehrdad Mostafavi, CCIE # 10383
Suresh Vijayakumar, CCIE # 10385
Muhammad Aamir, CCIE # 11429
Harnik Dhillon, CCIE # 11839
Felix Trinh, CCIE # 11994
Lawrence Imelsh, CCIE # 12000

CCNA

\$499

CCNP Module

\$799

CCIE Lab - R/S & SP

CCVP - Voice Over IP

CCIE Voice Bootcamp

CCIP- MPLS/BGP/BSCI/QOS

MCSE & Unix

CCNA - Voice

\$799

Visit the best CISCO lab in Canada

- Over 500 Cisco routers - 2800, 3700, 3600, 2600, 2500.
- VOICE Gateways, IP Phones, Call managers, Unity, IPCC.
- Catalyst 6509, 3560, 3550 and 2950 switches.
- TI, ADSL line and frame relay circuit.
- 35 CCIE Pods meets current CCIE Lab requirements.

FREE CCNA or MCP FOR EI RECIPIENTS

FREE CCNA
if you pay and register for
CCNP-limited time offer



The courses are designed by
HARITH KARIAPPER
Quadruple CCIE #8661

B.Sc.Eng., MIBM, CNE, MCSE, MCT, CCNP,
CCDP, CCIP, CCVP

WinNET SYSTEMS
HI-TECH TRAINING & CONSULTING

TORONTO

1200 Eglinton Ave. East, Suite 100, Toronto (Don Mills & Eglinton)

Tel: 416.447.TEST (8378)

www.winnet.ca

Online Dating

Looking for love in all the virtual places

Who among us can honestly say they envision the conclusion of a relationship when they embark into one? While the joy of discovery is still so fresh, when the hours between each date seem to stretch into days, when that chemical connection is so strong that every shared experience throws you into a state of euphoria, how can you possibly think of that time when you might separate...forever?

Yet the statistics are far from upbeat. Give or take a few percentage points, one of every two marriages in Canada will end prematurely. So while it may be true that nobody gets married to get divorced, half of us do end up that way, against our best efforts.

This may not be particularly problematic for younger guys and gals, who gravitate in circles where the majority of their friends and associates are still single, and are fairly likely to spend a chunk of their social time in bars and clubs that cater to the under-30 crowd. But what about those of us over the age of 30? Or 40? Or 50, for that matter? What do we do when we're on the prowl?

We could hang out with our married friends, hoping against hope they might finally invite some other single person along, but more likely will end up watching rented movies and playing boring board games.

We could hit the neighbourhood pub, where we might, if we're really lucky, find that perfect match amongst the usual gaggle of ne'er-do-wells and town drunks. Heck, we could even become a regular at the local produce store, pathetically hoping we might inadvertently touch hands with our dream spouse whilst sorting through the over-ripe tomatoes.

A brave new world

Or we could go online. Once regarded as a last resort for total losers fearful of showing their face in the real world, online dating sites have come a long way.

Indeed, when you consider the alternatives and the other potential scenarios (see above), online dating may be one of the best options today — especially for those too old for nightclubs but far too young to give up on love.

Before you mock the idea entirely, consider the following:

Online dating goes a long way toward reducing geographical barriers. In the “real” world, chances are your sphere of interaction extends just a few miles. Online, you can meet someone from thirty or forty miles away just as easily as people from your own neighbourhood. Granted, you may want to think twice before responding to that suspiciously lusty note from a gorgeous 25-year-old “supermodel” situated in some unpronounceable third-world country, but it generally goes without saying that your chances of meeting the right person are that much more enhanced when your horizons are broadened.

When you meet someone online, you'll have at least some idea in advance as to what makes them tick. Are they a soft-hearted romantic or a party animal? Do they enjoy extreme sports or extreme antique hunting? Are they happy and confident with themselves, or do they still carry a crazed obsession for their most recent partner that manifests itself in daily stalking rituals?

Unlike hockey rink hot dogs, online dating sites theoretically contain no filler. Everyone who signs up is there for one reason — to meet Mr. or Ms. Right. The same cannot be said for the shopping mall. Or the office. Or even the local watering hole, where you're more apt to find three-sheets-to-the-wind Karaoke hacks than a future wife or husband.

For most of us, it's simply easier to take that tentative first step, concoct a good opening line, and deal with possible rejection when we're not in a face-to-face situation. Furthermore, unless you're one of those

lucky guys or gals who simply ooze self-confidence, you'll likely find it easier to approach really gorgeous people online than on the street. There's just something about the buffer of the Internet that makes the whole process less intimidating.

Going fishin'

Of course, online dating is not without its pitfalls, arguably the most important being the simple yet undeniable fact that not all sites are equal. Indeed, while some online dating services deliver tremendous bang for the buck and are totally and completely above reproach, others are... substantially less impressive.

Certainly there's no shortage of alternatives. One of the most popular choices in this country is eHarmony (www.eharmony.ca), a matchmaking service that's both comparatively pricey and comparatively strict. It does not cater to gay individuals, it won't help you if you're merely “separated” (you must be legally single) and it discourages open, unsolicited communication between its members. Instead, eHarmony uses a series of parameters and personality traits to match you with others, then passes the results on to you and allows interaction from there.

Substantially different is Plenty of Fish (www.plentyoffish.com). The most important distinction between Plenty of Fish and eHarmony is price — the former is completely free. And while that's great news for those of us who don't believe in sinking megadollars into the search for our perfect mate, the flipside is that a freebie site encourages those who might... exaggerate the truth. Still, a no-charge service that promotes freedom of interaction between members, doesn't restrict on the basis of sexual preference or marital status, and is based right here in Canada (Vancouver, to be exact) is a pretty good thing. Lavalife (www.lavalife.com) is a sophisticated site that



offers its members perks such as integrated instant messaging, webcam support, a variety of discussion forums, and three distinct "communities" (Dating, Relationship, and Intimate). Lavalife charges for its service, but those charges aren't as steep as some other sites and they do serve to reduce the number of insincere participants.

Billing itself as Canada's Speed Dating Service, 25dates.com (www.25dates.com) intends to bring you together for a series of three-minute encounters with up to twenty-five potential suitors. The downside? If twenty-five consecutive three-minute dates doesn't faze you, maybe geographical limitations will. After all, what are the chances of even finding twenty-five other singles in your age bracket when you live in Milk River, Alberta?

If, conversely, you reside in the city and have money to burn, It's Just Lunch (www.itsjustlunch.com) will not only act as a matchmaking service, but also set you and your date up at a top-notch restaurant — thus eliminating safety concerns.

Prepare thyself

There are, literally, dozens more online dating sites from which to choose. Unfortunately, many of them are not without issues. Some, for example, have been known to send false, inappropriate, or geographically ridiculous matchups.

The key is to know in advance what you're getting into. Check the membership numbers — particularly "active" members — and see how many are situated within a reasonable distance. Decide if you prefer sites that offer unfettered e-mail and chat capabilities, and act accordingly. Google your favourite sites for professional reviews and user opinions.

Look carefully at the membership small print and make sure you're not on the hook for more money than you can afford or a longer time period than you want. If possible, sign up for a freebie trial or a reduced-privilege membership and look carefully at both the demographics and the quality of the members.

Ultimately, weed out the sites that don't work for you and experiment with a trial membership at the sites you like. It won't take long to recognize which service you most enjoy frequenting.

But even the best site is no guarantee of a successful dating experience. Your humble writer has dedicated portions of 2008, um... researching various sites and delving into the world of online dating after spending much of his adult life in a long-term relationship, and can attest to the uncertainty of the process.

Why, it seems like only yesterday when the rusting hulk of a 1988 Nissan staggered into his driveway. Cringing at the site of the smoldering monstrosity but thankful its engine died before it could explode, he bounced out the front door and down the steps in the hopes that a more agreeable vision awaited in the driver's seat. Alas, those hopes were trampled faster than a baby in a mosh pit.

New Contests!

Only at www.hubcanada.com

You can only win if you register, so sign up and join our community for your chance to win in the upcoming giveaways!

It wasn't just the circa-1970s Harley tank top. Or the tattoos. Or the pronounced belly, swinging to and fro below the beltline. It wasn't the bigoted attitude that immediately conjured up memories of Archie Bunker at his worst or even that she'd stretched the truth substantially about her age.

No, it wasn't any of the above. It was that this woman had somehow made it through the screening procedure. She'd painted a picture of sweetness and femininity in her online bio. She'd peppered her profile with ancient photographs that gave no indication of her current condition. And during each and every phone call, she'd spoken without the grating ignorance that now seemed so obvious.

Laugh in the face of danger

Ultimately, she and her beastly automobile would disappear into the night, and no real harm was done. Yet the lesson had been learned. Trust no one. It's a lesson that everyone considering the online dating world should remember.

Don't, for example, rely on e-mails and photos as reliable precursors to a first date. Instead, get the phone number of your prospective suitor and really talk it up. Are they bitter over past romances? Are they plagued by verbal quirks that'll drive you crazy over the long haul? Do they like to laugh, or are they too serious for their own good?

Ask them a few hard-hitting questions — they shouldn't mind at all if they have nothing to hide. And, if you're pursuing a relationship rather than a one-off rendezvous, keep the lines of communication open for a week or more before meeting to determine if the object of your desire is just as interested in a future.

Pick a busy, public location for that first get-together, take a cell phone along with you, and let a few friends know where you're going — and whom you're meeting. And when you arrive, try your best to relax and have fun. Remember, one date isn't really a big deal in the grand scheme of things. There's always plenty more fish in the online dating sea.

By Gord Goble

LAPTOP BLOW OUT SALE

COMPAQ,IBM TECHNICIAN •NOTEBOOK REPAIR • FREE ESTIMATE

We buy & Trade in used laptop
Motherboard, LCD repair •Password Removal • Virus Removal

Dell D600
PM-1.4Ghz CPU
512MB RAM
40GB HDD
DVDROM
14.1TFT
WIRELESS



\$249

IBM ThinkpadT2:
P3M 1.13GHZ CPU
256 MB /30GB
DVD ROM
network
30 Days Warranty
14.1TFT LCD



\$199

Dell D400
PM-1.4 GHZ CPU
512MB RAM
30GB HDD
external CD
WIRELESS
12.1TFT



\$229

IBM Thinkpad T42
PM 1.7GHZ CPU
512MB RAM
40GB HDD
14.1 LCD
WIRELESS
30 Days Warranty



\$349

Laptop Service
Laptop Screen from \$199
MB DC jack Erom \$99
Motherboard repair from \$199
Laptop battery from \$75
AC adapter from \$40
keyboard from \$75

Compaq Tower
AMD 3000 1.8GHZ
512 MB RAM
40GB HDD
DVDROM
FLOPPY DRIVE
LAN
LCD not included



\$100

Data recovery
from defective
harddisk drive

Laptop Parts

PC-100, 128MB	\$20
PC-100 256MB	\$50
PC-133 512MB	\$65
DDR-2100 256MB	\$20
DDR-2100 512MB	\$35
DDR-333 1GB	\$50

Wholesale & Retail

sales@cjaycomputers.com
www.cjaycomputers.com

321 COLLEGE ST. TORONTO M5T 1S2 416-321-2911 11AM-7PM
Unit12, 450 Alden Road, Markham 905-946-2555 10AM-6PM

Gigabyte GA-MA790GP-DS4H

Proving that AMD still has muscle to flex

GA-MA790GP-DS4H motherboard

Gigabyte ~\$179 www.giga-byte.com

Pros:

Great Integrated graphics performance
Hybrid and CrossFireX support
Decent price

Cons:

No DDR3 version
Current AMD CPUs are slightly less powerful than Intel's

Ever since the introduction of the Core Duo, Intel has been steadily eating away at the ground AMD worked so hard to gain with their Athlon line of processors. It's a shame, too, because it's not that AMD's latest Phenom processors aren't decent enough but rather that Intel has really stepped up its game. Luckily AMD has continued to fight the good fight, releasing plenty of intriguing products in order to lure back all those Athlon XP users of a few years ago.

Ironically, in the chipset department AMD has experienced quite a bit of growth in the past couple of years due to its acquisition of graphics chip designer, ATI. It's no surprise that their integrated graphics solutions are some of the best available and are also offered at surprisingly competitive prices. As you'll find out in this review of Gigabyte's GA-MA790GP-DS4H, their latest 790GX chipset is no exception.

The graphics in the 790GX

At the heart of the MA790GP-DS4H is the 790GX northbridge, whose claim to fame is an integrated DirectX10, Shader Model 4.0 capable Radeon HD3300. The Radeon HD3300 is trumped only by the lengths at which Gigabyte has stretched the GPU to reach its maximum potential. This is the first integrated graphics processor I have seen that has not only a standard 15-pin VGA and DVI connector but also has an HDMI port built directly into the motherboard's rear I/O panel (our *Ultimate Media PC motherboard*, the Intel DG45ID features a similar HDMI port, though they are rare. – ed). Gigabyte has gone ahead and made sure the connector itself adheres to the latest HDMI 1.3 certification in order to deliver the highest available digital audio and video signal as well.

The MA790GP-DS4H is compatible with two different multi-GPU graphics card configurations by delivering both ATI's Hybrid Graphics and traditional CrossfireX support. Hybrid Graphics is essentially a CrossFire setup that utilizes the onboard Radeon HD3300 as one of the two cards in the setup. If, of course, you'd rather have the best of the best, there are also two full-sized, PCIe 2.0 x16 slots on the motherboard as well. This makes upgrading from entry-level all the way up to ultra high-end feasible on the MA790GP-DS4H — everything from using the included IGP, to having two 4870 X2s (for nearly five teraflops of graphics-pushing power) is possible.

Another cool graphics-related feature of the MA790GP-DS4H is the inclusion of 128 MB of blazingly fast 1333 MHz DDR3 used as SidePort memory. Whereas most integrated graphics solutions borrow memory from the system RAM (often referred to as "shared memory" and is usually adjustable in the BIOS), Gigabyte has decided to use this additional 128 MB to try and eliminate the memory bottleneck associated with sharing slower system RAM. With this SidePort memory, the integrated graphics

performance gets an increase of as much as 10 per cent, further stretching the gap between competitors' onboard graphics offerings.

Rounding out the set

Joining AMD's 790GX northbridge is their equally outgoing SB750 southbridge. Typically the southbridge is responsible for all of the I/O functions of the chipset — the slower PCIe lanes, SATA ports, integrated audio, networking, the USB and FireWire ports, etc.

In the past, AMD's southbridges were, for lack of a better word, weak. Compromises were made that the other chipset manufacturers had no problems achieving, which put AMD at a disadvantage. Fortunately the SB750 has everything we've come to expect from a chipset released this cycle, so when buddied-up with the 790GX the two make quite a team.

Aside from all the major mainstays like 12 USB 2.0 ports, six SATA ports, a FireWire Port and ALC889A HD audio codec, the SB750 is poised to give AMD's Phenom processors an additional overclocking boost (if you choose to overclock, that is). Included in the southbridge is AMD's Embedded Controller for AMD OverDrive and Advanced Clock Calibration (thankfully dubbed EC-AOD-ACC).

Maximum OverDrive

Linking up with the SB750's EC-AOD-ACC is AMD's OverDrive software. This software suite can be accessed through the OS to not only overclock with the click of a mouse, but also to monitor all of your system's settings (voltages, temperatures, etc). They've also included an automated stress testing application to ensure system stability when tweaking.

The OverDrive software is so straightforward that it seems as if AMD is trying to make a point of being overclocker friendly... In fact, I'm almost convinced that AMD is encouraging users to try tweaking their system as the software is easy enough for even entry-level users to understand and use.

Not to be outdone by AMD, Gigabyte has also put their own personal spin on the GA-MA790GP-DS4H. The wonderful Ultra Durable 2 makes its return, so the improvements made to the SB750 southbridge for stability are compounded further with all-solid capacitors and sturdy design. Gigabyte has also gone along and attached all-copper passive heatsinks to cool potentially vulnerable components. The intention of Ultra Durable 2 is to increase system stability and component longevity in even the most grueling conditions.

The Gigabyte touch

Gigabyte's DualBIOS has also been added to the MA790GP-DS4H, so you needn't fear a failed flash attempt. Generally speaking the average user won't update their BIOS since an improper flash will leave you with a dead motherboard. But with DualBIOS you have no need to worry as there are two physically separate BIOS chips on the motherboard. If one craps out the other automatically kicks in, avoiding the catastrophe altogether.

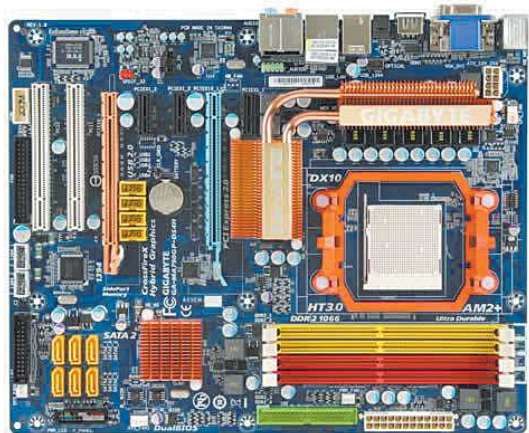
Another perk that Gigabyte threw in was high quality audio in the form of Dolby Home Theatre with support for 7.1 audio channels as well as two additional independent stereo channels. Not only is the audio quality better than the standard, but Dolby Home Theatre certification requires that the device completely supports Blu-ray lossless audio as well. When you consider the motherboard's built-in HDMI port, the MA790GP-DS4H could make for one heck of a home theatre PC.

Conclusion

Supporting all AM2 and AM2+ processors (even up to a whopping 140 watts), having Hypertransport 3.0, and support for DD2 1066 MHz (1333 MHz unofficially) means the Gigabyte GA-MA790GP-DS4H should be a viable option for quite a while. Tack on the incredible room for graphics card expandability and this board has quite a bit of futureproofing up its sleeve. With that said, the board's highlight feature, its integrated graphics, is currently the best available, so if you choose to go without discrete graphics hardware you'll still be able to play the latest HD multimedia and games. The GA-MA790GP-DS4H is another reason why we shouldn't completely count out AMD.

By Mike Palermo

Gigabyte GA-MA790GP-DS4H



Power Pellets: Top 10 PC Game Studios

These development companies hold the fragile future of PC gaming in their collective hands

The PC used to be the platform of choice for players interested in experiencing the latest and most advanced role-playing games, first-person shooters, and real-time strategy games. However, the last decade has seen a steady stream of talented PC game development studios redistributing their talents and energies to the world of console gaming. While companies like BioWare (Neverwinter Nights), Epic Games (Unreal), and DICE (Battlefield) continue to make PC titles, their focus has undeniably shifted toward the more lucrative Xbox 360 and PlayStation 3 markets.

But it isn't all doom and gloom for hardcore PC gamers. There are several developers that remain quite dedicated to the Windows platform. Ten of them are listed below, along with the means by which they will contribute to the PC gaming industry in the near future.

Blizzard Entertainment

What they've done: The Diablo games, StarCraft, World of Warcraft

What they're doing: Developing Diablo 3, StarCraft 2, content for World of Warcraft
Not much explanation required here. Blizzard made one of the most profitable PC video games of all time in making World of Warcraft. What's more, they remain completely focused on PC gaming. Legions of players are dying to get their fingers on the latest Windows-exclusive Diablo and StarCraft games.

Gas Powered Games

What they've done: The Dungeon Siege series, Supreme Commander

What they're doing: Creating new PC-exclusive games Space Siege and Demigod
Gas Powered Games' epic Dungeon Siege RPGs have proven worthy competition to Diablo in the dungeon crawling category, but the Redmond-based studio is branching out with the upcoming PC-only games Space Siege (a sci-fi themed action RPG) and Demigod (an RPG/RTS hybrid).

A.C.E.S. (subdivision of Microsoft Game Studios)

What they've done: The Microsoft Flight Simulator games

What they're doing: Developing MSFS 11

Among the longest running active game franchises (the first edition was made back in 1977), the Flight Simulator games have a massive global following, a magazine dedicated to the franchise, and scores of developers creating new add-on content. As long as the Windows platform exists, new Flight Simulator games will be made.

Crytek

What they've done: Far Cry, Crysis, the CryENGINEs

What they're doing: Marketing CryENGINE 2

Crytek has carved out a reputation for creating the most technologically sophisticated games around, but their main contribution to PC gaming has been the CryENGINE, the software that churns out the amazing graphics seen in their games. Crytek is currently trying to license CryENGINE 2 — which powers the acclaimed Crysis franchise — to other developers.



Crysis: Warhead

The Creative Assembly

What they've done: The Total War games

What they're doing: Developing Empire: Total War, Stormrise

This U.K.-based studio has used its Total War franchise to deliver some of the most epic and compelling real-time strategy games of the last decade, and will soon be adding a fresh entry in the form of the American revolution-themed Empire: Total War, which is set for release early next year. Also watch for Stormrise, an original post-apocalyptic RTS game.

Firaxis Games

What they've done: Anything preceded by Sid Meier's name

What they're doing: It's unknown for now, but Civilization V is a pretty good bet Firaxis has dabbled in console gaming over the years, but they always come back to Windows — and with good reason. The PC is still the only platform that facilitates the sort of sophisticated but accessible interface necessary to let players dig deeply into Firaxis' particular brand of turn-based strategy.

Valve Corp.

What they've done: The Half-Life games, the Steam digital distribution platform

What they're doing: Refining Steam, creating a new Half-Life 2 episode

Nowadays, Valve releases most of their games on consoles as well as PC. However, the company's real value to the PC gaming community is Steam, a digital distribution system that hosts 440 games, has some 15 million active users, and was recently rumoured to have caught a longing gaze from Google.

Maxis Software

What they've done: The Sims games, Spore

What they're doing: Developing supplementary content for Spore

The Sims games are second only to Nintendo's Mario games in total number of franchise units sold, and they're still going strong. However, the recently released evolution simulator Spore — which happens to be PC-only (not counting a dumbed-down version available for the Nintendo DS) — has given the company's brass a new focus.

Turbine Inc.

What they've done: Dungeons & Dragons Online, The Lord of the Rings Online, the Asheron's Call games

What they're doing: Developing new content for Lord of the Rings Online

With three successful MMORPG franchises under their belts, Turbine is a force to be reckoned with in online gaming. Their titles may not have the same user base as World of Warcraft, but they're nonetheless quite polished and critically adored. Mines of Moria, a new expansion to Lord of the Rings Online, is set to hit shelves Nov. 18.

Relic Entertainment

What they've done: Warhammer 40,000: Dawn of War, Company of Heroes

What they're doing: Developing Warhammer 40,000: Dawn of War 2, Company of Heroes Online

A THQ subsidiary based in Vancouver, Relic delivered one of the most engaging action/strategy games in recent years in the WWII-themed Company of Heroes. They're currently working on an online edition for the booming Asian market, as well as a sequel to the successful Warhammer series of sci-fi RTS games.

By Chad Sapieha

October special: 500 business cards for \$70



CUSTOM PRINTING GRAPHIC DESIGN

THAT MEETS *YOUR* NEEDS



COPYING/PRINTING



GRAPHIC DESIGN



CUSTOM PUBLISHING
(MAGAZINES)



PROPOSALS &
ANNUAL REPORTS



CARDS/INVITATIONS

CALL NOW FOR A QUOTE ON
416-348-9666 OR VISIT
WWW.YOURPRINTINGSHOP.COM



WE MEET *YOUR* NEEDS

Ad Index

Company Name	Address	City	Province/State	Website
1stDataRecovery.com	745 - 1050 West Pender St.	Vancouver	BC	www.1stDataRecovery.com
AA Electronics	1350 Matheson Blvd. E Unit #8	Mississauga	ON	www.aa-e.com
Allway Technologies Inc.	5 - 3671 Viking Way	Richmond	BC	www.allway.ca
Antec Trade Canada	300 Esna Park Dr. Unit 23	Markham	ON	www.antectrade.com
CBL DATA RECOVERY TECHNOLOGIES INC.	590 Alden Rd., Unit # 105	Markham	ON	www.cbltech.ca
Colosseum Online Inc.	800 Petrolia Road. Unit 8	Toronto	ON	www.colosseum.com
Cooler Master	4820 Schaefer Ave.	Chino	CA	www.coolermaster.com
Digital Electronic International	825 Denison St., Unit # 10	Markham	ON	www.digiland.ca
Dynamic Data Systems	416-825-8792			www.ddsc.net
FSP Group USA	14284 Albers Way	Chino	CA	www.fspgroupusa.com
Fujitech	180 Steeles Ave. W, Unit 2A.	Thornhill	ON	www.fujitech.com
Gigabyte	17358 Railroad St	City of Industry	CA	www.gigabyte-usa.com
Grey Tech Computers	550 Alden Road, Unit 110	Markham	CA	www.greytech.com
IQWeb Solutions	1867 Bainbridge Dr.	Pickering	ON	www.iqweb.ca
Linksys	P.O. Box 5629	Irvine	CA	www.linksys.com
Magiclink	205 Clayton Drive, Unit # 12	Markham	ON	www.magiclink.ca
Media Distributors Canada Inc	110 Torbay Rd. # 4	Markham	ON	www.mediadistributors.ca
Mediasonic Enterprises Ltd	#200 - 2268 No. 5 Rd	Richmond	BC	www.mediasonic.ca
Modcom	7310 Woodbine Ave., Unit 6	Markham	ON	www.modcom.ca
MPT/Match Point Technologies	2370 Midland Ave	Scarborough	ON	www.mptcomputers.com
Omni Systems Int'l	70 Yorkville Ave.	Toronto	ON	www.laptopcloseout.com
Overseas Video Lab	1359 Wilson Ave	Toronto	ON	www.overseasvideolab.com
Premier Computer Canada	3311 Lakeshore Blvd. West	Etobicoke	ON	www.pccanada.com
Restoring Data Inc.	Suite 500 - 666 Burrard Street	Vancouver	BC	www.restoringdata.ca
Sig Electronics	245 WEST BEAVER CREEK RD, Unit 9	Richmond Hill	ON	www.sigelectronics.com
Smart Vision	270 Esna Park Drive, Unit 11	Markham	ON	www.smartvisiondirect.com
Tomcom Link Corp	1353 Britannia Road East	Mississauga	ON	www.tomcom.ca
Transat Electronics	24 Ronson Dr., Unit 4AF	Etobicoke	ON	www.transatelectronics.com
Velcom	131 Delta Park Blvd.	Brampton	ON	www.velcom.com
Winnet Systems	1200 Eglinton Ave. East	Toronto	ON	www.winnetsystems.com

Business Directory

To Advertise here

Call

416 - 348 - 9666 ext. 252

Transfer your Old Films & Videos to DVD

- Advanced DVD Authoring, Production & Mastering
- Professional Editing Facilities (Broadcast & Corporate)
- 8mm & 16mm Films, Slides & Photos to Video or DVD
- Broadcast Standards Conversion (NTSC/PAL/SECAM)
- Multimedia Production
- DVD, CD & Video Duplication (Any quantity)
- Professional & Broadcast Video Taping Services
- Digital Video Capture (AVI, QT, MPEG 1&2, iPod)
- High Definition Video/VGA Projector Rental

Overseas Video Lab (416) 244-1822
1359 Wilson Ave. Toronto, Ontario
www.overseasvideolab.com Since 1980

1stDataRecovery.com

Dead Hard Drive Clean Room Recovery \$500*
3-Drive Raid Recovery \$850*

From dead, deleted, formatted, corrupted, virus infected, passworded, water & fire damaged, overwritten, inaccessible storage devices: raid server, NAS, SAN, DAS, Flash memory, tape, SCSI ...
Windows / Mac / Linux / NetWare
18 Years of Quality Service Data back in as little as 24 hrs.



Toll Free: 1-888-226-8145

1050 W. Pender St. Suite 745, Vancouver, BC V6E 3S7
157 Adelaide St. W. Suite 172, Toronto, ON M5H 4E7
925 De Maisonneuve Ouest, Suite 108, Montreal, QC H3A 0A5
info@1stDataRecovery.com www.1stDataRecovery.com

* up to 130 GB ATA windows drive

DDSCONET Dynamic Data Systems

We help Companies Build Custom Business Database Applications. Guaranteed Low Prices!

Online or local database systems, Finance/Credit

System Export, Access, SQL, ASP, Java, .Net, XML, etc.

416-825-8792 www.ddsc.net

Get Protection and GET IT NOW!

New from CBL Data Recovery, Canada's trusted data recovery specialist

The CBL Data Recovery Service Protection Plan

Unlimited data recovery coverage for pennies a day.

Buy your protection at www.cbltech.ca/drpp.



CBL Data Recovery

1-800-551-3917 24x7x365



Lost Data? Don't Panic! ReStoring Data Inc. Can Help You!

- ✓ Hard Drive Recovery (Desktop/Laptop)
- ✓ Memory Card Recovery
- ✓ Raid Array Recovery
- ✓ Removable Media Recovery
- ✓ Any Media, Brand or OS
- ✓ Fast Turnaround

We provide FREE evaluations and offer a **No Data No Charge** policy.

Toll Free: 1 (877) 737-8003

Sales@ReStoringData.ca

666 Burrard St. Suite 500 Vancouver, BC V6C 3P6

www.ReStoringData.ca

The Last Byte

The Social Net @ work



Facebook as a business app? What next, Macs on the corporate desktop?

I jest of course; both are today's realities — not necessarily mainstream but realities nonetheless. The Social Net is dressing up for work.

If you look at the recent elections here and in the US, you'll see the footprint of social networking everywhere. Candidates without blogs risk being perceived as "out of it." Yet sometimes it backfires, as when a couple of candidates in Canada dropped out because of inflammatory blog posts they made a year

or two earlier. Oops. Agenda item for the next caucus meeting: On the Net, smart-ass vitriol lasts forever.

South of the border headlines tittered that the Obama people Twittered — a sure sign that they were "with it." And everywhere, YouTube was both political stump and parody extraordinaire.

As an event concentrated in time, the elections provide lab-like conditions to study the impact of social networking on stimulating discussion as well as influencing and tracking opinion. There will no doubt be many doctoral theses written on the impact of the blog sphere on the 2008 elections or other Web 2.0 illuminations on the entrails of the elections past.

In business the short-term intensity of an election campaign is missing, but companies are attracted to these new technologies for many of the same reasons: targeted impact. It's the new sign of business savvy to have execs post blogs on the corporate website or to pitch on YouTube.

At the beginning of October the Conference Board of Canada announced its report on business and the Social Net. In *Customers and the Web: Web-Based Solutions That Improve Customer Acquisition, Loyalty and Retention*, the Conference Board presents five web-based strategies for improving the stickiness between companies and their customers.

The magic five on the Conference Board list are blogging, podcast and webcast-

based marketing, mobile (smartphone) marketing, social networking sites and direct-to-purchaser news releases.

What the board is underlining is something some businesses have already understood and implemented. As a tech writer I get a steady stream of e-mail from businesses inviting me to taste this or that new service they provide on the Net. Being also involved in publishing, I have a higher interest in blurbs related to that industry. Book publisher O'Reilly comes to mind as a paper-bound company that has transformed itself and is now fully engaged on the Net.

Sure you can buy books online from O'Reilly's site, but that's not necessarily the most compelling draw, nor the biggest potential revenue stream. O'Reilly's tech books, such as the *In a Nutshell* series are popular and cover a broad range of subjects.

But rather than just selling the books, O'Reilly allows you to access them through a fee-based service called Safari Books Online. The company's School of Technology offers self-paced courses with credit towards a certificate from the University of Illinois that further support its book business.

O'Reilly has also moved into the tech conference business, hosting conferences on many technology topics that cover the same subjects as the books they sell, including the Web 2.0 conferences since 2004. (O'Reilly Media Inc. CEO Tim O'Reilly is also often credited with introducing the term Web 2.0)

OK, I don't want to turn this into a shill for O'Reilly, but I know people working in other book publishing companies and their play towards this online ecology and digital economy are nowhere near as evolved.

It's a common problem with all businesses whose playing field has been turned upside down because of the force of the Net. If you look at the Conference Board's five web-based strategies you'll see commonalities with the things that O'Reilly has implemented.

Some will get it and grow, some won't.

Until next time,
David Tanaka

Your Website Your Message Your Way

Your customers are searching for you online. Make sure the first result they find is your own, presenting your message, your company image and your brand the way you want it seen.

YourWebDesignOnline.com offers full service website design, databasing applications, hosting, content management and much more to ensure your online presence is felt.

- Media kit design
- Logo design
- Content management systems
- Database creation and management
- Hosting
- Web site design



Visit us at <http://yourwebdesignonline.com>
and get your web design online today!

Give your PC a good foundation.



Toughpower XT

Introducing the all-new Toughpower XT series power supply. You've got all the right processor, graphic card and motherboard, now you need a good foundation to make sure all the components run smoothly. All-new Toughpower XT delivers cleaner, more stable and efficient power to where it is needed and when it is needed with the most current technologies such as Fan-Delay Cool, LED Alarm Panel and 80PLUS® certification.

For more information, please visit us at www.thermaltakeusa.com



COPPER COOLED QUALITY

GIGABYTE™

GIGABYTE **Ultra Durable™ 3** Motherboards

DDR2 1366+

Unique Technology from GIGABYTE

Ultra Durable 3

2 oz Copper PCB

Japanese Solid capacitor

Lower RDS(on) MOSFET

Ferrite Core Choke

Ultra Durable 3 vs Traditional Motherboard Temp.

50°C

Cooler

Ultra Cool

2 oz Copper PCB



PCB layer cross-section image, magnified 200x



Ultra Durable 3

2 oz

Copper Inner layer

Traditional

1 oz

Copper Inner layer



2 oz
Copper Inner Layer

Ultra Cool

Ultra Performance

Ultra Durable

Ultra Power Efficient



• GA-EP45-UD3P



• GA-EP45-UD3R



Buy UD3 Motherboard

Get Free

MSRP USD\$29.99 worth prize



Where to Buy:



The Leader in Energy Saving Motherboards

www.giga-byte.ca

These speed settings are not guaranteed by GIGABYTE. The specifications and pictures are subject to change without notice. All trademarks and logos are the properties of their respective holders. Any overclocking is at user's risk. GIGABYTE Technology shall not be responsible for any damage or instability to your processor, motherboard, or any other components.