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Agent 001 Goes Budget Cell-phone Hunting

Fly With A Career In Avionics

April 2008

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# digit

YOUR TECHNOLOGY NAVIGATOR

Living Room Bliss: 15 DVD / DivX  
Players Tested!



Between The Lens And You:  
Digital Cameras Explained



Make Google Fulfil Your Server Needs



Agent001's Big Geek Holiday



**Exclusive!**



One-on-one With  
**Jamie King,**  
Director Of  
Steal This Film

# GOOD VIBRATIONS

42 Speakers Sound Off!





## Dirty Rotten Scoundrels!

**A**LMOST EVERY DAY we read about money going missing from some poor soul's bank account. You can bet that for every case you hear about, there are 10 more that stay unreported to the media. Then there are those who are just too ashamed to admit that they fell for an Internet scam, or a phishing attack.

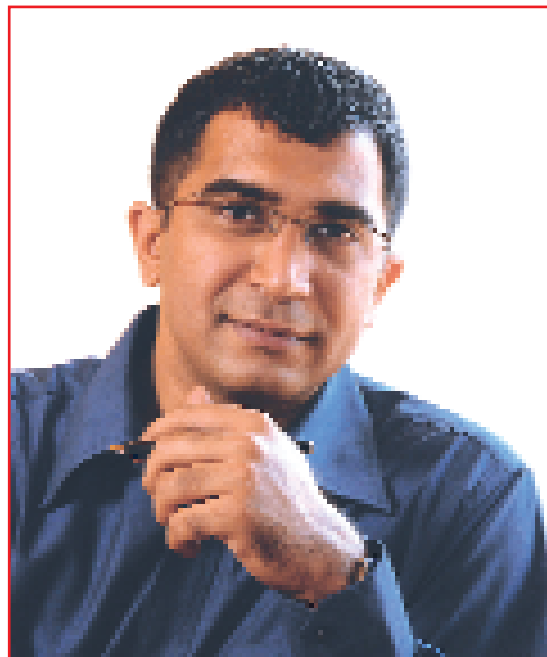
I am reminded about my induction into the world of cyber crime—a few years ago, a consignment of books landed up at my doorstep, and although I hadn't ordered any, I was overjoyed to get them. While I was still trying to figure out which charitable friend had decided to buy me a carton of expensive books, I received my credit card bill. According to the statement, I had bought \$4,000 worth of books from Amazon.com!

Several abusive calls to the credit card company later, I realised that although I was a customer, I certainly wasn't king! Apparently the fine print states that outstanding bills of \$4,000 void you of your right to justice. I was told that I shouldn't have accepted the courier. Perhaps I shouldn't have been naive enough to think that one of my many friends could have sent me books as a gift. Maybe I shouldn't have accepted the credit card from that pushy sales lady... perhaps it was my fault for being born in the first place!

I ran from pillar to post, first lodging a police complaint, then going through the ordeal of filling forms in triplicate, and some in quadruplet. Finally, after six months, my debt was wiped clean, and I returned the books to Amazon. I was lucky that the hacker only used my card to send stuff to me, and not himself—he was probably just using my credit information to hone his skills. how he got it, I still don't know!

Then there was this time in early 2007 when I received news that a leading Indian bank site was being successfully phished. We quickly got to work, trying to trace the owner of the phishing site. Two hours later, we traced the owner of the site back to an ISP in Czechoslovakia, and promptly informed the Delhi Police - Economics and Offences Wing. We also informed the bank, and the offensive site was closed for good.

Although the bank's servers themselves were not compromised, just by creating a look-alike site and



**Sujay Nair** Editorial Director

**“I realised that although I was a customer, I certainly wasn't king!”**

a very similar domain name, the phisher was able to get hundreds of customer login details. We were assured that no money was lost, and that the phisher was probably using the Indian bank as a guinea pig, training for a much fatter international bank. The bottom line is that we, the customer, need to make sure we don't fall for phishing, pharming and other social-hacks.

Awareness is the need of the day, and I should say that it's heartening that most Indian banks regularly send out warnings to all their customers, and are trying to educate them. However, we need to realise that using technology (like driving), is a privilege, not a right. And the only casualty is always going to be you!



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## Software On DVD/CD

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Disclaimer: For every *Digit* contest, there will be only one winner, unless specified otherwise. In the event of a dispute, the Editor's decision shall be final.

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Artis S111/FM  
Artis S111R  
Creative Inspire M4500  
Creative Inspire M5300  
Creative Inspire T3030  
Creative Inspire T6060  
Creative M2600  
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Intex 2050W FM  
Intex IT-2820-2820W  
INTEX IT-4800  
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Logitech G51  
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Logitech X-240  
Logitech Z-2300  
Logitech Z-4  
Logitech z5500  
Philips MMS460  
Supercomp SES 5177  
Supercomp SES2077  
TECH-COM SD-6001R  
TECH-COM SSD-2000  
TECH-COM SSD-2800  
TECH-COM SSD-3001R  
TECH-COM SSD-3400

TECH-COM SSD-4101R  
TECH-COM SSD-4201R  
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Lenovo ThinkCentre A61e  
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SanDisk Sansa View  
Sparkle SF-PX96GT512D3-HP  
Supercomp Music Station SES 668  
Tagan BZ800  
XFx 9600GT 512MB

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## Enter



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Move over Quad core, Intel's Dunnington is on its way

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### Lead Feature The Noblest Peer

We caught up with Jamie King and spoke to him, on some inside stories. Read more on what he had to say on the P2P sharing movement, principles, India and you—our reader!



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### Cover Story Good Vibrations

Here, we present you information on how to choose the speaker that best suits you. Whether you're loaded with cash or have saved every rupee, you will surely find something.



### Take A Crack Get Windows XP To Give You A Blue Screen On Demand

Get this puzzle solved this month and win!

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### Drool Maal Stuff To Lust After

A laptop with an adjustable screen, a revolutionay synthesiser and much more. Read on to know more...

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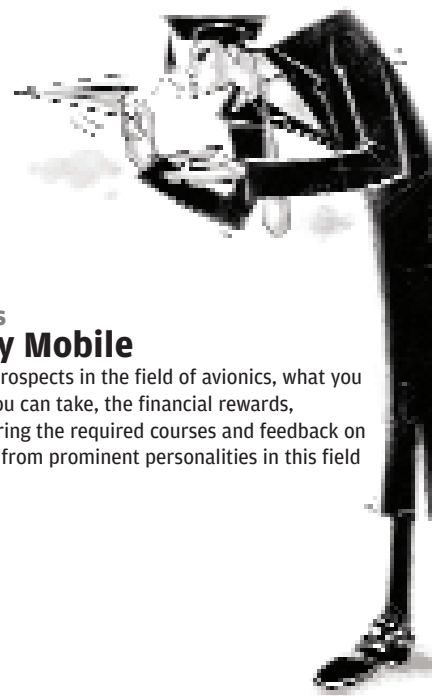
Get to know the ins-and-outs of Digital Photography. Learn more on how the sensors and image filters work together to give you those crystal clear images.

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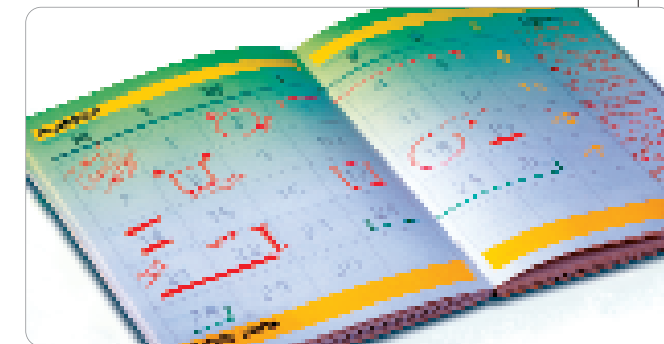
Learn valuable stuff on how to cut your IT costs drastically



### Smart SoHo Getting on Track

Don't be left behind because of your low budget. Read on more to find out your options for available professional project management software

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April 2008

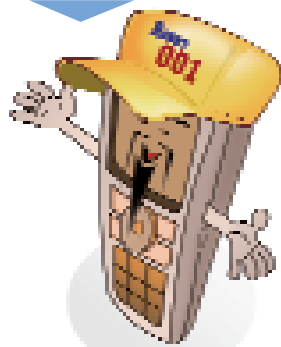
## DIGITAL TOOLS

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#### 3 Incredibly Useful Sites Summer School

Learn more about 3 really helpful Web sites where you can—hold discussions on any topic from Photoshop to PHP, know more about those weird sounding file extensions and get free educational media online

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### Agent 001 Cheap Mobility

Your very own Agent, had to go hunting for cheaper phones. His choice was cheaper Chinese phones or lower-end options from well known brands. Learn more about how he made his choice



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### Bazaar Let's go shopping

Be informed of new stuff in the market. Read more to know of exciting graphic cards, hard drives, PCs and PMPs

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### A-List Only The Best

Get to know the best deals for drives, motherboards, PCs, PMPs and much much more!

55

### Know More About How Speakers Work

Well, how do they? And how does the enclosure matter? And what's the Maximum Power Transfer Theorem? All these questions, and more!

## Digital Leisure



98

### Shhh... The Show's Starting

Bring out the snacks! It's time to hit the couch and watch a movie on your new DivX player!

### Main Story Geek's Week Out

Agent 001 takes a break from all the madness, but can he let go of his gadgets? Fat chance...



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### Game On

Kane & Lynch: Dead Men, Dawn of War: Soulstorm and Army of Two—all reviewed this month!

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## Gaming

### FREE An Untitled Story



An Untitled Story gives you a massive Knytt-like world where the exploration of those games are mixed in with the platform jumping madness of Jumper!

### Blip And Blop



Blip and Blop is a great 2D shooter game. Along your adventure you will come across some weird creatures you will have to kill, as well as some creatures that resemble other well known characters. There are six weapons available, from a simple shotgun to some hi tech weaponry.

### MapleStory

MapleStory is an entire online world of games all bundled into one. Each scene of this game features very appealing, picturesque 2D graphics.

### DEMOS Hard to Be a God

Hard to Be a God is a 3D RPG medieval story with active combat system, weapons, and more.



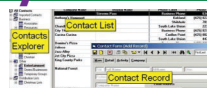
## Productivity

### PERSONAL Total Commander Ultima Prime

This is an extended version of Total Commander 7 by Christian Ghisler. It contains extended main menu and toolbar, other programs, numerous plugins, changed layout and other elements.

### Insight Contact Management Pro

Track prospects and keep history of activity using this customizable multi-user program. Create e-mail merges, labels,



envelopes, and reports. List, sort, and search contacts with any combination of fields. Perform SQL query to create dynamic lists of contacts. Each contact has unlimited notes, phone numbers, e-mail addresses, and links.

- Adobe Reader Lite 8.1.2
- Word Finder 1.0

### DEVELOPERS Visual Studio 2008 Express Edition All-in-One DVD

This DVD contains all the Express products as well



as optional components in a single image (ISO) file.

### Stylus Studio 2008 XML Home Edition

Stylus Studio 2008 XML Home Edition is an XML tool for experts to new comers who work with



XML in a non-commercial setting. It's a must-have XML tool for anyone trying to learn XML for the first time. View and load large XML files with ease.



## Entertainment

### MOVIES Sweeney Todd: The Demon Barber of Fleet Street (1936)

A Fleet Street barber recounts the story of Sweeney Todd, a notorious barber who in the last century murdered many customers for their money.



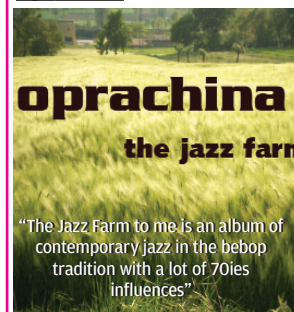
MOVIE  
OF THE  
MONTH

### The Gorilla (1939)



When a wealthy man is threatened by a killer known as The Gorilla, he hires the Ritz Brothers to investigate. A real escaped gorilla shows up at the mansion just as the investigators arrive.

### MUSIC The Jazz Farm by Oprachina



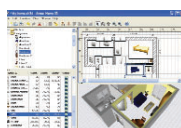
"The Jazz Farm to me is an album of contemporary jazz in the bebop tradition with a lot of 70ies influences"

- Nangilima by Doc
- Religionnaire I by Religionnaire
- Tanz der Lemons by ieatpants

## Tools

### MULTIMEDIA Adobe After Effects CS3

Design vector graphics, create more organic movements, and expedite delivery with new integration and collaboration features.



- aTunes
- AutoMKV 0.95a
- MediaTomb (Linux)
- Photoshop CS3 Extended Plug-In for Google 3D Warehouse
- Corel Painter X
- DigiRostrum 2.4
- VIDIrector 1.5.0115.0

### DAZ Studio 2



DAZ Studio is a feature rich 3D figure posing and animation tool that enables

users of any skill level to easily create stunning digital imagery. Whether you're a 3D newbie or an avid 3D artist, you'll find DAZ Studio is the perfect tool for designing unique digital art and animation with virtual people, animals, props, vehicles, backgrounds and more. Experience total creative freedom with DAZ Studio and express yourself in 3D like never before.

### Sweet Home 3D 1.2.1 (Linux)

Sweet Home 3D is an interior design Java application for quickly choosing and



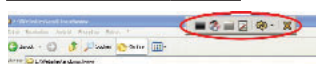
### INTERNET Microsoft Internet Explorer 8 for XP Beta 1

Internet Explorer 8 takes the Web experience beyond the page and introduces a new way to seamlessly experience the power of the Web whether you are a Web developer writing to standards, or an end user discovering a new online service. This beta

release is available to everyone, but is primarily for Web developers and designers to test the new tools, layout engine, and programming enhancements.

- Gogrok 1
- Microsoft Internet Explorer 8 for Vista 8.0 Beta 1
- WebcamMax 4.2.5.6

### LINUX AND MORE andLinux (KDE Version)



andLinux is a complete Ubuntu Linux system running seamlessly in Windows 2000 based systems (2000, XP, 2003, Vista; 32-bit versions only).

### FreeBSD 7.0

FreeBSD is an advanced operating system for x86 compatible (including Pentium and Athlon), amd64 compatible

(including Opteron, Athlon64, and EM64T), UltraSPARC, IA-64, PC-98 and ARM architectures. It is derived from BSD, the version of UNIX developed at the University of California, Berkeley. Burn the three ISO images to CDs and boot from Disc 1 to install.



### PCLinuxOS

PCLinuxOS is an English only live CD initially based on Mandrake Linux that runs entirely from a bootable CD. Data on the CD is decompressed on the fly, allowing up to 2GB of programs on one CD including a complete X server, KDE desktop, OpenOffice.org and many more applications all ready to use. In addition to the live CD, you can also install PCLinuxOS to your hard drive with an easy-to-use livecd-installer. Additional applications can be added or removed from your hard drive using a friendly apt-get front end via Synaptic.





## Productivity

### PERSONAL

#### MB Free Subliminal Message Software 1.30



MB Free Subliminal Message Software is a free, useful and advanced subliminal message-displaying program. This software reaches out to the subconscious mind and sends positive affirmations to the mind, thus helping you develop a positive mindset.

#### U&I Information Management System 3.1



U&I Information Management System is a customisable personalised information

management system

- Scientific Author 1
- Power Tab Editor 1.7 build 80
- Ro3n 4.1.1
- VirtMus 1.03
- WordFlashReader
- Archivarius 3000 4.00
- AutoIntern 2.0.122.0
- ENUFF PC 8.03
- e-Speaking Voice and Speech Recognition 3.8.12
- iCal4OL 2.3.1
- LockXLS 3.5.1
- NextUp Talker 1.019
- Painless Schedule 2.0.29.103
- Personal Numerologist 5.0.3
- Rapid-Pi 2.01
- Turbo Type 1.38.003

## Gaming

### FREE Phun



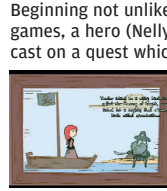
Phun is meant to be a playground where people can be creative. It can also be used as an educational tool to learn about physics concepts such as restitution and friction.

### Karoshi



A short, but puzzling platformer where the object is to kill yourself in every level.

### Nelly Cootalot: Spoonbeaks Ahoy!



Beginning not unlike many adventure games, a hero (Nelly) finds herself cast on a quest which she knows little about: It seems only one island is inhabited by the Spoonbeaks and suddenly they've all disappeared. Through careful sleuthing, analysing events and collecting of seemingly random objects, Nelly attempts to solve this mystery.

### DEMOS

#### Snood

Snood is a fun puzzle game that tests your intellect rather than your reflexes. The application has many new features and a new Armageddon level. There is also a play timer and a panic button (to keep others from knowing you're playing Snood). Your goal is to free all the trapped Snoods by launching other Snoods at them. If you connect three or more Snoods, they will disappear.



## Featured



### GAME DEMO Spandex Force

Spandex Force is a puzzle / RPG / adventure game that lets the player create his or her own hero to clean up Vigilance Valley. The game features many different kinds of puzzles, including match-3 battles in which common crooks and wacky supervillains must be defeated.

## Tools

### ESSENTIALS

- .net Framework 2.0
- µTorrent 1.7.7
- Avast Home Edition 4.7
- Avast Update
- Comodo Firewall Pro 3
- Digit Software Archive 2006 Beta
- DirectX Redistributable 9.0c March 2008
- Foxit Reader
- Free Download Manager 2.5
- Irfan View 4.10
- Irfan View 4.10 Plugins
- Java(TM) 2 Runtime
- K-Lite Mega Codec Pack 3.8.0
- Microsoft XNA Framework Redistributable 1.0 Refresh
- Opera 9.26
- Silverlight
- Spybot Search and Destroy 1.52
- Spybot Search and Detection updates
- VLC Player 0.8.6c
- WinRAR 3.71

### MULTIMEDIA Guitar Studio 4.8



Guitar Studio is a powerful tool set for the musicians playing guitar and related instruments. With Guitar

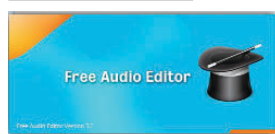
Studio you can easily improve your playing skills, edit tablatures and play audio and video files.

### Andrea AudioCommander 5.0.32.3



AudioCommander is an audio mixer program similar in functionality to the system Volume Control program. Using the system Volume Control to adjust the settings necessary to make a microphone can be very confusing. This application also makes it easy to get the right settings for the microphone.

### Free Audio Editor



Free Audio Editor, as the title foretells, is a multi featured audio file editing application. You can use it for audio file recording and conversion, file mixing, text to speech conversion and so on.

- AV MP3 Player - Morpher 4.0.61
- CineGobs Keyer 1.6.0.7
- Noiseware Community Edition Standalone 2.6
- The KMPlayer 2.9.3.1430 beta
- AutoQ3D Standard 3
- H264 WebCam 2.28

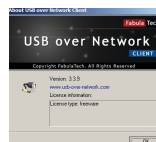
- MorphBuster 8.6
- Organ 3.0.2
- Plato DVD Copy 7.81

### SYSTEM Ashampoo® UnInstaller Platinum 2



Free for Digit readers! The Ashampoo UnInstaller series has always been the best and simplest way to keep your computer free of old program garbage. Now it's better than ever, with a whole range of powerful new functions, a slick new user interface and context-sensitive help that gives you the answers you need fast.

### USB Over Network 3.3.8



USB devices other than printers are difficult to share over a network. USB Over Network is a revolutionary software solution from FabulaTech. No need to move devices from one computer to another, and no need to buy expensive hardware switches. You can access any USB device connected to a remote computer from your computer via a LAN or the Internet as if it were physically plugged into your own PC.

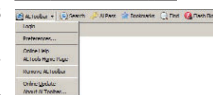
### Image for Windows 2.06



Image for Windows is an affordable and reliable drive image backup and restore utility that you can use to create a backup of all your hard drive data to other media or external drives (such as USB or 1394) and easily perform a bare-metal restore for efficient disaster recovery.

- Cobian Backup 9.0.0.149 Beta
- Crash Pickup 2.18
- DMEXBar 12
- Limagito Lite 6.34
- Local Cooling 2.0
- LogonStudio 1.01
- Napalm 1.0
- ProcessScanner 1.1
- Video Card Stability Test 1.0.0.3
- 007 DVD Maker 3.84
- Aarons Advanced Clicker 3.04
- iFreeMem 2.5 (Mac OS X)

### INTERNET ALToolbar v1.13



More than a toolbar gadget, ALToolbar is a real application to help you surf the web faster, safer, and easier



## Online



### By Demand

You get to choose what goes on Digit Interactive. This month, you chose:

**Adobe After Effects CS3**

Size: 837 MB

**Visual Studio 2008 Express Edition**

Size: 894 MB



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### Web Special Under The DIE

How processors go from idea to your PC  
(Log on to [www.thinkdigit.com](http://www.thinkdigit.com))



## Digit Reader Poll

### This Month's Question

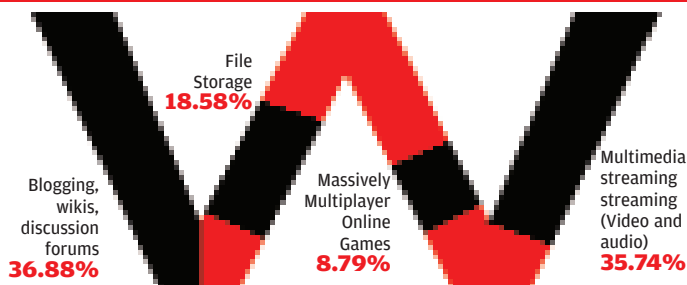
Vote at [www.thinkdigit.com](http://www.thinkdigit.com)

**Which feature of newer cellphones appeal to you the most?**

- ☐ Large screens or Touch function
- ☐ Good music quality and storage capacity
- ☐ Video playback
- ☐ Digicam-quality cameras

### Last Month's Question

**What Web applications do you use most besides mail and chat?**



taste technology at [www.thinkdigit.com](http://www.thinkdigit.com)

## FEATURED REVIEW FROM THE DIGIT FORUM ([www.thinkdigit.com/forum](http://www.thinkdigit.com/forum))

This month we feature a member review from the forum.

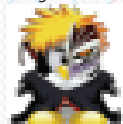
[Click here to go back to](#)

**thinkdigit.com**

### Asus EEE PC Review

21-03-2008,  
01:54 PM

Pathik  
Google Bot



Join Date: Aug  
2005  
Posts: 8,061

So, finally, after giving it a lot of thought, I decided to go for the EEE PC.

As the black one didn't appeal much to me, I went for the Pearl White one.

It looks damn cool and sleek.

After getting it, I was waiting to reach home and start some RnD on it. Got it for 16.7k in Mumbai.

#### Specs

Model Name—Eee PC 4G

Price (INR)—16,700

Memory (RAM) 512 MB (DDR2 SO-DIMM)

Solid-State Drive—4 GB (soldered)

Built-in Webcam—VGA (640×480) @ 30 fps

Battery—4 Cells: 5200 mAh, 3~3.5hrs\*

Storage Expansion—External MMC(plus)/SD(HC) slot

Display—7"; WVGA (800×480) @ 133.3 PPI

CPU—900 MHz Intel Celeron M ULV 353 @ 630 MHz

Operating System—Custom Linux OS (Xandros)

Wired Networking—10/100 Mbps Ethernet

Wireless Networking—802.11b/g Wi-Fi (PCIe)

Internal Modem—External RJ-11 connector present but internal MDC board not populated

USB Ports—3 external

External Display—VGA D-SUB (up to 1600×1280)

Audio—High Definition Audio with built-in stereo speakers and built-in microphone

...

#### PROS:

Very Portable

Cheapest Functional Laptop

Shock-Resistant

Sleek and Sexy

#### CONS:

4GB SSD Size

630mhz proccy

**For more visit:**

<http://www.thinkdigit.com/forum/showthread.php?t=83185>



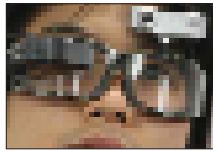
## Mozilla CEO Cries Over Apple Auto-update

John Lilly, CEO of Mozilla says Apple's latest decision to bundle their Safari browser with Apple auto-update is unethical. Lilly claims this move causes the customer to download software unawares. His opinions are met with mixed reactions throughout the industry.



## Glasses For The Absent-minded

Japanese researchers at the Tokyo University School of Information Science have developed glasses fitted with a camera. Aimed at amnesiacs, the camera scans the regions you view as you travel around, and help you get to the place later.



# Enter



Gavin Watson  
Director-Asia Pacific, Corel

Corel's setting up shop in India, and we caught up with Gavin Watson to talk about Corel's plans for our fabled land

### What do you aim to accomplish with your presence in India?

Firstly, and most importantly, we intend to create awareness about Corel and our product line-up. In addition, we aim to strengthen our software distribution channel to give potential customers greater access to our products. We also have a number of non-compliant users (read pirates) of Corel software here—we want to convert them into compliant users too.

### How do you plan on doing that?

Throw them all in jail! (laughs) But on a serious note, we want to do so with awareness. We plan on getting people exposed to, and learn our software through training institutes, and once they start earning from their training, we hope they'll invest in the software for their professional use.

### Have you tied up with anyone to provide education?

Yes, we have tied up with a number of training centres to provide courses on Corel software. In addition, some state governments have added CorelDRAW to their syllabi as well. Finally, there's the Corel Academy in Chennai, which will train students in our software.

### How will Corel Users in India avail of software support?

The first line of support will be your reseller, followed by Corel Sales and online support. We also have a tech support centre in Manila. Finally, there's the CorelDRAW community, which has a number of active Indian users. Increasingly, we're finding that more people are turning to the community for solutions to their problems. Users identify with each other, and solutions sometimes come faster than even tech support!

## FALLEN ANGEL

# Thai Monks Told To Stick To Monking



Of late, Thai officials have been urging Buddhist monks to avoid using social networking sites to woo women. This comes after a social advocacy group found this to be the best past time for many Buddhist monks. All the hype around this story comes on the heels of alleged rape allegations by a teenager from north-eastern Thailand. The police have since arrested a 23-year-old monk. It is alleged that the monk befriended the teenager on Hi5 and then lured her to meet him in his room, where he apparently tried to rape her.

Jakrapob Penkair, a junior minister, in an official statement urged Hi5

users to tell the monks to leave the site if they were using it. It seems that Thailand, known for high rate of prostitution, intends to improve its image internationally. In fact, reports of monks being caught either using or selling drugs or even having consensual sex with women are not met with surprise in the Thai media.

A senior Culture Ministry official, however, said monks should not be banned from cyberspace. Nevertheless, he added that the monks should consider these moments of "crisis", and rather spread the teachings of Buddha to the young. Ladda Thangsupachai, head of the

Cultural Surveillance Centre, said, "Instead of using the Net to flirt with young girls, monks should find ways to preach Dharma and lead them in the right direction."

After all, it is generally said, everything has a plus and minus factor attached to it. Some use social networking for constructive purposes, while there are some that use it wrongfully. Either way, policing and moderation is needed at times to maintain the balance.

## I BEAT M

# IBM, Allies Offer Microsoft-free PCs For Eastern Europe

It has been reported that IBM has partnered with companies in Austria and Poland to offer Microsoft-free PCs for the eastern European market. According to an official IBM statement, the PCs will include IBM's Lotus Symphony software based on the Open Document Format, which is a rival to Microsoft's Office Open XML. In recent times, Microsoft has been trying to push for Open XML as an internationally approved standard. IBM Corp said in its statement that it was

## Security Watch

### MS Excel Vulnerabilities

#### The Problem

After studying reported problems, Microsoft has admitted that a vulnerability in MS Excel could allow remote execution of harmful code. As per the official release by Microsoft, an attacker could take complete control of a system by successfully exploiting these vulnerabilities, through a specially crafted Excel sheet. Once, the attacker manages to send the corrupted file to the intended prey, he / she can install programs, create new accounts with full user rights or even view or modify data on the system. This security update is labelled as Critical for Microsoft Office Excel 2000 SP 3 and rated Important for subsequent versions of Excel.

#### The Solution

Patches specific to the version of MS Excel are available on Microsoft's Web site. Go to <http://www.microsoft.com/technet/security/bulletin/ms08-014.msp> and download the patch available according to the MS Excel version you are using. If you do not find your version, chances are that you are not affected.

offering the PCs based on the open source Linux operating system together with Red Hat software distributor VDEL of Austria, and Polish distributor and services firm LX Polska in response to demand from Russian IT chiefs. Russia, with rapid infrastructure growth has many large corporations and public-service organisations that are now in the process of building large computer systems, and is fast emerging as a key battleground between Microsoft and rivals offering open-source alternatives.

IBM, which had earlier sold its PC business to China's Lenovo, said that partners of VDEL and LX Polska would make the hardware for the PCs. IBM said the Linux PC line christened 'Open Referent' that it would offer with these partners, would cut desktop computing costs by nearly half for buyers. It said CIOs from Russian organisations, including the Ministry of Defence, airline Aeroflot and the private Alfa Bank, among several others, have requested an open-source PC.

In this Microsoft dominant market, every

other company seems to come up with an alternative to Microsoft's products. Initially, it was Google with their online office suite, then the Open source movement. Now, PCs already coming pre-loaded with Linux seem to be yet another blow for Microsoft.

## GLOBAL OUTSOURCING

# India Losing Its Offshoring Advantage

According to the latest analysis of the Indian labour market by Pierre Audoin Consultants (PAC), out of the 21 centres opened since January 2007 by the 20 largest UK companies, only two were in India, while four were in China, three in Eastern Europe and Morocco, respectively. Nick Mayes, senior consultant at PAC said that in the short term, there was no "serious threat" to India's outsourcing dominance. However, he added that companies are on the verge of reducing their dependence on

**HOT** **Quad-core Goes Affordable**  
You've got to hand it to Intel for this: we'd never have thought that we could have four whole cores on our desktops, and still have money left over to buy food and clothes!

**NOT** **So?**  
Precisely. Unless you use 3D or math-intensive applications a lot, chances are you're not going to be able to tell the difference between two and four cores. Even games have been slow to exploit all that extra processing power, but hey, at least they've started.

"India's heated labour market".

China's emergence as a global sourcing hub has traditionally been slow but the report found that BT Global Services, EDS, IBM and Tata Consultancy Services (TCS) have all started sourcing facilities in the country over the past 18 months.

The two facilities launched in India were both outside the traditional

## Which feature of newer cellphones appeal to you the most

(You, too, can participate in this poll—at [www.thinkdigit.com](http://www.thinkdigit.com))

- A** Large screens or Touch function  
**C** Video playback

- B** Good music quality and storage capacity  
**D** Digicam quality cameras

Users upgrade their phones often and rather want a device offering the maximum. My next phone should have at least 16M colour, GPS, WiFi, Expandable Memory, 3rd party applications and excellent image capturing with crisp and DVD quality Video capturing.

Yash Maheshwari  
Pune



I'd go for option A large screens or touch function. Reason—Large screen and touch functions are of great help when I am on the move as I can check email, browse Web sites and do everything a business phone can in a better way.

Dinkar Mohana Pai  
Kochi



(d) All the above options are already available in the market, at cheap rates. So giving customers a camera with digicam resolutions is an nice option to get rid of carrying digi or handycams, which is too hard to handle.

Milan P. Chouhan  
Baroda



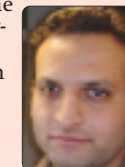
I love music and have a huge collection in my PC. Phones should have greater storage capacity so one can store as many high quality songs and videos possible. And also better quality of music is absolutely necessary.

Shoban Kumar  
Thiruvananthapuram



(b) Good music quality and storage capacity. A cell phone is supposed to be multi-functional. Prevent the need to carry multiple gadgets. My cell phone should play music all day long with large memory.

Ashish Rohilla (Keith)  
New Delhi



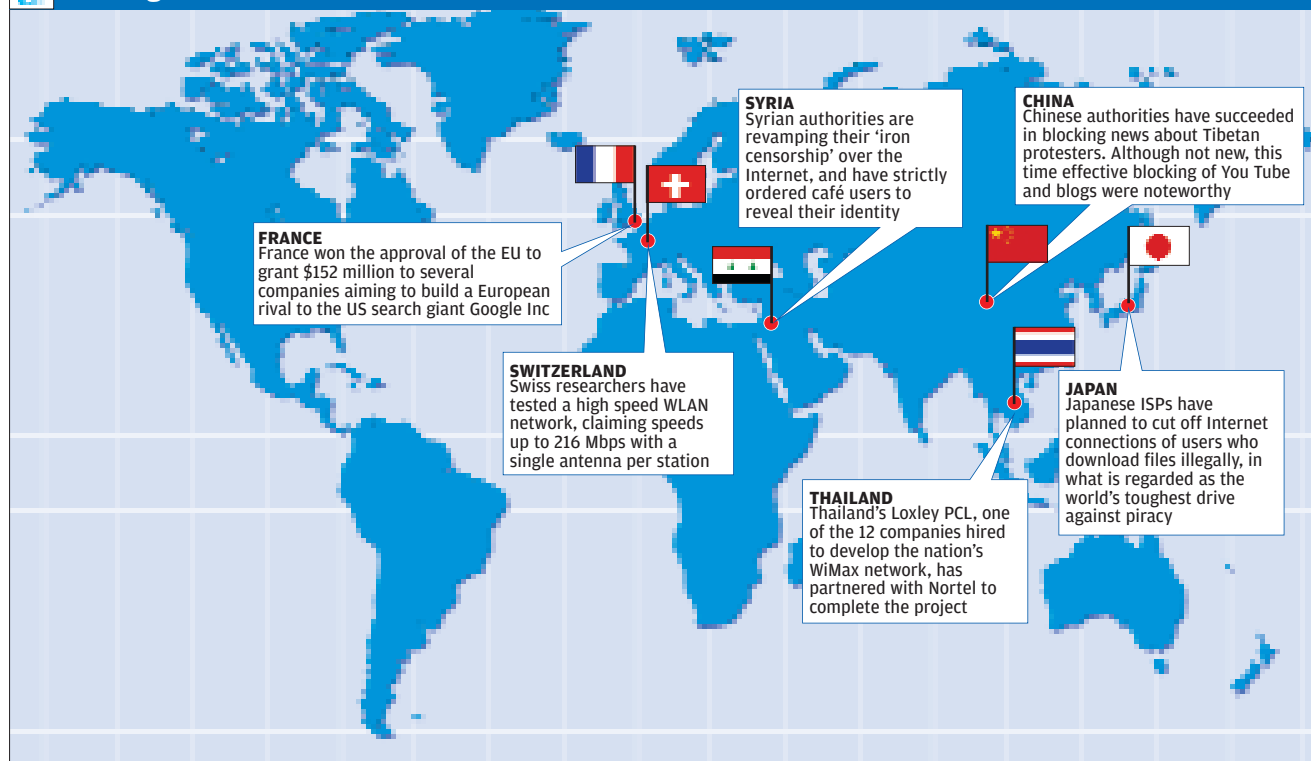
I choose D—Digicam quality cameras. I prefer digicam quality cameras, avoiding the need for digital cameras or video camera with a mobile. Hence one phone serves both the purpose, for communication and digital imaging.

Channabasanna S  
Bengaluru



(You, too, can participate in this poll—at [www.thinkdigit.com](http://www.thinkdigit.com))





hotspots of Bangalore and Mumbai-IBM's new centre is in Noida and TCS' expansion site in Hyderabad. Among the companies that were analysed were Accenture, BT Global Services, Capgemini, Capita, CSC, EDS, Fujitsu, HP, IBM and Logica.

As salaries of the Indian workforce increase, it seems obvious for the western companies to look for options that provide reduced costs. With an efficient English speaking workforce, Europe seems to be a hot destination. Similarly, close proximity also enhances their say in the outsourcing industry. In fact, the emergence of increased outsourcing to China will be closely watched by the Indian industry for sure.

#### VIRTUAL BEHAVIOUR

## World Of Crime

Some months ago we mentioned *World of Warcraft*, a MMORPG being used to study how

diseases can spread in the real world. Turns out that there are more lessons to be learnt from studying the role playing game universe that are applicable in real life. One of them is how terror works, especially terror cells and the dynamics of crimes.

If you have ever played WoW or heard about it you would know that it has a mind bogglingly diverse set of characters with varied powers and capabilities. The players mimic real life behaviour, both good and bad. The bad side includes crime and terrorism, including bio-terrorism. Now, researchers have zeroed in on this specific trait and have found that studying the in-game behavior can tell them a lot about how bad guys can operate in real life. In fact, the insights gleaned are much more significant than those from AI simulations or mathematical modeling, the traditional tools of choice for analysts when studying phenomena like the

possible spread of diseases like anthrax, or the probability of suicide bombers attacking a particular place.

The crowd behavior, approximating real life after an act of terrorism can also be predicted by observing, for example, what surviving characters do after an explosion in a crowded area.

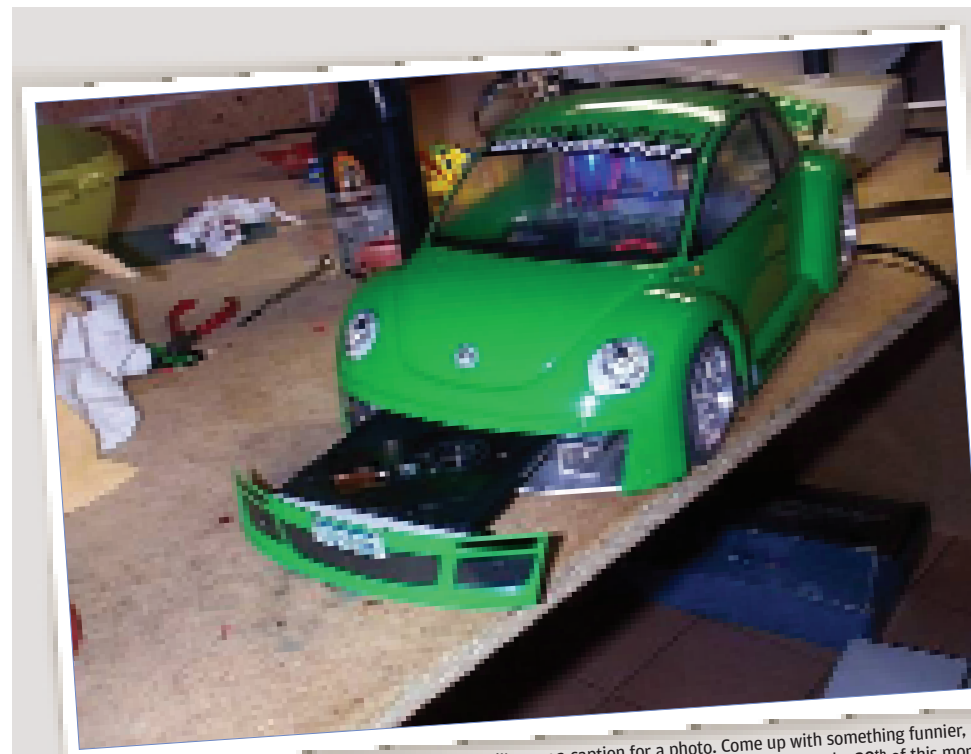
Some researchers however believe that WoW needn't be taken too seriously by spooks. This is because dying in the game is no big deal and you can easily take another new avatar or simply return after a specific period of time. Obviously that's not going to happen in real life and so players tend to take more unrealistic risks. However for all its flaws WoW is the closest researchers have got to real life conditions that can be controlled and they are not letting it go unstudied any time soon. Oh, and they also get the chance to mix business with pleasure, which is another added bonus.

#### NO MORE LIGHT

## Suing All The Way

Light emitting and laser diodes are used in a large number of consumer electronics products from the new fangled Blu-ray drives to the humble CD-ROM drives. They are also used in mobile phones and hand held devices, and even in traffic lights. Companies have been making this stuff for years and have been reasonably clear that all intellectual property related issues have been ironed out. In other words they don't expect someone to pop out and claim royalties.

So this has come as a shock to many companies when the news of a patent infringement lawsuit filed by a retired professor of Columbia University came through. Gertrude Neumark Rothschild, in her complaint which has been accepted by the US International Trade Commission says that a busload of companies have



Photograph Lakshmi Sudheendra

Each month *Digit* will carry a caption for a photo. Come up with something funnier, and beat the *Digit* team at their own game! Entries accepted by the 20<sup>th</sup> of this month.

been illegally using her patents without paying her any royalty. All total 34 companies, including Sony, Samsung, Nokia, LG, Motorola, Sharp, Hitachi, Sanyo, Sony Ericsson and Toshiba have been named as violators.

ITC is responsible for safeguarding US industries against dumping of goods and takes action against unfair trade practices like patent, trademark and copyright violations. This means that if ITC finds merit in Rothschild's case it can theoretically block the imports of mobile phones, cameras, camcorders etc to the US. We rather think that it won't deprive the American masses of their daily dose, but they might impose a steep fine on all these entities.

This is not the first time the professor has tangled with Big Business. Earlier she had sued Philips and obtained an out of court settlement over this patent. This means that she has built up a pretty bulletproof case and is not

to be taken lightly. The 34 respondents must have already got the message and are presumably brainstorming with their legal teams.

#### WATCH YOUR PATH

## Kerala Mapped

Recently in Kerala, the first Active Web Geographical Information System (GIS) service was launched for public use by the Indian Institute of Information Technology and Management-Kerala. Developed using free and open source software (FOSS) technology, a simplified version of dynamic geographical information is made available to the public.

Log on to [www.edugrid.ac.in/webgis](http://www.edugrid.ac.in/webgis), to check out this service. So instead of watching the sky, the users can surf online and find out the forecast for a week in advance. Why would one need an expensive software

or tool when the geospatial information is available on Web browsers? Yes, dynamic weather information and one-week forecast gets updated every three hours.

The available geospatial information could be utilised across several dimensions—from agricultural wellbeing to e-governance projects. Also, thematic maps provide significant information.

As per IIITM-K director K.R. Sriivathsan, "The institute is actively developing Active Web GIS applications for e-governance applications such as community instrumentation for agrarian prosperity, community-driven cultural heritage portals and trade logistics for farm produce". The geospatial information is supposed to benefit many dimensions of the state-right from urban planning to business.

Weather information about the mapped cities / villages of Kerala is integrated with Google Maps. Along with the

## Beat That!

#### Digit Caption

Herbie goes the green computing way

#### Last Month's Winner!

Akash Talukdar, Kolkata  
"The web has finally replaced my hard drives"



E-mail your caption with the subject "Beat That", and your postal address, to [beatthat@thinkdigit.com](mailto:beatthat@thinkdigit.com) and win

Google Power Tools Bible  
by Corey Sandler

Published by

WILEY-INDIA

thematic maps of Kerala, the 3D model topography has been developed using VRML (Virtual Reality Markup Language) for the 3D Web GIS.

Besides mapping the state on Google maps and syncing weather information and presenting thematic maps for Kerala, people would surely be expecting a lot more to come. The toughest part is providing dynamically variable forecasting data along with the dynamic geospatial data actively available on the Web browser. However, counting the efforts of the free and open mapping centric Free Map community, this initiative surely has a long way to go. Kudos to the IIITM-K team for Active Web GIS!

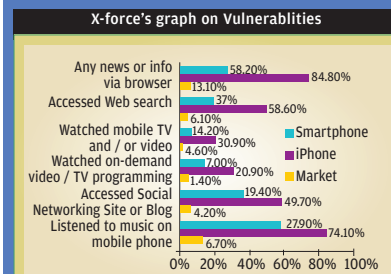
#### SYSTEM FAILURE

## Hackermania

Indian government Web sites are under attack. This has prompted the Department of Information Technology to draw plans for better security



## STAT ATTACK



**In the US, broadband mobile Internet connections jumped to 2.16 million in the final three months of 2007 as compared to 854,000 in the same period last year, according to comScore**

**Gartner predicts 11 per cent rise in worldwide PC shipments compared to 2007 at 293 million units in 2008 due to emerging markets**

**According to a study by MultiMedia Intelligence, 50 per cent of all phones shipped worldwide will be music-capable by 2011**

**IDC says there is about 281 billion GBs (281 exabytes; or 45 GB per person) on earth in the 'digital universe'**

measures, including relocating servers where the sites are present to Indian territory.

According to statistics released by the government, the past few months have seen a rash of attacks against Web sites of bodies like the Telecom Regulatory Authority of India, Indian Railways, Department of Telecom, Air Cargo Customs and National Institute of Social Defence. These attackers used several tactics to compromise the sites. Phishing seemed to be a hot favourite, followed by

unauthorized scanning and virus injection. Defacing was also one of the most used tactics with attackers defacing the Web site of even the Department of Information Technology, the nodal body which is in charge of cyber security. Talk about guarding the guards.

The Home Ministry has sounded out the alert after these hacking incidents and has suggested that all government sites be hosted on Central or State government servers. This is because most if the affected sites have been hosted

offshore on privately owned servers. That means that these servers, hosting sensitive information sometimes related to national security are not within the jurisdiction of Indian authorities. The MHA wants all the sites moved to servers hosted by the National Informatics Centre (NIC) or Education and Research Network (ERNET). To prevent these attacks from occurring again, a DIT body, the Indian Computer Emergency Response Team (CERT-IN), is installing tools like a network flow based threat assessment solution and attack detection system. Additionally it has drafted a set of guidelines involving issues related to network security and architecture, firewalls, intrusion detection systems, secure coding practices, etc., for securing Web sites in the future.

### LET'S PLAY ENGLISH

## Word Me Perfect

People are already obsessed with social networking and instant messaging. Aren't they? Whether at college or work, these both remain the headaches of IT departments. Recent obsession is Scrabulous—the word game which has hit the systems of several users. The cyborgs of this viral fever spread through social networking site Facebook's

group and now Scrabulous has become the top pass-time activity of millions.

Scrabulous, a popular Facebook app, was pleaded to shutdown because the toy maker giant Hasbro found it very similar to their board game *Scrabble*. Due to its similarity, the app was already popular and this piece news triggered the traffic on Facebook.

People looked upon Hasbro's allegations as a jealous stupid kid. Hasbro sent notice to Facebook to shutdown and remove the app. The users even warned of going on hunger strike if Facebook removed Scrabulous from apps after Hasbro's demands. To save it, they even started a group—*Save Scrabulous*. Made by two Indian brothers for sake of fun, today the site has over 700,000 users bringing the owners about \$25,000 per month as advertising revenue.

Being an online game and several users across the globe to compete with adds tinge of excitement and also creates a social platform. Though some players are involved in cheating (yeah, even in this game), there's nothing much to w00t about except personal glory.

Playing Scrabulous may help vocabulary developments but also wastes thousands of man hours if played at office.

The makers of Scrabble believe that the online version can and will affect their sales. While on the other hand, several instances cropped up about



### Quick Path

#### What is it?

Quick Path, also known as Common System Interface is a point-to-point processor interconnect which is intended to replace the Front Side Bus used in traditional processor architecture. It has high bandwidth and extremely low latencies. Like TCP/IP it is a combination of five layers: physical, link, routing, transport and protocol (in ascending order). Each of these layers have different responsibilities and some of them may be omitted in less complex systems.

#### Who is developing it?

Intel is developing this technology as a rival to HyperTransport, another point-to-point interface used for long by many manufacturers in chipsets, routers, processors and servers.

#### Why is it needed?

With the dominance of multi-core systems the need for faster data transfers between different cores are needed so that performance is not bottlenecked. In particular, processors with four or more cores need more bandwidth than the FSB can handle.

#### When is it going to debut?

Quick Path is going to debut in the second half of 2008.

#### Where will it be implemented?

It is going to be implemented on Xeon and Itanium platforms and will be first used by Nehalem and Tukwila processors. Quick Path is highly scalable and is designed for laptops as well as server farms.

#### How will performance change?

With 4.8 to 6.4 Gigatransfers per second and bus widths of up to 20 bits, the theoretical bandwidth is 24–32 Gbps per bus. These high speeds are needed in mission critical applications and eventually be faster than HyperTransport machines technology.



people who purchased the board game after playing it online. Slowly realising the online potential, Hasbro announced that it would come up with an online version of Scrabble with Electronic Arts soon. Seems to us that Hasbro changed its tune pretty quick when it saw a potential business opportunity.

### SMART VISION

## TV View

It has finally happened. All this while—since the time John Logie Baird invented television—it has been one-way traffic. People watch TV. They do have the option to change channels or even switch the tube off. But they can't do anything apart from that. Now Comcast is in the process of testing new technologies which it hopes will take care of the common 'there-is-nothing-good-on-the-TV-today' complaint.

In an informal talk a senior Comcast executive (the firm is also a big ISP in North America) has mooted using cameras in set top boxes. These cameras would use smart technology to recognize who is sitting on the couch based on body forms. There is no face recognition feature suggested as of now, which means that people don't need to have a picture of their face in the system. It will be used to provide contextual advertisements, as well as shows based on past preferences. Also, if a

family is watching a show and there are any inappropriate scenes that require parental controls the system will automatically censor them.

This system, however, has plenty of scope for misuse. Many people won't necessarily want a camera looking into their living rooms, which would easily be construed as invasion of privacy. Combine this with the fact that Comcast has a history of unscrupulous business tactics like surreptitiously blocking selected traffic like torrent downloads, and we are pretty sure this will get the thumbs down. That said, under proper regulations and monitoring by a responsible body, this system could be a pretty useful tool, especially when parents worry about kids watching FTV on the sly.

### GOOGLE LENDS A HAND

## Eradicate Polio

Remember those public service announcements about polio on television? While polio outbreaks were frequent across India, thanks to the electronic media, a wave of awareness about polio eradication had permeated to every corner of the country. Now, to give it a further push, Google Foundation has donated \$3.5 million to Rotary International towards eradicating polio from India and the rest of the world.

Monetary contribution from IT giants like Google, Microsoft and Intel among many others can be termed as part of their Corporate Social Responsibility. For instance, Google has been pushing *green computing* actively for conservation of environment. While this not for profit step by Google Foundation is one of their initiatives besides the investments in development of SME sector that will help India.

Deepak Kapur, Chairman of the India National PolioPlus Committee of Rotary, said, "The polio battle in India today is just short of the finishing line, and the much needed funds supported by **Google.org** will further boost the campaign in India and the world to eradicate polio forever." Like India, three other polio-endemic countries—Pakistan, Afghanistan and Nigeria will benefit from this funding.

Rotary's philanthropy aims to reach most challenging destinations on earth. As part of this initiative, India has received Rs 3.12 billion grant so far. India has had the most polio outbreaks with about 60 per cent of the global polio cases. In 2007, 844 polio cases were recorded as compared to 676 in the previous year.

But from them any innovative way to raise funds would be something really appreciative. For instance, it would be nice to see if Google came out with any innovative 'Help for Polio eradication' campaigns. Like signing up for using Google's online services where Google will pay the beneficiaries certain share depending upon usage. That would be totally different than mere clicking on Ads and banners. While the drive to eradicate polio from India is about to conclude, this push will help it to finish it earlier. ■





## Microsoft's Imagine Cup Helping The Software Economy In India Grow

Now in its sixth year, Microsoft's Imagine Cup is the world's premier student technology competition, and offers students from all over the world the opportunity to apply their innovation, knowledge and technical abilities to make the world a better place through technology, and to develop applications that are locally and globally relevant. Will they come up with ideas to enable healthier lives? Better education? Like they say, it's only limited by your imagination...

The theme for Imagine Cup 2008 is "Imagine a world where technology enables a sustainable environment." Over 185,000 students from across the world are participating in Imagine Cup 2008—now also endorsed by the United Nations Educational, Scientific and Cultural Organization (UNESCO)—up from around 100,000 a year ago. In India, the Software Design National Final for Imagine Cup 2008 will take place in Bangalore on May 9th, 2008, where teams will be judged by an eminent panel comprising experts from academia, the industry, and the venture capital community. The worldwide finals will be held in Paris in the first half of July, with the total prize-money going up to \$200,000 (Rs 80 lakh).

In a unique first in India, top teams from the Software Design India Finals will participate in an "Innovation Accelerator Program" that will be run by the Centre for Innovation, Incubation and Entrepreneurship (CIIE), at the Indian Institute of Management, Ahmedabad (IIM-A). This two-week-long incubation program will help this next generation of software developers harness their talent and take their ideas a step further towards commercial reality.

Given the various constraints that potential entrepreneurs face in taking their dreams to reality in India, the Innovation Accelerator can help teams move through the phases of starting a business by helping those who have an idea and intention to start an enterprise, and move to the second phase of recognising a viable business concept. Those select few will finally end up exchanging with the market and contributing to the local software ecosystem in India. In order to help these students cross the chasm and fructify their ideas, Microsoft has set up a fund of \$10,000 for one team of students that starts up its own company within a stipulated time-frame.

Deepak Jagdish, twice-member of the winning team at the Imagine Cup India Software Design National

Final (2006 and 2007) offers his thoughts on the life-changing experience: "The Imagine Cup is a one-of-a-kind opportunity for students who are oriented towards software and information technology. The competition offers teams a chance to take their innovative ideas from conception all the way through to implementation (obviously, only if they are good enough). I believe that, even though we weren't able to immediately take our ideas to fruition, we were richer for the experience, and that we have a new perspective on what it takes to get an idea up and running. I remain steadfast in my belief that the entire experience of participating in The Imagine Cup taught me things I would have never learnt otherwise. I still harbour thoughts of starting my own software company based on the solutions that we developed as part of The Imagine Cup. After all, who wouldn't want to be part of the incredible growth story in our country today, especially that driven by the local software ecosystem? And what more fulfilling way to partake of this phenomenal success than by contributing one's own innovation and intellect? In my case, I know that it is more a question of when rather than if!"





**28** Droolmaal



**32** Focal Facts



**36** 42 Speakers Tested

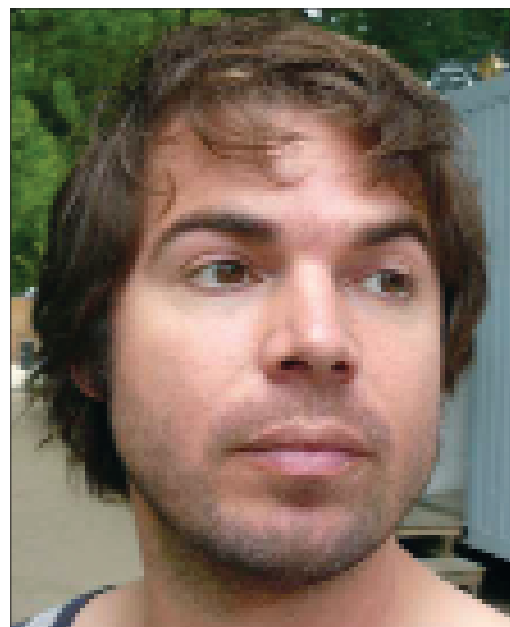
# Digital Passion

Fuelling The Pursuit Of Technology Knowledge

## Lead Feature

# The Noblest Peer?

**Jamie King, director of *Steal This Film I* and *II* on piracy, the little guy and “the future”**



**Nimish Chandiramani**

Jamie King is like you—he raises a fearless finger to record companies and movie studios, and goes on ahead with his file sharing activities. He’s a writer, activist, and with the *Steal This Film* movies, a filmmaker. Along with his contemporaries in the League of Noble Peers (LoNP), he’s fighting to usher in a new era of content creation and sharing. (If you haven’t watched *Steal This Film II* on our February 2008 DVD, do so now)

**Digit:** What inspired you to make *Steal This Film*?

**Jamie King:** We knew that we had the opportunity to do something amazing with P2P distribution. And we’d been

looking for a project to do it with for some time. We’d had discussions about fiction features and about all sorts of other things—but when the raid on The Pirate Bay happened we knew that this was the right topic for a documentary.

**D:** “We”, we presume, is the League of Noble Peers? How’d that start?

**JK:** The League of Noble Peers didn’t really start. Rather, it was a new name for something that had been going on for a long time already. We needed a new name partly because we were convinced that we’d be sued after *STF I*, and partly because this was the first project we produced with this exact configuration of people. LoNP is also meant to be something that anyone can be part of—you don’t have to ask our permis-





sion. Already we had a couple of people using the name to do quite big projects.

If you want to know about the etymology of the name, of course it's a pun on Peers. Peers in the UK are Lords, and Lords are supposed to be Noble (they might be noble for all I know, but I only met one, and he was shouting at me). So the idea is that there's a kind of nobility in P2P, and we try to convey this by being principled, in our own way, in our work (though we do well understand that our idea of "principled" and "noble" might be very different from an Intellectual Property (IP) lawyer's).

D: So when is file sharing noble, and when does it violate your principles?

JK: I don't think we ever wrote the principles down or even spoke about them, so it would be difficult to say. I suppose the fact that technology is fundamentally unprincipled is one of the key things we are trying to get across. You can't really argue with the material consequences of digitality and the network form. The nearest I could get to a straight answer would be to say, poisoning networks with fake copies is pretty much a violation of our principles. But then, on other occasions, fakes are fun.

D: So in the world that *Steal this Film* wants to see, what happens to the big media companies? Do they exist? How do they make money?

JK: How they will make money doesn't really concern us as League of Noble Peers. Starting a conversation about an historical change in human communications with 'how will the big businesses make money?' is silly. In a way, it can be more interesting to ask, "how will the little guy survive?"

D: But it's these companies that fund the content in a lot of cases, right? Giving money to "realise the vision"?

JK: That's (been) true, but it doesn't follow that big media companies are the only way to make nice media. The cost of production equipment is falling dramatically. The cost of post-production equipment is falling just as much. Digital file formats mean that it is possible to shoot and edit very cheaply and, with cameras like the Red One, at the quality of major studios. In effect, the only question a creator has to ask themselves today is if they have a good idea, a good script, good actors, a good editor, and the drive to finish a project. In any case, those kinds of people—who are really the future—know very well that big business has nothing to do with them.

D: Have you recovered your investment in *Steal This Film I* and *II*? How far have you made it there?

JK: It depends how you define "recovered our investment". We don't see an investment purely as a financial business, nor 'recovery' the same way you might 'recover' a debt from a miscreant borrower. I think we have recouped our investment—financial and otherwise—many times over in terms of the contribution we've been able to make to culture. And it constantly upsets me the way that artists are conditioned to think of their work in purely financial terms.

D: Tell us about your alternative compensation system—DISPS.

JK: The new name for DISPS (Distributed Supportive Payment System) is VODO—for VOLuntary DONations. We ditched "payment" for "donations" as payment has the wrong resonance; in the struggle to find an acronym we warped the concept a bit.

One of the things we learned from the thousands of people who donated to STF I and 2 is that, for any given project, there are going to be some passionate supporters who want to make voluntary donations, often well in excess of what they'd have to pay in the traditional mode. So we decided to hatch a project that would make it really, really easy for people to donate to others when they want to. In effect, VODO sees the P2P distribution chain as the natural home for media and therefore the right place for artists to let their work into the world, and it tries to create an infrastructure through which they can be supported on the back of their work. I can't say a great deal about how VODO works in detail, as we're prototyping it at the moment, but I can tell you that it's not a Web portal. And we're looking for collaborators—especially people with expertise in digital fingerprinting who are prepared to work under the GPL.

D: Will it integrate into our P2P programs?

JK: Yes. And we're actively working with some massive BitTorrent trackers and indexes and discussing with others. You can guess names but I have no official announcements at the moment. It will integrate across the P2P chain, right down to the player. Under VODO, you don't pay to watch works—the work connects you to a creator, to whom you donate. The work becomes (as it is) a mediator between one person and another—whereas under proprietary media the work (as it were) grows legs and often walks away from the creator!

D: It's a bit idealistic—counting on the goodness of others—isn't it?

JK: It's a bit unrealistic to count on being able to reverse a technology. I can't say too much, but VODO actually makes it pretty sensible for you to donate to artists. And since everyone is an artist now, everyone produces and copies, it's obvious that we are going to become more sensible in our creative ecosystem. Mutual support won't look so 'idealistic' when many people have become small creators, but we do get that some people have trouble seeing around the corner.

D: One of the solutions proposed for the 'p2p problem' is to introduce a "piracy tax" in an ISP's fees that compensates for any losses caused by file sharing. Your views?

JK: I think I can safely say that the League of Noble Peers are, while broadly friendly with the people who are behind this, against the so-called 'content flat rate', and we share this position with our friends at PiratByran. There are a couple of good reasons; the main one is that we shouldn't necessarily have to pay

creators who have already received more than enough 'compensation'. I should be able to give what I like to who I like, regardless if their material happens to be on a disk of mine or not. Disks are cheap—almost worthless. Bandwidth is cheap. Downloading—moving content from one place to another—is an everyday, mundane act. To connect it to creativity, to the question of value, to the survival of culture, is ridiculous. More and more, the question of what is on your 100 TB thumbdrive is going to be unanswerable—"Uh, I think... all of EMI's back catalogue... and Hollywood movies from the last 60 years?" (and you'd still have 20 TB left over). So what, you're going to pay a tax for each copy present on this disk? We don't think so. We think this is just a temporary band-aid for the big content industries. As such, it's not terribly important, it won't work for long, and we can look round the corner to the future that will scare the others. The worst that could be said about it is, it keeps people thinking that there is some way that there could be a 'return to normalcy' in media. There cannot and will not be.

D: Have you been to India?

JK: Yes, three times. Big fan. We think India is the future. I think we're not alone.

D: How do you see your vision taking shape here?

JK: It's more like we look to Asia to find inspiration. Two of the LoNP were telling me: one of our favourite BitTorrent trackers (I think I can't name it as it's private) is a place for sharing rare movies. Anyway, some of the LoNP often get movies from there and then screen them in their Pirate Cinema, and at that Pirate Cinema you can also download the movies from a local drive and take them away (e.g., burn them). So then, a visitor from India had taken away a whole bunch (around 500 titles) and he had shared them with the local markets for copied films—who had transcoded the MPEG4s to MPEG2 (DVD), downloaded the art, and re-created quite high quality DVDs of the films and were selling them with literature in Bangalore for around \$ 0.70—so that suddenly, the street market in Bangalore becomes a distribution mechanism for art cinema, Godard, Marker, etc.. And films that 'big business' doesn't care about, which could never be seen by Indian people in general, are available in a street market.

No one had realised this had happened. It was only when the LoNP saw them they realised—these had travelled all the way through these various circuits to end up here. That seems like the "future" to us.

Me: Anything you'd like to say to our readers?

JK: Yes, I want to re-iterate that anyone with a penchant for digital fingerprinting wanting to get involved with VODO should get in touch with me. And also, you can stop buying paper now, it's all over.

You can contact the League of Noble Peers at [peers@stealthisfilm.com](mailto:peers@stealthisfilm.com) ■

[nimish.chandiramani@thinkdigit.com](mailto:nimish.chandiramani@thinkdigit.com)

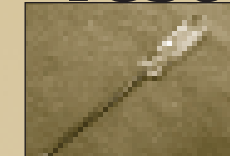
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# Edit



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Since everyone is an artist now, it's obvious that we're going to become more sensible in our creative ecosystem



## Dreamcom 10 series

It clear by now we aren't the only ones impressed by the Transformers movie. The Dreamcom 10 is like any other laptop that blatantly uses the term ergonomic in all their promotional material—except there's one big difference here. The Dreamcom 10's screen can be raised vertically out of its base where the keyboard resides. The docking station helps elevate the keyboard to face you with some extreme angles. All this means you can have a laptop that literally shapes itself into all kinds of configurations—making it like a desktop at times, and an ergonomically designed laptop when you want it. There will be 3 separate flavours choose from—Personal, Professional and Business.



## Future Retro Revolution Synthesizer R2

This concept design from Future Retro—which tries to be record player from outer space—is, in fact, a synthesiser and sequencer that will make any DJ go cuckoo. The synthesiser utilises analog and digital effects for the processing. The DSP does proper 24-bit stereo processing and the R2 can handle 256 unique recordable patterns. There are loads of presets and effects as well such as chorus, flange, rooms, halls, etc to generate the authentic sound. If none of the above impress you then surely the looks will! The price is pegged at around \$750 (Rs 30,000) when it comes.



## Ray Samuels Audio Emmeline II "B-52"

While most of us wouldn't spend more than a thousand bucks on a decent set of headphones, there are some who wouldn't spend anything short of Rs 10,000 to start with. In fact, they'd spend much more on a headphone amplifier and one on the wishlist has to be the big daddy of all headphone amps—the Emmeline II from Ray Samuels Audio, also nicknamed the B-52. There are two power supplies for each channel—that's how far they go to keep interference to a minimum. This is a balanced headphone amp that can drive headphones will impedance upto 600 Ohms! The price is said to be around \$2,495 or Rs 1 Lakh. The B-52 is a bomber alright—for your wallet.



## Raon Digital Everun

Weighing it at just under half a kilo, the Everun manages to house in it a 4.8-inch 800 x 480 resolution touchscreen, a 60 GB hard drive and an optional 6 GB solid state drive (SSD). A 567 MHz, AMD-powered CPU is used on the higher-end model and they all come with 512 MB of DDR RAM. The Everun comes loaded with Windows XP Home. Unlike your laptop which runs out of air in hours, the Everun (on the larger battery) can run for close to 12 hours, and 6 hours on the standard battery. The Everun also comes with a complete QWERTY keyboard. WiFi and Bluetooth are standard. Prices for the lower-end model start from \$800 (Rs 32,000) going all the way up to \$1100 (Rs 44,000) for the higher-end models.



## Vision One Computer Desk

Yes, this is in fact some furniture that will lure geeks. Sure it doesn't have a built in toilet-seat attached to it, so what? Prices for the V1 Computer Desk starts from around \$1700 (Rs 68,000) and go up to \$2600 (Rs 1,04,000). For that price, you get a rig that weighs close to 100 Kg. It's comfy, it's practical—you can easily set all three of your displays and your surround speaker set. There's even upgrades you can opt for—custom paint jobs for the many table tops to Porsche seats with inbuilt heaters! Geeks have never experienced comfort like this before!





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# Get Windows XP To Give You A Blue Screen On Demand



## LAST MONTH'S CHALLENGE



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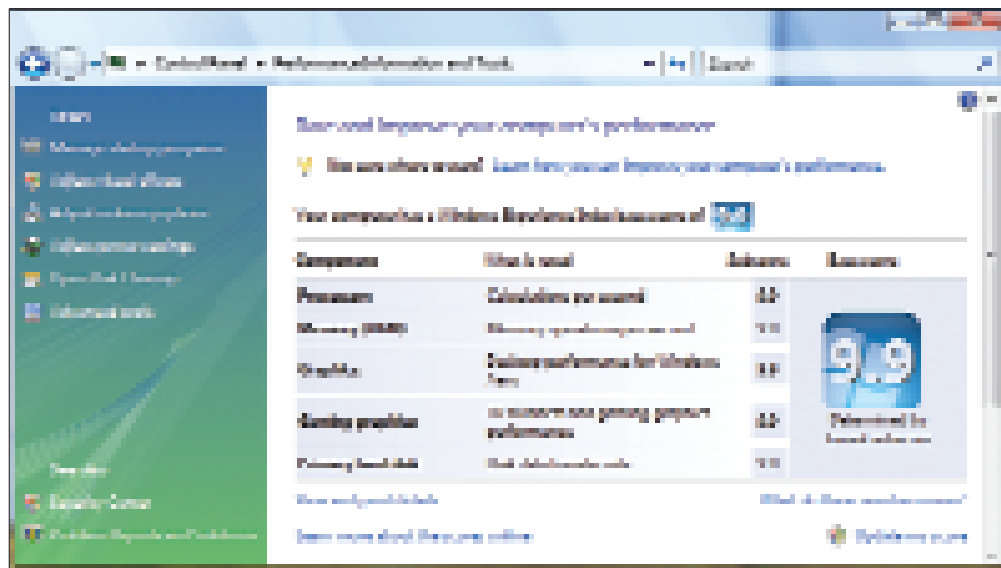
Readers are requested to send in their answers by the 15<sup>th</sup> of the month of publication.

Employees of Nine Dot Nine Interactive and their relatives are not permitted to participate in this contest.

Readers are encouraged to send their replies by e-mail. Nine Dot Nine Interactive will not entertain any unsolicited communication.

Nine Dot Nine Interactive is not responsible for any damage to your system that may be caused while you are trying to solve the problem.

## Hike your Vista Experience Rating



Vista Experience Rating after the necessary "tweaks"

The Windows Experience Rating is sort of like a system performance gauging system that you only find in Vista. While many complain that it's flawed and unfair at times, there's a way to fool Vista. Basically, we change the performance figures in the XML that holds the scores for each of the subsystems. To see what your system rating is originally, click on Start > Control Panel > System and Maintenance > Performance Information and Tools or if you use the Classic Control Panel, double click on Performance Information and Tools.

1. Open up Windows Explorer and browse to C:\Windows\Performance\WinSAT\DataStore.
2. Right-click on the most recently created XML file there and click on Properties.
3. Click on the Security tab and then on the Edit button.
4. Click on Add and enter the username that you log in using. Click OK.
5. Select the entered ID and check the checkbox for Full Control. Click OK.

6. Click on Yes for any confirmation windows that may pop up. Finally, click OK.

7. Open Wordpad from Start > All Programs > Accessories > Wordpad.

8. Click on File > Open and browse to C:\Windows\Performance\WinSAT\DataStore. Select All files as the type of file using the dropdown menu and select the XML file. Click OK

9. Under the <WinSPR> section, make changes to the scores given. These are the changes we made to strike the totally extraordinary score.

```
<WinSPR>
<SystemScore>9.9</SystemScore>
<MemoryScore>9.9</MemoryScore>
<CpuScore>9.9</CpuScore>
<CPUSubAggScore>9.9</CPUSubAggScore>
<VideoEncodeScore>9.9</VideoEncodeScore>
<GraphicsScore>9.9</GraphicsScore>
<GamingScore>9.9</GamingScore>
<DiskScore>9.9</DiskScore>
</WinSPR>
```

10. Save the file and restart Performance Information and Tools in the Control Panel ■





# Focal Facts

Michael Browne

Tracing breakthroughs in technology has been both, one of our favourite pastimes as well as our solemn duty as harbingers of technology related information. The era of digitalisation is both the present and the future. And this has touched our every day lives too, as fluctuating waves (representatives of the analog era) have given way to zeroes and ones. Vinyl gave way to CDs and later MP3s, video cassettes to VCDs and DVDs, similarly did film eventually take the digital plunge, and it's a path from whence there is no return. And why should there be? The digital photography revolution brought about drastic reductions in the cost of adoption of photography as a hobby while reducing the learning curve and the cost of making mistakes while learning. Sure in the beginning there were teething issues and sceptics wrote off digital photography as an amateur hobby, professionals stuck with film. It's been years since then, and today film is all but dead, restricted to museums and a very few niche professionals who still don't believe.

In what follows, we'll look into one of the most remarkable breakthrough products in modern times—the digital camera. A product that has revolutionised a profession and changed the way people create and share

memories, and simultaneously gained adoption into nearly each and every one of our homes.

## It's All About Pixels, Really

The first thing about digital photography is its complete compatibility with anything digital, be it a computer, a cell phone, another digital camera or even a portable multimedia player. This is because digital images are nothing but a long sequence of zeroes and one's, making up the bits and bytes that only digital devices with digital processors recognise. Also, a digital camera is ultimately tasked with creating a digital image, which is made up of pixels—the smallest unit of any image whether still or motion picture. Images themselves very simply consist of light waves and their interaction with colours. Therefore a digital camera is tasked with capturing a scene (also called a subject) and converting this captured scene into pixel values. Of course capturing a scene is the big part of the job. Just like a traditional camera, a digital camera uses a set of lenses that focus light to create an image of a scene. While film cameras focus this light directly onto a piece of chemically reactive film, the lenses of a digital camera focus this light onto a semiconductor device (popularly called an image sensor) which is capable of storing light electronically.

Digital Photography touches each of our lives in some way today. Digital Cameras sell like hot cakes but do we know the ingredients behind the perfect image? Here's a look at how it's done...

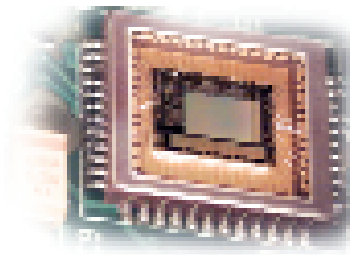
## Cool Fact

The image sensor's ability to capture detail is measured in pixels or megapixels. A 7.1 megapixel camera displays 3072x2304 pixels or 7,077,888 pixels, when in fact it is supposed to display 7,100,000 pixels. This loss of a few pixels is attributed to the CCD circuitry. This loss isn't present in CMOS sensors.

Now that's all that there is to a digital camera. Did that sound easy? No? Good, because it's not. Let's look at the significant individual parts of a digital camera one at a time and list out their role (no pun) in creating a digital image from light.

## The Image Sensor Photophobic And Loving It

We've already mentioned the role of the image sensor in capturing an image. Image sensors are basically silicon chips, (like your PC's CPU), around the size of your fingernail. The surface consists of millions of photosensitive diodes, each capable of capturing



An Image Sensor

a single pixel of the entire image (for ease of understanding you may assume each diode to be a pixel and the terms have been used interchangeably). These diodes convert the light that falls on them into electrons or an electrical charge. We all know when an image is clicked, the lens shutter opens briefly allowing light in. Now this light falls on each of these photosensitive diodes, (but with varying intensities according to the subject in the photograph), and is then converted into electrons. The more the light hitting a diode, the greater the charge it will record. For example, pixels capturing light from bright areas of a scene (bulbs, shiny objects, sunlight etc) will store a larger charge while those capturing light from dimmer areas (dark objects, shadows, etc) will have a lower charge. After the shutter closes to end the exposure, the charge from each pixel is measured and stored. From these numbers, result a digital image.

You will (surprisingly) not know that each diode can only capture brightness and not colour. Therefore, each pixel records an intensity of shade, a series of tones ranging from pure white to pure black. This is what we call *greyscale*. Wait now... where are all those gorgeous colours you see? That's the job of the next bad boy we're going to see—the Image Processor. But for now let's look at the two types of Image Sensors—CMOS (Complementary Metal Oxide Semiconductor) and CCD (Charge Coupled Device).

CCD sensors are generally smaller resulting in their use in mostly compact digital cameras. In a CCD sensor, every pixel's charge is transported across the chip to a single output node (the modern cameras may have more than one such node) where they are converted to analog voltages. This voltage is then buffered and sent off the chip as an analog signal. Then an ADC (Analog to Digital Converter) turns each pixel's analog value into a digital value by measuring the amount of charge present at that particular pixel's corresponding area.

CMOS sensors tend to be larger and till very recently were considered to be superior to CCDs which accounts for their prevalent use in DSLR (Digital Single Lens Reflex) a.k.a. professional cameras. On the CMOS sensor each pixel has its set of transistors that amplify, convert and move the charge. Often CMOS sensors also have additional circuitry for noise correction and digitalisation circuits, so that the sensor itself outputs digital bits rather than analog signals doing away



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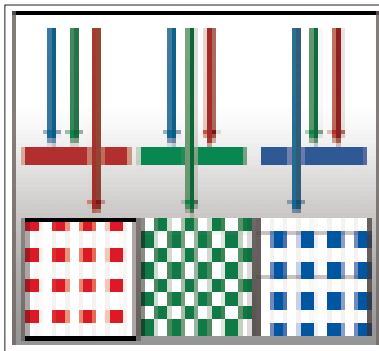


with the need for an ADC in many cases.

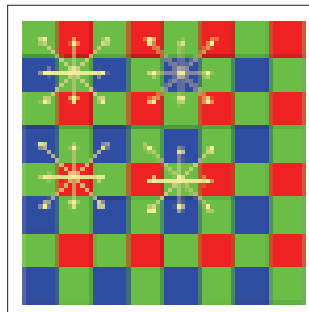
These different technologies have a number of advantages and disadvantages apparent from their functional peculiarities. Since each pixel on a CMOS sensor has a number of transistors neighbouring it the light sensitivity is reduced since with the same exposure some light will hit these dead zones i.e. the transistors. A CCD doesn't have this problem, but they consume a lot more power—in the range of 50 to a 100 times more than CMOS sensors.

For each image you click, there are millions of calculations that take place inside the camera. It's these calculations that allow the camera to interpolate, preview, capture, compress, filter, store and transfer the image as well as adjust settings, and allow manual tuning before taking a shot. The latest image processors are programmable which allows them to perform some advanced functions like in-camera photo editing, red eye removal, picture borders, panorama views and stitching, and even removing the blur caused by a shaky hand.

We spoke about each diode working in greyscale only. The next big step to an image is to add colours to it. This is where the Image Processor and the Image Sensor work together. In order to get colours into the image, the sensor must use filtering to look at the light (that they have captured) in its three primary colours. Once these three colours have been recorded, they are used in combination with each other to create all the colours. The three primary colours are also called RGB, where R is Red, G is Green and B is Blue. Nearly all cameras use what is called a Bayer Filter. This filter consists of a row of red and green blocks alternated with a row of blue and green blocks, something like a set of mosaic tiles. Note that the total number of individual blocks of each colour isn't identical and there are around two times more green blocks than any other colour simply because the eye is more sensitive to the colour green. Also note that the pixels on the filter are such that they can only capture one colour (that is, the colour corresponding to the colour of the filter placed directly above that pixel). Such a colour filter is placed over each pixel-capturing micro site and the image processor guesses the exact colour (read true colour) of a pixel by combining the actual colour that it captured corresponding to that pixel with the other two colours captured by the pixels surrounding it. If the raw output of a digital camera image sensor with a Bayer filter were to be viewed it would appear as a grid of red, green and blue pixels of varying intensities. There is then a process to break down this mosaic of estimated colours into



How the filter works



The bayer filter

#### Cool Fact

In 1860 James Clerk Maxwell created a colour photograph by using a black and white camera to take three photos of a tartan ribbon, and each photo was taken with a single colour filter in place (red, green and blue). The three black and white images were then projected onto a screen using three discrete projectors. When brought into alignment this formed a full colour photograph, and forms the basis for all cameras since.

another mosaic pattern with true colours. One major advantage is that a particular colour (of a particular pixel) can be used again by another pixel if required.

### Exposure and Focusing: Camera Optics

A digital camera has to control the amount of light reaching the Image Sensor, just like a film camera has to control exposure of the film. There are two components that work together to control the amount of light that is captured. They are the aperture and shutter speed. The Aperture is very simply the size of the opening in the camera that is the opening which allows light inside, and on to the image sensor. Mostly digital cameras have automatic apertures, although a manual setting is provided for enthusiasts and professionals to have more control over the final image. The shutter speed controls the duration for which light is allowed to pass through the aperture. Digital cameras can have both analog and digital shutters.

The lens of a digital camera is very similar to the lens on a conventional film camera. The role of the lens too remains the same—to control how light is focussed on the image sensor for which the lens actually moves. All digital cameras use autofocus—a feature where the lenses automatically adjust to focus on the subject. Where there are more than one subjects advanced autofocus methods may be used or manual focus is also available on digital SLR cameras.

The last part of the camera optics is the focal length. The focal length is defined as the distance between the lens and the surface of the sensor. But whereas for a film camera the size of the film is fixed at 35 mm, for a digital camera the size of the image sensor changes from manufacturer to manufacturer and model to model. In most digital cameras the size of this sensor is smaller than the size of a 35-mm film, so in order to project the image on this sensor the focal length also has to be reduced in proportion. With a zoom lens (optical zoom) the focal length is actually changed so that the subject appears to be much closer.

### In Conclusion

Think of your digital camera as a miniature computer. As camera resolutions increase and image sensors have evolved, digital photography has become good enough to become a household commodity, and the focus has now shifted to features and usability. Features like face recognition, on-the-fly red eye removal and even colour and tone adjustment in an image, grant more control over image settings even as they complicate things (unnecessarily for some) over the default Auto mode. With the latest consumer cameras upping the MP rating and optical zooms, and a host of other specifications we've come a long way from black and white giving way to colour. Mr Maxwell would be pleased...■

michael.browne@thinkdigit.com



# Good Vibrations

**I**t's a Saturday evening, and you come home after a day's work to sit on your couch to enjoy a nice movie. It's not as fun as it would be in a theatre, but you're not quite in the mood to stand in queue for a ticket in a jam-packed cinema hall. Your TV isn't going to give you the same thrill. What do you do?

We've always said that it's high time everyone started moving to LCD TVs or even large screens for their PCs. The home entertainment system's transition to the PC has been gathering pace, and the whole high definition craze drives it even more. HD players haven't hit the Indian market yet, so more people are buying large LCD TVs, connecting them to their PCs, and playing all their HD content on it. There are some things, however, that just cannot be experienced using headphones or typically tiny desktop

speakers you've used all these years. It's something to do with that chest-thumping bass and the presence of clear, pristine sound that encapsulates the entire room—like in a movie theatre, except you can experience the same right at home, on your PC.

The biggest problem with going out to buy any speaker by just looking at its tag and PMPO power rating is that you could end up with speakers that you might think are amazing, but most likely don't sound anywhere near right—some of them have an unnatural tone to them. The other common issue is with increases in volume, the drivers used aren't able maintain their quality. Speaker manufacturers try all kinds of new techniques to get the best quality out of their products. While some might do very well, some fail miserably.

This month, *Digit* looks at the speakers available in the market

**How can you dream of enjoying movies and music with the speakers you've been dealt? Here's what you need for that extreme sound-a-thon!**



Photographers: Jiten Gandhi, Sandeep Puri, Imaging Point Chandrasekar



and it's time we do what we do best—tell you which one's right for you! We've tested 43 speakers in two categories—2.1 and the 4.1 / 5.1 (surround) group. The latter are better for movies, and the 2.1 range generally for music

### German Physik Gaudi



The German Physik Gaudi is a \$2,50,000 speaker set. This speaker set comes with a choice of either titanium or carbon drivers. The weight of the cabinet is around 720 Kg. They are 2.1m in height and 1.3m in width. To keep the resonance at a minimum, there's use of a material called Hawaphon which is used widely in government and military buildings. If you wish, you can have a special carbon fibre cabinet.

and gaming. Let's find out then, shall we?

### 2.1 SPEAKER SYSTEMS

Multiple speakers don't result in louder and clearer sound. They especially don't make a lot of sense when you're going to spend your time listening to music more than anything else. 2.1 speakers have a few advantages of their own—for one, there's no trouble of setting up and arranging two or three additional speakers around you. Most surround speakers don't come with stands, so you need to make your own or hang them on a wall, which won't be at the right distance—so you end up with a completely ruined surround sound experience anyway. There are also cables to hide to make sure you don't have people tripping all over the place breaking their bones. However, if you want to use your system primarily for the home theatre movie experience, you'll need to spend on a 5.1 setup.

### First Glimpse—Build Quality And Design

The focus on design and styling has become a big component of speakers, and all the speaker manufacturers are paying attention to it.

The Creative T3030 was an elegant-looking set with clear glossy plastic stands, which look very much like the other Inspire speaker sets. These comparatively flat and tall satellites are light, and the driver, a little high up, has enough weight to topple them over very easily. Another set of Creative speakers was on the other end of the spectrum—the M2600 satellites had a rather cheap plastic feel. They are meant to be thin and sleek too, but they have some provision made for the driver on the back.

TECH-COM in general looked to create very unique designs throughout the range of speakers they sent us. Although they had decent designs, the TECH-COM

SSD-803 was an ugly set, with spikes on four corners. It looks all right, but the front panels used on both the satellites and woofer look odd, are made of plastic, and aren't firmly attached. It was also kind of funny to see the exact same design used for the Intex IT-2050W and TECH-COM SSD-2000.

The Artis S111R and the S111 / FM were two models that look and sound quite the same, except that the latter has an FM radio and the other has a remote control. These, too, have decent build quality—the knobs had the right amount of resistance and sturdiness to them. The only issue was the pegs at the woofer, which make the woofer slide around a bit at higher volumes. The Zebronic ZEB-4000W's woofer was another sturdily-built set that looked simple yet attractive. The other Zebronic model—the ZEB-SW8000—has a very unattractive design, and there were dials on the front of the woofer with no indication of purpose.

One of the issues we looked at was the quality of cables provided by some of the speaker manufacturers. The Supercomp SES 2077, for example, comes with extremely thin cables which won't stand even a moderate tug. There were other problems, too: some of the TECH-COMs came with really short cables—so short with the SSD-815, that we were forced to keep the woofer on the table itself! Quite a few of the TECH-COM and Intex speakers used RCA connectors; we don't use sound cards, so we were forced to buy 3.5 mm-to-RCA converter cables. Some of the other TECH-COMs did come with the converter cables though.

There's something about large subwoofers that intimidates you, and the Altec Lansing MX5021 subwoofer clearly does that very well. It's huge, and easily the largest of all the 2.1 speakers. The other Altec Lansing woofers weren't all that great at times—especially the FX4021—with the down-firing setup. The panel on top of the woofer was really weak and is supported by just a metal mesh. The satellites are well designed and fairly sturdy. The Altec Lansing VS2421 has a very attractive remote with a nice red ring highlighting it.

It matched a similar design on the woofer and the satellites. Simple, good styling.

### Quality Tests

The quality tests aren't just music tracks, but also recordings of all kinds of ambient background noises. Some of these were records with crackers exploding far in the distance and some right next to the recorder.

The Altec Lansing MX5021 came out far ahead of all the speakers in the 2.1 range. The ability to deliver clear sound at all volumes with very minor distortion at extreme volumes amazed us, and grabbed the attention of many passers-by. In one of the many tests, there was one where multiple bells were struck one after the other and it was amazing to hear the continuous hum from the different bells while new bells were added. Although the MX5021 isn't the warmest of speakers, the treble is still kept under check and doesn't go overboard.

The set leading the Logitech pack was the Z-2300. It was almost

### Adam Professional Audio OSS



Adam's Professional Audio OSS has a total power output that adds up to around 3000W! It towers a mighty two metres in height and weighs well over 160 Kg. There are 60 drivers in this complete speaker set which are powered by the

12 amplifiers. The frequency range may be 18 Hz but it goes all the way up to 50 KHz—that's far beyond what humans can hear. That kind of performance should make animals on the other side of the globe go nuts. To keep it precise, there's a processor that makes changes to the delay to compensate for the location of the different drivers.

as powerful as the MX5021 but it lacked the prominent tight bass characteristic of the MX5021. If price is to be considered, it is more than a third costlier than the MX5021.

The Altec Lansing VS2421 was another set that wasn't as powerful as the MX5021, but clearly

### How We Tested

Having received speakers from so many companies and for different setups, there were tests to gauge quality of the speakers and their performance under heavy load. The performance tests were basically a collection of tracks from different genres, as well as tracks designed to bring out fine details in speakers and highlight weaknesses.

All tests were performed using a Creative X-Fi Elite Pro sound card. Winamp was used to play the music, and Foobar for a few other tests. The bass and treble settings, wherever present, were kept at the default level.

Music is still where speakers are used the most, and that's why a big chunk of the tests involved listening to multiple tracks of different genres of music. Everything from Pop, Rock, Metal and Bollywood to Trance were used. Classical and vocalist-dependent tracks weren't missed out either. A *Sorta Fairytale* by Tory Amol and *Brid Og Ni Mhaille* by The Corrs were used. The Rock and Metal genre consisted of tracks from Opeth, Rush, Dream Theater, Break Benjamin, Between the Buried and Me and many more. The emphasis on these tracks was on the general sound and how each component of the track played out.

There were some quality tracks which were just ambient sounds like dogs bark-

ing and birds on the trees, water flowing down streams and so on. Each of these tracks had a list of events that was checked with every speaker—whether it could render these sounds properly. In some speakers, many of these events could not even be noticed. In the end, we ran the woofer and treble test with the volume cranked up to the maximum.

We also used Foobar to generate different frequencies, and then a frequency sweep of the whole spectrum to look for any kind of inaccuracy or inability to pump out certain frequency ranges. Many speakers show their glaring faults here.

For surround sound speakers, we used additional tests—HD video clips with high quality surround audio. These were clips from *Transformers*, which many consider to be one of the best CG movies ever. The fight scenes where metal-pounding action took place are where we focussed our attention. Bullets ricocheting off the robots and big bassy booms were also a good test to evaluate the 5.1 speakers. The same tests were used on the 2.1 speakers as well. Other than that, space fight scenes from *Star Wars: Revenge of the Sith* were used, and for ambient sounds, a few scenes from *Independence Day* were used. While the main dialogue between characters continues, there are background

sounds of cyclists riding and people walking, sounds of dice being rolled and the sounds of the waterfront next to which they're sitting—we wanted to see if the speakers could handle these well.

To evaluate surround sound, we use a benchmark called Rightmark 3D Sound. A looping track plays and keeps moving all around the listener—this is a great way to see how well surround sound systems perform. We looked for smooth transitions from one satellite to the next.

While all these tests were different from each other, half of the points were awarded to the general feel of sound and tone of the speaker and the other half were awarded on certain details present in each track. Tracks are played at different volumes to look for any signs of vibrations, fluttering or “tearing up”. In all, 40-50 different tracks were played on every single speaker set, trying to accommodate as many kinds of sounds and music genres as possible to get a good idea of what each of the speaker were capable of.

Other points were given to the build quality of the speakers, the stability of the stands and other features or effects that speakers might have. We also gave them scores on the type and quality of cables used, and the general usability of the features and effects.

### How Do You Set Up A Surround Sound System?

It's one thing to set up a 5.1 speaker system, and it's a completely different thing to set it up right. It's understood that most people don't have the right furniture or the stands required to position their rear speakers suitably—so what do you do? Place them somewhere in the rear as long as they point to you. It's absolutely important that for a good surround sound experience, the distance, the direction and height of your satellites are just right. Compared to buying the speakers themselves, getting stands for the speakers is a minor cost, so it's well worth the money you spend for them.



The centre channel speaker should preferably be absolutely head-on to the people watching the movie. It should be placed at the centre of the screen, and in front of it. The front left and right satellites shouldn't be too close to the centre—if they are, you won't be able to make proper channel separation.

The same thing should be taken care of while setting up the rear speakers. The rear

speakers are where all the ambient sounds are projected from, so they will be pretty low in volume most of the time. The rear speakers can be much closer to viewers than the front channels.

The subwoofer—which generates the low frequency range in the sound and gives you the ground-shaking vibration—can be placed anywhere in the room, but for the right amount of volume of bass, you can choose

to keep it a little closer to you. Using the woofer next to the centre channel or next to the TV is also popular.

In the end, it all comes down to you. Play a few quiet movie scenes and some action packed

ones. Depending on the positioning of the speakers and the dimensions of the room, you'll need to adjust the volume for the rear speakers and also the distance.

All the satellite speakers should be placed on stands such that they are at the ear level of the audience—who could be on a sofa, for example. Also make sure you have all the speakers a foot or two away from the walls.



excelled in quality tests. The Zebronics ZEB-4000W was also very close to it.

The ZEB-4000W, due to its lack of high-frequency range performance, didn't do too well in the bells test, and all the rings sounded rather flat—finer harmonics couldn't be distinguished.

### Fooobar Frequency Test

Fooobar's ability to generate steady frequencies or even frequency sweeps is very useful in finding out how well speakers can handle different frequencies. It's a good test to find small weaknesses in the best of speakers. There were quite a few surprising outcomes.

Although the Altec Lansing MX5021 ploughed through all the frequencies effortlessly, there were some sounds around the 50 Hz frequency range that created some vibrations in the woofer.

A big noticeable problem with many speakers is the how sharp the tone would become when the volume level was pushed beyond the 50-60 per cent mark. This is mostly because of the satellites trying to play the frequencies meant for the woofer, or the other way around. The Zebronics ZEB-SW8000 had an odd problem



Altec Lansing MX5021

where the woofer would give very little output, and an occasional kicking sound at higher volumes on extremely low frequencies.

### Music Test

The strongest point of 2.1 speakers is music, and the real fun part of the test was listening to our favourite tracks at mind-blowing volume levels.

The top place again went to the MX5021. The woofer per-

formed exceptionally, with tight, hard bass and booming sound where expected. The woofer on the Logitech Z-2300 also had a respectable amount of bass. The bass on the Z-2300 was not as hard as the MX5021 at all.

The Zebronics ZEB-4000W had a very nice bass too. The high frequencies weren't exaggerated, but the higher mids were a little too pronounced. The comparatively less treble meant a slight lack of sparkling or crispness in the sound.

Both the Artis S111-FM and S111-R are exactly the same in terms of quality. The woofer, although light, is pretty powerful and displaces a lot of air—we could feel it more than a foot away. Unfortunately, it lacks a deep bass because of its light-weight woofer design, which didn't make listening to music a great experience—especially in the bass-heavy genres like rock and metal.

The Altec Lansing BXR1121 is pretty good at music. It went through all the tests with some more than decent results for its clean, natural tone. The only drawback is that these are fairly low-powered speakers, so the woofer doesn't pump out the bass you'd like. Still, for a small room, these will do well. A low-powered speaker set has its own advantages—you can push the speaker to its limits and your sound still won't distort.

Having heard some really great quality from some of the other 2.1 speakers of Altec Lansing, the FX4021 is a disappointment. The woofer is decent, but the satellites are pretty appalling, with major distortion even at mid-level volumes. The Altec Lansing VS2421 had a very warm sound signature which makes it ideal for jazz music.

TECH-COM has generally suffered from really coloured sound—the speakers are mostly high on treble, which makes the sound very unnatural. A lot of equaliser tweaks are required to cut down on the lower-highs before you can get the right tone out of these speakers.

Movie playback is also very good with the 2.1 speakers, even if you do miss out on the sur-

round sound experience. The MX5021's solid bass works wonders. Following it were the closely performing Logitech Z-2300, Altec Lansing BXR1121, Zebronics ZEB-SW8000, and Logitech X-240. These are speakers with not-so-hard bass.

### And The Winner Is...!

The best speaker for music from all the tests that we ran is the Altec Lansing MX5021—its sheer power and undistorted sound, natural tone, with the right amount of crispness makes it an excellent performer. It's not very costly either, at an MRP of Rs 7,500. In some markets, it's available for around Rs 6,500, which makes it a steal.

A little far behind is the Logitech Z-2300. The woofer isn't as tight as the MX5021, or as powerful, but it stands its ground when you demand power of it. It does well for music, and the slightly boomy woofer does its part for movies too.

The Zebronics ZEB-4000W grabs a surprising third place. Although a little off in tone, the sound still had vibrance and clarity, which makes it a very good speaker set. A bit of tweaking with your media player's equaliser, and you can get decent music from this speaker set for sure. It's got good, heavy bass, but it needs you to turn up the bass a fair bit before you get the setting just right.

The Altec Lansing BXR1121 makes a for very good value-for-money product at just Rs 1,250. Although it lacks power, this is actually an excellent buy for people who want a fairly mid-powered sound system for their PC.

The Artis S111R is yet another product that makes a lot of sense for the budget-minded. Although a little costlier than the BXR1121 at Rs 1,500, it isn't a lot more expensive either, and has a slightly better subwoofer.

The Logitech speakers are really good, too but their biggest fault is the pricing. The Z-2300, for example, is fairly good—not better than the Altec Lansing MX5021—but it still priced at Rs 3,000 more! If you're looking for the ultimate 2.1 speakers, then blindly opt for the Altec

**BEST BUY**  
**digit**  
**APRIL 2008**



Altec Lansing BXR1121

Lansing MX5021. It is a very good bargain.

### SURROUND SOUND SPEAKERS

Surround sound speakers are meant to serve a completely different purpose—watching movies with, well, surround sound. The sensation of being in the middle of the action is something that you can experience in a good movie theatre. The speakers we've tested should be able to give more or less the same experience, but in the comfort of your sofa with your family and friends. The freedom to pause the movie and grab your unlimited supply of popcorn and your cola whenever you want is just one of the perks of having your own little home theatre system. Although the emphasis would have to be on the surround movie tests, we still must focus on the best audio quality overall. After all, you won't just be using your system for movies. While we received mostly 5.1 speak-

### Kharma Grand Exquisite

The Kharma Grand Exquisite is a \$2,20,000 speaker which like its price uses exotic components too. Diamond tweeters are used for the high frequencies and Kevlar for the bass. Wiring is done using pure gold and silver. Each speaker weighs 440 Kg and they have an explosive power of 500W. If that doesn't impress you, then the majestic looks surely will.



ers, there were also a couple of 4.1 speakers—Creative Inspire M4500, TECH-COM SSD-2800 and the TECH-COM SSD-3400.

### First Glimpse—Build Quality, Design... And Some Issues

The Logitech Z-5500 is the scariest of all the speakers that we received—the woofer is massive! The satellites were of 61 W RMS each. Most complete speaker sets—including the woofer and satellites—weren't made this powerful. There were sufficiently long cables provided with the speakers, although prospective buyers should think of ways to tuck the cables away—they can get your room a little messy.

The Altec Lansing VS3251 is a cute little 5.1 setup. Although not as monstrous as the other speakers we saw, it is built rather well, is compact and comes with a chunky remote with very good buttons. The Philips MMS460 has a very light woofer and we had our doubts about its performance in the bass tests. The satellites were really built well and heavy. This is one of the most

### Stand Back MP3, Enter Vinyls?

MP3s have come to be known as the best audio quality to most of the people using them—a wrong notion. Audio CDs easily surpass MP3s at the best possible bitrate and quality, but true audiophiles don't quite agree even there. There are many who would say that vinyls hold the crown for quality. Vinyls—for those who aren't aware—are better known as gramophone records. Unlike CDs, data on vinyls was stored as analogue. There is a groove that runs from the outside to the inside of the vinyl disc, and this groove contains the information which is read by a delicate nib—like on an ink pen. Data stored on either side of the groove is used to play stereo sound. This is far different from how CDs or DVDs are read.

Vinyls are said to be able to store a larger frequency range than CDs. There's

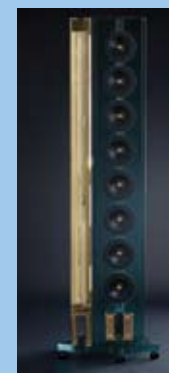


also a unique tone to the music which many consider comes from the inaccuracies of a relatively crude technology. It sounds very natural and very warm, unlike digital formats which have a very precise razor-like crispness to them.

Before you start unpacking your parents' old record player, we should just remind you that there was a reason why vinyls got out of the market in the first place—they're bulky, and very delicate. The surface is susceptible to scratches, and any kind of damage would completely ruin it. Now with CDs and the protective layer, there are no such worries. They were also very huge and therefore not portable—imagine going to work today in a train with a bunch of 12-inch records in your hand and even bulkier record player!

### Perfect8—The Force

Each of these transparent monster's stands weighs around 200 Kg. The frequency range extends all the way from 8 Hz to 50 KHz. All the drivers are housed in a glass casing. The high frequency range is not driven by some tweeter but through a 1.6 m long ribbon using a neodymium magnet system. The price for The Force with 2 towers and 4 outbound woofers is said to be around \$295,000.





stylish speaker sets we received, but there was some minor shielding issue with it.

TECH-COM's SSD-2800 is a pseudo-4.1 set—which means the rear speakers are practically just playing the same stuff as the fronts. To make matters worse, the cables are extremely short, so you can only place them right next to the front speakers. The SSD-3400 from TECH-COM was another such speaker. While these may have four satellite speakers, they're still good for stereo.

The Logitech G51 comes with thick cables, colour-coded to make it extremely easy to set up. Even the Altec Lansing FX5051 was considerably easy to set up for the same reason. These are examples of attention to detail, along with detailed troubleshooting information that make up a good set of speakers.

Some of the TECH-COM and Intex speakers, like those in the 2.1 category, had some very attractive designs.

There were some problems we faced while trying to get proper surround sound from some speakers, though. On some of the TECH-COMs, we had to plug in the front channel tracks



Logitech Z-5500

into the auxiliary port to get 2.1 sound. Another general issue with most TECH-COM speakers is the lack of 3.5mm-RCA converters. There were also very severe shielding issues seen in the TECH-COM SSD-5001R and the Intex IT-4800. Placing the centre speaker over a CRT monitor—or anywhere near it—is out of the question.

### Fooobar Frequency Test

Very low deep bass along with power is necessary for a satisfying movie experience—for bomb blasts and crazy dogfights, among

other things. The Z-5500's level of bass at 20 Hz is pretty low as compared to the other speakers—it's the sheer size of the driver that could be to blame here.

We also saw very erratic performance from all the other speakers. The Altec Lansing FX5051, for example, is extremely loud on higher frequencies, and not so much on the mids and lower range.

The sole Supercomp in the surround speaker category—the SES 5177—performed abysmally. The woofer was all over the place in the low frequency test. There was no clear steady tone but randomly switching tone. The Creative Inspire M5300 also lacked presence of bass between the 20-50 Hz frequency ranges but it was still a fair bit better than the M4500.

### Music Test

Logitech's Z-5500 seemed to be doing really well in most of the tests, and we assumed it would do equally well at music with its fairly neutral tone. It performs quite respectably, but bass isn't as tight as the Altec Lansing MX5021 from the 2.1 speaker category. The double bass drumming in the Metal tracks didn't sound as pronounced as we'd like. For Bollywood pop music, the punchy bass did well. The Z-5500s are also very loud, so you can actually have your friends over for your very own party in an average-sized room.

The Logitech G51 has a heavy but underpowered woofer. It gives you good soft bass in tracks like *With or without you* by U2. The satellites are pretty

decent, and the sound is rather warm and neutral without any shrill treble. The remote has a "matrix mode" for gaming and music, and fares horribly. The bass completely disappeared, so it's wise to keep the effects off at all times.

The Altec Lansing VS3251 isn't powerful, but the quality and detailed reproduction of sound was pretty impressive regardless. The TECH-COM SSD-4301R was surprisingly decent—better than most of the other TECH-COMs. It wasn't as crystal clear or crisp as the Altec Lansings, but the woofer pumped out well-balanced bass and it was pretty powerful as well. Another TECH-COM that did well was the SSD-5101R. The bass was very good for drum solos—both in the quality tests and in the drum solo by Mike Portnoy in the live version of Dream Theatre's *Beyond this life*.

The Philips MMS460 surprised us quite a bit—it has a very light woofer, but it gives some really impressive bass that does justice to bass guitars. It lacks the punchy hard bass for the drums, though, and the satellites exaggerate the higher frequencies. Bollywood and pop music was given an extra sparkle on top range frequencies, which made for a unique sound. The Philips MMS460 sound pretty nice in the piano tracks with every single note pumping that essential little bit of bass. Similar sound characteristics could be heard in the pure vocal (*a capella*) tracks with finger snapping.

### Movies

The Logitech Z-5500 does a fair job at movies. The ample power makes the action-packed *Star Wars* and *Transformers* clips a joy to go through. The Z-5500s are rated at 500 W RMS, but it really doesn't sound that much louder than the Logitech MX5021—which is around 90 W RMS.

We're pretty impressed by the Logitech M-50 in the music tests, even though they are low-power speakers. Movies sound all right, but for quiet movie scenes, the bass wouldn't play its part at all. Although not very loud, the detail was still very respectable. They are rated at 26 W RMS, but sound pretty powerful.



Altec Lansing VS3251

The Altec Lansing FX5051 gives extremely good detail in the *Star Wars* scene—the quality of the crunch of a ship smashing into another was pretty amazing. The lack of punch in the woofer and the distortion at higher volumes was a complete turn-off. The woofer had to be turned up to over 80 per cent to get some bass into the sound.

### Extras

The Logitech Z-5500 comes with a remote control with a display on it. Along with the remote is an inbuilt decoder. All the features and processing make the remote panel a little hot after some use. The remote itself is feature-packed with different audio modes for listening to music and movies, or using all speakers for music.

### Yg Acoustics Voyager



The Yg Acoustic Voyager's distinctive design looks like something out of a sci-fi movie. Unlike all the other mammoths of its class, the weight of the Voyager is just around 91 Kg thanks to use of

cast aluminium. The price for the Voyager is a comparatively low \$1,00,000. The Voyager is so exotic that it is only sold to the well known in the music and film industry. No, you can't walk in for a demonstration—you are to be invited by them.

The FX5051 can also be driven through a USB interface if you don't have sound card. There were no problems faced with detection, or anything to do with drivers. The quality is nothing special either, and these days pretty much every single motherboard comes with integrated sound so it doesn't do a lot.

### The Best!

We recommend the Z-5500 for its good quality, and more importantly, its colossal power. The biggest problem with the Z-5500 is the price—Rs 27,995! For that price, you don't really get that many more times the power or quality that you would get from a very good 2.1 like the Altec Lansing MX5021.

If power isn't what you're looking for, then the Altec Lansing VS3251 is a good set which is very affordable and is sufficient for an audience of two or three people in front of your PC. If you're willing to ignore the slightly high treble sound, then the Philips MMS460 is also

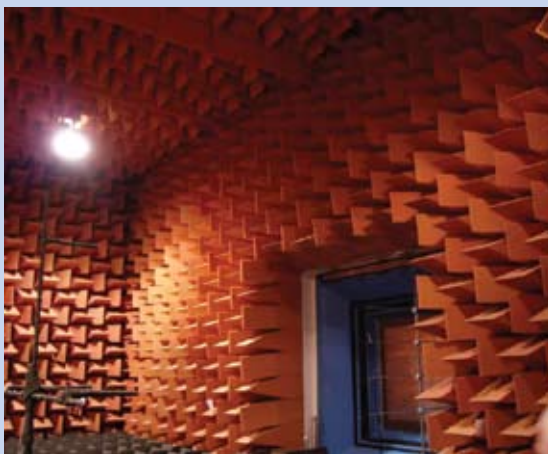
### Room acoustics—why bother?

In the audiophile's bible, anything that reflects sound is evil. Well, most of the time, at least. Sound bounces off flat and hard surfaces and all you get from that is loads of stray echoes all over the place and some sounds end up overpowering others.

There are a few things you can do to improve the acoustics of your room. Firstly, you'll need to use some sound-

absorbing material on your walls and floors, and if possible, even your ceiling. Curtains, wooden shelves and stacked books also work as great absorbing materials. This way, sounds get absorbed rather than getting reflected. Moving the seating arrangement and positioning can also help you find a sweet spot where echoes are minimal. A very small room also has lots of resonance, and is a bad idea to set up a home theatre in such a place.

Some of the largest and most advanced anechoic chambers are used for the development and testing of aircraft and other vehicles for the armed forces. To give you an idea of the size, the largest anechoic (without echoes) chamber is the Benefield Anechoic Facility at the Edwards Air Force base in the US. The dimensions of the room are some 250 x 264 x 70ft, and fits 816,000 cones to snuff out reflected sound.

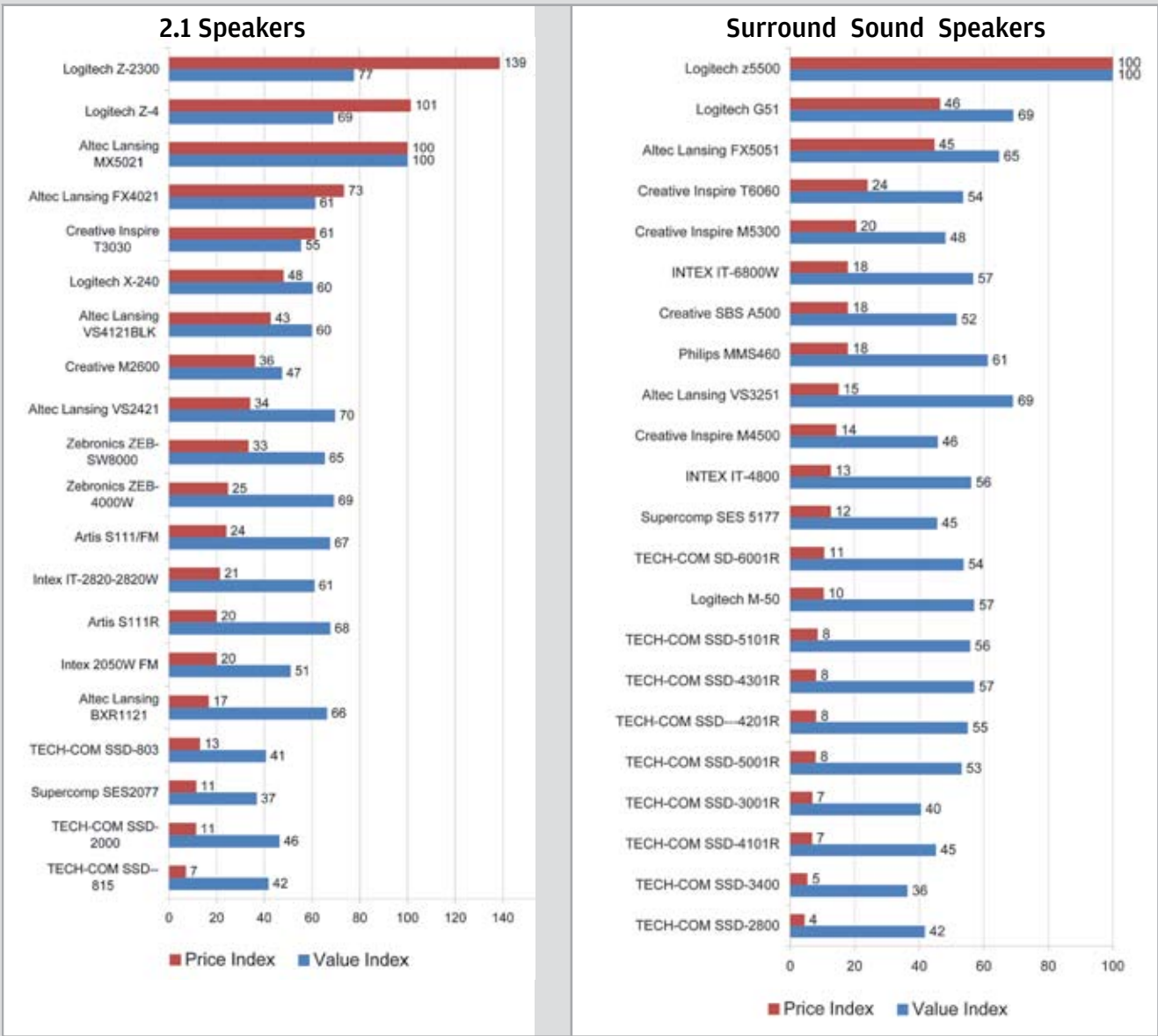


### Dumped Your PlayStation, Did You?

If you did, it could have been a big mistake. The buzz among audiophiles these days is that the original PlayStation (Model SCPH-1001) could possibly be one of the best CD players ever made! It's said that if you were to purchase a player that could match that quality, you'd be spending in excess of \$6000 (Rs 2,40,000) for it. Audio geeks who've spent that kind of money on their current high-end amps must surely feel like complete asses, having wasted all that dough, when the answer was right in front of them all along!







a very impressive set of speakers to consider. The VS3251 and the MMS460 are priced at Rs 4,200 and Rs 4,999 respectively.

The Logitech G51 also makes a decent buy, but like the Z-5500, is overpriced.

TECH-COM too had a few decent sounding woofers with hard tight bass, too.

Unfortunately, their inability to play well at loud volumes or poor detail and bad colouring on the higher end of the spectrum is the reason they don't figure in the top rankings. However, for the low price you pay, you get some really unique and fancy looking stuff. Creative's speakers were once considered great

sets—they are costlier than the rest, but they always had the quality. Today, the speakers from Creative don't seem to be targeted at enthusiasts anymore—they're just for people who want a basic surround sound setup.

At the start of this massive test, we expected a lot, and it's been a little disappointing to see no real fierce competition in the surround sound speaker market. There aren't any improvements, and there are too many models—each one slightly worse than the other. Here at Digit, we're still feeling the aftershocks of the Gigaworks and Megaworks range of speakers of the years that have passed. ☒

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Contact Sheet				
Speakers				
Brand	Company	Phone No	Email	Website
Altec Lansing	Rashi Peripherals Pvt.Ltd	022-67090909	altec@rptechindia.com	www.alteclansing.com
Artis	Kunhar Peripherals Pvt. Ltd	022-66345758	Sales1@kunhar.com	www.artis.co.in
Creative	Compuage Infocom Ltd	022-23842200	vaishali.shinde@compuageindia.com	www.creative.com
Logitech	Logitech	022-26571160	kavita_nath@logitech.com	www.logitech.com
Philips	Philips Electronics India Ltd	022-66912000	sacchit.naik@philips.com	www.philips.com
Zebronics	Topnotch Infotronics (I)Pvt Ltd	044-26616201	enquiry@zebronics.info	www.zebronics.net



### 2.1 Speakers

#### Best Performance

1 Altec Lansing MX5021  
Price: Rs 7,500

2 Logitech Z-2300  
Price: Rs 10,395

### Surround Sound Speakers

#### Best Performance

1 Logitech Z-5500  
Price: Rs 27,995

2 Logitech G51  
Price: Rs 12,995

### 2.1 Speakers

#### Best Buy

1 Altec Lansing BXR1121  
Price: Rs 1,250

2 Artis S111R  
Price: Rs 1,500

### Surround Sound Speakers

#### Best Buy

1 Altec Lansing VS3251  
Price: Rs 4,200

2 TECH-COM SSD-4301R  
Price: Rs 2,250

### 2.1 Speakers

#### Cheapest Performer

1 Altec Lansing BXR1121  
Price: Rs 1,250

2 Artis S111R  
Rs 1,500














### Surround Sound Speakers

#### Cheapest Performer








1 TECH-COM SSD-4301R  
Price: Rs 2,250





2 TECH-COM SSD-4201R  
Price: Rs 2,250



BEST PERFORMER digit APRIL 2008 Speakers—2.1							BEST BUY digit APRIL 2008						
Brand Model	Altec Lansing MX5021	Logitech Z-2300	Altec Lansing VS2421	Zebronic ZEB-4000W	Logitech Z-4	Artis S111R	Artis S111/FM	Altec Lansing BXR1121	Zebronic ZEB-SW8000	Altec Lansing FX4021	Intex IT-2820	Logitech X-240	Altec Lansing VS4121BLK
													
Price	Rs 7,600	Rs 10,395	Rs 2,550	Rs 1,850	Rs 7,595	Rs 1,500	Rs 1,800	Rs 1,250	Rs 2,500	Rs 5,500	Rs 1,600	Rs 3,595	Rs 3,200
Pros	Excellent performance	Decent woofer	Stylish performer	Comparatively tight bass	Great remote	Above average woofer	FM functionality	Great value	Very tight and powerful bass	Neutral warm sound	Exotic design	Good performer	Sleek design
Cons	Some minor vibrations in woofer	Distorts easily	Bass flutters at low frequencies	Minor buzzing	Overpriced	Overpowered mids	Overpowered mids	Lacking bass	Bad controls	Poor satellite performance	No punch in bass	Minor issues with bass	Highs distort too much
Total (Out of 100)	62.81	48.66	43.70	43.41	43.26	42.44	42.33	41.59	40.93	38.5	38.27	37.77	37.63
Features (Out of 40)	19.22	14.38	14.12	13.14	14.68	12.78	12.66	11.96	11.38	16.42	11.46	9.66	13.52
Performance (Out of 60)	43.59	34.28	29.58	30.27	28.58	29.66	29.67	29.63	29.55	22.08	26.81	28.11	24.11
Features													
Power Rating (RMS Watts)	90	200	28	40	40	29	NA	15	60	46	60	27	31
Subwoofer (RMS Watts)	50	120	14	20	23	12	NA	7	30	24	30	15	19
Satellites (RMS Watts)	20x2	40x2	7x2	10x2	17x2	8.5x2	NA	4x2	15x2	11x2	15x2	6x2	6x2
Frequency response (Hz)	40-18000	35-20000	35-20000	55-20000	35-20000	50-20000	35-20000	30-20000	35-18000	32-20000	55-18000	40-20000	20-20000
Sub-Woofer (Driver Diameter)	6.5"	8"	5.25"	5.25"	8"	5"	5"	4"	5.25"	4.25"x2	4"	4"	6.5"
Satellites (Driver Diameter)	1"+ 2x3"	2.5"	2.5"	3"	2"x3	2.5"	2.5"	2.5"	4"	1.6" + 0.7"	3"	2"	1.1"
Connectors on Speaker Set													
Analog (Front in/Auxiliary)	Y/Y	Y/N	Y/Y	Y/N	Y/Y	Y/N	Y/N	Y/Y	Y/N	Y/Y	Y/N	Y/Y	Y/N
SPDIF (Coaxial/Optical)	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N
Controls provided on speaker set / Remote control													
Bass/Treble (Y/N)	Y/Y	Y/N	Y/Y	Y/Y	Y/N	Y/N	Y/N	Y/Y	Y/Y	Y/Y	Y/Y	N/N	Y/Y
Volume (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Surround Effects / Others Effects (Y / List)	N / N	N / N	N / N	N / N	N / N	N / N	N / N	N / N	N / N	N / SFX	N / N	N / N	N / N
Bundled Accessories													
External Decoder/Power Adapter/Built-in FM Tuner	N/N/N	N/N/N	N/N/N	N/N/N	N/N/N	N/N/N	N/N/Y	N/N/N	N/N/N	N/N/N	N/N/N	N/N/N	N/N/N
Remote control (Wired [W] / Wireless [WL])	WL	W	W	N	W	W	N	N	N	W, WL	N	W	N
Manual & documentation (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Build Quality (Scale of 10)	7.5	6.5	5	6	5	7	7	4	4.5	5.5	5	4.5	5
Performance													
HD Movie Audio Test (Scale of 10)													
Transformers	7.5	6	5	6	4	4.5	4.5	6	5.5	5	4.5	5	5
Star Wars—Return of the Sith	7	6	5.5	5	4	5	5	6	5.5	4.5	5.5	6	4
Independence Day	7.5	6.5	5.5	5	4.5	4.5	4.5	5.5	6	5	4.5	5.5	4.5
Music Quality (Scale of 10)													
Rock	7	5.5	5	4.5	5	5.5	5.5	5.5	4.5	3	4	4.5	3.5
Metal	7	5.5	5	5	5.5	5	5	5	4.5	3	3.5	4.5	3
Jazz	7.5	4.5	5.5	4.5	5.5	5	5	4.5	5	4	4.5	4	3.5
Bollywood	7.5	6	5	6.5	5	6	6	5	4.5	4.5	5.5	5	4.5
Pop	7.5	5	4.5	3.5	4.5	5	5	5	4.5	2.5	4	5	3
Techno/Trance	7	5.5	5.5	5	4.5	4.5	4.5	4	5.5	3.5	4.5	4.5	4.5
Surround sound (Scale of 10)	7	5.5	4.5	5	5.5	5.5	5.5	4	5	3	4	4	4.5
Frequency test (Scale of 10)—Foobar	6.9	7.2	4.2	4.7	4.1	4.2	4.2	5	4.3	4.2	4.4	4.5	4.3
Freq. Sweep—20Hz—22kHz (Scale of 10)	7	6	4	4.5	4.5	5	5	4.5	5	4	4.5	5	4.5
Quality Tests (Scale of 10)													
Drums	7.5	5.5	5	6.5	5.5	6	6	5.5	5.5	3.5	4.5	5	4
Bells	7	5	5.5	4	5	5	5	5	5.5	2.5	4.5	5.5	2
Church Organ	7	5.5	4	5.5	5	5	5	5.5	5	2	5	5.5	3
Vocals	8	4	4.5	5	5	3.5	3.5	5	4.5	4.5	3.5	5	3.5
Woofer Test	7.5	7	4.5	5	4.5	5	5	3.5	4	3.5	3.5	4	4
Power handling Test (Scale of 10)	7.0	6.8	5.0	5.3	5.0	4.8	4.8	4.5	5	3.8	4.3	3.8	4.5



Speakers–2.1							
Brand Model	Creative Inspire T3030	Intex 2050W FM	Creative M2600	TECH-COM SSD-2000	TECH-COM SSD-815	TECH-COM SSD-803	Supercomp SES2077
							
Price	Rs 4,597	Rs 1,500	Rs 2,699	Rs 845	Rs 525	Rs 975	Rs 850
Pros	Unique, stylish design	Built-in FM tuner	Compact design	Cheap	Average at vocals	Decent build quality	Decent for vocal tracks
Cons	Slightly underpow-ered bass	Poor design	No sturdy stands	Extreme highs	Bad design	Over- emphasised highs	Poor cables
Total (Out of 100)	34.69	31.96	29.72	29.04	26.18	25.56	23.05
Features (Out of 40)	11.32	11.08	10.2	9.76	10.4	9.78	7.54
Performance (Out of 60)	23.37	20.88	19.52	19.28	15.78	15.78	15.51
Features							
Power Rating (RMS Watts)	29	32	29	34	8	38	8
Subwoofer (RMS Watts)	17	20	17	20	4	18	6
Satellites (RMS Watts)	6x2	6x2	6x2	7x2	2x2	10x2	1x2
Frequency response (Hz)	40-20000	40-20000	40-20000	30-20000	35-20000	35-20000	60-20000
Sub-Woofer (Driver Diameter)	NA	4”	NA	4”	4.8”	4”	4”
Satellites (Driver Diameter)	NA	3”	NA	3”	2.5x2	3”	3”
Connectors on Speaker Set							
Analog (Front in/Auxilliary)	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
SPDIF (Coaxial/Optical)	N/N	N/N	N/N	N/N	N/N	N/N	N/N
Controls provided on speaker set / Remote control							
Bass/Treble (Y/N)	Y/N	Y/Y	Y/N	Y/Y	Y/N	Y/Y	N/N
Volume (Y/N)	Y	Y	Y	Y	Y	Y	Y
Surround Effects / Others Effects (Y / List)	N / N	N / N	N / N	N / N	N / N	N / N	N / N
Bundled Accessories							
External Decoder/Power Adapter/Built-in FM Tuner	N/N/N	N/N/Y	N/Y/N	N/N/N	N/N/N	N/N/N	N/N/N
Remote control (Wired [W] / Wireless [WL])	W	N	W	N	N	N	N
Manual & documentation (Y/N)	Y	Y	Y	Y	Y	Y	Y
Build Quality (Scale of 10)	4.5	3.5	5	3.5	3	3.5	3.5
Performance							
HD Movie Audio Test (Scale of 10)							
Transformers	4	4	4	3.5	3	3	3.5
Star Wars–Return of the Sith	5	3.5	5	3	2	3.5	2
Independence Day	4	4	4	3.5	4	3	2
Music Quality (Scale of 10)							
Rock	4.5	3	2	2.5	2.5	1.5	1.5
Metal	4	3	2.5	2.5	2	2	1.5
Jazz	5.5	3.5	4	3.5	3.5	2.5	2
Bollywood	4	4.5	2	4	2.5	2.5	2.5
Pop	3.5	3	3	3	3	2	2
Techno/Trance	3	3.5	3.5	3	2	2.5	1.5
Surround sound (Scale of 10)	4.5	4.5	3	4.5	3	3.5	4
Frequency test (Scale of 10)–Foobar	3.2	3	4.6	2.8	1.7	2.6	2.8
Freq. Sweep–20Hz–22kHz (Scale of 10)	3.5	3	2.5	3	2	3.5	3.5
Quality Tests (Scale of 10)							
Drums	5	3.5	4	3	2.5	2	2
Bells	3.5	2.5	4	2	1.5	1.5	2.5
Church Organ	3	3	3.5	3.5	2.5	2	3
Vocals	5.5	3	3.5	2.5	3	2.5	2.5
Woofer Test	3	3.5	3	3	3	3	1.5
Power handling Test (Scale of 10)	3.0	3.5	3.5	3.5	3.5	2.8	3.5









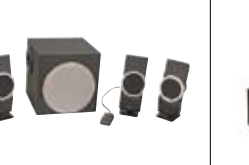
Speakers–Surround				
Brand Model	TECH-COM SSD-4101R	TECH-COM SSD-2800	TECH-COM SSD-3001R	TECH-COM SSD-3400
				
Price	Rs 1,875	Rs 1,250	Rs 1,900	Rs 1,475
Pros	Decent at low volumes	Low price	Cheap	Unique control knobs
Cons	Distortion at average volume	Pseudo 4.1	Weak at bass	Pseudo 4.1
Total (Out of 100)	31.07	28.71	27.84	24.95
Features (Out of 40)	12.98	9.76	10.24	8.54
Performance (Out of 60)	18.09	18.95	17.60	16.41
Features				
Speaker Setup	5.1	4.1	5.1	4.1
Power Rating (RMS Watts)	60	44	45	44
Subwoofer (RMS Watts)	20	20	20	20
Center (RMS Watts)	8	NA	5	NA
Satellites (RMS Watts)	8x4	6x4	5x4	6x4
Frequency response	20-20000	30-20000	40-18000	30-20000
Sub-Woofer (Driver Diameter)	5.25”	4”	5.25”	4”
Satellites (Driver Diameter)	3”x5+1.5x2	3”	3”	3”
Connectors on Speaker Set				
Front in / Rear in / Center-Subwoofer	Y/Y/Y-RCA	Y/N/N	Y/Y/Y-RCA	Y/N/N
Digital DIN / Auxilliary	N/Y	N/N	N/N	N/N
SPDIF (Coaxial/Optical)	N/N	N/N	N/N	N/N
Controls provided on speaker set / Remote control				
Bass/Treble	Y/N	Y/Y	Y/N	Y/N
Volume (Y/N)	Y	Y	Y	Y
Surround Effects / Others Effects (Y / List)	N / N	N / N	N / N	N / N
Bundled Accessories				
External Decoder/Power Adapter/ Built-in FM Tuner	N/N/N	N/N/N	N/N/N	N/N/N
Remote control (Wired [W] / Wireless [WL])	WL	N	N	N
Manual & documentation (Y/N)	Y	Y	Y	Y
Build Quality (Scale of 10)	3.5	3.5	3	3.5
Performance				
HD Movie Audio Test (Scale of 10)				
Transformers	3	3.5	4	3
Star Wars–Return of the Sith	3.5	3	4.5	3.5
Independence Day	4.5	3.5	4	4
Music Quality (Scale of 10)				
Rock	2.5	2.5	2.5	1.5
Metal	2.5	2.5	2	2
Jazz	3	3.5	3.5	2.5
Bollywood	2.5	4	3.5	2.5
Pop	2	3	3.5	2
Techno/Trance	2	3	2.5	2.5
Surround sound–(Scale of 10)	5.5	3.5	2	3.5
Frequency test (Scale of 10)–Foobar	3.9	2.7	2.7	2.8
Frequency Sweep–20Hz–22kHz (Scale of 10)	4	3	3	3.5
Quality Tests (Scale of 10)				
Drums	3	3	2.5	2
Bells	2.5	2	2.5	1.5
Church Organ	3	3.5	3	2
Vocals	3.5	2.5	3	3
Woofer Test	2.5	3	2	3.5
Power handling Test (Scale of 10)	2.8	3.5	2.8	3.0





Speakers—Surround									
Brand Model	Logitech z5500	Logitech G51	Altec Lansing VS3251	Altec Lansing FX5051	Philips MMS460	Logitech M-50	TECH-COM SSD-4301R	INTEX IT-6800W	INTEX IT-4800
Price	Rs 27,995	Rs 12,995	Rs 4,200	Rs 12,500	Rs 4,999	Rs 2,895	Rs 2,250	Rs 5,000	Rs 3,500
Pros	Very powerful	Decent quality	Sparkling details	In-built sound through USB	Modern design	Powerful for a 26W set	Average performer	Easy to set up	Decent looks
Cons	Very expensive	Highly overpriced	Soft bass	Noisy woofer	Lacking deep bass	Poor for music	Poor controls	Unstable bass	Unshielded speakers
Total (Out of 100)	68.87	47.60	47.55	44.57	42.18	39.26	39.26	39.04	38.61
Features (Out of 40)	25.94	15.44	16.20	19.94	11.46	15.00	11.94	12.74	12.06
Performance (Out of 60)	42.93	32.16	31.35	24.63	30.72	24.26	27.32	26.30	26.55
Features									
Speaker Setup	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Power Rating (RMS Watts)	500	155	70	89	80	26	80	140	65
Subwoofer (RMS Watts)	187	56	25	28	30	15	30	40	30
Center (RMS Watts)	69	19	9	13	10	2.3	10	20	7
Satellites (Front/Rear) (RMS Watts)	61x4	20x4	9x4	12x4	10x4	2.3x4	10x4	20x4	7x4
Frequency response (Hz)	33-20000	36-20000	40-17000	40-20000	20-20000	48-20000	20-20000	40-18000	20-20000
Sub-Woofer (Driver Diameter)	10"	5.25"	5"	6.5"x2	NA	5"	5.25"	6.5"	5.25"
Satellites (Driver Diameter)	3"	2x2"	2.5"	1.6" + 0.7"	NA	2.75"	3"	1.5+3"	3"x6, 1.5"5
Connectors on Speaker Set									
Front in / Rear in / Center-Subwoofer	Y/Y/Y	Y/Y/Y	Y/Y/Y	Y/Y/Y	Y/Y/Y	Y/Y/Y	Y/Y/Y-RCA	Y/Y/Y-RCA	Y/Y/Y-RCA
Digital DIN / Auxilliary	Y/Y	N/Y	N/Y	N/Y	N/N	N/N	N/Y	N/N	N/N
SPDIF (Coaxial/Optical)	Y/Y	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N
Controls provided on speaker set / Remote control									
Bass/Treble	N/N	Y/N	Y/N	Y/Y	Y/N	Y/N	Y/N	Y/N	Y/N
Volume (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Surround Effects / Others Effects (Y / List)	Y, Dolby Pro Logic II, 6Ch Direct, Stereo x2, Digital DTS	N / Matrix-Gaming, Movie	N / N	N / N	N / N	N / N	N / N	N / N	N / N
Bundled Accessories									
External Decoder/Power Adapter/ Built-in FM Tuner	Y/N/N	N/N/N	N/N/N	N/N/N	N/Y/N	Y/N/N	N/N/N	N/N/N	N/N/N
Remote control (Wired [W] / Wireless [WL])	W, WL	W	WL	W, WL	N	N	N	WL	WL
Manual & documentation (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Build Quality (Scale of 10)	7	5.5	4.5	5.5	5	3.5	4	4.5	4
Performance									
HD Movie Audio Test (Scale of 10)									
Transformers	8	5.5	5.5	5	5	5	6	4.5	6
Star Wars—Return of the Sith	8	6	5.5	5	5.5	5.5	6	4.5	5.5
Independence Day	8	4.5	6	4.5	5	4	5.5	5	6
Music Quality (Scale of 10)									
Rock	6.5	5.5	5	3.5	5	4	4	4	3.5
Metal	6.5	5	5	4.5	5.5	4	4.5	4	4
Jazz	7	5	5.5	4.5	5.5	3.5	4	4.5	4.5
Bollywood	7.5	5.5	6	4.5	6	4	5	5	4
Pop	7	6	5	3	4.5	3.5	4.5	5	4.5
Techno/Trance	6.5	5	4.5	4	4	3	4	4.5	4.5
Surround sound—(Scale of 10)	8	6	6	5.5	5.5	4.5	5	5.5	5.5
Frequency test (Scale of 10)—Foobar	6.9	5	5.3	3.7	4.8	4.1	3.4	3.2	2.9
Frequency Sweep—20Hz—22kHz (Scale of 10)	7.5	5.5	5	4	6	4	5	4	4.5
Quality Tests (Scale of 10)									
Drums	7	5	5	4.5	5.5	4.5	5	5	4.5
Bells	6.5	5.5	4.5	4	5	5	4	3.5	3
Church Organ	7	5	5	4	5	4	4	5	4
Vocals	7.5	5.5	4.5	4.5	5	4.5	4	4	4
Woofer Test	7	5.5	4	4	4	3	5	4.5	3.5
Power handling Test (Scale of 10)	6.8	5.3	5.3	4	4.8	4.3	4.3	3.3	3.8



Speakers—Surround									
Brand Model	TECH-COM SSD-5101R	TECH-COM SSD-4201R	TECH-COM SD-6001R	Creative Inspire T6060	TECH-COM SSD-5001R	Creative SBS A500	Creative Inspire M5300	Creative Inspire M4500	Supercomp SES 5177
									
Price	Rs 2,375	Rs 2,250	Rs 2,950	Rs 6,699	Rs 2,200	Rs 4,999	Rs 5,699	Rs 3,999	Rs 3,499
Pros	Good woofer	Decent tone	Decent warm sound	Stylish design	Heavy woofer	Good for surround sound	Sleek design	Smooth surround sound transition	Decent detail in satellites
Cons	Bad unnecessary display	Very underpowered bass	Issues with 2.1 setup	Overpriced	No treble control	Lacks bass at low volumes	Overpriced	Flat sound	Unstable bass
Total (Out of 100)	38.37	37.90	36.99	36.87	36.56	35.51	33.11	31.46	31.34
Features (Out of 40)	13.78	12.68	11.92	12.76	11.66	11.48	10.68	10.20	12.84
Performance (Out of 60)	24.59	25.22	25.07	24.11	24.90	24.03	22.43	21.26	18.50
Features									
Speaker Setup	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.1	5.1
Power Rating (RMS Watts)	90	75	120	72	120	47	47	41	80
Subwoofer (RMS Watts)	NA	25	45	22	45	17	17	17	30
Center (RMS Watts)	NA	10	15	18	15	6	6	NA	10
Satellites (RMS Watts)	NA	10x4	15x4	8x4	15x4	6x4	6x4	6x4	10x4
Frequency response	40-20000	20-20000	20-20000	40-20000	20-20000	45-20000	40-20000	40-20000	NA
Sub-Woofer (Driver Diameter)	5.25"	5.25"	5.25"	NA	5.25+3"	NA	NA	NA	5.25
Satellites (Driver Diameter)	3"+1.5x2	3"	3"	NA	6+1.5"	NA	NA	NA	2.75
Connectors on Speaker Set									
Front in / Rear in / Center-Subwoofer	Y/Y/Y-RCA	Y/Y/Y-RCA	Y/Y/Y-RCA	Y/Y/Y	Y/Y/Y-RCA	Y/Y/Y-cabled connected	Y/Y/Y-cabled connected	Y/Y/N-cabled connected	Y/Y/Y-RCA
Digital DIN / Auxilliary	N/Y	N/Y	N/Y-RCA	N/Y	N/N	N/N	N/N	N/N	N/Y
SPDIF (Coaxial/Optical)	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N	N/N
Controls provided on speaker set / Remote control									
Bass/Treble	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Volume (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Surround Effects / Others Effects (Y / List)	N / N	N / N	N / N	N / N	N / N	N / N	N / N	N / N	N / N
Bundled Accessories									
External Decoder/Power Adapter/ Built-in FM Tuner	N/N/N	N/N/N	N/N/N	N/Y/N	N/N/N	N/Y/N	N/Y/N	N/Y/N	N/N/N
Remote control (Wired [W] / Wireless [WL])	WL	WL	WL	W	WL	W	W	W	WL
Manual & documentation (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Build Quality (Scale of 10)	3.5	3.5	3.5	4.5	3.5	4	5	5	3.5
Performance									
HD Movie Audio Test (Scale of 10)									
Transformers	5	5	4.5	4.5	5	5	4.5	4	5
Star Wars—Return of the Sith	6	5.5	5	4.5	5	4.5	5.5	4.5	5
Independence Day	5.5	4.5	4.5	4	5	5	5	5	4.5
Music Quality (Scale of 10)									
Rock	3.5	4	4	4.5	4	4	3.5	3	2
Metal	3.5	3.5	4	4	4	4.5	3.5	3.5	3
Jazz	4	4	4.5	5.5	3.5	5	4	4	2.5
Bollywood	4.5	4.5	4	4.5	4.5	4	3	2.5	3.5
Pop	4	4.5	4.5	3.5	4	3.5	3	3	2.5
Techno/Trance	4	4	4.5	3	4.5	3	3.5	3.5	3
Surround sound—(Scale of 10)	5.5	5	5.5	4.5	5	6.5	6.5	6	4
Frequency test (Scale of 10)—Foobar	3.5	3.6	3.6	3.5	3	3.4	3.2	3.1	2
Frequency Sweep—20Hz—22kHz (Scale of 10)	3.5	4	4	3.5	4	3.5	2.5	2.5	2
Quality Tests (Scale of 10)									
Drums	4	5	4	4	4.5	4	4	4	3.5
Bells	2.5	3.5	3.5	3.5	4	4.5	4	4	2.5
Church Organ	3	3.5	3.5	3	5	3	3.5	3.5	3
Vocals	4	4	4	5	4	4	4	3.5	3
Woofer Test	3.5	4	4	3.5	4.5	3	3.5	3	2.5
Power handling Test (Scale of 10)	3.5	3.5	3.5	3.8	3	3.3	3.3	3.5	3





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# Digital Tools

Technology For Personal And SoHo Productivity

Know More About

## How Speakers Work

What Goes Behind That Boom?

Nash David

Speakers easily play the most significant role in enhancing your audio experience. So how do they actually manage to reproduce sound from the electrical signals that are fed as input? Devices such as speakers and microphones are technically called *transducers*. A transducer transforms one form of energy into another—in this case, a speaker converts electrical energy into acoustic energy (sound), in about the same way that a microphone converts acoustic energy into a corresponding electrical signal.

There's more to speakers than just plugging them in and believing that the costly sound system you got is going to take you to new heights. Of course, higher-end systems, with their excellent low-noise amplifiers, filters and impedance matchers reproduce crystal-clear sound even from speakers of the lowest end, but audiophiles know the difference!

We need to dwell into some physics to understand its mechanism. During our school days, we all have played around with the tuning fork during our physics practicals. On striking the tuning fork, we hear a long hum.

This sound is created by the compression and rarefaction of air particles, around the vibrating fork arms. When these compressions and rarefactions hit the eardrum, it vibrates, and we perceive sound. In a speaker, this compression and rarefaction is performed by a paper diaphragm that vibrates in accordance with the electrical signal fed to it. The construction of a speaker sheds more light on its functioning. At the base is a powerful ring magnet. In the centre is a voice coil made up of fine wire, wound around a paper cylinder. As we can see in the picture, the voice coil is attached

to a spider (an elastic paper sheet that holds the voice coil), such that it always returns to its fixed position under normal conditions.

To start off with the functionality of a speaker, the underlying principle is electromagnetism. The basic interaction between an electromagnetic coil and a powerful permanent magnet is what drives the speaker to produce sound. The primary source of sound is a diaphragm. One end of the voice coil is attached to the centre of the paper diaphragm. This diaphragm, in turn, compresses and rarefies the air particles around it, thereby producing sound.

Speaker enclosures, in addition to the speaker itself, also play a vital role in your audio experience. The reason for this is that the air flow through the enclosure drastically affects bass and crackling sounds due to undesirable harmonics. The dimensions of the enclosure have an effect on the resonance of the sound waves.

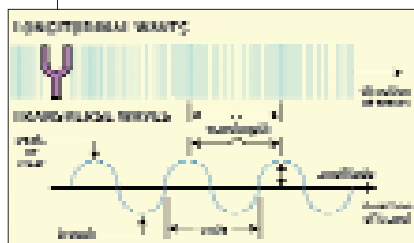
Getting more into the technicalities, let us consider an amplifier as a block. In this case, it primarily has two signals—the input and the output. For the amplifier to have high gain, its input impedance should be as high as possible and its output impedance should be as low as possible. The reason for this is the Maximum Power Transfer theorem, which states that to get the maximum power output from a source (the amplifier, in this case), the output resistance of the source should be the same, or as close as possible, to the resistance of the load (the speaker, in this case). For those of you who haven't heard of it, this simply means that the resistance of the speaker should be equal to that of the amplifier output. Typical speaker impedances are 4–8 Ohms—you can get

these values from the associated brochures and manuals that accompany your sound system.

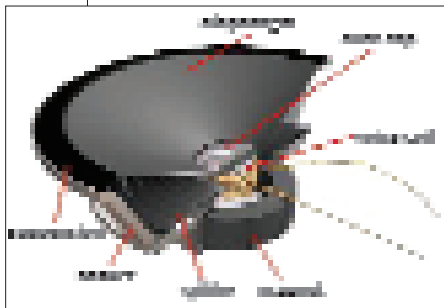
Finally, in a scenario of multiple speakers, positioning each speaker is of prime importance. Sound, after all, propagates in the form of waves. Although multiple reflections cause sound to be heard across all areas, sound travels in a straight path—like light. You should always consider sound to be similar to light while positioning the speakers around your home, with the prime aim to “illuminate” your living room. This is the easiest way to get it right, with minimal effort.

So go ahead and enjoy those tracks! ■

[nash.david@thinkdigit.com](mailto:nash.david@thinkdigit.com)



Sound is produced by the compression and rarefaction of air particles



Sound is created in a speaker by the vibrating diaphragm, similar to the tuning fork







Your Questions, Our Answers

All your computing niggles and nags are dealt with here!

### High Definition Queries

What format should HD content should be in—AVI, DivX, MPEG4? Does Blu-ray use any other format? What does Java support in Blu-ray mean? Also, is there a way using which I can convert optical audio output to, say, 5.1 analog output?

naveen\_reloaded on the Thinkdigit Forum

HD content can be stored in any of the formats—AVI, DivX or MP4. AVI and MP4 are both containers for the media. Any codec that supports HD resolutions can be used to encode. Blu-ray is encoded using MPEG2 or MPEG4-AVC—or what is more commonly known as H.264. Blu-ray Disc Java or BD-J is the Java used as the interface to interact with the content on a Blu-ray disc.

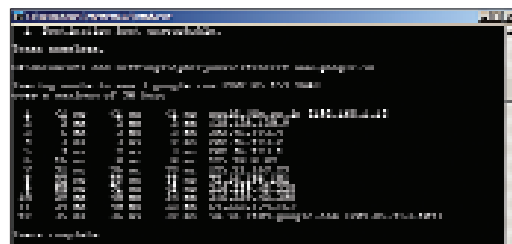
Optical to 3.5mm output convertors are pretty impossible to find. A DAC could be your best bet for digital (optical) to analog output but they are extremely expensive.

### Poor Online Latency Issues

I was playing *Call of Duty 4* online via BSNL 2 Mbps (Home 1800 plan) connection and was very happy for a while. Now, suddenly the ping shoots up to 400 ms while it was only 120 ms before. Moreover, when I ping a server—even those in India, the ping fluctuates to over 100 ms. www.google.co.in gives me a ping of 400 ms. Is there anyway to rectify this problem?

Amitash on Thinkdigit Forum

If your pings spike up randomly from 120 ms to 400 ms, then it could be a problem on your ISP end due to load or bandwidth shortage. It could also be disturbance in the line between you and the ISP. If it's a stable 400ms ping, then it could be the change in routing by your ISP. That is—your ISP may be using a different path to send data across the Internet. Use the command—tracert <Game server IP> and see the path your ISP has taken. You could request your ISP to revert back



to the original routing and also ask them to check line disturbance.

### Playback Statistics In Winamp

I use Winamp 5.33 and I want to see the most played songs and how many times they were played. How do I go about doing that?

ax3 on Thinkdigit Forum

The Winamp Library is the best way to find all the statistics for the songs you've been listening to. Winamp can also tell you which songs from the playlist you haven't heard at all. Press [Alt] + [L] with Winamp in focus to open the Winamp Library.

### IP Hijacking?

I use the Internet through a cable connection which has a static IP address. Whenever I try to download from Rapidshare, I get time limitation warnings such as "Download limit exceeded. Wait for 80 minutes" or "You are already downloading a file. Please wait till it is over". For the last couple of months I have not downloaded a single file from Rapidshare. What is the matter? Has somebody hijacked my IP address? Can I get it back?

abhijitroy on Thinkdigit Forum

The issue could be with your ISP. It could be someone logging into your account and thus gaining access to your assigned IP. Change your password from time to time if you have to. If you connect to the Internet through a proxy server run on your ISP end, then you are very likely to keep getting that message. Also, try clearing your browsers cache and cookies.

### PPPoE On Windows 98

How to connect to my broadband Internet connection through Windows 98? I have already connected to the same broadband using Windows XP from the same computer. I use the Ethernet port to connect the modem with my PC. Kindly guide me.

Aanand on Thinkdigit Forum

RASPPPoE is a PPPoE implementation made for Windows 95 / 98 / ME. Download it and unzip the files into a temporary folder. Uninstall any previous PPPoE software that you may have installed or got with your installation. Right-click on the Network Neighbourhood icon and right click on Properties. Click Add > Protocol > Add. Click Have Disk and point to the folder with the unzipped files. Select the INF file. Select PPP over Ethernet Controller. Go to Start > Run. Enter RASPPPoE and the application should run. Now create a dialup connection using the selected network adaptor.

### Get Help Now!

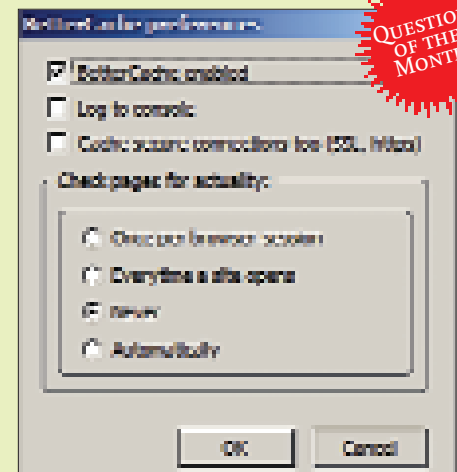
E-mail us your computing problems along with your contact details and complete system configuration to [sos@thinkdigit.com](mailto:sos@thinkdigit.com), and we might answer them here! Since we get many more mails per day than we can handle, it may take some time for your query to be answered. Rest assured, we are listening!

### Optimizing Firefox's Bandwidth Consumption

I use Firefox and it uses way more bandwidth than IE7 and Opera. I have set the cache size to 500 MB. It seems to take bandwidth to load recently visited pages despite the cache size. When I open Firefox it restores previous session but it uses bandwidth to load all the pages again. How do I force it to load from cache?

adithyagenius on Thinkdigit Forum

A lot of users use Internet schemes with data download limitations. Browsers like Firefox can really redownload many pages and images despite setting large cache. The problem is on the way pages are designed. A very good way to cut down on bandwidth is to install a Firefox plugin called BetterCache—<https://addons.mozilla.org/en-US/firefox/addon/6371>. Click on Install now to install the plugin. Restart Firefox then click on Tools > Add-ons. Click on Options for the BetterCache plugin. Check the radio button next to Never, under Check pages for actuality. This way Firefox will avoid looking for new versions of the pages or elements. The other solution you could try is to use a proxy server on your own system which caches pages better.



### Stopping Public Access To Printer

I want to protect my office printer from unauthorised use. I have a single user account and all office colleagues use the same computer. Is there any way to lock the printer?

goldy\_connect on Thinkdigit Forum

The easiest way to block access to printers is to first make sure the users using the same computer have separate accounts on Windows. Then, go to the Printer properties by clicking on Start > Control Panel > Printers and Faxes. Right-click on your printer and select Properties. Click on the Security tab and here you can set which accounts you want to give access to the printer and which you don't.

### System Instability

I have a desktop with a 19-inch Viewsonic LCD, 160 GB hard drive, Intel Pentium 4 3 GHz, i865g motherboard with 1 GB of RAM and Windows XP SP2. Everything has been running fine, but recently I have some problems. *GTA III* works fine but *NFS: Most Wanted* and *Carbon* crash! So will a graphics card solve my problem? I have an AGP slot so what is the best and cheap solution for it? Should I change the motherboard and I don't want to change my processor! Please suggest a solution for under Rs 10,000.

bhadkow on Thinkdigit Forum

The problem with crashing could be to do with overheating components. Check for CPU temperatures just after running some heavy games. If your processor crosses 70-75C then that could be your problem. Clean up your cabinet and fans. A complete system upgrade would be recommended if you are one who plays lots of games. If you want something temporarily, you could find an AGP ATI Radeon x1800 or x1900 line of cards for around or under Rs 5,000 if you are lucky but that won't fix your crashing problems. The Radeons will run the *NFS* series perfectly fine.

### Kaput BIOS

My BIOS has gotten corrupted. When my system boots up, it shows a message saying "BIOS ROM checksum error" and "Please insert

system disk" ("Award BIOS Bootblocker 1.0" is on the top of the page). So to correct this I downloaded the latest BIOS updates from the MSI site. I am going to get a startup floppy from one of my friends and flash the bios. Will a startup floppy created on my friends comp work on mine and will this solve the problem of the corrupt BIOS? Please help!

zodiac\_511 on Thinkdigit Forum

The BIOS ROM checksum error does indicate the corrupted BIOS. The latest BIOS update is just a file that needs to be inserted into the floppy drive. The floppy with the BIOS firmware on it will work perfectly fine on the motherboard and should fix the corrupt BIOS.

### False Alarm?

When I run Spybot Search and Destroy, it reports DSO Exploits. It appears to fix them, but when I run the scan again, it again reports the same DSO Exploits. Please help me, as I think that my system is at risk. I am running Windows XP SP2.

Yogesh Bendre

If you have SP2 installed, then you need not worry about these DSO Exploits warnings issued by Spybot because they are false alarms. Spybot removes the vulnerability by changing a registry value, but unfortunately, even the changed value continues to trigger this alarm, even though the Exploit has been disarmed already. To get rid of this annoyance, you need to do some registry editing. Navigate to HKEY\_USERS\DEFAULT\Software\Microsoft\Windows\CurrentVersion\Internet Settings\Zones\0. Look for a value called 1004 in the right-hand pane. The type of this value should be REG\_DWORD and its value should be 0x00000003. If this value does not exist, or if it exists but is the wrong type or has the wrong value, delete it and recreate it with the correct type and value. Repeat this step for the other entries listed by Spybot: HKEY\_USERS\S-1-5-18\Software\Microsoft\Windows\CurrentVersion\Internet Settings\Zones\0 HKEY\_USERS\S-1-5-19\Software\Microsoft\Windows\CurrentVersion\Inter





net Settings\Zones\0  
HKEY\_USERS\S-1-5-20\Software\  
Microsoft\Windows\CurrentVersionInter  
net Settings\Zones\0  
and so on (all of the entries in the HKEY\_USERS  
branch that do not contain the word “Classes”).

### Vanishing Space

After using the Automatic Update to install all the necessary updates for Windows XP, I found that the free space on my system drive has been reduced significantly. I remember that this cannot be accounted by the size of the automatic updates alone, because I see that more than twice that amount of space has been gobbled up.

Harish Chaturvedi

Windows downloads all the updates to a temporary folder and then installs them. However, it does not delete them after installation—that is why you find that a lot of your free space has been lost. Open Windows Explorer and go to the folder C:\WINDOWS\Software Distribution. Delete the folder called Download. This will free up most of the space that had been occupied. In Windows Explorer, go to Tools > Folder Options and select the View tab. Ensure that Show hidden files and folders is selected. Open the Windows folder. Locate the \$NtUninstall... folders. Note the name or KB number that follows Uninstall. Delete the folder. Start the Registry Editor. Expand SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall. Delete the subkey with the name noted above. Expand SOFTWARE\Microsoft\Windows\CurrentVersion\App Management\APCach. Delete the subkey with the name noted above.

### Prints Gone Wrong

When I try to print a page of a Web site from Internet Explorer, the text/image at the right margin is cut off.

Ashish Sharma

This problem is caused due to a bug in Internet Explorer, which is not able to determine the width of the printable area of the page. The better way to get rid of this problem is by installing of Internet Explorer 7, which does not have this bug. If you are unable to do so for some reason, you can print the page in another browser such as Mozilla or Opera. You can also try to use this workaround: Open Internet Explorer, open the web page you wish to print and go to File > Page Setup. Set the left and right margins to 0 and click on OK. Try printing the page again. If this does not resolve the problem, then click on File > Page Setup and change the Orientation setting to landscape.

### Dynamic Disk

I have a SATA 120GB drive. It has a primary and an extended partition. The extended partition has 4 logical partitions. I added a 320GB SATA drive and created partitions in it. The new disk shows up as a dynamic disk. What is a dynamic drive? I was creating an image of my Ubuntu partition on one of these

volumes and Acronis showed a warning saying the drive was dynamic.

Kenshin on Thinkdigit Forum

Dynamic disk is a type of initialisation that is done by Windows. Dynamic disks provide advanced features and volume management as compared to basic disks. The Dynamic Disk must have been initialized when you created partitions for the drive formatted them. Converting a Basic disk to Dynamic is possible without losing any data using Disk Management feature in Computer Management. Click on Start > Control Panel > Administrative Tools > Computer Management. To convert a Dynamic disk back to Basic, you will need to remove all the volumes on the disk which means you need to back up all you data on these partitions. Right-click on the disk you want to convert and click Convert to Basic Disk.

### Dead Links

I have been facing a weird problem—hyperlinks that are in my e-mails in Outlook Express do not open when I click on them.

Arshpreet Kaur

Make sure that you have a default Web browser configured. To make Internet Explorer the default browser, open Internet Explorer and go to Tools > Internet Options. Click on the Programs tab. Ensure that Internet Explorer should check to see if it is the default browser checked. Close Internet Explorer and reopen it. When you see the message “Internet Explorer is not currently your default browser. Do you wish to make it the default?”, select Yes.

Disable any third party pop-up blocking software that may be running on your computer.

You may also need to repair the file association for hyperlinks in the following way. Open Windows Explorer go to Tools > Folder Options. Click on the File Types tab and locate the entry named URL:HyperText Transfer Protocol. Click on Advanced.

Select open and click Edit in the Edit File Type dialog box. Make sure that the field Application to perform this action contains: C:\Program Files\Internet Explorer\iexplore.exe -nohome (if your default browser is Microsoft Internet Explorer) or C:\PROGRA~1\MOZILL~1\FIREFOX.EXE -url "%1" (if your default browser is Mozilla Firefox.) Please note: These paths may need to be modified if IE or Firefox are not installed in the default locations. Also keep in mind that the 8-character short path needs to be used for Firefox. The Use DDE box must be checked and the DDE Message: must be: “%1”,-1,0,,,,, (or “%1”,,0,0,,, for Firefox.). Also ensure that Application: is set to: IExplore (for Microsoft Internet Explorer) or: Firefox (for Mozilla Firefox.) Ensure that DDE Application Not Running: is blank. Ensure that Topic: is WWW\_OpenURL.



## HOW TO

# Create Your First Quake III Map

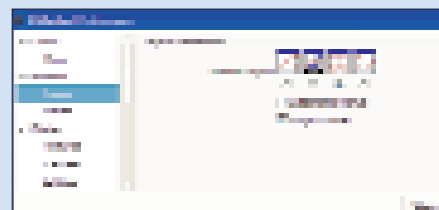
... it's not as hard as you'd think!

Rossi Fernandes

Quake III Arena is one of the best multiplayer games ever, and easily one of the most refined game engines ever made. To make your very first map in Quake III, you need a copy of the game (naturally) and GTKRadiant—which is freely available for download at [www.qeradiant.com](http://www.qeradiant.com). GTKRadiant is used to create maps for many games other than Quake III, so most of these techniques will be helpful in other games like Doom 3, Quake 4 and so on.

### Configuring GTKRadiant

When you start GTKRadiant for the first time, you're asked to point out to the location of your Quake III folder. By default, it points out to C:\Program Files\Quake III Arena. Make sure you change the path to your installed path, and remember to specify the game as Quake III Arena. When GTKRadiant loads, you will notice that the interface seems rather complicated. To make things a little simpler, we will change the layout of the viewports to 4 views by going to Edit > Preferences > Interface > Layout. Restart GTKRadiant and there will be three views showing the map through the X,Y and Z axis and the fourth one showing a real-time

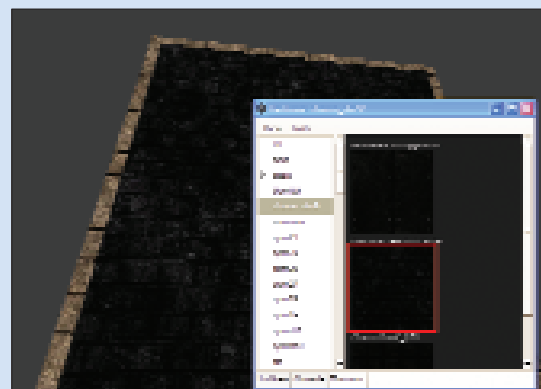


Changing GTKRadiant's default viewport layout is preferable—it makes things

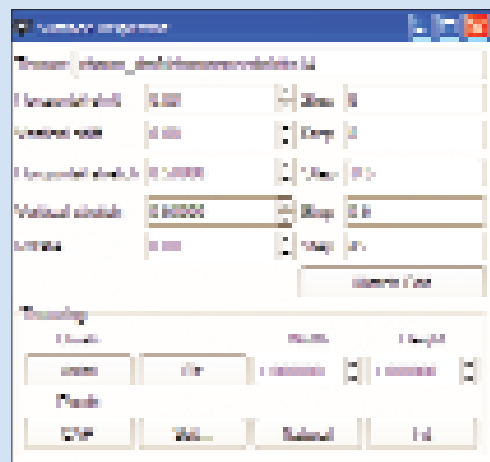
preview. To use the preview, right click in the window and use the directional arrow keys to move around like you would in the game.

### Creating Brushes

Brushes are the building blocks that make up the structures. The walls, the floor, the pillars are created with brushes. To create a brush, simply drag a sufficiently large box in one of the three views. In this example, we'll make a box and then make it hollow—like an empty room, but without windows. To make the box hollow, click on the Make Hollow button in the toolbar. The rotate, scale and move tools can be found on the tool-



Every surface you create can be given its own texture



Textures need to be moved into place and aligned using the Surface Inspector

bar above. While making the structure, you need to keep in mind that there are to be no leaks—no empty spaces leading outside the map. If required, make an additional hollow enclosure outside the main structure.

### Adding Textures

A map can't have one single texture painted all over—we now need to set texture for each of these surfaces. Hold the [Shift] key down and left click on a surface. Now, click on the Texture Browser button, or hit [T]. Click on a category of texture from the left and click on the texture on the right to apply the texture on the surface. Depending on the size of the texture and the object, the proportions will be messed up. To fix this, start the Surface Inspector—View > Surface Inspector or [S]. Here you can select the surface in the same manner and change the alignment and tiling for the texture.

### Adding Gameplay Elements

Things like weapon ammo, armor, jump pads and weapons contribute

to a fun-filled map. A spawn point is the bare essential—to add one, right click on the view where you want it added and select Info > info\_player\_deathmatch. You'll need many more depending on the number of players you plan on having in your map or you'll have all the players spawning at that single spot. Similarly, place weapons, armor and ammunition. Lights are absolutely necessary unless you plan on playing hide-and-seek in the dark. Right-click in the top view and select Light. You can give it an intensity and colour here.

### Test Run

To compile, first save the map to (File > Save). Then, click on the Build menu and select one of the compile presets. Compiling the map can take a while if it's very detailed and has many lights in it. If your compile fails, there's a good chance that there are leaks in the map—GTKRadiant will tell you where they are.

To test the map, copy the compiled .bsp file from the location where it was compiled to

your Quake III Arena\baseq3\maps folder. Start Quake III. Make sure the pure server is turned off by typing /sv\_pure 0. Type /map mapname or /devmap mapname and your map should load.

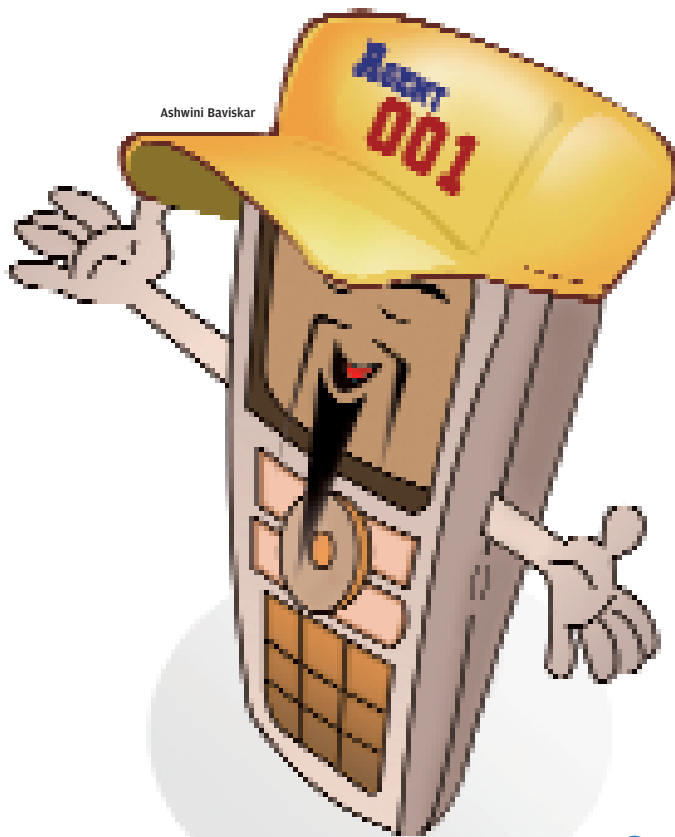
### Packing Up

When you feel you are satisfied with the results, its time to pack your map up so you can send it over to your friends so fragging can commence. Create an empty folder called Maps and copy the .bsp file into it. Next, use a compression tool such as WinRAR or WinZip and create a ZIP archive out of the maps folder. Rename the .zip file to .pk3. Now you can give your friends the .PK3 file to be dumped into the BASEQ3 folder of their installation.

If you are the one hosting the server, then you can have Quake III automatically send the map from your machine. Just make sure the clients use the command /cl\_AllowDownload 1 and you use the command /sv\_AllowDownload 1. ■

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# Cheap Mobility

**Agent 001 goes on a hunt for an inexpensive phone—and stumbles across some good alternatives**

There was a time when your beloved agent dropped his beloved cell phone, and then his beloved was no more. Thus began the hunt for a new beloved, but this time I couldn't afford to spend a lot (no more than 5,000 bucks). So I began my hunt for a cheap, yet feature-rich cellphone (does it even exist?), and I was joined in this quest by my faithful sidekick... err friend, who to his credit dropped his phone into his shaving mug! Our adventures took us from shops in Nerul and Vashi (Navi Mumbai) to the dusty, teeming streets of the western suburbs of Mumbai.

Buying a cell phone isn't easy, especially when money is a serious limiting factor, and manufacturers compete a lot in this segment—where features like expansion, Bluetooth, FM radio, MP3 support and decent cameras are key words, and one little omission may mean a product that is a market failure.

I'd heard of the new Chinese cell phone wave that has swept across the country. Manufactured on the cheap, these cell phones largely look alike

(with a few exceptions), with number keys and a large four way directional keys and centre key all on the front facia. Their screens range from 2.2 to 3.0 inches, and nearly all of them have touch screens. These devices are based on their own proprietary firmware and I'm pleased to report that the menus are rather intuitive.

I was curious to know why exactly these devices are so cheap (Rs 5,000 to 7,500). If a Nokia or Sony Ericsson phone were to have all these features, the price would be no less than Rs 15,000. Well, Chinese manufacturing processes are much cheaper for one. Secondly, these phones don't have any specific brands, and there are no advertising / marketing costs involved. Equally to blame for their cheap prices is our government—yes, for once our legislature has actually favourably affected prices! You see, such phones are carted over the border—smuggled in—and so no duties are paid on them. But this is a double-edged sword—with cheaper prices, you also lose out on a

bill, and warranty. Oh yes—your warranty lapses as soon as you walk out of the shop door with one of these phones. Vendors of such phones are quick to point out that they're repairable both on the software and hardware level. Of course, the quality of such a service is at best dubious.

We came across many such phones, the peculiarity being that the model number is only written on the box, and not printed on the device itself. Also, some phones don't have any model numbers written anywhere! Infinity was one such branded device at Rs 4,500, with a touchscreen, FM radio, Bluetooth, MP3 playback and expansion. Other model names were downright weird like the 0078 priced at Rs 4,000. Yet another model the CT200 was priced at Rs 6,000, and seemed to have a better build quality. From chats with previous owners of such phones, we discovered some people who were very happy with their devices and happily reported trouble free service, but a few people have had problems.


Coming to the branded stuff, we came across a model called Bleu 151X for Rs 1,300. Nokia has a list of phones in this price bracket—the very basic Nokia 1200 (monochrome display, no FM radio) for Rs 1,350 and its colour equivalent, the Nokia 1208 (Rs 1,800), the 2630 (with MP3 support, FM radio) for Rs 3,200. A little higher up, the Nokia 3306 comes with MP3 playback, 1.3 MP camera, colour display and memory expansion for Rs 4,900. The basic Sony Ericsson J121i was quite popular, good music, and a nice screen for just Rs 1,800. All these phones come with a one-year warranty. From Motorola, we came across their F3, which is very basic at Rs 1,140, and the W205 priced at 1,650 bucks. The cute flap-based W220 was priced at Rs 2,600, while the W375 was priced at Rs 3,300—two screens but no expansion.

We were very tempted to throw caution to the wind and go Chinese—the features that their cell phones have are serious value for money. My only issue was warranties. Peace of mind makes a difference to me, so I ended up shelling out 4,800 bucks (bargained for a 100 buck discount) for the Nokia 3306—I gave up a number of features mainly because all I needed my phone for was to make calls and the odd SMS. My friend decided on the cute and compact Sony Ericsson J121i, and when I teased him about the Chinese phones and what he was giving up he simply told me that he'd buy one after I took the plunge. Which won't be for a while now—I bought a rubber phone cover—so this time my beloved is well protected from the daily bustle of urban life. ■


*agent001@thinkdigit.com*




## Sound Buy

 I am planning to buy a PMP which has voice recording and FM radio. I wish to purchase Apple's iPod Touch but I am unable to get my hands on it. My budget is Rs 13,000.


**Anirudh Jain**

 Firstly, Apple's iPod Touch doesn't have support for FM Radio or voice recording. If you want a touchscreen with the functions you've mentioned, I suggest the Cowon D2. It's not as flashy and doesn't have as big a screen, but what it does have is terrific performance, with unmatched features. At under Rs 10,000 for the 4 GB version, the D2 is your best bet. It's also expandable.


## Phone Call

 I am looking for a cellphone, and these are my needs: Net browser XHTML / HTML, 3G, Screen (320x240), FM radio (stereo), fast processor (200 MHz or more), video player, 2 MP camera. My budget is Rs 14,000.


**Arnav Sengupta**

 I suggest you take a serious look at Nokia's N73 Music Edition. At Rs 14,000, it will give you strong multimedia capabilities with a 3.2 MP camera, good music playback, and 2 GB of storage via MiniSD that is bundled with the phone. 3G browsing is a sad misnomer in India, and the browsing speed will be bottlenecked by your service provider and not your GSM handset, so I suggest you forget about this feature—it's useless for now.


## Plug And Play

 I want to buy a pair of earphones for around Rs 1,500 for my Sony Walkman. I would prefer Sony earphones but others will also do. I have a Sony NW-E003F Walkman.

**Nikhil Sonthaliya**

 For in-ear type earplugs I usually suggest Creative's EP630. These earplugs have become very common and at Rs 900 they offer terrific value for money. I've used them myself and must say that for the price, the performance you get is pretty good. Beware of duplicates though—their popularity has spawned counterfeit look-alikes. Please insist on a bill when you do purchase them.

## Board Games


 I'd like to purchase a motherboard. But I am confused whether to go for an Intel- or NVIDIA-based motherboard. My basic need is a good onboard graphic support. I'd also like to know about the performance and onboard graphics of the chipset designed by Abit.

**Jidnesh Chaudhari**


 Abit is a motherboard vendor like ASUS, MSI, Gigabyte, Foxconn, etc. They do not manufacture onboard graphics chipsets. Since

you mentioned Intel, I take it you are going for a system based on an Intel Core 2 Duo processor. In that case, NVIDIA has better graphics solutions than Intel or AMD. The new GeForce 7050 is a good onboard solution. I recommend MSI's P6NGM based on their GeForce 7050 chipset. It's priced at Rs 4,800. I suggest you also look at 2 GB of system memory since the onboard solution will hog some main memory for video purposes.


## Top Choice

 I need a laptop with the following uses and parameters in mind: basic office work, watching movies, music, browsing, basic gaming. My budget is Rs 50,000. I want a minimum of 1 GB RAM and a 160 GB HDD, webcam and DVD writer. Lastly, is it safe to buy a laptop in SP Road, Bangalore?


**Ashwin S**

 Your best bet seems to be Dell, and considering that all Dell laptops ship from Bangalore you're well covered if you're in the city. Dell also has a very cool five-year warranty. Regarding your preference, you haven't mentioned the size of screen you want or the processor. I am assuming a 15.4-inch screen. I'm also going by the assumption that you'll stick to Windows Vista, and opt for 2 GB of memory in lieu of 1 GB. The Dell Inspiron 1525 comes to Rs 38,000 with a 2.0 GHz Core 2 Duo processor and 2 GB of RAM. If you want to spend more on something faster and more slick looking, the Dell XPS 1530 will come to Rs 52,000 with the same processor and a 128 MB GeForce 8400GS graphics card that will handle casual gaming easily. Both laptops come with DVD writers and 2 MP webcams, so all your needs are covered.

## Right Mix

 I'm upgrading my PC with a Quad-Core processor, Gigabyte GA-P35-D53R motherboard, 2 GB RAM, a Palit 8800GT card. I'm confused about QX6700 and Q6600 processors, which one is better? Which is better—the quad core 'QX' or 'Q'? And ultimately the power supply—is 550 watts sufficient? Please give the prices also. You can change my configuration if you feel something better is available.

**Zubair Mustahid**

 The QX6700 (2.66 GHz) is an *Extreme Edition* and while it is a faster processor it's also insanely expensive. The newer Q6600 (2.4 GHz) is also available and it's also reasonably overclockable. A 550 W power supply from CoolerMaster or Antec should suffice, but I recommend a little more juice just to be on the safer side, especially if you plan on more than one HDD. Look for CoolerMasters eXtreme Power 650W or Antecs Trio 650 watts. Go for 800 MHz DDR2. For the motherboard, I recommend the Abit IP35-E, for Rs 7,500—superb value for money. Your choice of graphics card is good—stick to it. ■



**Ask Away!**

Want a tech product, but don't know how to go about buying it? E-mail [agent001@thinkdigit.com](mailto:agent001@thinkdigit.com) with your complete contact details, and he might answer them here! Please note that Agent001 only answers purchase-related questions in this space.



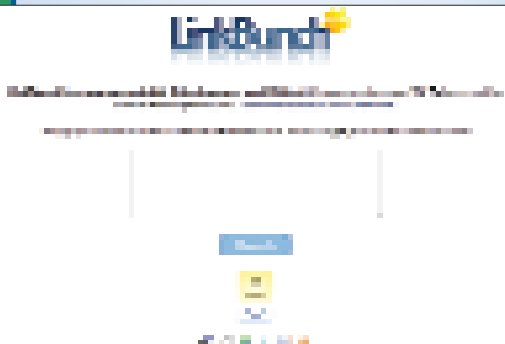
# Summer School

Samir Makwana

Even more educational material for your grey cells this month

## Linkbun.ch (www.linkbun.ch)

Post examinations, students would want to enjoy mailing, chatting and surfing. Holding several links on the same topic like Photoshop or PHP tutorials is always convenient for later reference. Enter Linkbun.ch, which functions as its name indicates—it bunches links. Imagine—you don't have to remember URLs of 20 favourite sites but simply a short and sweet URL!



You might've seen us using TinyURL or SnipURL for shortening long links. Linkbun takes several URLs and bunches them into one single and short URL which remains active for a long period. At the homepage there's a box where you've to paste all your links and press "Bunch".

The key feature of Linkbun.ch lies in its "no automatic redirection" function where you can access a bunched page with lots of links. This totally eliminates the possibility of being redirected to a malicious site.

Firefox fanatics can also download the Linkbun's Firefox extension from <http://linkbun.ch/linkbun.xpi> (check <http://xrl.in/18v> for how to install) to bunch their links on the go. The only thing that site needs to add is editable or pre-customisable links for the bunch any user wishes to create. It is a totally free site with no sign-up hassles. Here is a sleek resource and collection storage maker for Web crawlers who care for every byte from their bandwidth!

Are you looking for free educational media online? Log on to openculture for educational audio books, podcasts, videos, free online courses, etc. The site is a free library of educational and cultural resources.

Want to learn a foreign language for free? No problem; open culture will lead you to several podcast lessons for you to pursue online education. There's a library of podcasts on technology, culture, foreign languages, literature, law, etc. available.

Like any other educational resource site, openculture too offers digital books that will increase your educational quotient. You get additional help on how to download podcasts and videos on your iPod. It's a site carrying varied collected resources available for free from the Web so that you need not waste time searching for the obvious. You also get details of various courses being offered at various global universities.

## WhatIsThatFile (www.whatisthatfile.com)

At times, downloading, installing and uninstalling several programs could lead you to a confusing and dangerous situation. When you're on a hard drive cleaning spree, you might be wary of deleting an important OS file instead of a junk one. Using Task Manager also doesn't serve the purpose. So what do you do when you come across a file with a weird name? We introduce you to WhatIsThatFile.com which helps give you more details about that weird sounding file name.

This service will help you know about the thousands of files that reside on your hard drive and run with the OS—and the ones that stay dormant. If you search for these files in Google, you may not get the expected result—the engine is an algorithm, after all. Again, at times, your anti-spyware and antivirus programs may not be as secure as you think. The possibility of malware files residing on computers are high for those who stay connected to the Web.

Functioning like a mini-wikipedia sort of a database, the site allows you to edit information. In case you don't find information about the files you're looking for, then just submit its inclusion.

Being community driven, a 100 per cent guarantee of accurate information cannot be expected. But the site keeps you updated about popular viruses, malware and Trojans. However, the home page could've been better if the Google ads weren't placed right on the top and bottom—which may distract you. One can also contribute by checking the to-do list database and help users identify unknown files. A nice resource to clarify your doubts about certain files, add more knowledge about them and also keep your hard drive clean!



## openculture (www.openculture.com)



This is a nice place to look for free media resources which can be downloaded and used as per your convenience.





SECRETS THAT KEEP YOU AHEAD IN THE RACE

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## LINUX MINT

Today we're looking at Linux Mint ([www.linuxmint.com](http://www.linuxmint.com)), another distribution derived from Ubuntu Linux. They claim it's very user friendly but it's also very appealing in looks. While most of the tips today were tested on Linux Mint, they will still run perfectly fine on your Ubuntu installations as well.

### Restarting Gnome

Rebooting an operating system to get changes to come into effect is irritating because it's really slow and most of lack patience. When you're busy tweaking and want Gnome to be restarted every few minutes, you can restart it without rebooting the entire system. Save your work first and then press [Ctrl] + [Alt] + [Backspace]. Gnome will restart and you'll be returned to the login screen without rebooting within moments.

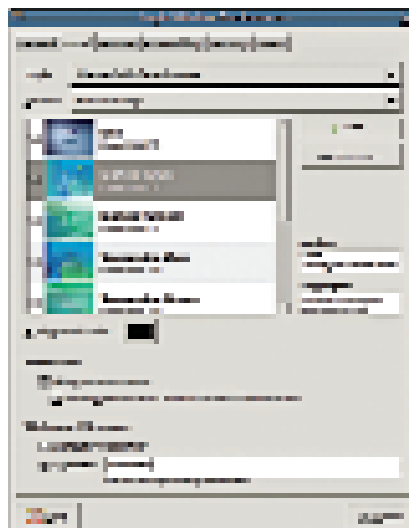
### Automatically Logging Into Your Distribution

Linux Mint and even Ubuntu have the option of having your user name automatically logged in when your PC boots up. That way, you don't have to enter your user name and password every single time. It's also useful when you use remote desktop to login to Linux and the VNC server can't be accessed until you login.

In Linux Mint, click on the Start button and then click on Administration > Login Window. Enter your password and then click on the Security tab. Check the box for Enable Automatic Login. Use the dropdown menu to select the user to be automatically logged in.

### Changing The Login Screen Theme

There's no denying that the login screen on Linux Mint looks very nice indeed. After a while, it gets boring and is always better to have a fancy theme greet you during login. Click on the Start button. Next, click on Administration > Login Window. Click on the Local tab and you can choose one from among the many themes in the list. A custom welcome message can be set using the text bar below. Sites like [www.gnome-look.org](http://www.gnome-look.org), <http://art.gnome.org/> and [www.customize.org](http://www.customize.org) have a large collection of themes, which you can download. Look specifically for GDM themes. New themes can be installed by clicking the Add button and browsing to the loca-



A variety of login screen themes are present in Ubuntu and Linux Mint

tion of the theme. Click Close when you are done.

### Enable Complete Previewing Of Files In Nautilus

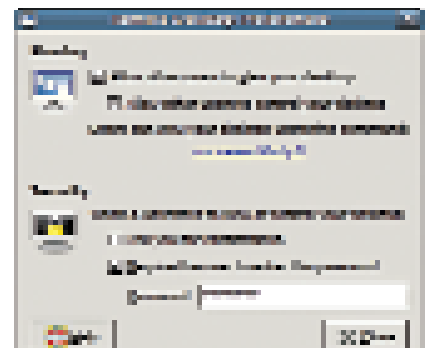
When you're using Nautilus to browse files, especially ones on a network, you may notice that some of the files do not generate previews like they do on your hard drive. This is because, by default, Nautilus only generates previews for local files. There is another limitation—only previews of local files smaller than 5 MB are generated.

To change these default settings, start Nautilus and then click on Edit > Preferences. Click the Preview tab. Here, you can change the values in the dropdown menu from Local Files Only to Always to Have previews generated for all locations. The limitation for files of certain sizes can be disabled by clicking on the dropdown for Only for files smaller than and Set the size from 5 MB to something larger. Click Close when done.

### Remotely Accessing Your Linux Desktop

Say you've installed Linux Mint on a spare unused machine but don't have 2 monitors, you can use remote desktop to access the machine through a network. Remote desktop runs on VNC, so you can use any VNC client to connect to your server. TightVNC [www.tightvnc.com](http://www.tightvnc.com) is one VNC server/client that can be downloaded for free. You can also choose to download just the viewer.

To enable remote desktop, click on the Start button. Next, click on Preferences > Remote Desktop. Check the Allow other users to view your desktop checkbox and the one to Allow users to control it. If you want to have a password to be entered for security reasons, you can enable that too. By default, you need to authorise the user to be allowed access to the desktop, so disable the checkbox for Ask you for authorization.



Remote Desktop can be set up to allow secure remote control of your Linux PC



## Stop Your PC Speaker From Beeping

Speakers will beep and they will beep every time there's an error or alert that occurs. These can be very disturbing to the user and others around. The speaker can be turned by a simple command that you can type in a terminal or at the console—`modprobe pcspkr`. Should you decide that you need the speaker again, you can turn it back on by entering `rmmod pcspkr`.

## Using Better Smoothing

Like Windows, where LCD users choose ClearType fonts for LCDs, Linux too has a font smoothing option that can be used. Go to **Start > Preferences > Appearance**. Click the **Fonts** tab on the top and select the **Subpixel Smoothing fonts** on the bottom-right. Click **OK**. More advanced settings for the font smoothing can be changed by clicking on the **Details** button.

## Moving The Mouse Cursor Using The Keyboard

There are those rare occasions when your mouse is not detected or stops responding. You can use the Num pad on the keyboard in Ubuntu, to move your mouse around. Press the **[Ctrl] + [Shift] + [Num]** Lock keys to enable this mode. Now use the direction keys on the Num pad to move the mouse pointer. Use the **+** sign to single click, **0** to right click and **[Enter]** to execute a program. Press **[Ctrl] + [Shift] + [Num Lock]** again to disable it.

## Restarting X And Killing Applications

If due to any changes that you make or any stability issues that you maybe facing, restart the X server. A quick way to do this is to press **[Ctrl] + [Alt] + [Backspace]**.

## Delete Files Permanently

Nautilus sends all deleted files to the Trash by default. Pressing the **[Del]** key normally sends files to the Trash. To permanently delete files, bypassing the Trash, the best way is to hold the **[Shift]** key and then press the **[Del]** key or right click on the file and select **Delete**. If the option isn't available, start Nautilus. Go to **Edit > Preferences > Behavior**. Make sure the box for **Include a Delete command that bypasses Trash** is enabled. Click **Close**.

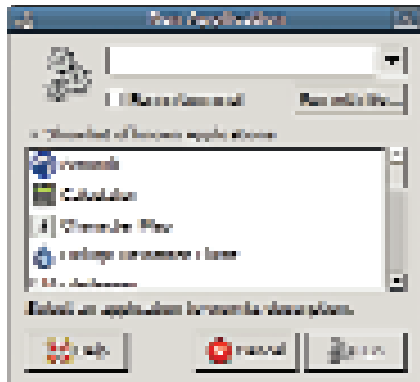
## Switching Virtual Desktops Quickly

Linux distributions have had virtual desktop from a very long time. They are useful to categorise and use each

desktop for a different task. That way you can have all your messengers in one window, browser windows in another and so on. The quickest way to switch virtual desktops is to hold down **[Ctrl] + [Alt] + left arrow** or **right arrow**. The left arrow takes you to the previous desktop and the right arrow takes you to the next. You can also move applications from one workspace to another by right clicking on the titlebar of the application, choosing **Move to Another Workspace** and then selecting the workspace.

## Quick Run Applications

Windows users know the **[Windows] + [R]** shortcut all too well. It's a quick way to run applications but Linux Mint and Ubuntu Linux users have a similar feature they can use. Hold down **[Alt] + [F2]**. Here you can type in the name of an application or location of a folder. You can also choose



The Run Application box allows applications to be executed quickly

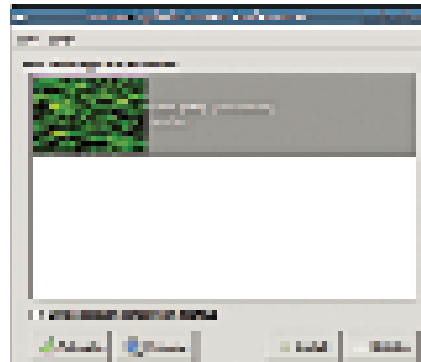
from a list of applications to run. Click on **[Show list of known applications]** and you can choose one of the many installed applications to run.

## Viewing Folder Trees

In Nautilus, files are displayed like in any other file manager. Nautilus has an option where all the sub-folders and the files can be displayed as a tree something similar to what Windows Explorer does to machines on a network. First, change the view mode to details by clicking on **View > View as List** or by pressing **[Ctrl] + [2]**. To open up a tree, click on the triangle on the left of the folder.

## Installing A Splash Screen

A custom splash screen can be used where all the different modules load when you log into X. For this, you can do things the hard way but the simplest way to download a tiny application called `gnome-splashscreen-manager`.

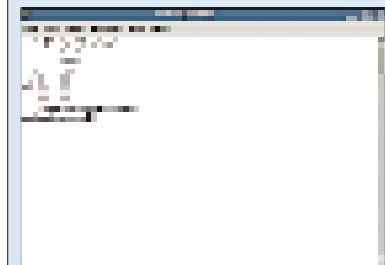


gnome-splashscreen-manager lets you set a custom splash screen

## Easter Eggs

### The Book of Mozilla!

Firefox like any other browser has the **[about: address]** that can be entered. For example, **[about:config]** loads up the advanced preferences windows where values for all the variables in Firefox can be accessed. Enter **[about:mozilla]** and you will see an extract from "The Book of Mozilla". The entire list of extracts can be viewed at [www.mozilla.org/book/](http://www.mozilla.org/book/)



apt-get's ASCII cow

### Aptitude Easter Eggs

Aptitude is an easy interface for package management. There are a few Easter eggs hidden inside aptitude. **[apt-get moo]** should give you a funny little cow as ASCII art. Next, try **[aptitude moo]**, then try **[aptitude -v moo]**. Keep adding an additional **[v]** to the earlier parameter and you'll get a funny sequence of messages.

### Something fishy about Gnome

Gnome has an Easter egg, which is a fish that swims about on the screen. The only way you can actually see it, is by pressing **[Alt] + [F2]** to get the **[Run Application window]**. Enter **in**, free the fish and click **[Run]**. A small fish will appear from one corner of the window, making its way to the other side. Click on it and it will dash back again from where it came.

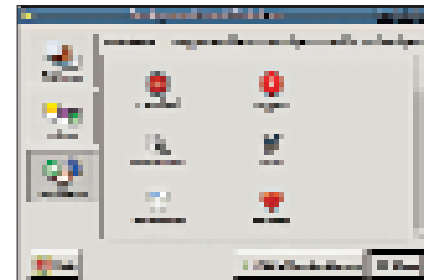
Start up the Package Manager through the **Start** button. Search for `gnome-splashscreen-manager` using the **Search** button. Check the box for it and choose to install the application. Any dependencies required can be downloaded too. When installed, press **[Alt] + [F2]**. Enter `gnome-splashscreen-manager`. Click on the **Install** button and browse and select the image that you want to use as your splash screen. Click **Activate** after choosing the splash screen of your choice.

## Autocomplete Search In Terminal Or Console

A complete history of all the commands is stored in a file in your home directory called `.bash_history`. Linux already has `autocomplete` that you can use by pressing the **[Tab]** key while entering a command. A more useful feature is the `find` feature, which gives you the closest search result from the history. That way, you can type large commands that you normally wouldn't remember. To use this feature, press **[Ctrl] + [R]** and then start typing the command. As you type, the closest result from your history will be displayed. Press **[Enter]** when you have the right command.

## Adding Visual Tags To Folders In Nautilus

Nautilus allows you to tag folders or files using artwork called emblems. Start



Tags can be added to any file or folder by a simple drag and drop action

Nautilus and go to **Edit > Backgrounds and Emblems**. Click on the **Emblems** button and then drag and drop emblems from the list to a file or folder of your choice.

You can also import your own custom emblems by clicking on **Add a New Emblem**. Enter a new keyword and click on the **Image** button. Choose from one of the existing images or click on **Browse** to select a different image. Click **OK**.

## DELUGE

Deluge is a BitTorrent client that runs on Windows, Linux and MacOS X. It's not as small as `µTorrent` (which Windows users adore) but it still has loads of features and

more importantly, support for plug-ins. We're using the latest 0.5.8.6 version on Windows and we're looking for some of its features that can come handy while migrating to it and some others that match the features in other clients.

## Getting Deluge On Linux

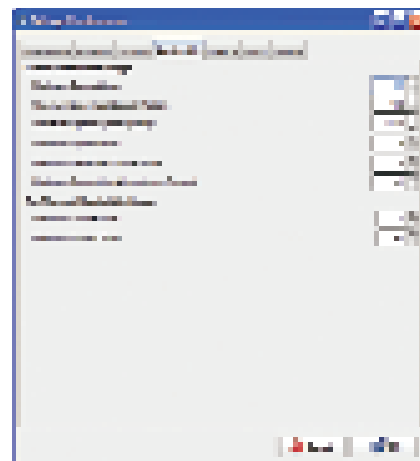
Deluge most likely doesn't come installed with the distribution so you'll have to download it. You can download it from [www.deluge-torrent.org](http://www.deluge-torrent.org). If you're on Linux search for Deluge using a package manager such as the Synaptic Package Manager. Check the box and click on **Mark** for installation. Click on **Apply** to have it downloaded and installed.

## Running Deluge In The System Tray

Deluge like other applications such as download managers, instant messenger and BitTorrent clients can be run in the system tray all the time. To enable or customize the way Deluge runs in the tray, click on **Edit > Preferences**. Click on the **Other** tab and make sure the checkbox for **Enable system tray icon** is enabled. Clicking on the **Start in Tray** checkbox will put Deluge in the system tray when you initialize it. You can even assign a password to make sure no one else can open Deluge. Click the **Password protect system tray checkbox** and enter a password. Click **OK** to save the changes.

## Tweaking Connection Settings For Your Speed

BitTorrent clients need to be tweaked and set up right or you end up with very bad speeds. Upload speeds need to be high as well, to get a proportionate download speed. Click on **Edit > Preferences** and then on the **Bandwidth** tab. Here, you can make changes to the number of connections being made by your BitTorrent client.



Tags can be added to any file or folder by a simple drag and drop action

You can also set the number of simultaneous downloads. If all this is rather confusing, you can also use the wizard which asks you for your connection upload speed and sets all the other parameters for you. Go back to the main Deluge interface and click on **Help > Run Configuration Wizard**.

ISPs can also try and throttle down BitTorrent clients and every single BitTorrent client has been implementing features to try and bypass this. Deluge too has an encryption feature that can be enabled by clicking on the **Network** tab under **Preferences**. Select the dropdown menus for **Encryption for Inbound** and **Outbound** as **Enabled**. If your ISP blocks certain BitTorrent ports, making changes to the default port range of 6881 to 6889 to something else can help too. Clicking **[Random Ports]** will set a random port every time Deluge is run. If you want to check if the port is open and accessible from the Internet, click the **Test Active Port** button. A page with the result appears. Click **OK** and restart Deluge.



Other than setting the connection speed and ports for your connection, enabling encryption can also help achieve higher speeds

## Downloading Select Files

When a torrent contains a folder or multiple files, you'll notice that you aren't able to select just a few files for downloading like you would in other clients such as `µTorrent`. To select specific files, click on **Edit > Preferences > Downloads**. Leave the checkbox for **Enable selecting files for torrents before loading checked**.

## Automatically Download Torrents

Deluge can automatically download torrents that have been put into a folder—you need not open every single torrent to make Deluge download it. To enable this feature, first create a folder where all your torrents will be placed. Click on **Edit > Preferences > Downloads**.





# Compiling From Source In Linux

Ever been too scared to install a program that wasn't an RPM or DEB?

Bhaskar Sarma

In Windows, installing software is a matter of clicks. In Linux, however, there are quite a few ways to skin the cat. Depending on the distribution you have, software can be downloaded in the form of either RPM or Deb packages. Again, you can compile software directly from source code—download the source code which comes in a tarball, unzip it and then compile it. In fact, this is the way source packages were distributed in the old days, and you might still have to go by this route in some cases.

However, to most people out there, compiling from source still feels like voodoo. Here is a quick guide to all that you need to know about compiling from source and what goes behind the scenes, without leaving anything to chance.

## Unpacking

Command to use: `[tar xvzf mypackage.tar.gz] or [tar xvjf mypackage.tar.bz2]`

This is the first thing to be done when you download the software. All the source files, associated libraries and documentation are distributed as compressed archives called tarballs. They are compressed using either gzip or bzip2, and hence the different extensions and the slightly differing switches used in the command.

After unpacking, a directory will be created with the name of the package in the destination folder. Change the directory using `cd mypackage` and then use `ls` to explore the directory tree. Make sure to read the readme, install and other documentation. Some packages might need some additional libraries or might suffer from dependency issues, so it makes sense to know what's needed.

## Configuring

Command to use: `./configure`

After you have unpacked the tarball and have also solved any dependency issues by installing required libraries it's time to go to the next step: configuration. You have to run the command while inside the installed package directory. This command does not change anything substantially. It basically does a house-

keeping job, checking whether all the required resources in the form of system libraries are present and then assigning values for system dependent variables. Various switches can be used along with the `./configure` command to change the behaviour of the program. For example, appending `-quiet` would stop printing the checking... messages during the configure process. If you know what you are doing you can use `-no-create` to inspect the output files before they are created. Using `-prefix=mydirectory` you can change the path where the Makefile will be created. The sample output of a configure command will look something like this:

```
creating cache ./config.cache
checking for extra
includes... no
checking for extra libs... no
checking for a BSD compatible
install... /usr/bin/install -c
checking whether build envi-
ronment is sane... yes
checking whether make sets
${MAKE}... yes
checking for working
aclocal... found
checking for working auto-
conf... found
checking for working
automake... found
checking for working auto-
header... found
checking for working make-
info... found
checking for a C-Compiler...
checking for gcc... gcc
...
creating Makefile
creating kdevelop/Makefile
creating po/Makefile
creating kdlgloder/Makefile
...
creating config.h
```

After the `./configure` command has run—during which you will see a bunch of messages scrolling up the screen in rapid fire sequence—a Makefile will be created. This Makefile is then used to build the binary which then needs to be installed.

## Building

Command to use: `make`

The `make` command uses the Makefile to create installable binaries. Binaries are the Unix equivalent of executables, or .exe files. The `make` com-

mand is time consuming and results in a whole bunch of messages scrolling across your screen. This part is going to take a lot of time, depending on the package being compiled as well as the system configuration. There will be another bunch of messages scrolling across the screen, sometimes with warnings about some resource being absent. If all is okay, it will display the command prompt. If however, there is some problem it prompts you with appropriate status messages.

Most of the errors in the compilation process are due to missing or incompatible libraries. Say you have a software that depends on GTK+, with the latest version not present. You might then have to download it from the Web. For the most part, if your OS is new you won't have any problems. However, you can always search software repositories provided by your OS vendor. Look for development versions which end with `-devel`.

## Installation

Command to use: `make install`

The `make install` command is the equivalent of point and click routine on Windows. The installation time will again depend on how big the software is. Before doing this, you need to log in as root. Since you have followed the best practices and have up till now done everything from a user account type `su` (sudo for Ubuntu) and enter the root password. After getting administrator privileges use this command to install the software. You will have no glitches and every thing will work out fine. Don't forget to log out by using `exit` when you are done.

The program will be usually installed in `/usr/local/bin` (check our *Know More About* on Linux Directory Structures in the February issue for more details). However, if you have specified a path during the configuration process, you will have to navigate to that directory to access the program. In most modern Linux distributions, you will see a graphical shortcut and will have to click there to launch the program. It's that simple, really.

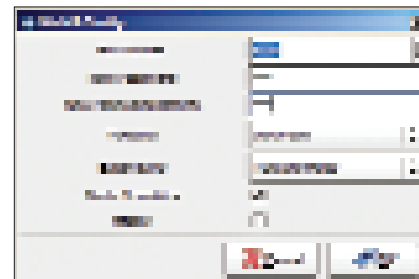
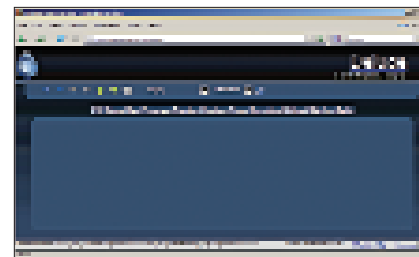
Oh, and if you need to uninstall the program just delete the binaries. In some cases, you could use the `make uninstall` command to uninstall the program. Get cracking. ■

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Click the checkbox for Autoload all torrents in and then click the dropdown menu and choose Other. Using the file browse, navigate to the folder and click Open.

## Plug-ins

To keep resources consumption to a minimum, Deluge has almost all of the plug-ins disabled and so only the very basic features are available to the user. To enable any of these features, click on `Edit > Preferences > Plug-ins`. All the plug-ins associated with Deluge are available here and can be enabled by clicking on the checkbox next to the plug-in name. Here are some of the most useful plug-ins and how handy they are.



Many of Deluge's functions can be made accessible remotely using the Web User Interface plug-in

## Web User Interface

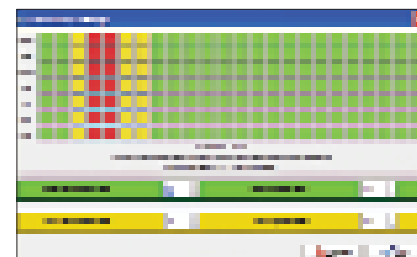
Deluge—like µTorrent and Azureus—can be controlled through a Web browser. Enable the Web User Interface plug-in from the list by clicking on its checkbox. Click Preferences and set the port and the password. You can also choose a template and button styles here. Click OK once you are done.

To access the Web interface, open your browser and visit the URL

`http://Your_Machine_IP:8112`. If you have already changed the port, then use the new port number instead. Enter your password and click Submit. You can now control pretty much everything in Deluge from here.

## Scheduler

With the help of the Scheduler plug-in, it's now possible to be slow down or stop the torrents from downloading altogether between a given time period. Enable the Scheduler plug-in and click on the Preferences button. In the chart displayed, click on the time slots once to make it yellow and then again, to make it red. The yellow blocks limit the speed and the red completely halt download. Before closing the



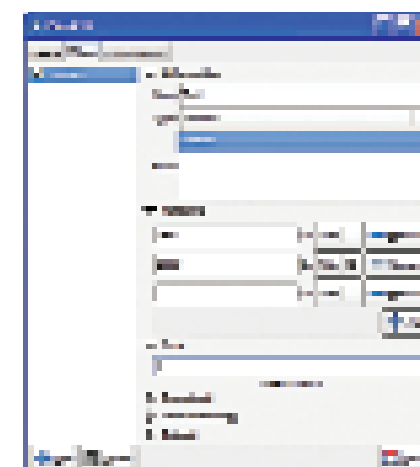
The Scheduler plug-in can be used to throttle you're your downloads during specific time periods

window, set the limited speeds for downloads and uploads, then click OK.

If you just want to be able to cap speeds of specific torrents on demand, you can do so by enabling the Speed Limiter plug-in. You can now right-click on a torrent and click on Torrent Download Speed and Torrent Upload Speed.

## FlexRSS

RSS feeds are a great medium for receiving quick updates from a site or service. The FlexRSS add-on allows users to receive RSS feeds from sites. These updates are used by the Deluge so it can download any file from that site without the user having to manually download the torrent and then start it. After selecting the FlexRSS plug-in, click on Preferences. To add a new entry, click on New. Enter a name for the feed, the



Deluge can use RSS feeds to automatically start downloads of the latest pod cast releases for example

URL and the interval after which it is refreshed. Next, click on Filters. Here you can adjust the scope, so that only the selected files are downloaded. Give the filter a name and then under patterns, enter the name of the files that you want Deluge to look for. Click Add to add any more keywords to look for. Click Save then ready.

## Torrent Search

The torrent search plug-in allows users to look through multiple torrent sites. Check the box for the Torrent search. A small search textbox will appear on the toolbar of the Torrent window. Click on Preferences to add your own search engines. Enter a name for the search engine or site and then enter the URL for the search itself, which you can find on the site. Use the URL, but replace the search keyword part to `{query}`. Click Add to add the new search engine. Click OK. You can now use the dropdown on the search bar to select your search engine.

## Network Activity Graph

The network graph is a missing feature, but like the others, it can be enabled through the plug-in window. The network activity graph feature is one of the better graphs you can find in a BitTorrent client and this one can be customized as well. Check the box for Network Activity Graph and choose Preferences. Here you can set the colour for the graphs and even the transparency. The graph can also display the maximum recorded speed and a line that shows the average speed in real time.

## SAFARI

Apple has a handful of software such as QuickTime and iTunes on Windows for some time now. The latest one to arrive—a Beta version of

## Safari Shortcuts

New Tab	[Ctrl] + [T]
Close Tab	[Ctrl] + [W]
Mark Page for SnapBack	[Ctrl] + [Alt] + [K]
Page SnapBack	[Ctrl] + [Alt] + [P]
Downloads	[Ctrl] + [Alt] + [L]
Show/Hide Bookmarks Bar	[Ctrl] + [Shift] + [B]
Add Bookmark	[Ctrl] + [D]
Next/Previous Tab	[Ctrl] + [Shift] + [ / ]
Preferences	[Ctrl] + [,]





# andLinux

Run Linux in Windows... With a twist!

Rossi Fernandes

We keep complaining about how we'd like to use Linux but all our work and favourites applications are here on Windows. Virtualisation can be harnessed to run both Linux and Windows together, but virtual machines are very resource hungry and it's not practical. andLinux could be the solution to all your problems. With andLinux, you can run Linux applications on Windows without having to boot into Linux or run virtual machines. The andLinux installer can be found in this month's DVD. We're showing you a quick outline of some of its features.

## Getting andLinux Up And Running

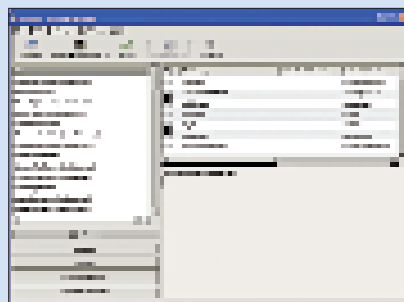
andLinux doesn't require you to create or modify any partitions, and the entire installation procedure is done on Windows like any other application. Double click the executable and continue beyond the agreement accepting window. Enter a suitable amount of memory that you want to allot to andLinux. If you want to use sound applications, check the radio box for enabling the audio support module. Similarly, if you want to use andLinux seamlessly when you boot into Windows, choose to set up andLinux as an NT service that runs automatically. Next, select the method you want to access the Windows file system. Choose CoFS, however, network shares can be used using Samba. The next step is to select the partition that can be accessed by andLinux. You can also set it to access a particular folder. Select the folder and proceed.

## Accessing andLinux's Applications

If you're wondering where the andLinux applications are, they are all accessible from the icon in the system tray. If you want to run console applications, you can open a terminal session using Konsole or an andLinux terminal. The username to use is [root] with no password. The andLinux terminal allows you to jump to other terminals using the [Alt] + [F1] / [F2] / [F3] / [F5] / [F6] keys.

## Adding New Software

You might think andLinux works like some kind of LiveCD that runs on

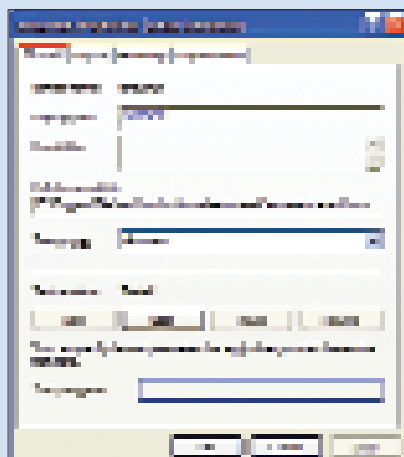


Synaptic Package Manager is an easy way to add applications to andLinux over the Net

Windows, but it is much more than that. LiveCDs generally don't let you install applications, which means you are stuck with what is provided. One of the most impressive features other than running Linux on Windows is that you can actually install new software on it. The simplest and quickest way to do this is to use the Synaptic Package Manager, as long as you have an Internet connection. Right-click on the system tray icon and click on Synaptic. Now search or browse through the directory for the software you want. Right-click on the application and click Mark for Installation. Click on Apply on the top menu to have the software downloaded and installed. You can also use apt-get to install, like you would in other distributions.

## Stopping The Service

While it's fun to have andLinux and its applications running on Windows, it can sometimes be a resource hog especially if you don't have a lot of RAM to spare or if you're about to start some



andLinux can be temporarily shutdown by shutting down its service in Windows

intensive games. In such cases, you might want to shut down all the unnecessary services and programs running in the background. Go to the folder where you installed andLinux. Double click on `srvstop.bat` and the service will end. The service can also be shut through the Services manager under Windows Administrative Tools. To start the service again, double click `srvstart.bat`.

## Using andLinux's Integration For Windows File Formats

If you haven't noticed, andLinux doesn't only run applications or open files in the Linux file system. You can browse through folders and use andLinux's applications run certain files—for example, .doc files can be opened using KWord. Browse using Windows explorer, right-click and you will see the application name in andLinux.

If you don't see an association made, you can open the application using the menu. Then proceed to open the file through the File > Open menu. Look for a path to Windows to open files in the Windows partition. You can also access the same partition through the path /mnt/win. Keep in mind, that andLinux will not be able to open paths outside the ones you specify during the installation.

## Modifying The Launcher Menu

The andLinux launcher allows you to run most applications available in andLinux. It might even not add any new software that you download and install. The menu can be modified through a small text file located in the installation folder of andLinux—`andLinux\Launcher`. Open `menu.txt` in any text editor and add any new entries that you want. Adding—adds a separator in the menu. The format is—

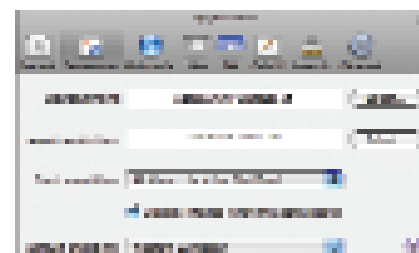
```
ApplicationName;ApplicationIcon.ico; ApplicationCommand.
For example, Digit;digit.ico;konqueror www.thinkdigit.com will add an entry Digit that will load www.thinkdigit.com in Konqueror. Unnecessary entries can be deleted from the list by removing a line. Save the files and close the launcher by right clicking on the system tray icon and then Exit. In the Launcher folder, run menu.exe again to restart the menu and you will now see the changes in place. ■
```

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Safari—a few months back is now finally out. We took a closer look at the latest version—3.1, which just arrived a couple of days ago.

## Setting The Right Font Smoothing

Anyone who has used a Mac will tell you that the font smoothing and rendering on Apple Macs is really something.



Safari's font smoothing might not work great with CRTs as it does with LCDs

Safari tries to bring similar font smoothing to Windows. While some might find the fonts very pretty, some find it rather distracting. To change this setting, click on Edit > Preferences > Appearance. Use the Font smoothing drop-down and select Standard if you want the effect turned down to minimum. The default setting—Medium is generally preferred for LCD users.

## Creating Temporary Bookmarks Using SnapBack

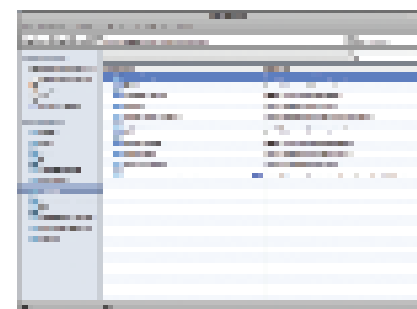
Safari has a feature called Snapback, which allows you to mark a temporary bookmark while you're browsing through a page. While on the page or site, click on History > Mark Page for SnapBack. Safari now remembers this page. Say you've proceeded several levels into the site and you want to return back to the main page on which you created the bookmark, click on History again and then on Page SnapBack.

## Browsing Without Footprints

Safari has a feature called Private Browsing, which can be accessed by clicking on Edit > Private Browsing. This mode stops caching any of the pages that you visit from then on. No records such as history or passwords are maintained. This is useful for any user who might want complete privacy while checking their mail or while doing online transactions for example. To get back to the normal mode, go back to Edit > Private Browsing.

## Bookmark Migration

If you like Safari, then you're bound to move your bookmarks to Safari at some point in time. Start your original browser and then export the bookmarks to an HTML file as that is what



Safari can easily import bookmarks from your other browsers through HTML files

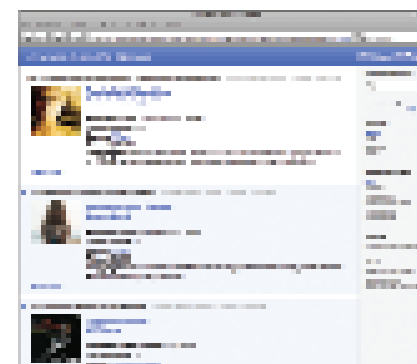
Safari uses to import bookmarks. Once that is done, click on File > Import Bookmarks. Select the file and click on the file you exported. A new windows view with all the imported bookmarks will now open. To have all the bookmarks accessible in the Bookmarks menu in Safari, select all the bookmarks and drag and drop them into the Bookmarks menu item in the left pane. Bookmarks can also be exported by clicking File > Export Bookmarks.

The other place where bookmarks can be displayed is the Bookmarks bar, which needs to be enabled by clicking on View > Show Bookmarks Bar.

## RSS Feed Reader

Safari may be new to Windows, but Apple has still implemented some features such as feed reading into it. There is no separate feed reading window as we find in Opera to read feeds. When you visit a site with an RSS feed in it, click on the RSS icon in the address bar to read the feed right there. To save the feed, you need to add a bookmark as in any other page by clicking on Bookmarks > Add Bookmark. Controls for searching the feed, or changing the size of the preview or viewing feeds using a timeline are also present on the right pane.

To make changes to the refresh interval, click on Edit > Preferences > RSS and use the dropdown menu for Check for updates. There are also

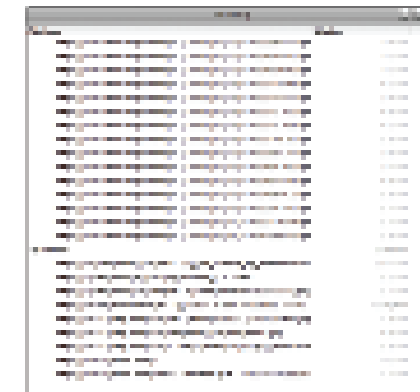


Safari has a simple feed reading feature but one with well integrated functionality

settings to automatically mark read items and highlight unread ones.

## Monitoring Browser Activity

Most of the loading status bars used to indicate the percentage of



The activity tool allows the user to view the download status for all files in a page

objects in a page loaded, are usually inaccurate. Safari allows users to see the status of all the elements being downloaded in a separate window. Click on Window > Activity. You can see a neatly sorted list of files and their download status for all the sites open.

## Spelling And Grammar Check

Safari's inbuilt spelling and grammar check can help avoid errors while writing mails or posting replies on a forum, for example. The checks can be enabled by clicking on Edit > Spelling and Grammar and click the menu items for spelling and grammar check. If you do make an error while typing, the mistakes will be highlighted by a red underline, which can be corrected by right-clicking on it and selecting the right spelling.

## Reopening A Window From The Last Session

Unlike most browsers, where the last session can't be loaded unless you save it, Safari remembers the last session's sites and tabs. That means you can shut down Safari in a hurry without worrying about forgetting to bookmark those pages. To open the last session, click on Reopen All Windows from Last Session from the History menu. Other visited sites are also sorted according to dates in the same menu.

## TOTAL COMMANDER ULTIMA PRIME

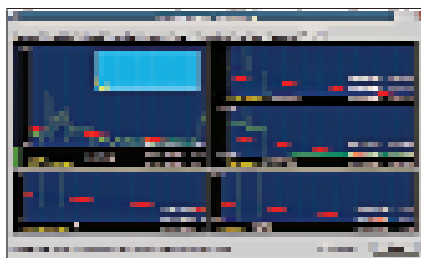
Total Commander has been well known as a replacement for Windows Explorer and has been around for many years. Total Commander Ultima Prime (TCUP), is, on the other



hand, a Total Commander plug-in that adds many more features in the form of other plug-ins and software bundled within it. We are using Total Commander along with the Ultima Prime add-on and you'll be surprised at how much more we can do and how simpler things can get.

### **TCUP's Process Manager**

The Windows Task Manager is a rather simple utility, which shows the list of processes running on Windows. It does a satisfactory job, but TCUP has a



The process manager in TCUP is far more feature packed than the one in Windows

very impressive process manager, which offers many more details on a selected process. To open the process manager, click on **Plugins > Processes**. Now double click on **Processes** again. A list of all the running processes is displayed. Double click on a process and you see information on everything from the CPU resources and RAM utilised to network connections being made. You can also view a graph of very interesting set of performance parameters for that process when you click on the **Graph** tab.

### **Running Applications As A Different User**

If you're running Windows on a standard user account without any administrative rights, it can be quite messy to log back in as Administrator. Total Commander gives you an easy window into the Administrator account to run an application. To do this, click on the file that you want to run, then click on **NTFS > Run As**. Enter the username and the password for that account. You can use this to use any account on your Windows system.

### **Burning Discs And Creating Images**

Total Commander has integrated a nifty little CD / DVD burning software that will also let you create images out of files and folders. Click on the **Network Neighborhood** icon, which will open the list of features in TCUP. Double click on **CD / DVD Burning**. Choose the type of disc you want to create by double clicking on it—**Data CD/DVD / Video DVD / Audio CD**. You can also choose create an ISO of the data. Drag and drop the data to be recorded from the opposite pane into the **CD / DVD**

burning pane. Double click the **Burn Media** menu item.

### **Snipping Menus To Your Liking**

Adding features and add-ons to Total Commander has definitely cluttered the interface and more confusing than the original TC. Fortunately, changes can be made to the menus and the interface can be given some colour. To edit the menus, click on **Configuration > Menu > Main Menu**. Click on **English** if you want the default simple menu without any links to any of the additional features. You can also edit the menu by adding or removing any extra menus by clicking the **Edit** button. The **POPUP** at the beginning denotes the main menu, which bifurcates into **MENUITEMS**. Delete all the unnecessary menus by deleting these lines. Make sure you make a backup of the files in the **LANGUAGE** folder in your Total Commander folder, just in case anything goes wrong while editing the files.

### **Turning Off The Monitor Through TCUP**

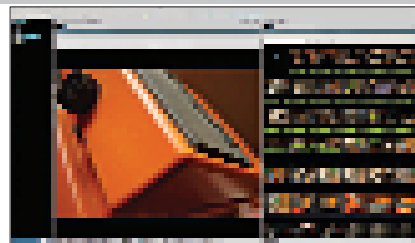
Total Commander allows you turn off the monitor on demand similar to Windows Power Management. This can be done by clicking on **Power > Turn off monitor**. You can also turn off the PC completely or send it into hibernation or standby through the same menu.

### **Accessing Registry And Startup Items**

Any changes to the Windows registry requires users to use the Windows Registry Editor which requires significant browsing and searching, before you find the key that you've been looking for. The most important keys in Windows are generally the ones which start programs when Windows boots or when a particular user logs in. While you can still use it to view the entire registry, there is an option in the main menu to view the **Autorun** items. Double-click on **Autorun**. Now enter the category of applications and double-click on an item to stop it from running or you can even delete it by pressing the **[Del]** key.

### **Making TCUP Your Image Viewer**

TCUP has the ability to generate thumbnails and previews for images so that should make it a pretty decent image viewer something like ACDSee. First browse to the folder with the images. Next, click on **Show > Thumbnail View**. All the files should be displayed as thumbnails now. Now, click on **Show** again and click **Quick View Panel** to have a large preview panel on the opposite pane. You can even use the controls



The Preview panel in TC UP makes it a decent quick image viewer

available that let you rotate the image or add a few effects. Click **Edit** and an image editor that comes bundled with TCUP loads up. The same previewing feature can be used to preview videos and it even supports some unexpected formats such as PDFs!

When you aren't viewing images or PDFs, then just point your mouse to a particular folder, and the preview pane is used to show a graph depicting the size and files in that folder.

### **Quick Searching Folders**

TCUP can scan through your directory tree for a particular folder. With this, you can search for a folder without having to browse in and out of different branches. Click on **Commands > CD Tree**. This will start the scanning of the entire drive for folders. When the search is complete, start typing in the name of the folder you are looking for and Total Commander will pinpoint to it. Click **OK** and you will be directed right there!

### **Choosing A Suitable Menu**

On installation, you might be asked by TCUP to enter a resolution that you are using for your screen. TC will automatically set the right icon size and layout so that it fits properly in your desktop resolution. Unfortunately the fitting isn't always perfect when you select a large screen resolution and you notice tiny icons within huge if you choose it. To set standard resolution, click on **Appearance > Resolution** and check **1024 x 768**. You will now get standard-sized icons on standard-sized buttons in the toolbar. Click on **Appearance > Buttonbar** and select one of the profiles—some of them have minimal layout while others are full fledged ones with all the utilities and features.

### **Tabs In A Windows Explorer Replacement**

Total Commander has tab support, which is useful when you want to keep many folders open at the same time. To make use of the tab feature, right-click on the title bar for the folder or drive that is open, and click on **Duplicate this tab** to create a copy of the panel. You can now even copy from one tab to another by dragging and dropping a folder into the title of the tab. ■





## NVIDIA 9600GT Galore!

### More For Less

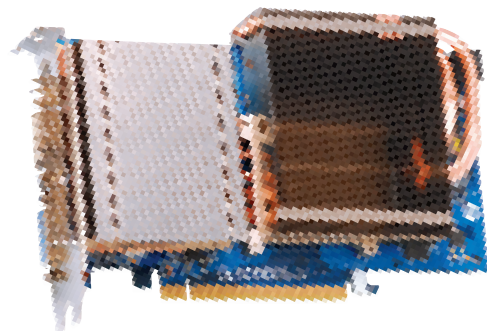
The mid-range graphics card market is abuzz with new releases that promise never-before-seen performance at reasonable price. These new value warriors had us gasping in disbelief. With the 8800GT and 8800GTS (512 MB) both priced above 10K, the 9600GT fits the “affordable gamer card” bill perfectly.

Based on the newer G94 core, the 9600GT is similar to the G92-based 8800GT and 8800GTS cards. However, the stream processors (SP) have been halved on this new budget card. The stock clock speeds are 650 MHz for the GPU core, the memory running at 900 MHz (1,800 actual) and the SPs humming at 1,625 MHz.

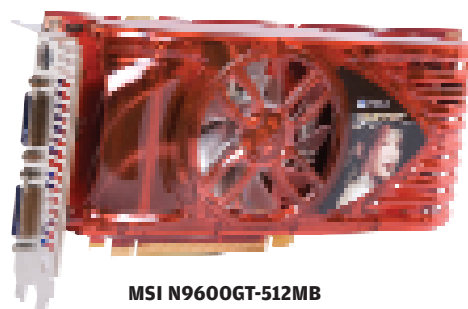
We have five cards from XFX, MSI, ASUS, Sparkle and Gigabyte. Though based on the same chipset, these cards sported various designs. ASUS, Sparkle and XFX were based around the NVIDIA reference, single slot design. MSI has the most spectacular looking card, where as Gigabyte had resorted to their passive-cooled heat pipe

design. Both these cards require two slots though.

During our testing, the single slot cards got warmer. However, the temperatures were within acceptable limits and we could touch the card. The heat pipes on the Gigabyte card did an excellent job, although the fins got really hot. The MSI card with its unique heat pipe plus fan design kept cool throughout the test.



Gigabyte GV-NX96T 512HP



MSI N9600GT-512MB



Sparkle SF-PX96GT512D3-HP



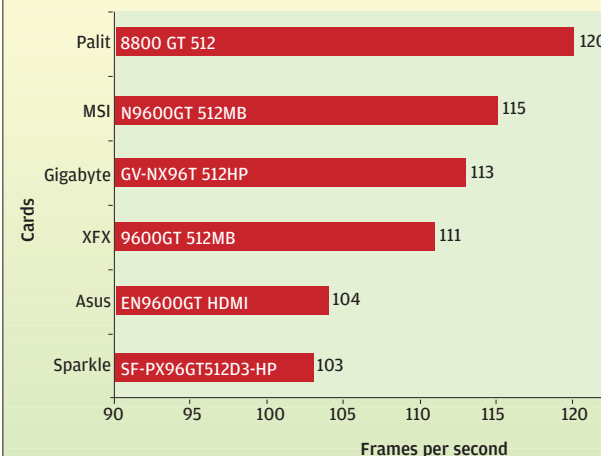
XFX 9600GT 512MB



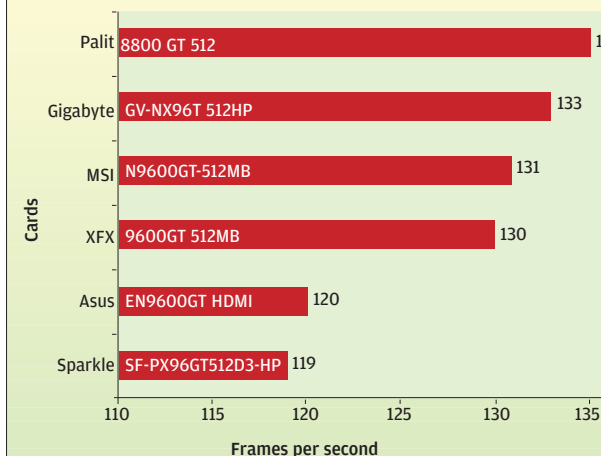
ASUS EN9600GT HDMI

Ratings and Contacts	Sparkle SF-PX96GT512D3-HP	Gigabyte GV-NX96T 512HP	MSI N9600GT-512MB	XFX 9600GT 512MB	ASUS EN9600GT HDMI
Features	★★★★●	★★★★●	★★★★●	★★★★●	★★★★●
Performance	★★★★●	★★★★●	★★★★●	★★★★●	★★★★●
Build Quality	★★★★●	★★★★●	★★★★●	★★★★●	★★★★●
Value For Money	★★★★●	★★★★●	★★★★●	★★★★●	★★★★●
Overall	★★★★●	★★★★●	★★★★●	★★★★●	★★★★●
Price	Rs 10,500	Rs 15,900	Rs 13,000	Rs 11,900	12,600
E-mail	megha@abacusperipherals.com	sales@gigabyte.in	sanyam@msi-in.com	xfx@rptechindia.com	media_india@asus.com
Phone	+91-22-40914613	+91-22-23823331 / 2	+91-11-41758808 / 09	+91-22-67090909	+91-22-67668800

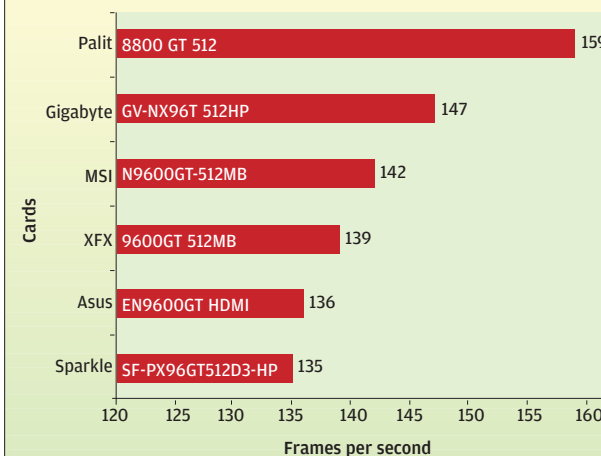
Prey @ 1280x1024 (4AA, 4AF)



Doom 3 @ 1280x1024 (4AA, 4AF)



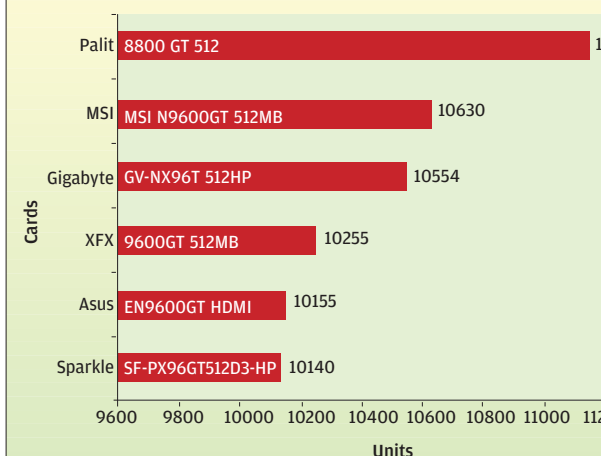
Splinter Cell Chaos Theory @ 1280x1024 (4AA, 4AF)



Almost all cards supported HDMI connectivity, which is good. However, this is done via the DVI-to-HDMI connector. Some higher-end 9600GTs have them on the back panel.

The XFX 9600GT comes bundled with the *Company of Heroes* game, necessary cables and HDMI connector. MSI, ASUS, Sparkle and Gigabyte cards come with an HDMI connector, cables

3DMark 2006



and the quick install guide—but no free games.

On the performance front, the MSI and Gigabyte cards were neck and neck. Other cards were trailing behind. All 9600GT cards are within a hairs-breadth of the 8800GT card. At lower resolutions, the difference isn't noticeable, in fact in some benchmarks the 9600GT runs at par with the 8800GT. However at higher resolutions, the performance gap widens.

Gigabyte's 9600GT returned the best results across the board with MSI following closely at its heels. Gigabyte has priced its card at nearly Rs 16,000. At that

price, one can buy an 8800GT. MSI is sweetly priced at Rs 13,000 and offers the best buy for the buck, considering the slight performance edge it has over other cards. XFX has the best bundle, good performance and is reasonably priced. Sparkle offers the best of both worlds—decent performance at a terrific price.

#### Specifications

Core clock 650 MHz, 1,800 MHz memory clock, 512 MB GDDR3, 256-bit memory interface, 1,625 MHz shader clock, PCI express 2.0, 400 MHz RAMDAC and HDMI connectivity.



## Tagan BZ800

### Power In Colour

Although internationally they've been around for a while, Tagan is a relatively new name in the Indian market for desktop power supplies. Enter their new BZ series, a funky product line, meant for discerning users and gamers and offering some *show* to what is usually just go. The BZ series do things radically different as far as visuals go. They're modular, with pipe-like connector cables complete with circular pin arrangements (called piperock by Tagan) that ensure incompatibility with any other power supply. Then there are the cool looking LED-lit circular strips around each modular socket on the PSU that illuminate when a cable is plugged in. The cables are colour coded as per the LED colour. This ensures no mistakes while plugging in cables. If you have a transparent side window, the ensuing lighting is definitely one to get the drool out as intended. Add to that

a large cooling fan (135 mm) with blue LEDs and the BZ800 is definitely lit to kill! There is a pair of branded nylon gloves—free publicity for Tagan if you should choose to wear them around. The outer body itself is reasonably well built, but the gauge of sheet used isn't as good as the CoolerMaster Real Power 1000W or the Corsair HX series.

On the technical front the BZ800 sports six 12 volt rails. There is a Turbo mode, which disables the power limitations on the 12 V rails allowing them to overdraw power, in case you should need it. Four PCIe (two 6 pin and two 8 pin) power connectors mean SLI/Crossfire is possible with the latest cards. With a combined load capacity of 64 amps on the 12 V rail (768 W) the BZ800 is no different from other recent power supplies, which concentrate on beefing up the 12 V rail that typically powers CPUs,



that the BZ800 ran out of juice, and performed well right through.

At Rs 8,700 the Tagan BZ isn't cheap by any means, but for a high-end power supply (which it most certainly is), the price isn't too bad. The only better option we've seen is the CoolerMaster Real Power 1000W Pro—which is much costlier. Incidentally, the fact that the BZ800 is 80+ certified means your power bills will be in check. If you're looking for an extreme PC, or a super duper gaming rig, and need a powerful PSU with loads of visual appeal, you can't go wrong with this.

#### Specifications

800 W continuous power, 6x12 V rails, max power (12 V)—768 W (64 A), 8x SATA connectors, 2x6 pin PCIe connectors, 2x8 pin PCIe connectors, 6x peripheral connectors (4 pin)

Contact: Nanopoint Technology  
Phone: +91-33-22251192  
E-mail: [ivan\\_tsai@nanopoint.com.tw](mailto:ivan_tsai@nanopoint.com.tw)  
Web site: [nanopoint.com.tw](http://nanopoint.com.tw)  
Price: Rs 8,700

RATINGS	
Features	★★★★
Performance	★★★★
Build quality	★★★★
Value for Money	★★★★
Overall	★★★★

## Supercomp Music Station SES 668

### May Not Be Music To Your Ears

The SES668 Music Station is essentially an iPod dock with killer looks. The dome-shaped design looks good and the use of silver highlight on a jet black body adds that extra style—something missing on most cheap docks.

On the top of the speaker sits the dock receptacle. The receptacle accepts multiple base connectors thus allowing the use of almost all generation of iPods, expect for the newer wider body Nano. The base connector is large enough to hold most iPods in place.



On the four corners of the squares, are the buttons for powering on and volume control, and one is a dummy button. The buttons are hard to press with distinct clicks, however one can keep them pressed to increase / decrease the volume. The volume control isn't smooth and boosts in huge steps.

The dock requires 12 V and it is powered via an adapter that runs off the mains. There is no option for alternative power source like batteries, if the mains are down. The iPod can be charged via the dock and the USB connector allows it to be connected to a PC for data transfer. The dock also has an auxiliary input thus allowing an alternate sound source.

On the performance front, the dock didn't perform as per our expectation. Bass is non-existent and the drum beats often sound flat, highs are not reproduced at all and the mid-

range is completely muddled. Also there is no way to control the playback from the dock, and you will have to use the iPod.

Though affordably priced at Rs 1,350, the SES668 Music Dock isn't the right solution for your iPod. We suggest that you up the ante and invest in JBL or Bose if you care for music quality, else stick to the stock earphones.

#### Specifications

USB charging, USB data transfer, Auxiliary input, mobile phone compatibility and CD/DVD player.

Contact: Supertron Electronics Ltd.  
Phone: +91-22-23881397  
E-mail: [info@supertronindia.com](mailto:info@supertronindia.com)  
Web site: [www.supertronindia.com](http://www.supertronindia.com)  
Price: Rs 1,350

RATINGS	
Features	★★★★
Performance	★★★
Build quality	★★★★
Value for Money	★★★★
Overall	★★★★

## Logitech G9

### The G series Goes Modular!

Logitech's G (for gaming) series features the highest pixel count sensors, and classy aesthetics that includes grip-friendly curves, and slick-as-teflon feet for a smooth glide—something that gamers will appreciate. The G9 goes a little high tech, and includes a laser sensor that allows a whopping accuracy of 3,200 dpi. Although gamers will recognise this as marketing rubbish (no gamer worth his salt plays at even 2000 dpi), the fact remains that the sensor on the G9 is sensitive indeed. Also, onboard is the micro precision scroll wheel, which we all recognise as a clone of the excellent unit on the MX revolution, and two working modes. One you can use as a regular wheel with clicky feedback. We did mention modular—the G9 has changeable grips—the

two bundled are the regular stripped down grip and an additional bezel-like unit which clicks on to the outer body of the mouse, making it significantly wider and hence the name *wide grip*. There are also other grips that you can purchase from Logitech, each customised for a certain type of usage. From its predecessor—the G5, the G9 gets a weight cartridge, only this time it's cleverly removed by applying pressure on its notch at the rear. The weights on the G5 had a tendency to rust. Thankfully, these seem to have been adequately treated. One issue that we noticed right away (and what is possibly a major flaw) is the slight play between the weight tray and its housing—truly annoying while using the mouse. Also, if you remove the tray, you



let you know how much to dial up or dial down the DPI.

At Rs 5,995, the G9 is very expensive for the innovations and features it offers. 3,200 DPI is just gimmicky because nobody will use this mouse at that resolution. The Lachesis from Razer is another similar high DPI product (4,000 DPI) that does a better job, at a slightly higher price. The polling frequency of 1 kHz is something though, so is the ability to store and load profiles. This is a good mouse for the serious fragger, but not at its current price.

get an ugly hole at the rear of the body, whereas the G5 was neater with the tray slotting underneath the body.

Practically, the side buttons feel a little too soft, mainly because there is a slight gap between the outer body and the inner body, which has the contacts for the buttons. There is a DPI indicator (whose colour can be changed via drivers—neat but useless!), that is useful to

RATINGS	
Features	★★★★
Performance	★★★★
Build quality	★★★★
Value for Money	★★★★
Overall	★★★★

#### Specifications

Sensor 3,200 dpi, polling frequency 1 kHz, customisable grips, customisable weights

Contact: Logitech India Pvt. Ltd  
Phone: +91-22-26571160  
Web site: [www.logitech.com](http://www.logitech.com)  
E-mail: [kavita\\_nath@logitech.com](mailto:kavita_nath@logitech.com)  
Price: Rs 5,995

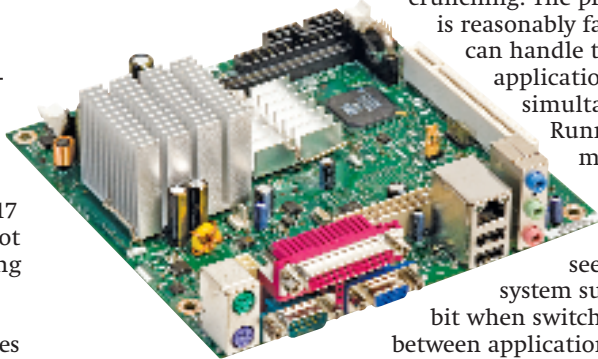
## Intel D201GLY2

### Honey, I Shrunk The PC!

The D201GLY2 is the cheapest motherboard-processor combo solution to come out of the Intel stable. Built to the micro ATX form factor, the motherboard is mere 17x17 cm. This combo makes a lot of sense for people building Linux nodes or low power downloading machines.

The motherboard comes with an Intel Celeron 220 processor soldered, which means no speed upgrade. The core 2-architecture based processor runs at Jurassic 1.2 GHz on a 533 MHz system bus. Thankfully, the motherboard supports DDR II, but it has single memory slot—so no dual channel for you.

Though the motherboard comes from Intel, both the chipsets are from SiS, namely, SiS662. The graphics driver for



Windows works well, but with Ubuntu 7.10 and Linux Mint 4.0, we ran into display problems and needed a patch driver for the GUI to work properly.

Other features include two SATA ports, one IDE slot, six USB ports, one serial port and one parallel port. A 10/100 Ethernet comes onboard and it has only one PCI slot.

Considering the hardware, we didn't run our

usual heavy duty tests, but instead relied on some old ones to do the number crunching. The processor is reasonably fast and can handle three applications simultaneously. Running multi-media, we could see the system suffer a bit when switching between applications. Graphic engines on the motherboard are quite weak and don't stand a chance when put to gaming. Reasonable resolution movies run fine, but high resolution ones occasionally stutter. The chipsets and processors are

passively cooled and when put to task, get really hot. We suggest going for the actively cooled model (D201GLY2A).

Priced at Rs 3,300, the D201GLY2 offers excellent value and if you want to build a compact, low cost machine, the 201GLY2 is definitely the solution to go for. However, don't expect to run games or any other heavy duty application. We suggest this for building a downloading machine, a print server or a file server.

#### Specifications

17x17 cm size, Celeron 1.2 GHz, supports DDR II up to 667 MHz, ADI AD1888 Audio (2 channel), 2 SATA ports and 10/100 Ethernet.

RATINGS	
Features	★★★★
Performance	★★★★
Build quality	★★★★
Value for Money	★★★★
Overall	★★★★

Contact: SES technologies Ltd.  
Phone: +91-80-28542105  
E-mail: [apacsupport@mailbox.intel.com](mailto:apacsupport@mailbox.intel.com)  
Web site: [www.intel.com](http://www.intel.com)  
Price: Rs 3,300



## Freecom Tough Drive Pink 250 GB

### Gigabits On A Pink Platter

Freecom, though unknown to the Indian market is an established player in the external storage arena. In the past, we have reviewed Freecom drives and now that Freecom has officially come to India, we expect them to be priced sanely.

The Tough Drive series, as the name suggests, is aimed at enduring shock. This particular drive is clad in pink rubber, which Freecom hopes will lure the fairer sex.

Thankfully, the Tough Drives are available in other colour options. In terms of design, the drive is sleek but not portable, obviously due to the thick layer of rubber cladding it dons. The rubberised body feels good to hold, but the tyre pattern design on it

doesn't do anything to enhance its looks.

On the brighter side, the Tough drives are indeed solidly put together and sport good design from the usability aspect. Apart from the rubber cladding, internally the hard drives are put on a spring suspended frame (anti-shock frame) for better shock absorption. The USB connector is integrated in the drives, and hence there is no need to carry along any cables. The drive can be directly connected to the PC. The USB connector lights up blue, and blinks during data transfer. The Tough drive doesn't require additional power and runs off a single USB port.

Freecom has bundled back-up software, namely NTI shadow. It can do real time continuous data



backup, scheduled back-up and has version control. Thus older files can be retrieved. The user interface is simple and the settings are granular to the point that you can even select the types of files to be backed up.

Internally, the Tough Drive comes with 5,400 RPM Fujitsu hard drive and delivers good performance. 4 GB (1 DVD) of assorted data takes less than 3 min to copy whereas a 1 GB (one movie)

RATINGS	
Features	★★★★☆
Performance	★★★★★
Build Quality	★★★★★
Value for Money	★★★★★
Overall	★★★★★

took around 39 sec to copy. We say the drive is fast for most purposes it will be used for.

Priced at Rs 10,150, the Tough drive is a reasonable buy. Ordinary 250 GB drives are available in the Rs 8,500 region and the small premium of Rs 1,500 for shock proofing is well worth it in the longer run. However, we would prefer to never see the pick version again—black or blue please!

#### Specifications

5,400 RPM drive, 2 m drop shock proof, USB 2.0 and Integrated USB connector

Contact: Rashi peripherals Pvt Ltd.  
Phone: +91-22-67090909  
E-mail: [freecom@rptechindia.com](mailto:freecom@rptechindia.com)  
Web site: [www.freecom.com](http://www.freecom.com)  
Price: Rs 10,150

## SanDisk Sansa View

### A Sleek Vision

The View is SanDisk's attempt at a video oriented PMP and features a slightly larger screen than their mainstream E200 series. It's also a slightly longer device, and gives up the metal back for a matt finished black rear that adds a touch of class to an already up-market looking device. The ribbed click wheel also goes in favour of a smooth finish with a smooth moving click wheel. The menu system remains the same, but we found exploration a little better, courtesy the new smooth action wheel. Expansion is via MicroSD now. Should for some reason 16 GB onboard be insufficient, and given the fact that 8 GB MicroSD cards are slowly making their way to the market space, is never going to be a constraint.



All the features we loved on the E200 series are present—FM radio, voice recording, video and image

viewing—although features like an alarm clock, calendar, and the ability to store notes was absent—a pity SanDisk didn't think of adding anything new. Navigating the menu is simple and the same ease of use has been carried over to the FM radio too. Setting up the channels took very little time. The screen is also a touch below par, especially when compared to the screen on the new Apple iPod Nano 3G, its logical competitor. Other devices like Cowon's D2 and Apple's Touch are miles ahead. Music quality is the other significant parameter, and the View doesn't disappoint here. Although we noticed good volume levels, the View isn't as loud as either the

RATINGS	
Features	★★★★☆
Performance	★★★★★
Build Quality	★★★★★
Value for Money	★★★★★
Overall	★★★★★

D2 or the Nano / Touch duo, nor is it as defined in the highs. In fact, bass doesn't extend as low as the competition, and while it does pound lightly, it's not the thump that we've seen from the best of the PMPs in our tests.

At Rs 12,790, the Sansa View is a good and reasonably feature-rich PMP. The problem is that it doesn't stand out at anything, preferring mediocrity to fame. It's hard to recommend to anyone, with each of the competition mentioned above doing at least something better, while retaining all the same features.

#### Specifications

16 GB Flash, MicroSD expandable, 2.4-inch LCD, FM radio, Voice recording, H.264 video playback

Contact: Rashi Peripherals Pvt Ltd  
Phone: +91-22-67090909  
E-mail: [sandisk@rptechindia.com](mailto:sandisk@rptechindia.com)  
Web site: [www.rptechindia.com](http://www.rptechindia.com)  
Price: Rs 12,790

## Dell XPS 420

### The Good 420



The XPS 420 is the top of the line Dell desktop model for the Indian market. Cramped with features, the XPS 420 is a multimedia powerhouse aimed at gamers, enthusiasts, etc

This new model features a new completely revised chassis. Finished in shiny black plastic, the front panel is a smudge magnet and attracts much dust as well. The side panels finished in brushed aluminium with a big XPS logo scream for attention. One unique thing about the XPS 420 is the presence of small LCD screen on the top (Windows Sideshow) an extension of Vista's Sidebar. This small LCD can be used for showing small tidbits of information via the sidebar gadgets. New gadgets can be downloaded from Microsoft's Web site.

The base configuration consists of Intel Quad core Q6600, 2 GB of DDR II 667 MHz, 250 GB hard drive and 8600 GTS graphics card. These components are powerful enough to ensure a high-end rig experience, though we think the 8600 GTS is aging and expect dell to replace it soon with the newer 9600GT card.

The 20-inch LCD monitor comes bundled with the system is breathtaking. The screen is glossy and reproduces

crisp images. Movies are fun on this monitor, so is editing photographs and the sheer space on offer will allow you to open two word pages side by side. The LCD also has an embedded 2 MP Web camera, which can be used for chatting, taking photographs and capturing video. The capture quality is good and colours are faithfully reproduced.

There is also an MPEG 2 transcoder with front mounted AV ports, which can be used for importing video from camcorders and encoding it to DivX. The accompanying software, however, isn't user friendly and requires lot of patience to learn. Additionally, there is the 19-in-one memory card reader with Bluetooth 2.0 module, wireless (Bluetooth) keyboard and mouse and a Hauppauge TV tuner card with remote. Miscellaneous items include micro fibre cloth for wiping the LCD,

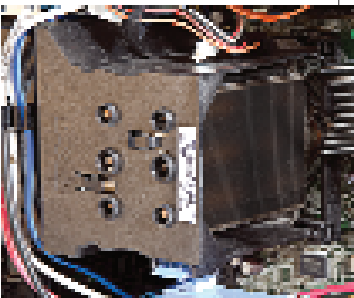


soft and hard mouse pads and a folder with the necessary manual and CDs all perfectly packed in the box.

The cabinet can be opened without any tools. All it requires is pulling a single latch to release the side panel. On the inside, everything is neatly packed. Since Dell has opted for the BTX form factor, the system requires just one fan to cool itself. The cables and wiring are tied down and routed optimally without affecting the air flow. The single 120-mm fan is placed right after the huge CPU cooler and throws out hot air from the front of the cabinet. Throughout our testing process the system remained cool and quiet. Though the cabinet is tall and the internals are neatly organised, there isn't much space for future upgrade; just two hard drive slots that's what you get here.

On the software front, Dell has bundled in Adobe's Elements Studio package consisting of the Lite version of Photoshop Elements, Premier Elements and SoundBooth

RATINGS	
Features	★★★★★
Performance	★★★★★
Build quality	★★★★★
Value for Money	★★★★★
Overall	★★★★★



CS3. The typical Dell in-house software is present and they provide complete control over every aspect of this beautiful machine.

The XPS 420 performs admirably in all aspects, thanks largely to the powerful hardware that's under the hood. The Q6600 simply chewed through the test we put it through and has enough grunt to transcode home videos on the fly. Though the 8600 GTS ran through the entire graphics test delivering playable frame rate, we think it's best to upgrade to a higher card. Dell offers 8800GT in lieu of the 8600GTS and if your pocket permits you should upgrade for better gaming experience. Overall, the system performance is more than satisfactory, despite Vista running on the system, it was responsive with hardly any lag.

Priced at Rs 69,169, we feel the XPS 420 is overpriced considering the weak graphics subsystem. However, it is very difficult to recreate the overall look and feel that the XPS 420 has—the beautiful case, neatly packed interiors, stupendous hardware and the tiny LCD screen on the cabinet! If you have money to blow and appreciate style, then the XPS 420 fits the bill.

#### Specifications

Intel Core 2 Quad Q6600, 2 GB DDRII, 250 GB, Media Xcelerator, 8600 GTS, 20-inch LCD screen with 2 MP Web cam and Bluetooth keyboard and mouse.

Contact: Dell India Pvt. Ltd  
Phone: 1800-425-4026  
E-mail: [dell\\_enquiries@dell.com](mailto:dell_enquiries@dell.com)  
Web site: [www.dell.co.in](http://www.dell.co.in)  
Price: Rs 69,169



## Lenovo ThinkCentre A61e

### Green PC

**G**o Green! Seems to be the mantra these days and every manufacturer is doling out power efficient products. Lenovo's A61e is based on AMD's DTX form factor—the first of its kind, consisting of their power optimised processor, chipset and graphics.

The A series of desktops from Lenovo are oriented towards business and hence don't expect this PC to churn out big numbers—it isn't meant too. The A61e is designed to consume less space—an important aspect for most businesses. We found the dimensions very compact for a full fledged PC—great for Media centre PCs. Despite the diminutive form factor the PC doesn't get hot—thanks to good ventilation and low power components.

The configuration offers a decent balance between

performance and power consumption. AMD's Athlon 64 X2 BE-2350 (power optimised) processor along with ATI's X1200 onboard graphics power the PC's critical systems. The motherboard is custom built, and hence we could not trace its manufacturer. Other goodies include 1 GB of memory, 160 GB hard drive, DVD writer and Gigabit Ethernet. The PC doesn't run directly off the mains, rather it requires the provided power adapter similar to a laptop. The tight fit of components means, upgradeability is limited. However, the system admin will appreciate the tool-case, which opens by sliding a single latch.

Along with the A61e, Lenovo has bundled the familiar black keyboard and optical mouse. The A61e can be ordered without any display. However, our test unit



had their 20-inch LCD monitor. During our tests, the LCD fared well and delivered good tonal accuracy. The LCD is fit for any office related work, i.e. Word processing, spreadsheets, browsing etc.

When we upgraded the memory to 2GB the PC shifted its gear and delivered reasonable results. With all the eye candy on, Vista requires at least 2 GB for other applications to work. With Windows XP, we had no problem with the

stock configuration. The performance was satisfying. We tried Ubuntu 7.10. The PC did boot, but with minor glitches such as wrong screen resolution, no sound, etc., which needed some fixing.

The A61e without the monitor is sweetly priced at Rs 15,800.

#### Specifications

AMD Athlon 64X2, 1 GB DDRII, 160 GB HDD, DVD-RW, X1200 onboard graphics, Keyboard, optical mouse, Gigabit Ethernet and PC DOS.

Contact: Lenovo India Pvt. Ltd  
Phone: +91-80-22108490  
E-mail: [buy@in.lenovo.com](mailto:buy@in.lenovo.com)  
Web site: [www.lenovo.com/in](http://www.lenovo.com/in)  
Price: Rs 15,800

RATINGS	
Features	★★★★☆
Performance	★★★★☆
Build quality	★★★★☆
Value for Money	★★★★☆
Overall	★★★★☆

## CoolerMaster CM690

### Keep Your Cool

**C**oolerMaster or CM as it's commonly referred to, enjoys the patronage of enthusiasts thanks largely to their attractive STACKER and COSMOS cabinets, which fall in the upper echelon of the desktop cabinets. The CM690, on the other hand promises the performance and designer looks of the higher end at a reasonable price.

A thin chrome strips runs across the entire length of the mess and it contrasts nicely with the black mesh. The chunky rubber feet with slanting cuts give the case a sporty stance.

The front panel connectors have been moved to the top and consist of two USBs, one Firewire and one eSATA port. Thumb screws mean opening the case requires no tools. The side panel



comes out with minimum effort. Except for the motherboard, all other components can be installed without screws.

Near the front, there are five 5.25-inch bays and another five 3.5-inch bays for connecting optical drives and hard drives, respectively. A large 120-

mm fan ensures the hard drives are kept cool. The cabling can be routed within the case using the sturdy clamps provided inside. The case comes with three 120-mm fans installed and additional 3 fans can be installed to cool the components.

Everything from the side panels and power supply housing, to the HDD trays and the fan mounts have silent, (read rubber), treatment to keep the dBs down. There are two rubber lined holes for passing liquid cooling pipes too. The side panel has a stylish cut and displays your wares in their full glory.

The CM690 performs well and handles even a Core

2 Duo X6800 and GeForce 8800GTX with a RAID 0 hard drive array without breaking a sweat. This along with three 120-mm fans—one at the rear (exhaust), one in the front (intake) and another exhaust on the side panel.

The CM690 retails for some 4,000 odd bucks and for that price it's a steal. In case you are planning to build a gaming PC, then the CM690 should be on your must have list. Though a tad expensive than the normal beige boxes, the CM690 makes up for it in every conceivable way.

#### Specifications

Form factor—Mid Tower, 3.5-inch bays—5, 5.25-inch bays—5, No of fans—3x120 mm, side panel cut (acrylic) tool less design.

Contact: CoolerMaster India  
Phone: +91-9833870302  
E-mail: [tanmay\\_i@coolermaster.com](mailto:tanmay_i@coolermaster.com)  
Web site: [www.coolermaster.com](http://www.coolermaster.com)

RATINGS	
Features	★★★★☆
Performance	★★★★☆
Build quality	★★★★☆
Value for Money	★★★★☆
Overall	★★★★☆



**External Portable Hard Drives****WD Passport Portable (Black)**

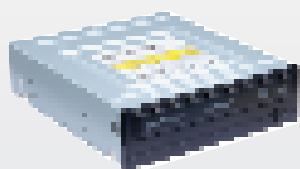
- Excellent performance, good value
- None in particular

Contact Champion Computers Pvt Ltd  
Phone +91-11-26214751  
Web site [www.championindia.com](http://www.championindia.com)  
Price Rs 6,500

**Internal DVD-Writers****Samsung SH-S203**

- Performance, inexpensive
- None in particular

Contact Samsung India Electronics Pvt Ltd  
Phone +91-11-41511234  
E-mail [c.serrao@samsung.com](mailto:c.serrao@samsung.com)  
Price Rs 1,200

**MP3 Player above Rs 10,000****Cowon D2**

- Very good performance
  - Slightly bulky
- Contact Lipap Systems P. Ltd  
Phone +91-9819917440  
E-mail [iaudio@lipap.com](mailto:iaudio@lipap.com)  
Price Rs 11,000

**Graphics Cards (High-End)****Galaxy GF8800Ultra**

- Sheer performance
  - Heats up
- Contact Technology and Gadgets  
Phone +91-22-23823331  
Web site [technologyandgadgets.com](http://technologyandgadgets.com)  
Price Rs 35,000

**Internal SATA Hard Drives****WD Caviar SE16 WD3200AAKS**

- Value for money, performance
- None in particular

Contact Champion Computers Pvt Ltd  
Phone +91-11-26214751  
Web site [www.championindia.com](http://www.championindia.com)  
Price Rs 4,500

**Internal SATA Hard Drives****WD Caviar SE16 WD5000AAKS**

- Fast transfer speeds
- None in particular

Contact Champion Computers Pvt Ltd  
Phone +91-11-26214751  
Web site [www.championindia.com](http://www.championindia.com)  
Price Rs 7,500

**Digital Cameras (High-End)****Canon PowerShot A570 IS**

- Good overall performance
- Lacking in macro performance

Contact Canon India Pvt Ltd  
Phone 1800-345-3366  
E-mail [info@canon.co.in](mailto:info@canon.co.in)  
Price Rs 13,995

**Graphics Cards (Mid-range)****ASUS EN8600GT**

- Well priced, fast
  - None in particular
- Contact Asus Technology Pvt Ltd  
Phone +91-22-67668800  
Web site <http://in.asus.com>  
Price Rs 8,800

**Desktop PCs****Sahara 20CK16**

- Great performer
- Slightly bulky

Contact Sahara Computers & Electronics Ltd  
Phone +91-120-4397777  
E-mail [info@saharacomputers.co.in](mailto:info@saharacomputers.co.in)  
Price Rs 40,000

**AMD AM2 Motherboards****Gigabyte GA-MA69G-S3H**

- Well built, feature rich
- None in particular

Contact Gigabyte Tech India Ltd  
Phone +91-22-30616666  
E-mail [sales@gigabyte.in](mailto:sales@gigabyte.in)  
Price Rs 6,900

**Intel P35-based Motherboards****ASUS P5K Premium**

- Excellent enthusiast solution
- Expensive

Contact ASUS Technology Pvt Ltd  
Phone +91-22-67668800  
E-mail [media\\_india@asus.com](mailto:media_india@asus.com)  
Price Rs 15,870

**Intel Integrated Graphics Motherboards****Gigabyte GA-G33-DS3R**

- Very good layout
- Expensive

Contact Gigabyte Tech India Ltd  
Phone +91-22-30616666  
E-mail [sales@gigabyte.in](mailto:sales@gigabyte.in)  
Price Rs 9,500

**Home Inkjet MFDs****Canon PIXMA MP160**

- Good performance
- No memory card reader

Contact Canon India Pvt Ltd  
Phone 1800-345-3366  
E-mail [info@canon.co.in](mailto:info@canon.co.in)  
Price Rs 5,995

**Mono Laser MFDs****Brother MFC-7420**

- Great cost per page, fax
- No Ethernet Port

Contact Brother International India Pvt Ltd  
Phone 1800-222-422  
E-mail [customer@brother.in](mailto:customer@brother.in)  
Price Rs 18,000

**PCI TV-Tuners****Leadtek Winfast PVR2000**

- Excellent video quality and software
- Expensive

Contact Topnotch Infotronics (India) Pvt Ltd  
Phone +91-44-42042565  
E-mail [naqui@zebronics.net](mailto:naqui@zebronics.net)  
Price Rs 5,500

**Mono Laser Printers****HP LaserJet 1020**

- Good combination of speed, print quality, and warranty
- A bit slow in comparison to others

Contact Hewlett-Packard India Sales Pvt Ltd  
Phone +91-124-2566111  
E-mail [kakuni.mahto@hp.com](mailto:kakuni.mahto@hp.com)  
Price Rs 6,999



The best products tested so far in different hardware and software categories

**2.1 Speaker Sets****Altec Lansing MX5021**

- Excellent performance
- Some minor vibrations in woofer

Contact Rashi Peripherals Pvt.Ltd  
Phone +91-22-67090909  
E-mail [altec@rptechindia.com](mailto:altec@rptechindia.com)  
Price Rs 7,600

**5.1 Speaker Sets****Logitech Z-5500 Digital**

- Explosive power
- Too expensive

Contact Logitech  
Phone +91-22-26571160  
E-mail [kavita\\_nath@logitech.com](mailto:kavita_nath@logitech.com)  
Price Rs 27,995

**MP3 Players up to Rs 5,000****Apacer Steno A4351**

- Good performance
- Tacky build, Screen quality

Contact Apacer Technology  
Phone +91-80-25702208  
E-mail [suraj\\_raina@apacer.com](mailto:suraj_raina@apacer.com)  
Price Rs 1,720

**MP3 Players up to Rs 10,000****Samsung T10**

- Good music quality, nice screen
- Tacky exterior

Contact Samsung India Ltd  
Phone +91-11-41511234  
E-mail [jitendra.c@samsung.com](mailto:jitendra.c@samsung.com)  
Price Rs 6,600

**Processors****Intel QX6850 Core 2 Extreme**

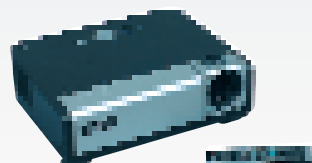
- Extreme performance
- Expensive

Contact Intel Tech India Pvt Ltd  
Phone +91-9833823474  
E-mail [saranya.rustagi@intel.com](mailto:saranya.rustagi@intel.com)  
Price Rs 52,000

**Projectors****Acer PD726W**

- Great overall performance
- Lacks remote sensor at rear

Contact Acer India Pvt Ltd  
Phone +91-9880544226  
E-mail [alankar\\_s@acer.co.in](mailto:alankar_s@acer.co.in)  
Price Rs 1,35,000

**LCD Monitors (19-inch)****AOC 1975**

- Good looks and performance
- Gloss finish catches smudges

Contact AOC India  
Phone 1800-425-4318  
E-mail [info@in.aocmonitor.com](mailto:info@in.aocmonitor.com)  
Price Rs 12,000

**LCD Monitors (17-inch)****AOC 177V**

- Good performance
- None in particular

Contact AOC India  
Phone 1800-425-4318  
E-mail [info@in.aocmonitor.com](mailto:info@in.aocmonitor.com)  
Price Rs 9,800

**Multimedia Cell Phone****above 20,000****Nokia N95 8 GB**

- Great all round performance
- Slightly bulky

Contact Nokia India  
Web site [www.nokia.com](http://www.nokia.com)  
Price Rs 28,000

**Below Rs 12,500****Sony-Ericsson W910i**

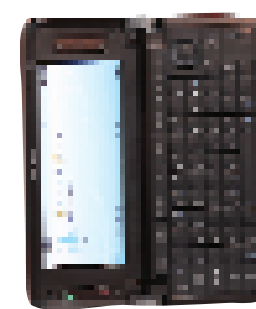
- Great sound
- Flat and clumsy keypad

Contact Sony Ericsson Mobile Comm. India Pvt Ltd  
Web site [www.sonyericsson.com](http://www.sonyericsson.com)  
Price Rs 19,000

**Business Device****Nokia Communicator E90**

- Extremely powerful
- Heavy, bulky

Contact Nokia India  
Web site [www.nokia.com](http://www.nokia.com)  
Price Rs 40,499

**Value Executive Phone****Nokia E51**

- Loads of features
- None

Contact Nokia India  
Web site [www.nokia.com](http://www.nokia.com)  
Price Rs 13,000

**Office Inkjet MFDs****HP Photosmart C4188 All-in-One**

- Good print quality
- No fax

Contact HP India Sales Pvt. Ltd.  
Phone +91-124-2566111  
E-mail [kakuni.mahto@hp.com](mailto:kakuni.mahto@hp.com)  
Price Rs 7,999

**DVD/DivX Players****Samsung DVD-1080P7**

- Great looks and performance
- No 5.1 channel RCA

Contact Samsung India Electronics Pvt. Ltd.  
Phone +91-11-41511234  
E-mail [shailja.m@samsung.com](mailto:shailja.m@samsung.com)  
Price Rs 2,990

**Mice****Logitech MX Revolution**

- Has a flywheel
- Expensive

Contact Logitech Electronic India Pvt Ltd  
Phone +91-22-26571160  
E-mail [response@logitech.com](mailto:response@logitech.com)  
Price Rs 8,000

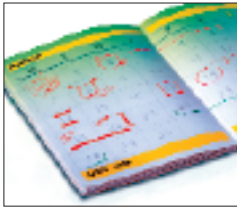
**Performance Laptops****HP DV6226tx**

- Funky Looker, features
- Needs better graphics

Contact Hewlett-Packard India  
Phone +91-124-2838700  
E-mail [tapoti-t.tipnis@hp.com](mailto:tapoti-t.tipnis@hp.com)  
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# Digital Business

How Technology Can Help Your Organisation

## Tech Careers

# Upwardly Mobile

Want a high-flying career? The booming field of avionics beckons you

Samir Makwana

**L**ike the heart is an integral part of the human body, an aircraft also has a heart—the avionics system. This system forms the integral part of an aircraft design and increases its capability. All the electronic components utilised in an aircraft for display, communication, navigation and management of other systems linked with them form the avionics system. Electronics systems like communications, surveillance and navigation systems, display systems, flight management systems, engine, fuel systems and other primary functions are used on an aircraft.

Avionics systems play a crucial role for effectiveness of the aircraft. Complex as well as expensive by nature, avionics systems are often called 'systems of systems'. For designing, integrating and testing the avionics systems and subsystems, a lot of expertise, time and money is required.

For the past five years, the Indian aerospace and aviation industry has been registering significant growth. Praful Patel, Minister of State for Civil Aviation, stated at the World Economic Forum held at Davos in January that the current annual growth of numbers of domestic passengers is 40 per cent and an average growth of 25 per cent per year is expected over the next five years.

## Broader Scope

India being one of the fastest growing markets for civil aviation, leading avionics companies have a presence in this country directly or indirectly. For any outsourcing business like design, development or production, India has always served to be the ideal option. "Avionics jobs are similar to other engineering jobs, with the exception of need for aircraft knowledge", says C. V. Ravi Shankar, Director, Merlin Hawk Aerospace, involved in research, design and value added development of hardware and software for aviation and aerospace applications.

Civil and defence are two areas you can work in. The functional roles remain nearly the same in both these areas. An avionics candidate can be involved in functional roles like design, development, integration, testing and advanced research of the hardware and software for avionics systems.

The private sector in the avionics field comprises the aerospace components suppliers / OEMs, IT solutions providers and other small and medium enterprises dealing with maintenance and allied services. Speaking of IT specifically, top IT companies like Infosys, Satyam, HCL, TCS, Wipro, Hindustan Aeronautics Limited, to name a few, specialise in providing solutions as aerospace IT players.

"In avionics, one should know and be sure of where and what is the specialisation required



Chaitanya Surpur



since there are different sub-divisions in the field. For example, mission computer and related hardware, cockpit displays, inertial navigation systems, weapons guidance system, etc., are parts of hardware. (Providing) software for those systems is again a challenging task,” says Suresh Kumar, Director-Sales, Datasol (B), which designs, develops and integrates modular products focusing on the areas of automated test equipment, avionics and embedded Systems.

The different sub-areas you can specialise in avionics are flight control system, flight management system, communication system, navigation system, surveillance system, safety and security system, power and electrical control system, in-flight entertainment and other miscellaneous systems.

On The Radar

You can decide to work either on the software side or the hardware side of avionics systems. Besides defence, options of working with other services-oriented organisations like the IT companies as well as the maintenance, repair and overhauling companies are widely open.

IT companies provide solutions on both hardware as well as software side for working with avionics systems.

On Hardware side

Detailed hardware design (VLSI-digital and analog, FPGA, ASIC), testing of the equipments and components like radio frequency chips, quality and qualification testing with environment, system safety analysis and even critical hardware manufacturing and development are a few options. IT solutions organisations are involved in providing the DTI (Design, Testing and Integration) solutions to airlines.

Today, the latest aircraft carry a unified solution in form of an open architecture computer as well. By synchronising the other subsystems like the radar systems and sensory systems with the core avionics systems, mission critical data is processed and displayed. The same data is communicated through radio communication to specified towers at airports.

Electronics engineers get involved mostly with designing and testing of the avionics hardware and subsystems. For example, VLSI chip design engineers specialise in designing different silicon components for mission computers based on open architecture.

On software side

Mission-critical electronic systems interface with the hardware using some software systems. The computers and embedded electronics used in aircraft today run on real-time operating systems. It’s the data processing software that collects the data from the mission computer based on open system standards.

Avionics software and components testing professionals are expected to check whether different avionics subsystems and hardware components are working properly or not. In-flight entertainment services also require



“Understand the workings and develop a passion for Aircraft instrumentation and Engineering. Avionics jobs are similar to other engineering jobs, with the exception of need for aircraft knowledge.”

C.V. Ravi Shankar  
Technical Director  
Merlinhawk Aerospace  
Pvt. Ltd.

strong networking and telecommunication support, which has to match the regulatory standards. Every organisation working with hardware and software of avionics systems must meet the respective standards for hardware and software published by the Radio Technical Commission for Aeronautics (RTCA).

For software programmers, knowledge of different basic programming languages like C, C++, MATLAB, and familiarity of working with RTOS as well as other platforms is necessary. Simulated environments are created to test avionics systems. Proficiency or awareness of CAD / CAE / CAM design tools and flair for design is also expected—it’s been the most essential practice in the automobiles as well as aviation industry.

Take-off Conditions

Deep interest in using cutting-edge computing ability and advanced electronics in challenging applications areas form basic elements for avionics education.

A strong fundamental background in mathematics, physics, electronics, chemistry, computer science, mechanical drawing / drafting, and conventional software programming is also helpful.

“Usually candidates carrying bachelors / masters level engineering degree or aeronautical engineering or aircraft maintenance and engineering can have an edge over others by specialising in systems engineering and instrumentation engineering,” says Retd. Air Cmde. Raghubir Singh, Director-Training at the Indian Institute of Aeronautical Engineering and Information Technology, Pune.

“Certain universities like Anna University, VTU and IITs offer a specialisation in avionics. A career in avionics requires an ability to appreciate and understand systems engineering. In today’s world where avionics has graduated from a standalone cluster of systems like FCS, FMS, and CNS to a level where the latest concept is “Integrated Modular Avionics”—it is important that an aspirant has solid grounding in electronics and further systems engineering,” says Abhishek Vanamali, Group Manager-Marketing, HCL’s Aerospace Practice, HCL Technologies Pvt. Ltd., which offers specialised expertise for hardware and software system level solution services.

Many colleges / institutes tie up with foreign universities to offer specific and specialised courses. For instance, Sreenidhi Institute of Science and Technology, Hyderabad (accredited by AICTE) has tied up with Vaughn College of Aeronautics and Technology, New York, to provide courses for electronics engineering and technology with specialisation in avionics.

Find Your Way

The procedure of recruiting remains uniform for this industry—a written aptitude test followed by personal interviews. At times, private sector companies have practical exams to test the hands-on knowledge and strength of the candidates in their respective field of specialisation.

“If you’re really keen about avionics then you can take up research as your career goal and join research establishments like the Defence Avionics Research Establishment. You can also work for organisations like NAL, HAL, ISRO and DRDO or labs like ADE and ADA”, says Vanamali.

Gaining hands-on experience and undergoing training at the apprentice level is a crucial part of an avionics career.

Besides academic qualifications, other basic skills like job knowledge, reasoning power, analytical ability, task orientation, tool identification, innovation, communication and being a team player are expected in freshers.

“The best thing would be to have some industry participation with colleges during the project phase. More than seminars, one-on-one hands-on training programs may be more useful in minimising the demand-supply gap”, says Kumar.

Know Your Role

The levels of hierarchy in this sector remain the same as other occupations. The typical jump from the fresher level to the intermediate level requires good knowledge and rigorous hands-on working experience in dealing with mission-critical hardware and software.

One can expect to work in the following hierarchy:

- Top level-Director / Project Manager
- Middle Level-Avionics / Aircraft Engineer
- Intermediate-Senior Technician / Developer / Software Tester
- Entry Level-Asst. Engineers / Technicians
- With the IT outsourcing companies the structure is:
- Top level-Vice President / Director / Project Manager
- Middle-Technical Lead
- Intermediate-Senior Tools Developer / Designer / Architect / Tester
- Entry level-Programmer / Tool Developer / Designer

Note that here the structure remains more or less the same whether you work on hardware design-testing or software development.

At IT outsourcing companies, one month of vigorous training on avionics domain—software development tools and verification tools—is provided before candidates are deployed on projects. Due to shortage of skilled workforce, many IT outsourcing units have developed and implemented their own training programmes for fresh recruits. Generally, training involves developing familiarity of working with co-ordination between software and hardware systems.

The Future

Like every other industry in the IT and ITes domain, the avionics industry is also starved for a skilled work-

Indicative College List	
■ IIT-Kharagpur	■ Nehru College of Aeronautics & Applied Science, Coimbatore
■ IIT-Bombay	■ Park College of Engineering and Technology, Coimbatore
■ IIT-Kanpur	■ School of Aviation Science and Technology, New Delhi
■ IIT-Madras	■ Indian Institute of Aeronautical Science, Jamshedpur
■ Indian Institute of Aeronautical Engineering, Dehradun	■ Institute of Aviation & Technology, Bhubaneswar
■ Academy of Aerospace & Aviation, Indore	■ Nehru College of Aeronautics & Applied Science, Coimbatore
■ Bangalore Institute of Aeronautical Engineering & IT, Bangalore	■ P.A.M.E College, Patiala, (Punjab)
■ Hindustan College of Engineering Kelambakkam (Tamil Nadu)	■ Rajiv Gandhi Memorial College Of Aeronautics, Jaipur
■ Hindustan Electronics Academy, Bangalore	■ School of Aviation Science and Technology, New Delhi
■ Hindustan Institute of Aeronautics, Bhopal	■ VSM Aerospace, Chelekere, Bangalore
■ Hindustan Institute of Engineering Technology, Chennai	■ Buddha Institute of Aviation Technology, New Delhi
■ Indian Institute of Aeronautical Engineering and Information Technology, Pune	■ Indian Institute of Aeronautical Engineering, Dehradun
■ Indian Institute of Aeronautics, Patna	■ Indraprasth Institute of Aeronautics, Gurgaon
■ Institute of Aviation Technology, Haryana	■ Academy of Aerospace & Aviation, Indore
■ Madras Institute of Technology, Anna University, Chennai	■ National Defence Academy, Pune
■ National Institute of Aeronautical Engineering, Dehradun	

force. The private aviation sector is yet to make it big by constructing an entire plane (for civil or military use) or complete engine by itself. Machines are getting more automated as technology advances, so the scope for growth is high.

“With a number of regional airlines coming into existence and growing at rapid speed while other national airlines go international, the growth of employment opportunities will take place. The industry has bright prospects,” says Mehta.

The outsourcing business of the aviation industry has also gone up. “We’re already ahead in terms of software development and the research front. With the 30 to 50 per cent offset clause for aircraft and defence purchase, lot of joint ventures in aviation industries are coming up like maintenance and repair organisations at the Tier-I and Tier-II cities. Apart from that many industries and sub-industries will emerge with huge financial outlays,” says Singh.

Major developments are afoot in this sector. For example, DaimlerChrysler is setting up research centres, IT honchos like Infosys, TCS and HCL are offering specialised engineering and design services, and firms like Hindustan Aeronautics are planning to invest in R&D as well as manufacture aircraft components in India.

Patel has predicted at the World Economic Forum that the fleet of aircraft operating domestically is expected to increase from the current 400 to about 2,500 by 2020. Hence the long-term equation for the avionics sector is simple—more passengers, more planes, more demand for skilled work force. ■

samir.makwana@thinkdigit.com





# Getting On Track

**You don't have to be a software development company to worry about project management solutions—dotProject can be customised to your needs too**

**Nimish Chandiramani**

**W**hen you think “project management”, you normally think Microsoft Project, which in turn makes you think that project management solutions are for software development companies only. In a sense, this is true—the first solutions were indeed designed to make software development easier. They enabled confusion-free collaboration, and provided a way to analyse the development team's efficiency at the end. If you're reading this and thinking, “I need this too!” we won't blame you. The benefits of a project management solution should be available to any organisation whose business is based on projects from clients, and more so when deadlines are tight.

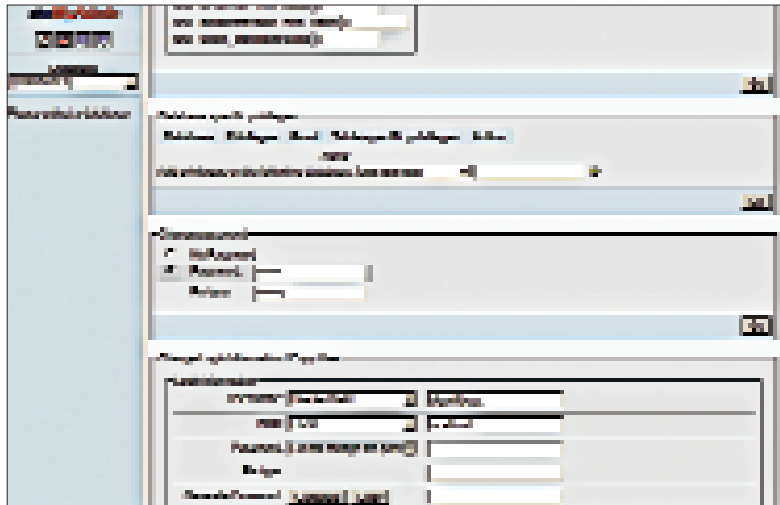
Sadly, many project management solutions—both open source and commercial—are still built with software projects in mind, but there are a few that can be customised to suit anyone. One such solution is dotProject, which is very easy to get used to, and works for anyone whose work comes as projects.

## Prelude

To run dotProject, you'll need a dedicated PC of modest configuration; this is a Web-based solution meant for the LAMP (Linux-Apache-MySQL-PHP) platform, so running it on a Linux-based machine is advisable. If you prefer Windows, install Wampserver (<http://www.wampserver.com>), which automatically installs Apache, MySQL and PHP on your PC. We'll use this approach for now.

The first thing you need to do after installing Wamp is to fix the most important security hole—the administrative user for MySQL (root) has no password. To fix this, start PHPMyAdmin by clicking on the Wamp icon in the system tray and choosing PHPMyAdmin. This lets you administer your database from within your browser. Click on the Privileges link, and you'll see a user overview. Click on the little icon next to the entry for “root” to edit it. Scroll down a bit, and you'll be able to change the password. Now open `C:\wamp\apps\phpmyadmin2.10.1\config.inc.php`, search for `$cfg['Servers'][$i]['pass-`





Before you start anything, change the root password

word'], and enter your new password here. Save the file and restart your browser.

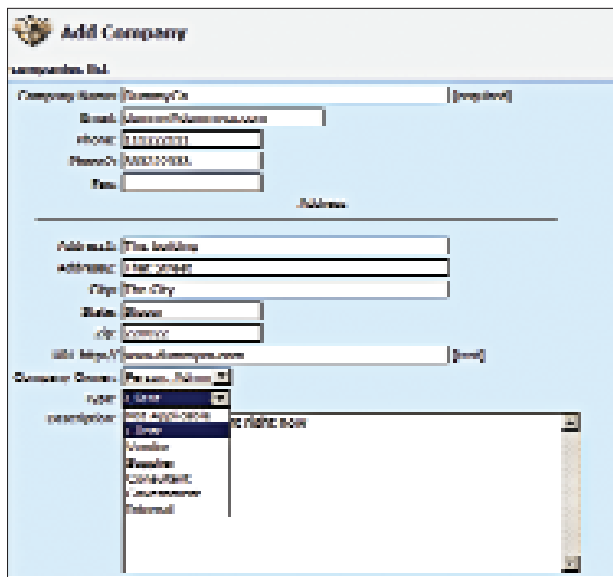
Once that's done, you need to create another user with lesser privileges than root—this is the user that dotProject will use when it makes requests to the database. Go back to the Privileges page and choose Add New User. Give this user a name (let's call it projmgr) and password, and under Global Privileges, give it all privileges under Data and Structure, but not under Administration. Your database is now ready for dotProject.

### Setting Up

You can download dotProject from <http://www.dotproject.net/>. Extract the contents of the ZIP file to C:\wamp\www. To start the installation, go to <http://localhost/dot-project> in your browser.

The first screen gives you a list of requirements and whether your PC meets them—you

**Permissions aren't exactly a pleasure to deal with, and it will take some time before you're comfortable with them**



Companies can be Clients, Vendors, Government or even yourself (Internal)

can safely ignore this and click Start Installation. In the database settings, enter projmgr (the name of the user you just created) as the Database User Name, and use the corresponding password. Leave everything else as is and click Install db and write cfg. Once that's done, use the link given to start working on your dotProject installation. Like the page says, it's a good idea to change your admin password when you log in.

### Getting Started

When you log in, you're first asked to configure your dotProject system. You'll have to change the currency and company name, naturally. You can tweak the rest as you please. Under Email Settings, you should choose SMTP and use the same SMTP server you use for your official e-mail. Once you're done here, click Save to get started with doing some real work.

Let's say you're designing a Web site for a company called DummyCo. The first thing you do is create the company in your database—this makes sure that if you get more business from them, you don't have to enter it in your database again. Click on Companies in the top menu to create a new company.

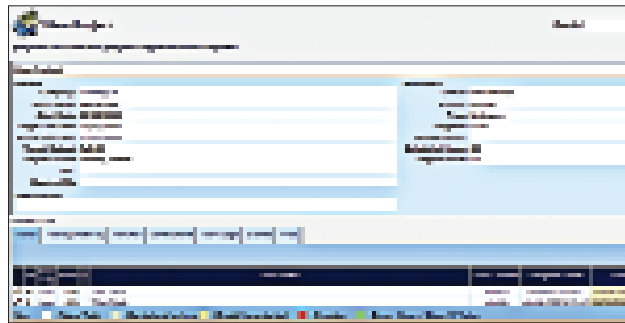
In the Add Company page, you'll see a drop-down menu for Company Owner—this is just the person who has the right to edit the company's details, not the actual owner. This is usually the administrator (you); it's best to leave it at that.

Before you start adding projects, you need to add the people who'll be working on them. Select User Admin from the menu at the top to start creating users. You should create a user account for yourself too, and use the administrator account only for, well, administrative purposes. When you're done creating the user account, check the box to inform the user of their details, and hit Submit. The next step is to assign rights to the user you just created; this, unfortunately, can be quite tedious. To speed things up, dotProject has a set of User Roles—Administrator, Anonymous, Guest and Project Worker—which come with a set of pre-configured permissions. You can assign these roles when you create the user, or under the Roles tab when you're editing the user's details. You'll likely be using the Project Worker role most often—these users don't have access to administration modules, and have full access to the non-admin modules.

You can also set access rights for individual items—for example, you can restrict users to one specific company by choosing Companies under Module, and then the company in question under Item. In general, this is a section you'll be coming back to a lot—it isn't exactly a pleasure to deal with, and will take some time before you're comfortable with it.

### Your First Project

User the Projects menu, use the New Project button to get started. The details are quite self-explanatory; fill them up and hit Submit. Now



View a quick summary of your project and its tasks

comes the important part—the tasks. Before you begin with creating tasks, you should have them charted out on paper.

Under the Projects menu, you can view your project by clicking on its name. In the View Project screen, hit New Task to begin creating tasks. Under the Details tab, you can select an owner for the task (the person in charge), and even create sub-tasks by choosing a parent task. The Dates tab is where you set the deadline for your task—you can enter a finish date and have the program calculate the number of working hours it'll take, or vice versa.

If the starting of one task is dependent on the finishing of another—for example, editing an article depends on the completion of its writing—use the Dependencies tab to add the task that your current task is dependent on. Remember to check the box for Set task start date based on dependency. Finally, under the Human Resources tab, you can assign one or more of your team to it. Annoyingly enough, you'll also have to keep removing yourself from that list. Add any comments you'd like, and hit Save—the people assigned to the project will automatically be informed by e-mail. When you go back to the View Project screen, you'll see a list of tasks at the bottom. Click on a task's name to view its details.

The New Log tab lets the assignee update the status of the task—progress as a percentage, hours worked, and so on, with a mandatory “worthwhile comment”. If there are any files associated with the task—Excel sheets come to mind, they can be uploaded using the Files tab.

That's about all you need to know to start using the most essential features...

### Business As Usual

Apart from tasks, you can add events to projects—meetings, appointments and so on. You also have the option to create discussion forums where your team can discuss ideas, clarify doubts, and every once in a while, goof off. When project workers are having trouble with their tasks, they can raise *trouble tickets* under the Tickets menu item—the ticket will remain open till the issue is resolved.

Your first few days with dotProject will likely be a little tough, but once you get used to it, you'll find your team working much smoother than ever before. ■

[nimish.chandiramani@thinkdigit.com](mailto:nimish.chandiramani@thinkdigit.com)



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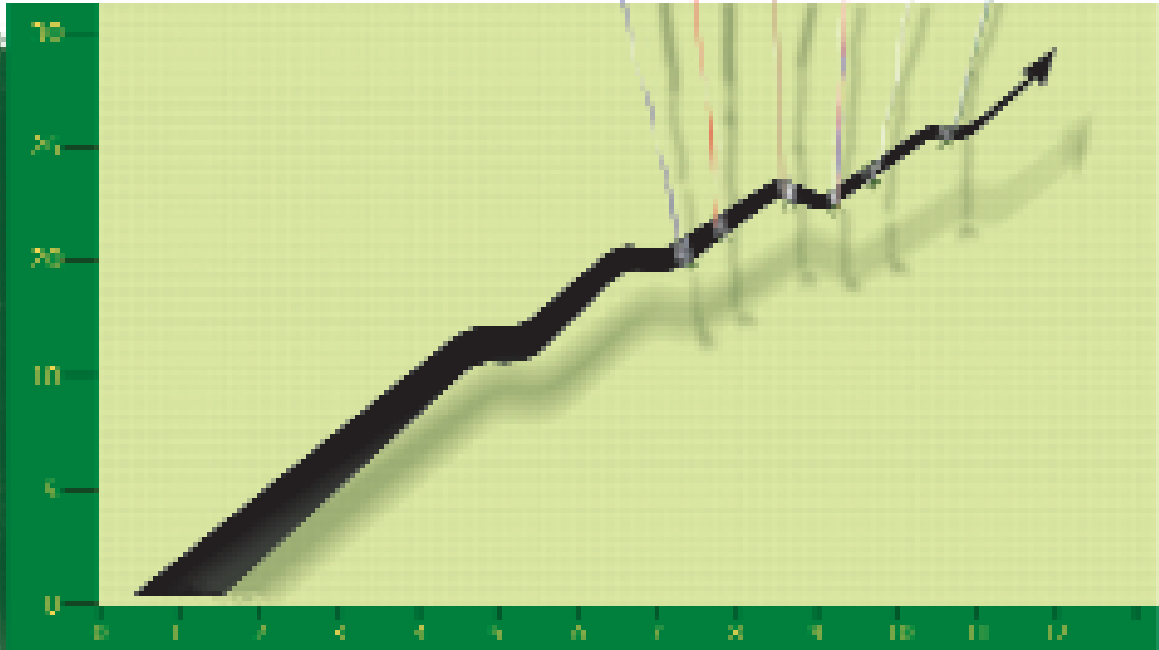
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Google Apps takes care of most of your IT needs

should be able to complete its transition to Google Apps in less than twenty minutes. You can also add more users later. Accept the terms and conditions and proceed to the next page—the dashboard. This, as the name suggests, is the panel with all the controls—it is nothing but the administrative page of your domain.

On the dashboard, are several major services—the Start Page, Calendar, Chat, Docs, Email, Web pages and Sites. Before proceeding to these services, create a list of users in your organisation. To create new users, simply click on Create New Users. For each user, fill the three data fields—name, sur-



name and username. Google Apps provides you—the administrator—with a password that can be changed later by the new users. You can also upload a compiled list of all users in the CSV (Comma Separated Value) format, and all users can be created at once. This makes things really easy for you.

### Start Page

The Start Page is where you access all Google applications. You can personalise the start page in the same way you personalise your iGoogle page—bring together your content, other Google services, and interesting applications from the. The URL for the Start Page is typically <http://start.your-domain.com>. The first time you click on the start page, the typical feeds available are your e-mail—where you can see a snapshot of the new e-mails in your inbox as well as a shortcut to compose a new mail. Other useful applications that you find on the Start Page are Calendar and Sticky notes, which is an online alternative to the post-it.

### Calendars

The calendar is a critical tool in time management. Access your calendar at <http://calendar.your-domain.com>. Insert an event in the calendar by clicking on the respective date, at the start time of your event. In the balloon that pops up, type your agenda. If you realise that the event is going to consume more time



You have to start with creating an account

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You can set passwords for new users, or let Google auto-generate one

than the default hour, you just have to drag the lower end of the event box.

You can share calendars with each other, and know when members of your team are free or busy—this lets you plan activities around everyone's schedule. You can also synchronise your Google calendar with Outlook (using third-party software), and even with your Blackberry.

## Docs

Google Docs is another interesting tool that's a part of Google Apps. With Google Docs, you can do away with the Office suite altogether. You and your team can collaborate on documents, spreadsheets and presentations all in one go! Google Docs offers you the option to share and publish your documents in to a unique URL. That apart, you can save it to a host of other formats too. This is of immense help to those people who are always on the move. They can start work while away from their workspace, without worrying about any data being lost. To use Google Docs, visit <http://docs.your-domain.com>. Once here, you can click on the New tab to the left. Of the options for Document, Spreadsheet or Presentation, choose any depending on your requirement. Once you start typing, Google Docs continuously saves your document as and when changes are made.

## E-mail

In its basic version, Google Apps provides 6 GB of storage per user—quite like a personal Gmail account. The URL for your e-mail will be <http://mail.your-domain.com>. In addition, Google also monitors [abuse@yourdomain.com](mailto:abuse@yourdomain.com) and [postmaster@yourdomain.com](mailto:postmaster@yourdomain.com) to report spam, abuse and other technical issues. Configuring the email addresses of your employees to Google Apps doesn't require more than couple of minutes. There are two major steps involved in setting up your new mail service. First, you need to create new user accounts. Second, set up the email delivery.

To switch your domain to use Google Mail, you'll need to change your MX records—you can do this from the administration page of your hosting provider. You can find instructions specific to your provider here: <http://www.google.com/support/a/bin/answer.py?answer=87084>. It takes around

two days for MX records to get updated—to avoid losing e-mails during this time, first create all the e-mail accounts you need, and only then change the MX records.

You can upload the details of existing e-mail accounts in bulk using the CSV format—username,userid,password. Log in to the control panel and go to Advanced tools. To upload the list in bulk, go to User Accounts Bulk Update. Upload the CSV file, and you're done. Once you've created the same user accounts in your control panel as you have in your existing domain, you won't lose any new mail.

Another interesting feature that Google Apps provides is email reforwarding. For example, say you have an employee named John in your organisation, and his email address is [john.smith@your-domain.com](mailto:john.smith@your-domain.com). If someone sends an e-mail to [johnsmith@your-domain.com](mailto:johnsmith@your-domain.com), you can set it up so that the e-mail reaches a "catch all" account like [error@your-domain.com](mailto:error@your-domain.com).

## Chat

At times, teams in your organisation may reside at remote locations or even client bases, making communication back and forth rather tedious and expensive. To reduce these ancillary costs, Google Talk is a viable option. With Google Apps, you can configure Google Talk within the users in your organisation. To control the use of Google Talk, go to the dashboard and click Chat—Google Apps gives you the option to warn your users when they chat with users outside your domain. You can use this feature to ensure no sensitive information gets out, and that your employees aren't wasting their time chatting with friends.

## Wrapping Up

You get to take charge of all your online needs, without the hassles a typical system administrator faces. Google does all the dirty work for you, while you can focus on improved productivity and business related issues. Apart from this, if the Docs application is optimally used, you can drive the running costs to rock bottom by doing away with the office suite completely. With large corporate houses also showing interest in Google Apps, this is one upcoming trend. ■

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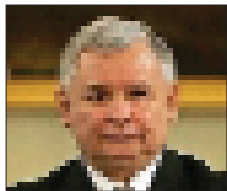




**98** DVD / DivX  
Players Tested



**108** Game on



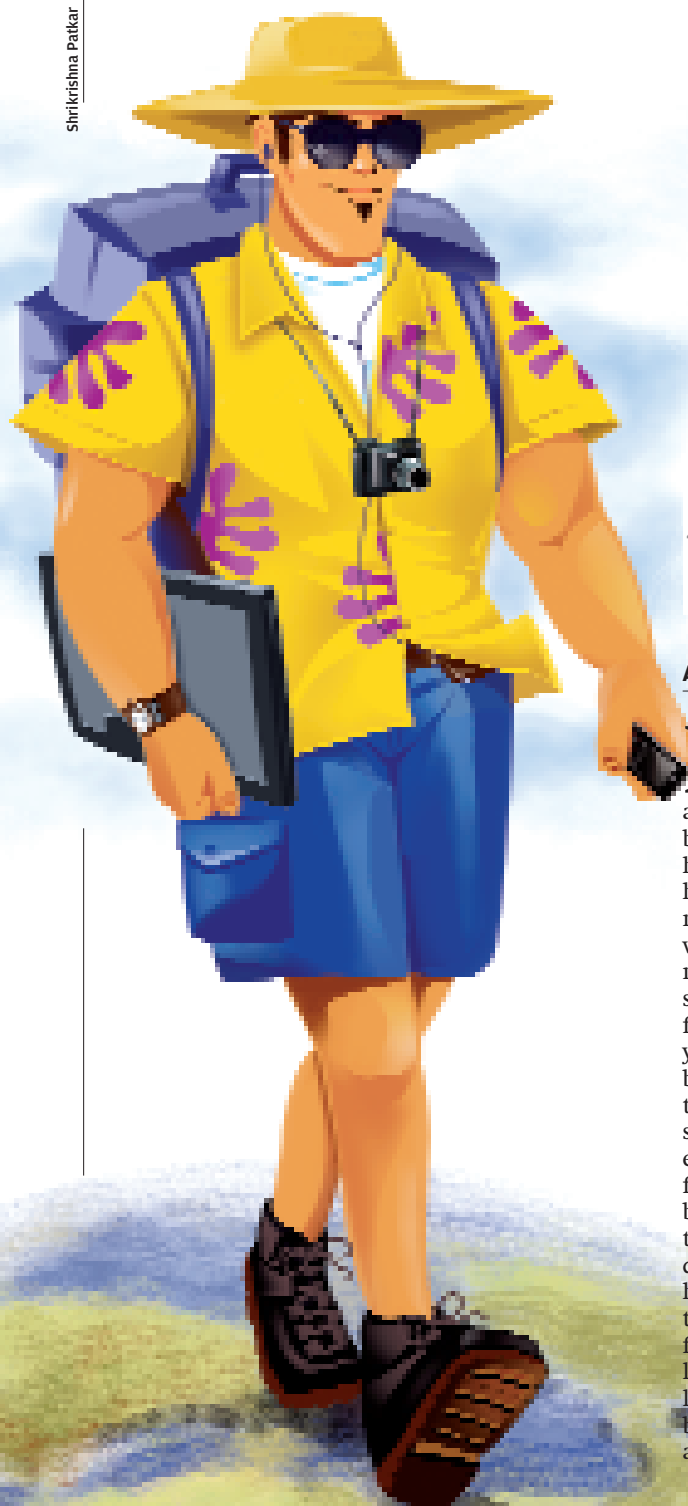
**122** Tabloid Tech

## Digital Leisure

Technology Beyond Work

### Lead Feature

Shrikrishna Patkar



# Geek's Week Out

**I finally got some much deserved, and much needed time off from my hectic, do good existence. Two weeks off!—here's how it was spent, and with whom...**

#### Agent 001

Even techies need a vacation, right? I rarely get time off, and even your beloved agent is susceptible to stress. It's been a long time since I went on holiday, and my diligence and hard work this past year was rewarded with a whole two weeks off! Two weeks to recharge my batteries, two weeks of de-stressing and rejuvenation, all for the humble goal of serving you, my beloved reader, a little better. Sadly I couldn't afford a trip abroad having spent all my spare cash on gadgets (what else?), and exotic locations and fast cars are more 007 dominion, but as 001 I have my standards too! I wanted something outdoors, something away from the hustle and bustle of urbanisation. I was thinking calm peaceful waters, greenery, wildlife, a little adventure, and mostly isolation. Kerala and its beautiful backwaters I have seen before, and having become accustomed

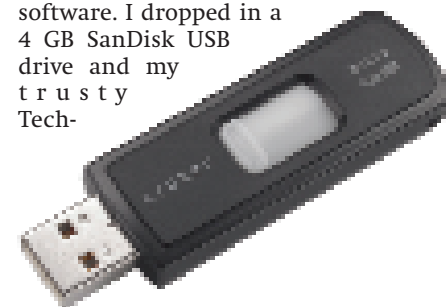
to the warm and cosy environs of Mumbai, the cold (brrrr!) north was out. After a bit of googling, and searching through each state's official tourism Web site, I finally decided on the so-called heart of India—Madhya Pradesh (MP). I googled quite a bit on the local people, places of interest, climatic conditions (my proposed visit is around the beginning of April). So two days into my holiday and I was all set.

I decided to visit the capital city Bhopal first—it's supposed to be the city of lakes as well as being steeped in history. I booked my ticket online courtesy my account at [www.makemytrip.com](http://www.makemytrip.com), and 3,500 bucks off my credit card later I was on my way. As exciting as a holiday is, especially when you're taking one after more than a year, I took my time making a list of the stuff that I would need for the trip, and took a printout of the same, which was pasted atop my fridge for reference.

I needed something to enable productivity on the go, and I was torn between notebook and PDA.



I finally decided to take my notebook instead of my PDA as typing on a small, uncomfortable Bluetooth keyboard has never been my cup of tea. So it was my shiny new Dell XPS 1330 a gift from my US-based uncle that got the nod ahead of my PDA. With a 13.3 inch screen, a Core 2 Duo T8100 processor, 2 GB of RAM, a 160 GB hard drive and a GeForce 8400GS graphics solution the XPS 1330 is compact enough to be lugged around in my backpack, and powerful enough to process just about anything. I installed a spare copy of PhotoShop CS2 (holidays mean great photographs right?), and ensured that I had Office 2003 installed for any correspondence that might need tackling. Also on board was a Reliance Data card. Coupled with my laptop this would ensure that I could receive official mails, and be in touch with the guys at office as long as I was within Reliance's network area, which according to online reports is pretty decent in MP. I would rely on my data card and laptop duo to book a return ticket to Mumbai as I wasn't sure of my exact itinerary. Other than that I wanted to maintain a journal of activities, and the sights and sounds and other interesting facts, and my laptop would allow me to easily do this. My next craving would be music, and I included my iPod Touch 16 GB along with around 45 MP3 albums. The Touch is a brilliant PMP, with superb quality music, and great video and photo viewing thanks to its 3.5-inch screen. Also available (though not of much use in this case) is wireless connectivity. The best part of the Touch has got to be its great interface, which one never tires of. I also packed my Audio Technica ATH A900 headphones (procured from <http://tinyurl.com/34wktn>). Although circumaural and large, these babies deliver pounding, liquid bass, and blissfully clear highs, with a strong, emphasised mid range, just what the doctor ordered for an unashamed audiophile. My next travel companion would be a Nokia N95 8GB. I'm a great believer of converged devices and the convergence is this cell phones middle name. With Quad band GSM, an ARM 11 processor, 8 GB of internal flash memory, a 5.0 megapixel camera, 2.8 inch 16.7 million colour screen, inbuilt GPS (Global Positioning System), and a 1200 mAh battery juicing everything this baby is one helluva cell phone for the intrepid road warrior. I downloaded Nokia maps for India, and to my delight the highways of MP and the larger cities are basically represented in the software. I dropped in a 4 GB SanDisk USB drive and my trusty Tech-



My trusty Cruzer for my PC, and my Extreme SD card for my camera—all my Flash memory needs covered!



I never step out without the Suunto X9i—even though it belongs to my editor!

Com memory card reader into my laptop case's side pocket, after all if portable storage isn't meant for a holiday then what is?

Next I packed my Nikon D40x camera which is a compact digital SLR. With a 10.1 megapixel rating, an ISO range of 100 to 1600, a very intuitive menu on its 2.5 inch LCD and a large viewfinder that gives 95 per cent coverage the D40x is a very good entry level DSLR and one which has given me some terrific results despite my amateurish (at best) photography talent. With the DSLR went a couple of multi purpose lenses an 18-55mm—useful for regular shooting, and an 18-200mm (borrowed

from a friend), which would come in handy for a little more distance shooting. I also packed a couple of 2 GB SanDisk Extreme 3 SD cards.

I threw in a couple of tubes of mosquito repellent, and bought myself a nice pair of hiking boots courtesy the nearest shoe showroom, and I was ready. My afternoon flight happened to be an hour late, and I spent the extra time surfing via GPRS on my N95 8GB while grooving to some heavy metal on my iPod Touch. The plane ride itself was uneventful, and I caught a taxi at Bhopal's Raja Bhoj airport



My N95 8 GB is my Ultimate Converged Device

and checked in to a nearby hotel for the evening. Incidentally Bhopal is a hilly region with an average elevation of around 500 metres as the readout on the Suunto X9i wrist watch showed. This watch was on loan from my editor and incorporates GPS, altimeter, barometer, digital compass and thermometer and is the ultimate watch for the outdoors. Here's a link from where he ordered it—<http://www.amazon.com/gp/product/B000E0MVZ4>. Evening temperatures were around 26 degrees (Suunto X9i again)—not bad. Around 8.30 pm, and a good bath and shave later I was in the market place checking out the local flavours. Dinner was a cheap affair—a deliciously spicy plate of chicken biryani. I spent an hour loafing around, and checked my mail a little later on my laptop. I'm happy to report Reliance's network is good in this part of the country, and the speed was decent for a dialup connection.

After breakfast at 10:00 am the next morning, I was on my way to the Bhoj Wetlands and what is called the Upper Lake. A really beautiful spot this, plenty of greenery and the birdlife on the lake was really something special. I thanked the 11.1x zoom lens on my D40x and got a couple of excellent shots of a flock of cranes fishing near the shore. I also enjoyed a leisurely boat ride on the lake. I got a couple of good shots of a large flock of geese that seemed to think swimming alongside our slow moving boat was fun. At this point the X9i on my wrist was reading 35 degrees, hot! After an early dinner I spent a couple of hours online, replying to a couple of mails and chatting up a couple of buddies via Yahoo Messenger. All the while charging my iPod Touch via USB for a little late night audiophile action...It was all so relaxing—a comfortable bed, a great view of peaceful, scenic old Bhopal, and my A900 / iPod Touch combo belting out some serious audiophile sound.



The Dell XPS M1330 is exactly what the doctor ordered—the keyboard is large enough for my fingers, and I don't have to lug a 15.4-inch behemoth around!



My Audio Technica ATH A900—expensive, and maybe a little bulky, but worth every penny

The next morning I checked out, and got aboard a rickety state transport bus to Jabalpur, my real destination which I was exactly 312 kilometres away from. Six bone jarring, back breaking hours of travel, only relieved by some scenic ghats ended at 4.30 pm, in Madan Mahal, Jabalpur. By now I had a backache, and checked in to a nearby hotel, and immediately got online after a hot bath. To my irritation Reliance had some issues with reception in the area—so my XPS 1330 was basically useless for browsing. Luckily Airtel offers very good service in this part of the country, and I was able to get decent speeds, a couple of quick replies later my aching back was ready to call it a night. This is where my W-1205 portable back massager earns its bucks-bought while on an official trip to Taiwan this little relief package for your entire lumbar region sports six motors, eight magnets and infra red heat therapy. Very suitable for sore backs like mine, after 45 minutes I finally feel like a biped again.

The next day was spent at the beautiful Marble Rocks of Jabalpur which are 200 feet high canyons of marble, through which weaves the Narmada River. I got some beautiful photos of Dhua Dhaar which the famous waterfall that gets its name from the droplets of water that spray due to the velocity of the river's flow. I even bought a couple of marble mementos. A boat ride on the Narmada followed by lunch that consisted of delicious dal, rice, poories and three vegetables well-cooked saw me content, and slightly lethargic (What? I'm on holiday, remember?). The next day I made a few phone calls and set up for a taxi to Kanha Kisli, a well known wildlife reserve, resplendent with







I'm zooming away thanks to the lens on my Nikon D40x

greenery and wildlife, including tiger, leopard and cheetah (spotted deer). The trip itself was fun, village roads, a lot of greenery and water bodies, and a small but scenic ghat section. I took a lot of photos all along the way including a few clicks of a family of monkeys that were sunning themselves along the road. Everything seems so green here, unfortunately after dark the mosquitoes become a problem—thanks to the repellent I brought along I was immune.

Kanha wildlife reserve proved to be the kind of holiday escapade I was looking for. I booked a small cottage, and immediately settled in. Thankfully two plug points meant all my gadgetry was in good charge. A couple of days of small treks skirting the reserve, (for safety reasons nobody is allowed on foot into the wildlife reserve), a lot of rest, and updating my log, and my photograph collection with various interesting tidbits, and I was ready for a foray into the park.

We set off early morning, and though I couldn't leave the vehicle I could get a lot of shots out of the window. There is always an armed person onboard each vehicle and this I got a nice photo of the guy with his rifle, proudly twirling his moustache. The winding road into the park was in permanent leaf shadow, giving the illusion of semi-darkness. About four kilometres into the park we chanced upon a bunch of grazing spotted deer, I got a few good shots, and quickly made a voice note on my cell phone. By now we were out of cell phone coverage area, and WiFi is non-existent in the region anyways. I felt different somehow, to be just a couple of hours of flight away from Mumbai, but yet so disconnected, so isolated from civilisation, if you'll pardon the dramatic way of putting it. My Suunto X9i showed the temperature at 33 degrees, and we were at an altitude of 320 metres. I was longing for a photo of some of the big cats, but the guide told me that winter (November to February) is the best time to come across the beasts and when it heats up they prefer dense foliage—only coming out at night for a drink of water or a hunt. Twice we came across families of monkeys, and the occasional birdcall was the only disturbance from the otherwise silent jungle.

We had a quick meal on the go (vehicles aren't allowed to stop) and another three hours later we were back this time by another route. My last evening was spent in front of a campfire, with one of the drivers, and a couple of security staff. Dinner consisted of chicken curry, puffy omelettes, and parathas, after which we talked well into the night. The following day I joined another group of tourists for another incursion into the park after which I left Kanha and boarded one of the many tourist buses back to Jabalpur. From there I would catch a bus to Nagpur, and then a flight back to Mumbai.

### One week later...

It's been my second day at work now, and I don't know why I wasn't surprised when our editor came up and asked me for an account of my travails over a can of Diet Coke after work. I was surprised when he informed me that my diary was to become the subject matter of this article. He wanted to visualise it as the week spent by a geek away from traditional, Digit-style technology.

Well, I've given him what he wants. His X9i now tells me that its time to phone up a friend and fix dinner plans. But first let me do a little browsing on my laptop after I get home. For now, I'm going to relax to some music on my iPod Touch. So was I without technology? Was I Disconnected? Hah! ■

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Shhh...

# The Show's Starting

**A home entertainment system without a good DVD player would be like a soccer match without a football. We've tested 16 players, each with something unique to offer in the realm of digital entertainment. Here's where you get to decide which one is the best for you...**

**Michael Browne**

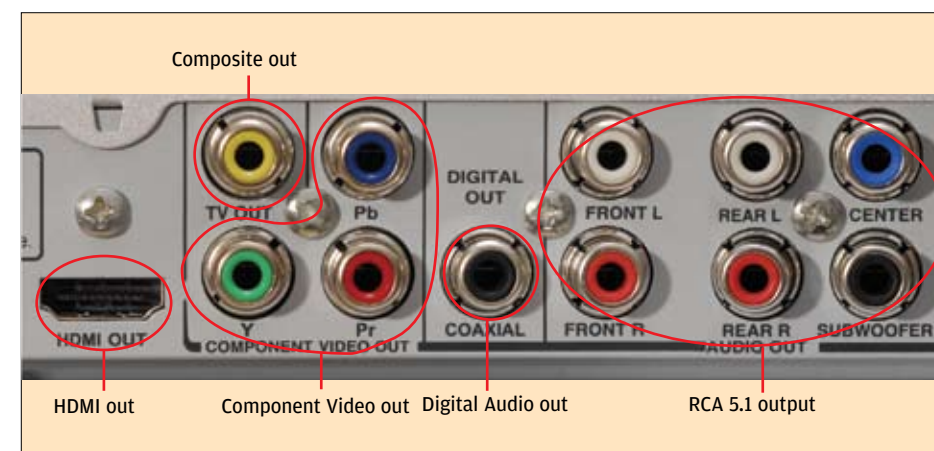
**W**e at *Digit* have always welcomed the dominion of digital entertainment. It's a realm where hours are spent in blissful leisure, senses tuned in to the wonderful sights and sounds that only a 50-inch plasma screen coupled with a 500W RMS surround sound system can give you. But wait...besides that 5000:1 contrast ratio screen and that 12-inch subwoofer, aren't you missing something? Unless you intend having your PC in your designer living room (ugh!) you're stuck for a proper source. Simply put—what do you use to

playback all your multimedia content? Well a good DVD player should do the trick. It can't playback all the formats your Winamp / VLC + PC combination can, but it does look a sight more at home in your living room where aesthetics is everything, and space is a premium ill afforded to such eye sores as an ugly beige box.

DVD players, as we call them for lack of a better term (for they are jacks of many formats and not just masters of one) are in fact one of the hottest selling consumer entertainment products, and having a sleek, black / silver box beneath your TV has become a de facto standard now,

up from the status symbol it was years ago during the age of VCRs. DVD players have become the staple of many a movie junkie, and although they can be used for music and photo files as well, their major use was intended as (and is) playback of video. The VCD players of yesteryear have given way to DVD players—these players play dual layer DVD videos, (called DVD 9), as well as VCDs, as well as the more recent DivX and AVI formats. High Definition (HD) resolutions are supported by some players which will also generally have the designation *HD Ready*, *HD Compliant* or such. Although HD formats like TS, MKV and WMV are meant primarily for PCs, even DivX and AVI files can be encoded at HD resolutions like 480p, 720p, 1080i, or 1080p which are the most common resolutions for HD content.

When buying a DVD player, it's very important to also decide on the other components of your entertainment setup so as to maintain a synergy between components. Some DVD players come with bundled surround speaker systems like the Moser Baer MBI AV 780, which had a 5.1 setup bundled. For others, you may have to choose a set of speakers (refer to our speaker test in this issue). You will also have to choose a television,



**The rear of your DVD player demystified**

while regular 21- and 29-inch CRTs work fine for VCDs, they are unsuitable for viewing widescreen content. Throw in the fact that 95 per cent of all video sources today are widescreen and you have a serious problem of thick black bands appearing on the top and bottom of your CRT TV. Of course, such banding is also common on LCD and Plasma TVs, but it's a lot better considering most of these TVs have aspect ratios of 16:10.

But that's another story for another time, without further ado let's get into the thick of our test. Of the 16 DVD players we tested this month there were two very unique players—the

LG DP271B and the Moser Baer MBI AV 780, both very different beasts but their exclusivity was enough to warrant them to get their own special box.

## Non-HDMI Players:

Eleven of our test subjects were of the non-HDMI variety and we'll look at them first. Onida's Candy was one of the funkiest, and definitely the most chic looking player across all categories. A bright red colour theme—*candy* red, if you will—extends to the remote control unit as well as the top body of the player. The unique shape like a half cut cake simply adds to the overall look that Onida has tried hard for—cool, young

## How We Tested

We divided our DivX players into the following categories on the basis of the resolution of content playback supported.

1. Native HD resolution players
2. DVD players

### Features:

We tested mainly two aspects of features for each player:

1. Connectivity: includes the physical connects present on the player for audio, video and miscellaneous connects
2. Formats supported: includes the codec and format support for audio, video and image files

### Performance:

1. **Video Playback:** we played back VCDs, DVDs, and HD content (on players supporting HD) and checked for video quality. We also checked for skipping of frames, colour reproduction, as well as scanning problems. For HD content we used 720p and 1080p clips

2. **Audio Playback:** we checked for audio quality on MP3 playback. Our Test MP3s used were encoded from original SACDs at 320 Kbps at high quality settings

3. **Image Quality:** we used a variety of JPEG files, at different resolutions on our photo CD

4. We also checked the video formats that each player was capable of, in case a format is listed as played, we actually tested to validate this claim

We used a 32-inch 1080p supporting LCD panel from Vu Technologies. Colour, Contrast and Brightness settings on the display were kept constant throughout the test. Progressive Scanning was enabled throughout, as was 5.1 audio. For the Non-HDMI DVD players we used Component as our choice for video, while the HDMI port was used on players supporting it. The Altec Lansing MX5021 was used as our reference for

music, while Logitech's Z5500D was used as while benchmarking videos, 5.1 surround and Dolby DTS 2 were also enabled throughout the video tests.

### Audio Test Files:

1. Guns and Roses—*November Rain*
2. Eagles—*Hotel California*
3. Eric Clapton—*Layla*
4. The Corrs—*Brid Og Ni Mhaille*

### Video Test Files (Select Scenes):

1. Transformers (DVD 9 and 720p)
2. Star Wars Episode 1: The Phantom Menace (DivX, 1080p)
3. Sahara (DVD 9)
4. Pitch Black (DVD 9)
5. Underworld (DVD 9)
6. Eragon (VCD)

### Images:

Various subjects shot at 7.0 megapixels (Canon A710IS) and 10.0 megapixels (Nikon D40x)



and hip. That aside, the Candy sports all the hardware under its small hood to seriously vie for your hard earned cash. What we really loved was the option for changing country code that was available in the menu system—boon for playing DVD movies manufactured for playback in a different region. Also available, and easily accessible on the brilliant menu system were a lot of settings that are sometimes missing from such player setup menus like the ability to set and adjust Luma, Gamma, Saturation, Dolby compatibility settings, and even the filtering frequency for sound, individual channel volume adjust and channel delay. The Candy's remote works at very wide angles, and functioned flawlessly at a range of 12 feet, which is more than we

can say for some other players. Another nifty feature is noticeable while skipping chapters in a DVD—the Candy displays the total amount of time elapsed and the total duration of the video so you have an additional indicator—a very small boon, but a plus nonetheless.

With very clear DVD playback, no blurriness and distortion noticeable (other than what is normal for viewing DVD content on a large widescreen LCD) the Candy scores big time as a DVD player. VCD quality is about as good as a 352x240 pixel video can look on a 1366x768 resolution screen. The Candy passed our music tests without any hiccups, and without discernable issues. Onida gets their picture quality spot-on with the Candy, and our high-resolution

images looked good with acceptable pixelation. After such a good showing on the performance figures we'd have loved to see some more connectivity options like a VGA / DVI connect or even USB—a big plus for those who want to play movies off their portable hard drives and thumb drives. With a six-month warranty, we figured Onida has been a bit stingy—especially at a price tag of Rs 3,400—not expensive for the performance on demand—but we wish it had a one-year warranty. Also, this player will not look at home in a suavely designed living room—it's got too much attitude, and it shows.

Intex's N-20VK was one of the plain-jane players—just a cool blue LED that illuminates the drive tray which is made of a translucent fibre based compound. We're thoroughly tired of the blue lights on PC cabinets, notebooks, external hard drives and now DVD players, and we're hoping some vendors are reading this! The Intex N-20VK sports a good finish and acceptable build quality—no complaints here. The ¼-inch jack means you can sing along with your favourite MP3s—a neat plus, considering this player is no slouch with MP3s. The N-20VK didn't do badly at DVDs and we figured that while we'd seen better, we certainly hadn't seen worse. However, we noticed the this player just lagging behind in some of the tests, and this added up when we looked at the price tag—just Rs 2,800—a lot of player for the price, to be sure, but definitely not the best performance out there. That said, the N-20VK has one terrific plus—a VGA port, meaning you can connect this to your PC monitor as well.

Moser Baer had a trio of players in this test and by far the most striking player was the Black Panther—first of all it's half the width of a regular DVD player, which may or may not be attractive—it does make the player look a little bulky from the front. To further enhance this effect, Moser Baer has provided this player with high foot pegs—a real eyesore considering the sleek and wide look is in—is different bad? You decide. The Black Panther played back DVDs

of any region somewhat like the Onida Candy, but the settings were visible, not changeable. The pathetic remote control unit seemed to have a problem at a distance of more than five feet, and within this distance, even slight angles will obstruct functionality. Other than that, we had no complaints whatsoever—the Black Panther really struts its stuff when it comes to any kind of video playback—all our VCD, DVD and DivX tests went off smoothly and without a hitch, and with good visual quality, minimal pixelation and good contrast. A good player, compact and feature rich, along with great performance—at a price of Rs 2,990, the Black Panther seems to have clawed all the good points into its kitty, it's the second best performer too. Just make sure to look before you leap...er...buy, because the squat, burly look may not appeal.

The other two Moser Baer players—the MBI 838 and the MB-6988S were very different lookers, the MB-6988S looks slim at first glance, but the bottom part of the body protrudes and so do the foot pegs, spoiling this effect. Luckily it won't look so bad when placed on a flat surface, especially one that's below eye level. The MBI 838 is slimmer, but both have equally tacky buttons that are hard to press, a shame, this, and annoying too. Once again, we had a few remote interface issues with these two, but the Black Panther has to take the cake in this regard. The front LCD display on the MB-6988S is bright and very readable but looks a little garish after some time, moreover it doesn't exude that quality look that the displays on the Samsung and Philips models have. Both these models have USB ports—a real boon when you have all your DivX titles dumped on a 2.5 inch external drive. Even USB drives can be used, although if the drive is too slow, the movie will lag. In fact, any video files VOB (DVD), DAT (VCD), AVI and even MPEG4 can be kept on a thumb drive / external hard drive and watched at your convenience—very nifty and ultra utilitarian. The MB-6988S also supports memory cards like SD

/ MMC / MS so you can simply pop out your digital camera's memory card, slot it into this player and enjoy your creations immediately. Of the two, the cheaper (Rs 2,990) MB-6988S impressed us marginally more in a few of the video tests, in other areas we'll call it a draw. Overall, at the same price as the smaller and better performing Black Panther, the MB-6988S doesn't make much sense to purchase, unless the lure of a memory card reader and USB port attract you.

Besides the excellent Candy, Onida had three other models, the DFX-5957, DFX-5988 and the DFX-5985 priced at Rs 3,100, 3,300 and 3,000 respectively. So the Candy is the most expensive model amongst the foursome and as our performance tests showed, by far the most suited for a quality home entertain-



Intex N20VK

ment system. All three players sported a sleek look; no ugly protrusions (read foot pegs), and while the DFX-5988 was the best looking, with a steel silver / dark grey body, all three boasted of similar features. We were surprised to see the connectivity options—nothing extra it seems Onida meant for these to be plain vanilla DVD players. After the excellent candy we'd partaken in earlier, this we just couldn't swallow, no matter

### LG DP271D—No Idiot Box, This

After last month's PMP test we thought we'd seen it all as far as portable multimedia went. How wrong we were! Enter this little box. The DP271D is a compact DVD player, small and very cute-looking with the same piano-white finish on its lid that some of LG's XNote laptops have. In fact the entire device looks like a miniature laptop. It's got an eight-inch LCD screen that swivels much like a tablet PC. Stereo speakers provided on the lid are quite powerful but the housing does take up precious screen space (we figure LG lost an inch in screen size with a wide bezel and large speaker vents). There are two powerful headphone jacks—cosy! The build quality and fit is very good, no squeaks or loose joints, although the buttons feel a little hard, especially the four way navigation button. The menu is very linear, well laid out and intuitive, and rather feature rich. There's a USB port provided—useful for playing movies off a removable drive, while an AV out ensures you can plug this in to a larger screen. The DP271D has a flip type DVD flap that is worked by a robust spring which we feel will bear the rigours of daily use well. Juice is provided courtesy a 2500 mAh clip on battery pack (much like a laptop), and our tests reveal battery life is good for two DVD movies of 105 minutes each—impressive.

Although the LCD doesn't look a very quality unit (cost cutting we fear) it seems to do a fair if not great job. Our VCD, DVD and DivX tests found the DP271D a little shy on the full gamut of colours, we conclude the panel is a six-bit TN (Twisted Nematic) type. Other than that, contrast seems OK, although a little smattering of



colour was noticeable on darker movies like *Underworld*. DVDs like *Transformers* looked very good, and it was easy to tilt the screen to orient the player any way to suit our convenience. The screen orientation can also be changed.

Music quality was pretty good, and the volume level surprisingly good—no PMP can come close to this on speaker volume, the earphone jacks are also adequately powered for most low-impedance headphones / earplugs. For an MRP of Rs 8,490 the DP271D is a good bargain, add to that the fact that you could probably shave off a thousand bucks or so (actual street prices will be lower), and this is a good buy. But it's not a device for everyone. If you have a PMP and are happy with it, forget this. The hassle of carrying optical media with you will mean this isn't suitable for short journeys like bus and local rides. However, if you're going for a weeklong tour, and want to chill in your hotel room and watch a movie before getting some shut-eye, this may be just up your alley.

### Moser Baer MBI AV 780—Just Pop In A DVD

We have reviewed complete entertainment systems before. Such systems are tailored for people who can't be hassled with component synergy but just want something that is built to perform perfectly together. The MBI AV 780 is an inexpensive attempt at the same—a DVD player plus 5.1 surround speakers bundled into one. The DVD player is the largest amongst all our test candidates, courtesy the inbuilt amplifier. Nevertheless, it's a solid unit that exudes build quality, and has an attractive front, that looks very busy with quite a few buttons and a knob, and a lot of small print advertising its features. The speakers follow the same grey / black colour tone of the player, and the black mesh grilles on the satellites looks downright classy. The subwoofer felt a little too light to be really effective, it also looks like it has a rather small driver (four inches). The rear speaker cables are long enough for a small hall, but if your player is around 20 feet away from each speaker you're going to have problems. With auxiliary RCA 5.1 outs and the 6 channel clip type connects for its own speakers, audio connectivity is taken care

of. Optical and coaxial outputs are also provided. S-Video, Component and Composite outs should handle all your video needs (no HDMI here). There's also a jack for an FM radio antenna, and with MW support added, this player is a full-fledged radio. Once again the remote unit although well built and with soft buttons just refused to work unless operated slap bang in front of the player—ridiculous and a very irritating problem, especially for couch lovers.

On the performance front, there wasn't anything to complain about in the way of video quality and the MBI AV 780 proves that price and performance can coexist peacefully. The audio was somewhat of an issue with the underpowered subwoofer, although the satellites are powerful and movies feel really good, they aren't for music where their tendency to be piercingly bright is immediately apparent. If its movies you want, the audio will satisfy you, we only wish for more power in the lower frequencies. Issues aside, what we have here is quite simply excellent value for money (Rs 7,490)—a fully ready home theatre. All you need is a large screen to go with it. If you are looking for a good DVD player and 5.1 surround speakers, why not kill two birds with one stone?





how hard we tried. Photo images weren't very good, and looked the most aliased and pixelated from amongst all the players. In terms of performance, all three DVD players are similar, making the model designations hardly significant (considering the very similar features), and quite simply put, your money is better spent elsewhere.

Further down the line, two Philips players attracted us with their looks. The build quality that this brand imparts has to be seen to be believed. Smooth, brushed metal, attractive steel grey powder coating, sleek as a wind tunnel-designed thoroughbred, both the DVP3136 and the DVP5150X will draw at least a cursory glance, and that's while switched off, although the latter is a better looking player. With sleek remote units, that look as good as they function (Ah, the joys of soft, yet firm buttons). Philips has got aesthetics covered to be sure. What we did miss was any sort of PC display connectivity (there's no VGA). A new incorporation from Philips has been support for DivX Ultra, basically a standard for compatibility of various DivX standards as far as subtitles, sound channels and even the encoded video go. Besides Philips none of the brands in this test had support for this new and emerging standard. Both the players have



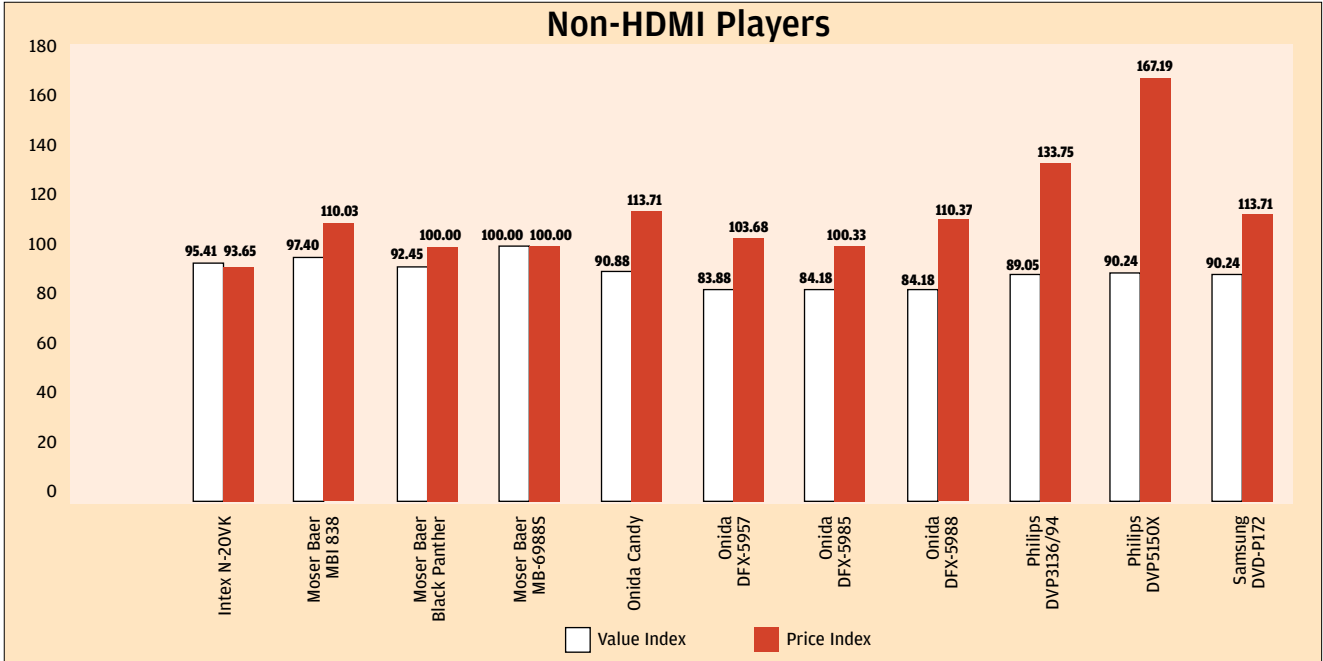
Onida Candy

no support for USB or memory cards, but performed quite well, and a few niggles aside, both make for good components in a home entertainment setup. Although the DVP-5150X costs a thousand rupees extra, besides the outer body finish, this isn't really noticeable in any way once both get working. The DVP-3136 also supports Hindi as a setup language—a boon to be sure for people who are more comfortable with it. The stereo channels have spring clips, and not RCA ports. Both these players performed very closely to the leaders of the pack—the Candy and Black Panther—although the difference in quality won't be noticeable unless you have both players running and are discerning enough. At Rs 3,999 and 4,999 for the DVP-3136 and DVP-5150X respectively, economy you will not get; which is the only blemish on an otherwise nearly spotless report card.

Samsung's DVD-P172 was the only player from the Korean giant in this category. The quality of plastics used is top notch. The entire dark grey / black and silver tone goes well, this player suits nearly any décor. We liked the soft-buttoned remote control which Samsung claims will work with any of their flat-screen displays as well. Even the DVD tray exudes quality, a nice slow action, not a jerky motion like most other players. The LED panel has a soft light that is quite easy on the eyes, while retaining legibility. Like the Philips players Samsung also does without memory card and USB connects. In terms of performance, Samsung's DVD playback quality was as good as we've seen in this category, while VCD quality wasn't a touch behind what we'd call *really* good. With a good showing on the performance front, a good price—Rs 3,400—and undeniably good looks, the DVD-P172 makes for a good buy especially if both the best performers' looks fail to inspire you.

Our Choice

Our *Best Buy* award goes to the Intex N-20VK. Excellent value for money at Rs 2,800, it's well built, reasonably feature-rich and a decent performer. If you're on a shoestring, here's your player. Our best performer in this cat-



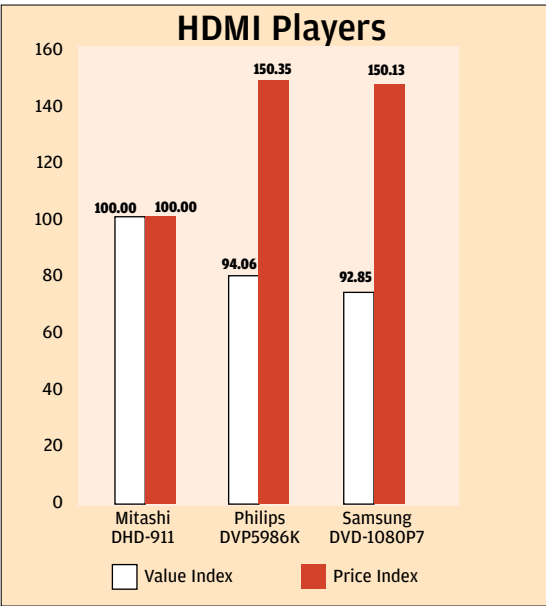
egory is the Onida Candy. A sterling little performer at Rs 3,400 with funky looks that will definitely attract attention (even if it's the wrong kind). Some may think it garish, some may think the design's weird, but it puts its critics to rest when you fire up any sort of compatible movie. Moser Baer's Black Panther also deserves mention here. It's a little more sober than the eye catching Candy, and marginally trails on the performance front. For Rs 2,990 the Black Panther most definitely deserves to prowl our markets and makes a very good buy if you should decide on something better performing than the N-20VK but cheaper than the Candy.

HDMI Players

This category consisted of just three players spanning three brands. HDMI and HD are big buzzwords in the market—everybody looking for a home entertainment system wants to ride the wave. Very little is known, however, about HD content, and just like any technology in its nascent stages of early growth HD isn't without its fair share of

niggles. On the PC, players like VLC make short work of playing any HD video regardless of resolution or file format, DVD players (even 1080p-supporting DVD players) had issues. Sadly, HD content on these players will only play if the file (mostly AVI format) is actually encoded in a supported HD resolution like 720p (1280x720 pixels, progressive scanned) or 1080i (1920x1080 pixels, interlaced). If the file is encoded at any other resolution, however minute the difference, the DVD player will cough up an error. Since HD videos are best enjoyed on a digital output signal, HDMI is the preferred connect when viewing any high definition content. Note that the HDMI connect will also carry audio signals, and you have to use your television's audio out to route these to the necessary speakers.

Mitashi's DHD-911 is a rather plain looking made a little better by the proud brand name embossed on to the top metal cover. The remote control was anything but plain—grey body with bright blue buttons—a little gaudy but we liked it. Buttons



are reasonably soft, imparting good positive feedback during use, and the unit works flawlessly at a distance of 12 feet. Connectivity wasn't on short supply either with the usual HDMI, S-Video, Composite, Component and audio RCA being accompanied by both USB and Memory card support. This would have to be Mitashi's highlight—the sheer connectivity options, and the other advantage we see is the transparency of settings in the setup menu, very similar to the Moser Baer Black Panther. So what's the downside here—performance? No! The DHD-911 is an excellent performer, and is highly recommended for any sort of DVD- or HD-viewing—especially at the bargain price of Rs 3,990—it's a lot of player for the money spent.

Philips' DVP5986K was the second HDMI ready player we tested and it had quite a few tongues hanging out with its design. The remote was suitably curvaceous and functional for all its looks. For once Philips, dropped in a USB slot—very appreciated. Another nifty feature is the addition of an audio in for karaoke. DivX Ultra support is another little bonus, though it's not of much use right now. We'd have liked separate RCA audio outs (useful for floor-standing speakers) and an optical out—neither was available. Comparing the DVP5986K to the DHD-911 proved interesting—the former is definite-

Decision Maker

If you're looking for:

**A cheap DVD player that performs adequately** then look no further than our *Best Buy* award winner, the Intex N-20VK. At Rs 2,800 and with a good feature set and performance to boot we'd guarantee satisfaction here.



**Something that's connected**, and HDMI and digital audio are your primary needs, but at the same time the player should perform well and equally importantly look good, then Samsung's DVD-1080P7 will easily do the trick. With sleek supermodel looks and the performance of a thoroughbred you can't go wrong with this player. Add to that a sweet price of Rs 5,990 and this is your best bet. Did we mention it's our performance winner in the HDMI player category?








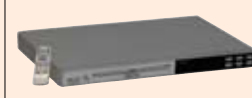

**No hassles, a DVD player with complete surround setup.** The Moser Baer MBI AV 780 will surely satisfy. It's got oodles of performance, is reasonably feature rich, and comes complete with subwoofer and punchy satellites all for a modest price of Rs 7,490



**Something portable that plays DVDs, and not a PMP.** We just may have what the doctor ordered! LGs DP271D is a very compact fully functional DVD player with a very cute remote, and an eight inch LCD screen. Its powerful loudspeaker is much better than any PMP and with two headphone jacks it's a cinematic experience for two. The good battery life is a plus, and with a number of settings available and very acceptable performance the DP271D bears our highly recommended moniker. The price—Rs 8,490 makes this device an absolute steal. Just remember to carry your DVDs safely!





<div><div><div><div><div></div><div>BEST BUY</div><div>digit</div><div>APRIL 2008</div></div></div><div><div><div><div></div><div>BEST PERFORMER</div><div>digit</div></div></div></div></div></div>									
Non-HDMI DVD Players									
Brand	Intex	Moser Baer	Moser Baer	MoserBaer	Onida	Onida	Onida	Philips	Philips
Model	N-20VK	MBI 838	Black Panther	MB-6988S	Candy	DFX-5957	DFX-5988	DVP3136/94	DVP5150X
									
Price	Rs 2,800	Rs 3,290	Rs 2,990	Rs 2,990	Rs 3,400	Rs 3,100	Rs 3,300	Rs 3,999	Rs 4,999
Pros	Very affordable, sleek	Well built, decent performer	Excellent settings, performance	Well built, good performer	Novelty looks, great performer	Sleek, low profile	Looks good, built well	Looks sleek, good remote	Good looking, soft buttons
Cons	Tacky buttons	Tacky buttons, plain looks	Looks a little bulky	Plain Looks, Tacky Buttons	Styling may not suit everyone	Mediocre performance	Average performer	Lacks S-Video connect	Expensive, No S-Video connect
Grand Totals (Out of 100)	64.44	65.79	62.44	67.54	61.38	56.65	56.86	60.14	60.95
Features (Out of 50)	33.00	32.00	26.80	33.00	26.80	26.00	26.00	26.90	27.10
Performance (Out of 45)	29.44	30.29	32.14	31.04	32.58	28.65	28.86	31.24	31.85
Warranty (Out of 5)	2.00	3.50	3.50	3.50	2.00	2.00	2.00	2.00	2.00
FEATURES									
Connectivity									
Audio Connects (Y/N)									
Separate RCA (Stereo)	Y	Y	N	N	N	N	N	Y	Y
5.1 channel	Y	Y	Y	Y	Y	Y	Y	Y	Y
Coaxial (SP/DIF)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Optical	Y	Y	N	Y	Y	Y	Y	N	N
Video Connects (Y/N)									
S-Video Out	Y	Y	Y	Y	Y	Y	Y	N	N
Composite Out	Y	Y	Y	Y	Y	Y	Y	Y	Y
Component Out	Y	Y	Y	Y	Y	Y	Y	Y	Y
VGA Out	Y	N	N	N	N	N	N	N	N
DVI Out	N	N	N	N	N	N	N	N	N
HDMI Out	N	N	N	N	N	N	N	N	N
Miscellaneous Connects (Y/N)									
USB	N	Y	N	Y	N	N	N	N	N
SD/MMC/MS reader			N	Y	N	N	N	N	N
Microphone in (Karaoke)	Y (1/4 inch)	N	N	Y (1/4 inch)	N	N	N	N	N
Tray Loading Type (Cassette/Slot)	Cassette	Cassette	Cassette	Cassette	Cassette	Cassette	Cassette	Cassette	Cassette
DivX Ultra Support (Y/N)	N	N	N	N	N	N	N	Y	Y
Progressive Scanning (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Max HD resolution natively supported	NA	NA	NA	NA	NA	NA	NA	NA	NA
Formats Supported									
Audio	WMA, MP3,	MP3, Audio CD	WMA, MP3, Audio CD	MP3, Audio CD	WMA, MP3, Audio CD	WMA, MP3, Audio CD	WMA, MP3, Audio CD	WMA, MP3, Audio CD	WMA, MP3, Audio CD
Video	AVI, VCD, DVD	AVI, VCD, DVD, DivX	AVI, MPEG4, VCD, DVD, DivX	AVI, VCD, DVD, DivX	AVI, MPEG4, VCD, DVD, DivX	AVI, MPEG4, VCD, DVD	AVI, MPEG4, VCD, DVD	AVI, MPEG4, VCD, DVD, DivX	AVI, MPEG4, VCD, DVD, DivX
Still Image	JPEG	JPEG	JPG, JPEG	JPEG	JPG, JPEG	JPEG	JPEG	JPEG	JPEG
Bundled Cables	Composite + audio Cables	Composite + audio Cables	Composite + audio cables	Composite + audio Cables	Composite + audio cables	Composite + audio cables	Composite + audio cables	Composite + audio Cables	Composite + audio Cables
PERFORMANCE (Scale of 10)									
Video Performance									
VCD quality (Avg Score)	6	6.5	6.75	6.5	7	6.5	6.5	6.5	6.75
DVD quality (Avg Score)	6.75	7	7.5	7.25	7.5	6.75	6.75	7.25	7.5
DivX Quality	6.25	6.25	6.5	6.25	6.75	6	6.25	6.5	6.5
HD 720p quality	NA	NA	NA	NA	NA	NA	NA	NA	NA
Audio Quality									
MP3 (320 kbps)	6.5	7	7.25	7	7.25	6.75	6.75	7.25	7.25
Test Clip 1 (5.1 channel AC3)	6.5	6.75	7.5	7.5	7.5	6.5	6.5	7.25	7.25
Test Clip 2 (5.1 channel AC3)	6.75	7.25	7.5	7.25	7.5	6.25	6.25	7.25	7.5
Photo Quality (JPEG)	6	6	6.75	6	7	5	5	6.25	6.25
Warranty	6 months	1 year	1 year	1 year	6 months	6 months	6 months	6 months	6 months



Non-HDMI DVD Players		HDMI DVD Players		
Brand	Samsung	Mitashi	Philips	Samsung
Model	DVD-P172	DHD-911	DVP5986K	DVD-1080P7
				
Price (Rs)	Rs 3,400	Rs 3,990	Rs 5,999	Rs 5,990
Plus (+)	Very good build and Looks	Good connectivity	Sleek, quality looks	Great looks and performance
Minus (-)	Slight issues with VCD quality	Looks boxy, clicky buttons	No S-Video connects	No 5.1 channel RCA
Grand Totals (Out of 100)	60.95	70.44	66.25	65.40
Features (Out of 50)	25.50	35.85	30.25	27.40
Performance (Out of 45)	31.95	32.09	33.50	34.00
Warranty (Out of 5)	3.50	2.50	2.50	4.00
FEATURES				
Connectivity				
Audio Connects (Y/N)				
Separate RCA (Stereo)	Y	Y	N	Y
5.1 channel	Y	Y	Y	N
Coaxial (SP/DIF)	Y	Y	Y	Y
Optical	N	N	N	Y
Video Connects (Y/N)				
S-Video Out	N	Y	N	Y
Composite Out	Y	Y	Y	Y
Component Out	Y	Y	Y	Y
VGA Out	N	N	N	N
DVI Out	N	N	N	N
HDMI Out	N	Y	Y	Y
Miscellaneous Connects (Y/N)				
USB	N	Y	Y	N
SD/MMC/MS reader	N	Y	N	N
Microphone in (Karaoke)	N	N	Y	N
Tray Loading Type (Cassette/Slot)	Cassette	Cassette	Cassette	Cassette
DivX Ultra Support (Y/N)	N	N	Y	N
Progressive Scanning (Y/N)	Y	Y	Y	Y
Max HD resolution natively supported	NA	1080p	1080p	1080p
Formats Supported				
Audio	WMA, MP3, Audio CD	MP3, WMA, Audio CD	MP3	WMA, MP3, Audio CD
Video	AVI, MPEG4, VCD, DVD	AVI, MPEG4, VCD, DVD, DivX	AVI, MPEG4, VCD, DVD, DivX	AVI, MPEG4, VCD, DVD
Still Image	JPG, JPEG	JPG, JPEG	JPEG	JPG, JPEG
Bundled Cables	Composite + audio Cables	Composite + audio Cables	Composite + audio Cables	Composite + audio cables, HDMI cable
PERFORMANCE (Scale of 10)				
Video Performance				
VCD quality (Avg Score)	6.5	6.5	7	7.25
DVD quality (Avg Score)	7.5	7.5	7.75	7.75
Divx Quality	6.75	7	7.25	7.25
HD 720p quality	NA	7	7.75	8
Audio Quality				
MP3 (320 kbps)	7.25	7.25	7.25	7.5
Test Clip 1 (5.1 channel AC3)	7.5	7.25	7.25	NA
Test Clip 2 (5.1 channel AC3)	7.25	7.5	7.5	NA
Photo Quality (JPEG)	6.5	6	7	7
Warranty	1 year	6 months	6 months	1 year



Mitashi DHD-911

ly superior in nearly all the tests, and the margin of victory ranges from hairline to runaway victory. Rs 5,999 isn't cheap, but neither is the product you acquire for the price. It's the perfect companion for all your movie entertainment escapades, but read on to finally decide.

On to the final contender and an even better looking player (if that is possible). Samsung's DVD-1080P7 is an example of metal machined to perfection. Although opinions were divided about the over-all winner for the best looking player, the DVP5986K and DVD-1080P7 are both very good looking, and deserve a living room makeover. With a similar remote to its cheaper sibling DVD-P172 (which isn't a bad thing) the DVD-1080P7 makes no bones about its purpose. A 1080p ready player with HDMI, Samsung forgot to include surround sound RCA connects, so you'll have to make do with stereo or use 5.1 channel via HDMI—not very convenient, but we'll reserve judgement for now. This was the only player without USB support;



Samsung DVD-1080P7

michael.browne@thinkdigit.com


memory card reading facilities were also absent—we're still being lenient but our patience is being tested now. The remote control was a pleasure to use, but after Mitashi's transparent menu system, the menus on the Philips and Samsung players do leave a lot to be desired. Oh, they're well laid out, intuitive even, but they haven't got the options...

Performance was by far this player's forte—with brilliant image, video and sound quality the DVD-1080P7 makes an ideal companion for a high-end home theatre setup. For DVDs and HD content, we haven't seen anything better—and the HDMI output does really propel the display quality beyond the realms of what Component connects are capable of. At Rs 5,990 this player makes a sensible buy, and we don't feel cost should be a restraint in this case—given the quality you get. Although the difference in performance between this player and the previous Philips model (DVP5986K) is less than 10 per cent, the price is nearly the same making your decision a no-brainer.

Our Choice:


Our Best Buy award goes to the Mitashi DHD-911—unbeatable at Rs 3,990. It's got connectivity, features, lots of available settings and great performance to boot. The slightly costly Samsung DVD-1080P7 is all about exclamations when it comes to describing its performance. It's quite simply the best performer on show here, trailed closely by the Philips DVP5986K. We're awarding Best Performer to the, well, best performer—the DVD-1080P7 gets its just reward. ☒

Contact Sheet		DVD Players	
Brand	Company	Phone No	Website
Intex	Intex Technologies (India) Ltd	+919313441213	www.intextechnologies.com
LG	LG Electronics India Pvt Ltd	0120-2560900	www.lgindia.com
Mitashi	Mitashi Edutainment Pvt Ltd	022-25006661	www.mitashi.com
Moser Baer	Moser Baer India Ltd.	1-800-111-113 / 011-40594512 / 13	http://moserbaer.com/consumer_overview.asp
Onida	MIRC Electronics Ltd.( Onida)	022-28200435 / 66975777	http://www.truthatonida.com/beta/home/home.asp
Philips	Philips Electronics India Ltd	1800 180 1111 / 011 66001111	www.philips.com
Samsung	Samsung India Electronics Pvt. Ltd.	011-41511234	www.samsung.com/in

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# Army Of Two

It's all about hunting in pairs...

**B**ullet dinging armour plating and fearsome face masks...two gung ho stereotypes with big guns and attitudes the size of Texas. Their mission—to kill everything *else* that moves, their motives—money, money, and sometimes a favour for an old friend. *Army of Two* is a whole ammo belt full of violent, tactical fun. You play as either of the two protagonists Salem and Rios, two highly trained mercenaries for hire, who fight terror, for cash, some of which will be used to buy bigger guns.

Although the story has its own share of twists, it's nothing in the way of path breaking, so you better forget about the subject matter of the game and focus on the way it plays instead. Game mechanics are good, if a little unbalanced. While your weapon recoil and the slightly screwy aiming system will ensure that you're highly inaccurate (at best)—especially while moving around—your enemies can hit you accurately from a hundred metres away. They'll duck frequently too, and use flush out tactics like flanking and even lob the odd grenade at you. For your tactics, *Army of Two* employs a system called *aggro* found in a few MMORPG games, where enemies focus on the person doing the most damage and ignore the other person totally. Suppose you put your partner in aggro mode, he will draw all the fire, leaving you to flank the enemy virtually unseen and pop 'em off rather easily. You can also draw aggro, leaving your partner to move around undetected and the system works rather well here. There's also an overkill mode that's activated if one of you draw sufficient amounts of aggro—everything moves in slow motion, the aggressive one gets double damage, and the other one becomes invisible for the entire duration of the overkill mode—which is fourteen seconds.

One of the highlights for me was the weapon purchase system—I love guns—and from the Desert Eagle to the Dragunov SVD to the M134 Gatling gun, you can buy them all...the only shortage being cash. Weapons sound ultra-real too, and you get to mod your weapons, adding silencers, bigger barrels, larger magazines, etc. Such mods alter statistics like accuracy, damage, ammunition, and aggro. There's also a gold plated “pimped” upgrade to each weapon that increases your aggro and little else—the man with the golden gun, anyone?

I'll admit that the storyline screws up on the execution of some good subject matter, but the intense action, good use of tactics, brilliant weapons and great co-op mode make this game a good way to spend half a day.

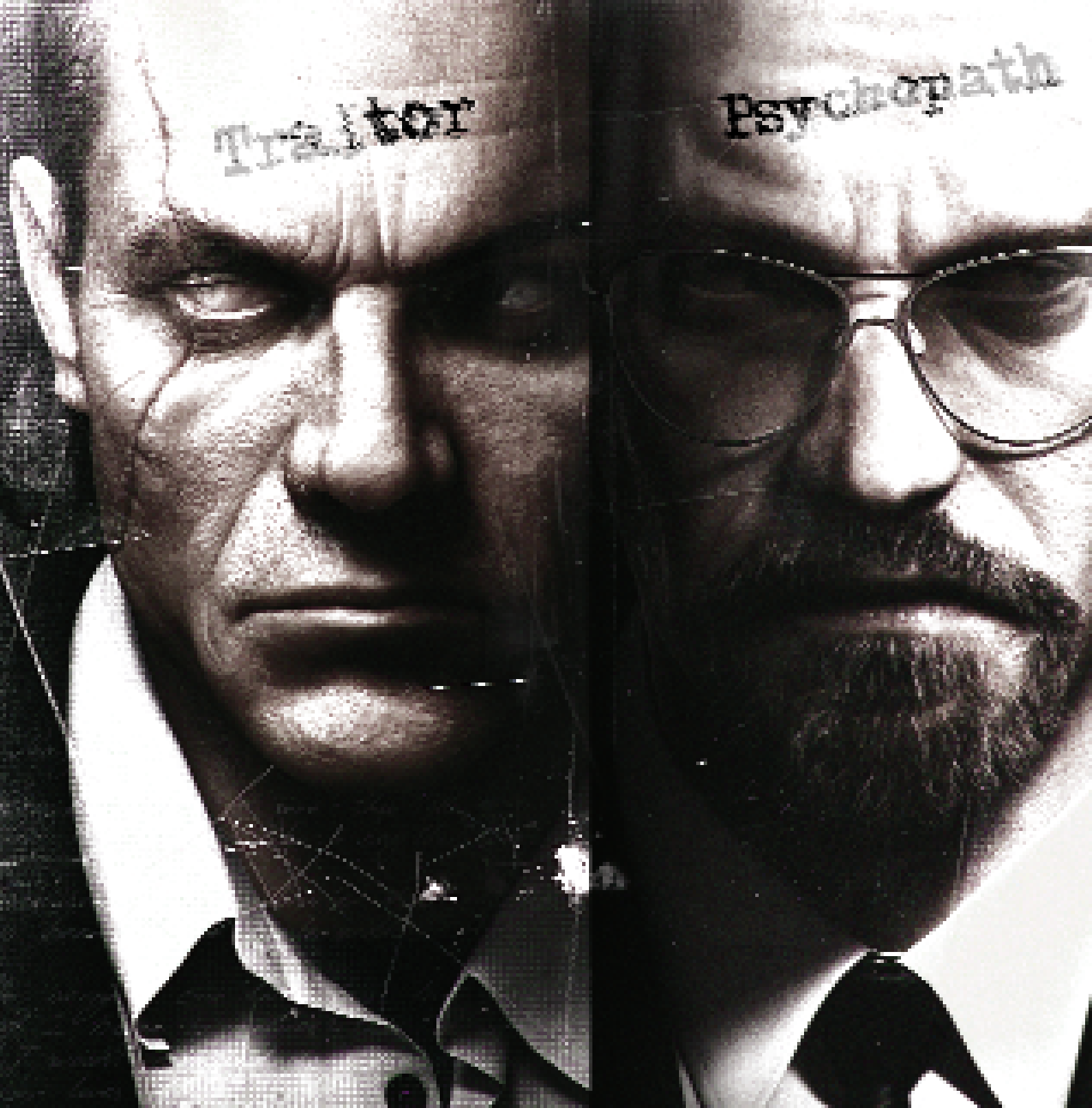
*michael.browne@thinkdigit.com*

Rating: 7.5/10  
Developer: EA Montreal  
Publisher: EA Games

## thinkdigit GAMING PC

XFX GeForce 8800 Ultra,  
Intel Core 2 Duo E6600,  
4 GB DDR2 RAM





## KANE & LYNCH

DEAD MEN

Rating:  
8/10

Developer:  
Eidos Interactive  
Developer:  
Io Interactive

**T**wo men, enemy by circumstances, bound together by fate, Kane and Lynch the two anti-heroes are indeed Dead Men. One is fighting against time to save his family from the wrath of the league of seven (basically a group of mob bosses), while the other is there to ensure that the former sticks to the plan while fighting frequent psychopathic urges. With the body count on the rise, one must find a way to free his family, while the other will accompany him—ensuring his cooperation throughout, while battling his inner demons. Kane must protect Lynch, without whose daily calls to an unknown number his family will be killed. Lynch must protect Kane

because he's the only one who can recover the missing contraband that the mob bosses so desire. They'll battle through cops, the Japanese mafia, the army, and ultimately time for the big show down.

A good story with some hair-raising turns and twists, and an excellent, deep plot, *Kane & Lynch* is let down by very mediocre graphics, and sometimes uninspiring gameplay. It's not that the action is bad, but mediocrity isn't something I expected from such a good storyline. The story, the locales (at times) and the action make it something that shouldn't be missed.

*michael.browne@thinkdigit.com*





Rating: 8/10, Developer: Relic, Publisher: THQ

# Warhammer 40000: Soulstorm

**S**oulstorm continues the franchise in the Warhammer 40000 universe, and is the third expansion pack after following *Winter Assault* and *Dark Crusade*. The turn-based strategic map from *Dark Crusade* makes another appearance, this time round, there are four planets and a couple of moons to take over. Once again, this fast paced franchise has an important value add for veterans—the addition of two playable races and the inclusion of new air combat units. A warp storm erupts next to the Imperial Guard occupied planet of Kuavav, and kicks off an insurgency from the rogue Orks in the area. Also disturbed from their blissful slumber are the undead Necrons, who rise from their ancient tombs with a vengeance. This storm also forces a landing from a legion of Chaos Marines, who quickly join the fray, sensing more slaughter and glory for their dark lord. The presence of Chaos summons their mortal enemies the mighty Space Marines. The awakened Necrons in turn attract the Tau forces. Using

their respective webways the Eldar and Dark Eldar forces (non allied factions) slip in. The presence of the evil elf like Dark Eldar spurs a visit from the Sisters of Battle, who sense the taint of perversion.

Phew!—That's quite a mix...

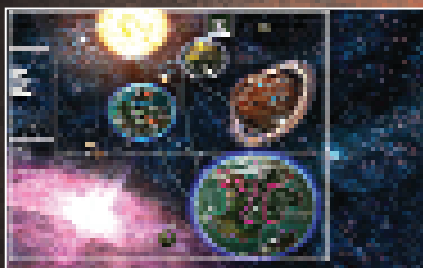
The Dark Eldar and the Sisters of Battle join Warhammer's (now) substantial list of races—the Imperial Guard, Space Marines, Orks, Chaos, Eldar, Tau and Necrons. The Dark Eldar are a twisted, demonic version of the evil battling Eldar, and bring dark magic to the battlefield much like the forces of Chaos. They're a balanced, highly mobile race, with a very good set of vehicles including a number of flying vehicles. They also have a third resource called Soul Essence, which is the most difficult to gather—you'll need to harvest tortured souls for this purpose. When you have sufficient Soul Essence you can fire off special abilities like Piercing Vision, Corrosion or Soulstorm (no spoilers, sorry). The other new race—the Sisters of Battle blend elite combat capabilities with strong religious ele-

ments—zealous warriors. Although their units and heroes are alike, one can't help comparing them to their male counterparts the Space Marines—there are many functional (not visual) similarities especially with their basic infantry and siege units.

With nine civilisations in the mix, and a number of planets consisting of areas that grant special benefits Soulstorm is suitably epic. The addition of air units to each civilisation makes for an interesting element of strategy. The entire element of war gear upgrades for your commander from *Dark Crusade* also makes its way into *Soulstorm*, and adds a near-RPG-ish depth.

*Soulstorm* is definitely is game you can spend a whole lot of time with, courtesy its immense replayability. Graphically it's the same as its predecessors, which isn't a bad thing at all, but a little sprucing up may be in order if there is yet another expansion pack. A good rounded game this, and unless you hate the genre, don't miss it.

*michael.browne@thinkdigit.com*



The planet system you'll fight to conquer



The Sister Of Battle whips Imperial butt



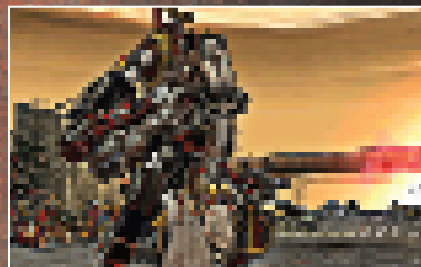
A flame turret in action



A dreadnought hooks and cooks a Slugga Boy



Assault terminators can be deadly



Lock...Load...terminate!



# A History Of Computing

## 1 Who developed the original Apple I?

- (a) Steve Jobs
- (b) Steve Ballmer
- (c) Steve Wozniak
- (d) Steve Morris



## 2 What is so special of September 7, 1998?

- (a) Google is founded
- (b) YouTube is founded
- (c) Ebay is founded
- (d) Amazon is founded

## 3 What is Nichi-Doku Shashinki Sh?ten?

- (a) An outlet serving delicious Japanese food
- (b) A forthcoming Hollywood sci-fi feature film
- (c) The original name for Minolta Co. Ltd
- (d) National Electronics was earlier known by this name

## 4 Which of these started as a computer repair shop developing boards for Apple?

- (a) Pixar
- (b) Creative
- (c) Transcend
- (d) Yes

## 5 What is a Gerber file?

- (a) A file format indicating paint colour
- (b) It is a file format used by printed circuit board fabrication houses
- (c) Latest Google application
- (d) An outdated file format

## 6 What does WiMax stand for?

- (a) Wireless Maximum Access
- (b) Wireless Medium Access eXchange
- (c) Worldwide Interoperability for Microwave Access
- (d) Wireless for Maximum Fidelity

## 7 What is Allegro library?

- (a) An online community dealing with resources on allergy.
- (b) A library application for colleges and universities
- (c) A host of files
- (d) Open source platform for video game development

## 8 What is Onion routing?

- (a) A method for anonymous communication over a computer network

- (b) A Cisco trademark
- (c) Low grade routing
- (d) Faster routing method

## 9 What is special about GLONASS—Russian alternative to GPS?

- (a) It is cheaper
- (b) It is more accurate
- (c) India is a partner in it
- (d) Is widely used

## 10 What is the Mallock machine?

- (a) An electrical analogue computer
- (b) A system that computes a device malfunction
- (c) A fictional computer
- (d) A work of art

Initially named Oak, the name for Java was decided at a local coffee shop frequented by many in the team, to prevent copyright issues.

**Did You Know?**

### Answers

1. c	5. b
2. a	6. c
3. c	7. d
4. b	8. a
5. b	9. c
	10. a

Got an interesting question? Send it in with the answer to **TQ@thinkdigit.com** Mark "TQ" in the subject area.

## Crossword

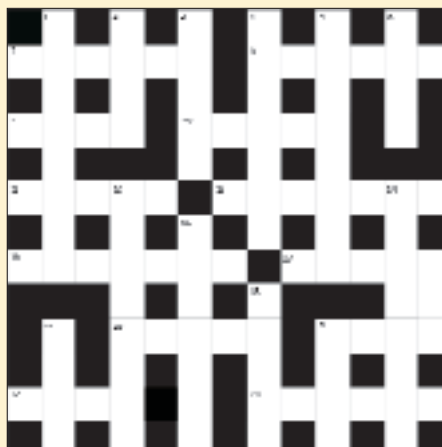
### ACROSS

- 7. A way of establishing an outbound connection through a firewall so that it is not blocked or monitored (6)
- 8. Text file containing information about a software program (4,2)
- 9. Attention Dial Tone(abbr) (4)
- 10. Japanese company specializing in cameras, photocopiers and computer printers (5)
- 11. Makers of the Macintosh line of computers and the Macintosh operating system (5)
- 13. Web pages that serve as gateways to the Internet (7)
- 16. A COBOL statement used for executing 'paragraphs' (7)
- 17. An object-oriented programming language for Microsoft Windows written by Charles Duff (5)
- 20. Sound Navigation and Ranging(abbr) (5)
- 21. Unique number assigned to a book title by its publisher for tracking and ordering purposes (4)
- 22. A set of symbols that represent assigned, possibly secret meanings (4)
- 23. ----- or bulletin board (6)

### DOWN

- 1. More than one server (8)
- 2. One of something, usually a byte designation (4)
- 3. Clip art on the computer (5)
- 4. Computer worm that affects computers running Microsoft Windows (7)
- 5. Electro----- device- relating to the interrelation of electric currents or fields (8)
- 6. The four basic design inks used to create a full spectrum of colour on a printed page (4)

- 12. An alternative user interface for use with any Windows operating system (8)
- 14. Test signal sent to a network destination that is returned as received to the originator in telephone systems (8)
- 15. 'Virgin' founder Richard----- (7)
- 18. To transfer data to an output device for producing copies of text or graphics (5)
- 19. Personal online journal that is frequently updated and intended for general public (4)
- 21. Internet Protocol Television(abbr) (4)



Last month's Winner  
**Iftekhar Shaikh**  
Thane

Send in your entries to **TQ@thinkdigit.com** on or by 20th of this month. One lucky participant will win

**3ds Max 9 Bible**

By Murdock

Published by

**WILEY-INDIA**



**Win!**

### March's Solution



Crossword by Nitta Jaggi



## Whose Country?

Facebook is now yet another cause of angst in West Asia. Jewish settlers in West Bank were pissed off when Facebook auto completed their country as Palestine. After angry protests it now offers Israel as another option, even though West Bank is not part of Israel. Well, as they say you can't please all.



## Remote Service

Undertakers and funeral parlours are embracing the Internet with gusto. They make money—lots of it—by webcasting funeral services for families whose members might be scattered all over the globe. For a fee of £75 (about Rs 5,974) you can watch a funeral live (with 20 seconds delay) or up to 7 days later. DVD's of the funeral can be obtained for £50 (about Rs 3,982).



# Escape

## BORNE IDENTITY

## Life's Labour Lost

Now this is what classifies as starting over from a clean slate. This is a scenario that all of us (yep, even billionaires and star kids) face at least once in our lives. Namely, could we not forget every thing bad that happened to us during the course of our sorry existence and start over new, like virgin plastic? Or,

a shiny new coin fresh out from the mint.

Apparently you can, if you have an eBay account. Because this was what a bloke from Down Under planned to achieve. Ian Usher was so heartbroken by a messy divorce that he could not bear to look at his house, his friends, his job and even his parachuting equipment because all of them reminded him of his ex. He therefore decided to sell all of them to the highest bidder on the Internet. Well actually only the house, with friends and the job thrown in as sweetener. So if you have about \$390,000 or thereabouts you can live in his house, hang out at the pub with his mates, have a crack at his job and also jump out of airplanes strapped to his parachute. He has actually settled up



with his friends and boss, so that the hanging out part need not start with awkward introductions. As for the man himself, he has decided that he will take the cash and go to far off lands.

We hope he would not have to run another such ad seven years down the line in some other part of the world. Oh, and we concur with Obelix—the Internet is crazy.

## HOW MANY WAYS?

## Mercy Killing

We know that eggheads sometimes get crazy and pick up the unlikeliest topics to write a research paper. One such paper is about the different types of video game deaths, and their co relation with the rush of hormones that bring forth a giddy rush.

At first glance, the conclusions seem to be totally counter-intuitive. Gamers like it when they

## Whatever Happened To...

### Gopher

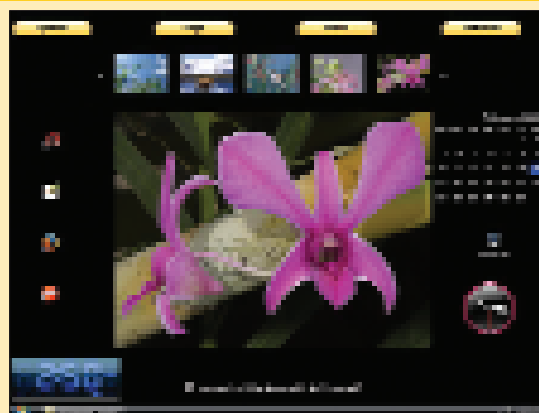
It's odd that an Internet protocol should be named after a rodent. If you look through your browser's proxy settings, you'll find it listed right there—where did it come from, and where did it go?

The Gopher protocol is supposed to be a souped-up version of Anonymous FTP—souped up because of the search capabilities it provided. It organises information in a strict hierarchy, and no-nonsense text menus would ensure that Gopher servers don't suffer with slow connections. All that promise...what happened?

It all began with greed—the University of Minnesota (the developers) decided one day that it would charge a licensing fee for the Gopher server. "The hell you are", said the world, and HTTP climbed the popularity charts. The protocol's since been released under the GPL, but the damage's been done.

Moreover, HTML offered much more flexibility and prettiness when it came to content, and the marketing guys loved it.

There are less than a hundred Gopher servers alive today, if you can really call them "alive"—they're just...well...there. One such site is Gopher Jewels (gopher://home.jumpjet.info/1%5CGopher\_Jewels\_2), which is something of a "the best of Gopher" collection. Visit, and enjoy.



Send us your desktop with a description of how you made it to [mydesktop@thinkdigit.com](mailto:mydesktop@thinkdigit.com) with the subject "My Desktop", and tell us your postal address, too.

Win!

## My Desktop

Bitangsha Ray, Kolkata

How he did it:

1. Create a new page in FrontPage 2003
2. Go to Insert > Web Component, choose Photo Slideshow. Locate all your photos. Choose a size for the enlarged photo
3. Save this page and set it as the desktop
4. Change your wallpaper by clicking the photograph

Participate in this contest and win next month

## .net Interview Questions

by Nagaraju B

Published by

WILEY-INDIA



## DigiPick of the month

## Asking for trouble



Last month's winner:

**Rajarajan P**  
Kanchipuram

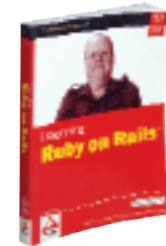
Corrigendum—February's Winner:

**Debiprasad Sahoo**  
Chennai

Participate and win next month:  
**Beginning Ruby on Rails**  
by Steve Holzner

Published by

WILEY-INDIA



## WIN!

Send in your entry and you could win an exciting gift by sharing an amusing picture with a tech angle to it. The picture should have been shot by you, and should not have been published anywhere earlier. E-mail your picture with "DigiPick" in the subject line, mentioning your postal address, on or before the 20<sup>th</sup> of this month to [digipick@thinkdigit.com](mailto:digipick@thinkdigit.com). One prize-winning picture will be published each month.

are killed, and they enjoy the different and convoluted ways in which their character dies. While we don't want to believe that, the elaborate set up rigged by the Niklas Ravajas leaves no room for ambiguity. Thirty-six gamers were wired up sensors while they were doing what they did best. Based on the readings of the sensors, Ravajas found that gamers cringe involuntary when they shoot their enemies while gloat when they get killed. Well, not exactly gloat but more like breathe easier. This is because the paper reasons that games have become more stressful as levels become tougher and the players have to fight more to save their skin. At one point of time this caper gets too much to handle and subconsciously the players start to think, enough is enough and run into a wall of hot lead or lasers and get blasted to Kingdom Come.

In fact, some game designers have taken the trouble to craft death sequences which make it worthwhile to die. Games like Halo 3 switch the

camera angle as you die so it's like an out of body experience as you see yourself zapped by lasers or blasted by grenades, falling down in slow motion.

Admit it—you always wanted to do that after seeing how Tom Hanks died in *Saving Private Ryan*, or how Ken Watanabe and company went down in that final charge in *The Last Samurai*.

## FOAM AND FONE TOGETHER!

## Bath Connected

Quick: connect anime, high-tech gizmos, green tea and luxurious public baths. Well the anime part was a dead giveaway. The Japanese, we hear, are compulsive gadget freaks and have a need to keep changing their mobile phones with a little less frequency than they change clothes. But it turns out that even in that short period of time they are incredibly attached to their phones. So attached that they can't pry those phones

off even when they have to go bathing!

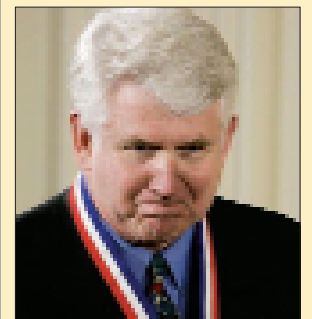
This habit has been helped by the fact that the Japanese don't take showers like the rest of us. No sir, their idea of bathing is a huge hall with a tub the size of an Olympic swimming pool. Hundreds maybe would congregate together and enjoy a refreshing (?) dip in the waters while catching up with politics. At least that's what used to happen during the good old days. In the mobile phone age everyone and their cousin are seen waist downwards in water and a mobile phone stuck to their ears. Statisticians, after a glance at their charts and graphs tell us that young people do most of the talking. They also helpfully inform us that writing emails and listening to music are also hot favourites.

In case you are wondering what happens when water enters the mobile phones, hold your horses. Japanese manufacturers had already foreseen this and sell their phones as bath-safe, presumably for an extra thousand yen.

## People Who Changed Computing

### Robert "Bob" M. Metcalfe

One man is the reason you're able to transfer gigabytes of data over your local network. That one man's name is Bob Metcalfe, and he's the father of the Ethernet—the reason you can connect to another PC for work, and for play.



Robert "Bob" M. Metcalfe

In March 1973, Metcalfe, along with his colleague David Boggs at the Xerox Palo Alto Research Centre (PARC), developed the system which we now fondly call the LAN. The official "day the Ethernet was born" was May 22, 1973, though November 11—the day it actually worked—would be more accurate. He was awarded the IEEE Medal of Honor in 1996 for the development, standardising and commercialisation of Ethernet.

Metcalfe studied Electrical Engineering at MIT, and followed it up with another from MIT's Sloan School of Management.

After leaving PARC, Metcalfe founded 3Com Corp—specialists in networking hardware. In 1990, he left 3Com to become a columnist for InfoWorld, before becoming a venture capitalist in 2001. Today, he's the director of PopTech—a technology conference he co-founded.



# Bluff

YOUR WAY THROUGH

## P2P

**Torrent:** This is a small meta-data file and ends with .torrent. This torrent file contains all the information about those files (movies, music, etc) that you so eagerly want to download. When you try to initiate a P2P download, this file is sent to your computer.

**Peer:** A peer is another user just like you on the network or the Internet, who is interested in downloading stuff. A peer doesn't have the complete file on his/her system.

**Seed:** As the word goes, a seed is the originator of the file. The seed has the complete file on his/her system. There can be multiple seeds for the same file on the Internet, which is what makes P2P sharing so useful.

**Swarm:** A swarm is the whole bunch of people associated with a particular file. This includes the source of the file (or seed) and the peers downloading the file (others like you).

**Tracker:** The tracker is the server of the torrent site that monitors (or tracks) the progress of your download. When you initialise the agent, all it does is it communicates with the tracker and acquires a list of peers to contact. It tells you of the progress in file transfer.

**DHT:** This is an abbreviation for Distributed Hash Table. The tracker uses this table to compile a list of peers that host a particular file.

**Usage:** Last week, I used P2P file sharing to get that copy of *Titanic*. I got the *torrent* for it immediately. The *tracker* referred to the *DHT* and showed me 14 *seeds* and 50 *peers*. The whole *swarm* has grown tremendously this week.

# Wild Wild Web

## MAIL ORDER ADVICE

### Bride taken for a ride

The mail order bride phenomenon is nothing new. Most of these brides are selected based on Internet ads and they come to developed countries like Canada from countries in Asia and Africa. These women don't often get what they were promised and they are quite often unaware of their rights. They are duped to live in remote villages, and maybe even pushed into prostitution.

If these brides blame the Internet for getting them into this mess, they could

also look at the Internet for succour. A Web site, [www.lawforforeignbrides.ca](http://www.lawforforeignbrides.ca) has been launched for these women by an organisation devoted to helping such people. There is nothing comic about this Web site which features information useful for new immigrants. However, we are sure you would see the irony in the whole situation. Of course there are a number of similar parallels: you install something dumb from the Internet which messes up your system and where do you turn for help? Why, another part of the Internet, of course.

## CYBER CANINES

### It's a dog's blog

Dogs have joined humans in blogging. At [maxthegoldenretriever.com](http://maxthegoldenretriever.com), a blog chronicles the life of a golden retriever named Max. It's written in first person and talks of life from the point of view of a dog. Apparently Max is addicted to popcorn, talks about experiences with vets and annoyances with dry tennis balls.

His favourite channels are Animal Planet (expected) and Fox News (unexpected). His fave treat is ice cubes and his real name is Sir Maxwell Jones (a noble dog?). He is also allergic to cats.

## OOPS! WRONG WAY!

# GPS-enabled Idiots

With GPS navigation systems making their mark among the roadies, also comes their way of getting into the limelight. Well, for good or bad depends on the eye of the beholder! These days, people in urban areas use GPS devices to guide themselves across their routes. However, at times, lessons are learnt the hard way—this is what Norman Sussman of New Mexico found out. Sussman asked his GPS unit for alternate directions after driving continually in heavy traffic.

Delighted on getting an alternate route, he ascended up a winding mountain road, hoping to join the interstate at another point. After nearly half an hour of turnings, Sussman came to a halt. He had just reached a 200-foot cliff!

Well, this is certainly not an isolated case, as commercials these days have started airing incidences of errors arising out of the use of GPS devices. In a popular

commercial for Nationwide Insurance, a man is seen crashing his car straight into a restaurant after following navigational instructions from his GPS device. Steve Schreibman, the firm's Vice President of advertising says the idea came from his own weird experiences with GPS. In a recent episode of the popular sitcom *The Office*, the character Michael drives straight into a lake, again due to faulty GPS navigation. Driving in the wrong direction and then realising it later would surely result in loads of swearing!

## TALK STRAIGHT

# Spin Detector

A professor from Queen's University has developed software that detects the political hoopla that candidates add into their speeches. David Skillicorn from the School of Computing at Queen's has some interesting findings from the election campaigns of the United States Presidential candidates. This software analyses the political speeches that the candidates deliver in each

round of campaigning. The methodology used by Skillicorn involves significant data mining and mathematical concepts. Over weeks of analyses, the software has found that John McCain emerges as the most honest in his speech. Barack Obama twists the most and Hillary Clinton comes in between the two. According to Skillicorn, there is a significant difference in the usage of terms like "we" and "I" in public speech. He added that people who tend to use "I" more often tend to be more responsible and honest in their outlook as compared to those who use "we". In general thought, it is quite unclear who the "we" is composed of! In addition, the software also uses terms like "but" and "or" in its calculation. This program uses the frequency of 86 key words to calculate a "spin" score for each speech. The higher the score, the lesser is the spin in the speech. Accordingly, McCain scored a healthy 2, Hillary a 0.6 and Obama was trailing with -1.3. We wonder what this software would conclude if tried out in India. Our *netas* would definitely score very high. Just which side of the scale is quite uncertain! Any takes?

## KEEP AWAY FROM CHILDREN

# Magneto!

Once in a while, we get to read of strange phenomena somewhere in the world. Sometimes it's radio broadcasts being heard from dental implants, sometimes it's the bizarre UFOs being spotted all over the place. The latest to make news is Joe Falciano III, a 12-year-old boy from Pulaski, New York. Apparently, when he just touches the computers he comes in contact with, they come to a standstill. The boy has become popular as "Magneto Man" and has found that every system he touches goes out of control. He was later suggested by his teacher to wear an anti-static belt at all times. His teachers are convinced that he has a static charge problem. According to Marie Yerdon, a teacher at Lura Sharp Elementary school in Pulaski, NY, whenever other students use the computers, they work perfectly fine. But as soon as Joe steps into the

# Shattered Realities

We have a large container (50 litres, to be precise) of liquid nitrogen in our offices. No, this isn't the twilight zone—it didn't pop out of nowhere. There is a purpose to this. If only we knew what...

It's summer, and a rather uncomfortable one, at that. Perhaps this blessed fluid is here to make up for our perpetually malfunctioning air-conditioning system. Then again, perhaps it's for our entertainment.

It was love at first sight. The minute Badri (aka Badjag, aka *SKOAR!* Overlord) saw the tank, his face lit up. He vanished for a second, came back with his lunchbox, and poured the nitrogen into it: "Let's see what happens."

A few minutes later, we find Nimish (aka FatBeing)



scene, weird things happen. In fact, this static problem nearly failed him in his fifth-grade social studies class last year because his PowerPoint presentation was affected. While other students in the lab continued with their presentations, Joe and his teacher Yerdon spent time troubleshooting his PC. As Yerdon describes it, Joe would be in Microsoft Word, and suddenly be

unable to change the font. If he highlights a particular text, he may not be able to un-highlight it. He even gets upper case text without using the shift key! Worse still, he would save something, but then not be able to recover it! Finally, Yerdon put a grounding pad under the computer, which she connected to the anti-static wrist strap that Joe was wearing. The teacher said that the school has

entering the container's vicinity, all alight with a satanic grin that could bode only evil. Many experiments followed, and for those of you who aren't fortunate enough to encounter liquid nitrogen at such proximity, we present our findings:

1. Frozen roses shatter—like in the movies and the Discovery channel shows.
2. Frozen fruit is perfectly edible after un-freezing. Nutritional value unknown.
3. Frozen cloth crunches a bit, but returns to old state rather quick.
4. Liquid nitrogen makes for an effective, if expensive, floor cleaner.
5. Sanket does *not* approve of shattered flowers in the test centre.

If you have any ideas, or items / relatives you'd like shattered, do write in—offer valid only while stocks last!

purchased the equipment to protect students with pacemakers from electronic surges. However, in Joe's case, they had to protect the computer from him. Joe also faced similar problems with his Xbox at home. His parents have now replaced it with the wireless Xbox 360, which he enjoys as long as he is across the room away from the gaming console. Some magnetic personality, Joe! ■

# Blog WATCH

**Google's cold shoulder towards Microsoft's proposal to buyout Yahoo!, a MacBook Air user's experiences and Torrent sites being shut by media hype are part of this month's blog watch**

## Marshall Kirkpatrick

<http://tinyurl.com/3apoyg>  
[http://www.readwriteweb.com/archives/safari\\_on\\_windows\\_scam.php](http://www.readwriteweb.com/archives/safari_on_windows_scam.php)

### Apple Takes the Spyware-Style Low Road, Pushing Safari on Windows

Debate is raging over the news that Steve Jobs has made good on his summertime promise and is now sending Apple's browser Safari along for the ride when Windows users are prompted to update iTunes or Quicktime. Users can deselect the additional software download, but let's be realistic—there must be millions of people unwittingly downloading Safari onto their computers right now....How many ways can you think of that Apple could grow its market share through innovation, instead of lowdown tactics like this?

## Nate Anderson

<http://tinyurl.com/2ah4d9>  
<http://arstechnica.com/articles/culture/nbc-media-moguls ars>

### P2P is for piracy... and we're going to use it

Apparently, media moguls do not breakfast on a diet of puppies and children, as some consumers seem to think; bagels, toast, and oatmeal are the order of the day. George Kliavkoff, NBC's first "Chief Digital Officer," has also joined us to talk policy.

"I'm curious if you necessarily equate peer-to-peer protocols like BitTorrent with piracy?" I ask after the orange juice arrives...

## Ryan Block

<http://tinyurl.com/37q46h>  
<http://www.engadget.com/2008/03/26/motorola-insider-tells-all-about-the-fall-of-a-technology-icon/>  
**Motorola insider tells all about the fall of a technology icon**

Like many (ourselves included), over the years Numair has become increasingly disenfranchised with the company's direction—enough so that he compelled us to publish his letter to Motorola, its board of directors, and MOT investors everywhere regarding the company's egregious missteps and mismanagement. In researching the myriad claims raised in this letter—which we believe to be true—we also discovered a number of other unsettling things about Motorola's corporate past in the last five years, such as certain gross corporate excesses demanded by Zander.

There's no doubt in our minds that Motorola is in dire straits. But today's news of the company's broken-off mobile division only serves to cement the fact that the company no longer knows how to conduct its core consumer business, and is squandering time and money as it flounders in a market that long since passed it by.





March 2008

### Thanks For Listening

Though I am new to the *Digit* world, I must tell you that it's been a fantastic beginning. I love the concept of giving out software along with each issue of your magazine. I have virtually become a tech geek amongst my friends, all thanks to *Digit*. And I like the fact that you actually give your readers' opinions the highest priority. It's wonderful.

However, there is one thing that I would like you to add sooner. I don't know whether it has already been published or not, but I want to know about the audio/video formats, and what players are required to play them, and what goes into creating a format? I once again congratulate Team Digit for the wonderful progress. Great Going!

**Ankush Gupta**  
New Delhi

Thank you for your appreciation, and believe us, it means a lot when readers like yourself notice and write in to us. Yes we do give our readers' opinions the highest priority, and honestly, it would be quite idiotic if we didn't! After all, it's you our readers who have made this magazine what it is, and will help us consistently improve and innovate, so that we can scale new heights.

As for your query about audio and video formats, we have done a Know More About as well as Fast Tracks to Digital Audio, and Digital Video. You will find the PDF copies of such articles and Fast Track books in our December 2007 DVDs.

As for what goes into creating a format, it's not something we can explain here, or perhaps even in an entire Fast Track! It takes years of research, coding and tonnes of money to come up with codecs, containers, colour systems, and more to build a new audio/video format.

Team Digit

### Fast Track In Demand

I recently discovered *Digit*, and I soon realised that the Fast Track was very handy and helpful for a computer novice like me. I was wondering whether copies of some of the old issues of Fast Track (e.g., PowerPoint, Web Design, Photoshop, Digital Photography, Virus Proof Your PC, etc.) are still available (in print, or as PDFs). If they are still available, please let me know how I can get my hands on them.

**Hemanta Sarkar**  
Ranchi

Almost every special issue of *Digit* carries the PDF versions of previous magazines. In fact, in our December 2007 issue, we included PDFs of every single *Digit* issue and Fast track that was made before December 2007. Unfortunately, we cannot make you a CD, because if we did, we'd probably be inundated with thousands of requests to do the same for other readers. We promise to include all the previous issues in PDF format in upcoming special issues, and perhaps we can work out something to satiate the thousands of requests we get for a "Fast Track Compendium". For now, please wait for the June 2008 issue, and keep your fingers crossed.

Team Digit

### I Love You Digit

This is my first letter to you, and I must say I am proud to be a reader of your beautiful magazine! I love *Digit* more than the Kohinoor diamond, and the words printed in it are like pearls spread over velvet. Your review sections and the comparisons areas are the best among all the other magazines. I love the *Take A Crack* and the other competitions, amongst other things. Still, since you seem to value suggestions from us, I would like to make a few:

1. Improve the packaging, it's way too big and bulky for stands and horrible for subscribers
2. Increase the number of articles that teach us the basics of technology

I also want to make my brother tech-savvy, how do I do that? Anyway, thanks for everything, and keep up the good work.

**Rohit Shivnani**

We'll try and change the packaging, but it's not as simple as we all would wish. Still, we are always working to improve and innovate with the look, feel and content of *Digit*, and you should be pleasantly surprised soon enough.

We also get a lot of requests to increase the number of articles and pages, and reduce the number of ads, etc. We will try our best to give you as much as possible, but with paper and printing costs skyrocketing, and inflation to boot, it's always increasingly difficult for all magazines to print an added number of pages, without passing on the costs to the readers. Still, you can rest assured that we will always give our all to ensure that you get the most from *Digit* for your hard earned money.

As for your brother, why not ask him to read *Digit*, and also register for our forum at [www.thinkdigit.com/forum](http://www.thinkdigit.com/forum), where he might find a lot of similar-minded people, and make a few friends, whilst making him tech-savvy.

Team Digit

### Aladdin's Lamp

I am a fan of this superb magazine since July 2006, and this is the first time I'm writing to you. One of my good friends told me about this magazine, and I was really blown away by it. After reading the March edition, I couldn't resist writing to congratulate you guys. *Digit* has become my one-stop for all Tech-queries. It is like Aladdin's Lamp for me—make a wish and it will be fulfilled. The two things I love most about *Digit* is that it covers all aspects of technology, all the people who work directly or indirectly with technology, and there's always something that everyone will find useful. How do you do it?

However, I still have just one complaint: You keep everyone but software developers happy. The CD and DVD contain a lot of useful things for developers, but you need to show us how to use those wonderful software. I know it is hard for you to try and please everyone, but we developers would settle for a small section every month dedicated to us. If you feel that the section will not be popular in the magazine, why not provide it to us on the DVD in the PDF format. That way you can keep us happy and also not waste space in the magazine. I hope you will consider my request. Keep up the good job.

**Anurag Srivastava**

You ask us how we manage to give our readers what they want before they ask for it? We would like to know how our readers always seem to ask for things we're already working on? Look for more developer-friendly content on the DVD in the upcoming issues!

Team Digit

### Write to the Editor

E-mail: [editor@thinkdigit.com](mailto:editor@thinkdigit.com)  
Snail Mail: The Editor, Digit, KPT House, Plot 41/13, Sector 30, Vashi, Navi Mumbai 400 703

Digit will publish the best letters on these pages. Letters may be edited for clarity. **Please include your complete address in all communication.**

For subscription queries send an e-mail to [help@thinkdigit.com](mailto:help@thinkdigit.com)

# Inbox

LETTER  
OF THE  
MONTH

### Age No Bar

You have been my technology navigator for the past 2 years. I am a student, 13 years old, and some tell me, too young to be reading *Digit*. Still, I enjoy reading your magazine, and I go through all the content on your CD and DVD as well. The *Fast Track* series is my favourite, and is fantastic. Keep up the good work. I also have a few suggestions to make.

1. You could make *Fast Track* a standalone book with colour pictures and better paper. You could also include more content. This would be good for students like me who like the Fast Track a lot. That way we could have the option of buying only the Fast Track if we had less money in a particular month.
  2. You need to improve your customer care. Some of my December 2007 DVDs were damaged. I sent a mail to [help@thinkdigit.com](mailto:help@thinkdigit.com), and still have not received a response.
  3. Please increase the amount of freeware on the discs.
  4. Although I realise the importance of Ads, I still feel there are more Ads than necessary.
  5. You need more/better copy editors, because over the past 1 year, the amount of errors and spelling mistakes has increased.
- Still, don't get me wrong. Whatever happens, your mag is THE best. All the other magazines I have read pale in comparison. Due to *Digit* I have become tech-savvy, and have even managed to make my parents tech savvy by making them read it. For that, I thank you *Digit*.

**Shishir Upadhy**

Some interesting suggestions indeed Shishir. *Digit* readers have always been varied, and as far as we know, the youngest *Digit* reader who wrote to us was just 8 years old; the eldest who has contacted us is 84 years old. So tell the people who think you're too young that technology has no age or gender boundaries!

We get so many suggestions for the Fast Track, that honestly, we have way too many options at the moment. Rest assured that we will evaluate them all and have some interesting new offers for you soon enough. As for the other complaints / suggestions, the Help Desk promises to look into your case immediately and the copy editors promise to try their best not to disappoint you again.

Team Digit

### Suggested Reading

I am a BCA second year student. I started to read *Digit* when my first year C language teacher suggested that we do so in order to keep ourselves updated about IT, and to get a wider view of the technology industry. I must admit that I am not a regular reader, but I do buy it when I feel I am losing touch with technology, or when I feel the need to learn about emerging technologies.

I want to suggest that you provide more full-version software in your magazine. Your competitor Chip does this, and although I think the software on your discs are better and more varied, that is the only place that they are beating you. Still, I attach more importance to the magazine, and in this regard, you are miles ahead. So I urge you to provide at least 4 or 5 full version software, across your DVD categories, and fix this tiny chink in your armour.

**Honey Chawla**

Wow. It's so nice to hear that we're being recommended by teachers, who we have a great deal of respect for. Please thank your teacher on our behalf, for recommending us to the entire class!

Thanks for not mincing your words, we appreciate your suggestion, and we'll try and give you no reason for complaint from here-on. We do however give preference to open source and freeware, and you will always find an abundance of such software on our DVD/CD every month.

Team Digit

### 11 On 10

I love your magazine, and anxiously wait for it in the beginning of every month. I have already recommended it to everyone in my school, and hopefully you will get a few dozen more regular readers. Please provide the Starry Night Backyard in your CD/DVD, and also some articles on MS-Access, JAVA and C++, as it is part of our school curriculum. I love the Fast Track, but it would be a lot better if it were in colour. As for the magazine, 11 on 10!

**Rishav Mukherjee**

Thanks for playing your part in popularising *Digit* in your school. We will try and make sure all your wishes are fulfilled over the coming months. As for the Fast Track in colour, a lot of people in the polls and surveys we conducted told us to leave it the way it is. Still, that's not

a definitive "No!", and we're doing our market research. You can rest assured that you will see some pleasant changes in *Digit*, ThinkDigit.com, the Fast Track, as well as the DVD/CD in the months to come.

Team Digit

### You Rock!

You guys rock the country with your software, and I like the *Fast Track* series a lot. I have a few suggestions:

- 1) Please add more pages in the magazine. I am not bothered about the advertisements as they are your lifeline.
  - 2) The pages of the *Fast Track* series can be more colourful and of better quality.
  - 3) Please do justice for the caption "*Your Technology Navigator*" by introducing free gadgets for subscription offers, instead of free issues. Personally, I did not subscribe *Digit* for this reason.
  - 4) More gaming reviews and news, a look into the new games for the hardcore gamers (like me!) with the required minimum and recommended configurations.
- Last but not least, I am supporting your anti-piracy campaign, but the bottom-line is that software developers need to revise prices for India.
- Finally, you rock man! Keep up the good work!

**A. Vigneshwar**  
Chennai

Wow, that's a lot of points you make. We have already answered your first two points in other letters, and they seem to be popular suggestions. As for the subscription offers, we will try and add more of them as quickly as possible. Though you should know that the most popular offers involve an increased number of magazines! Seems people would rather have a longer subscription than gadgets.

As for game reviews, you have to remember that *Digit* is, and never will be, focused on just one topic. We try our best to cover all aspects of technology, and so it's only natural that we can provide you with no more than three or four game reviews every month. Still, we understand the need for gamers to satiate their desires, and that's why we have SKOAR!, India's largest selling gaming magazine. You can visit them at [www.skoar.com](http://www.skoar.com) to find out how to subscribe.

Team Digit



# Tabloid TECH

People And Events That Grabbed The Headlines—For Better Or For Worse

## Out In The Open

Couples break up all the time. Some use letters, some do so by phone while others use SMS. But Jimmy Wales didn't use any of these ordinary methods. Rather, in the interests of transparency he decided to dump his girlfriend by announcing it first on Wikipedia!

Wales, who styles himself the "benevolent dictator" and "spiritual leader" of Wikipedia, the free encyclopaedia that anyone can edit has decided to sever all ties with Rachel Marsden, a conservative journalist. This was the ending of a pretty knotty relationship, whose aftermath caused a lot of raised eyebrows all over the blogosphere.

Rachel Marsden was a Canadian media personality who didn't like her biography on Wikipedia. It apparently harped too much on some unpleasant incidents of her past life which she didn't want people to know. Being a go-getter she went for the source, petitioning the benevolent dictator to correct the "mistakes". Wales put in a suggestion to his editing team and they carried out his orders. This led to quite a few dates and everything seemed hunky dory. However, something—which we will never know—came between the two lovebirds, and this led to a pretty ugly spat, with the lady leaking their salacious chat records to a gossip blog. The lady seems so determined to remove any association with Wales that she put his clothes—which he had left behind in her apartment—up for sale on eBay.

While the entries about their plans for the night might make interesting reading what's troubling to many is how Wikipedia has been used for furthering the interests of a person, or a circle. For instance, Wales attempted to bill \$650 (about

Rs 27,000) for two bottles of wine as expenses to the Wikimedia foundation. That money is actually coming from the donations for more server space and more features. There are many other indiscretions which are probably okay if an office worker had committed them, but definitely not okay when you are virtually in charge of one of the most visited Web sites on the Internet. Somebody should tell him to grow up. Oh, and in case you didn't get it, take everything on Wikipedia with a pinch of salt.

## Internet-bashing

Everyone agrees that despite the many shortcomings of the Internet, there are plenty of things which you can do online. Among the things that are counted as good is e-voting where you needn't queue up in a polling booth to exercise your democratic rights. You get the vote even if it's raining, democracy wins and every one is happy.

Except for a former Polish prime minister. Jaroslaw Kaczynski apparently thinks that the Internet is Satan's workshop and people should not be allowed to vote online. In fact he seemed to be worried about the youth population and felt that predominance of porn, along with beer would cloud their judgement and they would mistakenly hit the wrong button. He thinks that manipulating people online is easier than, say, in a public meeting where you run the risk of getting rotten things thrown at your face.

Ironically these remarks were published not in a newspaper or reported in a TV show



but in a Web page. Besides it's not that Kaczynski, is a technophobe. In December he had set up a video blog so that he could connect with people. So what could be made of the latest bout of Internet bashing? Maybe, like other politicians, he is just playing to the gallery, which in this case consists of a cult which has sworn off the Internet and whose votes he is coveting. Crazier things have happened in politics.

## Blogophobia: Off the Mark



Mark Cuban is a man who is the owner of an online media company and also the owner of a basketball team. He is pretty Net savvy and he knows what a blog is. So eye-

brows were raised when he banned all blogs from publishing inside scoops from the locker room in response to blistering comments about the performance of his team in a blog. Which means that no more tidbits and first hand information: everything had to be picked off from the traditional media.

After getting plastered all over the Internet for a decision that at best can be described as childish, Cuban decided that he hadn't done enough to prevent the spread of misinformation by new age media. In a next salvo he pontificated that newspapers should stop calling their blogs as blogs. He seems to think that blogs are associated with hasty and inaccurate reporting and newspapers ought to know better than to encourage this brand of journalism. In fact he sees a branding opportunity and says that blogging should be renamed as Real Time Reporting, probably because he assumes all blogs are hurriedly written without the cross checking of facts which traditional newspaper reporters do. While many blogs out there are lousy and slapdash there are an equal number of newspaper articles which are written minutes before going to press. We only assume that Cuban did not have the grace enough to admit he was wrong the first time and tried to play with words and semantics to fool people.

Sorry Mark, you just have to admit you are wrong and stop being obnoxious. Is it that hard?