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Karigars to *krantikaris*

A technology superpower – that’s what India’s been touted as, for quite a while now. Before the whole recession worries came about, everyone and their uncles were outsourcing to India. I’m not talking just about the good old call centre, which is what first springs to mind when you hear the word “outsourcing”, but also all the trillions of lines of code that Indians have been writing for companies across the globe. Whether as software services, game development, animation, and more, Indians are contributing to the world in a huge way. The software services industry has made a lot of money this way, and contributed to our economy, but we’re still not growing the way we should. We’re still not a true tech superpower.

In our cover story this month, as our way of celebrating this year’s Independence Day, we’re talking about innovations – quite frankly, we need some desperately.

First, let me give you a little insight into where I’m coming from. For over a decade, I’ve been an IRC junkie, and have interacted with strangers from all over the world. I’ve seen people’s perceptions about India, and Indians in general, change drastically in this timeframe.

About 13 years ago, when people found out I was Indian, I actually had to respond to questions like, “Do you own a monkey?”, and “Are there really cows and elephants on the streets?”, and some others I’d rather not discuss. Regardless, the perceptions were obvious.

Things then transitioned to, “Indian women are beautiful!” when some of our women started winning beauty pageants. Today, the reaction is more like, “What do you do? Are you a coder?” or “Do you work in a call centre?”.

Should I consider this a step up for me? Going from monkey-trainer to code-monkey in the eyes of the west?

I have nothing against the software services industry, and I think they’re doing an excellent job. However, we need to *create* more. We need made in India products that the world wants – software, hardware, concepts, anything. That’s where innovation comes in. And it starts in India, for Indians.

How many people in the west would understand the problems you face on a daily basis? How many of them would understand the great language divide that separates India much like the state lines on maps?


From conversations I’ve had with Indians who live abroad, as well as those who live here, the frustration is quite apparent. Some actually feel we’re nothing more than a sweatshop for the work that no one in the west wants to do – we are nothing more than cheap labour. “When,” I’ve been asked, “will India outsource mundane coding to the west, and choose to do the fun stuff here?” Honestly, I have no clue when, but I have to believe that it will happen.

The timing’s just right. We’ve got a whole generation of technology professionals all set to hit the market. Investments are coming in, Indian hardware vendors have started cropping up (mostly in the mobile segments, but there’s hope this will diversify), and the software professionals are almost seasoned veterans now. All we need are ideas, innovations and more attention to detail, and we could have our own success stories – companies that can stand shoulder to shoulder with the Googles, Microsofts and Apples of the world. That’s the reason for those two little words you saw on the cover.

Tech Kranti is our way of saying that we need to revolutionise the way we work, think and live. Think of ways in which you can improve lives here in India, and you will have a successful idea that you can market. Although there’s easy money to be made in the outsourcing world, building something here could be more rewarding in the long run. Plus, wouldn’t you like your revenue to not be dependent on bad policy decisions made by a few bankers thousands of miles away?

Perhaps it’s time you started thinking of yourself as a revolutionary, instead of a craftsman. What’s the difference? A craftsman is good at his work, but usually builds someone else’s idea... a revolutionary, on the other hand, would come up with an idea, employ a lot of craftsmen, and build something memorable... time to evolve from *karigars* to a *krantikaris*...

Click on over to thinkdigit.com/techkranti, and start giving our country the help it needs. Express opinions, share ideas, get inspired, and start improving lives today.

Jai Hind! 



Robert Sovereign-Smith
Executive Editor

“Should I consider this a step up for me? Going from monkey-trainer to code-monkey in the eyes of the west?”


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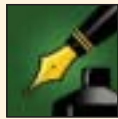
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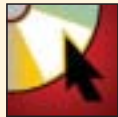
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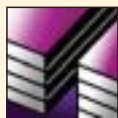
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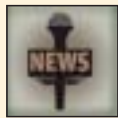
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DSLR TEST56

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Nikon D3s
Nikon D5000
Olympus PEN E-P1
Olympus PEN E-PL1
Olympus PEN E-P2
Samsung NX10

PHOTO PRINTERS64

Canon PIXMA iP 3680
Canon PIXMA iP 100
Canon Selphy CP780
HP Photosmart C4788
HP Photosmart C4688
Epson Stylus Office TX700W
Epson Stylus Photo R1900

DTH SERVICES 62

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In the event of a dispute, the Editor's decision shall be final.

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AUGUST 2010

VOLUME 10 \ ISSUE 08

Contents

QUICK NAVIGATOR

- 006 ENTER**
Inbox
Buzz
- 016 CONNECTIONS**
Mobile Watch
Web Watch
iOS4 vs. Android
- 026 DIGITAL LIFE**
Drool Maal
Windows 8 Rumors
iPad killers?
- 034 COVER STORY**
Geeky Women
Ewaste
Carbon nano tubes
- 078 TOOLBOX**
Tips and Tricks
Q & A
- 094 STREET SMART**
Agent 001
Price Watch
Killer Rigs
- 101 TECH@WORK**
DEVELOPER CORNER
INDUSTRY CONNECT
- 108 ESC**
Unwind
Community
Digit 101



42



An investigative look at unravelling this arcane species

34

How can technology help solve seven basic problems that are holding India back?

56

DSLRs tested

For enthusiasts and professionals who demand better quality from their cameras



TRIED & TESTED



70 ZOTAC GEFORCE GTX 460
NVIDIA's newest GeForce GTX460 graphics chip



071 DELL INSPIRON 560S
Dell's value desktop



073 ASUS RAMPAGE III EXTREME
Overclocker's board for the Core i7 processor



026

Drool Maal

Drool over some of the coolest gadgets and gizmos

028 Windows 8 revealed?

Features we'd like to see in the next version

042 Musing on the iPad

What remains when you've run out of lust?



064 Photo Printer Test



062 HD DTH Test

We help you choose the best HD DTH in the market

+40 FREE GAMES

ON THE DVD

Mindware Tools

Recovery

- Active NTFS Reader for DOS
- AVG Rescue CD
- CodySafe Admin Pack
- Crypt4Free 5.3.8
- EASEUS Disk Copy
- Kleo Bare Metal Backups
- MiniTool Partition Recovery 5.0
- MS Word Excel Cracker 2
- Pandora Recovery 2.1.1
- Partition Find and Mount
- R-Linux Free Recovery 4.0
- Smart Fat Recovery 3.9
- Smart Flash Recovery 4.3
- Smart Image Recovery 2.3
- Diagnostics and Recovery Toolset 5.0

Networking

- AdRem MyNet Toolset 1.0
- AdvancedRemoteInfo 0.70.3
- Anti Netcut 2
- EgoNet 2010-06-18
- Ethereal - Network Protocol Analyzer 0.99
- Hamachi Network Interface
- LDAP Browser 2.6
- Look@LAN Network Monitor
- ManageEngine OpManager 8.3
- Microsoft Assessment and Planning Toolkit 4.0.2925
- Net Tools 4.5.47
- Net-SNMP 5.5
- Packetizer 5.0.0.0
- Visone 2.5.1
- WhatsUp Gold Engineer's Toolkit 1.0
- EasyService Help Desk 2.6.2

SDKs

- DirectX Software Development Kit
- Microsoft Windows SDK for Windows 7 and .NET Framework 4

Developers

- Crimson Editor 3.7
- Codelobster PHP Edition FREE
- Free CSS Toolbox 1.2
- Db4o for Java 7.4
- Digital Mars C/C++ Compiler
- Free JavaScript Editor 4.7
- Hex Edit Free 3.0F

Playware Gaming

Full

- Battle of Immortals
- Prince of Persia: Sands of Time

Demos

- LEGO Harry Potter 1-4
- Sniper Ghost Warrior

Open Source

- Aleph One
- AssaultCube
- Black Shades
- Bos Wars
- Build-a-lot
- Chromium BSU
- Free civ
- FreeCol
- Gang Garrison 2
- Liquid War 6
- My Tribe
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075 ASUS VG236 H

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075 ALIENWARE M 11X

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✉ I thank you for publishing the screenshot of my desktop in your February 2010 edition. I know it's quite odd that I am thanking you after such a long time. The reason for this lag was that I skipped purchasing the February and March edition of Digit due to my ICSE board exams. It was only yesterday that one of my friends informed me that my desktop's screenshot was published in the February edition. On actually seeing such a large portion written about my desktop modification (on page 109), I was overwhelmed and so were my friends who instantly started appreciating me.

I had sent my desktop in the hope of winning in the My Desktop competition which used to be a regular feature of the magazine some time back. But now you stopped that competition :-(and I also never received any prize from your side. I just wanted to ask you if I stand a chance to receive it.

📄 Digit is always there for you, but exams come first and we always encourage readers to give importance to their studies. As for your screenshot when you sent it in we had not yet commenced the My Desktop competition on Facebook, and hence it was published as part of the community page where we feature interesting things that the Digit community is upto from reviews, discussions and the odd tech joke or two. However, since you did take the trouble to send in the screenshot of your desktop, and it was a pretty good mod, we might add, you will get a movie DVD from us. Follow Digit on the Facebook fan page (www.facebook.com/thinkdigit) to be able to participate in contests like My Desktop and Logo Design.

Nimish

✉ I have been reading Digit for nine years now. It's been a great experience. Have learnt a lot over the years from you guys, especially on the Linux and web development front! Today, with all the knowledge, I have redesigned one of India's premier food and drink forums. I am excited about it especially since I learnt all of it including Photoshop tutorial, Linux administration, PHP development over the years through Digit.



July 2010

Thanks for the wonderful technology navigation so far.

Chetan

📄 Thank you for being a loyal Digit reader for so long. Congratulations on designing the forum. It feels wonderful to know that Digit helped you in learning Photoshop, Linux and PHP over the years. Keep reading.

Siddharth

✉ Digit is the best technology magazine I have ever read. I am an 11-year old boy, studying in 7th standard. Some two years ago, my elder brother bought an issue of the magazine. At that time, I wasn't interested in tech and related stuff. But some months ago, when my brother went to Delhi for further studies, I saw his collection of Digit. I took out some 7-8 issues from that collection and read them. I loved it so much, that now I am a regular reader of your magazine.

I have a suggestion, why don't you have a section on blogging, where you give tips on blogging.

I would also like to read a piece on Blogger vs. Wordpress in Digit as I am a blogger too. I really want to see it in your mag. Digit Rocks!

Vinayak Nagri

📄 Your story is very interesting and we would like to thank your brother who

instilled the love for technology in you via Digit. We will try to cover blogging tips and discuss story ideas on your suggestion.

Nash

✉ I have been a regular reader of the magazine since September 2009 and this is my first letter. Digit has helped me a lot in keeping me up to date with the latest technology.

The product review pages are the ones that I eagerly look forward to every month and read them before any other article in the magazine. Reviews about motherboards and processors are my favourite since I am a hardware engineer and it helps me in suggesting the best products to my clients. In the July issue the Wi-fi router test was awesome.

Hope you have a processor and motherboard comparison test in the coming issues. You guys rock.

Sandeep Maurya

📄 Yes, we do have a processor and motherboard shootout coming up in the next few months. Also, we will try and ensure that mails to SOS are replied to sooner. With hundreds of mails a day, it's hard to reply to all of them at once, but we'll try.

Rossi

✉ I have been a regular reader of Digit for the past couple of years. The maga-

Youtube cuts off music

Youtube has launched a separate section of music in its site, dedicated to music videos only

Froyo for Milestone

Motorola official unsure about Froyo update for the Milestone Android phone

Inbox

zine satisfies all type of readers, from beginners to experts. I have to say, you people are doing well in that regard. Keep it up. Now coming to my point. I have a couple of suggestions, simple but very helpful though.

1. The DVD has a lot of goodies in it. But please provide a PDF version of list of contents on the DVD every time. It can be copied effectively to ones system. This saves a lot of time in searching things from older DVDs. I think this costs nothing more than a few wallpapers. Now I have to put each and every disc to search something. And you can imagine how impractical it is to carry all the magazines with me all the time.
2. The Digit interface: I feel it is not user friendly. Now the list comes on top and the explanation comes at the bottom, and in the half-sized window, there is little space for both. Try this instead. First of all make every window full size. Keep the list to the left half in the full sized window and the explanation and all other things in the right half. Every one will accept that left-right movement of eyes is comfortable than top-bottom.
3. Finally please provide PDF version of the magazine in DVDs, if possible. Do it after one or two months later so that it won't affect the circulation. I hope you will look into these matters.

Paul Sunny

Thanks a lot for the appreciation. We try to have articles in the magazine which can be followed by experts as well as beginners. The entire content list of the DVDs, is put up on thinkdigit.com/forum under the Preview & Feedback section. You can simply click on the link and download the XLS file that has all the details you'd need for both DVDs.

My plans to update the DVD interface have hit a little speed bump, but rest assured it's number one on my list of priorities right now. Maybe a MAC inspired interface? Send me feedback about what you'd like the interface to be. PDFs will be something we save for special issues, so watch out for the next one. All Fast Track issues of 2009 were included in the June 2010 DVDs.

Robert

LETTER OF THE MONTH

✉ Congratulations on completing yet another year full of achievements and bringing out such a wonderful magazine, full of enriched content.

Well, I got my hands on the April and May issue. I missed the June issue because of its cost :(but was glad to see the changes and was quite elated. Congrats Raaabo!

I would like to mention a few achievements of mine that wouldn't have been possible without Digit: I secured state rank 2 in ITTSE 2007, which was sponsored by NIIT and got All India Rank 20 in National Cyber Olympiad 2009 apart from getting state rank 10 in National Cyber Olympiad 2008. Digit has been my secret ammunition for the preparation of all these examinations as well as for providing that little "extra" edge for cracking these examinations.

I would definitely try to mail you a box full of sweets or chocolates atleast! Tell me how many of you are there in the team? :)

Next, I was really delighted and happy to see the movement you have initiated

towards the welfare of consumers by highlighting their issues. I would like to contribute an article towards consumer awareness as to how to buy safe and get redressal and what steps to take.

Anyways, I appreciate the changes in the magazine. Keep up the good work and congrats on coming out with such wonderful magazines issues in succession. My best wishes are always with you.

Kumar Harsh
Ranchi, Jharkhand

Thank you for the appreciation, and the offer to send across a box of chocolates. Instead, please plant a tree, give something to your favourite charity, or buy a Digit subscription for a small school's computer lab in your neighbourhood.

We hope you achieve many more laurels in the future. Send us your articles, and we might carry them. Mail them to me at editor@thinkdigit.com.

Robert

✉ I loved the July issue. I bought the magazine on my birthday and I must say it was a wonderful gift I gave myself. The vendor from whom I purchased said, "Here's its competitor ****". But I told him I'd be happy buying Digit rather than any other "competitor".

The DVD contents this month were amazing. Your video lectures proved very useful to my Dad as he is not so good at computers. So I made my Dad sit down, pop in your DVD and let him learn from the lectures provided. Thanks. Your articles were very interesting too.

I have read other readers' letters who criticise you. But I really find nothing in your mag worth criticising. I have only one small request: if you could provide some Hindi songs as well in the DVD, then I'd be obliged. And when are you going to provide PDFs next? I missed June's issue.

Ayan Sarkar

✉ We feel really proud that you continued reading Digit. It's loyal readers

like you that propel us to be the best tech magazine around and we will never let you down. It is wonderful to know that the video lectures in our DVD helped your father. Digit is open to criticism from its readers and we never shy away from them. It only helps us to serve our readers better.

As far as the music goes, we had provided four songs by Delhi-based band Sifar in the July 2010 Mindware DVD.

Sambhav

✉ July issue was wonderful with exhaustive tests. Linux Administration FT was awesome. Thanks for movies in DVDs. Congratulations on shifting to a new office.

Mayur Gaikwad
Satara

✉ It's been a while since we tested so many products in a month. This issue we were shifting while testing all those products. A hectic month indeed!

Rossi

USB monitor gets better

A 10-inch USB touch-screen monitor mimo has been recently launched, which can connect to any USB compatible device

Microsoft processor

Microsoft has recently succeeded in becoming the official licensee of ARM processors that are used in cellphones

HDBaseT set to replace HDMI as AV standard

Google Music to give Apple iTunes some competition




A new AV standard - HDBaseT - has been jointly developed by the surreptitiously formed industry group that comprises: LG Electronics, Sony Pictures Entertainment, Samsung Electronics, and Valens Semiconductor.

Set to replace HDMI, HDBaseT uses a regular Ethernet cable, called Cat 5e/6 network cable, which with the new technology will be able to provide HD & 3D video signals apart from data on the Ethernet connection, which still has a remarkable 100Mbit bandwidth.

A major advantage of the HDBaseT sort of cable over previous industry standards is the length of wire through which it can function, more

than four times the previous best (DiiVA), at 328 feet. This advantage is made even more extraordinary by the fact that HDBaseT cables will support 8 multi hops, effectively multiplying it to up to 2624 feet. The biggest advantage however, will be much lowered cost of the HD-capable cables - the easy affordability of normal Ethernet cables.


In case you are wondering, this will also be ideal for Google TV type internet connected services. You might also have wondered what solutions mobile devices will get, after considering the fact that many new smartphones/tablets support mini-HDMI output. The odds are, some new sort of mini-USB interfaces will be developed to work with it. 

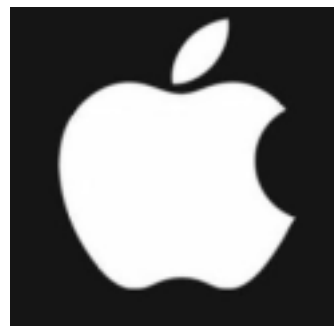
In a world where being entertained wherever you are, on the move or at your neighbourhood coffee shop, is not considered an unreasonable demand, a paradox exists. Video and audio content certainly isn't getting any lighter, and high-definition is making a big dent in storage capacities across the world. Fortunately for us all, while content size is increasing, so is the speed and reach of mobile connectivity. Considering all this, the answer to your portable storage problems is exceedingly obvious - cloud storage.

Reports are in that iTunes is on its way to becoming a cloud service, aiming to excel at wireless streaming and syncing of content between Apple's servers, your computer and devices. iTunes is the acknowledged (U.S.) market leader for audio content, and millions of users will be glad when it shifts to the cloud, giving them the new ability to enjoy their content across a range of their devices, content that will not be limited (or at least as severely) to their device's storage capacity, and accessible from anywhere.

However, Google is certainly not going to let the cloud entertainment space go that easily, and spoke about the launch of a new music service (rumoured to be called Google Music) this American Fall at Google I/O 2010, which will offer over the air downloads for the Android platform, and remote access of the media.

Apple wouldn't be too worried about retaining its massive iTunes userbase, simply because so many users have DRM content that's tied to the platform, which they will not be willing to leave behind. Google still has an advantage though, with some of the best cloud experience in the industry, and a wide variety of cross-browser, Chrome-based, and Android applications.

The same reports that partially detail Apple's cloud initiatives, say that the services (iTunes, Apple TV, and more) will be launched around the American Fall, which is the same time that Google Music and Google TV are expected. This is also around the same time that another phase of competition between Apple and Google will begin - mobile advertising - when iAds will battle AdSense for supremacy. 



Google takes over ITA

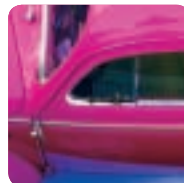
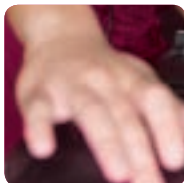
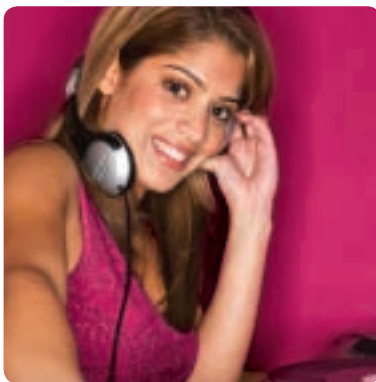
Billion dollar companies have a penchant for acquiring technology the easy way, and Google's takeover of ITA Software, a leading flight information company, for \$700 million, is a classic example.

The industry is certainly buzzing with questions. What

exactly does Google intend to do with a \$700 million flight information company? Google has not said how they intend to use ITA, except by commenting that they'd honour all of ITA's previous commitments; most notably service agreements with Microsoft's Bing, apart from the more obvious Kayak and Orbitz. 



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Smart ride bike

Panasonic has launched RX-10S, an electric bike, that can assist you to go 97km on single recharge

Tablet for India

At the time of going to print, Indian HRD ministry announced a Tablet PC for Rs. 1500.

ASUS unleashes world's fastest GPU

In an effort to dominate the gaming hardware market, Asus has gone ahead and made the world's fastest GPU, by combining two ATI Radeon HD 5870 graphics cards into one. It will surely make a hole in your pocket, at \$1,200. Named the Asus Ares, it is reportedly 32% faster than the Radeon HD 5970, and is available in a Limited Edition Metal Case and a ROG gaming mouse bundle. It apparently requires a 750W power supply to run. Aply, Asus has tagged




it as: Limited Edition, Unlimited Power.

The monster card will set you back by Rs. 1,00,000. We got our test piece just when this issue was going for print. Stay tuned for our review in the next issue.

Meanwhile, Nvidia has released the DX 11 capable GTX460 that purportedly runs faster than the expensive GTX465 and offers you a 'bang for the buck', something quite uncharacteristic from Nvidia. It is apparently more energy efficient, consumes less power, runs cooler and sticks to a budget gamer's constraints. Benchmarks peg the \$230 1GB GTX 460 above the \$200 HD 5830, and just below the HD 5850. The GTX 460 however gives consumers the added advantage of Nvidia's 3D

Vision, PhysX, and CUDA technologies. The sole advantage the HD 5830 presents over the GTX 460 is a slight price difference, and ATI Eyefinity. The GTX460 is presently available in India in two configurations:

The Nvidia GeForce GTX 460 768MB, is Priced at Rs.13,150 (approx), while the Nvidia GeForce GTX 460 1GB, is priced at Rs.15,100 (approx).

Meanwhile, the elder brother GTX 465 is priced for approximately Rs. 18,000 (approx) for the 1GB configuration. 


AADHAR's API

The Indian government's plan to implement a unique identity code for each Indian citizen is finally bearing fruits. The Unique Identification Authority of India (UIDAI) has released an API specification for how identities would be authenticated with different agencies using a central database.

With a unique identity number assigned to each citizen, establishing and authenticating the identity of any individual will become much easier. Currently multiple identity documents are required for different government services. Each has a basic requirement needed to authenticate our identity. With a unique ID, and a means to authenticate that ID, this workflow would become much simpler and convenient.

The new unique identity system, named AADHAR, is projected to work by establishing one's identity using the AADHAR code, and any combination of biometric identification, such as fingerprint or retina scans. It appears that the creation of user ID could go paperless and validated/verified online.

When talking of a central database containing everyone's personal details, privacy concerns are sure to arise. The system developed with AADHAR is intended to prevent such abuse. The AADHAR API does not expose any way to access some one's personal details from the UID code; instead it merely allows authenticates the details you do provide against the central database to establish an ID. It will merely give a "Yes" or "No" response.

How this would work is that one would need to provide their AADHAR ID to the agency with which you need to establish your ID, this could be a bank where you are opening an account, or a government service you are registering for, such as a driving license. Using your UID and biometric data (fingerprint / retina scan etc.) captured on the device installed at such locations, the agency (bank, ration card office etc.) will be able to verify the details you provide. 

Low energy Bluetooth 4.0 unveiled, expected to hit market by Q4 2010

While Bluetooth 3.0 has been alive and kicking for more than a year, very few devices have found use for it since its release in April 2009. This hasn't stopped the Bluetooth Special Interest Group (SIG) from enhancing the technology further, and now, they have announced the arrival of Bluetooth 4.0.

While developing the Bluetooth 4.0 Core Specification, SIG's primary focus areas were low power consumption using new 'low energy technology', apart from enhanced range and multi-vendor operability. They seem to have achieved what they set out to do, and claim that it will allow for several years' worth of battery life on standard coin-cells. This will allow for very small and low cost devices to incorporate Bluetooth as a budget friendly connectivity option. This hallmark 'low

energy technology' feature of Bluetooth 4.0 promises to have "new [connectivity] applications in [the fields of] health care, fitness, security and home entertainment".

Complete specifications are available at Bluetooth.org. The following is the list of enhancements at a glance, mirroring the key advantages of the low energy technology:

- Ultra-low peak, average and idle mode power consumption
- Ability to run for years on standard coin-cell batteries
- Low cost
- Multi-vendor interoperability
- Enhanced range

Interoperability testing and qualification are proposed to take place at SIG's 37th testing event, UnPlugFest (UPF) 37, which is scheduled for 4-8th October, 2010, in Barcelona, Spain. The first devices featuring Bluetooth 4.0 are officially expected to make their presence felt by the end of the year. 

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SSD for cellphones

Samsung and Toshiba has developed DDR 2.0 NAND flash memory for smartphones that gives 400MBps transfer speed

Toshiba's 25th Anniversary of Laptop Innovation – from T100 to R700

Digit had the opportunity to visit the Toshiba Information Equipment (TIH) factory in Hangzhou, China, on 24th June. The event was their 25th anniversary of manufacturing notebooks.

TIH Factory Visit – Dedication to Quality

Calling it the “25th Anniversary of Laptop Innovation and Quality”, Toshiba showed us the dedication it has for solid engineering with a tour of the TIH laptop plant, from the factory floor to the design and test centres. This is no Foxconn, we noticed no boredom or depression or sweat shop atmosphere here...just whole floors of assembly lines, made up of both humans and machines. With everybody concentrating at work, the near silence was extraordinary, only syncopated with machine rhythm. The chatter and smiles that broke out at lunchtime were rather startling, but expected – everybody likes a break from work.

With top-of-the line machinery and apparent cleanliness in the lines, nothing stood unused – small components flowed on tape to be fused to printed circuit boards with surface mounted technology, bigger components were carefully installed. We also noticed innumerable quality check points at every stage of production, ranging from Automatic Optical Inspection, Aging Testing, Finer Assembly Testing, to the human eye. This, according to Toshiba, is the single most important contrib-

utor to their quality, and super-low field failure numbers. That and their engineering team, who we were told are fearless in the face of technological hurdles – each an eagerly looked forward to challenge.

Toshiba India's Roadmap

Identifying India, China and Brazil as the top emerging markets, Toshiba aims to get a foothold in each. India has an astounding 46 per cent year-on-year growth and to this end, has started redoubling its efforts in marketing, retail, and service coverage. They've even got Sachin Tendulkar as their new ambassador, a sure sign of Toshiba's desire to progress in the booming Indian market. With him, they have launched an extensive cross-product media campaign conveying the message of “Excellence in Quality, Technology & Design”, as ambassador for Toshiba's laptops, LCD TVs, and home appliances.

In terms of their laptop portfolio in the country, Toshiba India had only 11 models in the country before April 2010, but intends to have a wide portfolio of 30 notebooks by October end, ranging from Rs. 19,000 to Rs. 70,000. Three of them were released on June 25th – the Portege R700, Qosmio F60, and W100 Libretto – some of the most exciting notebooks of 2010, which we've covered later in the article, and more extensively on www.thinkdigit.com.

Seeking to offer competitively priced products targeting institutions, corporations, and

the consumers, Toshiba has set its plans in motion, and has set an aggressive target of trebled sales and a double digit market share in India, which is currently pegged at 4 per cent by IDC India. In order to do this, they're about to expand their retail outlets as well as their service centres. From 71 service centres in 45 cities, to plan to have 81 centres in 55 cities by year end. Next, their 700 or so retail stores will grow to about 800 by the end of the year. Toshiba has also successfully formed retail partnerships with Reliance Digital and Croma. According to company officials, talks are also in advanced stages to partner with another major retail chain.

Innovative new laptops Portege R700 laptop

The quintessential lightweight business laptop, the 13.3-inch R700, weighs just 1.39 kg, and manages to squeeze in full powered Core i3 and i5 processors into a 0.88-inch thick frame, without sacrificing battery life or suffering heat dissipation problems. How Toshiba managed to do this is a tribute to their engineering skills, who managed to build an ultra-lightweight and super-strong honeycomb chassis out of magnesium. Also unprecedented on ultra-mobile laptops, is the presence of a 9-mm optical disk drive.

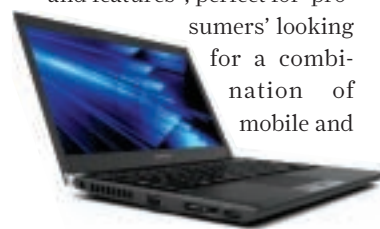
The i3 version costs Rs. 65,000, while the i5 version costs Rs. 75,000. A Portégé R700 with an i7 processor can be built to order, an SSD

can be opted for.

The R700 laptop also comes with some pretty cool software pre-installed, including an HDD Protection technology with 3D motion sensor (which parks the HDD head if excess vibration is detected – note, its sensitivity is adjustable), Toshiba Eco Utility (power management).

W100 Libretto

Called the world's first Windows 7 dual-touch-screen laptop, the Toshiba W100 Libretto weighs 819 grams, and has two 7-inch wide aspect capacitive multi-touch screens. The device is hailed by Toshiba as a mini-notebook that showcases an “unparalleled blend of high performance, mobility and features”, perfect for ‘prosumers’ looking for a combination of mobile and



Portege-r700

state-of-the-art computing. It is priced at Rs. 75,000.

We got our hands on the device on our visit to Toshiba's Hangzhou laptop factory, and we have to say, the W100 Libretto is seriously responsive in all aspects, and it looks great! The device certainly isn't conventional, and is something in between a laptop, a netbook, and a touchscreen tablet. This is why it can't be compared directly with an Apple iPad or Dell Streak. What really makes it stand apart is its

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Motorola's update

Motorola has confirmed to launch Droid 2 with Android 2.2 OS

HTML 5 for mobile

AOL has rolled out HTML5 mobile site which is specially designed for cellphones And 2 new Android apps

2GB DDR3 1066MHz RAM, LED backlit LCD screen, a 64 GB SSD, USB 2.0 interface, a 1MP web cam, 729MB shared video RAM for the Intel HD integrated graphics solution, and a 1.2 GHz Pentium U5400 processor with 3MB L3 cache.

Possibly the best part about the device is the way Toshiba has managed to split Windows 7 OS across two displays vertically, giving users excellent video real estate, while ensuring a large sized onscreen keyboard which ranges from 3-line, 4-line, and split-QWERTY configurations, to a number pad. The dedicated keyboard button, is accompanied by a home and power/sleep button. The accelerometer works well to switch from laptop mode to book mode, and, you can drag and drop content from one screen to the other.

Unfortunately, the W100 device has some drawbacks right from the get-go, namely, its 4 hour battery backup, and a mono-speaker which when we tested it, was not very powerful. We however have great hopes for the device, though at its price point, it will not become common as the iPad or netbook.

Qosmio F60

The Toshiba Qosmio F60-X5310 is an extraordinary 15.6-inch entertainment laptop that has some very powerful features, namely the Toshiba Quad-core graphics processor (you know, the one the PlayStation 3 has, the famous Cell processor?) that uses a Spurs Engine, a Core i5 processor, and integrated Harman Kardon stereo speakers. This Cell GPU is the primary difference between this model and the one released in Europe in January, which featured an

Nvidia 330M GPU instead.

Starting at Rs. 61,490, the Qosmio F60-X5310 15.6-inch screen is LED backlit and has a wide 16:9 aspect ratio, at a native resolution of 1366x768 pixels. Users will greatly enjoy the benefits of the quad-core Cell processor GPU, especially in hardware video encoding. An example of this is Toshiba's Upconversion Technology called Resolution+ (also seen in the Portégé R700), which uses a proprietary super-resolution algorithm solution to up convert standard definition images/videos to near high



Libretto W100

definition level. Another great multimedia feature is one of the three Toshiba Value-Add software available on the laptop, namely Toshiba Face Navigation, which lets users select any face in a video, after which they can see all the parts of the video where the face appears. Useful if you are looking for a particular part of a movie.

However, what is perhaps the most exciting thing about the laptop is the Toshiba Gesture Controller, which using the laptop's integrated 1.3MP HD Automacro Webcam and the Quad-Core GPU to simultaneously recognise and interpret a user's hand gestures. This allows the user to control media as well as the mouse pointer with simple hand gestures.

AC100 smart companion


The 10-inch Android-based and Tegra 2 powered AC100 smart companion offers a smooth transition across the difference in visual real estate from a phone to a tablet/clamshell (just like iPad does for the iPhone); giving Android smartphone users the opportunity to bridge the gap. The AC100 smart companion and an Android smartphone crucially differ in one regard, the presence of a hardware keyboard. Android 2.1 as a framework is built for a multitouch interface, along with four dedicated buttons. By choosing to go in for the laptop form factor, engineers at Toshiba challenged themselves to modify the Android OS to conform to a keyboard, and in the process, have heavily customised it.

The Toshiba AC100 will also be one of the Tegra 2 first devices to hit the market, and the world will look on to see if the SoC can perform to its potential. This also gives the AC100 a one-of-a-kind status of being the only 3G capable-Google Android-NVIDIA Tegra-laptop around, and makes it much more powerful than its (albeit tablet but) counterpart device, the iPad, in almost all departments. It features a 10.1-inch LED backlit screen, 8GB NAND

flash memory, 512MB RAM, 1.3 megapixel camera, Bluetooth 2.1, full 1080p video, SD card reader, USB & HDMI port, 802.11 b/g/n Wi-Fi, and a full size keyboard.

The AC100 smart companion will operate in always-on mode just like the iPad, but offers a slightly lesser 8 hours of mixed browsing-video playback battery life, with a seven day standby time. Users will have access to a variety of applications and widgets from a separate source (for now) than the Android Marketplace, apart from the many pre-installed applications such as Opera Mobile, Facebook, Twitter, YouTube, Fring, an Office document editor, an email client, and the Toshiba Media Player. Users will also be able to set up to five homescreens that can also be made to change with work and life profiles, and GPS positioning. The Opera Mobile browser has probably been chosen over the Android WebKit-browser simply to avoid touch issues.

Calling it "building from the ground up", Toshiba's decision to devise a hardware keyboard solution for the Android platform is certainly still puzzling, perhaps more so, that they have chosen to do away with the touchscreen completely. This, after they showed off their touch engineering ability with the dual-touchscreen mini-Win7-notebook, the Libretto.

The Toshiba AC100 smart companion will release in Q3 of this year, starting with Europe, Middle East, and Africa. An Android 2.2 update will be available shortly as well, which will give it full Flash 10.1 support. 



Qosmio F60

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MeeGo ready for handsets

The successor to both Intel's Moblin Linux and Nokia's Maemo, and the product of an exciting partnership, MeeGo was released in developer form two and half months ago. Soon after, they released a Moblin-inspired netbook version of MeeGo, and now, they have made the Maemo-inspired handset version available to the public, complete with a UI. It is currently compatible with the Nokia N900 and Intel's own Aava Mobile platform based on Moorsetown.

Symbian has been struggling to keep up with the other platforms, and even Symbian^3 in an exhaustive review of the OS by Mobile Review only seemed to be playing catch up. But in MeeGo lies a new hope. If Nokia does drop Symbian from its higher end N-series devices – as they supposedly are – Nokia might have better luck with its smartphones with a more capable OS.

The plans for MeeGo don't



end here. With MeeGo Intel and Nokia plan to increase the scope of their merged Linux distribution from Netbooks (for Intel's Moblin), and smartphones/internet tablets (for Nokia's Maemo) to five categories of devices: netbooks, handsets, media players, in-vehicle infotainment systems, and televisions. On the other hand, Android too, is growing and has been demonstrated in all kinds of devices, from netbooks, numerous handsets, tablets, cars, media players, and of course, TVs with Google's own Google TV. MeeGo has a lot of competition ahead to face.

All four of these operating systems (Moblin, Maemo, MeeGo and Android) are Linux based, and all of them do their own thing UI-wise. While one may feel like declaring a winner, and the "death" of the other platform, the best thing for consumers is choice. We now have the luxury of choices for PC operating systems, and as these devices get more powerful and more featured, we may see a future where the choice of a mobile device will be uncoupled from that of a mobile OS.

On a related note, Nokia is gearing up fight for a place in the smartphone market with

MeeGo and Symbian^3, with Nokia CEO Anssi Vanjoki telling the world that he and his company are committed to make Nokia "number one for high-end devices". He also praised MeeGo as the future of the smartphone era: "The current phase of MeeGo development is looking awesome. We believe it will power the computers of the future. And the computers of the future will not be tied to a desk or even a lap – they will fit in your pocket..."

With MeeGo, Nokia might actually succeed and manage to produce Nokia's new dream of "killer smartphones and market-changing mobile computers." Vanjoki also said that Nokia has "no plans to introduce an Android device", and that they'd be sticking to Symbian and MeeGo.

Refer to www.thinkdigit.com/latest/MeeGo.html for more images as well as videos of the interface.

Sony Ericsson Vivaz Pro: Loses 8MP

We particularly loved the original Vivaz for one thing: 720p continuous autofocus video recording ability in a slender, sexy body. It is still there in the Vivaz Pro. We particularly hated the original Vivaz for another thing: Symbian S60 5th edition, which has now been completely run over by the newer touch-oriented operating systems. Unfortunately, this too is still there.

The form factor is the same as the Vivaz, with Sony Ericsson's Human Curvature design. The

back panel is a hard plastic with a fine dull finish, which gives it an appearance of solidity. In fact, it is not until you remove the back panel that you realise that it is actually quite flimsy. The power button (that doubles as screen-lock toggle) rests in an odd position, on the upper half of the back panel. The three function buttons (select, call answer and call cancel) placed below the screen, and the volume controls on the side, are all thin but easy on the fingers and tactile. We also like the two dedicated buttons on the side, for Video and Photo

mode. The screen is the same as Vivaz; 640 x 360 with high dpi of 229. The slider is spring-loaded and is somewhere between the snappy N97 mini and the manual Motorola Milestone. We liked the slider of the Vivaz Pro.

The 5MP camera of the phone still manages to record 720p video. This feature needs a little clarification though: while the camera has been downgraded, it is still more than enough for the 720p video recording, 8 megapixels are not really needed for the 720p recording.

Although the touch is bad, the



hardware QWERTY is the saving grace here, as it saves us from the torture that was on-screen typing on the Vivaz. We'd give the keyboard a lot of marks for looks, as each key has backlit borders that lend a splendid effect. But, ergonomic-wise, the keyboard just scrapes through.

TPB ISP

Those behind The Pirate Bay launches an ISP; currently 100 subscribers are said to be using it

Windows 7 SP1

Microsoft to release the first service pack for Windows 7 in early 2011

Mobile watch

Microsoft kills its Kin, just 6 weeks after the launch

Against all expectations, Microsoft announced the discontinuation of its social networking mobile phone, Kin, just 6 weeks after its release into the market. Much to the dismay of Windows Phone 7 and social networking phone lovers, it has brought down an appalling gloom of darkness shrouded in mystery. The official reason is that the Kin core team would be moved into Windows Phone 7 project to allow Microsoft to concentrate to a promising

project. Microsoft also said they will be "incorporating valuable ideas and technologies from the Kin into future Windows Phone releases." A good idea, because some UI features of the Kin, such as Studio, Spot, and Loop, were surely interesting.

Other revelations indicate that Microsoft encountered several constraints & severe financial setbacks running the Kin project, including an unexpectedly feeble response in Kin's opening sales, amounting to just 500 Kin phones. Another major blow that Microsoft could not sustain, came



in the form of Verizon's exorbitant service charges on the monthly plan, which mirroring its luxury smartphone service plans.

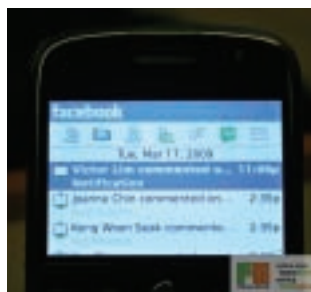
Though Microsoft has promised to continue pro-

viding support to existing Kin consumers, there is no word regarding the prospects of regular software updates & bug-fixes they'd highlighted earlier.

Free Facebook access to Airtel customers

Airtel has announced that it will offer free access to mobile Facebook users (comprising more than 130 million subscribers) on its network up to August 31st, 2010. The mobile Facebook version will enable users to post status updates, comment and write on walls, message others, and also be able to view or upload photos (without incurring any data charges on this usage). Existing mobile internet users on Airtel can immediately avail of this free service by connecting to their friends on the mobile Facebook site. However, the

new subscribers who are accessing the mobile internet for the first time need to SMS FACEBOOK to 54321 to make use of this offer. Airtel promises to offer Facebook in six Indian languages - Hindi, Punjabi, Bengali, Telugu, Tamil, and Malayalam, starting with Hindi and English.



Cheap Android phones aimed at India

Google is looking to expand the offering of the Android OS, and has aggressively taken aim at emerging markets, such as India and China, with cheaper handsets catering to the untapped masses. Andy Rubin, vice president for Engineering at Google, recently commented about the potential of these markets: "the down-market opportunity is about to happen. It's actually quite a revolution".

Apart from low cost handsets, Google intends to provide payment gateways

for application developers, allowing them easily accept payments and sell things like subscriptions. Low-cost handset makers have already started making noises about their upcoming Android devices, such as Huawei, LG, and Samsung.

Lemon Mobiles, a relatively recent entrant into the Indian mobile market, has also announced a low-cost Android 1.6 mobile, called the P1, which stands for Professional One. In related news, Reliance will also be launching the first Android CDMA phone in India - the Samsung Galaxy i899.

Symbian^3

The Symbian community has released the newest version of Symbian, version 3 with over 250 new features

Symbian members

Prominent telcos such as AT&T, NTT Docomo, Qualcomm, Sony Ericsson, Samsung and Vodafone, in addition to its known promoter Nokia are members of the Symbian Foundation

The latest browsers: Opera 10.6 vs. Firefox 4 Beta 1

Opera 10.60

With the advent of Opera 10.60, Opera Software is bringing the versions of Opera for all platforms in sync and thereby offering better stability and a further 50% boost in terms of performance. The standard SunSpider test has revealed that Opera 10.60's performance is at par with that of Chrome 6's latest dev version. It is also twice as fast as the latest Firefox 4 build, and almost thrice as fast as Firefox's latest stable version 3.6.6. While the SunSpider test alone isn't enough to gauge the performance of all aspects of the browser, there seems to be a pattern here.

Opera 10.60 also comes with better support for upcoming standards, including Geolocation, and it is the first stable browser to support WebM media. Other standard features include App-Cache, for offline applications and Web Workers. There are a few more tweaks to the Opera

UI and features which improve the browser overall, the Opera menu being one of them. Additionally, Opera features such as the download tab, history tab etc. now display icons instead of tab previews. Another subtle change is the inclusion of Bing as a search engine in the browser – although Google is still the default. Opera



10.60 also supports search suggestions from websites such as Wikipedia.

Opera 10.60 no longer shows tab previews in the Windows 7 taskbar. While the feature has its utility, for many power users

it is simply an annoyance, since the whole point of browser tabs was to not clutter the taskbar. Those who still want to turn it on needn't worry. The option is still there.

Opera 10.60 also brings new security features in the form of an "AVG-supported anti-fraud systems and phishing protection". This is coupled with live feeds which carry information educating users of current scams, and potential malware.

Although Opera 10.60 further evolves Opera towards a perfect browser, it misses one of the key things – the out of process model for plugins, now adopted by Chrome and Firefox 4.

Firefox 4 Beta 1

Firefox Beta 1 will be a very early look at Firefox 4, and will feature few of the brilliant features that will be found in the final release. They are as follows:

1. New UI with add-on manager.



2. Windows 7 taskbar integration.

3. Support for jumplists and tab previews (which unlike most other browsers can be turned off).

4. Implements tabs-on-top approach with the UI. But, this could be changed from tabs on top to tabs on bottom if desired.

5. Adds an HTML5 parser and full support for web video, audio, and drag and drop.

However, there is precious little improvement in web forms support, and the browsers lags significantly behind Opera 10.6 in terms of performance.

Microsoft and Facebook open Docs.com

Docs.com, a collaborative effort between Facebook and Microsoft, has been opened to the general public. Meant to allow users to create and share Microsoft Office documents over Facebook, Microsoft has unveiled a new feature soon after its full release: support for Facebook fan pages.

This will allow administrators of Facebook fan pages to use and emplace Office documents,

as supplements to their content. This feature seems unusual, and Microsoft admits that it wasn't initially envisioned as a function of the service: "When we built the service, we didn't anticipate this as a core scenario. We were focused on individuals sharing documents at any point in time."

Commenting about Docs.com as a platform, Pat Kinsel, Product Manager of Docs.com at Microsoft's FUSE Labs, went

on to say that the site has a long way to go before it catches up with Google Docs, which additionally gives users the ability to share and collaborate on non Microsoft Office documents. Other Google Docs advantages according to Kinsel include searchable docs, and the tight integration of Gmail and Google Docs.

But, Kinsel pointed out that revisions are coming out on a weekly basis, and that for now,

"growth isn't the priority; the experience is." Microsoft is also looking for better integration between mail and document sharing, and Kinsel shared that it's a definite milestone on their "roadmap."

"The big open question is whether Facebook users can be leveraged and steered to productivity scenarios, or is this a site where people want to goof off. I think we're at the forefront of finding that out."



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HTC Wildfire

HTC launches the Wildfire, a cheap 240x320 display Android phone for the masses

New Google Images

Google launches updated image search which shows many more images in a single image

HP Labs' new service enables mobile web access without GPRS



HP Labs India has developed a new technology that will allow users of non-GPRS enabled phones to browse the internet, via SMS and voice services, instead of the traditional webpage browsing method. Called SiteonMobile, it is based on cloud computing

technology, and will enable the masses to access the internet.

You are probably wondering how this would work, and might be thinking that most pages would overload a user's phone with SMSes simply to load...Well, if you were, you'd be right - only sites optimised for this sort

of viewing can be accessed via SMS, by designing what are called 'TaskLets'.

These task-based interactions on the website are chosen by the site owners, and will allow users to access only that relevant content/function, instead of the entire page. This is the basis of the entire technology, and that's why the service's tagline is "packaged web interactions on mobile." These TaskLets can be accessed by PC, as well as any internet-enabled

device out there.

Check out www.siteonmobile.com for more information. While the services are currently free, no known sites have been optimised as yet. The 'invitation only alpha release-product' access is limited to site owners as of now, and not for end-users. "We make your web content reach billions", is how they are enticing site-owners to create TaskLets and customize their webpages. Expect full-fledged services to start soon. 

Battle for social networking supremacy: Google vs. Facebook

Just when people had started digesting Facebook and Google as the two internet giants, it appears that Google will attempt to pull the ground from under Facebook's feet, by launching a new social networking service of its own called "GoogleMe" and simultaneously rope in the famed services of Zynga, the social gaming developer of Facebook fame. This news comes after TechCrunch's


reports that Google has pumped in between \$100m to \$200m into Zynga.

Zynga has been doing rounds on Facebook, growing in stature and popularity with such hot games like Farmville and Mafia Wars. Everybody is amazed by the company's potential, with the current estimates pegging Zynga's 2011 revenue at \$1 billion.

Google's interest in Zynga seems obvious, for Google

Games with Zynga's expertise will give them a hold on the social gaming sphere, and open up another battle front with the social networking behemoth - Facebook.

Meanwhile, speculation has it that the new GoogleMe service will be an enhanced, and more integrated version of the current Google Profiles. To support this, there's also news that Google Buzz's lead developer, Rick Klau,

is now working on Google Profiles. A move like this, really emphasizes how much Google wants to dominate the social networking space, and they certainly do have potential, if Gmail, Docs, Maps, Calendar, Orkut, and even Search are properly integrated. Although, outplaying Facebook in its own backyard would be easier said than done. Not to forget the bungled launch of Google Buzz! 

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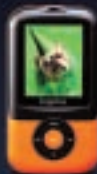
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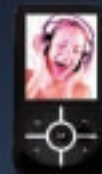
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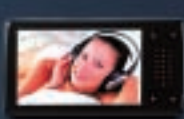
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- FM Radio



SP-101 Speaker

- PMPO: 1500W
- High Bass Output
- 2.1 multi media speakers
- 4" High Bass Sub-woofer
- 3" Driver Units
- Wooden Material with Elegant Design
- Magnet Resistant Technology



SP-131 Speaker

- PMPO: 1800W
- High Bass Output
- 2.1 multi media speakers
- 4" High Bass Sub-woofer
- 3" Driver Units
- Wooden Material with Elegant Design
- Magnet Resistant Technology



SP-101 Speaker

- PMPO: 1500W
- High Bass Output
- 2.1 multi media speakers
- 4" High Bass Sub-woofer
- 3" Driver Units
- Wooden Material with Elegant Design
- Magnet Resistant Technology



SP-21 Speaker

- PMPO: 1200W
- High Bass Output
- 2.0 multi media speakers
- 2.5" Driver Units
- Compact Design
- Piano Finish



SP-22 Speaker

- PMPO: 1200W
- High Bass Output
- 2.0 multi media speakers
- 2.25" Driver Units
- Compact Design
- Piano Finish

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iPhone 4 to hit India soon

Bharti Airtel is in talks with Apple and plan to launch iPhone4 by September end

Antennagate

Apple to give iPhone4 with protective case to prevent signal strength issues caused due to gripping the iPhone with bare hands

Investigating iOS4

So is the iOS4 as great as it's touted to be? We decided to give it a spin

Nimish Sawant

nimish.sawant@thinkdigit.com

Apple's latest iteration of its mobile operating system was launched amidst much fanfare along with the iPhone 4. The operating system previously known as iPhone OS got a slimmer nomenclature in the form of iOS. Along with the new name, Apple has introduced a lot of features in iOS4.

Since Apple iPhones and iPods span across generations, you have to know which device is actually compatible with iOS4. Apple iOS4 runs smoothly on iPhone 4, iPhone 3GS and iPod touch (3rd gen). For iPhone 3G and iPod touch (2nd gen) users, certain features like multi-tasking will not be accessible, as it is too taxing on the hardware of these devices. iPhone 2G and iPod touch 1st gen users will have to stick with iOS 3.1.3 as it cannot upgrade to iOS4. Finally, iPad will start getting upgraded with iOS4 sometime in October-November.

For our testing purpose we used an iPod touch (3rd generation). We pretty much got all the iOS4 features except the ones associated with the phone. So here's a lowdown of our experience with the iOS4.

Multi-tasking

This is one feature that was sorely missing in an Apple mobile product, which was

already present in other mobile operating systems like Android. Unlike pre-iOS4 when multi-tasking was only allowed with Apple apps, the multitasking function is now available for third-party applications. So you can listen to an online streaming music app and at the same time write your Notes or update your Twitter account. However, multi-tasking on the iPhone or iPod is different from that on a desktop PC or Mac or Android based phones, in the sense that when the app is running in the background, Apple allows only certain functionalities so as to save battery life. This



App drawer showing background apps

means that you cannot expect the Twitter app to pull in updates unless it's in the foreground. But if you are downloading a map, you can minimise that app and do other tasks. Similarly, location polling apps like GPS or direction apps can do so in the background.

Double tapping on the Home button makes the screen transparent and slides it upwards revealing an App Drawer which will show you which apps are present in the background. You can see four apps at a time in the drawer and you will have to swipe left or right

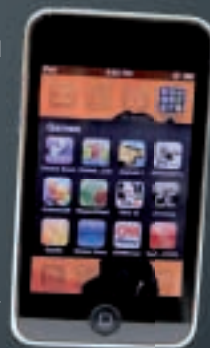
to get the complete picture of the apps in background. At the left most we have the music controller and orientation lock. App-switching is quite snappy. One annoying aspect of this feature is that if you want to get out of an app, you will have to first set it in the background by one tap, and then double tap to reveal the app drawer. Then hold down on that app and then close it.

Folders

The Apple store has reached over 200,000 apps and it is safe to assume that we download lots of apps. But before iOS4, the downloaded apps were all over the place.

To create a folder all you have to do is hold down on the app till it starts to jiggle, and then move it over another app to create a folder.

Now the folder is automatically named based on its genre, but as a user you get the option to rename the folder according to your specifications. A single folder can hold up to 12 apps. Having a folder makes organisation of apps very easy i.e. you can name folders based on



Apps within a folder

the apps they contain. Having folders is great as it helps you organize your apps brilliantly, but you will have to remember which folder has which app, which can get annoying at times. As of now there is no provision to nest one folder into another.

Simplifying Email

The Email app has an innovative addition, not seen in the Android phones yet, in the form of Unified inbox. It basically gets email from your multiple mail accounts in one place. This prevents you from jumping in and out of multiple inboxes. On the other hand, this feature may also be too overwhelming for some users, if there are many mails flying around on each account. You can also switch to inboxes of individual accounts.

Installing iOS4

You will need the latest version of iTunes (9.2 and up) which can be downloaded from Apple's website or can be found on our July 2010 Mindware DVD. Once iTunes is installed, all you have to do is connect your device (iPhone or iPod) to your system and go to your device. A summary pane will show a notification of upgrading to new OS. On selecting it you will be guided through the upgrade process.

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iOS 4.1 Beta released

Apple has released a beta version of iOS SDK 4.1 for developers

\$3.25 billion net profit

Apple reported a net profit of \$3.25 billion on revenue of \$15.7 billion this quarter

Another interesting aspect in the email app is threaded emails. You will get a small box with a number indicating the number of conversations that have happened over that mail. Clicking it, will open up all the previous mails as well. Also you have the option of opening up attachment in third party apps.

Customising Spotlight Search

Mobile Safari has added quite a lot of options here. You can customise the Spotlight search (Settings > General > Spotlight Search) to search the iPhone/iPod based on your preference. For example, if you want the OS to search your Contacts first, then your Mail or Notes etc., for the search query, you can arrange it accordingly. Also Mobile Safari has added Wikipedia and search engine support to expedite search.

Improved iPod app

The iPod app has undergone some interesting additions. The iOS4 update allows you to make custom playlists, instead of just having the legacy On-The-Go playlist in the previous iOS installment. You can edit a current playlist by adding or deleting tracks from it (playlist_name > Edit > + (for adding tracks), - (for deleting them)) or create a brand new playlist (Music > Playlist > Add Playlist...) iPhone OS 4 now features the album art, release date, number of songs and album length at the top



More playlists in the Music player

of the page when an album has been selected.

iBooks on iPhone and iPod touch

'Who reads books on their mobile phone?' did we hear. Well going by the way Kindle is now available across all mobile platforms, it is safe to assume that a lot of books are read on mobile screens. With Apple having launched its own iBook store to compete with Amazon's Kindle, it was no surprise to find an iBook app along with the iOS4. iBook has been optimised for the mobile screen but in terms of functionality it is similar to its iPad counterpart. You can read your PDFs in iBook or order ebooks online. It allows you to change the background from white to sepia; change the font in the iBook app; add a bookmark and make notes by tapping on a section of the text. Further reading on this feature revealed easy syncing with your iPad if you are on the same WiFi network.

Camera features

iOS4 has enabled 5x digital zoom in the camera section. This we felt was not such a great addition considering, digital zoom is not a feature that will give you great results. For the video camera, you can decide your point of focus by tapping the region of the screen you want to focus on. Again this feature is not a brand new feature, considering many other phones already offer this.

An interesting addition is the ability to decide the resize photos while attaching them in the mail. Another feature which is interesting but not novel is geo-tagging photographs. This feature is very similar to Footprints app of HTC phones, which helps you to tag

a particular photo to a place. iOS4 can pull the geo location data attached to the photo and show them on a map.

Word Editing

You can now select text, copy it, paste it or replace it just like you would on your desktop. iOS4 has added support for Bluetooth keyboards, which can also replicate the Command + A, + C, + V on the iPhone or iPod. But this feature is ideal only for emergency use, as using a keyboard and viewing the output on the small screen just seems foolish and also you cannot carry your Bluetooth keyboard the way you carry your iPhone or iPod.

Instead of auto-correcting spellings to what Apple thinks is the right way to spell, you now get a red underline and on tapping it, you have the option to select the correct spelling or leave it as is.

Features that didn't make it: Flash


Apple and Adobe have had huge rows over this. According to Jobs, Apple would be more willing to adopt HTML5, CSS and JavaScript which are all open standards and bypass the need to download third party browser plug-ins (like Flash). Jobs also claims that Flash is not suited for mobile devices as it sucks up battery life and has security holes.

Social media integration

This is one feature which we felt was the most obvious one, which iOS4 missed out on. Integrating social media with contacts, is a feature that has existed on many phones which definitely reduces navigation time.

Bluetooth media transfer

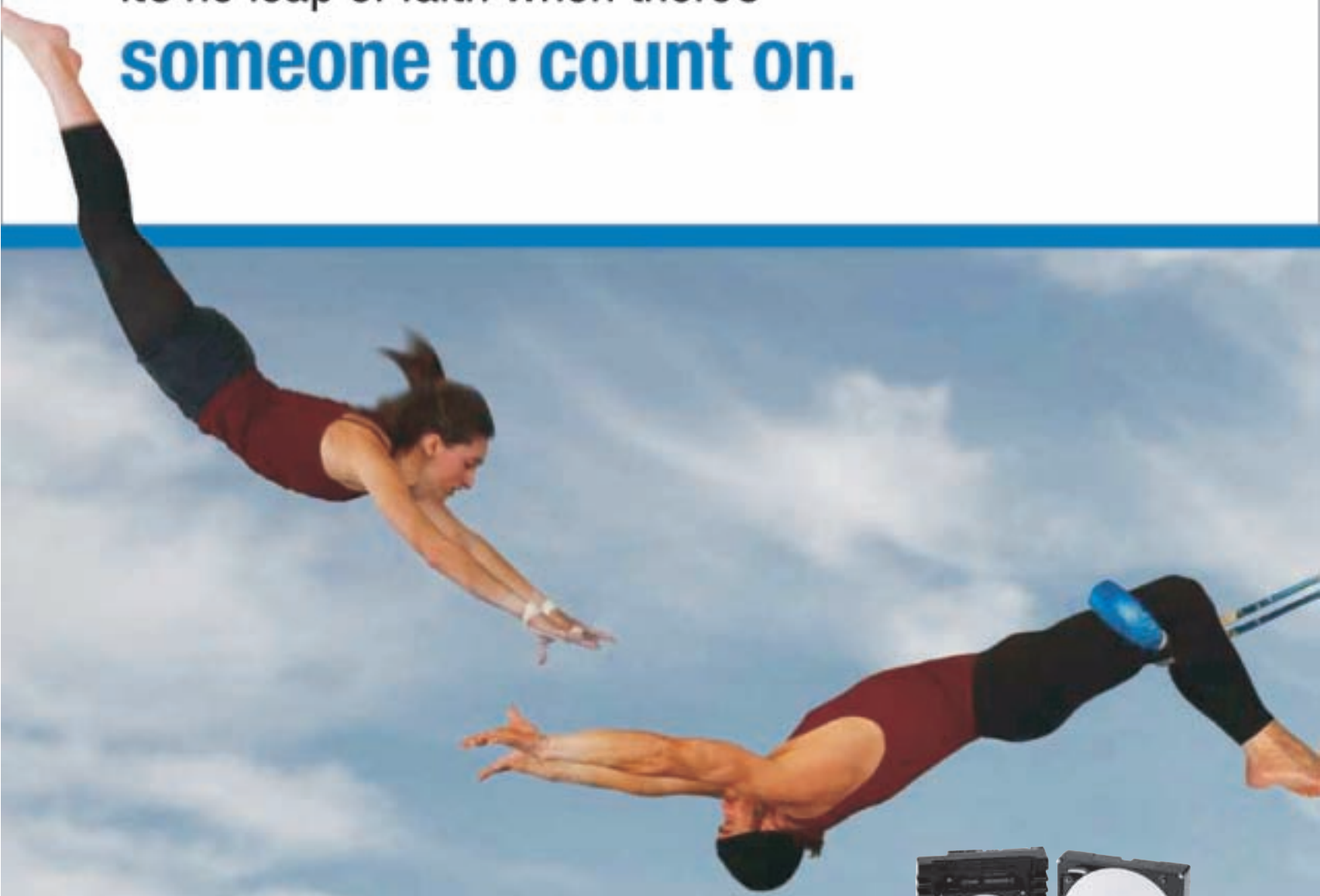
Apple iOS4 still does not allow Bluetooth transfer to devices other than Apple products – a bit archaic.

On the whole this update has been great. But we feel some features like multi-tasking, geo tagging photographs introduced in iOS4 have come in a bit late and were already present on many other devices. However, features like iBook, unified email, make up for wait. 

Features	Apple iOS4	Android 2.2 aka FroYo
Multi-Tasking	Limited	Full
Number of apps	over 230,000	reaching 100,000
Flash Support	None	Yes. FroYo supports Flash 10.1 beta
Hot-Spot capability	None	Yes. WiFi can be shared by upto 8 users
Video Chat	Natively support on iPhone4	None
Unified Email	Yes	None. But threading is available in Gmail
UI customization	Only wallpapers	Everything from multiple wallpapers, to skins, themes and widgets

iOS4 vs. FroYo : Feature for feature comparison

It's no leap of faith when there's
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28 **Window 8**
Rumours revealed and what we'd like to see in the new version

32 **iPad killers**
A look at the ten most promising iPad competitors



Terrafugia

Wish you could travel the Jetsons way? Well the dream of owning a car that flies can soon be a reality by this year end. A group of MIT alumni have designed and demonstrated a wing design that can fold inside, making the whole flying car concept more practical for normal use. The design was tested over 500 times on the Terrafugia and has been functioning fine. Let's hope this wonder car takes off soon! Get your's for just \$194,000.



World's smallest Phone

With a size smaller than your average cell-phone battery or a credit card, the Modu 1 will surely attract loads of eyeballs from everywhere, as it's so damn small in size. Recently launched in the UK, the name Modu comes from the customisable modular jackets the phone can fit into. Based in Israel, the Modu will soon have its next installment available - the Modu 2 which will have a touchbased interface.

Intel's new 'remote' technology

Researchers at Intel have churned out a proposal for a remote control which shows tailor made content on your TV the moment it comes in contact with your hand. Working on the motion sensor platform the remote takes accelerometer readings every 100 nanoseconds and builds a database about your choice and selections on the TV so the next time you handle the remote the TV will start showing you content which you like. However the accuracy level is still between 60-90 percent, not bad for starters.



\$100M Google lawsuit

Google had spent close to \$100M on the lawsuit against them by Viacom

Starcraft II

Blizzard is said to have spent around \$100M on developing the upcoming Starcraft II game

Droolmaal



JBL MS-8

Replace your existing car audio system with the JBL MS-8. As far as the amount of stuff this system packs the list grows quite big, it has a digital signal processor which offers digital sound processing equalization along with DSP time correction, up to eight channels of sound can be optimised on it including a headset. It houses an LCD display, wireless RF remote, preamp controls, and a graphic equalizer with 31 bands. Phew! Now that's entertainment in your car.

Project Modern Times

A fusion of retro classic style and new technology. This digital music player will make a fine addition to your living room. The unit consists of three objects: "Pulse" – a docking station for MP3 players, "Ash" – a paraffin lamp and "Instant" – a series of table clocks. The docking station has two speakers and an amplifier that are hidden by the glossy structure on the Pulse. To enjoy music on this over the top design furniture just dock in your iPod and let's good times roll over.

Tron Legacy

Inspired by the 1983 movie *Tron*, the Tron Legacy is a custom made bike by the Parker Brothers whose earlier creation was the batpod that couldn't see the light of the day as it was not street legal. This however, is a limited edition bike with just five models being rolled out for sale. Priced at \$35000, it features a 1000 CC engine and 22x12-inch dual hubless wheels. Black predominates the bike along with neon accent glowing options available in red, blue yellow and green colors. Watch out for this bike in the upcoming 3D remake of the movie *Tron* in December.



Win 8 Kinnected

From some of the slides, it seems the next generation motion sensor video technology for the Xbox 360 is likely to be ported to Windows 8



Windows Ate 7, Already?

Last month, loads of confidential slides from deep within the lairs of Microsoft's Windows client development team, found their way onto the internet. They gave us a glimpse of what's to come in Windows 8. Here's our analysis and what we'd like to see in the next version of the world's most widely used operating system

Siddharth Parwatay

siddharth.parwatay@thinkdigit.com

If we were superstitious geeks we'd say that Windows 8, is most likely going to be a dud. Why? Well right from the time of Windows 3.1, every alternate Windows offering has severely bombed. So while XP sorta rocked with the infusion of numerous service packs, nothing could save the sinking ship that was Vista. Windows 7 on the other hand was unanimously heralded as Microsoft's big comeback.

But why are we talking about Windows 8 already? Wasn't 7 just recently launched? In fact some of you might've not even switched to the new OS yet. There's an emphatic 'yes' on all counts. And yet Microsoft has been furiously working on its successor already. If the confidential slides that leaked on to an Italian site (windowsette.com) are to be believed, developmental work has hit major milestones. One of the reasons why the authenticity of these slides is suspect is because the exact source cannot be pinpointed. Some bloggers have traced the earliest appearance to win7vista.com who were supposedly responsible for the painstaking removal of watermarks identifying the OEM to whom the slides were allegedly released under NDA.

Rumour has it that the Windows 8 beta might ship as early as July 2011. The slides only mention that it will be available "for the holiday" so it's anyone's guess as to which holiday that might be. Apparently, this data was released released to OEMs,

such as HP or Dell, as part of Microsoft's PC partners programme. On further inspection of these mystery slides, we realised they're much more than just plans for PC partners. They're internal thought notes covering a whole range of things, right from market segmentation, developer ecosystems to concept PCs. So without any more suspense lets find what some of the more shocking revelations from the slides were.

Apple adoration

Perhaps the most telltale sign that Windows pays attention to the Mac world is a slide titled 'How Apple does it a virtuous cycle'. Funnily enough, it describes how Apple creates value for its customers and why people are willing to pay for their products (as opposed to Windows?). Another truism mentioned is that Apple products 'just work'. Now again comes the issue of the authenticity of these slides. Could this be an elaborate Apple campaign? In fact the next two examples we have for you, have a little of Apple written all over them.

Prototype

A rather strange looking prototype which some in the Digit Team described as an iMac experiment gone bad, was found in one of the slides. Yet there is still divided opinion about whether to love or hate it. Some actually liked this render of the prototype machine. Another important

angle that comes out of this revelation is that Microsoft is most likely going to dictate strict terms to OEMs in terms of specifications and form.



Windows 8 machine specifications

Windows Store

Microsoft has already tried to mimic Apple's App store in the form of Windows Marketplace for Windows Phone devices, without phenomenal results. But would an app store for a full fledged operating system be useful? Isn't the vast wilderness of the internet anyway a free-for-all app store for Windows? That being said a repository or linux style package manager may not be such a bad idea. This also ties in well with one of the points we've mentioned in Digit's Top 8 for Windows 8. If a touch shell is actually executed for tablets or even for converting a netbook into a tablet, an app store will come in handy. App store results are slated to appear in Bing and there's also a Wakapoo (<http://wakoopa.com/wakapoo>) style social app discovery mechanism in store (forgive the pun). An interesting point on one of slides states the store as "Revenue Neutral". Wow, no \$\$ for Ms?

Confused

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Facial recognition

Windows 8 reportedly will have an advanced form of facial recognition that will log in users before they even get a chance to sit down after turning on the PC

Push button reset

The idea of this function is to allow the user to reinstall Windows while maintaining all personal files, applications and settings without taking a manual backup - something that we all were



Windows 8 machine specifications

used to doing some time back with Norton Ghost. As reported on the Msft-kitchen blog the slide deck describes a scenario where a user notices his system starts to perform poorly. Why it should perform poorly over time is



Windows 8 machine specifications

something Windows should solve but anyway it offers this reset function as a solution.

Digit's top 8 for Windows 8

From what we've seen so far, Microsoft certainly has some new tricks up it's sleeve. But lets forget the 'brain-melting-super-secret-mindblowing-leaked-slides' for a second and look at what you and I as common end users would like from our OS of choice.

Firefox as the default browser

We're of course kidding, but it's an indicator of how IE is hated by the geekier lot. You can however stop dreaming since a large number of these slides talk of IE9. What's new with IE 9 then you ask? Nothing much really,

except your standard GPU-powered HTML5 graphics capability which Firefox is already offering.

Tighter Web Integration for social networking

Interestingly, the latest Ubuntu version has managed this quite well. Windows on the other hand has integration limited to their Live service. What we're talking about is simple - you log into the user account for the OS and you're automatically logged into all your social networks and IMs right from one panel as part of the OS not as a third party app. Imagine what you could do with photos and other stuff on your system and simple contextual menus. Your right-click send to option could allow you to post stuff where ever you want anywhere.

Touch shell option for transforming it to a tablet OS

Even when reviewing HP's TouchSmart line of PCs last year, we came to a forlorn conclusion - Desktop OSes cannot be made to work as touch screen OSes simply by adding touch functionality and a touch screen. Finger input needs a different interface design - big buttons, a minimalist look, etc are needed. A touch shell or different UI operating over the normal desktop OS is one possible solution. With netbooks with detachable screens being spotted lately, the possibilities are limitless in terms of using



Win 8 plans to focus on 3 form factors

tablets as mobile computing as well as desktop devices. A touch shell could make a device multi-form. A slide describing three separate form factors (Slate, Laptop, and All-in-One) makes us believe Microsoft might just be thinking in that direction.

More Windows 7 less Vista

We're talking about further tweaks to the UAC (User Account Control) and

other stuff that Windows 7 managed quite well. The Superbar for instance with its applications pinning was a great step up and a move towards merging functionality that the Mac Dock provides.

Starter edition of office bundled

Lets face it - If there's one thing Microsoft is good at, it's their Office suite. When customers pay for an operating system why is it unreasonable to expect it to help you get by in the most common use cases? Simple work processing and spreadsheet creation is a much needed feature any modern day OS should allow.


Cloud

One of the other interesting possibilities revealed in the slides was user accounts connected to the cloud which would allow your preferences to be accessed from anywhere. A shift from machine centric to user centric computing. Perhaps mounting Microsoft's own cloud storage would be a good idea considering bandwidth improvements in the future.

Faster start up - hallelujah !

Yea sure some of you might be using hibernate, in which case your PC wakes up quicker. But the rest of us mortals go through the excruciating wait time associated with a windows boot. Yes even with Windows 7. Three slides dedicated to address this issue is an encouraging sign. "Windows 8 PCs turn on fast, nearly instantly in some cases, and are ready to work without any long or unexpected delays. When customers want to check email, sports scores, or play media they love to reach for their PCs because they can get what they want quickly." No kidding Windows.

More eyecandy

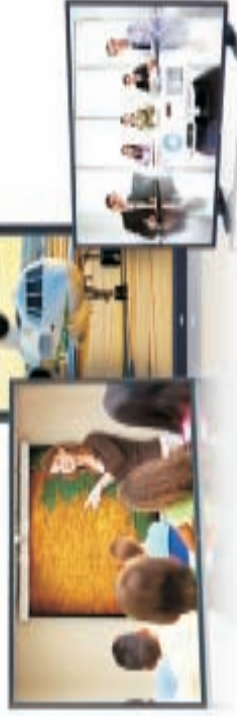
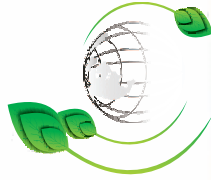
Some of the rumours suggest that Windows 8 will natively support 3D. That means apart from stereoscopic movies and pictures maybe your desktop itself will be three dimensional. The techradar blog talks of as-yet-undetermined 3D video codecs. A slide showing the regular Media Center sporting a 3D movie collection is another indicator. 

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Axiotron Modbook

Never heard of it? It's a custom works company that converts a Mac Book laptop into a pen-based Mac tablet.



Microsoft Courier

Not a direct competitor to the iPad, this foldable tablet offers some unique use case scenarios. But it's rumoured to be cancelled.

iPad Killers?

The iPad seems to be the undisputed ruler of the tablet kingdom. We take a look at ten of the most promising contenders for this coveted throne

Siddharth Parwatay

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A number of eminent sources have proclaimed 2010 to be the year of the tablet. When we spoke to Paul Lee, Director, Deloitte International research, he was very optimistic about NetTabs being 'just right' for tens of millions of consumers in 2010. They're bigger than a smartphone and much more portable than netbooks. Yet when we look at the current scenario, the Apple iPad overshadows every other tablet offering in the market, selling more than 3,00,000 units just on debut.

Perhaps there is a need to answer some of the more fundamental questions - what makes a good tablet and what kind of platforms exist in the tablet space? A tablet is a touch screen device, usually in the vicinity of 7 to 11 inches in size, meant for consuming internet and multimedia content. The large screen size offers a unique proposition of viewing video, ebooks and the possibility of handheld gaming. Currently, there seem to be three emerging schools of thought when it comes to tablet environments. One is the Apple way of doing things - excellent hardware and 'there's an app for everything' interface design. The other is the Android + Tegra 2 combination. These devices work on the Android operating system which is also designed for touch, with the added advantage of Flash support when it comes to online browsing. The Tegra 2 chip from NVIDIA is also powerful enough to run HD video without any hiccups and runs games

beautifully. The last format of tablet computing is Windows based. Manufacturers try to cram a whole computer into a tablet form factor to give users a more complete PC experience, enabling USB ports, Flash support and access to the vast already existing software in the wild. These devices usually run on the Intel x86 Atom platform with Windows 7. The flagship product following this format was the HP Slate, which many felt was a strong contender to be the one true iPad killer. Unfortunately HP conceded defeat even before entering the fray with the premature discontinuation of the Slate project. The trouble was that Windows 7 inherently is not designed for touch input and the underlying hardware reportedly rendered the Slate a slow and handicapped version of a PC. Does that mean the iPad is the undisputed ruler of the Tablet space? Certainly not. There are a lot of contenders entering the fray with unique offerings - from our very own Indian Notion Inc with Adam to established biggies like Dell with the Mini 5 Streak. Here we look at the top 10 devices - either already available or soon to be released - that are likely to compete with the iPad.

Notion Ink Adam

The most promising contender so far and one that is close to our hearts owing to its Indian origin. The Adam is leaps and bounds ahead of others when it comes to



Notion Ink Adam



Archos 9

Archos 9 PTablet

Archos traditionally has been one of the companies to come out with compelling PMPs that gave a sound alternative to the iPod back in the day. The Archos 9 seems to be such an offering from the company to try and take on the iPad. It runs on Windows 7 and offers all the advantages, and disadvantages that come with it. There seems to be no attempt to make the OS touch friendly. It runs on a 1.2GHz Atom processor and features a 8.9-inch LED backlight resistive screen, Wi-Fi and an ethernet port - an oddity on a tablet. The 60 GB version is available for £459.77.

Eee Pad



ASUS Eee Pad

When the company that essentially created the market for netbooks announces that it's going to launch a killer product soon, we sit up and take notice. Accordingly at Computex 2010 it unveiled the Eee Pad. It comes in two variants the 12 inch EP 121 and the 10 inch EP 101. The larger screen variant comes with Windows 7 and is powered by a CULV Intel Core 2 Duo processor promising 10 hours of battery life. It also has an innovative hybrid keyboard/docking station design. The smaller variant comes with Windows Embedded Compact 7. The estimated price is to be \$399 but the bad news is that the Eee Pads will go on sale only next year.



Our iPad review

A must read two part review by Digit showcasing the iPad at its best and worst.
<http://thinkdigit.com/d/ipadreview/>

Digit Hands on Video

Watch our hands on video with two Tegra based tablets - Compal and EAFT Magic Tile.
<http://thinkdigit.com/d/tegra2vid/>



Aigo N700

Aigo N700

Basically a rebranded Compal NAZ, the N700 comes from a Chinese manufacturer best known for its mobile internet devices, USB flash drives, and digital cameras. Running on a 1GHz ARM Cortex A9 and Tegra 2 graphics, the 7 inch multi touch tablet boasts 512MB of DDR2 memory and 4/16/32GB of onboard storage. It runs on Android 2.1 and supports full HD playback. Pricing is not announced yet, but since its a Chinese company that's one are where we can be assured of solid undercutting.

Fusion Garage JooJoo

This one is a strange piece of work. The controversy ridden CrunchPad was rechristened and released as the JooJoo and is one of the few tablets that is in production as of now. The tablet is really huge with a 12.1 inch capacitive touch screen. It runs on a Atom 1.6 Ghz CPU with NVIDIA Ion graphics support and a custom version of Ubuntu. The OS works on a format similar to Jolicloud, wherein all the apps are web based; in effect rendering the tablet pretty much useless without a net connection. Shipping for \$499 many consider it over priced, considering the limited features it offers. Yet there might be a niche audience of takers.



joojoo

Dell Streak

They say good things come in small packages. Well if priced right, this little bundle of gadgety goodness will give serious trouble for the biggies. A little smaller than some of the other tablets this one is 5 inches and runs on a Snapdragon 1Ghz + Android combination. The UI has been customised by Dell. On the hardware



Dell Streak

front it features a 5-inch capacitive multi-touch WVGA (800x480) display, a 5MP camera at the back with flash, besides a front facing VGA camera for video chat. It's got 3G, Wi-fi and Bluetooth so accessories such as headsets, external keyboards may be a possibility. It has 2 GB of internal storage for apps (not user accessible) and expandable SD slot upto 32GB. The device is likely to be launched by the end of the month locked to AT&T in the US.

Lenovo IdeaPad U1

This is one imaginative device with a split personality disorder. A two-in-one device in the truest sense of the phrase, it functions as a notebook normally and becomes a tablet as soon as you pop out the screen. When docked to the laptop, it runs on Windows 7 with 1.3 GHz Core 2 Duo chip powering the machine. In tablet mode it has the 1GHz Qualcomm Snapdragon CPU and a 16GB solid-state drive to keep things going. As for the interface it has a widget based customised linux OS. One of the best features is that once you pop out the screen to make it a tablet you can still continue some of the tasks that were running such as as open Web pages. Pricing and how good users find the resistive touch screen will determine the fate of this innovative tablet. The product is listed in Lenovo's new products catalogue website but no details on price or launch date.

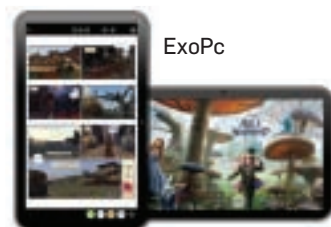


Lenovo
IdeaPad U1

ExoPC Slate

The ExoPC Slate is quickly becoming one of those esoteric devices that only a select few know about. It's a Windows 7 based tablet device but with a custom UI Layer running over the underlying OS. At 11.6 inches its one of the bigger tablets out there. The device runs on

a Atom N450 and has 2 GB of DDR2 RAM. One of the innovations include what the makers call a Stroboscopic keyboard - it gives an efficient visual feedback to reduce typing errors, and the keyboard layouts allows quick input with ten fingers or thumbs only, they say. To be priced at \$599, it was slated (no pun intended) for launch in March but the company wants to improve the product further.



ExoPc

ICD Ultra

The Ultra from Innovative Converged Device is a 7 inch tablet that focuses on affordability. It looks a lot like the indigenous EAFT Magic Tile which we got our hands on at an Nvidia event some time back. It is a perfect example of your typical Tegra 2 and Android based tablets. It's got Wi-Fi, 256MB of RAM and 512MB of ROM, 4GB of internal flash memory. Pretty ordinary except the estimated price tag of \$250.



MSI Wind-Pad

Until its recent christening this offering from MSI was known only by its working title - MSI Tegra 2 Tablet. Going by reports the USP of this device - apart from being ultra cheap - is that it is going to be ultra light. Considering that weight has been one of the gripes people have had with the iPad over extended use, MSI might just have caught a chink in its brushed aluminium armour. Spotted at Computex the all plastic Wind Pad is to have a 10-inch capacitive touch screen, running on a 1.66GHz Atom processor, with 2GB RAM and a 32GB SSD along with an HDMI-out. It runs on Windows 7 but there is a custom UI layer. 



How can technology help solve 7 basic problems that are holding India back?

Team Digit
editor@thinkdigit.com

We've come a long way as a country in the 63 years since we gained independence. We've become

one of the world's most influential economies, we've launched our own satellites, sent probes to the moon, become nuclear capable, and done it against all odds, despite enormous problems of over-population, corruption, hunger and illiteracy.

Technology is one specific area where we've grown like crazy, and it plays a rather large part towards our GDP. Based on numbers released by a Department of Information Technology (DIT) report, IT in India has gone from just over \$10 billion in 2001-2002 to almost \$60 billion in 2008-2009. A rough estimate puts that at just a little over 5 per cent of our GDP. A NASSCOM report suggests that India will earn \$63 billion in 2010 from IT software and services. But enough with the numbers...

What doesn't change is the fact that these huge amounts of money are being earned by a relatively small number of

people, and thus do not really benefit the masses of our country. What also doesn't change is the sad fact that there's no Indian-made iPhone, or any Indian company that can hold a candle to Microsoft, Google, Apple, and the likes, or any real made-in-India IT success story. Why?

Indian farmers still commit suicide on a frighteningly regular basis. Why?

Most of us curse the pothole-laden roads we travel on, and we've been doing

so for years, but some things never change. Why?

Solutions?

We're all looking for answers, and we all have friends who will sit around and wax eloquent about how this or that is to blame, whilst others will blame governments, the population, corruption – or basically as many reasons as problems. But where are the solutions?

Whatever the problems, we at Digit feel that the only answers lie in technology. We're way beyond the point where we can hope for things to "work themselves out", and the only way we're ever going to see a visible change is if we start building the technology innovations we need. And it has to be "us" who builds them. By us, we mean Indians, living in India, working on Indian problems.

The reason we're stressing on the Indian-ness of the solution providers, is that we don't think too many foreign companies care about our problems. While the same companies will most certainly try and sell you their latest gadgets, they're certainly not bothered by our farmers committing suicide. Just as we aren't really bothered by the problems in other countries, unless they start affecting our incomes, or interfering with our lives.

What needs fixing

Team Digit sat down and thought long and hard about what areas of our lives most need technology innovations, and where technology can be most effective. The following pages of this article will list each of the seven problem areas and our thoughts on how technology can fix them.

Tech Kranti

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a part of
**TECH
KRANTI**

What we want from you is to put on that thinking cap, and come up with solutions that build on what we've suggested, or even something we haven't touched upon at all, and suggest ways in which technology can do away with those problems. We're calling this little project of ours "Tech Kranti", because we believe that India has enough innovative

thinkers and implementors to get the job done. All people really need is a stiff kick in the pants, and a carrot to chase to get movements like this going. In this case, the reality of your daily problems ought to be a stiff enough pant-kicker, and understanding that the first people to implement these ideas are likely to not only help their country, but also get filthy rich in the process, ought to be enough of a carrot to make enough gaajar-ka-halwa to feed our poor.

Go to www.thinkdigit.com/techkranti
Your country needs you to.

1 A light bulb moment

Those of you living in metros probably haven't experienced India's dearth of electric power, and those of you from smaller towns are nodding your heads up and down vigorously in agreement – so hard, in fact, that chiropractors will laugh all the way to the bank this month.

For decades our biggest problem has been power, and the fact that India just does not generate enough to supply to its billion-plus population. Any technology you want to use needs power to run it.

Solution: **CAPP**

A cheap power source that can be used off the grid, or even to supply back to the grid... Sounds like sci-fi? All technology is sci-fi a decade or century before it's invented. We're going to call our tech CAPP (cheap and portable power).

How it could work

Now if there's one area where there's an embarrassment of riches when it comes to theory, that's power. From anti-matter generators to cold fusion and even everyday solutions like solar or hydroelectric energy, there are enough ways mankind knows how to create power. Drawbacks include too much power input and too little power output, or basically low efficiency generation techniques. Then there's the whole field of research that aims at reducing power consumption to begin with. Either way, there are tonnes of solutions to the problem, and what it really needs is all of us to start following it. Let's look at a few solutions that we feel are promising.

The ordinary

Conserve: The most obvious way to solve our power problems is to reduce the amount we use, and we've told you how to do exactly that in previous articles.

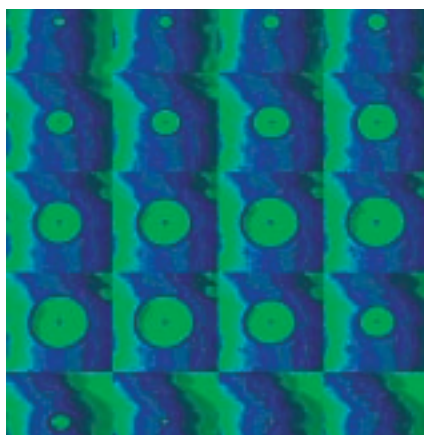
Sun, wind, water: Living in India has its advantages. The extreme summers can be put to good use, providing we find even cheaper ways of manufacturing photovoltaic cells (solar cells). A little less reliable than solar energy, wind power is still a viable source. Some innovative ideas suggest that we could have gliders that

ride the winds and collect energy as they do so, and then land to deliver it at base stations. The same applies to hydroelectric energy, which is again seasonal, but very usable in India's monsoons, which is also when solar power is least reliable.

The extraordinary

Sonoluminescence: A strange word indeed, but with perhaps the most promising yet. If only we can figure out how to get it to work. Basically, sonoluminescence is using sound (sono) to heat up a bubble or air in a liquid and produce light (luminescence). It might not sound like much, but the methods being used could theoretically solve the cold fusion problem. Going into detail about this phenomenon is out of the scope of this article, but all of you physics majors out there might want to look into it. In a nutshell, if you pass high-frequency sound waves (between 20 and 40 KHz) through a liquid that has an air bubble, the sound waves cause the bubble to contract suddenly, and briefly produce temperatures hotter than the surface of the sun at the centre of the bubble. That's, hot enough to start a "fusion" reaction, and is contained in a relatively "cold" liquid surrounding. If you're in the field, do the research, and remember us when you bag that Nobel prize.

Piezoelectricity: The one thing we do not have a shortage of as a country is people. Now consider our large cities, where millions reside, sometimes in spaces where perhaps only a few thousand should. Japan



A sequence of false colour images of growth and collapse of a single bubble in sulphuric acid irradiated with ultrasound



Prof. Yuji Ohya from Kyushu University, Japan, suggests we use floating windmills

is no different, but instead of sitting around complaining about the crowds, one Japanese scientist, Kohei Hayamizu, decided to put all those crowds to good use, and started using piezoelectric crystals to harness all our wasted energy. To illustrate, think of one of Mumbai's busy stations for instance. With literally lakhs of people walking up and down stairs and platforms every day, imagine if we could get a little energy from each one of them? Kohei Hayamizu's idea is simple – what if stairs, pavements, roads and anything else that objects or people move over, could generate electricity? You climb a staircase, and the stairs move ever so slightly, absorbing some of your energy. Of course it would mean that all of us would find such stairs just ever so slightly tougher to climb, thanks to the law of conservation of energy, but chances are we'd never notice it. Of course the innovation doesn't stop here. You could use piezoelectric cells to line your shirts, shoes, mobile phone keypad, and absolutely anything that moves. Cell phone service providers would kill for this today – imagine if everyone with low phone batteries started SMSing friends like crazy to build up some charge? On both, the battery and the phone bill, that is...

What the above ideas symbolize is a way to make electricity locally, for local needs. For India, and the world, any one of these could be our winning formula. Of course there are a hundred other ideas that could do the same here, such as smarter grids that are more efficient, and thus lose less energy, or more efficient circuits, and even super-conductors. The possibilities are endless, and all we need is one of them to work.

Must-clicks

<http://bit.ly/bMa7p9> | <http://bit.ly/dxYyMH>
<http://bit.ly/c7ABZq> | <http://bit.ly/cxeUPy>

Janta Search

JantaKhoj, an online people search engine has announced the listing of 500 million people on its database, publicly accessible

e-Gujarat

Gujarat is leading the way with a new single e-governance portal that will allow citizens access to over 50 services such as revenue records and public grievance

2 Across distances

This one's a bit obvious. But what we mean by connectivity is not just hooking people's PCs up to a network, but also figuring out how we can do so seamlessly, and not just limited to PCs, but whatever device we're using. It's also about managing our data better, and making public data easily available to the public. When you think connectivity in the future, we're hoping you will be thinking about not just getting on a network, but also being able to seamlessly use it.

All the things we've been making a noise about in the past decade in technology require people to be connected. eGovernance, education, information flow, planning, disaster management, and even your local traffic report need to connect you to the data that happens to be important to you at just that moment. Figuring out a solution to this would not just solve a lot of our problems, but also play a rather large role in enabling some of the innovations we're going to be talking about a little later in this article. This just makes it all the more critical for us to try and achieve.

Solution: Cumulo-Indus

A wireless country-wide data network that's cheap (or free) to access, is truly platform independent, is cloud based.

How it could work

If there's one thing that we're never happy with, it's bandwidth. There's always too little of it, and it's always too expensive. We've heard experts tell us that the reason for this is expensive international bandwidth, and how local bandwidth is cheaper. Thankfully, to create a wide area network (WAN) that spans the country, we actually need no international bandwidth whatsoever. Since costs are taken care of, or at least controllable, the next step is to figure out how we could network the country. The simple answer seems to be wireless technologies, since going forth, they seem more reliable than fiber optics or copper. However, we'd also need to solve for today's problems of high costs and lower bandwidths over large

distances when using wireless networks. Plus the weather can play spoilsport again, affecting signal quality, as do all those buildings around you.

Assuming we can come up with a wireless standard of our own, or just adopt one for usage, the next, and perhaps biggest challenge is to connect everything. In an article in Digit a few years ago we looked at what the future (2020) would look like. We assumed that every device we owned would be smart, networked, and programmed to communicate the right information at the right time.

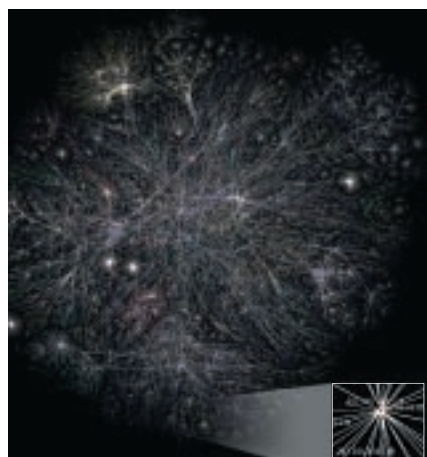
The ordinary

Let's relook at a popular example here. Your fridge notices that it's running low on milk. Now it can just tweet that to the world, or use a phone service to send you an SMS, that you may or may not read. However, imagine the possibilities if the fridge was able to tell that, since you're in a meeting, the reminder would be wasted on you right now, but another family member who happens to be passing a store, at that instant, would be a better target for this information. All this may sound like sci-fi, but it's very programmable even today, it's just the networks that don't exist between a regular fridge and you.

Of course this means you would never run out of milk, but what can it do for India?

The extraordinary

Now imagine that same connectivity applied to everything and everyone.



The net today is complicated enough, imagine the future?

For instance, the truck driver bringing in groceries for your neighbourhood would know better than to turn on to a traffic jammed road. The same would apply if a truck broke down in the middle of a highway, in the dead of night, and was able to call the nearest empty truck for help.

We could also connect all colleges and schools to a grid, enabling content sharing, admission statuses and result announcements. Police stations would get information in real time of arrests or crimes. In case of a flood, the government would be able to tell everyone to get to higher ground...

However, it's not just a question of being connected. Connectivity also opens up the possibilities of database sharing, and access to services. Imagine a farmer in a remote village standing in front of a kiosk in his village, paying for the seeds he's ordered from a distant city, booking the required amount of space on a goods train and also the truck that will carry it all from the nearest station to his farm. Or the reverse. Imagine farmers sending out an alert that they happen to have X amount of grain just lying about, while a vendor in another village agreeing on a price and paying for the goods.

Perhaps we'd also be able to use all our "3G" cell phones, and actually start making video calls. We could also cut down on travel with video calling if we had a reliable network that was cheap to use, thus saving costs and energy.

Of course, if our dream wireless innovation were truly inter-operable across platforms (think Android, Windows, iOS, Linux and more), this would enable devices to do more than just "talk" to each other. The most eagerly awaited innovation would be when devices start to share resources. Imagine your netbook using the coffee maker's and washing machine's IC and memory to speed up displays when you're watching an HD video...

Must-clicks

<http://bit.ly/b1fuMd> | <http://bit.ly/cweeNs>
<http://bit.ly/cqx4uO>



UID gets funding

A high powered cabinet committee recently sanctioned Rs. 3,023 crores to the Unique Identification Authority for the implementation of the second phase of the project



Remote locate

Volvo India recently launched the CareTrack navigation system which will allow remote monitoring of construction equipment

Cover feature

3 Do you understand the words that are coming out of my mouth?

Like in the movie Rush Hour, we Indians waste a lot of time trying to understand each other. From frustrating experiences when talking to customers or companies, to trying to explain to the cab driver, in a city you're visiting, where you want to go. Although most of us city and town dwellers will have it easier, we can't even fathom the thought of villagers from a northern state trying to communicate with those from a southern or eastern state. Besides, not all of India is comfortable in either English or Hindi, and with so many languages and dialects spoken across India, the only real way to get India as a whole to move forward is to make people understand each other.

Solution: Babel-babble

A mobile-based real-time, two-way translator, that converts a spoken language to any other language. So basically, all you'd need to do is hold your mobile (or another mobile translation device) near someone who's speaking a language you cannot understand, and it translates and speaks to you telling you what he or she said. Then when you want to reply, you speak into the device, and it translates what you said into the person's language. Let's call it Babel-babble. Of course, the Bb (Babel-babble, not RIM's BB) would also be a cool phone with gesture controls and a holographic display thrown in for good measure, and not just a translation device – just in case you needed a little extra incentive to carry one around!

How it could work

Although we'd like nothing better than the Babel fish from The Hitchhiker's Guide to the Galaxy, the Babel-babble would be the next best thing. With a headphone jack as well as a speaker, so that you could listen to translations privately, and also allow the person in front of you to hear what you're trying to tell them, the Bb will be our new best friend.

Challenges here are rather huge. For example, the kind of translation we're

expecting, in real-time, would mean our little mobile device would need a dual Core i7 setup, at least. Not exactly the computing power you expect from mobiles. Also, the size of database that would be needed, to translate from any language to another would be humongous, and not exactly something we could fit on a mobile device. But would we need to?

The ordinary

Text: Google has a very decent translation engine for text, and though grammar is not always correct, that's immaterial as the point gets across. Google's service is a lot better than you could do trying to stutter your way through German or Japanese. But what about the difference between Bengali and Assamese, or Tamil and Malayalam? That's where we come in. Although we're sure Google loves India, and is very involved in this, nothing stops us from doing the same.

Phraselator: Developed by Voxtec (voxtec.com) for the US army, the Phraselator calls itself the "ultimate mobile translation system". What it does is basically read out pre-defined phrases in whatever output language you select. It's also customisable, so you can add your own phrases to it, provided you know someone to tell you the equivalent translation in the other languages. Why do we get the funny feeling that

someone somewhere has reprogrammed a buddy's Phraselator to only spew out abuses? Adding insult to injury in war-torn countries?

The extraordinary

Google again: Their translations lab is said to be working on a speech-to-speech translation for the Android platform. In an interview with The Times (UK) earlier this year, Google's head of all things translation, Franz Och said he was confident of speech-to-speech technology working reasonably well within just a few years. He said, "Clearly, for it to work smoothly, you need a combination of high-accuracy machine translation and high-accuracy voice recognition, and that's what we're working on."

The biggest challenge with speech-to-speech, as expected, is natural language parsing. This has been the bane of speech recognition technology for ages now.

With thousands of languages, and hundreds of distinct accents for most languages, it's no surprise that our always precise PCs have trouble understanding those imperfect, stupid beings called humans. Still, we've seen software solutions that work better after a time, learning from their mistakes, after you "train" them.

This could work well if two people with early prototype versions of the Babel-babble were to talk to each other. Since the machines would

understand each other, and each machine would understand its "master", you could theorize that the conversations would occur smoothly.

As for the problems we mentioned earlier, about processing power and storage space – well that's what the cloud would provide for us. Our very own Cumulo-Indus could also provide a basis for the required connectivity and processing.

Must-clicks

<http://bit.ly/bfni4> | <http://bit.ly/bjCG7j> | <http://bit.ly/GwIzl> | <http://bit.ly/d12UJO> | <http://bit.ly/4CaDxs>



The Babel fish knows all



Invest India

India ranked ninth most attractive investment destination by a recent UN report. Meanwhile govt. approved FDI proposals worth Rs. 2,245.32 crore

4 Are you a teacher's pet?

While a lot of us have started complaining about our declining education system, there are still tens of millions who would kill to go to your run-of-the-mill, everyday "sub-standard" school. That's not to say that the education system couldn't use a shot in the arm, and technology has all the right nutrients for a magical growth serum. Of course, when we talk about education and India, we're not talking about just improving the quality of education, but also improving the quantity of students who have access to it. We'd also love to see a law that makes it mandatory for kids to (at least) be educated till class 10. Get them out of those carpet producing factories and kitchens and into classrooms – physical, virtual, whatever. As for parents who don't send their kids to free schools, deny them loans of all kinds, the right to vote, and put a few repeat offenders in jail, if need be. As you can tell this is something we feel strongly about, and accept no excuses for.

Solution: R.O.S.E.S.

What we need is an open source education system. In our case, the Required Open Source Education System.

Short, simple, but oh so sweet. You just can't go wrong with such a system. Much like Wikipedia and social networking, it's just the need of the hour for some transparency and openness in schools.

How it could work

Assuming that the Cumulo-Indus is built, a simple starting point could be



The e-lab at the Institute of Lifelong Learning, Delhi University

to make it mandatory for all existing schools to teach as many free students as those that pay fees. With voice and video not really technology that's out of reach, we could make it mandatory for all schools to run virtual classroom programs. However, while the Cumulo-Indus could solve the problem of reaching children across India and teaching them, this is a solution for the quantity of education provided, not the quality.

The ordinary

Here's where the open source solution could kick in. With the Cumulo-Indus already providing a way to connect and store data collectively, what we'd need next is a central hub for knowledge – perhaps for each state, in case we can't invent the Babel-babble in time, or centralised if we do.

Think about the amount of knowledge sharing that can be achieved. With videos of lectures, and sharing of notes, there'd be no excuse of bad teachers anymore, because if you didn't get what your teacher was saying, or didn't like his or her teaching style, you could choose to take that course virtually from a teacher across the country whose style suited your own learning style. You could also just opt for virtual extra classes in subjects you find yourself struggling with.

The extraordinary

Although the effort here is to gather all knowledge that we can and make it accessible to students of schools, colleges and researchers alike, the idea is not to make the same mistakes again. A lot of experts have been saying that what we need is a way to do away with grading systems, and neatly categorising kids from young

ages according to grades. We need to encourage diversity in thinking and learning, so the current system of grading will have to go. You can't categorise kids based on how good or bad they are at math, science, commerce and the likes. Instead we will need to encourage them to pursue streams that interest them, and not discourage interests because they don't fall into our neatly organised job classifications.

Although we're focussed on India, it's not like we'd be averse to schools and colleges around the world logging in to Cumulo-Indus and sharing our knowledge, whilst imparting some of their own. Perhaps the Cumulo-Indus could expand its boundaries, and take over the world, without the mad scientist laugh track being played in the background.

What incentives would the businessmen behind schools and colleges have left to run them? Well, they wouldn't stop making money, they'd just help India



Colleges in Second-life are just so much cooler looking, aren't they?

more than usual. Plus, there could be incentive schemes given to those schools and colleges that have the most used lectures. Schemes such as compute time on the Cumulo-Indus for the school/college labs that are researching and trying to build the most needed innovations – give the Babel-babble more CPU time please!

Must-clicks

<http://bit.ly/I0UvI> | <http://bit.ly/14LXs> | <http://bit.ly/dCh0c6>



275 Million by 2015

That's the number of high speed internet subscribers India is likely to have by 2015 predicted a report by Frost & Sullivan

5 Non-greasy palms, sirjee!

If there's one thing we all know India needs to reduce, it's the level of corruption. No one's really proved the whole 1.5 trillion USD lying in Swiss accounts theory, but it's not such a hard to believe number, given all the corruption you see on a daily basis.

Solution: Me-Mo

We could take a more serious look at the mobile-payment solutions already on offer, and make it easier for them to function. With enough government support, we could create a system where we all are easily identified as ourselves, and can securely pay using a variety of techniques, the most common of which would be a mobile phone. So that's a technology that knows who you are, wherever you are. Or more simply, knows Me when I'm Mobile (Me-Mo).

The idea here would be to do away paper money as much as possible, and especially notes above the Rs. 100 denomination. What would be needed is Cumulo-Indus, a mandatory registration of a biometric identity at census time and mandatory zero-balance bank accounts for everyone.

How it could work

The technology around today requires you to remember six or eight digit passwords, a mobile net connection, a smart phone and the ability to read English, no guesses for why the technology's not really catching on.

Apart from being constantly worried about our phones getting stolen, people in India just aren't used to transacting with anything but paper money. Although it might take years for a biometric census to complete, for once we'd like to see a government take the lead in planning for future events that could occur beyond its own term of power. This basically means that we should start now, and make it a mandatory affair.

The ordinary

The Unique Identification Authority of India (UIDAI) has started on this path, even using biometric data! They call their project

Aadhaar, and the plan is to get a mix of PINs and biometrics, and log demographic data. If you've been counted, you'll get an Aadhaar number (like a social security number in the US), and have your fingerprint and iris impression stored.

With fingerprint readers becoming a common sight, it's not hard to imagine your fingers and eye impressions replacing your credit cards, if not all cash transactions.

The extraordinary

Replacing most, if not all, cash transactions is where the real attraction to this technology lies. Without large amounts of cash on people, or the ability to access them, the corruption rate ought to fall automatically. The amount of black money and fake currency schemes should also be reduced. However before this happens, we'll need the right infrastructure, a secure way of transacting and Cumulo-Indus access. With basic cameras being built into almost every mobile, face recognition, or iris impressions might not be that hard to authenticate.

Imagine you're at a local store and want to purchase something worth Rs. 412. All you'd have to do was click on "Pay" (in whatever was your preferred language), hold the phone's camera to the shopkeeper's eye, until he was recognised. Then you'd enter the amount – Rs. 412 – and hold the phone to your eye when asked to (again in your chosen language), and once authenticated, the amount would be transferred. Both you and the shopkeeper would get a confirmation SMS, and you'd walk out with your goods.

Why not just SMS payments like in the popular advertisement, as suggested by sirjee? Because it's not secure.

Of course there could more stringent methods for authentication for higher amounts, say, above Rs. 1,000. The RBI guidelines and rules would have to be changed though – currently mobile payments cannot cross Rs. 5,000 for funds transfers and Rs. 10,000 for purchases. Wide-spread adaptation of Me-Mo could force that though...

Must-clicks

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Facebook population

Every fourth visitor to Facebook comes from Asia, says O'Reilly Research

Nanopillars in solar cells

University of California researchers have devised nano pillars that can be used to improve solar cells and displays

6 Cops 'n' robbers

The afore-mentioned biometric unique identification could also help reduce crime, and speed up the time it takes to solve cases. Although getting a DNA profile of 1.2 billion people may not be very feasible, biometrics can surely help reel in the crime rate. Face detection is the



most promising of all the crowd-spotting techniques, and perhaps Aadhaar should also include a photograph of everyone – not too much of an ask in terms of storage, but a huge ask when you're counting and identifying a modest 600 million people (UIDAI's target is half our population).

Solution: Aadhaar

Well, why mess with the name the UIDAI has already come up with? The only difference is that we're increasing the scope of the "foundation", and taking it further than the government's initial plan of Aadhaar being a foundation for the Public Distribution System.

Let's get this straight out in the open. You're either going to hate this idea, or not really care. Very few, if any are



going to love the idea. After all, in the digital age, where we're all paranoid about our "privacy", who wants to be catalogued along with 600 million others? What if they mix-up your biometrics with another person with the same name, who happens to have a criminal record? That's where the demographics come in. Your Aadhaar will also contain your date of birth, place of birth and parent's names – which is standard fare for any form you fill in these days anyway – so if you happen to have a doppelganger with the same name, same date of birth, lives in the same city, and has parents with the same names and yours, tough luck, and we're sorry our system failed you. Hope you like jail food.

Seriously though, it would be easy to fix such an error if it occurred. Wait! Allow us to rephrase that. It would be easy for you to prove that an error has been made, how long it would take to fix is anybody's guess. The cynicism of that last sentence stems from numerous visits to government offices for routine paperwork that involved more running-around than we'd normally do in a gym!

How it could work

Thanks to Aadhaar and Cumulo-Indus, what you do and where you go is automatically logged into a system somewhere. Before you conspiracy theorists jump up and down screaming bloody murder, you need to realise that this is not such a big deal. Not until you commit a crime, that is. For example, if you suddenly decide to go on a mass killing spree, murdering people in a mad frenzy on a path from Delhi to Mumbai, a quick Aadhaar search would be able to narrow down the list of suspects who have travelled from Delhi to Mumbai on the exact same path as you to about, oh, 20,000? We are a populous country after all. But then tracking the victim's whereabouts and matching that to the 20K suspects will probably narrow that right down to just you.

The ordinary

Of course it's not all about catching bad guys. If a terrorist attack were

to occur on a train. A quick search could release a list of names of people on the train at the time. If you were on the train, and injured, a quick call to the concerned authorities would allow them to tell your family exactly which hospital you had been taken to, and perhaps even the extent of your injuries, if that were logged by the concerned authorities at the time.

Even petty crime could be traced a lot quicker by lifting prints, or using CCTV footage and face recognition.

The extraordinary

The biometric aspect would make it a lot easier for complaints to be registered. Kiosks outside police stations or public places could register even simple complaints about losing your Me-Mo/Babel-babble phone, or your wallet. If you were pick-pocketed, you could walk over to a kiosk and report it, quickly



give a rough description of the thief, and a police control centre could swing into action, checking CCTV feeds, first locating you, then the pick-pocket, and then ultimately tracking him down to the place he is at the moment, or when he makes the next transaction.

Must-clicks

<http://bit.ly/dAyLHk> | <http://bit.ly/9LrL65> | <http://bit.ly/crHAXD>

Flexi-transport



Exocar is a concept transportation unit that allows a user to travel in a more flexible manner using the four wheels which adapt to the body of the user



Cyclops in India

A remote surveillance system that offers recording capabilities called Cyclops was recently launched in India by World Phone Internet Services

Cover feature

7 Illogistics

Perhaps the largest scale problem we have, and the one which would require the largest investment yet, logistics is the problem that billions are spent on to save even more money in the long run. In India, the logistical challenges are nothing short of a nightmare. With no guarantee of finding a driveable road where one existed just a month ago, and where nothing seems to run on schedule, how this country manages to get things done on a daily basis is nothing short of a miracle.

Solution: Pipe-o-dreams

A lot of us would have seen the email forward that contains a PPT or video of the train that never stops at a station, supposedly conceptualised by a Taiwanese gentleman named Peng Yu-lun. The origins of the idea are under debate, but that's of little importance to us right this moment. What was obvious from this video is that an innovative idea can really revolutionise technologies we thought we had perfected. For over a century and a half, trains have stopped at stations to allow people to get on and off, and until 2007 no one really thought about all this stopping being unnecessary...

The pipe-o-dreams is an idea that may seem just as ridiculous at first, but feels more and more plausible the more you think about it, and envision the different ways it can be implemented, and the stuff you can achieve with it afterwards.

How it could work

The pipe-o-dreams could be a pipe, a conveyor belt, or a vacuum tube, with diameters ranging from a few inches to a few hundred feet – depending on what needs to be transported. This may sound like a solution for liquids only, such as crude oil and water – which is what most countries use such pipelines for – but we feel we're only limited by imagination here.

The ordinary

Let's assume we have a trans-India, pipe-o-dreams that carries water across India. This could be sea-water that's pumped to a treatment plant in drought affected areas in the interiors. Huge initial costs, sure, but we'd get salt, potable water, and increase

the green cover in areas where this would not normally be possible. We're never going to run short of sea water either, so it's sustainable forever. We'd need CAPP (our cheap and portable power solution) to keep pumping water through the pipeline, and reduce the operational costs involved in maintaining and running a thousand kilometre (or more) pipeline.

The extraordinary

Transporting water to areas that have little is desirable, but by no stretch of imagination will this solve our logistic problems. Now if we were to use this same pipeline to also transport goods that would normally be sent by road, you've got a logistics solution on your hands. As a random example, imagine a shipment of wheat that needs to be sent from Mumbai to Jaipur. The road or rail transport costs would scale up based on the size of the shipment. However, if we were to pack the wheat into specially made rubber balloons that could withstand the water pressure in our Mumbai-Jaipur arm of the pipe-o-dreams, we'd be able to pop them into the pipeline and let the water we're already sending to Jaipur carry the wheat there for us. This would probably be faster than road or rail, and we'd be able to just keep sending as much as we need, since the water supply would be continuous anyway. A few added precautions, and better packaging ideas, and we could send crude oil through the same pipeline.

Heck, when we sat about brainstorming this, there were even ideas that suggested all we need for the pipe-o-dreams to work was a better extraction process. Just create a slurry of food grain, water, oil and whatever else we needed to send, and just pump that along the pipe,

and leave the separation plant at the other end to do the work of extracting the different components of that slurry.

Must-clicks

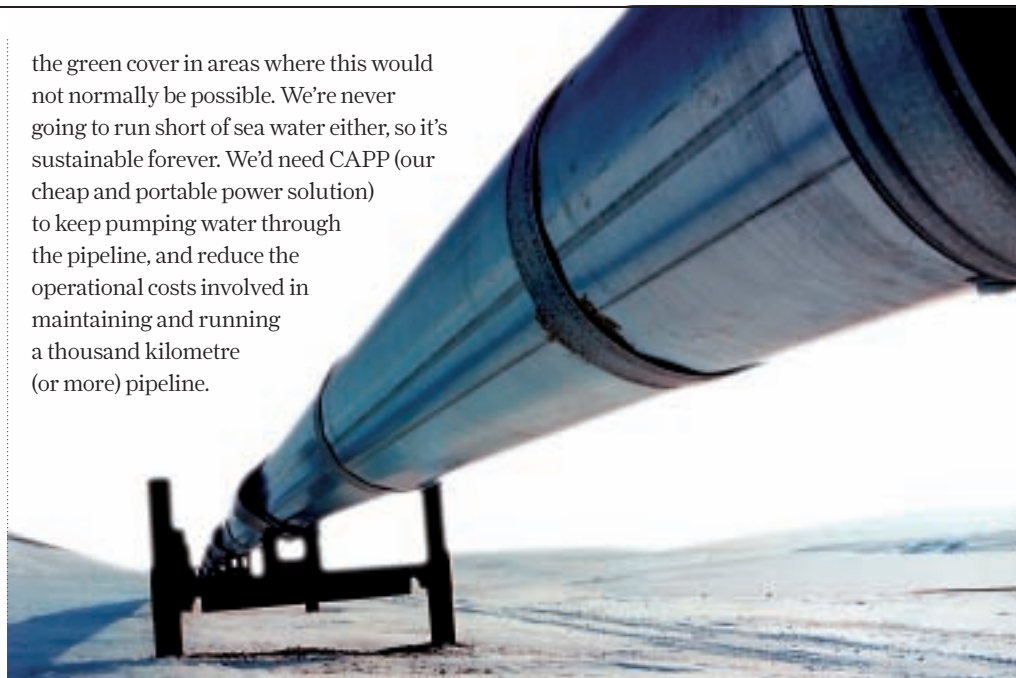
<http://bit.ly/aOsGRO> | <http://bit.ly/yBIKL> | <http://bit.ly/9RAebX>

The new India

In a country where people are starving in some places, while in others a million tons of grain are rotting because of an excess crop that no one wants to buy, it's time people like us started dreaming up and working on some innovations that can change all of this. We've often heard of German efficiency, Japanese work ethics, and American grit. Perhaps it's time to show the world that India is ready to face its problems head on, and use good old Indian ingenuity to start a *Tech Kranti*.

Take one pipe-o-dreams, power it with the CAPP, add a generous helping of Cumulo-Indus, use the Babel-babble to communicate, a Me-Mo to transact, and you have a solution to most of India's problems.

As an interesting experiment of your own, stand in a public place, read that last sentence out aloud, and write in and tell us the reactions you got – if they ever let you out of the asylum, that is.





Coder Barbie

After half a million votes were cast to decide Barbie's newest career, kids now have Computer Engineer Barbie as their newest companion



Veronica Belmont

A self confessed geeky chick, has 16 lakh followers on Twitter

Siddharth Parwatay
siddharth.parwatay@thinkdigit.com

The image of a sweaty Megan Fox reaching under the hood of a Chevy Camaro in Transformers is imprinted in all our geek minds. The reason for this indelible memory is not just the obvious - it's Megan Fox - but it's more to do with the fact that she's doing something that is traditionally believed be a man's domain and at the same time, she's damn good at it. At the risk of sounding like a chauvinist - what is it with women who do things that are unconventional that's so err engaging?

But before your testosterone fuelled mind starts getting any ideas, we must say - down boys! What we're going to be talking about in this story is women who are busy conquering new lands in kingdom of geekdom. The image you're looking for is more of Sandra Bullock in The Net.

Identifying the geek gene

It is generally believed that all things tech are for the boys. We as men, are programmed, it seems, to rip apart gadgets, open up PCs and generally tweak and tinker with everything. It's not just hardware but even software; be it trouble shooting our PCs, fiddling around with Photoshop, dual booting Linux, or spending hours on a tech forum. As it turns out though, all of these things, are not really restricted to men these days and perhaps never were. Think about it - we don't ever hear of female hackers. Is it because there aren't any, or is it because they're just too good to get caught? We've gone on an expedition of sorts



and tried to explore the XX world of geekdom. That's chromosomes you guys!

The female geek is a rather difficult species to identify. Geeky women in reality are nothing like Gretchen Grundler from Recess - soda glasses, braces et al - if that's the first image that came to your mind. They're more like you and I, or just about anybody else. This is also a species that gadget makers are only recently waking up to. A study last year found that out of every ten gadgets bought in the UK, four are

purchased by women. Before your stereotypical mind thinks of mixers, microwaves and toasters, the study meant things like HDTVs, smartphones and gaming consoles. Yes, gaming consoles. Another study noted that in the 25 to 34 age bracket more games are being played by women than men.

So who is our quintessential female geek? We spoke to a lot of women to understand this very question. From those in the online world - tweeps and bloggers to our very own readers - believe it or

not, about 20 percent of those reading this are female. And of course we spoke to a couple of techies. All of our hardcore interrogations yielded a few distinct categories. Take the case of Gursimran Kaur (www.gursimrankaur.com), a quirky Web Designer from Jalandhar. "My morning doesn't begin until I squint my eyes to check my smses, walk over the maze of wires to reach my PC to check my mail", she says. Her work involves the computer and "so most of my better day is spent converting it into a money making machine", she adds. "My only earnest wish is to have my dreams wi-fi enabled so I don't have to waste all those sleeping hours without the internet", she said tongue firmly in cheek. Women have increasingly started living life online. Kanika Sud, one of our readers we spoke to said, "I would love to spend the whole day online if I could". It turns out loads of women in the country are beginning to think the same way. According to comScore data, the total number of women between the age of 15 to 35 logging on to the internet was 52,65,000 in March 2009 and for February 2010 the figure has jumped to 81,01,000 - an increase of 53 % over the past year.

But as it turns out, web obsessed geeks are just the tip of the iceberg. It seems Indian geeky women come in many shapes and err sizes. Some are coders by profession, some are gamer chicks, and some have even leveraged technology to invent some new hardware! More on that later.

Geekism redefined

The fact that Women are taking strides in the IT industry is well known. A survey



I read up on reviews, drink YouTube features and tweet for wisdom whenever I have to invest in a new gadget..

Gursimran Kaur, Freelance Webdesigner and photography enthusiast from Jalandhar



T Bhargavi showing off her Cabtop PC

Virtual shopping

A recent survey by playspan revealed that women spend \$55 for purchasing virtual currency on social games whereas men spend \$30

Geeky wedding

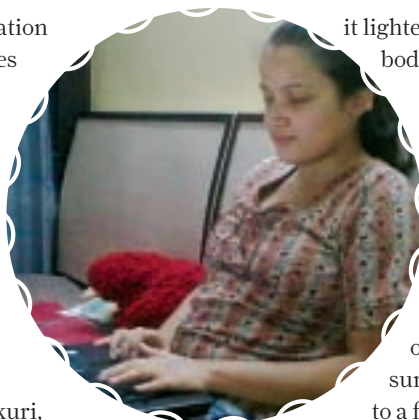
A geeky bride to be gave her equally geeky fiancé a USB flash drive wedding ring

Cover feature

by the National Association of Software and Services Companies (Nasscom) conducted in 2007, predicted that by 2010, women will make up half of the workforce in the IT and ITES sectors, up from a fourth of the total employee base at the time of the report. Sharvari Atmakuri, 22 year old Digit reader and Software Engineer from Bangalore reaffirmed this "Women are very high on technology and tech jobs

lately. In fact there are more women in my team at Wipro. My TL is a woman too." The proverbial glass ceiling is about to be shattered if it hasn't already. Another example is of Noopur Julka, who is a Java Developer at Accenture, who says she likes coding for fun. "Setting up new widgets, tweaking codes on my blog definitely feels great," she says.

One of the most unique women we came across was T Bhargavi a housewife from a remote village of Chittoor district of Andhra Pradesh who retrofitted a computer cabinet to design her very own wirefree and portable all-in-one computer. The idea for the 'Cabtop' as she calls it, was a result of her getting fed up with all the cable clutter that her husband's computer created. "I wanted to pack it all up into one neat little box", she said. So she drew up plans to restructure the layout for the innards of a computer and verified feasibility with her brother, who happened to be a network engineer. She got the initial funding from Department of Science and Industrial Research under the *Technopreneur Promotion Programme* and now she's looking for further infusion to make



"I would love to spend the whole day online if I could"

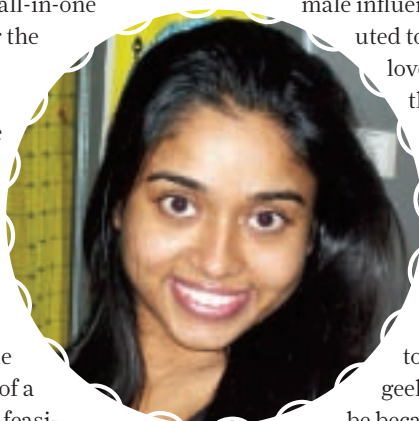
Kanika Sud, Msc IT student from Simla

it lighter with an all plastic body and take it retail.

One of the things we wondered about during the course of research for this story was: are these women geeky because their male sibling's geekiness rubbed off on them? From our surveys we could not come to a firm conclusion. We have someone like Sharvari who learnt to play games and trouble shoot her PC from her brother, while 24-year old

media professional, Joyeeta Chakravorty is a hardcore console gamer but we found no male siblings to whom we could attribute this to. "I've enjoyed playing the Max Payne Series, Conflict Global Storm, FIFA 2010, and God of War on my PS2", she told us. "I've played video games ranging from the rowdy Doom days to the strategic Sims era. No male influence contributed to this sheer

love for entertainment", the ever opinionated Gursimran seconded. Well it could simply be that women are getting comfortable with their geek-iality. But some such as Kanika, were reluctant to accept the moniker of a geek. Could this reluctance be because there is a bias in our society against women who are tech savvy? "Absolutely not," said Gursimran. "I think the society is in awe of women who know their tech". "Come to think of it, there is a certain amount of awe and respect for a tech savvy girl in the house," Kanika also admitted.



"Having women specific designs or gadgets is good, as long as they pass the required quality tests for any device."

Joyeeta Chakravorty, media professional from New Delhi

Pink or no pink?

One of the age old questions about what women want when it comes to gadgets is this - do women care about specifications or is it all like "ooh that's pretty, I want." Product makers have tried to go both ways on this one. On one hand you have Nokia coming out with product lines such as the Supernova series and the likes of Dell and Sony with nail polish lacquer notebook tops. These approaches, some might consider rather patronising, if the products themselves were vacuous or atrociously priced. On the other hand you have Blackberrys that are probably used by just

as many women as men, yet

we haven't come across a

Pink Blackberry as yet.


We asked the fairer sex what they felt.

"I can understand why there is a certain approach manufacturers use to reach out to either genders. It is not about a 'bias' or a 'stereotype'," said Gursimran. "I do realise

women like gadgets that are more portable, easier to use and look sleeker than their cruder counterparts. But if

looks was all it had, give me the bulky brick of a gadget anyway," she adds. This seemed to be seconded by almost all the women we spoke to. Sravani said, "We like aesthetics and even pink gadgets, yes. In fact I own a pink Dell Studio laptop. If there was a choice between really good specs and aesthetics I'd go for the specs. Kanika, who herself owns a Supernova series phone said that specifications are important in certain product categories. "When I went for my point & shoot digicam specs trumped the looks," she justified.

Diamonds or Gadgets?

This is the final clincher to settle any doubts you might have about women being geeky. "I'd sell my diamonds for gadgets, no questions asked" said Gursimran to our quirky question. End of story. 



"I like code"

Noopur Julka, Java Developer at Accenture

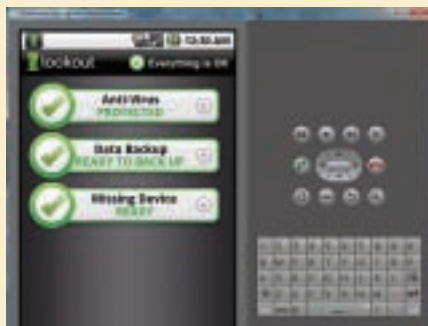
Run Android Apps on Your Windows PC

If you're not currently an Android phone user, you may be wondering what all the hoopla is about. If you are truly intrigued by what the Android OS is all about, you can spend some quality time with it, at your leisure, in the comfort of your own home—and for free! All you need to do is download and install some free software, configure a few settings, and you'll have a “virtual” Android phone running on your computer.

First, a few caveats. First and perhaps most important, is that you won't be able to use your virtual Android phone to actually make phone calls. This project is about getting a feel for the Android OS and its user interface, and the opportunity to explore some Android applications—without having to buy anything. Another limitation is that any app that seeks to utilize a phone's camera or GPS will find that these components don't actually exist in the virtual device. Also, any app that uses location services (which provide relevant information based on your current physical location) won't be able to pinpoint where you are. (It is possible to get a virtual Android device to work with an attached camera or GPS, but that sort of deep-developer-level tweaking is well out of the realm of what we're doing here.) You're also going to find that your virtual Android device runs slow—probably much slower than a real Android phone would.

But there are still plenty of things a virtual Android device can do—especially when you start installing apps.

You'll want to keep in mind a few things about Android apps. Unlike the heavily policed iPhone App Store, the Android OS version, the Android Market, has much looser guidelines. In fact, some consider the Android Market to be the wild west of apps: Almost anything goes, and malicious apps are often pulled from the Android Market only after users complain. As to how widespread the potential is for



Run Android apps on your Windows PC

malware in the Android Market, the mobile phone software security company, SMobile Systems, recently released a report that estimates that “one in every five applications request permissions to access private or sensitive information that an attacker could use for malicious purposes.” It’s unlikely that every single one of these apps is requesting this information intentionally for the purpose of sending it back to cybercrooks. In all probability, the majority of these apps are either using this information for legitimate purposes (such as Internet banking) or are just the by-product of developers’ sloppy coding. But at least some of these apps may be trying to steal your information and put it in the hands of individuals you probably would rather not have it.

And the Android Market isn't even the only source for downloading and installing Android apps. A number of independent Android apps stores have already been doing business for a while now (such as Softonic, Handango, and GetJar), and new ones are starting to pop up (such as AndSpot, SlideMe, and AndAppStore) now that the popularity of Android phones is increasing. How these independent sources will mind the cyber-gates still remains to be seen.

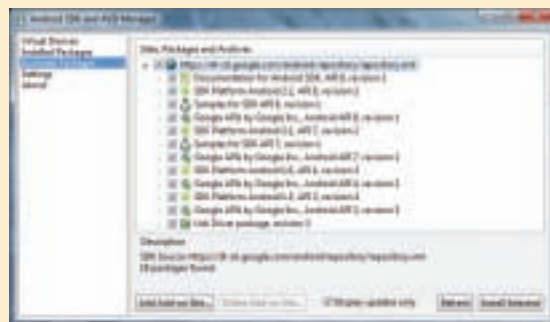
The bottom line is that you need to be careful what you install on an Android device—even a virtual one—especially if you’ve already entered some personal information, such as your Google account credentials. How do you know if an app is

really malware in disguise? Without having some sort of security software installed, it might be hard to tell. We installed the no-cost Lookout Mobile Security FREE (beta) app on several of my virtual Android devices (and my real Android phone), and as far as we can tell, it does what it is supposed to: protect against malware.

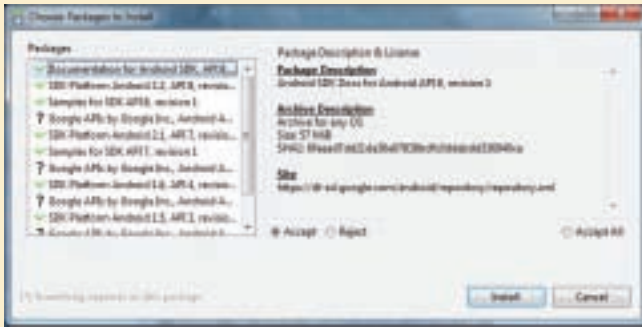
In the following pages we show you how to create and use a virtual Android device on a Windows PC, as well as how to download and install Android apps from the independent Android apps stores. This is all done with the latest iteration of the Android OS: 2.2, which is also known as Froyo (Froyo is shorthand for “frozen yogurt”—all of the Android OS codenames are named after desserts). And we finish up this primer with what you need to know to set up an Android 1.6 virtual device with a working Android Market.

All of the examples we provide here were done on a system running Windows 7; but they should be just as applicable for virtually any system running 32-bit Windows XP or 32- or 64-bit Windows Vista. There are even versions of the Android SDK that run on Intel-based Macs loaded with Mac OS X 10.5.8 and later and some versions of Linux, but the steps to getting this to work on these other operating systems differ somewhat from you'll find in this guide.

The first thing you need to do is to make sure that Java is installed on your



The download components of the Android SDK



Accept the license agreement during the installation

system. The documentation for the Android SDK suggests that you install the JDK (Java Development Kit) version of Java; but unless you are a developer all you really need is the standard version of Java, which is officially called the Java SE Runtime Environment—if you are downloading it using Internet Explorer, it might be listed as “Java for Windows Internet Explorer.”

Once you confirm that Java is properly installed, the next step is to download the Android SDK Starter Package—you’ll be downloading a zip file. When you unzip it you should have a folder called android-sdk-windows. You can put this folder anywhere you want on your computer—everything runs out of this folder and there is no software to install in the traditional sense. Just remember where you put the folder, because no shortcuts or desktop icons get created unless you do so manually.

Navigate to the android-sdk-windows folder and launch SDK Setup.exe, which is the Android SDK and AVD Manager application.

If Java is not properly installed, an error message will pop up stating that Java cannot be found.

If this is the first time you’ve run the Android SDK and AVD Manager, you might see a Refresh Sources window that says the repository can’t be found. If you do, you’ll have to change the SDK’s settings to use HTTP, instead of the default HTTPS. To do this, click Close. Next you’ll see a “Choose Packages to Install” window, but with nothing listed. Click Cancel. The next window you should see is the Android SDK and AVD Manager window. Select the Settings tab and in the Misc section enable the “Force https://... Sources to be fetched using http://...” setting.

Now select the Available Packages tab. You should see a single site in the

list: <https://dl-ssl.google.com/android/repository/repository.xml>. Select this site and a list of packages should appear below it. If you want to play around with the different versions of the Android OS then enable all the packages.

If you only want to use Android 2.2, then the only packages you’ll need to download are “Documentation for Android SDK, API8, revision 1”; “SDK Platform Android 2.2, API8, revision 1”; “Samples for SDK API8, revision 1”; and Google APIs by Google Inc., Android API8, revision 1.”

Once you’ve selected the packages you want to download, click the “Install Selected” button. This opens the “Choose Packages to Install” window, with all of the previously selected packages listed. (If you didn’t encounter the HTTPS error when you first launched the SDK then this is the first screen you should see.) Don’t hit the Install button

quite yet. You’ll notice that some of the listed packages have question marks next to them. This means that you have to accept the license agreement for each of these packages before you can install them. Select each package that has a question mark next to it and click the Accept button. Once all the packages have check marks next to them go ahead and click the Install button.

If you chose to install all of the available packages, it may take a few minutes to download them all. When it is done, you’ll see a window that says something like “Done, 12 packages installed.” Click Close.

Creating an Android Virtual Device

Now you’re finally ready to create your very first virtual Android device! The Android SDK actually refers to this as an Android Virtual Device or AVD—which is what we will be calling it from here on out. Select the Virtual Devices tab and click on the New button.

This opens a Create new Android



Android Virtual Device running



A few apps running on the new AVD

Virtual Device (AVD) window. There’s actually not much to creating an AVD. All you really need to do are:
Name: Give the AVD a name. Pretty much any name will do that uses alphanumeric characters.
Target: Here is where you pick the version of the Android OS that the AVD will be based on. For this example, choose Android 2.2.
SD Card Size: This is where you choose the size of the AVD’s virtual SD card. The SD Card size must be at least 9MB. For

this example, create a 1GB SD Card. You can use larger sizes as well. Skin: You can choose any pre-defined (built-in) or custom resolution that you want—it doesn't have to match the resolution or aspect ratio of a real phone screen. For this scenario, choose WVGA800 (800x480), which is the screen resolution of a number of phones, such as the HTC Incredible. If you wanted to, you could set a custom resolution that simulated what an Android tablet might look like—perhaps with a screen resolution of 1024x600.

Hardware: These items will be selected automatically. You don't need to make any additions or changes here—unless you are a developer and you know what you are doing.

Now click the Create AVD button.

The AVD will be created lickety-split, and a window will pop up stating that the AVD has been created. Click OK to close the window. Note that once you create an AVD, its settings can't be changed. If you want to make any changes, you'll need to create a brand new AVD. The AVD you just created should now appear in the list of Virtual Devices.

To launch the AVD, select it and then click the Start button. A Launch Options window opens, which allows you to Scale the display and Wipe user data. You might be tempted to choose the Scale display option—but don't, because if you do, the resulting window will be the physical size of a phone screen (about only three inches tall). Don't select the

Wipe user data option either (though we will be using this option later when we set up the Android 1.6 AVD that includes the Android Market). Just click the Launch button to start the AVD.

It might take a couple of minutes for the AVD to launch; so be patient. But soon enough, the AVD will appear on your screen. The AVD is also referred to as an emulator because it "emulates" an Android device.

You'll see a window on the left that is the device's display, and a window on the right that houses the device's navigation buttons and virtual keyboard. In most cases you seldom have to use the onscreen navigation buttons or keyboard—your system's real mouse and keyboard should do the trick.

Here are some useful mappings to help you navigate in the AVD using your system's keyboard:

Home	Go to the Home Screen
F2	Menu Button
ESC	Back Button
F6	Toggle Trackball Mode
Ctrl+F5	Increase Volume
Ctrl+F6	Decrease Volume
Ctrl+F11	Switch Between Portrait and Landscape Mode
Alt+Enter	Toggle Full-Screen Mode

Before you start exploring, one of the first things you might want to do is confirm that the AVD has Internet access. Look in the status bar (running across the top of the AVD's display screen) and determine if you see an icon that has four bars with the first two bars lit up. If so, then the AVD at least thinks it has Internet access. You can confirm that the AVD's Internet access works by clicking on the Web browser icon in the bottom panel of the home screen—this is the icon that looks like a globe—and seeing if it connects to the Internet.

The AVD is simply piggybacking off of your system's Internet connection. While experimenting with the Android SDK on a number of different systems, we encountered a few situations where an AVD's Internet connection did not work. In all of these instances, the system was connected to the Internet via an Ethernet cable; but the system also had a Wi-Fi radio that wasn't connected to an access point. Connecting the system's Wi-Fi radio to an access point and restarting the AVD resolved the Internet access issue for me.

If you click the Launcher icon (the

icon that is made up of 4x4 squares), you'll see the apps that come preinstalled in the AVD. You're likely going to be disappointed—there aren't many apps here at all. But fret not; in the next section we explain how to install Android apps onto your AVD.

But before we discuss installing apps, a few words on quitting and starting an AVD. Quitting an AVD is as simple as just closing the window. Really. That's all there is to it.

As to starting an existing AVD, there are a number of different ways to this. One is to launch the Android SDK and AVD Manager (SDK Setup.exe) application, and then start the AVD from the Virtual Devices tab. But if you're going to be using the same AVD on a regular basis, here's how you can create a shortcut for it, so you can launch the AVD directly from your desktop:

1. Determine the exact name of the AVD you want the shortcut to launch. You can get this info either from the Android SDK and AVD Manager or from the physical location where the AVDs are saved, which is C:\Users\[username]\.android\avd\.
2. Create a new desktop shortcut for the emulator.exe file that resides in the ...\.android-sdk-windows\tools folder.
3. Once you've created the shortcut, edit its properties and add these options to the end of the target text field: -avd [name-of-avd]. This isn't case-sensitive, so you can do it all in lowercase. For my example, the shortcut's full target text field reads as follows: c:\.android-sdk-windows\tools\emulator.exe -avd extremetech-froyo

Now whenever you want to launch the AVD, all you have to do is double-click the shortcut.

Installing Apps From Independent Android Apps Stores

If you've followed these instructions up to this point, you've got an AVD running Android 2.2, with a few barely useful apps and no Android Market. So how are you going to get apps onto your AVD? By downloading them from one of the independent Android apps stores.

Using your computer's Web browser, navigate to one of the Android apps stores, such as Softonic, Handango, or GetJar). Find the apps you want to



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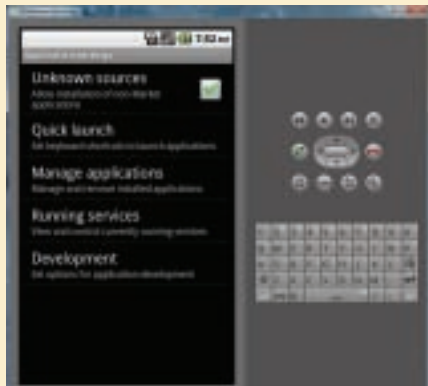
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download and click the respective download buttons for those apps.

Android apps exist in files that have the APK (Android Package) file extension. An



Settings for installing non-market apps

APK file is actually a package that contains a number of bundled components—similar to how a zip file works. In fact, when you download an Android app file, it might have either an APK or ZIP file extension. If you download an Android app that has a ZIP extension, don't try to unzip it—just change the ZIP extension to APK.

So how do you install an Android app that you've downloaded onto your

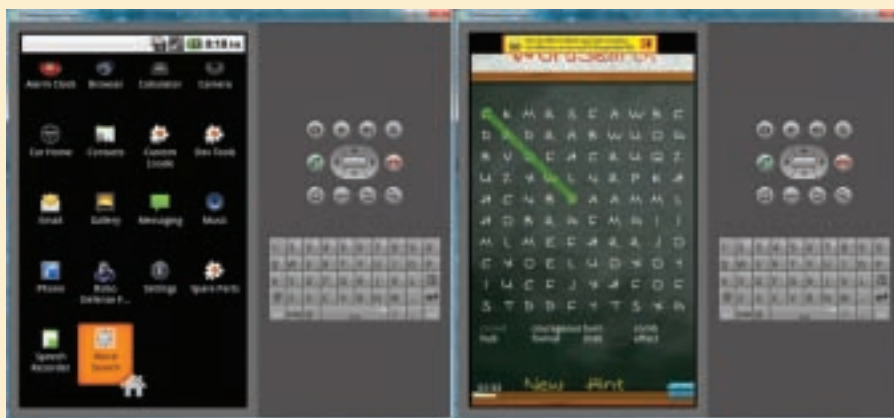
computer's hard drive? The first thing you need to do is fire up the AVD and wait for it to launch. Once the AVD is running, make sure that it's set to permit the installation of non-Market applications. Do this by selecting the Launcher icon, choose the Settings icon, click on Applications, and make sure that Unknown sources is enabled.

With the AVD running, open a Windows Command-Prompt window (or what we old-schoolers like to call a DOS-Prompt window). You'll be typing a command that executes the adb.exe application that lives in the android-sdk-windows/tools folder, followed by a space, then the word install, another space, and then the Android app's file name. The trick is, you also need to include the full paths for both the adb.exe app and the APK file you are installing (unless they both live in the same folder).

Here's an example of how we installed the Word Search app in my AVD:

```
c:\android-sdk-windows\tools\adb.exe install c:\temp\wordsearch.apk
```

It might take a few moments to install. When the word "Success" appears in the Command Prompt window, you know it has installed. I've found that on rare occasions, installation will fail on the first try, but succeed on a second attempt.



Once you've entered the Settings, you can download apps from external sources



Uninstalling an app is also simple

Now if you go back to the AVD, you should see an icon for the app you just installed appear amongst the other apps. Launch the app and it should run as expected.

If you want to uninstall an app, do so by going to Settings > Applications > Manage Applications > Downloaded, then select the application you want to delete, and click the Uninstall button.

If the AVD actually had access to the Android Market, then there would be a bevy of Uninstall applications

to choose from—which would make uninstalling apps a much easier task. We didn't have much luck finding a working uninstall app from the independent Android apps stores.

Accessing the Android Market in an AVD

If you want to be able to access the Android Market in an AVD,

you can do it; but it will need to be with an older version of the Android OS. A software Engineer by the name of Kumar Bibek posted instructions on his blog; on how to do this using a file downloaded from the HTC Developer Center Website with an Android 1.6 AVD. While some users claimed it worked for them, we couldn't get it to work. But luckily, Mr. Bibek made an alternative custom file available for download that worked for me. Here's what you need to do:

1. Create an AVD that uses Android 1.6—but don't start it yet.
2. Download the system.img file that Mr. Bibek made available here.
3. Copy the system.img file you just downloaded to the AVD folder for the AVD you just created. You can find this folder in ...\.android\avd in your user folder. For example, we created an AVD called "Market" and this is the path to its folder on my system: C:\Users\ExtremeTech\.android\avd\Market.avd

4. Start the AVD for the first time; but when the Launch Options window opens, enable the Wipe user data option. Then click the Launch button. You should only have to do this once—on subsequent launches of the AVD, disable the Wipe user data option.

5. Once the AVD loads, you'll have to go through a few setup screens; but you can skip most of them.

6. Navigate over to the Applications page and you should see an icon for the Android Market, as well as a few other apps that weren't present in the Android 2.2 AVD—such as Google Maps and Google Talk.

7. Before you can access the Android Market you'll have to either create a Google account or enter the login credentials for an existing Google account.

8. Once your Google account credentials are entered, you can access the Android Market and start downloading apps into the AVD!

Have fun exploring Android!

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Long Drive with Obama

President Barack Obama took test drive on, Chevrolet Volt, an electric car, during a visit to the Compact Power battery plant in Holland

Charging station

First public electric charging station in New York was installed recently by Coulomb Technologies

India, the nation choked by e-waste

Photographs: Tushar Goyal



The dark reality of e-waste is a gripping one with a thriving industry exploiting cheap labour

Anoop Verma

readersletters@thinkdigit.com

The technological zeitgeist of modern society is part of a package, which includes an unlikely desideratum – e-waste.

Sure, the hip iPad, the immaculate smartphone, the cool air-conditioner, the new digital camera, the hot LCD TV enhance the quality of your life in all sorts of ways, but at some point in the future, these devices, which seem incredibly advanced today, will go obsolete. And once you let go of them, they will have to make their final journey to the myriad graveyards for obsolete devices that are mostly located in the heart of dirt-poor slums of India. Ultimately it befalls on the slum dwellers to perform the dangerous

job of electronic-scavengers; working with most medieval tools – they try to eke out a living, by extracting some valuable material from a plethora of discarded devices.

Rag pickers sifting through filthy garbage dumps in search of plastic or paper are a common sight in India, and so is the visual of young children risking their lives while trying to pick apart old computers, radios and air-conditioners. India's informal e-waste industry is notorious for working on a shoestring budget. As they work without any protection, at times with their bare hands, the labourers, employed by the informal e-waste industry, often end up suffering from skin infections, and from other debilitating diseases of blood systems and kidneys. In case of severe exposure to toxic material, they might also suffer brain swelling,

which might result in paralysis or death.

The Centre for Science and Environment (<http://www.cseindia.org>), in its May 18, 2010 press release, has made the following observation: “India generated 330,000 tonnes of e-waste in 2007 – equal to 110 million laptops. About 10 per cent of the e-waste generated is recycled every year; the remaining is refurbished, and the unorganised sector is right behind almost all of it. Informal dealers refurbish and make money from e-waste.” In India the situation is being compounded by the fact that it is not only the country's burgeoning middle class that is discarding a huge amount of electronic waste, ranging from personal computers, optical disc players, mobile phones and other portable devices, even the rich Western countries have started shipping their e-waste to our ports. Kushal P S Yadav of CSE says, “According to our estimate illegal import of e-waste in the country stands at about 50,000 tonnes annually. Loopholes in laws facilitate this.”

What can be done?

A good way of disposing electronic products, which are in working order, but are no longer required by you, is to donate them. These days we have a number of organisations, which will accept your old computers and send them to schools where children from poorer sections of society come to study. An organisation called Donate Your PC (<http://donateyourpc.in/v2>), lets you log in and register your donation details, and whenever an NGO requires your PC, you will receive intimation.

You can also dispose off your old PC or any other electronic gizmo by selling it off on eBay. After all, eBay is world's largest online store for used electronic items and its time we took advantage of it for extending the working life of old electronic items. Taking cognisance of the mounting e-waste problem around the world, eBay has come up with a unique Rethink Initiative, whose details you can find out by pointing your browser at: (<http://pages.ebay.com/rethink>). Powered by the tech behemoth Intel, the Rethink Initiative seeks to coordinate the recycling programs of many major manufactures of electronic

Hottest Picture on Earth

A Google Earth layer was launched by the U.K. government, that models what Earth might look like when its current temperature rises by 4 degrees

Solar voyage

A solar-powered plane designed to fly day and night has succeeded with a 24-hour voyage

Cover feature

goods. If you are resident of Mumbai, then you can also take advantage of the NGO called United Way Mumbai (<http://www.unitedwaymumbai.org>), which makes it possible for you to donate computer spares parts that are in good working condition.

Another good way of tackling e-waste envisages the manufacturer of any electronic product making arrangements for taking the device back once its lifecycle runs out. But in this case the problem is that many of the top brands in the country don't have the necessary infrastructure in place to collect their discarded products. According to a Centre for Science and Environment (CSE) report, "Most of the top brands have no take-back policy in India. So if are using a Apple, Microsoft, Panasonic, PCS, Philips, Sharp, Sony, Sony Ericsson or Toshiba device, you can't depend on the company to help you safely discard their device." Wholly Indian owned brands like Wipro and HCL have come up with very consumer friendly take-back programs. In fact, the 'Guide to Greener Electronics' initiative by Greenpeace ranks Wipro amongst the top five brands in the world as far as the take-back policy is concerned.

In an official release from Greenpeace, Abhishek Pratap, the Greenpeace India Toxics Campaigner, says, "It is

good to see Wipro making it to the top league. The recent financial meltdown has not acted as a deterrent for proactive environmental management measures at Wipro and we hope this is sustained over the long term. We expect this initiative by Wipro to catalyse other electronics brands to take similar measures" Companies like Nokia, Acer, Motorola and LG, also have collection centres in the country, but the service seems to be working only in the cities. Samsung electronics currently operates a collection point through its authorised service centre in India, but these centres will only accept discarded mobiles. According to Samsung's press release, "by the end of 2010, the company will start operating recycling programs in Delhi/NCR, Mumbai and in Bangalore."


Government initiatives

The slow pace with which our government works has certainly aggravated the problem of e-waste management in India. Finally in 2010, when lakhs of tonnes of e-waste has already vitiated the environment and damaged the health of thousands of people, the government is finally moving in the direction of enacting new laws that will make the producers of electrical and electronic equipment respon-

sible for the collection and appropriate disposal of e-waste generated at the end of life of its products. The draft of these new rules were made public on the web site of the Ministry of Environment and Forests in April this year. The proposed rules seek to place a ban on the import of used electrical and electronic equipment for charity in the country. The truth is that millions of tonnes e-waste enters the country on pretext of being reused and donated to local charities. This is because the import of e-waste is restricted.

The new set of rules will also regulate the recyclers and intermediaries, such as operators of collection centres. The end-consumer too will come under the ambit of these laws. You won't be allowed to chuck away your gizmo into the nearest garbage dump when you are done with it, you will be required by law to turn it in for recycling at a properly managed establishment. If these laws are not implemented properly, then instead of helping the country in tackling the e-waste problem, they could only have the effect of adding another layer of bureaucratic red tape to the already over-encumbered system of governance.

The Centre for Science and Environment remains unenthusiastic about the new laws that have been proposed.

According to the CSE, the proposed rules don't seem to go far enough to be effective in protecting the environment from e-waste. In its press release, the CSE says, "The proposed rules, for the first time in India, bring in the concept of extended producer responsibility, making manufacturers liable for safe disposal of electronic goods. However, they do not detail the business model for collection of e-waste from consumers. Neither do they offer any assistance to help the informal sector get organised." There is no doubt that the environment needs to be protected and nurtured, but this has to be done in a cost effective manner, otherwise the purpose behind these new laws is going to be defeated. 

INTERVIEW WITH B K SONI

Eco Recycling Limited (<http://ecoreco.com>) manages e-waste in an environmentally friendly way. The company has developed a complete spectrum of manual and technological procedures that go into e-waste management. B K Soni, the main promoter of Ecoreco, explains how his company is at the forefront of the war against e-waste.

• What is the biggest obstacle that organisations such as yours face in managing e-waste?

The main problem is that currently much of the e-waste goes to junk dealers, who sell their stuff to informal recycling centres. We are still in process of convincing individuals and corporate entities to give their e-waste to properly functioning recycling

centres such as Ecoreco.

• Where does the bulk of e-waste that you recycle come from?

Most of the material that we recycle comes from corporate entities. If a corporate entity gives us their e-waste for free, we generally use part of the value of such e-waste to donate new computer equipment to schools being run in the poorer areas.

• How do you ensure that the material gets recycled properly?

Our workers are fully trained and they take every precaution while dismantling the e-waste. The reusable material like steel, copper, aluminium, plastic, etc are separated and sent to different

industries to be recycled. While the toxic material in the e-waste is sent to government recognized facilities to be safely disposed off.

• What is your view of the e-waste laws being proposed by the government?

These laws seem too ambitious for a country like India. For instance, it is being assumed that people will call HP every time they want to get rid of an old printer, manufactured by that company. But that might not happen, many people who are not environmentally conscious will prefer to sell it to the junk dealers. What is really needed is not a new set of laws, but a change in the way people think about e-waste.



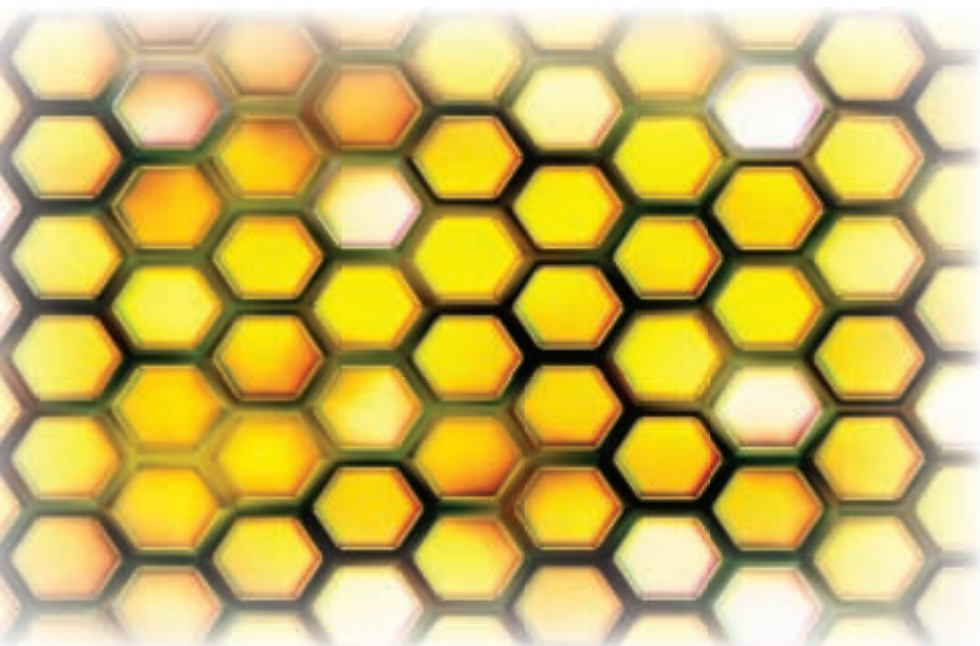
Need battery?

Zen Mobile has introduced the M25 phone that claims to have a battery life of 72 hours

Laser zapping

US scientists at Wake Forest University in North Carolina have demonstrated the concept of laser zapping to treat mice with breast tumours to heal them

THE REAL NANOS



Photos.com

"The Next Big Thing is Really Small"
-Jack Uldrich

Rahil Banthia

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Nano as a prefix implies a scale of 10^{-9} and nanotechnology is the science and study of manipulating matter at the atomic or molecular scale and building materials with at least one dimension under 100 nanometres. Although the first reference towards nanotechnology was given by legendary Richard Feynman in 1959, carbon nanotubes were only introduced in 1991 and since then have become the focal point of the scientific community. From super computers to space elevators, their use have been envisioned in everything, so we will do a reality check today and discuss their current use, ongoing research and future applications.

If you peer down with a good microscope you'll observe, that at the atomic level, carbon nanotubes resemble your nylon clothing line. Only instead of nylon, the tube is made

from a hexagonal lattice of carbon atoms. The tubes are in the order of nanometres in diameter. Their structural strength makes them an ideal composite material, while its electrical conductivity makes it suitable for deployment as a semiconductor alternative.

Current application Copper Replacement

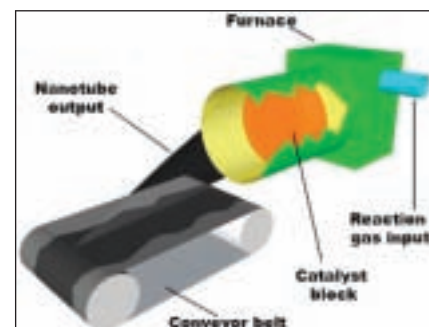
Long Fibres

Today nanotubes are commonly produced in segments about 10,000 nanometres long, forming a black powder. Nanocomp Technologies of Concord manufacture lightweight antennas, cables, and electromagnetic interference shields using this same material for the military and aerospace markets.

The heart of Nanocomp Technologies' manufacturing process is a long, cylindrical furnace. A reaction gas comprising carbon-based feedstock which is the raw material is fed into the furnace. The gas is swept along the furnace until it meets a heated, porous block coated with a catalyst.

As it passes through the pores, the gas is forced to be in contact with the catalyst, and carbon nanotubes are formed. A temperature gradient between the porous block and the open end of the furnace supports the tubes as they grow, absorbing material from the reaction gas. Eventually, nanotubes leave the cylindrical furnace, looking like a black mass of tube-shaped cotton candy. A rotating anchor or conveyor belt captures the nanotubes as they emerge, turning them into yarns and sheets.

They are also producing sheets of carbon nanotubes that measure 3 x 6 feet and have announced plans to produce slabs with an area of 100 square feet. These sheets will be used primarily in as electrical



LongYarn Image Courtesy: Stephen Cass

conductors in planes and satellites to replace copper wire and save weight, and hence increase fuel efficiency. The resulting material can be a valuable addition to such applications such as electromagnetic interference (EMI) shielding, electrical conductors, thermal dissipation solutions, lightning protection and advanced structural composites. Another interesting use due to structural strength of the material is as a substitute for kevlar as body armour.

Agriculture

Carbon nanotubes are being used to accelerate the growth in size, quantity and speed, of vegetables like tomatoes. In September 2009, at the Little Rock Nanotechnology Center, housed at the University of Arkansas, used carbon nanotubes to increase the germination rate of tomatoes. Exposure to carbon nanotubes caused the seedlings to become stronger and grow more quickly. Carbon nanotubes become a part of the seed by penetrating through the

Waiting for 3G?

KeyOn Communications Holdings Inc. and Alvarion have deployed a 4G wireless network in Nevada in the last week of July 2010

Goodbye shopping woes

Carbon nanotube-laced ink will soon be used to print RFID tags on goods in shopping malls, enabling you to simply walk out of the mall with your purchases. Wonder when we'll get to see the technology at work!

Tomorrow's tech

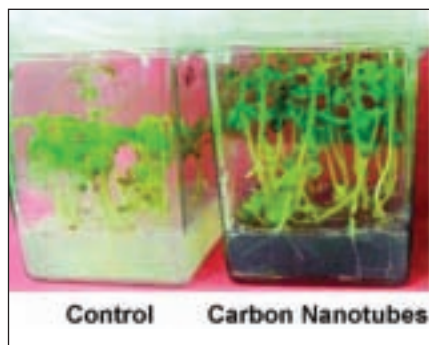
thick outer shell and bonding with the plant structure that enable the plants to take in more water and also retain it, creating a plant that could possibly survive longer spells of drought after long rain fall.

Future applications

Although current applications may be limited by the prohibitive cost of \$95 per gram (that's a little under Rs. 4,500) at present. Probably with time, it would become more affordable.

Hydrogen storage

Carbon nanotubes have, for long, been championed as a strong contender for storing hydrogen in fuel cells.



Accelerating food growth with the aid of carbon nanotubes

Improved transistors

Y-shaped nanotubes behaving as electronic switches similar to traditional MOS (metal oxide semiconductor) transistors currently used in almost all of microprocessors, memory, and other integrated circuits have been invented by researchers at UCSD and Clemson University. They say that these specially synthesised carbon nanotube structures exhibit electronic properties that are improved over conventional transistors used in computers.

Water filter

At our very own Bhabha Atomic Research Centre (BARC) in Mumbai new water purification technologies are constantly being investigated that are simple, inexpensive to install, operate, and maintain. Their recent efforts in the field of nanotechnology has led them to use hollow carbon nanotubes to do the job of water purification. The unique chemical properties of carbon nanotubes

mean that only very small molecules, such as water molecules can pass along their interiors, whereas viruses, bacteria, toxic metal ions, and large noxious organic molecules cannot.

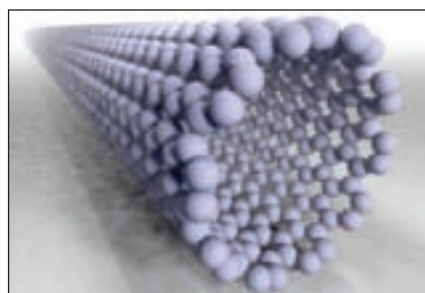
Smooth and water repellent surfaces of carbon nanotubes means that a filter-based on this technology would be very efficient, allowing a high flow rate of water through the filter without fouling. Importantly, the power needed to drive water through such a system will be low compared to conventional membrane technology. Although this technology is not without limitations, in order to be a practical solution, the nanoscale structures need to be engineered to form well-defined arrangements to allow the efficient decontamination of water.

Breast cancer research

Nanotubes bond to an antibody that is produced by chickens and have been useful in lab tests to destroy breast cancer tumors. The antibody carrying nanotubes are attracted to proteins produced by a type of breast cancer cell. Then the nanotubes absorb light from an infrared laser, literally burning the nanotube and the breast cancer cell they are attached to.

Single-walled carbon nanotubes have been highly touted for their potential as novel delivery agents for cancer detection and therapeutic agents. HER2 is a family of genes that help regulate the growth and proliferation of human cells. Normal cells have two copies of HER2, but about 20 to 25 per cent of breast cancer cases consist of cells with multiple copies of the gene, resulting in the overproduction of a HER2-encoded protein that is associated with particularly fast growing tumours.

The team led by Huixin He, PhD, of Rutgers University, and Yan Xiao, PhD,

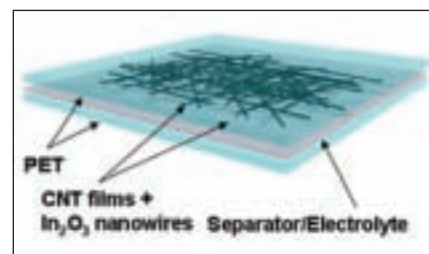


Hollow Carbon Nanotubes like these can be used to filter water

of the National Institute of Standards and Technology (NIST), has demonstrated how they created the new dual-purpose nano structure by attaching an anti-HER2 antibody to short carbon nanotubes. The investigators then exploited two unique optical properties of carbon nanotubes to detect and then destroy HER2 breast cancer cells. Near-infrared laser light at a wavelength of 785 nanometres reflects intensely off the nanotubes, and this strong signal is easily detected by a technique called Raman spectroscopy (invented by Dr. C V Raman). Increase the laser light's wavelength to 808 nanometres and it will be absorbed by the nanotubes, burning them and anything to which they're attached, in this case, the HER2 tumour cells.


Battery

The latest iPhone4 has more than half of its volume occupied by the mammoth battery which is crucial to running the modern convergent devices with power hungry features such as GPS, Wi-fi, powerful CPUs and large screens. Battery is currently the biggest hurdle in making better and more featureful mobile devices (iPhone didn't support multitasking till now to primarily save on battery). All this is about to change



They might power your next cellphone

with MIT's Laboratory for Electromagnetic and Electronic Systems (LEES) work on technologically possible and economically viable carbon nanotube based ultra-capacitor alternative.

Capacitors store energy as an electrical field, making them more efficient than standard batteries, which get their energy from chemical reactions. Ultra-capacitors are capacitor-based storage cells that provide instant, massive bursts of instant energy. They have already been used in fuel-cell vehicles to provide an extra burst for accelerating into traffic and climbing hills. 

AGE-P

An Evolutionary Platform for the Self-Organization of Smart-Appliance Ensembles

Nature-inspired informatics

Technologies are being developed for optimisation of telecom networks that are inspired from nature

There are several striking examples of intelligent design, inspired by nature. We look at some of these technologies

Rahil Banthia

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Philosophers are right when they say "Progress often occurs at the boundaries between disciplines." Our natural world is full of complexity - from the organisation of the nervous system, to molecular genomics and even coral reef ecologies. The same way our technology, computer technology in particular has been manifestly becoming more and more complex—from systems on

chips to interest-router connectivity, and from software module interactions to new operating systems. So, the natural question arises: Are we exploiting insights from biology to help understand the complex computational systems that we've produced or are we doing everything ground-up?

Throughout history we've built artefacts whose inspiration derives from biology and the natural world. You will naturally argue that computer science and technology haven't been influenced to such a large extent because our computers implement a binary logic that's hard to discern in nature, using a general architecture that's remote from anything that has evolved. However, it isn't hard to recognise the influence of biological processes and methods on computer science.

Here are few examples which will tell you how nature has inspired everyday tech:

- ✔ Velcro — inspired by seeds' clingy burrs
- ✔ Low-friction ship hulls — inspired by shark skin
- ✔ Morphing aircraft wings — inspired by bird wings
- ✔ Temperature-adapting fabric — inspired by pinecones
- ✔ Dirt- and water-resistant paint — inspired by the lotus flower

The Network Paradigm

If we take a deep look at the internet, we will see a striking similarity with nature and genes in particular. A gene network is defined by connections between specific genes, whose outputs are influenced by proteins (expressed by other genes), metabolites, and small signaling molecules. Other networks are layered on top of genes, such as protein interaction networks, signalling networks, and metabolic networks, which themselves underpin arrays of interacting networks that link cells together.

An organism's physiology requires the linking of many gene, protein, metabolic, and cellular networks, with feedback interactions between them. In a very similar fashion, our modern internet is a complex, multilayered, and modular structure. Physical devices provide the foundation, and frame formats determine how packets course through the physical links. The IP packet protocol lies above the link layer and enables communication between various computational networks, creating the experience of a single

Naturally Inspired



From the real ant to the artificial ant

Applications in combinatorial optimisation, data clustering, collective robotics and image processing

Natural algorithms

Nature-inspired algorithms help forensic investigators crack complex cases

From the labs

virtual network. The TCP transport layer running over IP ensures that large streams of data traffic are transported reliably, in the right order. All applications such as FTP and the WWW are layered on top of TCP, and thus we obtain our multilayered interacting network. In this network, the dynamics of decentralized packet transfer can respond to congestion protocols in the higher levels invoked by requirements generated at the application layers. The result is a complex tiered network responding to feedback loops between the various tiers.

Butterfly wings and peacock feathers create color by causing light to interfere with itself. These highly developed structures reflect light so that specific wavelengths interfere with each other to create nature's purest, most vivid colors. This inspired Qualcomm's next generation of display technology, Interferometric Modulator (IMOD) that achieves substantial performance improvement and power-saving benefits over current technologies. This innovative, highly reflective design enables an Always-On™ experience with:

- ❑ Ultra-low power consumption — extended battery life
- ❑ Superior viewability — in all lighting conditions, even bright sunlight
- ❑ Enhanced readability — reduced eye fatigue, like reading printed paper
- ❑ Robust functionality — virtually unaffected by environment and extreme temperatures
- ❑ Mechanical durability — long operational life

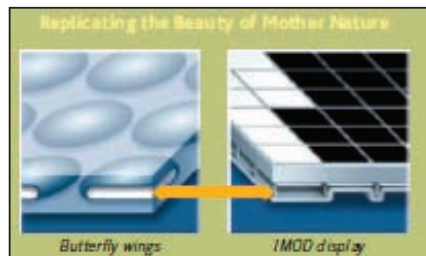
Biomolecular computing

There have been various Molecular electronics attempts to mimic solid-state components with molecular structures. Molecular wires, rectifiers, and transistors have all been constructed on very small scales. Biomolecules such as the protein bacteriorhodopsin have shown great promise for natural computing. This protein



Some of nature's creations depict vivid colours

serves as a solar power source for a bacterium. Light at a certain wavelength can change how the protein behaves; this behaviour is accompanied by a colour change. This lets us, in principle, encode states and then read them off. This biomolecule and others like it might have



Qualcomm's IMOD displays are inspired from butterfly wings

serious applications in high-density memory. Researchers have already used a genetically engineered version to build devices that can perform optical character recognition.

IBM increased chip performance, courtesy shells

Thanks to the way shells balance heat when under high pressure, IBM has come out with its own Airgap Technology.

Though putting a bigger fan and copper rods is a good solution, it increases the amount of noise, power consumption and energy loss. Lenovo overcame one of these problems with an idea inspired by owls to lower the sound. Owls fly swiftly without making any noise to catch its prey. Similarly, Lenovo fans run faster and without significant increase in noise by changing the shape of the fan blades.

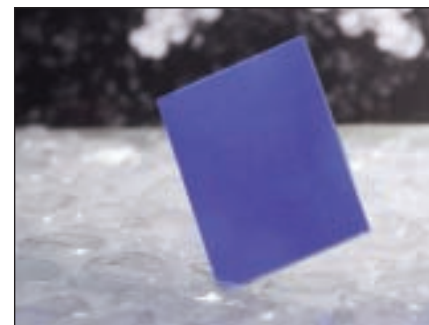
Bionic device technologies

Biological models of the vertebrate, insect and mammalian visual systems have led to several bio-inspired algorithms. Many man-made electro-optical materials and devices have been inspired by biological systems. The motion detection system of the fly is a good example of a useful optoelectronic system for robot piloting and navigation. The rest of the insect world represents a huge data base for future bio-inspired microsensor-processor-actuator units.

Naturally, the future growth of VLSI faces a number of limitations. But, you will be pleased to know that Biology has been employed to overcome some of them, an example being fault tolerance, by using loosely coupled, faulty

elements. Although mimicking biology with silicon is very hard. The real niche for bio-inspired systems is at the interface between the digital and analogue world, particularly in the areas of wireless telecommunication and PDAs where power dissipation is critical for implementing powerful signal processing applications like speech recognition. Current digital trends are toward full integration on a single chip. However, many systems with high dimensional input data need the massive processing of analogue signal arrays.

New nano-scale electronic interfaces will offer great improvements in ultra-low-power bionic devices for prosthesis and scientific studies of neural tissue. Future advances in microelectronics and analogue processing will allow dramatic reductions in cost and size. Advanced imaging sensors can benefit greatly from new bio-inspired algorithms.



IBM's chip technology is inspired from shells

The future

We envision that within a decade, and in a continuously developing fashion, a new industry will emerge thanks to research inspired by nature that will serve unprecedented human needs. It's not far before we have sensory and other prostheses (visual, auditory, tactile, olfactory, gustatory, motion based, etc.), as well as self-contained medication, forecasting and therapeutic devices built into the human body or brain-controlled robots and motor prostheses.

With some effort by scientists worldwide, we will be living in a world with life-like perception/action devices for household, industrial, and medical use, and OEM bionic parts to be embedded in many other goods and services. It will be a networked world with brain-controlled, neuromorphic or bio-inspired robots. Scary as it may sound, with nature on our side, the future beckons with open arms! 🦾

Flash of the Titans

Point and shoot cameras aren't the best you can find. Every enthusiast dreams of owning a good DSLR, and now to add to the confusion, there are newer formats to choose from. It's time to demystify...



By Rossi Fernandes & Nimish Sawant

Almost every single one of us would like to own a DSLR sometime or the other. Sure, people tend to take you more seriously as a photographer, but that's not what it's all about! DSLRs are not meant to be cool gadgets

like a fancy watch or cellphone. A point-and-shoot makes perfect sense if you're the type who needs to take photos quickly at an event. But what if you're looking for perfection?

DSLRs have a lot going for them – with their bulk comes larger sensors, larger lenses, larger better quality screens and a whole load of controls and features that you can spend

days playing with. They're still meant for professionals but for those like us who love spending hours playing around with cameras and trying everything you can, point-and-shoots are not cutting it anymore. They're turning into tame.

We've called all the big DSLR names in India asking them to send across their cameras. Nikon, Canon and

Olympus were the ones who sent us many of their popular offerings. Sony politely declined from participating in the comparison review. Let's start by first looking at all of the features and usability aspect of the cameras.

Canon EOS 7D

Last year, we tested the EOS 50D. This year, we have the even better Canon EOS 7D. This larger bodied camera has a 18 MP sensor and fits perfectly in the hand. It is heavy though. The side of the camera has all the connects for the microphone, flash, remote control and HDMI. There are no direction buttons on the back of the camera, but there is a joystick. It's used to navigate through the menus. The dials on this new camera are pretty tight to rotate. Unlike most other cameras, the buttons used to set settings don't have to be held while using the jog dial. They like toggle buttons instead which makes them a little easier to use. Most of the controls surround the top display on the camera. The LCD screen doesn't have a border surround it which makes it almost seamless with the rest of the frame. The new menus look great, have smooth transition effects but there is no subdivision of the menus into categories or sections. One of the unique features on the camera is the virtual horizon feature which lets you to level the camera evenly.



Canon EOS 550D

Nikon D3000

The D3000 was brought in to replace the D60 and the popular D40 and D40X models. The D3000 sells with an 18-55mm lens that you find in most stock kits on DSLR cameras. The more expensive the camera, the less likely you are to get a lens kit. Users are then expected to choose a lens of their preference.

The focus motor isn't on the body, so the lens has it inbuilt. Make sure that any lens that you purchase in the future has an inbuilt focus motor or you'll miss out on the auto-focus function.

There is no Liveview on the camera. Its competitor, the Canon EOS 1000D has Liveview. While many professionals dismiss the Liveview function, for beginners, it's a simpler way of using the camera.

The 11-point focus system makes auto-focusing a little simpler and quicker.

For those who are new to photography and need something that can help them find their way around, the Guide mode makes operating the camera slightly simpler. The controls are simple to use and unlike the costlier DSLRs, there is no dedicated ISO button or two jogdials on the D3000, so you're forced to use a few more buttons while shooting. Some of the buttons can be customised to be used with the jogdial for other functions.

Nikon D5000

The body of the D5000 has some similarities with the D3000. The D5000 includes a foldable LCD screen that also makes the camera slightly bulkier. The base of the camera towards the LCD has become bulkier. This means Nikon has been only able to fit a 2.7-inch screen on the



Nikon D5000

camera. The cheaper D3000 comes with a 3-inch screen, but no Liveview. The D5000 feels like a downgrade in that aspect. In other aspects, it's an upgrade – higher resolution, better ISO range, burst speed shooting rate, etc.

All the bay doors are sturdy and there's no chance of the plastic/rubber straps holding them of breaking.

One of the other less important features is GPS that records coordinates of the location of the photo. You need to buy an optional GPS unit from Nikon for that. The HD 720p video recording feature is unique and possible with the Liveview function.

Nikon D300s

The Nikon D300s is where things get a lot more serious. The size and weight of the camera is indicative of that. There's a big difference going from the D5000 to this. The older D300 had no Liveview so there was no video recording functionality either. It's still no a full-frame sensor camera though. The D300s like the D5000, records 720p video.

The camera has a high-quality 3-inch non-foldable display and many more controls. It includes a top-view display for the controls, so you don't have to look at the screen at the back while switching controls. Dedicated buttons for all the other controls along with the two jogdials control pretty much everything. You rarely use the direc-



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Brand	Canon	Canon	Canon	Nikon	Nikon	Nikon	Nikon	Olympus	Olympus	Olympus	Samsung
Model	EOS 1000D	EOS 550D	EOS 7D	D3000	D300s	D3s	D5000	PEN E-P1	PEN E-P2	PEN E-PL1	NX10
Price (₹)	25,295 (kit lens incl.)	51,995 (kit lens incl.)	1,45,995 (with 15-85mm IS lens)	30,950 (kit lens incl.)	94,950	2,89,950	31,950 (kit lens incl.)	34,999	44,999	29,999	42,990
Overall (On 100)	46.99	70.49	73.55	49.52	71.77	77.06	56.31	59.31	62.36	59.51	64.48
Features (On 70)	28.84	49.79	53.97	31.22	52.12	55.32	39.36	43.26	46.76	43.61	47.08
Performance (On 30)	18.15	20.70	19.58	18.30	19.65	21.74	16.95	16.05	15.60	15.90	17.40
Specifications											
Sensor resolution (MP)	10.1	18	18	10.2	12.3	12.1	12.3	12.3	12.3	12.3	14.6
Sensor size (mm)	22.2 x 14.8	22.3 x 14.9	22.3 x 14.9	23.6 x 15.8	23.6 x 15.8	36.0 x 23.9	15.8 x 23.6	4/3-inch	4/3-inch	4/3-inch	23.4 x 15.6
Sensor type	CMOS	CMOS	CMOS	CCD	CMOS	CMOS	CMOS	Live CMOS	Live CMOS	Live CMOS	CMOS
ISO range	100 - 1600	100 - 6400	100 - 6400	100 - 1600	200 - 3200	200 - 12800	200 - 3200	100 - 6400	100 - 6400	100 - 3200	100 - 3200
Shutter speed range	1/4000 - 30	1/4000 - 30	1/8000 - 30	1/4000 - 30	1/8000 - 30	1/8000 - 30	1/4000 - 30	1/4000 - 60	1/4000 - 60	1/2000 - 60	1/4000 - 30
Burst shutter speed	3	3.7	8	3	7	9	4	3	3	3	3
Display size	2.5-inch	3.0-inch	3.0-inch	3.0-inch	3.0-inch	3.0-inch	2.7-inch	3.0-inch	3.0-inch	2.7-inch	3.0-inch
LCD Resolution (pixels)	230000	1040000	920000	230000	921000	921000	230000	230000	230000	230000	614000
Formats - RAW / JPEG / TIFF	Y / Y / N	Y / Y / N	Y / Y / N	Y / Y / N	Y / Y / Y	Y / Y / Y	Y / Y / N	Y / Y / N	Y / Y / N	Y / Y / N	Y / Y / N
Mic / HDMI-out	N / N	Y / Y	Y / Y	N / N	Y / Y	Y / Y	N / Y	N / Y	Y / Y	Y / Y	N / Y
Max video resolution	N/A	1920 x 1080	1920 x 1080	N/A	1280 x 720	1280 x 720	1280 x 720	1280 x 720	1280 x 720	1280 x 720	1280 x 720
Battery capacity (mAh)	1080	1200	1800	1080	1500	2000	1200	NA	NA	NA	1300
Memory cards support	SD / SDHC	SD / SDHC / SDXC	CF	SD / SDHC	SD / SDHC / CF	CF	SD card	SDHC	SDHC	SDHC	SD / SDHC
Weight (g)	450	475	820	485	840	1240	560	335	335	296	353
Performance											
Light scene	6	6.5	7.5	6.5	6.5	8	5	4	4.5	5.5	5.5
Flash test	7.5	7.5	5.5	5.5	6.5	NA	5	NA	NA	4	4
Macro	4.5	6.5	5	5.5	7	7.5	5	5.5	4.5	4	6.5
Video Quality	NA	6.5	6	NA	5.5	7.5	5.5	6.5	6	6	6
Quality (So10)											
Body	6	7.5	8	7	8	8	7	7	7	6.5	7
Buttons and dials	6.5	7	7	7	7	7	7	6	6	6	6.5
Ease of use	7	7	7	7	6	5	7	6.5	6.5	6.5	6.5
Interface	7	7.5	8	7	7	7	7	4.5	4.5	4.5	6
Bays	6	7	7	6.5	7	7	6.5	6.5	6.5	6.5	6.5
Screen	6.5	8	8	6.5	7.5	7.5	6.5	6	6	6	6

tion keys to adjust settings.

The direction button set has a thicker feel to it and you no longer get the easy-to-understand photo shooting mode dial. The ISO, image quality, white balance and even the shoot mode settings can be found on a separate dial which works in collaboration. In the interface, it's very similar to the D5000 and the D90 camera of yesteryear.

Samsung NX10

Samsung's NX10 is the unexpected entry into the DSLR crowd. Where as all the other brands has a history of DSLRs

and high-end cameras, Samsung is the one of the new players. The camera doesn't exactly fall into the single lens reflex digital cameras category.

The Samsung NX10 like most other four thirds has no optical viewfinder due to the missing mirror and prism. Instead, a LCD screen like



Samsung NX10

the ones found on ultrazoom (pseudo-SLRs) can be found on the camera. The body isn't too deep and the lens feels very slim as compared to DSLRs. The body feels tightly packed together although the lens could have been a little sturdier. The focus ring feels loose and flimsy, and it has no dead zone either. The zoom lens feels hard to move while reaching the extreme ends. In the hand, it feels alright. Since it's a pretty compact body, it's difficult to fit the camera in the palm of your hand. So you end up holding it like a point and shoot camera. At the same time, it's not exactly

feather weight with that lens.

The refresh rate on the display is top notch and there's hardly any detail visible. The viewfinder is another LCD, which isn't very good.

Olympus PEN E-P1

Olympus's PEN E-P1 was one of the first cameras to start the four third system craze. The body of the camera feels like a block of metal. It feels sturdy and its compact design is due to the micro four third systems like the Samsung NX10. While the Samsung had a small hand grip, the E-P1 is designed like a box, but a

Apple has a magazine

Flipboard is one of the Apple apps for iPad that grabs contents from your social networks and build you a digital personalized magazine, as it feels like one.

DSLR Comparison Test



Olympus PEN E-P1

sturdy metal box at that. Here, there is no digital or optical viewfinder so you are left to focus only using the 3-inch LCD. The front has a textured pad which makes the camera a little comfortable to hold. The lens doesn't feel great either – it's made of plastic

The interface looks dated and is nowhere close to the Nikon and Canon cameras. Being somewhat of a lifestyle product, we expected better. The controls can be a little confusing and operating it is closer to using a point and shoot camera than using a DSLR. The body gives out some heat near the controls at the back. The controls aren't very easy to use.

In the dedicated manual mode, there are two dials you can use – one which is normally used to zoom while previewing images, and the other ring that doubles as the directional buttons. We received two lenses from Olympus – one 17mm and the other 14-42 mm.

One of the biggest drawbacks of the camera is the flash. Due to its compact size, there's no inbuilt flash, so you are forced to buy one.

Olympus PEN E-PL1

The Olympus PEN E-PL1 has many similarities to the E-P1. The E-PL1 has a smaller 2.7-inch screen which is similar in quality to the E-P1. The E-P1 came with no flash but Olympus managed to squeeze in a really tiny flash on the E-PL1.

The buttons are smoother and softer than the ones on the E-P1. The data cable connection is positioned right under the flash mount. The lack of the jog dials on this camera means you are forced to use buttons a lot. Focussing on both these cameras isn't fast.

One of the settings the camera has, is the Art mode that allows you to special features that allows you to get a pinhole effect or tilt photography-like results. It does this at the cost of the processing performance. The frame rate of the LCD screen drops drastically when you enable the mode. This also happens when

you try zooming into the display while trying to focussing on distant objects.

Olympus E-P2

The Olympus E-P2 isn't much different from the E-P1 and E-PL1. The body has the similar build and we used the standard 14-42mm lens with the camera. The frame rate of the screen is decent while focussing, but the frame rates drop drastically when you switch to the HD video recording mode. The interface hasn't changed a bit either – it's very dull, boring and very much like a point and shoot camera. Focussing isn't as fast we'd like it to be. The ISO, autofocus, and white balance settings have to be changed using the buttons and then selecting the right option on screen. There is no concept of using the buttons along the jog dial like on a DSLR.

Nikon D3S

A first glance at this beauty from Nikon will leave any photography enthusiast gasping for breath. The full-frame Nikon D3S is the high end professional camera having ISO that can scale to ISO 12,800.

D3S has a solid grip, and the body is quite heavy at around 1.5 kg. The body is made for the Nikon FX series lenses, but it can




Nikon D3S

also house the DX series lens but with some expected compatibility issues. A vertical grip is integrated that adds to the solid feel. Even the command dials have a rubberised finish.

A second control display is located on the top right hand side of the camera. There is a provision to put in two CF cards at a time in the two slots.

The battery can allow shooting up to 1000 shots in one charge.


This camera is meant for professionals.



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Pune - 020- 2432 1298, Patna - 0612- 326 0947,
Raipur - 0771- 329 3674, Ranchi - 0661- 324 4199,
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Facebook's half billionaire

Facebook announced past week that it has reached 500 million active users around the world

PC control

Gmote is an application that converts your Android cell phone into a Remote control to control your desktop PC

Used with a compatible FX series of lens, it can be a joy for wildlife and sports photographer among others.

Canon EOS 1000D

The Canon 1000D has a strong body, but it lacks a rubberised grip. There is very little gap between the hand grip and the lens mount, such that your



Canon EOS 1000D

fingers will lock against each other while adjusting the lens at times. The layout of buttons around the screen is very neat. Navigating through the menus isn't overwhelming. It has a Liveview mode, but it doesn't have support for video shooting.

All in all this is a great camera for DSLR newbies to work around with, till they decide to graduate to the professional level. At a sweet price point of ₹25,295, it is highly economical.

Performance and final words

The Canon EOS 1000D and the Nikon D3000 lie at the bottom of the pyramid. They both come very close to each other in image quality. The colours on the EOS 1000D seem a little more saturated. Throw the D5000 into the

picture, and colour saturation on it seems a tad better. The D5000 on auto settings is a little better than the D3000 and Canon EOS 1000D. The 550D shares characteristics when it comes to colours and image sharpness with the costlier Canon EOS 7D.

When it was time to play with the Nikon D3s, it delivered what we expected it to. The highlight was its excellent performance in low light. It performs great till ISO 6400 sensitivity. At ISO 12,800, you need a tripod to get a sharp image. Noise is visible only at maximum zoom in most ISO's up to 6400. The test images we shot gave good colours and detail at 100 per cent zoom.

When we compared some of the shots of the Canon EOS 7D with the Nikon D300s, we found the colour saturation to better with the D300s. Image seemed softer on the Canon EOS 7D though. The cameras adjusted to the lightning and set very low ISO levels. Sensor noise was not an issue here.

With the four third system cameras, even the slight drop in sensor size results in a small drop in quality. Some grain is visible on the Olympus PEN series across all shots even when compared to the entry-level DSLRs.

Canon also arranged two additional lenses to play around with. One, the EF70-200mm f/4L USM zoom lens priced at ₹68,295. We used it with the EOS 7D and we found extremely handy at outdoor shoots. We weren't able to

HOW WE TESTED

All the test photos were taken using the automatic mode where the camera would set the best settings for the scenario and hopefully, take the best photos possible.

The test scene would contain a wide variety of objects and items that would be illuminated by pure white light to eliminate any possibilities of colouration. We ensured that the room was made pitch dark by covering all windows. All lights were turned off.

Three test shots were taken. The first one was the wideangle shot with no zoom used, the next with the zoom set to maximum and the third with the flash on. Each of these photos were compared with each other so we could rate the quality. We were looking for crisp images with properly focused objects and natural colours. We also rated the camera for their usability. Points were given for easy-to-use menus, quality of the body, dedicated controls, etc.

play around with it with the rain pouring down on us but anyone looking for a good lens for wildlife shoots, with a reasonable good camera such as the EOS 550D or EOS 7D should go for this lens. The other lens was the ₹61,995 EFS 15-85mm f/3.5-5.6 IS USM which makes for good wideangle shots but also can be used for some basic zoom similar to the 18-55mm kit lens.

We would highly recommend the D3S to anyone who is a serious full-time photographer. Our only concern is the pricing of ₹2,89,950 just for the body. You'll need to get compatible lenses to work on the camera though. It's our best performer with the EOS 550D getting the Best Buy award. As an all rounder, the EOS 550D is a great camera.

For enthusiasts like you and me, the Nikon D3000 will do just fine. You get the controls you always to play around with photography and you also get the improved quality. The Canon EOS 1000D is our

Best Buy winner. It maybe a little inferior in build and image quality, but at the price it's available at these days, it makes very good sense indeed. If you want video on your DSLR, then the slightly more expensive D5000 is an option to consider.

We weren't very impressed with the four third cameras. For one, the body may be compact but like most cameras, they come with zoom lenses which can't be compacted anymore. There's no way you can put one of these in your pocket unless you detach the lens. These cameras offer much improved image quality over point and shoots but not enough to match DSLRs. If we had to choose one from this format, it would be the Olympus PEN E-PL1. It's cheaper, but it shares a lot of characters with the E-PL1. If you're looking for ultimate quality from this format, then the Samsung NX10 wins. It's priced high at ₹42,990 though. It would be great if they were priced like ultrazoom cameras but they're not. They're often priced as much or higher than the basic DSLRs which people seem to going in for these days. Until we see those big drops in prices, things look bleak. **d**

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Timeline X

Acer, the world's second largest PC brand launched their latest line of notebooks powered by CULV Core i processors with an 8 hr battery life

BlackBerry tablet?

BlackBerry is expected to launch a tablet powered by a 1GHz processor by the end of this year

Michael Browne

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High-Definition is a buzzword that should have buzzed by your ears over the past two years with increasing regularity. And for good reason – HD content is here to stay, and for those who haven't gotten their fix yet, it has to be said – you're missing something. HD content is all around and the experience of watching a movie with every detail standing out is an experience. Ask anyone who has seen a Blu-ray version of *Iron Man*. A simple exercise for the non-believer – watch an HD 1080p resolution of the movie and then rent and watch the DVD version. When television service providers jumped on

Airtel and Reliance were clearly not interested in comparison tests for their TV broadcasting services. So this comparison consisted of Dish TV HD and Tata Sky HD – two popular services available all over the country. Earlier, we covered the features on offer by these two service providers, so we won't be covering a lot of features here. We also won't be covering the quality of regular (read non-HD) channels. For making the most out of the HD service, you will require an HD display, preferably one capable of 1080p which is called "full HD". The maximum resolution offered by both Tata and Dish TV is 1080i, 1080p is not possible as it requires significantly more bandwidth. Dish TVs HD service is called "Dish truHD", while Tata Sky calls

HIGHER DEFINITIONS

After testing various DTH and DVR offerings, we take a closer look at some of the latest HD variants available



to the HD bandwagon we were curious – after all, HD is an oft-abused term. HD also requires a lot of bandwidth, and airing TV channels in HD is no easy task, especially for a bandwidth deprived/restricted (take your pick!) nation as ours. Only a few select channels like National Geographic and Discovery are being aired in high-definition by providers; and we were curious to see how good the services really are. Remember that reception is a subjective thing that differs from region to region, so exceptions cannot be ruled out, but our testing happened in Chembur, Mumbai, out of our new office.

theirs "Tata Sky HD". These are premium services, and you can monitor the charges for Tata Sky HD here: <http://www.tatasky.com/hd/what-will-cost.html> and Dish truHD here: http://www.dish.tv/in/HD_MICRO-SITE/price.html. Existing customers get a waiver, and at the moment Tata Sky is waiving the installation charges, and offering existing users who upgrade a free subscription to their HD Gold Pack for a year.

Let's take a look at both the options now. The Tata Sky set top box is bigger than the Dish TV one. The remote provided is compact, but it fits the hand nicely. Build quality

is mediocre. Buttons are well laid out and the menu system is pretty intuitive and simple. The Dish TV remote unit is larger, while their set top box is smaller. The remote is much better laid out, with a separate button for games and a good dose of shortcut keys. The main TV menu has a much more intuitive and convenient division of channels. Instead of listing all channels like the Tata Sky interface does, Dish TVs setup divides channels under various headings, like Hindi movies, English movies, kids' entertainment, business news etc. An alphabetic listing is provided, but sadly, this isn't as useful as it sounds. When browsing through channels on the programme guide, the Tata Sky was faster at displaying the schedule of upcoming programmes, whereas on Dish TV, the schedule has a delay of 2-3 seconds. The volume on Dish

to conduct these tests. The display supported multiple HDMI inputs – just what we needed for quickly swapping between both services. We used two HDMI cables to be able to swap between the Tata Sky and Dish TV for testing HD quality. While we could set a channel on Tata Sky and switch to it from Dish TV using the select source on the TV, we couldn't switch back to the Dish TV channel, the Dish TV box requires a restart before it works. This was annoying because every time we had to restart the Dish TV box and re-select the channel. It also spoiled the continuity of viewing that is important to discern finer differences. With the same settings for colour and contrast, the colour on the Dish TV setup seems a little more saturated. There is slightly more noise visible especially in faster moving scenes, and also a little less detail in fast action scenes. Pixellation



TV is slightly louder than the default volume on Tata Sky, and this was noticed mostly with the non-HD channels, although there is a slight difference in the volume of HD content as well.

We used a VU 42-inch LED-backlit, full HD display

on non-HD content seems to be more apparent when compared to Tata Sky, and the noise level with HD content is definitely higher. There also seems to be some minor tearing happening in fast scenes, although this visible with 24p content (movies) and not 30p (television) content.

Egg vs. chicken

Supercomputer HECToR has helped British scientists in their research and provided the result that the chicken came before the egg

Fair and handsome

Vaseline launched a controversial Facebook app in India that makes men's profile pictures look fair

HD DTH test

And that wasn't the end of the weird occurrences on Dish TV – we couldn't get the 1080i content to natively fit the screen for any of the Zee channels. When the base resolution is the same i.e. 1920 x 1080 pixels, the content should occupy the entire screen without the ugly black bars to maintain the aspect ratio. The quality of Zee Cinema HD looks decent, at a distance, but from 10-feet away there is noticeable noise, and also a surprising loss in finer detail, that should not be present in native 1080p content. Zee TV looks a little better, but there is a marked loss of detail in finer textures, and darker colours lose detail. For example, human hair appears as a black mass, with a lot of noise, unlike typical 1080p/i content where the texture and detail is evident. It's almost as if the Zee

channels are being shot in lower resolutions and upscaled. Nat Geo HD works perfectly with the 16:9 aspect ratio and we got a good chance to compare this with Nat Geo HD on the Tata Sky – in our opinion, the Nat Geo on Dish TV looks slightly better – there is good colour that is tonally accurate, and pretty good detail. Discovery HD also looks very nice, and is about at par with Tata Sky's broadcasting of the same. For Tata Sky there were only two channels available in HD – Discovery HD and Nat Geo HD, there was another channel that was an on demand movie channel that we didn't have access to. Tata Sky gives very good quality on both the channels, what we liked was the neutral colour, and great detail. Nat Geo HD looked slightly better on Dish TV with margin-

ally more detail in some of the moving scenes, but the colours were more neutral on Tata Sky; Tata Sky also had less of an issue with noise in the colour black.

Both providers will be adding additional channels to their repository in the coming months. Tata Sky openly announces plans for Star Plus and Star Movies to be broadcast in HD on their website, while Dish TV is a little more secretive with their plans. At the present, two and three HD channels might not seem much to brag about, but channels like Discovery and National Geographic are ones where the extra detail is really required – watch a chameleon change colour, or a leopard bring down its prey in high-definition, and, trust us, you won't want to go back to blurry, detail-less, silly old

Box connects

Tata Sky

RF in, RF out, USB – 2, HDMI – 1, Coaxial (audio) – 1, Component – 1, Composite – 1

Dish TV

(Zenega D-6000 HD): IF in, IF out, USB – 1, HDMI – 1, optical (audio) – 1, Component – 1, Composite – 1

standard definition content. If you're looking to take the plunge, you might want to wait a few months, till a few more channels hop aboard the HD bandwagon. And services will become cheaper as the adoption goes up, and competition gets tougher. For now, we'd stick with the Tata Sky HD, simply because their HD quality is at par with Dish TV on the whole, they have better deals, and their SD channels are better looking. However, they're also the ones with bigger promises to live up to. 



The advertisement features a blue background with a collage of photos showing people in various settings. In the foreground, two Adata C906 USB drives are displayed: one black and one silver. The text 'We've got what you are looking for' is prominently displayed in a bold, blue font. Below this, the text 'Classic Series C906' is visible. At the bottom, the Adata logo is shown with the tagline 'Love Life. Drive it.' and the website 'www.adata-group.com'. To the right, it mentions 'Authorized RMA Service Center for ADATA branded products.' and 'ACCEL FRONTLINE SERVICE PARTNER'.

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Authorized RMA Service Center for ADATA branded products. **ACCEL FRONTLINE SERVICE PARTNER**

Google Cloud Print

Google's Cloud Print plans to enable any application on any device (desktop or mobile) to print to any printer via the cloud

Dye Sublimation

A printing process that uses heat to transfer dye onto a medium such as photographic paper or fabric using cyan, magenta, yellow colours and an overcoating layer



Ever since we have replaced film cameras with digital ones, physical photo albums have become a rarity. We present some photo printers that will help you rekindle that old tradition.

Nimish Sawant

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Photography has become accessible to everyone around us. We click more photographs now than we did say ten years back. But one common complaint we come across is that the photographs can only be viewed on a screen. That romanticism of actually touching real photo prints has definitely reduced since we decided to replace the camera roll with an SD card. How cool would it be to have the photo developing studio come to you than the other way round?

Photo printers are slowly but surely catching on. Every major printer manufacturer has some printer to address this growing need. We tested around 7 printers

(yeah we know that is not a great number). We contacted the respective brands well in advance, but with poor response as well as some damaged products dropped numbers. We managed to test one compact photo printer.

These printers are ideal to be used at homes or in small office setups. Not only do they print photographs, but can also be used for other work like printing documents or CD and DVD covers in some cases. The printers that we got for testing are quite different from each other in various aspects, where some can do WiFi, others come in wonderful form factors; some come with a modest two ink cartridges whereas some as many as eight.

Canon PIXMA iP3680

Canon PIXMA iP3680 is an inkjet colour photo printer. Its design is similar to other Canon PIXMA models like iP2680, iP1980 etc, coming in a rectangular box having rounded edges with a black glossy finish throughout. It's a practical design with just two buttons on the right hand rounded edge for power and cancelling printing. The iP3680 uses CMYK dye cartridge ink and a pigment black ink.



Canon Pixma iP3680

cartridge for high contrast text on a plain white paper. The build quality of the printer is quite decent. Tray quality is a bit poor as the hinges around it tend to shake a lot. It only has two connections viz: power connection and the USB interface.

After powering on the printer, the first task involves installing the five ink cartridges. Before installing the cartridges, you have to attach the print-head in the correct manner. While installing the drivers you get a prompt to test a print page for alignment of the printer head. As this is a photo inkjet printer, the glossy photo paper should be inserted from the rear side whereas the normal A4 paper should be fed via the cassette located at the base of the printer on the front side.

Opening the front panel opens up the output tray. The cassette has a capacity of around 150 pages. The output collector tray is located just above the base cassette and comes out in the form of a ramp. The iP3680 has support for PictBridge. It comes bundled in with its regular set of softwares like Canon Solutions, Easy PhotoPrint EX. The user interface of the printer is quite user friendly. Printer is ideally suited for home and SoHo users.

Performance

The iP3680 prints at a decent speed, neither too fast, nor too slow as compared to the other printers. It took around 30.9 seconds for a quality mixed document print where as an economy print took 22 seconds. Quality of the print was quite satisfactory. In the photo tests it performed decently, specially in Photo 3 which was a portrait shot of



Pencil Printer

XPencil printer designed by Hoyoung Lee of Yanko Design uses lead shavings as ink when printing, which can later be erased

Bronzing

An effect which imparts a metallic bronze-colored sheen to areas of the print based on the amount of ink in the printed area

Photo printer test

two sisters. The colours do not over saturate at any point.

Price: ₹5,595

Canon iP100

A lot of the ultra compact photo printers in the market are capable of doing only 4x6 inch print. Imagine carrying a portable printer that can do A4 prints just as good as it does 4x6 inch prints. Canon iP100 is the portable inkjet printer whose form factor is such that it can allow easy mobility. It's an upgraded version of the Canon iP90v.

The simple design philosophy of the other Canon iP series of printers is followed in the iP100 too. The printer that we got has a smooth silver matte finish all through out with glossy black side panels. A single black line on the top panel has the Canon logo and the model number. On the outer surface, there are no buttons or any kind of operational panel. Power connector port is present on the left hand side whereas the USB port is on the right hand side of the printer. This printer can run on batteries. It comes with an external battery which fits into a plastic slot. This slot has to be screwed on the rear side such that the battery ports are properly inserted in the space provided on the rear side.

Build quality of the printer is quite sturdy despite the small form factor. The same cannot be said for the tray quality though.



Canon iP100

The top panel opens up and acts as the feeder tray, whereas a front panel acts as the output collector tray. Due to the small height of the front panel, you will have to either collect each outputted paper manually or keep the printer with some desk space in front of it so that the output is manageable.

On opening the top panel, one comes across the two buttons viz: power and paper clearing button. The cartridges can be inserted by opening the panel alongside the buttons. Setting up the ink tanks should be done carefully as it is slightly different from the standard cartridge.

PictBridge is the only connectivity option present on the printer. It does not support printing from a memory card and also it does not have any network printing support.

Performance

Do not go by the size of the printer, as its performance is up there. It performed well in all the photo tests, coming out tops in most of them in terms of quality. However, one thing that was upsetting was the time it took to print a mixed document - 101 seconds. Specially when you compare this

with how quickly it prints the photographs.

It took 171 seconds for Photo 1 and 221 seconds for Photo 3, which was 20 to 30 seconds faster than the Canon iP3680.

₹15,695

Epson Stylus PHOTO TX700W

Epson printers are impressive to look at and Stylus Photo

TX700W does not disappoint on that count. Coming in the traditional black plastic body with a glossy finish with a matte finished top panel. The top portion of the all-in-one is the scanner section having a flatbed type of scanner. It uses as many as six ink cartridges



Epson Stylus PHOTO TX700W

namely CMYK, light magenta and light cyan. The front panel can be broadly divided into three sections viz: the feeder trays, the operational panel and the memory card and PictBridge slots. The design is quite interesting with the feeder as well as the output tray located on the front facing panel. Tray quality of the cassette is quite impressive and it has an additional tray on top to print CD covers. The trays have grey coloured movable locks for various size of papers ranging from 4x6 inches to A4 size.

Memory card slots are present on the right hand corner. There is a slot for SD/MSPro/xD card and another one for CF cards. A PictBridge port is present just beside the card slots, allowing you to print off a camera directly without then need of a computer.

The operational panel on the printer occupies the place of pride. The left hand portion comprises the power

button, a CD tray indicator and a four-way home button which allows you to directly switch modes from copying to printing to scanning. In the centre we have a 2.5-inch colour LCD screen. Navigating through the various menus on the screen is quite simple with the help of the navigation buttons beside the LCD screen. The operational panel can go from a front facing orientation to a top facing orientation by pressing the unlock button on its corner. There is a blue light which is on when

the printer is working. The all-in-one has lots of connectivity options like network printing, bluetooth, WiFi, memory cards and PictBridge. Setting up the WiFi functionality throws up many issues.

Performance

The TX700W is blazing fast as compared to the other printers. But one annoying aspect we discovered while printing was that when the photo prints were nearing the end, the glossy paper used to get stuck to the rollers and move sideways thus ruining the base of each photo print. Now whether this was the problem with this particular piece, we can't be sure. This affected its performance scores. It took 120, 126 and 140 seconds for Photo 1, Photo 2 and Photo 3 respectively. Photo 3 gave a good output giving crisp colours. Printing off a memory card also too under 75 seconds which was the fastest amongst all the printers.

Price: ₹13,999



Droid X sells out

Motorola's Droid X sold out online on the first day and is running short on supply



HP Designjet 3D

HP's Designjet 3D printer is capable of turning 3D CAD drawings to tangible prototypes using molten plastic layers on top of one another to give 3D models

HP Photosmart C4688 and C4788

HP sent us two printers from the Photosmart series namely C4688 and C4788. Both these printers are completely iden-



HP Photosmart C4688

tical except for the fact that C4788 has the WiFi connectivity option whereas the C4688 does not. Both the models are all-in-ones having functionality of scanning and copying apart from the regular printing. The all-in-ones come in an all



HP Photosmart C4788

black glossy body with the HP logo emblazoned on the top panel. The front panel is somewhat unconventional in terms of aesthetics as it isn't smooth one body front panel. It is covered by the input feeder tray which reveals the printer paper rollers on opening. To insert the tri-channel colour and black cartridge, one has to open the front panel after lowering the input feeder tray. There is no paper collection or output tray. The paper comes out from the front portion. A grey plastic extender tray is located under the input tray which when ejected out lies perpendicular to the input tray and prevents the output paper

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HP	HP India	99535 99212	bharat.kharbada@hp.com	www.hp.com

from falling off. Tray quality is quite sturdy in both the printers. Apart from the power button, there is no other button on either of the all-in-ones.

A 1.45-inch colour LCD screen is located on the left hand top edge. We felt that the screen size is quite small and the fonts used even smaller. However, the touch sensitive controls located around the screen are a welcomed addition. There are three controls like OK, back and don't select (denoted by an X) on the left hand side whereas three selection slits on the right hand side.

Performance

HP Photosmart printers are slow operators. Pain-

fully so in some cases. Photo 2 and Photo 3 took over 5 minutes for C4788 and around 7 minutes for C4688. The quality was not the best among all the printers. It fared well in the sample photo tests (photo 1 and photo 2) but in the portrait photo (photo 3) it was not that great. C4688 tended to oversaturate the colours giving. Also, the skin tones looked somewhat overtly bright in C4688. Printing off a memory card also took 249 seconds and 302 seconds for C4788 and C4688 respectively.

Price: ₹7,570 (C4688) and ₹6,267 (C4688)

Epson Stylus Photo R1900

An upgrade from the older R1800, the Epson Stylus Photo printer R1900 was the only A3 photo printer that we tested. This printer occupies a lot of space thanks to its relatively

greater dimensions to accommodate the A3 paper. Both the input feeder tray and output collector tray extend outwards from the plane of the printer, so you need sufficient space on your desk to accommodate the R1900.

It comes in a black and silver body. There is no operational panel, only four buttons on the top. It has very limited connectivity options. There is a PictBridge slot on the lower left hand corner. R1900 does not have network connectivity, instead it has two USB interfaces to connect to two systems at a time.

This printer has as many as eight cartridges. There are two black cartridges namely Glossy black (GBK) for glossy paper prints and matte black (MBK) for matte photo papers. In addition to the regular cyan, magenta and yellow cartridges there are red and orange car-

HOW WE TESTED

For the photo printer we used the same rig as we have used for all the printers in the past i.e. an Intel Pentium 4 with 2 GB of RAM. As this was a photo printer test, we had tested the printers using three test photographs. Photo 1 was the photo we use for all our printer tests, which covers a wide gamut of objects, patterns, faces etc. Photo 2 was another sample photo which had only objects shot against a black backdrop. This helped us assess the quality of black colour printed. Photo 3 was a human portrait showing two sisters. We also included one mixed document print test to check all

the printers, as you would also use the photo printer to print documents.

We identified 6-7 regions in each of the photograph and gave a score out of 10 to each region as compared to other printers. An average of this score was assigned as the Quality score in the log sheet. This was done so as to cover all aspects of the printout rather than be biased by one particular aspect of the printout.

Apart from the printer performance, we also gave points to the features offered by the printer. Those having extra connectivity options like PictBridge, memory

card support, wifi, network etc had an edge over others. Ease of installation, build quality and printer setup was also evaluated for each printer.

Although we had given clear instructions to all the participating brands that we were testing only the photo printing prowess of the printer, we got a couple of printers with a scanner and copier functionality. So to prevent an unfair advantage to the pure photo printers, we did not allot any weightage to copiers and scanners. But just to give you an idea of their importance, we recorded the timings.

Brand	Canon	HP	HP	Canon	Epson	Epson	Canon
Model	PIXMA iP 3680	Photosmart C4788	Photosmart C4688	PIXMA iP100	Stylus Office TX700W	Stylus Photo R1900	Selphy CP780
Price (₹)	5,595	7,570	6,267	15,695	13,999	39,999	5,995
Grand Total (Out of 100)	47.55	50.18	42.51	47.48	76.52	49.79	NA*
Features (Out of 40)	9.20	17.30	13.30	8.70	31.30	9.18	NA*
Performance (Out of 60)	38.35	32.88	29.21	38.78	45.22	40.61	NA*
Features							
Maximum print resolution (dpi)	9600 x 2400	4800 x 1200	4800 x 1200	9600 x 2400	5760 x 1440	5760 x 1440	300 x 300
Power Saving Mode (Y/N)	N	N	N	N	N	N	N
Duplex printing (Y/N)	N	N	N	N	N	N	N
Ink Saving Mode (Y/N)	N	N	N	N	N	N	N
Zoom / Fit to Page (Y/N)	N	Y	Y	N	Y	N	N
Colour Correction on printer (Y/N)	N	N	N	N	Y	N	N
Size of display on printer (inch)	NA	1.45	1.45	NA	2.5	NA	2.5
Number of Cartridges Used	5	2	2	2	6	8	1
Cartridge Colours	CMYK Black	Colour,Black	Colour,Black	Colour, Black	CMYK, Light cyan, light magenta	Photo Black, Matte Black, CMY, red, Orange, Gloss optimizer	CMYO
Scanner (Y/N)	N	Y	Y	N	Y	N	N
Print Memory	NA	64 MB	64 MB	NA	NA	NA	NA
Connectivity							
PictBridge Support (Y/N)	Y	N	N	Y	Y	Y	Y
USB Flash Drive Support (Y/N)	N	N	N	N	N	N	N
Network printing support (Y/N)	N	N	N	N	Y	N	N
WiFi support (Y/N)	N	Y	N	N	Y	N	N
Bluetooth Printing (Y/N)	N	N	N	N	Y	N	N
Memory Card support (Y/N)	N	Y	Y	N	Y	N	Y
Fax (Y/N)	N	N	N	N	N	N	N
Performance							
Photo 1 (Quality)	5.83	6.16	5.58	6.25	5.75	4.17	6
Photo 1 (Time)	191	277	348	171	120	46.5	58.3
Photo 2 (Quality)	5.5	6.08	5.83	6.25	5.08	5	5.6
Photo 2 (Time)	183	326	414	196	126	165	58.2
Photo 3 (Quality)	6.7	5	4.1	6.6	6	5.8	5.8
Photo 3 (Time)	253	358	451	221	140	177	58.5
Mixed Document (Quality)	4.35	4.71	4.71	5.42	5	4.29	NA
Mixed Document (Time)	30.9	74	71	101	54.2	37.4	NA
Mixed Document (Economy)	5.5	3.5	3	5	2	2	NA
Mixed Document (Time)	22.1	14.5	16	25	12.3	21.1	NA
Printing Photo 3 off USB/PictBridge/Memory card (Time)	330	249	302	259	74	150	69 (pictbridge), 74 (SD card)
Scanning (Time)	NA	40	37	NA	25	NA	NA
Copying (Time)	NA	38	41	NA	36	NA	NA
Miscellaneous							
Bundled Cables	Power cable, USB cable	Power cable, USB cable	Power cable, USB cable	Power cable, USB cable	Power cable, USB cable, LAN cable	Power cable, USB cable	Power cable, USB cable
Software Supplied	Canon Utilities	HP Solution Centre	HP Solution Centre	Canon Utilities	Epson Easy Photo EX	Epson Print CD software	Canon Utilities
Dimensions (W x D x H)(mm)	431 x 296 x 153	442 x 421 x 169	442 x 421 x 169	322 x 185 x 62	446 x 385 x 150	617x322x2136	176 x 132.6 x 75.6
Weight (Kg)	5.6	4.6	4.6	2	9	12.2	0.94
Build Quality							
Body	6	6.5	6.5	6.5	8	6	7
Folding / Hinges	6	7	7	5	7	6.5	7
Tray Quality	7	6.5	6.5	4	7.5	7.5	4
Buttons	6.5	7	7	7	6.5	6	6.5
Ease of Use							
Hardware Connections	7	7	7	7	7	7	7
Cartridge Installation	6.5	6.5	6.5	5.5	6	6	6
Paper loading	6.5	7	7	6.5	6	6.5	6.5
Software User Interface	6.5	6	6	6.5	6.5	6	6

* No score was given to Canon Selphy CP780 as it's a 4x6 inch printer while all others were scored for A4 prints

Facebook at a theatre near you

'The Social network', a movie on popular social networking site Facebook is to be released on October 01, 2010

tridges. Apart from the seven colour cartridges there is a gloss optimizer (GO) cartridge. GO helps in reducing the effect of bronzing - a phenomenon where if you look at a glossy print from an angle, light will reflect differently on areas with little ink than from areas having lot of ink. R1900 allows

you to minimise this problem by spraying the entire print with a gloss optimiser spray. Installing the cartridges is quite straightforward. Setting up the printer is easy. The R1900 also has a provision to print CD and DVD covers. there is a separate tray to insert the cover paper.

Performance

R1900 performed well in most of the tests when it came to speed, but its quality was not as good as we expected from a printer having eight cartridges. We rechecked the cartridges to

see if the bundled cartridges were inserted in the correct slots. Inspite of that, we noticed a slightly dull printout. All the printer settings were at default. Photo 1 lacked contrast. Photo 3 which had human subjects appeared really nice though, with skin tones that weren't too bright, a problem we noted with many previous printers. Mixed document printing also strictly OK, nothing great to talk about in the quality of the print.

Price: ₹39,999

Conclusion

Epson Stylus Photo TX700W was awarded as the Best Performer for its fast, good quality print speeds. HP Photosmart printers gave good quality prints as well, but they took insane amount of time because of which they lost out in the performance scores. Moreover,

TX700W comes with myriad features like WiFi, Bluetooth and also functions like copier and scanner (no points were awarded for these functionalities though).

Best Buy was awarded to Canon iP3680 for its sweet price point of ₹5,595. Its performance outscored both the HP printers.

Apart from these printers, we felt that the pricing of Canon iP100 is way off the mark. It is ideal for someone who is constantly travelling and wants instant printouts. The additional battery provided with the printer can be a boon in places where there is no provision of direct power.

Epson R1900 is strictly meant for office use. It's not feasible for home use as it will need a large desk space plus it does not make economic sense to print A3 prints at home. 



Epson Stylus Photo R1900

Canon Selphy CP780

Ultra compact portable printers are flooding the market, thanks to digital cameras becoming a necessity in our lives. The joy of physically flipping through photo albums cannot be matched. Canon Selphy CP780 is one photo printer that can be used to quickly take 4x6 inch prints of your photographs either from the PictBridge port or the variety of memory card slots. The compact size makes this photo

printer extremely portable. It also has a provision to add an external battery, thus reducing the need for a power source. However, the model we tested was done using a power source. Canon Selphy CP780 comes in a white plastic body with a silver top portion. There is a 2.5 inch LCD screen which is surrounded by the operational panel buttons. The top portion has a wavy design making it quite attractive to look at. All the buttons like power, menu, back, print and navigation buttons are rubberised. The printer comes with two trays, one for a postcard size paper and the other for a visiting card size. These trays have a two way plastic panel acting as a lock. There is no output collection tray. On the right hand side is the slot to insert the ink rollers. It has PictBridge port on the left hand side whereas the memory

card slots populate the left hand corner on the front panel. It has support for SD/mini SD/MMC+/RS-MMC/CF/MS/MS Duo cards. Due to the compact size, this printer makes use of printing by dye sublimation technique. These print the photograph by passing the photo paper through the rollers four times, once each for each of the C,M,Y and the overcoat layer. It is fascinating to see the photograph being developed as it passes through the rollers and superimposing the individual colours to get the final output. The overcoat layer forms a thin laminative protective covering over the photo to prevent discolouration from UV light and air.

Performance

This printer is quick to print 4x6 prints. It took around 58 seconds

each to print the three test photos. The glossy paper that Canon bundled along with the ink cassette has perforations on either side. It is advisable to not get rid of the perforations till the photograph is printed. One thing that disappointed us, in this otherwise fast printer, was that while printing borderless, some portion of the image leaked into the perforated sides. The colours are quite vibrant. But we noticed a prominent layer of dust or some sort of noise on the darker portions of the photograph. This may be due to microscopic dust being deposited on the photo before the overcoating. We tried our best to print it in a clean environment, but the noise never reduced. We couldn't compare this printer to the others in this for the sake of fairness.

Price: ₹5,995



“My elder brother lets me use his bike”

GRASS

Cricket Today. An addiction for over 29 lakh men.

When it comes to winning hearts of young Indian men, Cricket Today emerges as the clear winner. And we don't claim that. The IRS 2009R2 report proves that. According to this survey, Cricket Today is much ahead of Stardust, Femina, Autocar, Digit, Wisden and many such magazines. In other words it means that Cricket Today is not just a sports magazine. In fact, it is the most stylish and sleek lifestyle magazine that caters to upwardly mobile Indian males. The reason why men just can't help getting addicted to it.

Cricket
_lifeline_of_Cricket_ today

IRS 2009R2- Total Readership Figures(In lakh): Cricket Today- 29.15, Filmfare- 20.64, Stardust- 16.54, Femina- 10.01, Autocar- 8.64, Society- 5.49, Digit- 5.34, Overdrive- 3.55, Cosmopolitan- 2.11

*Combined English & Hindi figures. All figures as per IRS 2009R2.

www.crickettoday.com



NSN eats Motorola

As part of a planned breakup, Motorola Inc is selling its wireless network division to Nokia Siemens Networks for a sum of \$1.2 billion

Help wanted

Mozilla has upped the ante by now offering \$3000 to security researchers for reports on security bugs in its applications

ZOTAC GeForce GTX 460

NVIDIA GTX460 arrives

ZOTACs GeForce GTX460 reaches the test centre. With the highly anticipated and delayed launch of their GTX400 series cards, NVIDIA's next in line is the GTX460. AMD already has a head start with most of their cards.

The GTX460 goes head-on against the Radeon 5850, their somewhat affordable cards. Straight on to the specs, the 40nm GTX460 comes in two variants - 768MB memory with the 192-bit memory interface and the other with 1GB with the 256-bit interface. The ZOTAC card we've tested is the 1GB version. The core speed of the GTX460 is 675MHz, and the GPU houses 336 CUDA cores (as NVIDIA

likes to put it) and 56 texture units. These cards like the other in their series are DirectX 11 and OpenGL 4.0 compliant.

The ZOTAC GeForce GTX460 uses the stock cooler that keeps the card adequately cool. There are two DVI ports, an HDMI and a DisplayPort connector. The performance of the card through the benchmarks shows that the ZOTAC 1GB card with its superior memory bandwidth has an advantage of around 3 per cent in most games, which it loses out with games such as *Company of Heroes*. 3D Mark Vantage only shows a difference of 0.5 per cent between them. Both the GTX460



cards don't quite match up to the Radeon 5850 as expected.

However, the GTX460 cards are priced quite lower than the Radeon 5850. At ₹14,999, the ZOTAC GTX460 is close to ₹3,500 cheaper than the ASUS overclocked GTX460. With the superior bandwidth, there's little difference in performance, so there's really no confusion. The ZOTAC is the better of the two cards as far as value-for-money is concerned.

Specifications

GeForce GTX460 675MHz GPU, 1 GB GDDR5 256-bit memory interface, Connects: HDMI, 2 DVI, DisplayPort, DirectX 11 and OpenGL 4.0 compliant

Contact

Aditya Infotech Ltd
Phone: +91-11-4666 5666
E-mail: sales@adityagroup.com
Web site: www.zotac.com
Price: ₹14,999

7.5
10

Features 7.5
Performance 7.5
Build Quality 7
Value for money 7.5

ASUS ENGTX460 TOP

Already an overclocked GTX460

Specifications

GeForce GTX460 700MHz GPU, 768 MB GDDR5 192-bit memory interface, Connects: 2 DVI, 1 HDMI port, DirectX 11 and OpenGL 4.0 compliant

Contact

Vinay Shetty
Phone: +91-22-6766 8800
E-mail: reachus@asus.com
Web site: www.asus.in
Price: ₹18,450

7
10

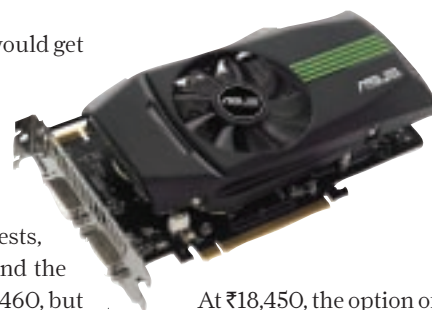
Features 7.5
Performance 7.5
Build quality 7
Value for money 6

The second of the two meteors to land was the still scorching ASUS ENGTX460 TOP. The card is a 768MB, 192-bit version of the GTX460 with the other feature set constant.

The first thing to notice is the custom cooler with 2 heat pipes. We later noticed that the temperatures weren't too different from the ZOTAC card - on idle or load. If you were looking for a pretty looking

card, then the ASUS would get more points.

The overclocked card should be able to make up for the lower memory bandwidth. Across all the tests, it stayed slightly behind the ZOTAC GeForce GTX460, but nothing that would be visible while gaming. It managed to keep up with the other 1GB 256-bit card. Scores for the card are given in the table below.



At ₹18,450, the option of overclocking it a little more is the only incentive you have. If that's not on your mind, then the ZOTAC GeForce GTX460 is the way to go.

Brand	ASUS	ZOTAC
Model	ENGTX460 TOP 768MB	GeForce GTX460 1GB
3D Mark Vantage (Overall)	14692	14766
3D Mark Vantage GPU	12025	12111
Crysis Warhead (1680 x 1050, DX 10, Enthusiast)	25	26
STALKER Clear Sky (Day, 1680 x 1050, 4xAA, DX10, Extreme)	28.9	29.8
Far Cry 2 (1680 x 1050, Ultra High, 4x AA)	76.67	80.09
Company Of Heroes: ToV (1680 x 1050, 4x AA, Max Detail)	101.4	97.6

Firefox on iPhone & iPad

Firefox Home is now available as a free app to browse content on the iPhone & iPad

Linux to dominate

According to market survey, Linux will have a bigger chunk of the pie by having a market share of 62 per cent in the non-smartphone category

Bazaar

Dell Inspiron 560s

Small (cheap) wonder

The new Dell Inspiron 560s comes in a slim, attractive package and at ₹25,400, it's very affordable too. The cabinet has been designed in a way that it can be placed horizontally or even vertically. The DVD drive eject buttons are hidden away and the bright glossy front only has buttons for the power switch, USB ports and audio connectors.

As far as system configuration's go, it's very basic but the Core 2 Duo E7500 along with 3 GB of memory has enough punch to do most tasks. The ATI Radeon 4350 has enough power to play HD movies as

well as to play some basic games.

Performance is modest in all aspects. PC Mark Vantage churns out 5225 points, while video encoding of a 100 MB file took 47 seconds. *Doom 3* demo run ended up with an average frame rate of 97.8 fps at medium detail at a resolution of 800x600. This is very decent for a system priced at this price.

We didn't notice any heating up issues, neither was there any vibration or noise from the cabinet. A simple heatsink cools the processor, but there's



a slow fan on top that helps in expelling some heat.

As a customer, you get five different colours to choose from for the case. We like the fact that you get essential gaming performance from a PC this cheap. Those looking for assembled systems can safely go in for one of the Inspiron 560s that come with a discrete graphics solution and rest easy.

Specifications

Intel Core 2 Duo E7500, 3 GB RAM, ATI Radeon 4350 Graphics card

Contact

Dell India Pvt. Ltd.
Phone: +91-80-2506 8026
E-mail: Suhas.j@dell.com
Web site: www.dell.co.in
Price: ₹25,400

6.5/10

Features.....	7
Performance.....	7
Build.....	7
Value.....	5

Vu LED-40T28R

'Vu'ing has a price

Specifications

40-inch screen, 1920x1080 resolution, composite/USB/coaxial/D-SUB/components ports, 2X10W internal speakers

Contact

VU Technologies
Phone: +91-22-2837 7300
E-mail: info@technologies.vu
Web site: www.technologies.vu
Price: ₹70,000

Vu LED-40T28R is a 40-inch LED TV with a black glossy finish and with just 10 watts per channel for sound. It's one of the first LED backlit TVs from Vu.

The stand looks good and is sturdy. It provides the facility of horizontal swivel to the television. However, it doesn't come with any clear wall mounting provisions although the manual says it does. The bezel is thicker than we'd like.

The ports at the back are smartly arranged to save space. The horizontal swivel is good but we've seen better swivel with some of the brands we've tested. The touch-sensitive buttons on the TV placed on



the right bottom, are easy to handle, even at night. The menu is simple to use, but Vu could have worked a bit on the aesthetics and design a little more. The TV is very thin at just 3.5 cm in depth, but it goes to 26cm if you're using the stand.

Viewing angles are also good. The internal player for

USB data is decent, can play HD content which is surprising. We wouldn't recommend depending on it for all your HD playback, because there are quite a few popular formats it won't play.

When it comes to the display quality, this television doesn't impress. Most of the images and movies show clear

banding.

At ₹70,000, it's costlier than a standard LCD TV. In performance, it's certainly not bad, but we would still recommend going in for a regular LCD TV for a lot less. We've seen Vu coming out with better products and this is just one more of those.

6/10

Features.....	6.5
Performance.....	6.5
Build Quality.....	7
Value for Money.....	5

Modern Kitchen

Oasis is a interactive countertop technology from Intel that will teach you how to cook

Pole dance by bike

Kevin Scott, a young U.K. industrial designer, has invented a bicycle with a flexible frame that allows it to be locked to a pole without using a separate lock

BenQ V920

Slim and Sturdy

BenQ V920 is a slim 18.5-inch LED monitor. It has a sturdy build, with no horizontal or vertical swivel. The build quality is poor as the components used for height adjustment are not impressive. The metal clip at the back panel for height adjustment looks odd. The key feature of this monitor is low power consumption.

Unlike the width of this monitor, we were not quite impressed with its performance. We could see banding in the Displaymate tests. Also while watching high definition videos, we could see shaded bands in the outdoor scenes. *Crysis* did not look very immersive. Apart from being slim we could



not find any other impressive features for this monitor. We missed the swivel and height adjustment feature as well. Also, the OSD keys are difficult to use.

If you want to save space and you want to have better

energy efficiency, you may go for this monitor. But at ₹8,999, we don't recommend this monitor to our readers. You may get a better performing and bigger monitors for this price like 20-inch LG 2043T, 22-inch AOC 2236VW.

Specifications

screen size: 18.5 inch;
interface: DVI / D-Sub;
1366×768 resolution;
thickness: 14mm; response
time: 5ms; power: 17W

Contact

BenQ India Pvt Ltd.
Phone: 1800-419-9979
E-mail: sales.enquiryin@
BenQ.com
Web site: www.BenQ.co.in
Price: ₹8,999

5/10

Features 6.5
Performance 5
Build Quality 5.5
Value for money 5.5

Specifications

Capacity : 500 GB;
Weight : 140g; Dimensions
(WxDxH in mm) : 115x12x76;
Interface : USB 2.0;

Contact

Verbatim Marketing
India Pvt Ltd.
Phone: +91-11-4652 5661
Email: customerservice@
verbatim.co.in
Website: www.verbatim.com
Price: ₹3,500

6.5/10

Features: 6
Performance: 6.5
Build Quality: 7
Value for money: 6.5

Verbatim Mobile Hard Drive

Affordable drive with performance

Verbatim's 500 GB mobile hard drive is quite portable and has a sleek black glossy body. The build quality is quite strong, but the glossy body is a dust magnet. It is one of those portable drives that have an option of operating in the Turbo mode which claims to enhance the speed of the drive.

We tested the drive on an Intel X58 motherboard with an Intel Core i7 965 processor, Corsair 4 GB DDR3 RAM and a Corsair 620 W power supply.

The drive gave decent scores. In the HD Tach test we got an average read/write speeds of



33 and 28 Mbps (for 32 MB file). Si Soft Sandra 2010 gave a R/W scores of 33 and 29 MB/s respectively. The real life tests gave scores that were a bit on the lower side. Writing a 4 GB file gave speeds of 28.44 MB/s

(single file) and 22.14 MB/s (assorted file), whereas reding the same 4 GB file gave higher speeds of 32.25 Mbps (single file) and 41 Mbps (assorted file).

At ₹3,500, it's decent and gets a thumbs up from us.

Microbes in your cell

Exxon Mobil said Wednesday it opened a greenhouse facility to grow and test algae, the next step for its nascent bio-fuels program

Nokia's magical Kinetic concept

Kinetic from Nokia responds to notifications through movements e.g. By standing up

Bazaar

Siemens Gigaset S880

Cordless comes with a price

Siemens Gigaset S880 is a cordless phone with some improved features over previous versions. Siemens Gigaset S880 acts as a base station that can register up to 4 Gigaset S88H handsets.

It is lighter when compared to the previous generation of cordless phones. The charger provided is also light, but doesn't stick to the base and has a propensity to fall off. We found that the handset could easily fall off if not taken care of. The keypad is similar to the basic cellphone keypad, but keys don't give a better grip and the keypad often wobbles. The screen is good for small utilities. The black finish adds to the looks. The clip provided

at the back is good for fixing the handset.

This phone has features like contact list, free internal calls between two handsets and registration of multiple handsets within single base station and directory transfer between two handsets. Features like alarm clock and multiple language support are also present.

For calls, voice clarity on the receiver side is good, but the ear phone sound quality is poor. Calls drop when you change floors. Also the network reception is poor. This phone should have provided more features such as messaging, and also provision for games. Sound quality needs to be improved. Build quality



Specifications

Frequency : 2.4 Ghz; 150 entries phone directory

Contact

Gigaset Communications India
Phone: +91-22- 4003 6435
E-mail: arvind.prasad.ext@gigaset.com
Web site: www.gigaset.com
Price: ₹6,400

5/10

Features:.....6
Performance:.....7
Build quality:.....5.5
Value for money:.....4.5

is also poor. At Rs.6,400 this set is really not a value-for-money product. There are no impressive features bundled with this phone. One can get a better cordless phone at this price with more features.

ASUS ROG Rampage III Extreme

An enthusiast's object of pride

Specifications

Chipset : Intel X58 (NB)
- ICH10R (SB); 2 USB 3.0 ports; dual BIOS chips; 6 Gbps x 2 SATA ports; 4 PCIe x16 slots; LGA 1366 socket

Contact

ASUS Technology Pvt Ltd.
Phone: 1800 209 0365
Email: reachus@asus.com
Website: www.asus.in
Price: ₹30,650

6.5/10

Features:.....8
Performance:.....7
Build Quality:.....7
Value for money:.....4

Asus's ROG series motherboards are choc-a-bloc with features and Rampage III Extreme does not disappoint. Rampage III Extreme is an Intel X58 board. One has to be very careful around the intricate heatsink as it tends to heat a lot and the design has lots of sharp edges. It supports USB 3.0. An interesting addition is the four switches placed adjacent to the Start and Reset buttons, for the disabling/enabling the PCI express x16 slots. It comes

with certain features like ROG Connect, Bluetooth remote control and TurboV. ROG connect allows you to connect your board to another system via USB for overclocking and monitoring. We tested the system using a Core i7 965 processor, Corsair 4 GB DDR3 RAM and a Sparkle GTX 285 graphics card. It gave impressive PC Mark Vantage score of 9234 marks. In video encoding it took a mere 24 secs to convert a 100 MB VOB file to DivX. Trans-



ferring a 4 GB file took around 90 seconds. STALKER : Clear Sky gave a frame rate of 94 fps (1280x1024, low) and Crysis scored 54 fps (1280x1024, High).

A steep pricing of ₹30,650 ensures that this motherboard is meant for enthusiast gamers and overclockers.

Wheelchair to disappear

A new pair of robotic legs out of New Zealand lets wheelchair users do the improbable—stand, walk, and even go up and down stairs

Apple's Antenna

During a press conference, Steve Jobs announced free iPhone 4 cases for all to overcome iPhone's weak signal problem

Seagate FreeAgent GoFlex & Upgrade cable

An upgradable portable hard drive

We know that portable hard drives come with the standard mini USB interface via which it's connected to the system. But Seagate's FreeAgent series' latest GoFlex series portable hard drive comes with an interface adapter which allows it to be used as a USB2.0 drive and also allows upgradation to USB3.0.

This 500 GB drive comes in an all red body with a glossy front and a matte rear finish. The interface adapter attaches on the lower edge of the drive which is connected to the USB wire connecting it to the port. There are two slits of white light which act as status indicators.

We got a GoFlex USB 3.0 upgrade cable separately. The drive was tested for both USB2.0



as well as USB3.0 interfaces. The test system comprised a USB3.0 compatible Crosshair IV Formula motherboard. The real life test scores for both the interfaces are given alongside.

At ₹6,500 we feel the drive is a bit overly priced. Also the upgrade cable comes at a grand price of ₹3,000.

Specifications

Interface : GoFlex (upgradable to USB 3.0); Weight : 150 g; Dimensions (WxLxH in mm): 83 x 14 x 111

Contact

Fortune Marketing
Phone: +91-11-2641 4468
Email: sales@fortune-it.com
Website: www.seagate.com
Price: ₹6,500 (HDD) and ₹3,000 (upgrade cable)

Interface	USB 2.0	USB3.0
Real World Tests		
File Write 4 GB Single File (MBps)	32.51	75.85
File Write Test Assorted 4 GB File (MBps)	23.95	44.04
Read Test Single 4 GB File (MBps)	32.77	77.28
Read Test Assorted 4 GB File (MBps)	31.27	73.14
PhotoShop CS2 (1 GB File, in MBps)	14.63	17.96

6/10

Features:.....6.5
Performance:.....6.5
Build Quality:.....7.5
Value for money:.....4

Cowon J3

Ridiculous pricing

Specifications

Audio formats: MP3/2, WMA, FLAC, OGG, WAV, ID3, APE; Video formats: DivX 3/4/5, Xvid SP/ASP, wmv 7/8/9; 3.3-inch AMOLED touchscreen

Contact

Lipap Systems Pvt. Ltd.
Phone: +91-22-4003 2653
Web site: www.cowonindia.in
Price: ₹9,750

COWON's next flash based PMPs is the new J3. This portable player sports a sleek design, a 3.2-inch AMOLED touchscreen and also an internal speaker. We're quite surprised by its light weight. It comes in two colours - black and white; we received the black one.

There are basic controls lined along the edges of the player. The dedicated keys for music makes changing tracks easy. The internal speaker sounds good although there is some distortion at high volumes even though it isn't very loud. FM radio is supported and the reception is decent. However we could not find a USB adapter for charging with the package.

The key feature, of this player like many other Cowon players, is that it can play lots of popular audio formats such as MP3 and WMA and even lossless formats such as FLAC. It plays most of the video formats other than MP4, 3GP and MKV. There are plenty of equalizer and effects present to try and enhance the audio.

The touch response is impressive and the player also has an accelerometer. TV-out is also available which is a neat little feature.

Audio quality of the ear-plugs is average. There is some bass but nothing like the ones you find on decent in-ear phones. Highs also can



be heard but there are certain ranges of frequencies it doesn't play. In all, the sound quality is average.

The price of ₹9,750 is exorbitant for a 4GB player. For a little more, an Apple iPod Touch for example can let you browse the web and use apps in addition to good audio and video playback performance.

6/10

Features:.....7
Performance:.....6
Build Quality:.....7
Value for Money:.....3.5

Pen is mightier

Livescribe has recently launched a next generation digital pen echo that can record sound in sync with the words

Unmanned weapon

Britain's Ministry of Defense recently unveiled an unmanned stealth attack aircraft, that chooses its own targets without human intervention

Bazaar

ASUS VG236H

A new dimension in monitors

ASUS presents the next generation of 3D LCD monitors with their new VG236H model, which is a 23-inch HD1080 LCD monitor. In terms of style, it's neat looking with its glossy black finish.

Along with the standard DVI, it also has an HDMI input as well as component connectors. Speakers aren't part of the package.

One of the key features is the height adjustment and front swivel. The OSD controls are present on the right bottom of the display and the interface of the OSD is simple to use.

Perhaps the biggest feature and the reason for its ₹41,000 price tag is the NVIDIA 3D Vision support for 3D display. The monitor goes up to 120Hz for that very reason. However, it was very difficult to get that working. The 3D effect works well in dark but is not very impressive.



But as this is the first generation of 3D monitors, effects are not smooth and visually appealing.

This monitor gave a rather impressive 734:1 contrast ratio when we tested it with out Spyder3 Elite. However with Displaymate colour tests, a different story came in light. We noticed that there was some banding across all colors especially in black, which had a little bit of red and greens being rendered with the some shades of Grey. We noticed no lag in games.

This is a monitor destined for gamers. But at ₹41,000, you can opt for a good quality panel such as the 27-inch Dell U2711 with a resolution of 2560 x 1440, that is much more than that provided by this monitor.

Specifications

screen : 23-inch (58.4cm);
resolution : 1920 x 1080;
video input: Dual-link DVI-D (support NVIDIA 3D Vision) / Component(YPbPr) / HDMI ; response time : 2 ms

Contact

Vinay Shetty
Phone: +91-22-6766 8800
E-mail: reachus@asus.com
Web site: www.asus.in
Price: ₹41,000 (excluding taxes)

6.5
10

Features:.....7.5
Performance:.....7
Build Quality:.....6
Value for Money:.....5

Specifications

Processor: Intel Core 2 U7300;
RAM: 4 GB; Graphics card:
NVIDIA GeForce GT335M;
HDD capacity: 500GB;
11-inch 1366x768 display

Contact

Dell India Pvt. Ltd.
Phone: +91-80-2506 8026
E-mail: Suhas.j@dell.com
Web site: www.dell.co.in
Price: ₹70,000

7
10

Features:.....7
Performance:.....7
Build quality:.....7
Value for money:.....4.5

Alienware M11x

Not ridiculously good

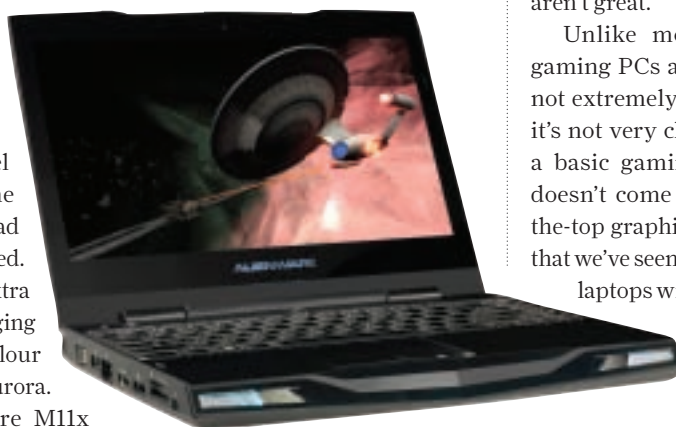
The new Alienware M11x is here to thrill you. Weighing in at around 2 kg, it's not very heavy and it's 11.6-inch widescreen format ensures that you don't have a bulky laptop either. The downside is the lack of an optical drive.

The front panel is good, but the keys on the keypad are kind of cramped. It also has some extra features like changing keypad display colour like that in Dell Aurora.

The Alienware M11x

comes with Intel Core 2 U7300 processor and a NVIDIA GeForce GT 335M graphics card.

Performance is decent when it comes to application



benchmarks. PC Mark Vantage churns out 2,826 points whereas the video encoding test took 162 seconds to encode a 100 MB file. Doom 3 scores aren't very impressive either. In short, the performance is decent but nothing that will match a decent gaming desktop.

The display renders decent colours but the viewing angles aren't great.

Unlike most Alienware gaming PCs and laptops, it's not extremely expensive, but it's not very cheap either. It's a basic gaming laptop that doesn't come with the over-the-top graphics performance that we've seen in the past from

laptops with two graphics cards, especially from brands such as Alienware.

Transformers rising

China has developed a Giant robot named Optimus Prime using recycled car parts, to counter the giant Gundam

MS Kinect

Kinect, motion gaming technology from Microsoft, will soon be available at Macy's store in US nationwide



AXIS M1031-W

STOP! Who goes there!

It is compact and connects to both wired and wireless networks. The camera does a maximum resolution of 640x480 which we find to be pretty adequate for a security camera. There's also a built-in microphone to hear conversations, a speaker to send messages and also a light that can be used to illuminate dark areas.

There is no built-in battery, which means that the camera must be constantly powered using a power connector. There's no motorised motion either.

Audio quality on the camera is good and so is the video frame rate. The camera can be monitored using the

software or even using a browser. You get a choice of which codecs or formats to use while viewing the video stream in the browser itself. Motion detection along with an alarm system is a feature which is handy in scaring away those who venture closer than they are supposed to.

The M1031-W is a feature-rich camera that sells for a price of ₹18,500 excluding taxes. It's certainly not cheap enough for everyone to buy one. If you own a small shop or office, and need something to guard the entrance, this one should do just fine. Home users might find it hard to justify the cost.

Specifications

Max video resolution: 640 x 480; Video compression: H.264, Motion JPEG; built-in microphone; speaker and PIR sensor

Contact

Axis Video Systems India Pvt Ltd
Phone: +91-80-4111 9331
E-mail: vishwas.shetty@axis.com
Web site: www.axis.com
Price: ₹18,500

Axis Communications, a company that specialises in video security has launched the AXIS M1031-W, an IP based security camera made for small businesses.

6.5
10

Features:.....7
Performance:.....7
Build quality:.....6
Value for money:.....5.5

ADATA S596

Expensive drive, average performer

Specifications

storage capacity : 32 GB;
128MB cache ; trim support

Contact

ADATA Technology Co., Ltd.
Phone: +886 28228 0886
E-mail: jerry_lu@adata.com.tw
Web site: www.adata-group.com
Price: ₹6,140

5.5
10

Features:.....5.5
Performance:.....5
Build Quality:.....6
Value for Money:.....5.5

ADATA S596 is a 2.5-inch SATA II SSD drive with capacity of 32GB. It belongs to the ADATA 500 series of SSDs. It is light and handy to carry. One of the key features of this SSD drive is that it comes with a USB port, so You can connect to a PC without opening the cabinet, but at the cost of speed.

ADATA claims it to have outstanding speed, but our tests did not agree with that. We used this drive as SATA drive so as to see a burst in performance but we were disappointed with this drive in our tests. In HD Tach tests this drive gave us the score of 174.6 MB/s of average reading which is lower

than the average scores we got in January SSD tests. Similar situation is with all the other synthetic tests. However it's the real life tests where the situation goes real bad. It gave poor read / write scores of 112.15 MB/s and 26.73 MB/s respectively for an 8 GB sequential file.

This drive looks like just another SSD drive on the block. One may give it a shot as the average reading speed and writing speed is better than the magnetic hard drives. The performance of operating system will be better when it is located on this SSD drive. But when compared to the other SSD drives in the market this drive doesn't give a satisfactory



performance.

The cost of this drive is ₹6,140. For a little more price you may get a better performing SSD drive with more storage. For the same price, you can get regular desktop drives that also offer similar performance but with way more capacity.

Camcorder from future

Sony has launched NEX-VG10, the next generation Handycam with interchangeable-lens, 18-200mm kit E-mount lens, for less than \$2,000

TV-TV on the wall

Scientists have made Media Decor Mirror TV which are mirrors that feature an embedded 19-inch LCD panel so you can watch TV while dressing up yourself

Bazaar

Adobe eLearning Suite 2

Learning it is not easy!

Adobe's acquisition of companies has helped them create a much larger product lineup. The eLearning Suite 2 is a compilation of many of their softwares to create a suite that's best suited to creating education course material.

The eLearning suite comes with pretty much everything you can think of - Photoshop, Flash, Dreamweaver amongst many others. Each software looks the same, so there aren't too many tweaks when you look at the interface. There's no sign of video editing tools such as Premiere or After Effects.

Captivate is the program at the heart of the suite that helps in bringing together all the media that you work on separately. There is tight integration between the software, so you are never lost wondering how to export and import content. The suite as a whole allows you to work, modify, and then present, most of the popular media types with ease. There are options for quiz, together with easy features to record on-screen tutorials in the case of software.

The main drawback of the suite is that it's not easy to use, for someone who has never used each of software by



themselves. Its price tag also suggests that it would be something that larger content development companies with trained staff, would go for. At little over a lakh, it's simply unaffordable for most of the schools and colleges to purchase for their staff in India.

Requirements

Intel Pentium 4 / AMD Athlon 64 processor or higher, 1 GB RAM, Windows XP / Vista / Windows 7, 9.3GB disk space, 1280x800 resolution display

Contact

Adobe Systems
Phone: 1800-102 5567
E-mail: iisadobe@adobe.com
Web site: www.adobe.com
Price: ₹1,02,200 (\$2,187 excluding taxes)

6/10

Features:.....7.5
Performance:.....7
Ease of use:.....5
Value for money:.....5

Specifications

processor: Intel Core i7
CPU 975 @3.33 GHz; RAM:
12 GB DIMM DDR3, Intel
X58 mother board; graphics
card: nVIDIA Geforce
GTX 260x2; HDD storage:
1024GB; operating system:
Windows 7 Ultimate

Contact

Dell India Pvt. Ltd.
Phone: +91-80-2506 8026
E-mail: Suhas.j@dell.com
Web site: www.dell.co.in
Price: ₹2,00,000

7.5/10

Features:.....9
Performance:.....8
Build quality:.....8
Value for money:.....4

Dell Alienware Aurora

Extreme PC for the extreme gamer

Wow! is the first word that comes in your mind at a first glance of Aurora. It's a n extreme high-end gaming PC with an unmatched configuration.



The Aurora is a sturdy, heavy (literally) full black PC with the classic Alienware trademark design. One of the cool features is the front panel where the face slides down into the chassis exposing the Blu-ray drive and the memory card reader.

The two hard drives are configured in RAID. Cooling for the processor is handled by the compact water cooling unit. The keyboard comes with additional macro and game profile keys. The mouse is ergonomic and is very reactive. It has the gaming profile selection button and allows setting sensor sensitivity.

The lights on each and every panel, the keyboard, the mouse can be custom-

ised to your taste.

The performance as expected is staggering. PC Mark vantage gave an impressive score of 8,148 marks. It took only 20 seconds to convert a 100 MB VOB file to DivX whereas it took 47 seconds for a 4 GB sequential files transfer which we thought was quite fast. Company of Heroes - Tales of Valor gives 96.3 fps at Ultra settings. It's excellent for gaming at extremely high settings. The GTX260 might seem a little outdated though.

At ₹2,00,000 this customised system is for those who are big fans of Alienware brand. However we wouldn't refer this system those who want an economic gaming PC.

Tips & Tricks

Learn interesting tricks through your favourite software and get things done faster

QnA

All your questions answered. Write to us and have your doubts clarified as well



Digging into Firefox 4

Nishith Rastogi

readersletters@thinkdigit.com

Six years ago, Firefox 1.0 was released by Mozilla Corporation and that started the browser war. Today, Firefox commands approximately 25 per cent market share and the love of every single geek in the world. With the launch of Firefox 4, they are challenging the limits of what a browser can do and further erasing the boundaries between a web app and a Desktop app. Let us see what are some of these features are and how you can enable and use them.

Installing Firefox 4

Though the final release is supposed to be released in November 2010, the beta is already out and you can give it a spin by downloading it from www.mozilla.com/



Download Firefox 4 Beta, OS is auto selected

en-US/firefox/all-beta.html. If you install the beta, it will not remove your existing installation, but will use your settings so your bookmarks and extensions will be automatically accessible in Firefox Beta 4. You can launch your current version or the Beta 4 by selecting it from the Start Menu, albeit only one at a time. As a friendly reminder, we would like to tell you that a lot of your add-ons might not work.

Enabling hardware acceleration Direct2D (only for Windows)

Direct2D is a 2D and vector graphics API designed by, and for, Microsoft. It improves performance and quality by taking advantage of hardware acceleration if you have a graphics card/drivers that support it.

Unfortunately, it is not switched on by default in the Firefox 4 Beta since the developers didn't want to regress any functionality in the browser for majority of their users, so by default, DirectWrite would have been selected.

A handytip at this point is that if you're running the aero interface in Windows 7/Vista or the Compiz Windows Manager in Linux, you have hardware acceleration enabled on your system. To enable it in your browser, here is what you have to

do. But before you proceed any further, note your experience/frame rates while rotating/resizing the photographs in that link, you would need to know this to confirm if you have enabled Direct2D.

- Open Firefox 4 Beta and in a new tab, type `about:config` in the address bar and press [Enter].
- Taste the humour of Firefox developers and approve of the warning.
- Enter `render` in the Filter box.
- Double-click on `gfx.font_rendering.directwrite.enabled` to set it to `True`.
- Double-click on `mozilla.widget.render-mode`, and set the value to `6`.
- Restart Firefox. You don't need to restart the system.

Now again, go back to the link above after restarting the browser. If you notice an improvement, things are great and you will slowly start noticing an improvement in your browser experience especially on graphics heavy sites.

In case you don't, here is a small list of things that could have gone wrong:

If you have Windows XP, then it doesn't support Direct2D, so you need to upgrade to Windows 7 / Vista. If you have an extension that is interfering with Direct2D, try disabling it. It's likely that your system/graphics card/driver doesn't support hardware acceleration. You can check this using Aero/Compiz.

By setting `webgl.software_render` to `True` for Linux installation will help a bit in your browsing experience.

WebGL

Why stop at 2D hardware acceleration when you can have 3D. Now we will enable WebGL in our browsers. If you don't know what WebGL is, don't panic. This is a method of accessing OpenGL from within the browser via HTML5. Mozilla has been working on this for quite a while now via experiments under the hood of Canvas3D. Currently, the effort is spearheaded by the Khronos Group. To enable it:

1. Open Firefox 4 Beta. In a new tab, type `about:config` in the address bar and press [Enter].
2. Enter `webgl` in the Filter box.
3. Double-click on `webgl.enabled_for_`



A game of 3D playable virtual pool being rendered inside your browser in Real Time

`all_sites` and set it to `True`.

Unlike Direct2D, confirming if WebGL is working is a far more tangible experience. Go to http://o3d.googlecode.com/svn/trunk/samples_webgl/o3d-webgl-samples/pool.html. If you get to see a beautiful pool table as shown in the screenshot above then it works, else you'll get a mean looking error of the form saying No WebGL context found. Even in Firefox 3.x, you will find the options in `about:config`, but setting them won't matter and you will still not be able to run WebGL content. We leave you with a few more links to play with. This also includes one that runs *Quake* within your browser: http://www.nihilogic.dk/labs/worlds_of_webgl/ http://www.khronos.org/webgl/wiki/Demo_Repository. <http://code.google.com/p/quake2-gwt-port/import>.

Experiencing HTML5

A quick search on Google for HTML5 videos will give you examples in plenty. Go to www.youtube.com/html5 and you will be prompted to join the HTML5 program. If you're not already a part of it, you might need to sign in with your Google account for this.

Once done above, it will ensure that if any video can be presented in HTML5 format, it will be offered to you. Especially the higher definition videos. Search for a video using keywords. For example, trailers. In the browser's address bar, add `&webm=1` at the end of the URL. For example, http://www.youtube.com/results?search_query=trailers&aq=f&webm=1. Select your favourite video and it will display HTML5 webm in the toolbar of the video player.

Finally, we would like you to go to

<http://html5test.com/> and see your score for yourself. In our test runs, Firefox4 beta1 scored 199. Remember if you enable hardware acceleration as explained above, you should gain around 15 points, while



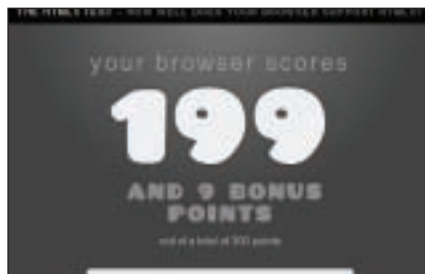
HTML5 Video in YouTube

Firefox 3.6 gave 139 and the webkit-based browser on our Symbian phone gave around 30.

Plugins and extensions

For most Firefox users, a primary reason to use the browser has always been the power to customise it with a choice of their favourite extensions by installing them from a vast repository. Developers have enhanced this part of the browser in two ways. One is an enhanced and more featureful new Add-on Manager. The Add-On Manager now opens in a tab instead of a Window and has been designed to make finding plug-ins practically effortless. Beta users can also grab an Add-On Compatibility Reporter to test their favourite add-ons for compatibility.

In addition to above, starting with Firefox 3.6.4 (partially) and with Firefox 4 Beta1 (almost completely), Firefox brings in a feature known as "Out-of-Process-Plugins" or OOPP that implies Flash, Java, QuickTime and similar platforms run their own separate process. So if they crash, they don't



Firefox4 score on Linux

bring down the whole Firefox window but only close the respective tab.

Other features

Layout

The new layout of Firefox, with the aim of maximising screen estate, especially on widescreen monitors with lower vertical resolution, has strong supporters as well as critics. First, it brings the tabs on top of the navigation (address) bar. This is present by default only in the Windows version of Firefox 4. Mac and Linux users will need to go to the View menu, select Toolbars from there and then Click on Tabs on Top to switch this UI feature.


Then comes the removal of the menu bar and merging it into one big button. This isn't available in the Linux flavour. Finally, you have the removal of the bookmarks menu into a tiny button right next to your address bar. Love it or hate it, this is what you get in the default bundle, though thankfully you can tweak it to your satisfaction.

Error console

Go to the Tools menu in and Click on Heads Up Display or Press `[Ctrl] + Shift + [K]` and you will be presented with tabbed interface enhanced error console aimed especially towards helping developers in debugging and improving compatibility. Entries are time stamped and categorised into DOM (for AJAX especially), Network, CSS, Exceptions, Errors, Info, Warnings and Log.

Awesomness bar

Introduced in Firefox 3, in the Firefox 4 version it also allows you to switch to an open URL by typing in the URL or the title of the page. This is immensely useful if you have several open tabs and want to switch to it without navigating through all the tabs. Whenever you feel like switching to an open tab, just type in the first few letters of the URL or the title of the page and you will be shown an option to switch to that open tab.

There are many more improvements like geo awareness, privacy fixes, JavaScript speed enhancements and like, so do remember to give the shiny new Firefox a spin. 

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Linux Mint

It's becoming difficult these days to come across a discussion on any forum about a good Linux distribution for beginners and not encounter the name 'Mint'. Mint is a distribution heavily derived from Ubuntu, so much so that it is completely binary compatible with it and uses the exact same Ubuntu repositories for package downloads.

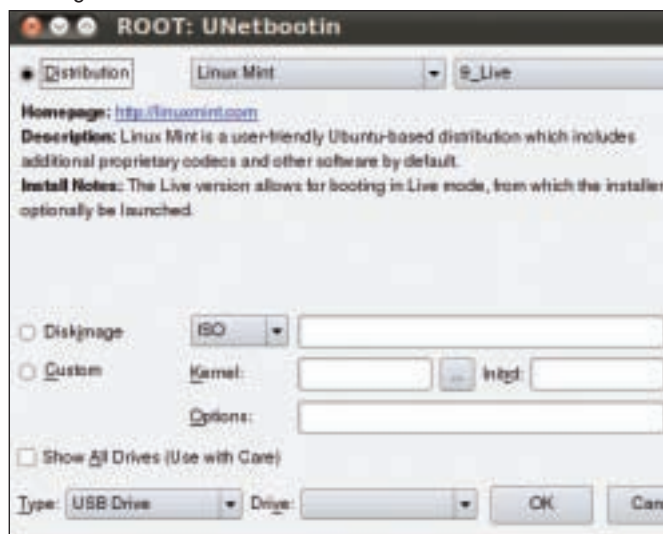
The major difference between Mint and Ubuntu is based on philosophy and converts to ease of use and functionality out-of-the-box for the end user. Primarily, Mint is Ubuntu packaged with restricted drivers and codecs. So as an end user, your MP3s and DVDs play out-of-



Linux Mint.....	57
Safari 5.....	59
Viewer 2.....	61
Sync.in.....	62
Windows Live Photo Manager.....	63



An elegant distribution with a sense of humor



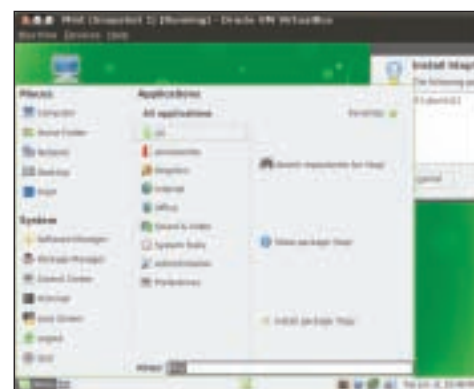
UNetbootin: Your go-to tool for Linux on a flash drive

select the drive, the USB drive menu and you are good to go. It will automatically download the distribution and create a bootable Live USB driver out of it. If you already have the image on your computer then you can just point to the path in the Diskimage radio option, instead of selecting the Distribution radio option and click OK. Short of bringing world peace, this should do the trick.

Installing a package

Mint started primarily as just Ubuntu with integrated media codecs. Since then, it has included many improvements for usability enhancement – one of the primary being the inclusion of new menu. The new menu lists your favourite appli-

the-box and your graphics card works much better too. These slight usability enhancements has already made Mint a top three distribution on distrowatch.com. Here are few tips to make your experience even better.



Custom Menu makes package installation a breeze

Install on a pen drive

If your computer doesn't have a working disk drive, or you're just too lazy to burn a buggy CD-ROM to install and try Mint, then fret not. Just go to unetbootin.sourceforge.net/ and download UnetBootIN, a universal and cross-platform tool for creating Live USB drives for various Linux distributions.

Once downloaded, just execute. The process is pretty simple. As you can see, just select 'Linux Mint' in the distribution menu and then select the version you want. In our case, we are going with 9_Live. Then, insert a pen drive of size 1 GB or more,

cations, commonly used applications, a Windows 7-like search bar, and common file locations in one go.

A hidden and less commonly used feature, though immensely useful feature of this menu, is its ability to search and install a software straightaway. Let us take the example of installing Htop, a brilliant command prompt clone of your system monitor. When you will type htop in the "filter" bar of the menu and if it isn't already installed on your system, mint will give you three further options, one of them will be install package 'htop'. This will initiate a 'I am feeling lucky' type search and will begin



Bringing back the old, conven-tional and familiar menu

the installation for `htop` after one more confirmation. Simple eh?

The Gnome menu

If for some reason you find the above mentioned menu slightly unfamiliar to use and want your old conventional Gnome menu back, then all you need to do is right-click on the bottom panel. In the add to panel window, select the Main Menu that will give you back your Gnome menu, and obviously since you are in a free world, you can retain both if you choose.

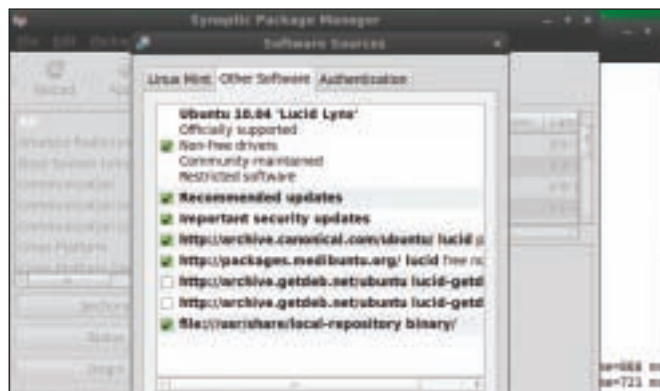
Ubuntu packages

A common confusion novices have is between the utility and functionality of the Software Manager. In Ubuntu's case it is called Ubuntu Software Center

and Synaptic Package Manager. Think of Software Manager as a proper subset of Synaptic Package Manager. While the former lists only complete applications (more often then not with a GUI), the latter lists them along side with all individual libraries and documentation files. So say you will find 'VLC' or 'Totem Media Player' in the software manager, but in the Package manager alongside finding them you will also have the option of installing underlying libraries for them individually as well like `gststreamer-bad` or `libXYZ-dev`.

get-deb repositories

Get-Deb is an independent project that aims to bringing easy installation of many great applications that are not by default found in the Ubuntu/



Enabling the GetDeb repositories in Linux Mint

Mint repositories. Sometimes it includes a new version than the one available in the in repositories.

Mint allows one click addition of the GetDeb Repositories (supported since GetDeb v2) so that you can download all the packages either from the Ubuntu default repositories or the GetDeb archive in the one single, unified and familiar interface of Synaptics Package Manager.

To do this, open Package Manager found under the systems tab in the start menu. Go to Settings > Repositories and then check GetDeb repositories. Click Close to continue and when asked, select reload package information. The above process can also be accomplished manually by uncommenting (removing the '#' symbol) in the `/etc/apt/sources.list` file.

Desktop Cube

Assuming you have the correct drivers, go to All applications > Preferences > Appearance from the Mint Menu. In the Visual Effects tab, select Custom. Once the Desktop effects are enabled, you can click on Preferences to enable the Desktop Cube and tweak many more features. Open Synaptics Package Manager and install `CompizConfig-Settings-Manager`.

AptonCD

If you have ever wondered about losing all your favourite packages in a reinstall after you downloaded them so laboriously, then Mint brings you a solution for this. Go to Menu > All Applications > Administration AptonCD.

Now from the AptonCD application, select Create to open a menu from where you can select your desired packages (or all of them) to backup and store them as an ISO file. You can later restore them easily using AptonCD to the default cache location. Remember this won't install all of them, but only restore them on your hard disk, you can install them from the package-manager, but this time the package-manager won't download from the internet, but use the package on your hard disk if a new version isn't there.

Ndiswrapper

Linux in the last 5 years has come a long long way in supporting hardware out-of-the-box, with more than 90 per cent of all hardware never requiring another click from the user to work. Even then, wireless remains a weak-spot in hardware support. To counter this, the 'Ndiswrapper' project has done an excellent job of making your wireless driver written for Windows work flawlessly with Linux, and Mint includes



Easily back up and restore your downloaded packages



Easy solution to all wireless problems

an Ndiswrapper utility in the default installation.

Just launch it from the Main Menu by typing Ndiswrapper in the Filter bar. All you have



IP messenger for Linux Desktop

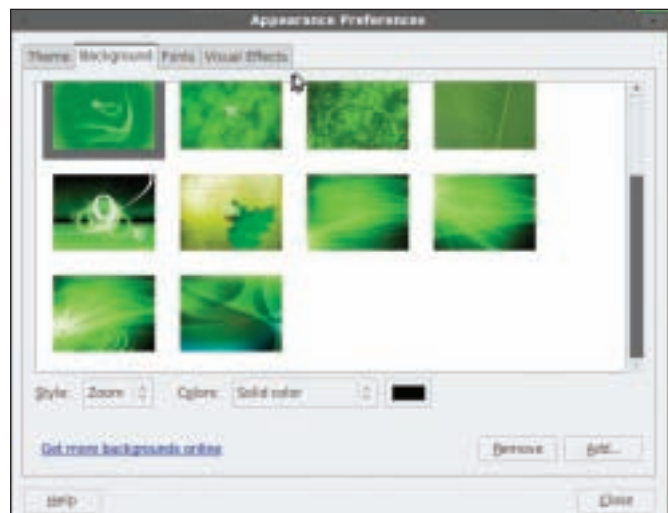
to do is click on Install New Driver. Select the INF file of your Windows driver in the Location bar. Click on install. A reboot following this should do the trick.

Giver /IPTux

Giver is the file transfer utility for computers running Linux on the same local network. You can transfer a single file

or folder with ease at the maximum available speed of your network via Giver. Think of this as an IP messenger for Linux. A piece of advice though, Giver doesn't play well with Windows users. On IP messenger, if you want that functionality install IP-Tux

from the repositories. Not only does it work with users on IP-Messenger for Windows, it also has some neat functionality like Gtalk style conversation window so that



Breathtaking collection of wallpapers

your screen isn't clogged with pop-ups and an insanely fast peer discovery (10x faster than the Windows client).

Wallpapers

Although this may seem like redundant information, but seriously, everyone should for once checkout the default wallpapers pack in Mint. Mint makes elegance one of its motto and this fact is clearly reflected in the quality of wallpapers included by default. The theme based wallpapers are better than the ones we've seen anywhere including on Windows, Ubuntu and even Sabayon Linux. They can be found and changed from Menu > All Applications > Preferences > Appearance.

Safari 5

Firefox and Chrome always provided nice install extensions that enhance the browsing experience. And now finally, Apple has given Safari the long-awaited feature. But in the present version Safari 5.0, it's still a development feature and not enabled by default, since Apple has not yet officially opened the extension library.

To enable it, you need to access the Develop Menu in the toolbar. Open Preferences by pressing [Ctrl] + [,] or by going to Settings

at the extreme right of your browser window. Then open the Advanced tab and select the Show Develop Menu in the Menu bar checkbox.

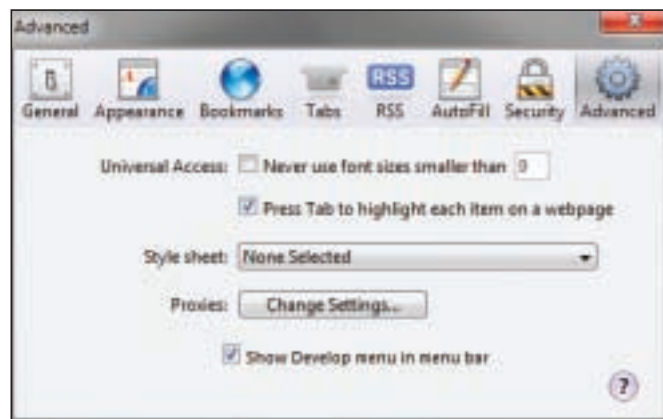
After this, open the Develop Menu from the Menu bar and click on Enable Extensions.

Now you should have a new tab in your Preferences window called Extensions which will let you manage your installed extensions. There is also a slider to disable all of them together – a feature which we would want other browsers to adopt as well.

There is no official extension library, so you need to dig the internet and find useful ones. However, we've compiled a list of them for you to try out to ease your journey into the world of extensions:

Extension manager

AdBlock for Safari - <http://safariadblock.com/>
 YouTubeDownloader - <http://code.google.com/p/safari-extensions/downloads/list>
 Beautifier- <http://jgn.heroku.com/2010/06/11/beautifier-my-safari-extension/>
 GReader - <http://rafeed.me/safari-extensions/#GReader>
 View Style Sheets - <http://www.pimpmysafari.com/extensions/view-style-sheets>
 Facebook Photo Zoom - <http://github.com/lleger/Facebook-Photo-Zoom-for-Safari>



Open the Develop Menu from the Menu bar and click on "Enable Extensions"



Safari Restore - <http://www.sweetpproductions.com/extensions/extensions.htm>

Save your tabs in between Safari sessions - <http://annovativeweb.tumblr.com/post/685175177/savetabs-safari-extension>

GoMBoX - <http://gombox.nrm.me/GoMBoX.html>

Snapper (Take a screenshot of the current webpage) - <http://tinyurl.com/stpsnapper>

Tweetbar - <http://juliankussman.com/blog/2010/06/08/tweetbar-safari-5-extension/>

Safari's support for extensions is a little too late and is nothing compared to the Add-ons that Firefox offers.

But being Apple, with their developer program and a tightly integrated and monitored Extension library, they have the potential to pull off a miracle.

Customise settings

Safari did not allow you to customise any tab settings until 5.0. But now, you can head over to the Tab Preferences (Preferences > Tabs) and set a number of very helpful options for tabbed browsing aficionados.

No need to get annoyed every time you click on a link from other programs where in previous versions each of those would open in a new

window. Just set the "Open pages on tabs instead of windows" to always from the drop down menu and all the new windows will open up in tabs, regardless of size and layout variations. The same Tabs window in Preference also shows some keyboard shortcuts to handle tabs in Safari.

Enhance your reading experience

Reading online articles is outright painful with all the random Flash content, decorations, and advertisements strewn across web pages these days. But Safari comes to your rescue with a new feature called "Safari Reader". A small button appears in the Address bar while browsing certain web pages with long blocks of text or blog-style posts, clicking on which the article appears in a distraction free space. The background dims out and you are left with simple black text on a white background; center aligned, text-focused with its own scroll/zoom bars and email/print buttons. It is very similar to services like Readability and Instapaper; but the fact that it's built into a browser is remarkable. And, we are talking about a good layout, fonts and UI, because it's Apple!

If Reader supports the website you are on, you will see a "reader" badge on the right end of the Address bar. Click on it or press [command] + Shift + [R] to engage the Reader. A transparent black Control Bar is present at the bottom on the reader when you hover your mouse over the window, which contains the X to close the reader and buttons to Zoom In/Zoom Out/Email/Print.

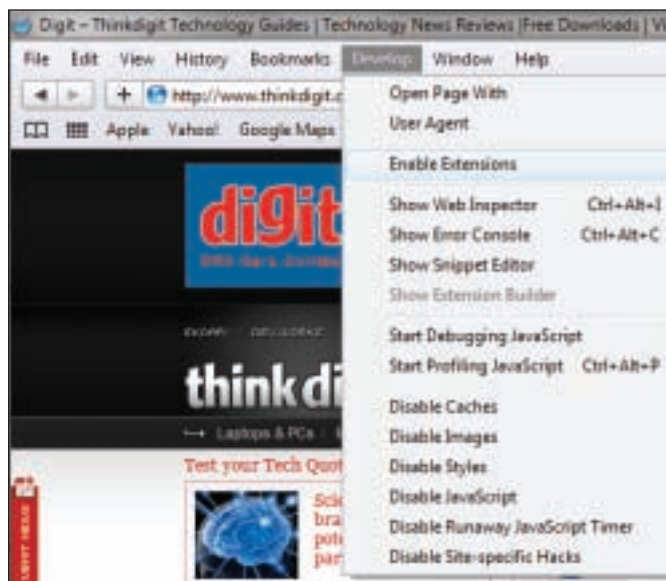
You can increase or decrease the size of the Reader text either click on the zoom button in the control bar at the bottom of the Reader or press [command] + [+] to increase the text size, and [command] + [-] to decrease the text size.

We checked the email/print links with several web sites and just like it's meant to, it only selected the text and graphics related to the article and not ads or any other useless information for that matter. It won't be long before advertisers find a work-around and fill your sacred reading space with their fluff, but till that happens; Happy reading online!

Edit Top Sites

Safari has a very nifty feature called "Top Sites", which gives you quick access to your favourite web sites by the way of live thumbnail previews. But did you know it was customizable too? You can change the size of the thumbnail previews, remove and add sites, and even pin some of them so they're always present.

To change the size of each thumbnail (either to improve visibility or increase the number of sites that can fit), click on Edit on the bottom left corner on the "Top Sites" page. Now, the bottom right corner will allow you to choose the thumbnail sizes in



The Reader on ThinkDigit.com's article. It almost looks like reading it on paper



Modified 'Top Sites' window



The Reader on ThinkDigit.com's article. It almost looks like reading it on a hard-copy

order of Small, Medium and Large. Small will fit 24 pages; Medium will fit 12; and Large will fit 6 pages. You can pin certain websites permanently to a particular position, by clicking on the thumbtack icon at the top left corner of individual thumbnails in Edit Mode. The icon will glow blue if it's active.

To add a new page to the "Top Sites" page, open the website in a new Safari window and drag the favicon from the left end of the Address Bar to replace a thumbnail in the "Top Sites" window. Similarly, you can also drag any other link from a text document or an email message onto the thumbnail to replace it. Make sure the thumbnail you are trying to replace is not pinned, as no changes will take place on doing so.

To remove pages from Top Sites window, just click on the X icon for that certain page in the Edit Mode. This will result in that thumbnail disappearing and a new one popping from your History to fill the gap.

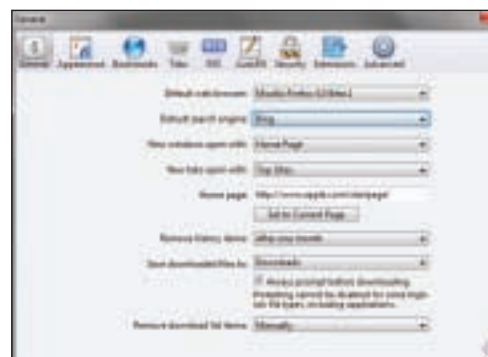
Make sure you click on Done to save your changes and exit the Edit mode. If however for any reason you do not want to display the "Top Sites" page (privacy concerns, bandwidth limitations etc), you can go to the General tab of the Preferences window and choose something else such as Home Page, Empty Page, Same Page or a Bookmark instead of Top Sites in the "New tab opens with" and "New window opens with" dropdown menus. You can even hide the Top Sites page from the Bookmarks bar by going

to the Bookmarks tab in Preference and unchecking the "include Top Sites on the bookmark bar".

Use Bing as default Search Manager

This should come as a surprise to you, but Apple promotes the addition of Bing Search along with the already available Google and Yahoo as one of the major new features in Safari, even with its constant jibber-jabber with Microsoft.

For those of you who have migrated from Google to Bing, you can go to Preferences > General and select Bing from the drop down menu against "Default Search Engine".



You can set Bing as the default search engine

Analyse and troubleshoot

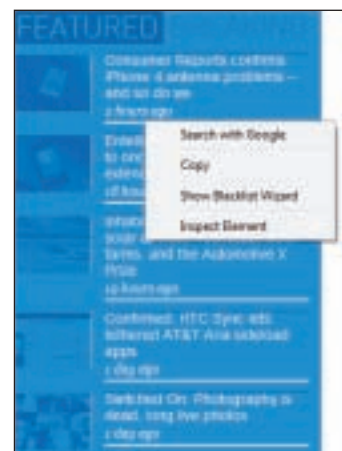
Anyone into web development would be familiar with the Firefox extension called Firebug. You would be happy to know that Safari now comes with a similar feature built in-called Web Inspector to extend debugging and development. Make sure the Develop Menu is turned on by using the steps we detailed previously. Now you can select any element on the webpage and [Ctrl] + right-click on it. A contextual menu will pop up, where you have to click on "Inspect element" to open two additional window panes with the HTML code for that element and the CSS rules that have been applied.

You can then hover over the HTML to see that part highlighted in the main window. To edit an item, just click on it in the Web

Inspector pane and make the changes.

They will be reflected immediately on the main window. In case you prefer to have the Web Inspector on a separate window, rather than just a pane in the main window, you can click on the Undock into separate window icon at bottom

left of the window. It even shows you the list of errors and warnings, accessible by clicking on the Console



Search, or Inspect with a right-click

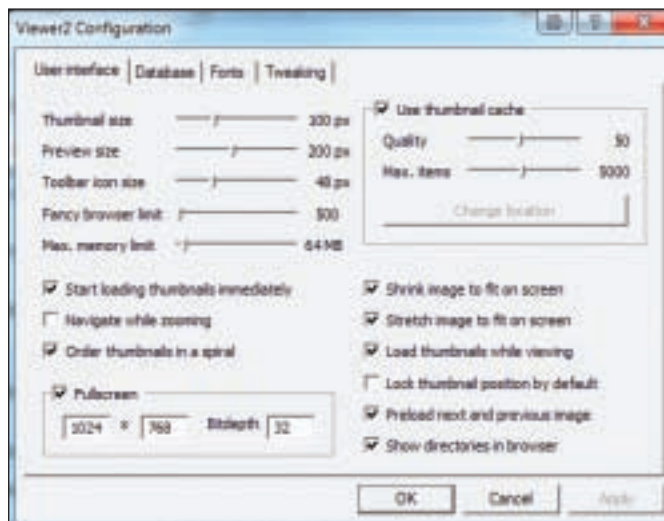
button (beside the Undock button) which divides the Web Inspector pane so the lower part can display all the errors.

Viewer2

Viewer2 is an image viewer with a searchable image database for those who know what they are doing. It is relatively lightweight, works only on



Analyse web pages with Safari 5



Increase this if you can afford it

Windows and is currently free. It also brings in nice 3d accelerated effect for visual pleasure. You can download it from <http://kometbomb.net/projects/viewer2/>. We present a few tips to improve your experience.

Configurator utility

You can access the configurator utility from the 'Viewer2' folder under programs in Start Menu. We would recommend that if you have plentiful RAM, then to increase this limit for improved performance even before the first run.

Adding files to the database

This has to be done via the command line tool called `dbtool`. Yes, it may seem archaic to you that in this age of GUIs why fire up the command line, but then this tool is for power users.

The following command is pretty self explanatory.

```
c:\Program Files\Viewer2\dbtool add "Your_Folder_Location"
```

A few things to note that your Viewer2 shouldn't be running while you are adding the files. Secondly if you are running the 64-bit version of Windows7, your

Viewer2 folder might be located in the Program Files (x86) folder. One neat trick here is to simply drag and drop the folder you want to add to the command prompt window after typing `c:\Program Files\Viewer2\` `dbtool add` to automatically insert the folder path.

You can add tags in go by using the following syntax while adding directories `c:\Program Files\Viewer2\` `dbtool add "Your_Folder_Location" tag1 tag2 tag3 ...`

Automated tagging

Tagging makes finding images easier especially if you don't have a strong directory structure. So after adding the directories with `dbtool` or simply while browsing, you can issue the command below to check every filename in the database for known tags and associate it with the picture.

dbtool extractiptc

Use the command below to peek into the IPTC metadata as well

```
dbtool extractiptc Your_Folder_Location
```

While finally the command below also looks in file paths for suitable tags and prompts if

it gets confused along the way to resolve the conflict. Pretty neat we'd say.

```
dbtool -fuzzy -prompt extract
```

Searching for images

Every self-respecting developer making a tool for power users includes powerful search functionality. The case of Viewer2 is thankfully no exception. Viewer2 supports searching by date, time, size and with logical operators, quotes and wildcards (both `*` and `?`)

Here are some examples:

```
name:digit - will search for images with the word digit
```

```
path:2007 digit - matches all images with the word digit in the tags or the filename in any directory whose name has the word 2007
```

```
-tag:* digit - matches all images with no tags and the word digit in the filename
```

```
date:lastweek - matches all images whose date is earlier than last monday but newer than the monday before that. You can use these words with the date command: today, yesterday, thisweek, lastweek, thismonth, lastmonth, this-year and lastyear.
```

```
size:small - shows images that are small. Valid words for size: tiny, small, medium, large, huge, ultra.
```

Important Keyboard Shortcuts

Beside your usual copy/paste shortcuts, Viewer2 supports an array of speed enhancing shortcuts. We'll mention a few and their brief explanation here. `[Alt] + [P]` sorts by path. Press `[Alt] + [R]` to sort by resolution. `[Ctrl] + [E]` takes you to the directory of the selected image. `[Ctrl] + [F]` for Fast Search files. `[Ctrl] + Shift + [F]` takes

you to a deep search. `[Ctrl] + [I]` inverts the selection. Similarly, `[Ctrl] + [O]` arranges theselected images in one group. `[Ctrl] + Shift + [O]` arranges the images in groups.

`[Ctrl] + [T]`: Tag selected files, separate tags with commas

Correcting Messed up Layout:

If the layout of your images is all messed up (images keep loading in the wrong position etc.), then to fix that you can rename or delete the database file. It is located for Windows XP in `C:\Documents and Settings\<Username>\Application Data\Viewer2\viewer2.db`

If you delete the above file all data including tags will be lost, in the scenario where you only want to reset the layout scheme (which is the more probably scenario), you need to issue the `updatedb` command as follows. Open Command Prompt. Switch to the directory where your Viewer2 is installed. Finally issue `c:\<Viewer2 directory>\updatedb.exe delete_links`.

Sync.in

Sync.in is an online collaboration tool with basic word processing capabilities. Think of it as a word processor in the form of a white board. It supports multiple people working on the same document with updates appearing in real time. It works on all the three major platforms i.e. Linux, Apple and Windows.

Use the in-built chat

It has nice retro-styled chat that does exactly what it should. It is more like a chat room where everyone who is currently editing the note is added and the messages typed is broadcast to the rest. It doesn't support



view how your note has progressed over time, how the edits were made and in what order and by whom. It nicely displays it as if it motion captured your note while it was being created by multiple people and you can play it back. Not only is it time-stamped you can also play it back by 'Save' history by clicking on the star icons on top right.

Version control

Sync.in is a programmer-friendly editor with colour



Basic inbuilt version control

the note. Now not only does sync.in has that, It has it in style "Share This Note" from the main menu and then you can spread the word about your collaborative creation via email, Twitter, Facebook, Digg, LinkedIn or even Del.icio.us. Sync.in redirects to relevant pages for 3rd party services and it plays nice and doesn't store any of your passwords.

Sharing only a read only version

There are plenty of occasion where you only want to share a read only version of the notes and we couldn't find an option to that on the main interface. There is a simple solution to that, the 'Read Only' link is hidden under the "Time Slider" tab. All you need to do is go that tab and select 'Link to read-only page' from the right hand side context menu.

Windows Live Photo Gallery

Quickly search for a specific photo

Cannot locate that 'one in a million' photo inside your large collection? No need to fret; just click on the Find tab in the ribbon to quickly find any photo using different criteria such as by face, names, date, geo-location, descriptive tags, folder titles or any

combination of those. If you've people that are tagged already, you can click the user and all the images of that person will automatically get pulled up.

Create a new photo from the best parts of similar photos

This new version comes with a new feature called Photo Fuse which is present under Create menu along with another feature worth checking out, i.e., Panorama which has been there since Wave 3. Photo Fuse is primarily aimed at getting the best shot possible by combining multiple photos, which in particular will be of good use for all you Facebook addicts who like posting that 'one group photograph' for every outing which is very difficult to come by because someone moved, or someone sneezed or someone's not looking in the right direction. Just take a lot of shots, and head to Photo Gallery and it will take care of the rest. deleting unwanted objects, people passing by in the background, and let you choose what part to keep for each detected variation.

Select a series of photos with the same background/ taken at the same place, and simply click on the "Photo Fuse" button under "Create" tab on the ribbon, and you'll



Sync.in lets you launch a new note from your desktop

fancy emotions or voice/video yet but it does the job well, it performed even across connection breaks and high latency.

Launch new notes quickly from your desktop

You will need Adobe Air to run the desktop client, it allows you to launch your notes (public or private via signing in) in a simple manner without first visiting the web site from your web browser. It nicely tucks away in the notification area when not in use. A definite recommendation if you plan to use Sync.in regularly.

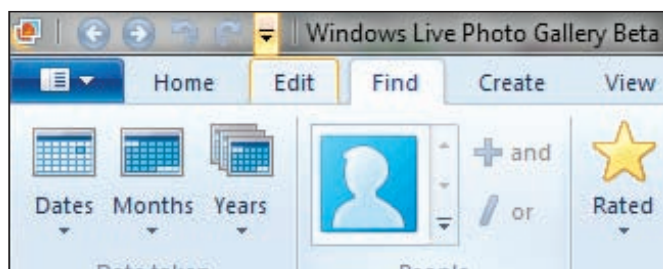
Review progress

Not very functional but very cool indeed. You can go the 'Time Slider' tab and

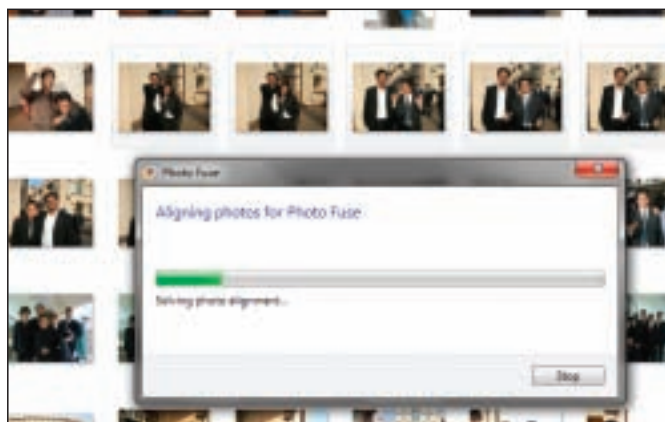
coding for different users and line numbers on the side. One awesome feature it introduces is the in-built 'Version Control'. Click on "Saved Revisions" from the main interface and from there you can 'Save' your current work or go back to any saved version. So no need to maintain different draft copies as in case of desktop files, you can revert back to the last saved or before that version if you don't like your current work. It is like a baby git/SVN built in.

Sharing your notes with friends

In the current scenario of everyone being connected 24x7 with each other, it would have been a sorely missed feature had there been no option to invite your friends to view



The Find tab



Choose a number of photos to fuse

be presented with the selection window where you can highlight the portions you're not satisfied with (example applications include a person with eyes blinking, or powerlines across your photo), and select from the pop-up window the portion that you prefer. You can do this to as many areas as you like, and Photo Gallery will automatically "fuse" that portion into the composite image you're

exposure, color correction, and even noise reduction. Buttons let you apply fixes automatically, but a "Fine tune" button offers deeper control (such as an adjustable histogram, highlights, shadows, sharpness, and color temperature). This version adds a new tool: Blemish removal, which worked well



The create toolbar

working on. Once you're satisfied with the result, just click on "Save" and you've got that perfect shot! Pretty impressive, eh? A word of warning though: Its comparable to what you find in Adobe Photoshop Elements, and the results were intriguing but not perfect—some people ended up with big hair, or worse, two ears on one side of the head.

Jazz up your photos

Windows Live Photo Gallery Wave 4 lets you jazz up your photos with a lot of photo adjustments like cropping, red-eye fixing, straightening,

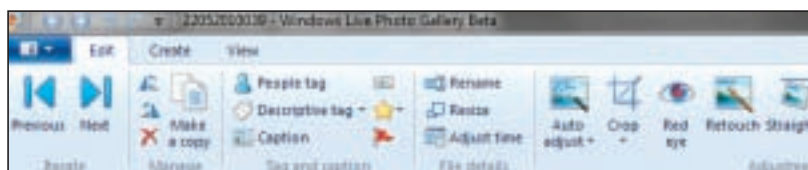
in my test, as did the red-eye fix. An Auto-adjust option will let you configure what you want fixed—any combination of exposure, color, NR, and straightening. The editing is non-destructive, so, at any point, you can revert to the original. You can even use the new batch edit tool that lets you apply fixes to a bunch of selected images at once, but it only works with the auto-fixes—color, exposure, straightening, and noise reduction—not with the

fine-tuning. Sometimes your photos are not straight and are tilted because of wrongly holding the camera. So for such photos there's a 'Straighten photo' option provided. Also there's a new option of giving your Photos 'Black and White effects' so that you can give an antique look to your photos.

Retouch Photos

You vacation photos don't look as good as they should because of that spot or blemish on your face? Windows Live Photo

your family and friends? Windows Live Photo Gallery comes to your rescue. Just highlight the photos you want or [Ctrl] + Select, click on Slideshow from the ribbon, choose your Slideshow theme choose from six themes, including pan and zoom, contemporary, sepia, and cinematic and then click on Share Slideshow which lets you upload it to either your SkyDrive, Facebook, YouTube or Windows Live Groups to share with family and friends.



The edit toolbar


Gallery lets you retouch your images and make them disappear. Select the photo you want to retouch, click on the View tab and select Zoom in so that you can view the blemish or mark close up. Then click on the Edit followed by Retouch. Now simply drag the cursor around the spot or blemish and it will magically disappear, so that all of your photos and those of your nearest and dearest will look perfect.

You can even choose to Photo e-mail which will use your default mail client to create a message that doesn't attach the photos, but instead links to an online gallery hosted on Windows Live SkyDrive, which is great for saving your recipient's inbox from large attachment clutter. Plain old attachments are still an option, too, though, and the choice between this and photo mail is clearly labeled.

Make Slideshows and Movies

Need to quickly create a fantastic looking slideshow of selected photos to share with

Integrate with Photosynth and other software

You can now integrate Windows Live Photo Gallery with other Microsoft Labs softwares like PhotoSynth, AutoCollage 2008, Pro Photo Tools, Image Composite Editor (ICE) and a few others. Just install them and they will automatically appear in the Extras Menu of Photo Gallery. It is not yet tightly integrated, but nevertheless, it's a step forward towards total integration. 



Uploading an image to facebook

Unmanned weapon

Britain's Ministry of Defence recently unveiled an unmanned stealth attack aircraft that chooses its own targets without human intervention

Blogs, kidnapped

A WordPress platform, less-known, Blogetery.com, used by more than 70,000 blog was recently shutdown by its hosting company, without any notification

Q&A

Slow connections, disappearing drives?

...Digit to the rescue

Computer network going haywire

I am a regular reader of Digit since June 2005. My friend's PC has been facing broadcasting problems on this network. In about 26 minutes of surfing the net, the total amount of sent data reaches about 2 lakh bytes and the data received reaches about 9 lakh. What kind of problem is this?

Tarun Goswami

It depends a lot on whether it is 9 lakh bytes or bits. Either way, PCs send and receive data all the time when connected to a network. If there are viruses on the network, your PC is bound to receive and send a lot of random data. There is nothing unusual about this. If you feel that the system is using up a lot of bandwidth, then install a firewall to try and figure which services and programs are using that bandwidth. Also, run an antivirus scan on your system to check for any threats.

Headphone microphone not working

I recently bought an Intex Mega headphone with mic (model no. HS-301B). I connected it to my PC and opened up Sound Recorder on Windows but the mic doesn't work. Then, I checked the headphones and they seemed to work fine. I went to the shop to exchange the piece with another one.

While giving me the new piece, the shop keeper said that if this piece doesn't work either, then my computer has a problem. I tried it but again, it didn't work. Then I tried it on another computer and to my surprise, it worked. Here are the configurations of the computer on which the mic doesn't work:

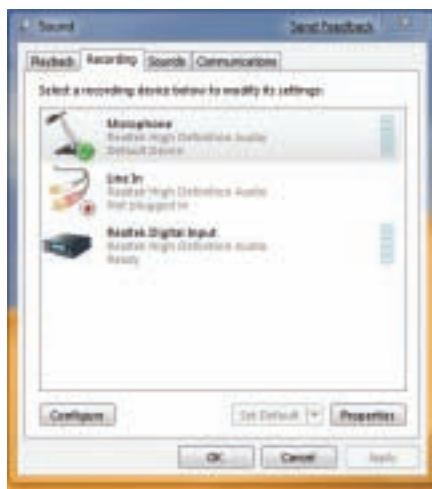
- Intel Pentium 4 CPU 2.66 GHz
- 504MB RAM
- Windows XP SP2
- Frontech Brisk CPU

I want to know why the microphone doesn't work and how to make it work.

Vinayak Nagri



You need to be very sure on which port you connect the microphone. Your drivers should alert you if the microphone is plugged into the wrong slot. Often, you'll need to specify the microphone input in your drivers or the Windows volume control panel. If you are using the front panel,



Window showing the proper connectivity with microphone

try the rear panels on your PC as well. The microphone volume might be set too or microphone boost disabled. Enable those settings and try again.

Prince of Persia framing

I bought this machine about a couple of months ago with the following configuration.



Selecting 'Microphone boost' to check the sound through speakers

- AMD Athlon X2 240 processor, 2800 MHz
- ASUS M2N68-AM SE2 motherboard
- NVIDIA GeForce 8400 GS, 512 MB graphics card
- ST3250318AS SCSI HDD

I feel my graphics card is not performing at its optimum level. When I run *Prince of Persia: Warrior Within* and the *Two Thrones*. It shows the system configuration initially and the game shows the processor as "unknown AMD processor". The game runs, but is just not smooth. It runs well for a few seconds and then it starts stuttering. I need a remedy.

Prateek



The GeForce 8400GS is an extremely basic HTPC card and isn't designed for gaming as such. Upgrading to a card such as the GeForce 9800GT or the Radeon 5670 is recommended as they are better suited for the games you're trying to play.

Game trouble

1. I have recently purchased a copy of *Assassin's Creed II*, but it doesn't run after installation. It shows an error saying that an internet connection is required. Is there no way to run that game without internet connection? Please help me out to run the game?

2. I also have another game called *Crysis Warhead*. When I try to install this game, I see another error - "Cannot copy data2.cab: Data error(cyclic redundancy check)".

Surya Prakash Singh



Assassin's Creed II uses a DRM system that requires you to be connected to the internet while playing the game. As of now, there is no way of running it without the connection. The error while installing *Crysis Warhead* is due to a bad disc. You might have to get in touch with the game vendor to get you a replacement. There's also a chance your DVD drive maybe giving trouble. Check with some other discs to confirm this.

TV for 99 cents

Apple is developing a new Apple TV that will feature TV shows at just 99 cents

Valve releases free games

Valve recently released an updated version of the old Unreal Tournament mod, Alien Swarm, for free along with source code

Hard drive queries

- My PC configuration is as follows
- Intel Core 2 Duo E8400 3.0 GHz
 - Asus P5QC Mobo
 - Corsair 2x2Gb DDR3 1333 RAM
 - Sapphire 4670HD 1GB DDR3 graphics card
 - Seagate ST3500418AS 500GB HDD (16 MB cache) + Western Digital WD3200AAJS HDD 320GB HDD
 - OS: Vista Ultimate x64
1. My doubt is which HDD should I install my OS? Is there any performance variation by doing this?
 2. How much space should I allocate for installing Vista? Will there be any performance variations by allocating 200 GB for all my software and OS?
- I have already replaced my Seagate HDD twice (S.M.A.R.T test failed - I read that it's because of power problems. Do I need to check my SMPS and motherboard?)

Vipin

Both the drives have more or less the same performance. It shouldn't matter. I would keep at least 40 - 50 GB for the OS drive, at least, along with installed essential applications (browsers, instant messengers, download managers, email clients, office suites, etc.). Games and other media can go on other partitions. SMART errors are mainly due to drive problems.

New laptop and its errors

- I bought a Sony VAIO laptop last month. It's configuration is as follows:
- Intel core i3-330M processor 2.13 GHz
 - Windows 7 home premium (64 bit)
 - Hard Disk Drive 500 GB
 - 4 GB RAM
 - ATI Radeon 5650 1 GB

The problem is that it pops up a dialog box. Another problem is that whenever I shut down my laptop, it shows an error "Background programs is running, do you want to force shut down or cancel?". How do I solve this problem?

I have been regular reader of Digit, it helps me a lot in learning tech activities, all my friends call me tech guru. I am really thankful to ThinkDigit.

Chandrashekar Sirimala

The dialog box could be due to cor-

rupted software, bad drivers or even a worm or virus. It's difficult to pinpoint what the problem might be.

If you are running several applications in the background while shutting down the PC, it's common to see the error where Windows asks you to force shut. Ideally, turn off all background applications before starting the shutdown process.

BSODs while gaming

I am Akshansh Vatsa, a regular reader of yours you are truly great. I have a Compaq Presario SG3350IL with the following configuration

- Compaq 7540 plug and play CRT 17-inch monitor
- Intel Core 2 Duo processor
- 1GB DDR2 RAM

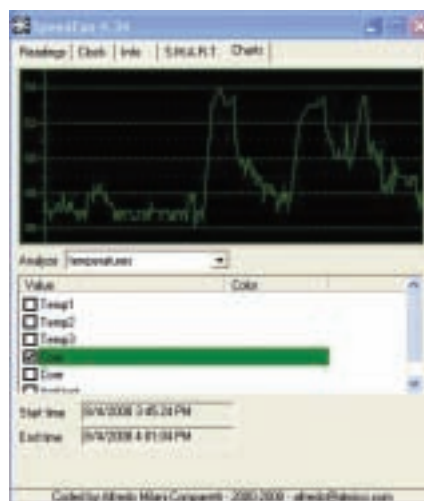
My problem is whenever I play *Counter Strike: Condition Zero* or *Half-Life*, my system hangs completely and after 2 to 3 seconds it shows a BLUE SCREEN OF DEATH. Please give me a solution to my problem.

Akshansh Vatsa

The game probably crashes due to a faulty card or display drivers. Download and install the latest version of display drivers for your card. That should fix the problem. Also, try using Speedfan to check if your card or processor is overheating.

Files not copied

A few days back, I copied some files to my 500 GB WD portable hard drive using



Graph showing BSOD's during games

Linux. But when I tried to rename them or copy them, I was unable to do so. I could somehow rename the folder containing those files. A popup error message appears saying that the system was unable to find the files. When I go to properties of those files, it shows the size of those files to be 0 bytes.

Raj Chahal

We've seen similar problems while copying files using a Linux distribution from one drive to an external USB flash or hard drive. In your case, there is no way to access the data because it wasn't written properly in the first place. You should go back to the PC and copy the data again.

Both CD and DVD writers not working

I am a computer shop owner for the past ten years and a reader of Digit for the past seven years. It helps me a lot to troubleshoot several hardware and software related problems. But now, I'm facing a problem with my CD/DVD drives. They don't work at all.

Details:

- Motherboard: Intel 810 Frontech
- CPU Intel 600 MHz Celeron
- 512MB SD RAM
- Hard Disk 40 GB PATA Seagate Barracuda
- LG CD-R / LG DVD-RW
- OS Windows XP Home Edition
- Antivirus Quick Heal Plus 2009 which is updated regularly

My system was working very well in the beginning. I use it only for office purpose and net surfing. Recently, my CD and DVD drive had faced problems and they don't work. They are detected though the BIOS, but in My Computer, there is no sign of a disk drive. I have formatted the C partition and reinstalled the OS, and the system shows the disk drives.

Please help me solving the problem so that I can use CD/DVD Drives again. While scanning with Quick Heal the following message comes C:\windows\system32\gff6.exe detected and quarantined. Please reply as early as possible.

Asit Sarkar

DVD and CD drives are very unreliable and we've seen many of them failing

Droid X sells out

iPhone's look alike, the Motorola's Droid X sold out online on the first day and is running short on supply

Google gets Metaweb

Google has recently acquired Metaweb, which maintains a huge database of almost all sorts of things and their relationships

within months of purchase. It's most definitely the reason your drives aren't working. You can try testing them on a different PC to be very sure. Even though a drive isn't working properly, they still appear as working devices in the BIOS and Device Manager. There seems to be a worm or virus on your system which is being detected by Quickheal.

Slow internet download speeds


 My PC configuration is as follows:

Intel Pentium 4 (@ 3.6GHz)


1 GB RAM

My problem is that my broadband connection only downloads files at 20kbps and my speed while streaming goes up to 1Mbps. Can you help me out?

Dharamdass Mahan


 The odd speeds might be due to a number of reasons. If you're file downloads are through a P2P service such as Bittorrent, then it depends on the number of peers you have available to download from. For HTTP and FTP downloads, use a download manager and your speeds should increase substantially.

Bootloader gone missing

 I had Windows XP SP2 previously installed and I installed Ubuntu. But after sometime, I found it to be slow, so i removed the partition in which Ubuntu was installed using Windows.

After restarting, the GRUB loader gives an error saying that such a drive doesn't exist. I want to have my Windows boot loader to be my default boot loader. What should I do?

Abhishek Kumar

 To reinstall the Windows bootloader, boot into installation disc after setting your optical drive as the boot drive. Then, choose the Recovery Console or Repair option in the installation menu. Use the commands `FIXBOOT C:`, then type `FIXMBR`. Your Windows bootloader should be reinstalled.

VPU recovery errors

 My system configuration is:

Intel E4500 2.2 GHz processor



```
Microsoft Windows XP (R) Recovery Console.
The Recovery Console provides system repair and recovery functionality.
Type EXIT to quit the Recovery Console and restart the computer.

C:\>fixboot
(fix boot sector)
Type the drive letter of the partition to be repaired.
C:\>fixboot
The target partition is C:.
Are you sure you want to write a new bootsector to the partition C: ? y
The file system on the startup partition is NTFS.
FIXBOOT is writing a new boot sector.
The new bootsector was successfully written.
C:\>fixmbr
This computer appears to have a non-standard or invalid master
boot record.
FIXMBR may damage your partition tables if you
proceed.
This could cause all the partitions on the current hard disk
to become inaccessible.
If you are not having problems accessing your drives,
do not continue.
```

Repairing the bootloader using recovery console

Gigabyte GA945GCM-S2L motherboard

Hytech 450W SMPS


Seagate 160 GB HDD

1 GB RAM Dynite


ASUS EAH3870 DDR4 512 MB

I have bought a second hand card from a dealer. The first day, the card ran properly but the very next day, the screen suddenly went blank, and restored to normal showing a VPU recovery error! It displays an error that say that Catalyst drivers reset the graphics processor to prevent system crashing. Also the graphics card was disabled until the next restart. Since then, this happens often (2-3 times a day). The PC also has become very slow. Is this a problem with the SMPS or is it a driver issue? Worse, is the card damaged? I'm planning to format my PC and increase my RAM to 3 GB. Will this help?

Manish Mauta


 If you haven't had these problems in the past, then it's something to do with the card. There's a good chance it's due to an insufficient power supply. The easiest way of knowing whether the card is spoiled or the power supply is insufficient is to try the card on a friend's PC with a decent PSU. If you see the same VPU errors, then it is a spoiled card. Otherwise, you need to upgrade your power supply to a better make and capacity – a Corsair VX450 will do well.

Can't use the @ character

 I'm using a Toshiba laptop with Windows 7 Ultimate. I have a problem with my keyboard. When I press the key '@',


the character which appears on the screen is ' '. I have tried changing the language and region options but it's been of no use. So please help me solve the problem.

Praveen


 Try booting into a different operating system such as a Linux LiveCD using a bootable disc. If you see the same problem in a text editor on it, it's most probably an

issue with the keyboard. You need to replace or have it repaired. If not, it's something do with the keyboard layout in Windows.


DVD drive disappeared

 Yesterday, I came across a serious problem. I'm unable to find the DVD writer in the Device Manager window on My Computer. I contacted HP and they suggested me to format my system and reattach the drive by removing and reinserting it. I did what they said but the problem still persists. I am using a Compaq Presario V3702AU laptop.


Avick Kumar Dey

 DVD drives malfunction from time to time and it's one of those queries that we see very often. You will need to replace the drive. Make sure there are no loose connections on the drive or motherboard end before you do.

PC restarts very often

 My PC runs on an Intel Core i7 processor, Intel WX58BP motherboard, 4GB DDR3 Trancend RAM, Cooler Master 600W PSU, and an ASUS 512 MB VGA card. The PC restarts when I load any application such as Photoshop. Some programs run well, but the PC restarts randomly. Please give me a solution.

Jitendra Shelake

 The power supply is the cause of the problem. Your system requires a good quality power supply with at least a 500W power supply. Look for a Corsair HX520 or a Cooler Master Real Power series supply in the 500 – 600W range.

Super Computers!

Linux dominates super computing. It occupies 470 of the top 500 spots. The remaining: 25 with Unix, mainly AIX, and Windows with only 5

Still no "year of Desktop Linux"?

Windows 7 took 4 days to have more market share than all distributions of Linux combined

DIY



Get your own Linux distro on a flash drive and use it on PCs as you travel around. We show you how could stay up and running with your data no matter where you are

Linux on a Flash Drive

Rahil Banthia

readersletters@thinkdigit.com

We know you've always wanted a full Linux operating system on a USB thumb drive. But the problem was that most of the tools only made a non-persistent installation that worked like a Live CD and all the changes were wiped out with a reboot. Well, now we will show you how to get a portable Linux operating system and run it from any computer that can boot from a USB flash device, allowing you to bring your entire operating system, desktop, applications, files, email, personal settings, and more with you. It's like carrying your own personal operating system in your pocket; fully customised, with your own favourite apps and all your settings intact.

No magic trick. We will use this Windows tool called "Universal USB Creator" that makes all this possible. It's a stand alone application that automates the process of downloading, formatting, and installing a Linux OS to a USB drive, as well as imple-

menting a variable amount of persistence. This means when you install new software, change keyboard shortcuts, store files in your home directory, or make other changes to your portable Linux, they stick from boot-up to boot-up — which isn't the case with most portable Linux distributions. Another useful feature that you wish for: your USB drive can still be read by Windows when you're done formatting, so your pen drive is not wasted and you can still use it the old-fashioned way: for storing data!

Download the Universal USB Installer from <http://tinyurl.com/digit0810linux> and 'Run' the executable. Click 'Browse' and open the downloaded ISO file. If you've already downloaded a Linux installation ISO and run Universal USB Installer from

the same directory the ISO is in, the app will find it and use it for the installation, rather than download another copy.

Make sure you select persistence from the drop-down box, else it will be just another Live CD type installation.

UNetbootin is yet another Live USB creation tool that can be used to create a Live Linux flash drive from an ISO. Most of the Linux distributions are supported out of the box with custom install options available for Linux distributions. One bad thing about Unetbootin as compared to Universal USB installer is that the pen drive created using this software is not persistent and all your changes are lost upon reboot. It is just like a Live CD, but works nonetheless. Download UNetbootin from <http://tinyurl.com/digit0810unetbootin> and double-click on the executable file to start it.

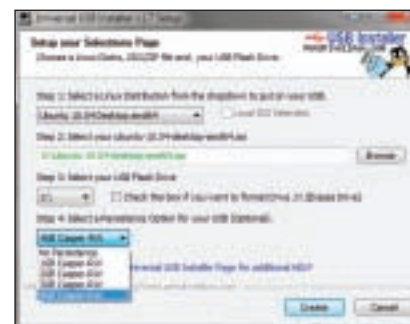
Select the DiskImage radio box and browse using the ... on the right side to select your ISO file on the hard disk. Next, set the target USB drive in the drop down box labelled 3 in our image. Next, click on Ok

and you're done.

First, you need to check under which device node it is associated. Type the following command:

```
$ sudo fdisk -l
```

On our test system, the device appeared as /dev/sdb, we will therefore use /dev/sdb as a reference for this tutorial; you just need to replace it accordingly for your system. Now comes the part where we will make a separate partition for this install. You need to ensure that the already mounted partition is unmounted with `$sudo umount /dev/sdb1` and then launch `fdisk`, a command line software to edit partitions under Linux `sudo fdisk /`



Choose the USB drive and click 'Create'

dev/sdb1. The first partition we will make on our pen drive will be formatted as a FAT file-system of size 16 and this will contain the CD image:

```
$ sudo mkfs.vfat -F 16 -n liveusb /dev/sdb1
```

The second partition should be of type ext2 with a blocksize of 4096 bytes, and labelled as casper-rw. Make sure that it is labeled as casper-rw otherwise this tutorial might not work:

```
$ sudo mkfs.ext2 -b 4096 -L casper-rw /dev/sdb2
```

At this stage, your usb pen-drive is ready to host the liveCD image. You just need to copy the



Select Ubuntu 10.4 Desktop amd64 from the dropdown list

Want to host your website?

Linux is the cornerstone of the LAMP server-software combination the most common platform for web site hosting

Windows Software on Linux?

The Wine project provides a Windows compatibility layer to run unmodified Windows applications on Linux

DIY



Using UNetbootin to create a Live USB Linux

files to the USB drive. And you need to do this in a specific way detailed below:

First mount the Ubuntu ISO:

If you have the CD, you can do so by `$ sudo mount /`



Installing Ubuntu on a pendrive from an existing Ubuntu installationLinux

media/cdrom. If you have an image file, you can do so by

`$ mkdir /tmp/ubuntu-lived.`

`$ sudo mount -o loop /path/to/feisty-desktop-i386.iso /tmp/ubuntu-lived` (Replace the ISO name with your Linux variant).

Next, mount the partitions of your pen drive:

`$ mkdir /tmp/liveusb`
`$ sudo mount /dev/sdb1 /tmp/liveusb`

Copy at the root of your USB drive's first partition:

The directories: casper, disctree, dists, install, pics, pool, preseed, .disk, the content of directory isolinux and files md5sum.txt, README.diskdefines,

ubuntu.ico as well as files casper/vmlinuz, casper/initrd.gz and install/mt86plus.

`$ cd /tmp/ubuntu-lived`

`$ sudo cp -rf casper disctree dists install pics pool preseed .disk isolinux/* md5sum.txt README.diskde-`

`fin`es ubuntu.ico casper/vmlinuz casper/initrd.gz install/mt86plus /tmp/liveusb/

Also go to the first partition of your USB disk and rename isolinux.cfg to syslinux.

cfg:

`$ cd /tmp/liveusb`
`$ sudo mv isolinux.`

`cfg syslinux.cfg`
change /tmp/liveusb according to your settings

Next, you need to edit syslinux.cfg so that it looks like:

```
DEFAULT persistent
GFXBOOT bootlogo
GFXBOOT-BACKGROUND
0xB6875A
```

```
APPEND file=preseed/
ubuntu.seed boot=casper
initrd=initrd.gz ram-
disk_size=1048576 root=/
dev/ram rw quiet splash
--
```

```
LABEL persistent
menu label ^Start
Ubuntu in persistent
mode
```

```
kernel vmlinuz
append
file=preseed/ubuntu.
seed boot=casper per-
sistent initrd=initrd.
gz ramdisk_size=1048576
root=/dev/ram rw quiet
splash --
```

```
LABEL live
menu label ^Start or
install Ubuntu
kernel vmlinuz
```

```
append
file=preseed/ubuntu.
seed boot=casper
initrd=initrd.gz
ramdisk_size=1048576
root=/dev/ram rw
quiet splash --
```

```
LABEL xforcevesa
menu label
Start Ubuntu in safe
^graphics mode
```

```
kernel vmlinuz
append
file=preseed/ubuntu.
seed boot=casper
xforcevesa
initrd=initrd.gz
ramdisk_size=1048576
root=/dev/ram rw quiet
splash --
```

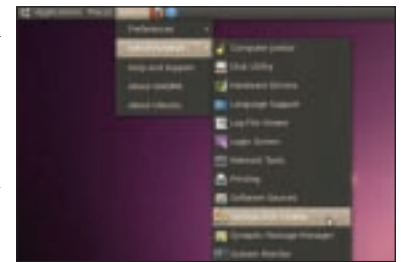
```
LABEL check
menu label ^Check CD
for defects
kernel vmlinuz
append boot=casper
integrity-check
initrd=initrd.gz ram-
disk_size=1048576
root=/dev/ram rw quiet
splash --
```

```
LABEL memtest
menu label ^Memory
test
```

```
kernel mt86plus
append -
LABEL hd
menu label ^Boot
from first hard disk
localboot 0x80
append -
```

```
DISPLAY isolinux.txt
TIMEOUT 300
PROMPT 1
F1 f1.txt
F2 f2.txt
F3 f3.txt
F4 f4.txt
F5 f5.txt
F6 f6.txt
F7 f7.txt
F8 f8.txt
F9 f9.txt
F0 f10.txt
```

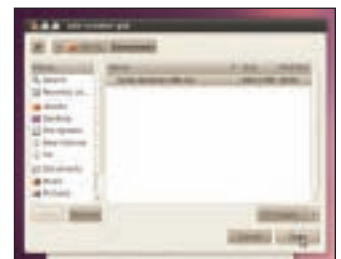
We are almost done. Now, the last thing that needs to be



Click on 'Other' to choose the ISO file



Select the file and click on 'Open'



Select the USB stick in the bottom box and click on 'Make Startup Disk'



No commands, no unmounting drives, creating partitions, installing additional software

done is: making the usb bootable. For this, you need to install syslinux and mttools by:

`$ sudo apt-get install syslinux mttools`

Then unmount /dev/sdb1 and make it bootable:

`$ cd`
`$ sudo umount /tmp/liveusb`

`$ sudo syslinux -f /dev/sdb1`. And, you are done!

Lappy look out...



Agent 001

agent001@thinkdigit.com

I get emailed every single day by readers asking for advice on all kinds of gadgets. Sometimes, their requirements aren't clear and they just have a budget in mind. Lamington isn't the best place for laptops, so you're better off dropping into your local technology store at a mall. I decided to go down to some malls and also visit some sites as well, to look at what people were buying. With so many product releases, I wanted to refresh my own database of models and prices.

As expected, there were salesmen swarming me from the moment I started looking at some of the Sony models, with each of them asking me what I wanted. I told them I was just looking and continued my usual stroll. Students seemed to be getting interested in laptops in the ₹30,000 to ₹40,000 bracket. I noticed that there were some Sony EA and EB series models priced under ₹40,000. Sony is a brand best known for selling products priced over ₹45,000 – ₹50,000, so a product this cheap should be news to many. The entry-level models used Intel Core i3 350M processors with Intel integrated graphics. However, there are a few models priced at ₹3,000 – ₹4,000

more that includes an entry-level Radeon 5145 graphics solution that would be useful for HD content playback. Windows 7 Home edition is the operating system bundled with these laptops.

I found Dell too matches these Sony laptops with some models from their Inspiron series of laptops. I was on their site which allows you to customise some of the models. The most basic configuration on the 14-inch display was priced at ₹34,300 and if you opt out of the operating system, you can save around ₹1,500 less – great if you're using Linux. The configurations were similar to the ones by Sony. When I started looking at the larger Studio 15 range, I found that the configurations didn't change a lot except for the screen of course. The somewhat high-end model priced at ₹51,400 has a Core i5 processor, a 500GB drive and 4GB of RAM. I was pleased to see the very basic Vostro laptops from Dell as well. Prices start from only ₹28,000 and go up to around ₹35,000 depending on the configuration.


Acer also had a few models in this range. Acer has been considered a brand to look out for while searching for a budget laptop. The Aspire 4735z in particular is one of the cheapest value laptops around. With a Dual Core



For products such as laptops, street shopping isn't the best way and so I decided to explore the options we have...

Intel processor running at 2.2GHz, 3GB of RAM, and a 320GB hard drive, it's perfect for any student looking for a laptop to carry along for college.

There were also those who wanted a portable computing device instead of building an assembled PC for a little more than ₹20,000. Laptops priced at ₹35,000 were out of the question although that's what I normally recommend. The Compaq CQ-139TU was one model priced at just ₹24,400. While the old Dual Core 2.3GHz isn't going to match the performance of the Dell Studios or any of the Macs, it's one of those complete laptops with a DVD drive, a decent sized screen and something that will fulfil all of your office applications and internet browsing needs.

For absolute lifestyle products, it was back to brands such as Apple and Sony. Apple's Macbooks have been updated to the new Intel Core i5s and i7s. One of the cheapest models is priced at around ₹1,05,000. It comes with a 2.4GHz processor, 4GB RAM, 320GB HDD and a Radeon GT330M. Similarly, the Sony VPCF127HG from the F series of VAIO netbooks was also available I was told. The price tag was a ridiculous ₹1,29,900 for a Core i7 740QM, and a great 16.4-inch full HD display. The same GeForce GT330M GPU found on the Macbook was to be found in this as well. Yet another new model was the Sony Z series VPCZ128GG priced ₹1,59,900. With a small 13.1-inch HD1080 display, it runs one of the fastest mobile Core i7 processors. While the salesman went on forever about the product, it was pretty obvious that the price was for the two SSDs in RAID configuration. If you're looking for an over-the-top performing stylish netbook, then this should be it. 

Q I have got a PC with 1 GB RAM, D865GB Intel original motherboard having an AGP 8X graphics card slot. I am using a Ge-Force 6200 graphics card. I want to upgrade my graphics card to one GB or more. I live in Siliguri in West Bengal and could not find any AGP Graphics card here. Do the companies has stopped manufacturing AGP graphics cards? Do I have to upgrade my complete machine?

Indranil

A AGP cards are indeed defunct. Thus, the few remaining cards are priced exorbitantly as sellers know that consumers who want one have no choice. I highly recommend upgrading your entire system. You could opt for a basic Core 2 Duo system, or go the AMD Athlon II X2 way. In any case, your processor would also be a bottleneck for most of the graphic cards available today.

Q I am assembling new PC sans monitor. I have decided upon following specs AMD Phenom X4 955 BE, ASUS M4A78-Pro, Sapphire HD 5850, 2x2 GB DDR2 (800 MHz) Kingston RAM, Seagate 1 TB 7200.12. Please tell me about power supply and cabinet which one to buy. Is my graphics card ok for playing games in Samsung 2233SW? My budget is ₹45000. I am hoping to run Crysis 2 on this system.

Leejat Kumar Pradhan

A I think you'll be able to run Crysis 2, but I'm not sure how well it would run, and would you be able to enable all the eye-candy or not. It's a good choice though; especially given the new 6xxx series will probably be looking at an end of year release. At least you won't invest as much as you would on a GTX 480 or HD 5870. The rest of the configuration is good.

Q Could you please suggest a good mobile set with the following features?

- TouchScreen
- Ergonomic Soft QWERTY
- High Resolution Camera
- Advanced Multimedia Features
- Good Connectivity
- Stylish Looks

The range should be around 13K. Which

one would be better; a Nokia C6 or Nokia 5800 Xpress Music? It would also be helpful if you could provide a comparison between the newly released Nokia N900 and the latest iPhone available considering the points mentioned above.

Medhatithi Guha

A I would recommend the C6 simply because more is more – it has a QWERTY keypad, and while the touch interface of the 5800 XpressMusic was its weak point, add a full keypad to it, and you essentially have a Nokia N97, with a smaller screen.

Q I want to buy a graphics card, give suggestion.

Sellam Kumar

A You haven't given me a budget to work with. Still based on your query, I recommend an ATI Radeon HD 5450 – it's a DX11 compliant card.

Q I want to buy a decent 500 GB portable HDD. Please help with all details including specifications and prices of various model available and which would be better suited?

Tarundeep Singh

A I recommend Western Digital's Passport Essential 500 GB. Expect to pay around ₹4,200 for this drive – a good price. The warranty is three years, which is about at par at what is offered for these products.

Q I have the following configuration (Dell Optiplex 755)
CPU: Intel Core 2 Duo
RAM: 2GB DDR2 667MHz
Graphic Card: ATI Radeon HD 2400 XT 256MB (PCIe x16)
LCD: Dell 1907FP 19-Inch
OS: Windows 7 Ultimate

I want to buy a new graphics card (1 GB) to play GTA IV. Please suggest a new graphics card which connects at PCIe x16 and must be 1 GB. My budget is ₹3,000.

A For decent performance, your best option is the Sapphire Radeon HD4670. It costs around ₹3,900. It would provide

much superior performance in comparison to the very basic HTPC graphics cards which are normally priced under ₹3,000. It's only a 512 MB card and 1 GB memory wouldn't really to the performance.

Q Could you suggest me a good CPU + motherboard + RAM combo for approximately ₹11,000 – ₹12,000. The mobo should be of the microATX form factor with a good onboard graphics solution. I will be glad if it has a PCI express slot for a discreet GPU. Will the GPU on it be any better than an onboard GPU?

Niranjan Ramanan

A It would be somewhat difficult to get an Intel Core i3 setup with RAM for that budget. For that budget, you won't even get a motherboard with onboard graphics. It makes sense to go with an AMD setup.

Here's a configuration that should fit your budget

AMD Phenom II X2 555 BE
Gigabyte MA785GM-US2H
2 GB Kingston Value RAM

The AMD785G chipset has pretty decent graphics performance that's plenty for HD playback and also for some basic gaming needs. A discrete graphics solution would be better than the onboard graphics performance.

Q I want to purchase a good touchscreen phone, with good value for money, reliable. I need 3G, Wi-Fi, a good camera, rich music quality and I want to try various applications on it as i have a Nokia N72 smartphone. I prefer Windows Mobile or Android as the OS. My budget is around ₹ 15,000. Some phones I like are the HTC Touch 2, Samsung Jet, Sony Xperia Mini and Nokia x6. Please send me more suggestions and also, the best among these.

Kalash Sharma

A By recent trends, Android seems to be the most popular of the lot. The Sony Xperia Mini seems like the only decent option if you're looking for a platform with loads of apps. The Samsung Wave S8500 costs a little more, runs the Bada OS and is a much better phone. It's a new platform and there is a community that is developing apps for it. **d**

Facebook in theatres

'The Social network', a movie on social networking sites, is about to be released on October 01, 2010

SPEND SMART

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Processors

Model	Brand	Market Price	Socket/Interface	Brief Specs	Tested in
Sempron 140	AMD	₹1,750	AM3	2.7 GHz / single core	September 2009
Athlon II X2 240	AMD	₹2,950	AM3	2.8 GHz / dual core	September 2009
Athlon II X2 245	AMD	₹3,175	AM3	2.9 GHz / dual core	-
Phenom II 550	AMD	₹4,550	AM3	3.1 GHz / dual core	September 2009
Phenom II 555 BE	AMD	₹5,175	AM3	3.2 GHz / dual core	-
Athlon II X3 425	AMD	₹3,550	AM3	2.7 GHz / 3 cores	-
Athlon II X3 440	AMD	₹3,875	AM3	3 GHz / 3 cores	-
Athlon II X4 630	AMD	₹4,925	AM3	2.8 GHz / 4 cores	-
Phenom II X3 720 BE	AMD	₹6,450	AM3	2.8 GHz / 3 cores	September 2009
Phenom II X4 945	AMD	₹7,225	AM3	3 GHz / 4 cores	September 2009
Phenom II X4 955 BE	AMD	₹8,200	AM3	3.2 GHz / 4 cores	September 2009
Phenom II X4 965 BE	AMD	₹9,275	AM3	3.4 GHz / 4 cores	September 2009
Phenom II X6 1090T	AMD	₹14,800	AM3	3.2 GHz / 6 cores	June 2010
Celeron 430	Intel	₹1,890	LGA 775	1.8 GHz / single core	-
Pentium Dual Core E5400	Intel	₹2,900	LGA 775	2.6 GHz / dual core	September 2009
Core 2 Duo E7500	Intel	₹5,150	LGA 775	2.93 GHz / dual core	-
Core 2 Quad Q8400	Intel	₹8,100	LGA 775	2.66 GHz / 4 cores	September 2009
Core i7 920	Intel	₹14,100	LGA 1366	2.66 GHz / 4 cores	September 2009
Core i7 930	Intel	₹14,650	LGA 1366	2.8 GHz / 4 cores	-
Core i7 980 Extreme	Intel	₹54,000	LGA 1366	3.33 GHz / 6 cores	April 2010
Core i3 530	Intel	₹5,600	LGA 1156	2.93 GHz / dual core	-
Core i5 661	Intel	₹9,950	LGA 1156	3.33 GHz / dual core	May 2010
Core i5 750	Intel	₹10,400	LGA 1156	2.66 GHz / 4 cores	-
Core i7 860	Intel	₹14,350	LGA 1156	2.8 GHz / 4 cores	-
Core i7 870	Intel	₹27,400	LGA 1156	2.93 GHz / 4 cores	-



Motherboards

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Model	Market Price	Socket/Interface	Brief Specs	Tested in
ASUS P6T Deluxe	₹20,450	LGA 1366	2x PCIe x16, 8-channel audio, 8 x SATA ports	September 2009
ASUS Rampage 2 Extreme	₹24,500	LGA 1366	2x PCIe x16, 8-channel audio, 8 x SATA ports	September 2009
ASUS Rampage 2 Gene	₹16,400	LGA 1366	2 x PCIe x8, 8 channel audio, 6x SATA ports	-
Gigabyte X58 Extreme	₹21,200	LGA 1366	2 x PCIe x16, 8 channel audio, 6x SATA ports	September 2009
Gigabyte X58 UD5	₹17,100	LGA 1366	2 x PCIe x16, 8 channel audio, 6x SATA ports	September 2009
MSI X58 Pro-E	₹11,300	LGA 1366	2 x PCIe x8, 8 channel audio, 6x SATA ports	September 2009
Gigabyte P55 UD6	₹17,100	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 8x SATA ports	October 2009
ASUS P5P55-D	₹9,750	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	October 2009
Gigabyte P55 UD7	₹19,400	LGA 1156	1x PCIe x16, 3x PCIe x8, 8 channel audio, 8x SATA ports	June 2010
MSI P55 GD65	₹8,290	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	October 2009
ECS P55-HA Black	₹8,900	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	April 2010
MSI P45 Platinum	₹9,100	LGA 775	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	September 2009
ASUS P5Q	₹8,500	LGA 775	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	-
ASUS P5Q3 Deluxe	₹13,500	LGA 775	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	September 2009
ECS AB 890GXM-A	₹7,100	AM3	2 x PCIe x16, 8-channel audio, 6x SATA ports	April 2010
Gigabyte 890GPA-UD3H	₹7,900	AM3	2 x PCIe x16, 8-channel audio, 8x SATA ports	April 2010
ASUS M4A78TD-V-EVO	₹5,900	AM3	1 x PCIe x16, 8-channel audio, 6x SATA ports	-
ASUS M4A78T-E	₹8,800	AM3	2 x PCIe x16, 8-channel audio, 6x SATA ports	-
ASUS M4A79T-DELUX	₹13,100	AM3	2 x PCIe x16, 8-channel audio, 8x SATA ports	September 2009
Gigabyte MA78GMT-USB3	₹5,850	AM3	1 x PCIe x16, 8-channel audio, 6x SATA ports	-

Red Alert!

A malware named 'Spy rootkit' is suspected to infect most of the critical infrastructure systems in India and Iran

Price watch



Power supplies

Model	Price	Tested in	Capacity	Modular
Cooler Master Real Power Pro 460W	₹3,600	-	460W	N
Cooler Master eXtreme Power 650W	₹4,200	-	650W	N
Cooler Master GX 550W	₹4,300	March 2010	550W	N
Cooler Master GX 650W	₹5,300	-	650W	N
Cooler Master GX 750W	₹6,500	-	750W	N
Corsair HX 750	₹8,800	-	750W	Y
Corsair HX 850	₹10,100	January 2010	850W	Y
Corsair HX 1000	₹13,500	-	1000W	Y
Corsair CX400W	₹3,200	September 2009	400W	N
Cooler Master UCP 1100W	₹15,650	-	1100W	N
Corsair HX620W	₹7,650	-	620W	Y
Corsair TX650W	₹6,700	-	650W	N
Corsair VX450W	₹3,950	-	450W	N
Corsair VX550W	₹5,700	-	550W	N
FSP Blue Storm Pro 500	₹3,650	-	500W	N
Seasonic PS S12II-430	₹3,850	-	430W	N
Silverstone 400W	₹3,100	-	400W	N
VIP 600W	₹2,880	-	600W	N
Zebtronics Pro 600W	₹4,000	-	600W	N



Cabinets

Get Best Deals on



Model	Price	Tested in	5.25-inch bays	3.5-inch bays	Bundled fans	Expansion slots
Antec Nine Hundred	₹7,100	-	6	3	4	7
Antec NSK4400	₹1,700	May 2008	3	5	1	7
Antec Three Hundred	₹3,900	October 2008	3	6	2	7
Cooler Master 690	₹4,500	-	5	5	3	7
Cooler Master ATCS 840	₹14,650	November 2009	6	7	4	7
Cooler Master Cosmos	₹15,000	-	5	6	1	7
Cooler Master Elite 100	₹3,100	-	1	1	0	0
Cooler Master Elite 310	₹1,600	-	4	7	1	7
Cooler Master HAF 932	₹10,000	-	6	6	4	7
iBall Baby 306	₹2,000	-	1	3	2	0
Thermaltake Armor+	₹13,700	-	7	7	3	10
Thermaltake Armor+MX	₹7,800	-	5	5	3	7
Thermaltake M9	₹4,800	-	6	3	2	7



Cell Phones

Model	Price	Tested in	Screen size	Camera resolution	Platform
HTC Hero	₹22,200	February 2010	3.2-inch	5 MP	Android 1.5
HTC Touch HD 2	₹26,400	-	4.3-inch	5 MP	Windows Mobile 6.5
LG KP500	₹7,300	June 2009	3.0-inch	3.15 MP	-
Nokia E55	₹17,000	-	2.4-inch	3.2 MP	Symbian S60
Nokia E63	₹8,845	November 2009	2.36-inch	2 MP	Symbian S60
Apple iPhone 3G 16 GB	₹33,130	June 2009	3.5-inch	2.0 MP	iPhone OS
Nokia E72	₹17,200	-	2.36-inch	5 MP	Symbian S60
Nokia N97	₹22,400	August 2009	3.5-inch	5 MP	Symbian S60
Nokia XpressMusic 5330	₹9,000	-	2.4-inch	3.15 MP	-
Nokia XpressMusic 5800	₹13,000	-	3.2-inch	3.15 MP	-
Samsung Omnia HD i8910	₹27,690	December 2009	3.7-inch	8 MP	Symbian S60
Sony Ericsson Satio	₹24,999	March 2010	3.5-inch	12 MP	Symbian S60
Sony Ericsson Yari	₹11,150	February 2010	2.4-inch	5 MP	-
BlackBerry Bold 9000	₹21,150	June 2009	2.4-inch	2 MP	BlackBerry OS

Vibrate to save accidents

A former Segway engineer has created a system that warns drivers of dangers by using vibrations in their seats

“Who All Can complain in a Consumer Court?”

Anu, a Delhi based software professional received a latest high end cellphone (of a reputed brand) as a birthday gift from her parents based in Mumbai. Three months later, the device started having software and functional problems. The problem persisted even after being repaired at the service centre. Finally, the service centre indicated that the mobile set had some inherent manufacturing defect. Understandably, she felt cheated and disappointed as it was of emotional value being a gift from her parents. She wanted to take action, but had no idea how to go about it.

She did not want to bother her parents and at the same time wanted to take action against the erring company. She thought it wasn't possible for her to file a complaint with the consumer forum as the device was billed in her mother's name. When she posted her query on an online forum, she realised she could file a complaint with the Consumer Forum although she's not direct buyer of the said product.

The “word ‘consumer’ is a comprehensive expression. It extends from a person who buys any commodity to consume either as eatable or otherwise from a shop, business house, corporation, store, fair price shop to use of private or public services.” The first part of the definition of ‘consumer’ deals with goods, while the second part pertains to services. For instance, it's not only buyer, but even those who use the goods who are beneficiaries of services with approval of the person who purchased the goods or who hired the services is included in it.

There are occasions when many of us receive, as well as gift others products that are purchased. We come across problems and service deficiencies, but feel cheated to have defective

goods or devices and shy or hesitate to ask the person (purchaser) to tell about the problems or go ahead with any legal recourse. At the same time, we fail to appreciate that there is no need to bother the person who purchased the product for you. The Consumer Protection Act, 1986 secures the rights of people who are users and beneficiaries. For the purpose of the Consumer Protection Act the word “consumer” has been defined separately for “goods” (for example a mobile hand set of NOKIA, LG etc.) and “services” (for example of Vodafone, Airtel, etc.).

For the purpose of “goods”, a consumer means a person who buys or agrees to buy goods for a consideration that has been paid or promised or partly paid and partly promised or under any system of deferred payment (where things are taken on EMI). It includes any user of such goods other than the person who actually purchases goods and such use is made with the approval of the purchaser.


If Anu was also gifted a SIM card along with the mobile device, she could have taken action against the service provider as well being a consumer. The Consumer Protection Act is aimed at protecting the interests of a consumer as understood in commercial sense of the term as ‘purchaser of goods’ and in larger sense ‘user of services’.

In India, the Consumer Protection Act, 1986 also differentiates a consumer as consuming a goods or service either for his personal domestic use or to earn his livelihood. Any person, entity or organization purchasing a commodity for commercial reasons is exempted from any benefits of this act. However, if



If you're facing a problem with your purchase, write to us at help@consumermate.com

the buyer of goods uses them himself, i.e., by self-employment, for earning his livelihood, it would not be treated as a “commercial purpose” and he does not cease to be a consumer for the purposes of the Act. Suppose a person purchases computers to run an internet café for earning his livelihood would be a consumer with in the meaning envisaged under the Consumer Protection Act.

Conclusively, when business people and legalists talk of consumers they are talking about person as consumer, an aggregated commodity item with little individuality other than that expressed in the buy/not-buy decision. There is increasing backlash from the public over use of the label “consumer” rather than “customer”. The National Commission for Consumer Redressal and various State Consumer Commissions have held that the expressions ‘consumer’ and ‘complainant’ gather within themselves and includes the legal representatives of the deceased consumer. Do not feel cheated and there is no need to bother the person who got the goods and availed services for you. You are a consumer and you can be the complainant to raise your rights and file consumer complainant with the consumer forums. 

Expert buying advice

Visit Consumermate.com for expert buying advice and comprehensive information on Laptops, Mobiles, TVs, Cameras and Camcorders

Solar gardening

Australian inventors Brendan Corry and Peter Sargent have invented Wunda Weeder, a solar-powered contraption that lets gardeners take their back-breaking work lying down

Consumer protection

COMPLAINTS RECEIVED

Laptops

Case File #216

I can't go for HP products - poor customer after-sales service

I thank Digit magazine for offering this forum. I wish to report bad service offered to me by HP (after-sales support). I purchased a Presario cq 62-105TU two months back and was offered Norton Internet Security 2010 as part of the HP redemption scheme. I sent a draft worth `499 as demanded by HP for this package. HP instead of sending Norton Internet Security 2010, sent Norton Antivirus. The anti-virus was actually offered in another scheme at just `300 along with music/game. I was not interested in games and hence opted for Norton Internet Security 2010. I reported to HP too. HP redemption cell didn't bother to reply to my email. HP usually replies to pre-sales query within a day. But they didn't reply to my redemption issue even after a week. I've not opened the anti-virus 2010 pack sent to me by HP. Hence, I request HP to send me what has been offered to me. I can return the anti-virus to the nearest HP office once I receive Norton Internet Security 2010. I've already sent redemption details to HP via email. My redemption code is 7VDS013CCW, ref no 71010379 on the parcel, at par cheque from ICICI bank from Bhavin Ashar was sent to HP Redemption Cell. I must say HP laptop is nice with preloaded software. But I can't go for HP products in future due to its poor customer after-sales service.

Ashar Bhavesh

Answer by Consumermate:

Considering the stakes involved we can't advise you to go to the consumer court. But you must take action for the money you've spent. At this stage, you send them a letter asking them to take immediate action regarding your grievance, failing which you will be taking action in the consumer court.

Mention a claim amount in your letter. They should respond.

Case File #332

Hard Drive Problems with my Compaq CQ model

I recently bought a Compaq CQ 42-116TU notebook on May 01, 2010 and a month later, my computer doesn't restart. It doesn't detect the hard drive. I've lodged a complaint with Compaq (no 4615430329), but they say parts are unavailable.

Frankie

Answer by Consumermate:

It's a sad situation where you're facing problems with your new purchase. It is understandable that if a part is not available, the customer can be asked to wait for a reasonable time. By reasonable we definitely don't mean beyond a week's time. We'd advise you to keep a track of all the emails and communications exchanged with the company. You may write a letter to them via speed post, and call the company to rectify the problems within a week, failing which they have to pay you compensation for the loss of work and harassment caused to you.

Mobile Phones

Case File #411

Touch Screen is not working properly Boss I Phone

I had purchased a Boss I Phone Model 3300. Within a month of using it, its touch screen isn't working properly. I had already lodged a complaint at the email address given in its user manual, but haven't received any response from the company. I'm thinking of filing a case in the consumer court for this.

Arup Das

Answer by Consumermate:

It is a fit case for the consumer court. But before moving to court, you should give one final chance to the company to rectify your problems. Just make

sure all the correspondences you've had with the company are via registered mode or emails. In your letters to the company, call upon them to rectify all your problems failing which you will be restrained to take legal action. For filing the complaint, you will always have the assistance of Consumer Mate.

Case File #463

No IMEI number on Sony Ericsson W205 mobile

I had purchased a Sony Ericsson W205 mobile on July 14, 2009. Within three months, I realised that there was no IMEI number so I received a replacement; the W205 phone is giving me high trouble now. 1) The messaging application is very slow, 2) The phone software gets corrupted every two months, 3) The phone suddenly becomes non responsive, 4) the phone arbitrarily at its own wish begins to restart at its own whim and fancy, 5) phone memory decreases by 100kb a week, 6) Master resets prove worthless and these problems are really frustrating me, my phone software was reloaded on May 4th and it is already giving problems again if we try to access file manager the phone restarts the above mentioned 5 problems are also present. I request you to let me know how to try and get a replacement for my phone because it is still in warranty period now. After the warranty period, I can only imagine what i will be doing with the phone because Sony will say warranty is over so now you have to pay for the software reload.

Answer by Consumermate:

To claim replacement, you have to prove that the product was inherently defective. At this stage, you can serve a legal notice upon them asking for a change of the product and compensation for the defective product and harassment. Keep a record of all the communications and send all the letters through emails or speed post.

KILLER RIGS

everything you will ever need to build your own PC. whatever your budget.

PRIMARY COMPONENTS



PROCESSOR

- AMD Athlon II X2 240 / ₹2,950
- AMD Athlon II X4 630 / ₹4,925
- Phenom X4 945 / ₹7,225
- Intel Core i5 750 / ₹10,100
- Intel Core i7 960 / ₹31,100



MOTHERBOARD

- ASUS NVIDIA 7025 M2N68-AM / ₹2,250
- Gigabyte MA78GM-US2H / ₹4,200
- ASUS M4A78-PRO / ₹5,850
- Biostar Tpower P55 / ₹8,500
- ASUS P6T Deluxe V2 / ₹19,300



RAM

- 2 x 1 GB DDR2 800 MHz (Kingston) / ₹2,000
- 2 x 1 GB DDR2 800 MHz (Kingston) / ₹2,000
- 2 x 2 GB DDR2 800 MHz (Corsair) / ₹4,000
- 2 x 2 GB DDR3 1333 MHz (Kingston) / ₹5,100
- 3 x 2 GB Kingston HyperX T1 2,000 MHz / ₹17,600

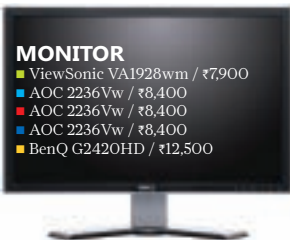
GRAPHICS CARD

- None
- ZOTAC GeForce 9600GT / ₹4,750
- Sapphire Radeon HD 4850 / ₹6,900
- Sapphire Radeon HD 5850 / ₹17,500
- ZOTAC GeForce GTX 470 x2 (SLI) / ₹46,000



HARD DRIVE

- Seagate 500 GB 7200.11 / ₹2,800
- Seagate 500 GB 7200.11 / ₹2,800
- Seagate 1 TB 7200.12 / ₹3,950
- Seagate 1 TB 7200.12 / ₹3,950
- WD Black Edition 1 TB x2 / ₹11,500



MONITOR

- ViewSonic VA1928wm / ₹7,900
- AOC 2236Vw / ₹8,400
- AOC 2236Vw / ₹8,400
- AOC 2236Vw / ₹8,400
- BenQ G2420HD / ₹12,500

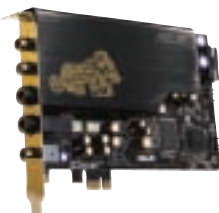
CABINET



- Zebtronics Antibiotic / ₹2,100
- Zebtronics Antibiotic / ₹2,100
- CoolerMaster 690 / ₹4,400
- CoolerMaster 690 / ₹4,400
- Antec 900 / ₹6,500

SOUND CARD

- None
- None
- None
- None
- ASUS Xonar DX / ₹3,700



SECONDARY COMPONENTS

POWER SUPPLY



- VIP 350 Watts / ₹850
- VIP 400W Gold / ₹850
- Corsair VX450 / ₹3,800
- Corsair VX450 / ₹3,800
- Corsair HX850W / ₹10,100



SPEAKER

- None
- None
- Altec Lansing VS2421 / ₹2,200
- Altec Lansing VS2421 / ₹2,200
- Altec Lansing MX 5021 / ₹6,500



MOUSE



- Logitech 3 button scroll / ₹300
- Logitech 3 button scroll / ₹300
- Logitech MX518 / ₹1,300
- Logitech MX518 / ₹1,300
- Logitech G500 / ₹3,700



OPTICAL DRIVE

- LG H55N / ₹1,100
- LG H55N / ₹1,100
- LG H55N / ₹1,100
- LG H55N / ₹1,100
- 101/ ₹11,010

KEYBOARD

- Logitech Multimedia / ₹400
- Logitech Multimedia / ₹400
- Logitech Multimedia / ₹500
- Logitech Multimedia / ₹500
- Logitech G15 / ₹4,400

MISCELLANEOUS

TABLET



- None
- iBall Design Tablet PFI209 / ₹8,900
- Wacom Intuos4 Medium (PTK-640) / ₹21,280



MOUSEPAD

- None
- Razer Goliathus Speed (Oversized) / ₹1,400
- Everglide Titan / ₹1,650
- Steel Series QCK Heavy / ₹2,000



HEADPHONES

- None
- Sennheiser HD 201 / ₹1,500
- Sennheiser HD 280 Pro / ₹5,500



GAMING CONTROLLERS

- MS Xbox 360 Controller / ₹1,350
- Logitech Momo / ₹5,500
- Logitech G27 / ₹15,520



PRINTING SOLUTIONS

- Canon PIXMA iP1980 / ₹2,695
- Canon iP3680 / ₹5,595
- Epson B-500DN / ₹22,999



POWER PROTECTION

- None
- APC 550W / ₹2,400
- Numeric 1 KVA / ₹4,200



The silver line

Microsoft's web application framework has transformed into a full-fledged application framework with its new avatar and is slowly gaining ground in a world nearly dominated by Flash

Rahil Banthia

readersletters@thinkdigit.com

Silverlight, although not technically a part of the .Net Framework, was updated with the recent release of .Net 4. It has come far from being a small subset of the Framework's core features running as a plugin for web browsers to a full-fledged cross-platform application framework like Adobe Flash. The WPF graphics model of Silverlight, leveraging existing .Net developers bundled with out-of-browser capabilities and plugins for nearly every web browser including mobile platforms pose an ever increasing threat to the dominant Flash. Let us delve deeper into Silverlight 4 and see what new features it brings to the table and if they are really worth all the hype.

Silverlight 4 includes many new features such as web camera and microphone support, right-click event handling, improved rich text boxes and

data binding features, modular development with MEF, and support for several new languages. All of this, if rightly implemented will enhance the building of business and media applications using this framework, even applications that reach beyond the browser.

Right-click event handling

What this essentially translates into, is that right-mouse-click events can now display a custom context menu instead of the default Silverlight menu, or invoke direct commands that could be used in games. The events are routed to a particular element and use the same MouseButtonEventArgs that the MouseLeftButtonUp and MouseLeftButtonDown events use so you can determine which element was affected and where on that element a right mouse button event occurred in order to show a context menu at that location.

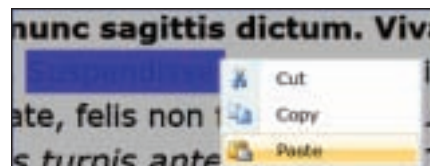
When the MouseRightButtonDown event is handled and the MouseBut-

tonEventArgs.Handled property is set to true, the default Silverlight configuration menu will not be displayed. The MouseButtonEventArgs.StylusDevice.DeviceType property will report the source device type for the event such as mouse, stylus, or touch. The following code is required to implement the right click functionality and display a custom menu control:

```
public MainPage()
{
    InitializeComponent();
    mediaElement.MouseRightButtonDown +=
        new MouseButtonEventHandler(MouseRightButtonDownHandler);
    mediaElement.MouseRightButtonUp +=
        new MouseButtonEventHandler(MouseRightButtonUpHandler);
}

private void MouseRightButtonDownHandler(object sender, MouseButtonEventArgs e)
{
    e.Handled = true;
}

private void MouseRightButtonUpHandler(object sender, MouseButtonEventArgs e)
{
    var menu = new MyContextMenuControl(mediaElement);
    menu.Show(e.GetPosition(LayoutRoot));
}
```



This is how the right-click contextual menu will look

The political connection

President Obama's inauguration was broadcast using Silverlight

The Olympic connection

NBC used Silverlight to broadcast the 2008 Summer Olympic games and the 2010 Winter Olympic games

Support for mouse wheel

In previous versions of Silverlight, you had to rely on some helper classes from either DeepZoom or other sample sites to implement handling the mouse's scroll wheel functionality on things like ListBox, etc. But with Silverlight 4, your applications can respond to mouse wheel events on controls where scrolling is appropriate. The Silverlight ScrollViewer automatically handles the MouseWheel event so the ListBox, ComboBox, TextBox, and ScrollViewers automatically scroll. The best part about the MouseWheel event is that it exists on all UIElements. This event fires whenever the mouse wheel is turned while the mouse pointer is over a UIElement. You can code the MouseWheel event in your application with a code that looks like:

```
private void
OnMouseWheel(object sender,
MouseWheelEventArgs e)
{
    if (e.Delta > 0)
        slider_X.Value += slider_X.
LargeChange;
    else
        slider_X.Value -= slider_X.
LargeChange;
}
```

Support for web cams and microphones

Flash had it for ages. But finally, Silverlight 4 comes with web cam and microphone support. It uses the device capture API to determine which video and audio devices are connected to the computer. The same API is then used to retrieve the devices, prompt the user for permission to access the devices, and use to the devices to capture audio and/or video.

Now once the user has granted permission, you can use the CaptureDeviceConfiguration class' GetDefaultVideoCaptureDevice method to get the default video device and the GetDefaultAudioCaptureDevice method to get the default audio device. This video can be captured by creating a new instance of the CaptureSource class and setting its VideoCaptureDevice property to the video device. Let's see the code necessary to request permission to your users to



Grant it permission by clicking on Yes

leverage their capture devices and then capture both the audio and video.

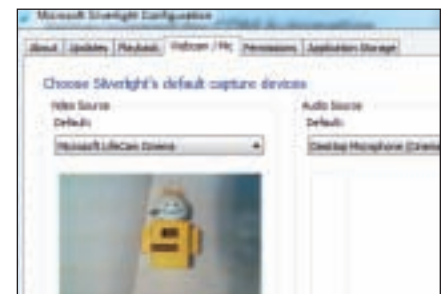
```
We request for permission with:
if (CaptureDeviceConfiguration.AllowedDeviceAccess || Cap-
tureDeviceConfiguration.Request-
DeviceAccess())
{
    _captureSource.Start();
}
Then capture the video using:
if (_captureSource != null)
{
    _captureSource.Stop(); // stop
whatever device may be capturing
_captureSource.VideoCaptureDe-
vice = (VideoCaptureDevice)Vide-
oSources.SelectedItem;
_captureSource.AudioCapture-
Device = (AudioCaptureDevice)
AudioSources.SelectedItem;
VideoBrush vidBrush = new
VideoBrush();
vidBrush.SetSource(_capture-
Source);
if (CaptureDeviceConfiguration.AllowedDeviceAccess || Cap-
tureDeviceConfiguration.Request-
DeviceAccess())
{
    _captureSource.Start();
}
}
In case you just want to take a snap-
shot from the webcam, you need to use:
private void TakeSnapshot_
Click(object sender, RoutedEventArgs e)
{
    if (_captureSource != null)
    {
        _captureSource.
AsyncCaptureImage((snapImage) =>
{
    _images.Add(snapImage);
});
}
}
```

Pretty neat, right? Of course the user first needs to set the default video and audio devices for the Silverlight application by right-clicking on the Silverlight application and going to the web cam/Mic tab as shown below.

Like good old Flash, you can even view and edit the permissions granted for the webcam and microphone access from the configurations window.

Elevated trust applications

Silverlight 3's out-of-browser (OOB) applications had very limited privileges. But with Silverlight 4, you can now



Make the necessary changes in your default devices

alter the OOB manifest to request more elevated permissions for your application. These applications then require the user to grant consent at install time and run outside the browser with elevated trust. To enable a trusted application,



Click on the highlighted check box

Open the project in Visual Studio and check the "Require elevated trust when running outside the browser" permissions checkbox in the Out-of-Browser settings for the Silverlight project. The result will be that the OOB install dialog now looks a little different and warns the user of these elevated privileges.

Local File System Access

In order to read/write data to the user's machine, you normally had to do it

Users of Silverlight

16 million subscribers to the largest 25 US daily newspapers. Compare that to 14 million Netflix subscribers and 23 million Xbox live subscribers

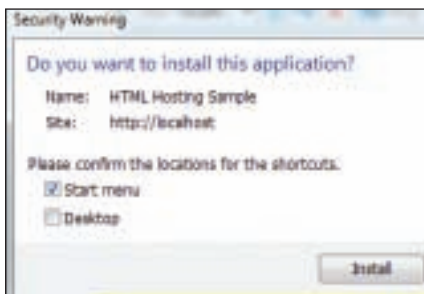
Silverlight mobile?

8.8 million - global iPhone sales in Q1 2010. 21.5 million - Nokia smartphone sales in Q1 2010. Nokia S60v5 already has a working Silverlight port

Developer corner

through a mechanism of OpenFileDialog (read) and SaveFileDialog (write). But come Silverlight 4, you have direct local file access to the users' "My" folders in their profile. These are things like Documents, Videos, Pictures, and Music folders under the user's profile. It lets you specify which folder you want to open by passing one of the Environment.SpecialFolder enumerator values to the Environment.GetFolderPath method. This method returns the path of the folder which can then be used to perform file operations, as shown in the code:

```
var sampleFile = @"sample.txt";
var path = Environment.
GetFolderPath(Environment.SpecialFolder.MyPictures));
if (System.IO.File.Exists(path + sampleFile))
{
    System.IO.File.Delete(path + sampleFile);
}
StreamWriter sw = File.
CreateText(path + sampleFile);
sw.WriteLine("<root>some data</root>");
sw.Close();
```



Click on install

Notification (aka "toast") API

One major flaw in these out-of-browser applications, in both Adobe Air and Silverlight was that there was no integrated support for Notifications; leave alone the ability to use the Windows's default notification tray to show messages like your IM client shows when you receive anything new. But Silverlight 4 tries to bring an end to that misery with a new API with the NotificationWindow method which acts like a subtle notification system with the ability to

temporarily display some information provided by the application on the user's screen. But one thing to remember is that Notifications can only be done in Silverlight out-of-browser applications. It is very simple to implement, however; Use the NotificationWindow method to provide a simple or customized notification mechanism for your application:

```
private void CustomNotificationButton_Click(object sender,
RoutedEventArgs e)
{
    NotificationWindow notify =
new NotificationWindow();
    notify.Width = 330;
    notify.Height = 75;
    TextBlock tb = new TextBlock();
    tb.Text = "Sample notification";
    tb.FontSize = 24;
    notify.Content = tb;
    notify.Show(3000);
}
```

Using Silverlight application as a drop target from your desktop

For a lot of scenarios, you may have wanted to be able to drag a file from your desktop or file explorer on to your Silverlight 3 or previous applications. You will be happy to know that Silverlight 4 now supports being a drop-target for the common drag-and-drop practice of clicking on a virtual object and dragging it to a different location or onto another virtual object. For this, the AllowDrop property of the UIElement must be set to true and its Visibility property must be set to Visibility.Visible for the UIElement to be a drop target.

Hosting Web Content within Silverlight Applications

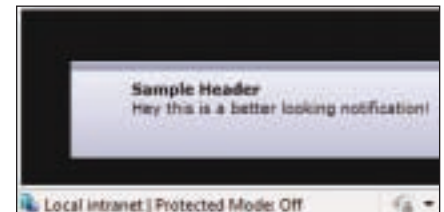
Enabling hosting HTML content in Silverlight is now possible by providing a simple WebBrowser control that will enable you to provide string-based HTML contents or navigate to a fully interactive URL

There are three ways to load web content inside of the WebBrowser control:

The NavigateToString method - The

NavigateToString method accepts a string that represents content (HTML and JavaScript). The content is passed to this method is rendered in the WebBrowser control.

The Navigate method - The Navigate method accepts a URI that points to the HTML content that you want to render. The URI does not need to be in the same



Different ways of notifying the user

Note

Silverlight cannot run on Linux (the Mono project has already ported Silverlight 3 for Linux and is on its way to release a beta build for Silverlight 4); but there is no doubt that the future of Silverlight rests in Windows and Windows alone. Also, we wish for an Android port soon!

domain as the Silverlight application.

The Source property - The Source property is another way to set the content to a URI.

The following code loads the www.microsoft.com Web page in the WebBrowser control when run Out-of-Browser.

```
wb.Navigate(new Uri("http://www.microsoft.com"));
```

You can even have a Silverlight 4 application hosting an embedded YouTube Flash video for that matter:

So that is Silverlight 4 for you guys. It sure has some nifty features and new toys to play around with. What matters is how you use them and create fantastic new applications with fresh UI's and tablet-specific features for the future, because the way we see it, Silverlight is destined to shine once Windows Phone 7 or Windows 7 tablets start rolling out in the market. Did we mention it has multi-touch support and full screen keyboard access on out-of-browser applications? 

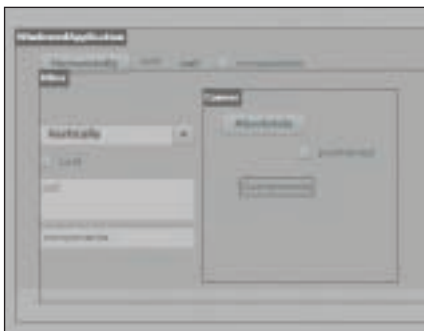
Exploring layouts for the Picasa Gallery app using Flash Builder 4

In our last tutorial we created an application using the Flex SDK in Flash Builder 4 for browsing an image gallery exported from Picasa. Here, we'll explore the concept of layouts in Flex 4, and how we can take advantage of them.

Flex "spark" layouts

In a Flex application, we usually have multiple components that may be laid out horizontally, vertically, or in a combination of both. In the earlier version (v3) of the Flex SDK, you could use containers such as VBox for vertical layouts, and HBox for horizontal layouts. These both derived from the Box component. Flex 3 also supported a Canvas component that used absolute positioning, where instead of laying out components according to a particular layout, each component would be given a fixed position.

In the new component architecture called "spark" which has been adopted in Flex 4, the layout mechanism of containers is kept separate. So while the Group container, TitleWindow container, List container all have different features, and looks they can be assigned any layout, and the way they place components will be



Containers within containers, each with its own layout

derived from that. So while the Group and Panel components are simply for displaying components, and the List component is for displaying and navigating through data,

they can use the same layout.

You can write your own layout mechanisms if you want to control the placement. For example, you could take a list and create an iTunes-like coverflow, or a 3D carousel. Let us take our list of images from the last tutorial:

```
<s:List id="imagesList"
dataProvider="{index}"
width="100%" height="100%"
click="imagesList_
clickHandler(event)" >
<s:layout>
<s:TileLayout />
</s:layout>
<s:itemRenderer>
<fx:Component>
<mx:Image source="{data.
itemThumbnailImage}" />
</fx:Component>
</s:itemRenderer>
</s:List>
```

Here we've added the TileLayout component that manages the layout for the objects in our List within 'layout' property. The TileLayout component manages the arrangement of the images we load from the Picasa gallery. We can very easily swap this out and put in <s:VerticalLayout /> instead, and lay out items in a vertical orientation. We can configure our layouts as well, the TileLayout class, for example, allows you to configure horizontal and vertical gaps and alignments, the number of columns or rows, and you can select a row or column oriented layout.

Another interesting concept is that of virtual layouts. With a virtual layout you can have a list display hundreds or even thousands of elements, and the client runtime, Flash player will render only as many items as required. This will allow you to display a very large amount of data in Flex containers.

Due to this flexible architecture, it is not only possible for you to experiment with different layouts by changing just a single

tag in your code, but you can also change the layout of containers in your project at runtime!

Extending our Picasa Gallery app

We'll add a drop-down list to the UI that will list all the available layouts and on changing the selection in that list, the layout of our images will change.

This entails the following things:

1. We need to add a DropDownList component to our application
2. We need to create an array of layouts to display in the DropDownList
3. We need to associate each entry in the DropDownList with a layout object
4. We need change the layout with the selection

STEP 1: Add a DropDownList component to our application

This is simple, we just add the following after the list code in our previous application:

```
<s:DropDownList>
</s:DropDownList>
```

If you add this and run the application, you will see the drop down list we have added will overlay the earlier list. Since we have not specified a layout for our application, it defaults to using BasicLayout, which uses absolute positioning and layout, where you need to specify the position and size of every component added to the application.

This is quickly and simply remedied by adding a VerticalLayout component as the layout for the applications. We can do this by adding the following code inside the application tag:

```
<s:layout>
<s:VerticalLayout />
</s:layout>
```

To make the width of this drop-down list 100% and give it an id, add the following code:

iPad/netbook?

7.1 million projected iPad sales in 2010.
58 million projected netbook sales in 2010

439 million

Projected global smartphone sales in 2014. Windows
Phone 7 with Silverlight has ample potential to dominate

Developer corner

```
<s:DropDownList  
id="layoutSelector" width="100%"  
>  
</s:DropDownList>
```

STEP 2: Create an array of layouts to display in the DropDownList

To display the layouts in a list, we need to have a name for the layout to display in the list, and an instance of that layout object. For this we will create an array of Object instances, with each having two properties, a name to display in the list, and a layout that has a layout object instance.

Here is a sample object:

```
<fx:Object name="Tiles">  
<fx:layout>  
<s:TileLayout />  
</fx:layout>  
</fx:Object>
```

The Object class is the base of everything in Flex; it is a dynamic class, so you can attach properties – such as ‘name’ and ‘layout’ – to it at runtime. We will create an array with multiple of these objects and add it as the data source for our list.

Let us add VerticalLayout and HorizontalLayout. Note that you can configure the objects in these instances as you like. Here is the finished code of an ArrayCollection with these three layouts:

```
<s:ArrayCollection id="layouts">  
<fx:Object name="Tiles">  
<fx:layout>  
<s:TileLayout />  
</fx:layout>  
</fx:Object>  
<fx:Object name="Vertical">  
<fx:layout>  
<s:VerticalLayout gap="5" />  
</fx:layout>  
</fx:Object>  
<fx:Object  
name="Horizontal">  
<fx:layout>  
<s:HorizontalLayout gap="4" />  
</fx:layout>  
</fx:Object>  
</s:ArrayCollection>
```

Note that this needs to be added inside the <fx:Declarations> tag in your applications code as it is not a visual component. We have given it an id of ‘layouts’ so that it can be used as a

source for the DropDownList.

STEP 3: Add the array of layouts as data source for the DropDownList

To add this as a data source for our list, we just need to bind it to the dataProvider property. We could have also chosen to place this entire list inside the <s:DropDownList> tag, which would have had the same effect.

To have it pick up the names from the objects and display them in the list, we use the labelField property. This property can be used to tell the List component which property of the list items is to be displayed in as a label.

We will also initialize it with a selectedIndex of “0” so that the first layout comes selected by default. Here is the final code:

```
<s:DropDownList  
id="layoutSelector"  
labelField="name" width="100%"  
selectedIndex="0"  
dataProvider="{layouts}">
```

If you run the application now, it will be display the drop-down list with the listed names, however changing it will have no effect. That we save for the final step.

STEP 4: Change the layout with the selection

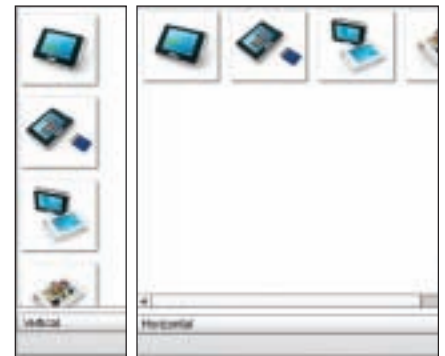
This step is quite easy. First we remove the layout we have set to prepare to have it set dynamically.

Next all we need to do is bind the layout of the List to the ‘layout’ property of the currently selected object in the DropDownList. So in the end we need to add the following inside the <s>List> tag:

```
layout="{layoutSelector.  
selectedItem.layout}"
```



The DropDownList now lists all the layouts



Left: Vertical layout, and right: the horizontal layout

```
selectedItem.layout}"
```


However just to be safe will we have the layout default to the “TileLayout” in case no item is selected. The final code for that is:

```
<s>List id="imagesList"  
dataProvider="{index}"  
width="100%" height="100%"  
layout="{layoutSelector.  
selectedItem?layoutSelector.  
selectedItem.layout: new Tile-  
Layout()}">  
<s:itemRenderer>  
<fx:Component>  
<mx:Image source="{data.  
item.thumbnailImage}" />  
</fx:Component>  
</s:itemRenderer>  
</s>List>
```

You may notice that the layout attribute now reads:

```
layout="{layoutSelector.  
selectedItem?layoutSelector.  
selectedItem.layout: new Tile-  
Layout()}"
```

Please check to ensure that we always have a valid layout. So if no item is selected (layoutSelector.selectedItem does not have a value), the layout for the List will be a “new TileLayout()” object, while in other cases it will be the ‘layout’ property of “layoutSelector.selectedItem”. Run the application and you will see that the application will change layouts as you change the selection.

Check out the extended tutorial online at http://www.thinkdigit.com/d/fb4_tut1_3 which will show you how to use some more exotic layouts such as a wheel / carousel layout, a flowing layout, cover-flow etc. 

Radeon 6000

AMD to launch the upcoming Radeon HD6000 series of cards in 2010

30nm DDR3

Samsung said to start manufacturing 30nm DDR3 modules soon

Are antiviruses going to die?

With the widespread adoption of open source operating systems that are inherently less vulnerable to virus attacks and Microsoft offering its own brand of security in the form of Microsoft Security Essentials, one wonders whether anti-viruses are really necessary. This month, we set out to answer this very question by featuring opinions from a wide cross section of the industry – from OS makers to anti-virus companies themselves

Amit Nath

Country Manager, India & SAARC,
Trend Micro



The answer is no. I have few questions before someone agrees to my thought. Has the threat landscape changed? Has it become more complex? Are the customers still being attacked? Have we solved the customer problem? If the answer to all the above questions is yes, then how can possibly AV die.

The roll out of a new technology means more complex needs of customers. Virtualisation is the new standard and with that, a new paradigm will be needed for security. As cyber crime is all about money, new social engineering malware attacks will bring in more challenges for security vendors. They will have to continuously come out with carefully crafted solutions to stay ahead of the curve.

Venkatasubrahmanyam Krishnapur

Senior Director – Engineering, McAfee

The threats to the cyber world have only been growing in nature and sophistication over the years. We expect to see AV co-exist, though likely on a diminishing scale, with increasing emphasis on pro-active anti-malware technology resulting in superior and faster protection to customers against a wider range of threats. McAfee has a head start in this area given that our solutions



are integrated with McAfee Global Threat Intelligence which offers our customers real-time protection and peace of mind

Rajiv Popli

Director, Windows Client, Consumer & Online Business Microsoft India

According to a recent CERT-In report, 1900 web sites have been defaced in the first three months of 2010 – a growth of over 500 percent, when compared to last year. Stats like these reinforce the need for consumers to protect themselves when surfing online. Also, socially engineered online security threats today are no longer limited to malware, phishing or Trojans you have newer threats / viruses evolving with every passing day. So, having an antivirus is imperative in ensuring the security of your



PC and personal data.

Apart from this, consumers need to keep their antiviruses and even OS up to date with service packs. However, the fact remains that as long as we have cyber crime, antiviruses will remain relevant in protecting consumers against cyber-threats.

Prakash Advani

Partner Manager - Central Asia,
Canonical

Linux is less effected by viruses than other operating systems for two reasons. The first is popularity - the virus makers of the world know that they can affect more systems more quickly by creating viruses for the most popular operating system, namely windows. The second is technical. There are inherent strengths in how Linux is built that makes it less vulnerable to those viruses



that are created to target Linux users.

For example, in a Linux system, user data and applications are separate, user can read and execute the applications but not write to them. For a virus to be successful, it needs to go and attach itself to all the executables. In Ubuntu we have an additional level of security by having sudo, whereby the root (admin) user is disabled by default.

I have been using Linux for the last 14 years and have never been affected by any

Lightspark 0.42

Latest release of free and open source
Flash alternative released online

Movies anywhere, any format

UltraViolet is the open standard system which lets you watch movies you buy regardless of place or format being tested by media companies



viruses nor have I had to use any anti-virus software on Linux. However the software does exist and it is not going to die, but it is going to evolve, especially for Linux systems.

Yuval Ben-Itzhak

Senior VP Engineering, AVG Technologies

The term Antivirus is still interpreted by many people as a software that tries to match known signatures of virus/malware with a given file. In simple words, traditional signature based anti-virus tries to identify a virus based on what it looks like. This was true until 8 years ago. The new

technologies are no longer using signatures but detect a malware by its behavior (in simple words, by what it does rather than by how it looks like).

To summarize, today's security products such as AVG are actually security suites and not just traditional anti-virus as many people still consider them. So the days of antivirus are not over at all, there are just additional security layer that were introduced to provide the needed protection.




David Hall

Regional Consumer Product Marketing Manager, Symantec, Asia Pacific

Malicious activity is more rampant than ever. In 2009, Symantec identified more than 240 million distinct new malicious

programs, a 100 percent increase over 2008.

The growing sophistication of malware means online threats are no longer limited to viruses, but also include spyware, spam and phishing, among others. The industry is therefore quickly realizing that traditional approaches to antivirus, both file signatures and heuristic/behavioral capabilities, are not enough to protect against today's threats. We have reached an inflection point where new malicious programs are actually being created at a higher rate than good programs. As such, we have also reached a point where it no longer makes sense to focus solely on analyzing malware. Instead, approaches to security that look to ways to include all software files, such as reputation-based security will become key.

As Indians increasingly go online to work, play and stay in touch, they need more protection, not less. Consumers need to invest in a comprehensive and up-to-date paid security software featuring reputation-based technology, and that is the direction in which the security industry is heading too." 

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Time Machine

Travelling in time has always fascinated the human mind. Be it things that could be undone, saving precious lives from a disaster or a war or stopping a potential crime before it is committed, time travel can open new boundaries and horizons for mankind.

MOVIES



Back to the Future: One of the major motion pictures based on time travel. Micheal J. Fox-Marty goes back in time in 1955 to prevent the death of his scientist friend 'Doc'.

Terminator 2 Judgement Day: Who isn't familiar with the T101 and his quest to save Jack from the evil T 1000. In the first and second parts, Arnold travels back in time as a villain first and then the ultimate hero.



Bill & Ted's Excellent Adventure: Bill & Ted go on a joy ride as they travel back in time collecting important historical figures in order to pass their college project.

BOOKS



The Time Machine: Written by HG Wells, this classic novel tells the story of a time traveller who goes back and forth in time, concluding his understandings on now degenerated humans and finally as a spectator to the end of the earth.

The Time Machine: Written by HG Wells, this classic novel tells the story of a time traveller who goes back and forth in time, concluding his understandings on now degenerated humans and finally as a spectator to the end of the earth.



Replay: Jeff Winston dies of a heart attack and goes back in time when he was a 18 year old kid, inspite of his repeated attempts and several 'replays' later he still cannot alter the future to prevent his death. Written by Ken Grimwood.

Replay: Jeff Winston dies of a heart attack and goes back in time when he was a 18 year old kid, inspite of his repeated attempts and several 'replays' later he still cannot alter the future to prevent his death. Written by Ken Grimwood.



The Time Traveler's Wife: Debut novel of Audrey Niffenegger. One of the protagonists suffers from a rare disorder Chrono-displacement where he travels through time having no control over the time or duration travelled.

The Time Traveler's Wife: Debut novel of Audrey Niffenegger. One of the protagonists suffers from a rare disorder Chrono-displacement where he travels through time having no control over the time or duration travelled.

Tourism in Time

According to Stephen Hawking, the very absence of time travellers from the future puts a question mark on whether at all travelling in time is achieved by humans, he goes on further explaining that this does not mean that time travel is impossible but may be its never been developed fully or used cautiously.



Another take on this given by Carl Sagan goes something like this, that time travellers could be amidst us but are in disguise and are not recognised as time travellers.



The Grandfather Paradox

First described by René Barjavel in 1943, it states that if you travel back in time and cause the death of your grandfather before he meets the prospective grandmother then as a result the traveller's own existence is at stake as he would have never been conceived. Hence creating a paradoxical situation.

Another similar paradox by Stephen Hawking states that if a scientist has built a time machine and he goes back in time by one minute and takes a gun along with him and kills his past self with it who was still loading the gun before travelling into the past, now the question arises as to who killed whom, the traveller or the scientist. According to Hawking the man who gets killed in this situation would not negate the existence of the other as the person from the future is just a copy of the past man.

Computers from the Future

The design of a standard desktop PC hasn't undergone a major facelift for a long time. The basic setup remains more or less the same – monitor, CPU, keyboard and mouse with the exclusion of wires in some new PCs, but these machines from the future are bound to give a new look and feel to the way we perceive PCs today.



The E-Ball:

Future computers won't be just rectangular plastic. The E-Ball concept PC is a sphere which has pop out legs, measuring 6 inches in diameter this orb projects a virtual keyboard and display and also houses a detachable mouse.

Power Flower: Who needs electricity to power their machines when Fuel Cell technology is in? Based on clean energy platform the Power Flower PC is a minimalist



design idea saving space and energy. Capturing the gestures and movements of the user the Power Flower PC uses motion detection to operate and projects the screen on a wall. Can you imagine making your big business presentation

from a sunflower?

Dell O Project PC: This green design PC houses a small plant inside its circular hollow CPU. However the idea would have made a lot more sense if the plant would have produced more Oxygen than the amount of CO2 generated during its computer's production, but due to its small size it does not do its bit. Its still a good reminder for cutting down gas emissions and the Going Green idea!



Hard Disks from the future

There was a time when a 20 GB hard drive on a Windows 95 system created buzz among people. Now the size of what's considered today a good amount of HD space to have, goes up a notch almost every month. A 1 TB hard drive today means a good PC configuration and fits in easily in a standard CPU unit, so how much space does a PB or EB take to store?

PETABYTE: 2 datacentre cabinets

EXABYTE: 2,000 cabinets, datacenters will consume the size of a 4 storey building

ZETTABYTE: 1000 datacenters, will consume an area of about 90 square Kms

YOTTABYTE: A million datacenters, will consume a mind boggling area of 6500 square kilometres.

Finally, for the last mind numbing number trivia,

World GDP – \$61 trillion

Cost of a Yottabyte – \$100 trillion.

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Partial List

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Must-have App: Google Earth

Really? You need a reason beyond "Google Earth iPad exists" to get Google Earth on the iPad? (Free)

Musing on the iPad

What remains when you've run out of lust? (And other magical stories)



Anonymous Writer #4492
readersletters@thinkdigit.com

Why, I must ask myself, am I writing about the iPad now, when it's been out for yonks (in tech terms, at least), and everyone from professional reviewer to unprofessional pillock has taken great liberties with the thesaurus in describing its wondrousness? I'll tell you why, children. It's because only after time passes and the halo and hype have faded away – leaving room for the Next Big Thing™ – do we see the true nature of the shiny things we fell for. Will we chalk it down to a moment of weakness and deny we ever bought this horrible thing, or will we settle into what promises to be a long, healthy and loving relationship, at least until the next one arrives?

I suppose I must mention that when

the iPad was announced, I was astonished at my own optimism. Could this be the first thing launched in recent memory that doesn't suck? Would I have bought one if someone else hadn't already paid for the one I have? The answers to those questions, it turns out, are yes and no, respectively.

Let me first point out that the iPad is exactly what a portable computer should be. Does a few things, does them really, really well, ARM-based, and with a battery that requires a conscious effort to drain. It's also what a tablet user interface should be – fully aware that users will

be using their fingers, not a mouse, and designed to reflect that.

I read plenty of early criticism that the iPad isn't "magical and revolutionary" because it doesn't run a "bonafide" OS like Windows or Mac OS X. "I won't buy a tablet that doesn't run Windows", to paraphrase one particular forum (not ThinkDigit) commenter person. If you identify with this statement, read on.

First, take that bucket off your head – it makes you look silly and miss stuff. Like the fact that Windows-based tablets have been around for ages. Like in all those years, they've never found much of a following. Because they were rubbish. And expensive. But mostly rubbish – think boiling hot sewage served on a platter of mouldy bread.

"But surely Mac OS X is worthy of the tablet treatment," you might reply, "I've tried Ink with a graphics tablet, and it's really good." To which I would point out,

"Have you seen the close button on windows on the Mac? They're really hard to hit with a mouse cursor, much less with your flabby fingers. And don't interrupt me." No – putting an OS designed for keyboards and mice on a device for fingers is a recipe for, well, hot sewage pizza, and if you can say otherwise with a straight face, you are deluded. Or Steve Ballmer.

Right then; where was I?

The fit

Here's an interesting strategy to save yourself from misery – instead of emptying your bank account every time a pretty gadget hits the market, try to visualise where it fits into your life. For example, I see a Nokia N900 fitting into mine quite neatly – it runs Linux, so I can use vi to write my articles anywhere; it's got a TV out and will pair to a bluetooth keyboard, so I can actually do that writing with a proper keyboard and a proper display. It is, in fact, the mobile computer I'd much rather be writing about right now, if I could afford the damned thing.

Coming back to the iPad – I could picture that fitting into my life too. iBooks is a big, fat reason right there – I love books, e or otherwise. So is the fact that now that it's got Pages, it becomes a much lighter portable workstation than my current laptop. Of course, there's the whole user experience thing, but it's really the reading and writing that takes the iPad beyond just "big iPod Touch".

Unfortunately, the reading part gets kicked in the groin when you realise that the iPad weighs 650 grams, is top-heavy, and doesn't lend itself well to gripping. To address those in order – 650 grams is more than your average paperback, and perhaps more than a hard-bound

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Must-have App: Gravitux

Use your finger to create gravitational fields, and move the stars around your screen. You're supposed to create art, but it's really just an excellent time-killer (Free)

book, even. Take a tablet that size and that weight to read in bed, and watch it tip over in your hand and bonk you on the nose. Not the type to read in bed, are you? Well, how about this: the shiny front bezel will ensure that no matter how you try to grip it, your thumb will slowly slip towards the edge, forcing you to hold the iPad in both hands. If you can picture yourself doing this – i.e. in a chair, worrying that it may fall if you aren't ever-vigilant – you might see that it's a rather stupid position for reading; something, I must remind you, that people do to relax.

What about writing then? With the keyboard dock, perhaps. But since I couldn't be arsed to spend any money on that, I was stuck with the on-screen keyboard. I should point out that I'm biased here: I've always maintained that anyone who trades in a physical keyboard for a touchscreen travesty should be tied naked to a nest of angry hornets, so it's no surprise how much I dislike the iPad's keyboard. But I can't imagine anyone *liking* it – just tolerating it in various degrees. In portrait mode, it's too big to use with thumbs, but too small for both hands. In landscape, it's big enough to use with both hands. I can use it without cursing by now, but it's still horrible, and I'm getting a keyboard dock as soon as I can convince someone to buy me one.

Okay, so maybe it is a really big iPod Touch. But can that be a good thing?

The good thing

It's the screen. It's bright, beautiful, responsive (although that has to do with the processor as well), and is perfect when viewed from every angle. And big. And the bigness is good. Good for browsing the Web, reading PDFs, and when turned off, checking for bits of food in your moustache before that important presentation.

But where the screen truly excels is games. Not the little iPhone/iPod Touch games, where you're tilting and shaking the device, of course – you don't tilt and shake a \$500, 650-gram device that threatens to fall out of your hands every time you lift it up. I'm talking good, old-fashioned tabletop games. The screen supports up to 11 fingers (or 10 fingers

and the tip of your nose), making it the closest you'll come to that Surface thing that Microsoft promised and then threw down a black hole. Fire up Game Table (free in the App Store), lay the iPad on your table, and have a game of Chess (or Checkers, or Reversi) with a friend. Play Harbor Master HD (also free) for endless hours, and have your friends help you dock those boats without crashing. Join a friend in the tower defense extravaganza that is Plants and Zombies. See the common thread here? The iPad's screen is a compelling reason to get back in touch with all those



**iPAD
REVIEWED
IN DIGIT
MAY 2010**

people you've alienated since you found the Internet. Or alternatively, get yourself a gimp.

But beneath the starry veneer, there are still things that smell.

The gripes

Someone needs to tell Steve Jobs that I'm a big boy now. That means I get to take responsibility for my decisions, even if they seem like the actions of a whimsical monkey on LSD. I should be able to install apps that "ruin my experience", as long as I acknowledge that I only have myself to blame when my iPad crashes. Is that so hard? Anyway, let's not beat this dead horse any more.

What's really getting on my nerves lately is the lack of a common file storage. It would be presumptuous of me to

trouble you, Apple, for a Finder-like utility to browse the iPad's file system, but surely you could just make a common pool of files that every app could dip into, couldn't you? Transferring files to apps through iTunes is groovy and all, but how about letting the apps share those files properly? Consider what I'm dealing with: I'm reading a PDF in GoodReader, when I realise I want to make a couple of annotations in iAnnotate. In GoodReader, I can choose to open that file in iAnnotate (also groovy). But here's the catch


– iAnnotate gets a *copy* of the PDF, not the original. This repeats every time I try to use this "open with" feature. So when I'm done annotating and want to send it back to GoodReader, I now have my original PDF and an annotated copy, and an annotated copy still in iAnnotate. You could argue that I should do everything in one app and stop whining, but there's a reason I use two. GoodReader, for instance, doesn't die when I throw huge PDFs at it. And now with iBooks supporting PDFs as well, I may end up with another copy for that, too. And before you know it, the apps are spawning more copies than a collection of bunnies during mating season.

I understand that apps need to run in their own sandboxes and not mess with other apps' toys, but don't sell it as a device for (potential) productivity if you're going to get in the way of me getting productive.

But maybe that's been my mistake all along.

The point

The iPad, as the tech pundits will tell you, is a great device "for consuming media". You know, like your TV. You're supposed to stare gormlessly into its magical screen, drooling onto your shirt, watching YouTube and surfing the Internet looking for bandwagons to jump on. Productivity? What kind of square are you, daddy-o? This is a thing for the cool kids, who don't need to work, because mommy told them that the world will bow before them anyway.

On the other hand, revision 2 might turn out to be rather nice. 

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Facebook update

The social network recently hit the 500 million user base milestone. The last 100 million got added in the last six months

Google images update

Google claims their images search category gets one billion page views a day. A picture is indeed worth a thousand words.



Digit anniversary issue lucky draw winners

CONGRATULATIONS!!!

Here are the bumper prize winners from June's lucky draw

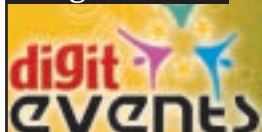
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2	Muhammed Rafeek P.h	BenQ Camera	Thrissur
3	Eby Varghese George	MSI Netbook	Bangalore
4	Sagar Kotadiya	Verbatim Hard-disk	Surat
5	Ganesh Jaiswal	Verbatim Hard-disk	Lucknow
6	Ashish Rakheja	BenQ Monitor	Palwal
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August 2010



Digit is taking interactivity to a new level, and will be organising events every month. You get to meet and interact with people that you wouldn't in the normal course of your life — industry experts, Team Digit, and other readers with similar interests. Stay updated and stay ahead of the curve by looking for this page in every month's magazine.

1 Webinar

Basics of Photography



**AUGUST 21
TIME: 1700 HRS**

Is a high mega-pixel count the real deciding factor? What is better - Optical zoom or digital zoom? DSLR or Prosumer? What is aperture priority, shutter priority? To get answers to all of the above questions, and some more dope on photography, log in to the Webinar on 'Basics of Photography'. We will try to cover the basic doubts regarding cameras and what to look for in what type of camera. Learn about settings such as ISO, white balance, and some basic techniques to click great photographs.

Bonus feature: Learn how to take the best possible shots with you cell phone camera.

For details on upcoming webinars and to view past webinars, visit thinkdigit.com/webinars

HP slate

Despite being stricken off from active development, the HP slate re-appeared on the company's website towards the end of last month

Community

Download the 'Green Guide' - a free e-book from Digit !

100 pages of life tips that all of us can use towards a better life, richer pockets, a greener Earth and a healthier future. Explore the grand compilation of Green themed articles from Digit and loads of tips from the iThinkGreen community (facebook.com/ithinkgreen).

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Digit distributed seeds along with the Anniversary issue. Those little saviours of the planet are growing steadily and on their way to becoming mighty life-giving trees. Post photos of your saplings and trees on facebook.com/ithinkgreen and win exciting prizes

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Crysis 2 AI

Crytek claims their new game Crysis 2 will have the best AI in any game

Starcraft II pre-loaded

Blizzard has enabled pre-loading of the upcoming strategy game Starcraft II

International Cricket 2010



This game is a little rough around the edges; however it is quite solid where it really matters

Codemasters has followed up Cricket Ashes 2009 with release of the next game in the series called International Cricket 2010.

While in most part, the game is the same as the last release, in some areas it is a step up. When it comes to sheen and presentation, this game is far from sport games by the likes of EA Sports. However, considering the dearth of Cricket video games in general, International Cricket 2010 is perhaps as good as it gets in its space.

Meat of the game

For the unlicensed teams, the players are given names that are just different enough not to violate any rights, but at the same time they are obvious enough to hint at their real-life equivalent. For instance, Virender Sehwag goes by the name of V. Sevak in the game.

The skills of players in the game closely match those of their real-life counterparts. In addition to this however, each time a player reaches a certain milestone in the game (like a certain number of boundaries) the game rewards a skills point to that player. This skill point can then be used to upgrade that player's skill. The various skills of a cricketer are distributed under three main categories of batting, bowling and fielding. The cumulative skills of all the players in a team determine the overall ability of a team in these three

categories and its star rating.

This game also has good variety of options when it comes to match types. It features 20 over matches, one day international (ODI) and Test matches. The ODI can be further customised to setup 5, 10, 25 or 50 over matches. Then there are four types of preset tournaments – World 20 overs, Champions Cup (ODI), 20 overs Super League and World Trophy (ODI). In addition to this, the game also has the option to create custom tournaments.

On the field

Players' performance is dependent on their skills in the three key areas (balling, batting and fielding), coupled with their current level of confidence. In turn, players' confidence is built up by good performance on the field. What this boils down to is that typically one would start with safe simple stuff before trying high-risk, high-payout moves. Bowling and batting techniques are masterfully mapped to the gamepad without making things too complicated.

Batsmen have three stroke types available: defensive, attacking and loft and the power and direction of the stroke is controlled by the analogue stick. In addition, a batsman can choose to play the stroke on the back-foot, front-foot or step-up ahead of the crease. For the bowler, there is a wider variety of options

THE SKOAR

8

Genre: Sports

Studio: Trickstar Games

Publishers: Codemasters

***Platforms:** PlayStation 3, Xbox 360

Price: Rs. 1,999


***Reviewed on** Xbox 360

and techniques available. A bowler can choose the length of the balling pitch, type and amount of swing or spin to the ball and also choose to aim the ball at the stumps or outside its range. The variety of options available depends on the bowlers' skills and how much the ball is worn.

Fielding is largely automated with the exception of catching and throwing. When a fielder has an opportunity to catch a ball, the game slows down to bullet time, with a coloured circle around the ball. During this time, the player needs to press a key at the exact moment the circle turns green, in order to successfully make the catch.

Dumpy pitch

This game starts taking a hit on quality when it comes to things like presentation and animation. While the commentary is dry and dreary—like it generally is even in real-life—the commentary lines are quite limited and they repeat more often than it usually does in a sports video game. There are also commonly occurring animation glitches, especially outside of the pitch area. There is also a major problem with appeals to the umpire. It is quite common for the players to appeal for an LBW, even when the batsman is cleaned bowled. Additionally, the developers could have done a lot better with the menu and navigation system. Editing a player's skills, gear and appearance is a tedious process that could have been easily avoided by a better designed system.

All things considered, International Cricket 2010 culminates into a fairly solid product. The variety of option available in single-player modes is complemented by an equally decent number of multiplayer options. The game supports two to four player offline multiplayer and two-player online matches. We must say that we actually find this sport to be extremely mind-numbing in real life. 

GENRE: (THIRD PERSON) SHOOTER, STEALTH

STUDIO: UBISOFT MONTREAL

PUBLISHER: UBISOFT

*PLATFORMS: XBOX 360, PC

(MICROSOFT WINDOWS)

PUBLISHED: 1999

*REVIEWED ON PC

ACTION-PACKED ROLLERCOASTER RIDE

The hallmark of Splinter Cell games has always been missions that emphasised on quiet and stealthy infiltrations; some of which required players to complete an entire mission without killing a single enemy. For me, patiently lingering in the shadows, watching and eavesdropping on oblivious guards was the real kick in those games. Compared to these past releases in the series, Splinter Cell: Conviction feels more like a cover-shooter than a spy game. Stealth is still an element in the game; however, it no longer rules the design of the game like it once had.

ARTISTIC CONVICTION

The most significant change in the series is in the art department. All other changes in the game's design are apparently centred on this new art direction. Starting with the game's protagonist, Sam Fisher has ditched his trademark night-vision goggles and tactical stealth armour, in favour of urban casual wear. And while there are well-lit and dark areas in equal measure, hiding in shadows has been stylized to meet the new art-style. In Conviction, lurking in shadows bathes the world into shades of gray and Fisher can see in the dark without the need for night-vision goggles. This is because enemies are almost always placed in well-lit areas. The way forward in the missions is mostly about leaving behind a sea of dead bodies. Stealth kills now includes effortlessly taking out enemies while hanging from a ledge or a window pane and a highly effective addition - the Execute move.

A nice bit about this new art direction is the way in which the game's environment has been used to communicate with the player. Mission objectives and grainy videos of flashbacks are projected on the surrounding walls to dramatic effect.

BANG-BANG!

Sam Fisher starts off rather ill-equipped, using stolen piece of a rear-view mirror to peek under doors. However, as the game progresses, he has access to enthusiastically stocked weapon crates that are curiously placed at fixed checkpoints.

Weapons include customary weapon classes of most shooter games—there are pistols, SMG, Rifles and Shotguns. The selection of weapons in each class grows as the game progresses and all of them are upgradable using achievement points.

Just like weapons, the game also has a decent collection of gadgets that are fully upgradable. However, unlike previous Splinter Cell games, you will rarely feel the need to reach into the pockets and use a gadget. Conviction is a relatively fast-paced game with little room, or even the need for much planning or strategising.

VENGEANCE AND BEYOND

Splinter Cell: Conviction has a fairly decent storyline which is delivered through often engaging voice-acting. The plot of Sam Fisher's personal quest to track his daughter's killers is intertwined with another plot which inevitably includes saving the world. We feel that new direction with game-play would have been better justified if the main storyline

would not have essentially culminated into just another mission for the country. Missions are relatively short and as a result the game feels a bit short. The good news is that besides the main campaign, there is a decent amount of bonus content. For instance, in online co-op mode, players assume the role of Archer and Kestrel in a joint effort to recover stolen warheads. Hunter game mode is about progressively clearing the area of enemies, and Last Stand is about surviving waves of enemies, while simultaneously defending an EMP generator. Our online experience with the game was not one of the best. The DRM software for the PC version of the game appears to incessantly ping the Ubisoft servers even during 'offline' play. On a really bad day for the internet connection, it made the game virtually unplayable since every three or four seconds the game would lose connection with the servers and lock the game up. This may be a deal breaker for some. On the plus side, most of the additional game modes do not require another human player.

Splinter Cell: Conviction has its fair share of virtues and vices, and on the balance of things this is a fairly solid game from a neutral perspective. More significantly however, it is the shift of emphasis from stealth to action that is most likely to hurt the fans of series. For those who really want to get this game, it's a hard choice between paying more for the Xbox 360 version or getting the far cheaper PC version and risk having to endure the DRM. **d**

PURE FOOTBALL

Pure football presents itself as a mixture of professional football and its street version—a game that is as much about street-credit as it is about winning a serious championship. It appears that the game is trying to earn its distinction among the ranks by being a concoction of all other football games.

Playing Field

This game has 17 national teams and three "Legends" teams featuring the old gods of the sport. The matches are played with five players a side in a small football arena and the control scheme is pretty much like FIFA or PES. Understandably, the offside rule has been eliminated and players do not get booked or sent off. Instead, the game has a penalty meter that fills up each time a player commits a foul. When this foul meter is completely filled up, the opposing team gets a crack at your goal through a penalty kick. Each team has a goalkeeper and four outfield players that

of deciding the team's name, emblem and kit. This is followed by creation of a new player who will serve as the captain of the team, whose starting stats will depend on the playing position you choose. Finally, the team creation process will let you pick the starting line-up and reserves from an initial pool of players.

Campaign mode is a 28 day contest against 17 national teams to climb up the team leader board ranking. Towards the end of this contest, you get to have a crack at the championship if your team is somewhere in the top eight. Journey



can either be all strikers, midfielders or defenders; or any combination of the three.

There are no half-time breaks or substitution opportunities and the rules of winning the game can differ each time. For starters, there are traditional timed-matches where the team leading on the scoreboard at the end of time wins the match. If the scores are still tied by the final whistle, the game goes into penalty shootout to decide the winner. Besides this, matches can also be played with different parameters for victory. For instance, the first team to score three goals wins the match or the team to reach a goal difference of two is the winner. To its credit, this is one thing in the game which makes it feel like street-football, and invariably it also keeps things fresh and interesting.

Pure Campaign

A huge chunk of the game is the single-player campaign mode which is mixture of "Be a Pro" and "Manager Mode" of FIFA games. The campaign starts off with a team creation process

Pure Football is a display of stifled potential

certain match against Italy unlocks centre-back Cannavaro for team transfers. Locked venues can only be unlocked by winning a set number of events in other venues. At end of an event—irrespective of the result—the game calendar moves to the next day.


Not much else

Besides the campaign mode, there is little else to do in Pure Football as the only other single-player game mode is the customary exhibition matches. The game supports offline multiplayer between two to four players and online multiplayer supports only two players.

Restricting the campaign mode to just 28 days hurts the game more than it helps. This is nearly not enough time to unlock all the venues and players, and beat all the challenges. At the end of 28 days, the game locks you out of that particular campaign and there is

nothing you can do to further strengthen your team. This leaves the only option of restarting the campaign with new team and hope to do better than last.

Game-play is heavily dependent on timing with the shot and cross meters, rather than strategy or tactics. Opposing AI becomes too predictable, too soon and as the entire campaign can be played on a single strategy. The developers have used motion-blur and dynamic cameras to give emphasize the feel of close-up action and the art-style lends itself well to the game's intent. However, with very little in actual game-play to support the art, it all comes out as little more than unwarranted drama.

There are a few good ideas and features in Pure Football and then there are overbearing shortcomings. There are plenty of teams and players on the disc, but considering the dearth of game-modes and limited nature of campaign mode, there is very little you can do with it. Pure Football may still have its uses as it can be a half-decent football quick-fix. 

THE SKOAR

8

Genre: Sports, Arcade, **Studio:** Ubisoft Vancouver
Publisher: Ubisoft, ***Platforms:** PlayStation 3, Xbox 360,
Price: ₹1,999/-

*Reviewed on Xbox 360

Connecting the world 140 characters at a time

Ever since its launch in 2006 Twitter has been growing at an alarming rate. What was originally called as twttr (inspired by Flickr) later developed into twitter. The first tweet was posted in March 2006 by Jack Dorsey who is now the chairman of the company, it was "just setting up my twttr." The twitter universe has grown by leaps and bounds since then and now has a whole list of terms and lingos associated with it

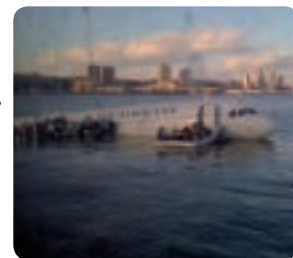


The Essential Twitter Lexicon

- **tweet**- the 140 character message that you post
- **twittering/tweeting**- the act of sending your tweet
- **followers**- people who receive tweets from you
- **following**- people from whom you receive tweets
- **retweet**- forwarding a tweet to your followers
- **@**- appears before the name of the person whom you are replying to
- **tweetp**- is a person whom you know on twitter
- **twoops**- when a direct message appears in public
- **twitpic**- posting a picture to all your followers
- **twitterfeeds**- news feeds which you receive straight in your account
- **tweet-up**- when two twitter users meet face to face
- **twestival**- annual meet of twitterers in major cities around the world
- **twitterverse**- the twitter universe
- **twittercize**- criticizing someone's tweets
- **trending**- any popular subject which users tweet about
- **#tags**- appears before a tweet making trending topics easier to locate
- **twemes**- breaks up as twitter memes which are global tags for twitter

Tips to increase your Twitter followers

- Start #tag's- create a loop which other twitterers find interesting and they'll add on to it
- Follow famous twitterers- this will add more value to your tweets and replies
- Retweet your links and encourage your followers to do the same. This will give your @username an international push
- Complete your bio- Its always better to give a brief idea about who you are as your tweets and replies don't mean much to your followers unless they know more about you
- Tweet pictures- pics taken from cellphones are heavily retweeted, use twitpic for it. This one has been retweeted more than 400,000+ times



New Inventions & Upcoming Products



- 1 Yike Bike**
Designed in New Zealand, the Yike bike is a new innovation in biking, inspired by the retro penny-farthing style of bicycle and touches a top. The best part about riding this bike is that the rider has to bend towards left or right to steer it in the desired position making it a joy ride. It will be available for sale by mid 2010.

- 2 Vscan**
Touted as the stethoscope of the 21st century the Vscan designed by GE is a handheld ultrasound which gives a clear view of the insides of a patient's body on its cell phone sized screen. With mobility as one of its main advantages the Vscan is as powerful as any standard ultrasound machine.



- 3 Sikorsky's X2**
For the high speed traveller helicopters have never been an option as they touch a max speed of just 297km/ph. Things might change with the Sikorsky entering the picture with its twin rotors spinning in opposite directions and a propeller attached to its tail the X2 does a 500km/ph matching the speed of a small size plane.

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Sales Toll-free No.: 1800-180-2237, Support Toll-free No.: 1800-425-9888, indiasales@iomega.com