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# Imagination to inception

I grew up reading the masters – Arthur C Clarke and Isaac Asimov. There was something to be said about the sheer believability of the content. Even if you were studying the laws of physics in school, these masters of sci-fi were able to convince you that there were shortcuts past Einstein's barriers of Physics. Thus, I happily went zipping across the universe with the protagonists in the novel of the week, with my imagination stoked, but my reasoning mind firmly planted in reality – thinking, "Hey, this really could happen in 3000 AD."

Even today, I re-read a lot of them, so hooked to every page that I have to play hookie from work because I was awake all night. I'm also one of those people who will tell you that good sci-fi books died along with the two masters, but I digress...

Since people hardly read books anymore, creativity and imagination is not something that's inspired by paper anymore – it's all video and images these days. And for most, letting our imaginations run wild is way more exercise than we want. We need to touch, feel or experience in some way...not imagine.

Our regular dosage of oohs and aahs comes from the movies. It's hardly imagination, because you only believe what you see... but it does captivate us nonetheless. Another way we find fantasy is in still images – desktop wallpapers, paintings, comics, etc. However, the latest fad is the "concept". Like everything else before, this concept of "concepts" has been around for ages already. Sometimes also called prototypes, the concept first became famous with the automobile industry.

However, over the years, we seem to tire of the latest fad – we're already fed-up of the iPad and the new tablet craze. We're now busy salivating over the sleek and dreamy concept gadgets that designers are only too happy to throw at us. Also, the days of concept imaging are already behind us; we expect 3D videos these days!

The Mozilla Seabird is one of the concept videos that caught everyone's fancy in late September. For those of you who haven't seen the video, do a YouTube search and watch it – in 3D.

If the comments on the [mozillalabs.com](http://mozillalabs.com) site are any indication, an actual phone like this one would sell like hotcakes. I read hundreds of the 1024 comments before it got boring, and all basically said, "Wow! I want one."

Although I'll be the first to admit that the concept video is well done, and it definitely is a cool looking gadget, it's hardly practical.

A projected keyboard may be cool, but if you can use it only on a flat surface, why not a foldable, bendable one? The pico projector also assumes I would have a dock sitting about in a dark room to use my phone as a laptop replacement. However, I think the cloud offers more of a solution there than a one-stop gadget that tries to be everything, and just about achieves it. And where exactly would I project if I were in a taxi, or on one of our over-cramped flights, with my legs almost pressed-up against my chest; and God forbid I wanted to have a meeting outdoors at noon in India!

Of course I have no doubt that if this phone were released tomorrow, hordes would spend their life savings to get it. Being practical is so boring isn't it?

It's not just about concept gadgets. The same applies to the "cool" gadgets of today. If you can afford it (or even if you can't), you want it; doesn't matter if you need it, or if it's practical.

On my way to work one day, I was on Gtalk from my phone chatting with a young reader (you know who you are), who was about to go off to college, and wanted to spend about Rs. 26K on an iPod Touch 64 GB.


"Why?" I asked.

"Because it's portable, has a lot of storage, and is the only device I will own for the next three years."

"A netbook is portable, has a lot more storage and will let you get college work done, and you'll even have money left over to buy a PMP!"

"Hmm...will think about it..."

I wonder if he was able to resist the temptation, and buy smart rather than buy cool. I doubt it, because I see people buying an iPhone, and never using it for apps, music or videos; and others who have bought a BlackBerry, but just to send SMSes...and to be a BlackBerry Boy.

All it takes is a cool 3D video, and people happily throw away practicality in favour of spending big bucks on features they *imagine* would be cool to own. We may have lost the ability to use our imaginations properly, but the manufacturers of fantasy have certainly managed to master the art of inception – it's not as hard as the movie made it out to be, apparently. 



**"...letting our imaginations run wild is way more exercise than we want. We need to touch, feel or experience in some way... not imagine"**

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- Acer Aspire One 532h
- AMD Phenom II 1075T
- AMD Phenom II 960 Black Edition
- Apple iMac 21.5 inch
- Apple MacBook 13-inch
- Apple Magic Trackpad
- ASUS Crosshair IV Extreme
- ASUS Crosshair IV Formula
- BenQ GL2030AM
- BenQ V2410
- Biostar TA880GB+
- Brag DB10
- Brag FJ8
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- Escan 11 Internet Security Suite
- SMC Ez StylePad
- Fly MV135
- Galaxy GTX460 768MB GC
- G-fone 777
- Huawei C5600
- Huawei U9130
- Lian-Li EX-30
- MEElectronics M6
- MEElectronics M9
- Micromax E390
- Movil MC100
- MSI N465GTX
- Norton Internet Security 2011
- Palit GTX460 Sonic 2 GB DDR5
- English Helper Read to Me
- Roccat Kone+
- Roccat Pyra
- Seagate GoFlex TV HD
- Silicon Power A50 250GB
- Skullcandy iCon2
- Sony DPF-X95
- Sony NWZ-A845
- Tech-Com SSD-600 USB
- X-Mini Capsule
- X-Mini Max II
- X-Mini V1.1 Black
- Zebtronics Zebmate 20
- Zebtronics Strider

**HIGH-END CELL PHONE TEST 64**

- Apple iPhone 3GS 32 GB
- Blackberry 9105 (Pearl 3G)
- Fly Ivory
- HTC Desire
- HTC HD Mini
- HTC Touch HD 2
- HTC Wildfire
- LG GM 360i
- LG GT 540 (Optimus)
- Motorola Milestone
- Nokia E72
- Nokia N8
- Nokia N97 Mini
- Samsung Galaxy S
- Samsung I5800 (Galaxy 3)
- Samsung S8500 (Wave)
- Sony Ericsson X8
- Sony Ericsson Xperia X10 Mini Pro
- Sony Ericsson Xperia X10

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Due to circumstances beyond our control, the event has been postponed.

We wish to thank all those who wrote to us for passes.

We're in the process of re-scheduling, and we will make it a priority to inform you of the new dates and send you passes

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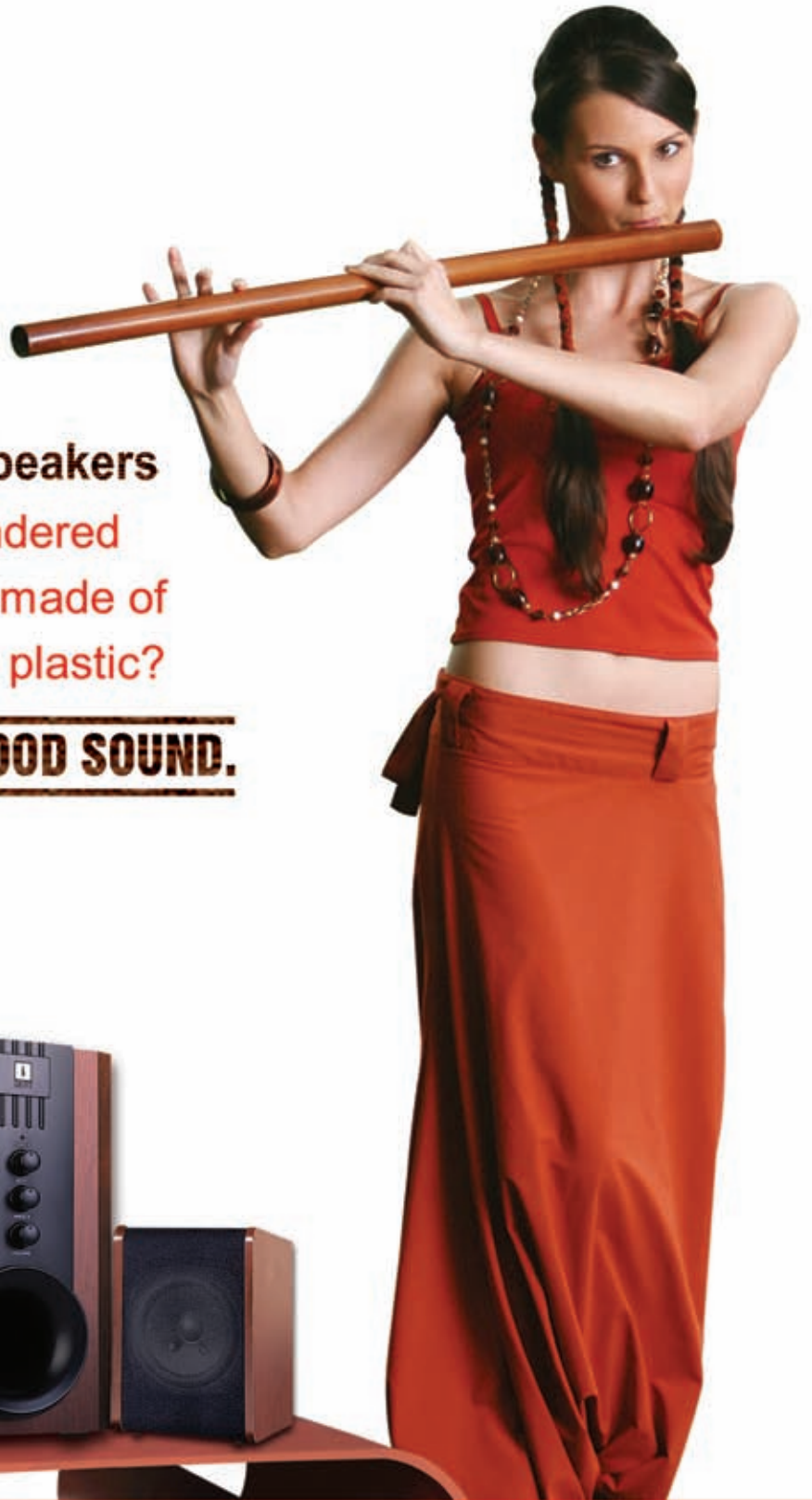
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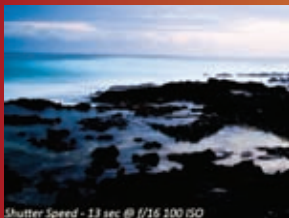
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### Software

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- Adobe Shockwave Player 11
- Advanced RSS Mixer Personal
- BlackBerry Theme Studio 6.0

### Distros

- Ubuntu 10.10
- Peppermint

### Tips & Tricks

- Adobe Photoshop CS5
- Adobe Premiere Pro CS5

### Podcasts

- Distro Watch Weekly
- FLOSS Weekly
- Linux Link Tech show
- The Linux action show

### Ebooks

- Demystifying Google Hacks
- iOS Reference Library
- Step by step Linux Guide
- VideoLAN Quickstart

### Whitepapers

- Design content rich websites
- 7 Deadly Mistakes of Social Media Marketing ...and How to Avoid Them
- Mobile web design: how to create your success story
- Ten useful tricks to rank higher in search engines

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### Indian Rock Music

- Bhayank Maut
- Hydrodjent
- Kastadyne
- Split
- Something Relevant
- The Circus
- Undying Inc

### Music

- Motherjane
- Sanjeev T
- The Unrelenting Surge of Vengeance

### Digit TV

- FIRA
- Acyut - The Indian robot
- Robot football
- Robot obstacle race
- SMC ebook reader
- X-mini speakers

### Game Demos

- Arcania: Gothic 4
- Blade Kitten
- FIFA Soccer 2011

### Movies

- Carnival of Souls
- The Phantom of the Opera

### Music

- Hot Fiction-Dark Room
- J.L.T- Elevation
- Loudog-Waste Your Time
- STEEP-Your Reality
- The Phase-Dogma




**Viewsonic VX2258WM**  
 Viewsonic launches the VX2258WM - a  
 22-inch touchscreen monitor

✉ I am regular reader of Digit since last two years, but now I am a subscriber. I was really happy to know that Digit stands amongst the top 10 most read English magazines in India in the Indian Readership Survey 2010. I would like to congratulate the entire team of Digit. I would request to you please provide some software about Indian Astrology for my father, as he is also a reader of magazine.

Tushar

📄 Thank you for becoming a subscriber to Digit. It is readers like you, who read Digit month after month, and recommend it to friends which has kept the Digit magazine readership higher than any other technology magazine in the country. With regards to the Astrology software, we will definitely discuss it in our edit meets.

Sambhav

✉ I am hungry to learn ethical hacking but don't seem to find real and practical stuff. It came to my knowledge that Digit had published an edition related to Ethical Hacking in its June 2010 issue. I am sure this is the kind of content I am looking for. I will be greatly obliged, if I can avail a copy in the PDF format. And if possible the list of the software which are extremely essential for Ethical Hacking and are free of cost.

Jayant Vishaal

📄 Our Fast Track to Ethical Hacking is your surest answer to get practical information on the subject. We give away the PDFs of older issues in our December and June issues. You can also buy the hard copy online at [www.thinkdigit.com/cart.php](http://www.thinkdigit.com/cart.php)

Nash

✉ According to me, a perfect magazine should always contain good pictures and visuals. There must always be a catchy cover. The covers of the October 2010 and April 2009 editions were truly unique. I started reading your magazine in May 2007 and till now I have every edition preserved well. The issue which really stands out is the April 2009 one, which was crafted with passion and hard work. I also have some thoughts on your World



View section. I think that this section is a breath of fresh air to the magazine, especially the Timepass section. The new format of the Bazaar is really wonderful. I am not a tech geek or not even gadget obsessed. I am a student who awaits his monthly piece of excellence. This is one of your greatest fans signing off.

Amish Singh

📄 The very fact that you read Digit proves that you have a higher tech quotient than your friends who do not read it. We are glad that you liked the new additions we have made to the magazine in the form of World View and Bazaar Mini. It really is quite motivating to know that readers are liking the hard work being put into the new sections.

Siddharth

✉ I would prefer reading Fast track on my screen as it saves money and is eco-friendly as well. One more suggestion I would like to make is to make the circuit diagrams easy to understand. Sometimes, it is not so easy to understand the symbols specially for readers from non - engineering background. By the way, the security tool in Toolbox was awesome. I really loved your DIY special of June 2010. Looking forward to more such DIY's. If possible, please try to provide the status of the request of DVD demands of

software. I have suggested software for the DVD on several occasions, but I do not get a status update

Vishal Karade

📄 Thanks for taking the time to send feedback. We really appreciate it. Apologies for your previous mails not being replied to. We will look into the matter. We will also try and make it easier for readers to understand circuit diagrams in the future. Look for the software you demanded in the November issue of Digit.

Nash

✉ Just when I was thinking of renewing my subscription which is expiring next month, i.e, November '10, you gave me another reason for not doing so. I have been waiting for your reply since a long time and have now given up. I have been a Digit subscriber for the past six years, and have asked for your advice so many times but have never got any help. I have mailed you guys many times and that too from different IDs hoping to get a reply on at least one, but in vain. You have constantly been a disappointment. Some people say "you guys rock", but I'd just say "you guys are a rock". Words and questions go thrashing on you and you are not even moved. I do not feel connected to the Digit family anymore. I hope you guys don't reply to my



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## iPhone trumps BlackBerry

According to researchers at Strategy Analytics, 15.4 million iPhones were shipped globally compared to only 12.4 million Blackberries



## Quad-SIM phone?

OTECH F1 has come out with a phone that houses four active SIM cards

question this time too, so I can discontinue my subscription without a second thought. Thanks for (not) being there when required.

Mohit Khanna

**d** I am deeply sorry for the mental agony you had to go through while composing this mail. There is nothing more sad-denning than losing a dedicated reader and we promise to be more careful henceforth. I will look into the matter as to why your queries went unanswered. It is our constant endeavor to answer all user queries on Agent001. Sometimes, we have lots of queries but due to space constraints we cannot publish all the replies. But we make sure that whichever user has mailed us, will get a prompt reply. All we ask is for one chance to rethink your decision.

Robert

**e** I'm an avid fan of Digit. The magazine is doing some really good work in educating me in the IT field. I've been reading Digit for around two years now and I've gained a lot of knowledge. You have my thanks.

I have a request and suggestion. With the computer market rapidly flowing with many laptop models, particularly gaming laptops, there is a lot of confusion amongst people buying laptops. I believe it is high time for the shoppers to learn something important, the different range of graphics cards and processors and their capability of each model, etc. I hope you guys do a comparison test on laptops having GPU's with the Core i series processors and premium AMD processors in the range of entry-level, mid, high and ultra high levels. I'm sure everyone will benefit from this.

Also, I want to enquire about the Collector's edition. How many pages does it contain?

I saw an ad about SKOAR EXPO! to be held for the 22nd-24th Oct 2010 at NSIC Exhibition centre in New-Delhi. I would like to get free passes for two, if possible, for me and my cousin.

Keep up the good work.

David H.Singson

## LETTER OF THE MONTH

**e** I have been a reader of your magazine since the very beginning and in the past few years I have been an on and off reader. Recently however I subscribed to the magazine since it was a way by which I would get and read Digit each month. However, I have not been happy with the issues of late as the quality of content seems to be deteriorating rapidly and put quite simply, I am finding the content appalling. I think there has to be a more stringent editorial process to ensure that the articles are of good quality.

I will take the case of the September 2010 Issue (Vol 10, Issue 09) Page 61: Macbook: in Column 3 you say that 'Apple has implemented a very intelligent feature to switch from integrated graphics to discrete graphics'. I do not know who has patented this, but there are now umpteen notebooks available with switchable graphics and this is not an Apple thing. There were a lot more of these content errors and writing errors. You should be more careful of typos and ratings errors.

I really do not like the snippets at the top as they are a reading distraction - more like ads on a web page - and it is quite distracting to read the article and then suddenly read the snippet on top while shifting to the next column.

The World View section is one of the most interesting pieces of the magazine. The articles are very interesting and I only wish that you have many more articles but shorter ones - limited to a page or two. For example, the October mag had just one huge article spanning five pages. Instead three smaller articles would have been more fun.

Also, I would love following those bit.ly links that you have put out all over the magazine. It would be a great idea to have (all) the links in a dedicated section on your website, so that I can just log on to your website and follow the links that I am interested in.

Also in reviews, it would be nice to summarize the various scores (Cinebench, DOOM etc.) in a box. That makes it easier to compare.

Sorry again for being too harsh, but I am paying for this magazine and I think I deserve better in terms of content.

Prashanth K S

**d** We are always open to constructive criticism and you do not have to be sorry for pointing out errors. Regarding the Apple MacBook review, we said that Apple has implemented the feature in this line of laptops. We did not say Apple introduced or came up with this concept. Our testing process is completely objective and our reviews reflect a stringent testing process and its outcome. We will try to be more careful with typos and ratings errors as you mentioned.

Snippets in the features section are in context of the article. We try to have snippets that will arouse your curiosity on the topic and help you explore the article beyond what is mentioned in our write ups. We are glad you liked our World View section. We will definitely give a thought to the suggestion you made about the bit.ly links and try to have them up on our website. As for the benchmark scores, we do put them up on the website. You can find the links to some of them in the Bazaar section.

Nimish

**d** Thanks for your valuable suggestions. We will try to cover gaming laptops in the future. We are working on the Collector's edition and you can rest assured that it will be very special. It will certainly have many more pages than a normal issue. Also, it is wonderful to see your interest in the SKOAR! 2010

event that was to be held between 22nd and 24th of October 2010. But due to circumstances beyond our control, the event has been postponed.

We're in the process of rescheduling, and we will make it a priority to inform you of the new dates and send you passes.

Rossi

# Confused

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**Electric car in India**

GM plans to come out with an electric car sometime next year

**Palm Pre 2 arrives**

Palm Pre 2 sporting the all new webOS 2.0 operating system from HP, launched in France and will enter US and Canada markets soon

# Microsoft Arc Touch Mouse sends lesser mice scurrying, plays a fashionable Pied Piper

Microsoft has unveiled the Arc Touch Mouse and it's just as unconventional as the first one. The Arc Touch Mouse moulds itself from curved to flat, and can be used on nearly any surface, tracing with its 2.4 GHz Nano transceiver and Microsoft BlueTrack technology. The option of the flat position also makes the Arc Touch more portable than its predecessor. Featuring a capacitive touch and scroll sensitive strip, it does away with the

mouse wheel, though Microsoft tried to retain the effect – using haptic feedback to make little vibrations and a little speaker to make little clicks, all to simulate the feel of a mouse wheel.

The sleek Arc Touch Mouse is 15 mm thick and certainly a fashion statement. It offers new ways to interact with the computer, with its touch and scroll sensitive strip and haptic feedback. Even the flat position would have been an interesting way to control the mouse, if Microsoft had built that into the design. The Arc

Touch Mouse apparently went through 50 prototype designs to create, and the consensus over the web is that while the mouse might not be just perfect yet, it does point to a new path for mice everywhere, leaving us looking forward to even more innovative designs and interface possibilities in the near future.

The Arc mouse is of course, wireless – using two AAA batteries for power that lasts six months on a single charge. It's available for pre-order right



now for a price of \$69.95. The Arc Touch Mouse ships in December, and will be broadly available online and in stores this January **d**

## Flex in a week

This video training course will help you understand how you can use Adobe's Flex framework to build your own Rich Internet Applications (RIA's). You must be familiar with basic programming constructs and processes and have a basic knowledge of XML, HTML and CSS.

The course consists of videos and exercises organised into training modules. If you do get stuck (as all learners are expected to), the 'Flex in a week' forum is also available to help you out of your jam.

For more information, head over to <http://goo.gl/uqq3>.



## Intel's new upgradable processors yours; for \$50

It appears you could soon be bringing home a (comparatively) cheaper computer with an Intel Pentium G6951 processor, and be able to upgrade it by purchasing a \$50 (currently ₹2,291) card. The card comes with a code which can be used by the Intel's Upgrade Application to unlock features in your computer. The upgrade could double the amount of L3 cache, and improve HyperThreading support, doubling the number of threads, which is a substantial upgrade indeed.

Upgrading hardware is decidedly more difficult than upgrading software, which is one of the reasons why even hardware devices such as your CD/DVD ROM drive, motherboard and many other such devices, have the firmware.

This means that any bugs detected in the hardware even after manufacture can possibly be fixed by updating the firmware.

This however is not a new concept. Processors routinely come with features such as entire cores locked, however this is usually done due to faulty components rather than a means to derive further profit. Even in these cases, for those willing to take a risk, there are means available to unlock and use the blocked features. If you buy a copy of Windows Vista or Windows 7, your disc already contains all versions from the lowliest Home Basic to the Ultimate. However, the version installed depends on the key used during installation, and is a matter of convenience for them to be on the same disc.

What Intel is doing has key differences from the cases highlighted above. First of all this is not being done because of faulty components, and if it was, \$50 is way too much to ask for adding instability to your system. Intel has also already charged you for the hardware you bought and paid for, recovering the cost and making a profit. This is like purchasing a refrigerator with the freezer compartment locked, and the key for extra. Even so, the fact of the matter is, if you had an option between purchasing two refrigerators which cost the same, one without a freezer and the other locked, you might find it wiser to invest in the one with better future prospects.

Anyone want to place a bet on how long it will take before this gets hacked? **d**

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## Credit Card 2.0

Citibank will start testing Card 2.0 a new credit and debit card device that claims to securely link multiple accounts

## 391,832

That is the number of secret Iraq War documents that WikiLeaks has released, which is touted as the biggest military leak in history

# Gaming comes to Tata Sky and Hungama

Tata Sky and Hungama Digital Media Entertainment have teamed up again to bring gaming into your living room, via the television. Calling it a global first, the duo offer “high-end Java-based gaming” that’s developed by Hungama Game Studio, via Tata Sky’s Active platform. The two first teamed up on Active Mall. Vikram Mehra, CMO of Tata Sky, said it was all an effort to deliver casual gaming to the 130 million TV homes in India, of which only 10 million own PCs, and 1 million own gaming consoles (and, Tata Sky just hit a subscriber base of 6 million).

The DTH service announced the value-add can be tried free by subscribers for a 15 day trial period before they choose to invest in the ₹40 for a months package. The service was soft-launched almost a fortnight before its official launch, and Tata Sky claimed they snagged



35,000 Active Games subscribers, without any advertising.

As for the platform itself, Tata Sky and Hungama officially launched it with what they call a celebrity/sports game - Yuvraj Singh Cricket Championship, obviously connecting it with one of India’s favourite past times. Neeraj Roy, CEO of Hungama DME, said that they intend to cater to the entire family, and deliver around 50 games over the course of the year, in various genres. To further differentiate it from embedded games on modern televisions, Hungama Game Studios aims to provide many new games every month **d**

# OpenOffice forked as LibreOffice

In order to ramp up the evolution of OpenOffice.org, community members have decided to fork the project and develop it under an independent foundation. For this purpose they have set up The Document Foundation which will be driving the further development of OpenOffice.org under its new name LibreOffice.

OpenOffice.org is possibly the most popular open source office suite for Windows and Linux, and has a port available for Mac OSX as well. It was mainly developed by Sun, and used as a base for their own commercial version of the suite called StarOffice. With the recent acquisition of Sun by Oracle, OpenOffice.org is now in development



under Oracle. The Document Foundation also needs Oracle’s approval before using the OpenOffice.org brand, hence the name “LibreOffice,” and in case they do get Oracle’s approval, it will simplify matter quite a bit as the office suite could then continue to go by its original familiar name under the new foundation.

What The Document Foundation is aiming to do is similar to what has happened with Firefox. Mozilla Firefox’s past lies in the Netscape browser which was open sourced and developed by the independent Mozilla Foundation into what it is today. Hopefully, LibreOffice will have a similar effect on Microsoft Office as Firefox had on Internet Explorer.

Certainly a vendor-independent open source office suite which can challenge the foothold of Microsoft Office is beneficial to the open source community. Hopefully, Oracle will be kind enough to donate the OpenOffice.org brand **d**

# MIT: Linux will be multi-core ready

Three MIT professors and their students decided to undertake research in multi-core scalability, i.e., if you keep increasing the number of cores, can you make sure that performance keeps up?

They found that they could, but only by modifying the way the operating system worked, by addressing “clogged refer-

ence counters” that occurred as they kept scaling up the cores. Since multi-core systems end up tasking multiple cores with calculations that require the same data set, the data remains stranded with one or the other cores during the course of the calculation. When a core starts work on the data, it sets a central (available to other cores) counter up, and when it finishes its task on the data, it sets

the counter down. The counter keeps realtime record of which cores are using the data, and when the counter resets itself to zero, the OS then deletes the data, and frees up the processor memory for other tasks.

As one keeps increasing the number of cores however, what happens is that the data gets split into ever smaller portions. This results in the cores “spending so much time ratch-

eting the counter up and down that they weren’t getting nearly enough work done.”

All they had to was to rewrite the Linux code slightly, instructing each core to keep a local count that was only periodically synchronized with the central reference counter, resulting in much improved overall performance. Well, to modify the system, it had to be open-source (at least legally) **d**



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## Nokia World 2010: Nokia shows off 3 new Symbian^3 devices

At Nokia World 2010, the Finnish mobile giant launched three new phones – E7, C7, and C6 (C6-01) – all Symbian^3 devices. If you were hoping to hearing about MeeGo devices, you're out of luck for now.

You will be able to see MeeGo launches only in 2011. For now, enjoy the Symbian shower (Nokia N8 included) with an interface that Nokia hopes will support the smartphone mantle for a while: "Today our fight back to smartphone leadership shifts into high gear. Despite new competition, Symbian remains the most widely used smartphone platform in the world. Our new family of smartphones introduced today feature the all-new Symbian OS, rewritten to be faster, easier to use, more efficient and more developer friendly". All three phones will begin shipping "before

the end of the year." The Nokia N8, the flagship Symbian^3 device, was the first to be launched in October. Before we take a look at the three new devices, it is important to note that Nokia is also introducing a new display called Nokia ClearBlack Display, or CBD. Promising better black as well as superior contrast ratio, colour and brightness, CBD is an AMOLED technology that's set to compete with the iPhone 4's Retina Display, as well as the Samsung's Super-AMOLED screens.

All three phones feature capacitive touchscreen displays, 8 MP cameras with dual LED flash, 720p HD video recording, 3G HSDPA connectivity, Bluetooth 3.0 with A2DP, Wi-Fi b/g/n, WebTV (free digital TV content), and the innovative USB-on-the-Go feature, which lets you directly connect USB flash drives to the phone.

### Nokia E7

The Nokia E7 features a full QWERTY keyboard on a horizontal slider, a 4-inch CBD AMOLED tilting touchscreen display with a 640x360 pixel resolution, 16GB internal storage, 256 MB RAM, and 1 GB ROM. One of the phone's USPs is its ability to create PowerPoint presentations on the move. It also features an aluminium body, and bright anodised colours. It will be priced at approximately €495, or ₹29,552.



Nokia's E7

### Nokia C7

Certainly well-photographed, the Nokia C7 is an entertainment and social networking device and features a 3.5-inch CBD AMOLED screen with a resolution of 360x640 pixels, 8GB internal storage, and stereo FM with FM transmitter. It will be priced at approximately €335, or ₹19,999, and has started shipping.

### Nokia C6-01

Representing the lower end of the new Symbian^3 range, there is not much difference between the C7 and the C6-01, except that it has a smaller display, featuring a 3.2-inch CBD AMOLED screen with a 640x360 resolution, and less internal storage, with just 340 MB onboard. A 2 GB microSD card will come bundled with the phone though. It will be priced at approximately €260, or ₹15,523.

## Videocon goes Android with Zeus

Videocon has just launched an Android 2.1-based full-touch phone, the Zeus, and further extended its portfolio, by introducing four other phones as well.

Providing full access to the Android Market, the Videocon Zeus (V7500) also comes with a whole bunch of preloaded applications as well as an 8GB microSD card, all at a rather attractive price of ₹12,900. At that price, you can't help but

compare it to the LG Optimus GT540, another Android full-touch phone that was released just over a month ago, priced at ₹12,990. The GT540 currently however is based on Android 1.6, though it will support an upgrade to Android 2.1.

The Zeus ships with 2.1, and is powered by a 600 MHz Qualcomm processor. Other specifications include a 3.2-inch multi-touch screen, 5MP camera, Wi-Fi, Bluetooth, A-GPS, and push mail.

## MarketPlace now available for Indians, finally

Android has finally made its way into international markets in a big way, and now offers the ability to buy apps to users in 18 more countries, including India – starting today. So, now you can log on to the Android Market with your smartphone, and use your credit card to purchase apps via Google Checkout. Prices are visible in rupees. For

now, no operator billing support has been provided.

Also part of Google's international expansion of the Android Market is support for paid applications sales for developers, now available to 20 more countries, which unfortunately doesn't include India (and Switzerland). So, if you're looking to sell an Android application you've developed, you'll have to wait a while longer.

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## No more Suggestions?

Google has renamed its popular suggestion feature to "Autocomplete" as part of their integration with their Instant search

## Fake Alarm!

ZoneAlarm's customers are enraged over a fake antivirus scare, calling the notification a tactic, and many of them have opted to uninstall the software

# Qualcomm's plan for the future

With all the news that came before this, Qualcomm's announcements almost sound trivial, but, are sure to make a lot of people sit up and take notice. One of the biggest manufacturers of mobile processors, modems, and other telecommunications equipment, Qualcomm's processor roadmap is always studied with much interest, and its latest, is no exception.

Qualcomm has announced it will ship the first devices featuring the 1.2 GHz

MSM8x60 dual-core Snapdragon processor only by Q1 2011, and, devices featuring the 1.5 GHz QSD8672 dual-core Snapdragon processor will ship Q4 2011. The 1.5GHz dual-core processor was expected to hit devices by Christmas this year, so there has obviously been a hold up somewhere.

It is truly safe to say that mobile computing is becoming faster, more capable and power efficient, and the fight to make a processor that wins on all the counts - power versus price versus performance - is on!

# Nokia N8 launches, starts shipping

Set to take on the world's best smartphones and mobile operating systems,

the N8 represents Nokia's first trump card to get back in to the smartphone game, and you can be sure a lot of hopes are invested in it, and a lot of crossed fingers.

Nokia's N8

# LG adopts dual-core Tegra

The NVIDIA Tegra 2 is certainly a very capable SoC, and everyone is excited about the performance and multi-tasking powerhouse reaching the masses. While mobile devices with larger form factors (such as tablets and netbooks) have not faced very serious problems in the prototype stages, the Tegra 2 processor has made news in the recent past for plaguing soon-to-be mass produced handheld portable devices with power consumption issues, like the case of the new Sony PSP and Notion Ink Adam tablet being delayed...

All those issues seem to be a thing of the past, because LG, a major player in the global mobile market, has decided to adopt the Tegra 2 for its future

smartphones, including the upcoming Optimus series. This makes LG the first company to adopt NVIDIA Tegra 2 on a large scale.

LG expressed high hopes from the Optimus series, specifically with 3D graphics, hardware acceleration of online and local Flash content, and HD video playback up to 1080p.

LG announced that the first of its Optimus mobiles to feature the Tegra 2 SoC will be released this year, and we presume it would be the LG C900 WP7. An LG spokesperson commented on the bright future of Optimus series with the NVIDIA Tegra 2: "LG is committed to making its Optimus Series smart devices the *de facto* standard in speed and graphics performance."

The Nokia N8 has been officially released in India, and will be on shelves starting with Nokia Priority Stores, from tomorrow, October 13th. Priced at ₹26,259, the Nokia N8 represents the Finnish phone maker's top smartphone model, and paves the way for the got-a-lot-to-prove Symbian^3 platform.

If you are dying to get yourself an N8, and just can't rustle up the bank notes, then take heart in knowing that Nokia is providing an easy-EMI scheme that will get you a Nokia N8 with three equal

monthly instalments, and zero percent interest.

Apart from the awesome 12MP camera, convenient USB-on-the-Go, and seamless 720p HD video output, Nokia is also promoting the N8 as a platform for a plethora of applications. Not only will the N8 have access to a majority of older apps from the Ovi Store, it will support the Nokia-developed and critically-acclaimed Qt framework. This will surely see a large number of developers making apps for Symbian, and, give them the flexibility of programming for the numerous other platforms that are supported by the Qt framework.





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## Upside down

A great extension if you want to play a prank on your friends. It'll turn web pages upside down! (<http://bit.ly/6izWR4>)

# 12 Must-add Chrome Extensions

Those of us from the geekier side of life are quite familiar with improving the functionality of a browser via extensions – thanks to good old Firefox. Chrome added support for extensions post Version 4 and there has been no looking back. Here's a hand picked selection of Chrome extensions that will up your productivity, enhance your browsing experience and let you have some fun too. One of the best things about extensions on Chrome is that you don't even need to restart your browser, so add away.

## 1 Sync Bookmarks - Xmarks

<http://bit.ly/a2o7X5>

Xmarks used to be (and still is) one of our most favourite Add-ons in Firefox. Now available in Chrome as well, it syncs your bookmarks across any computer and even browser. The extension requires you to have an account with the service. Once set up, it will sync your bookmarks with a cloud based server. To get back your bookmarks in the new browser/computer you're using simply install the extension again and enter your login credentials. We were able to import our bookmarks from Firefox effortlessly. Hopefully the service will survive its eminent demise slated for some time next year.

## 2 Improved scrolling - AutoPager Chrome

<http://bit.ly/8vU2PJ>

Often sites have multiple pages and it gets quite annoying to click next at the bottom, doesn't it? Well even if it doesn't why waste those many precious calories. AutoPager is that

Chrome extension which will save you the trouble by automatically loading the next page of a site inline when you reach the end of the current page for infinite scrolling of content. By default AutoPager works with a ton of sites including Twitter, YouTube and most essentially Google.

## 3 Improved social networking - Facebook for Google Chrome

<http://bit.ly/8kjkAz>

Simply put this extension lets you read your Facebook news feed and wall, besides which you can of course post status updates. The beauty of this unofficial extension lies in its simplicity. The extension sits in your Chrome toolbar and shows a number for each unread notification. You have three buttons for each of the feeds.



Facebook for Chrome

## 4 Painless Tweeting - Chromed Bird

<http://bit.ly/7i74lr>

Until the #NewTwitter rollout is completed the web interface of Twitter is nothing to write

home about. Till then and perhaps even later, this little birdy that sits in the browser is all you need to fulfill your tweeting needs. It shows up notifications for various types of events such as @ mentions or DMs. These can further be customised. Of course there's the ability to post and a built in URL shortener.

## 5 Lookup stuff instantly - Apture Highlights

<http://bit.ly/bt97yZ>

Even smart guys need to look up a particular word or phrase from time to time. This little extension is a great tool for those err rare occasions when you want to look up anything from the meaning of a word or want to get more info on it on Wikipedia. Simply highlight a phrase to get instant access to Wikipedia, YouTube, Twitter, and more without leaving the page! The Apture in action extension can work well with another extension that looks up only word meanings - Google Dictionary (<http://bit.ly/7pGVi7>) – Once installed you can double-click any word to view its definition in a small yellow pop-up bubble.

## 6 Password Management - LastPass

<http://bit.ly/cAUNl4>

LastPass is a rightly named extension. It signifies that once you install this extension it is the last password you will ever have to remember in your life. Additionally LastPass can also help you automatically fill up online forms. We all know how painful filling online forms

can be right? To use LastPass you need to create an account wherein you enter a 'master password'. It locally encrypts all your password data and sends it to the cloud. The service is capable of importing data from different browsers as well as many password keeping services such as RoboForm. This however requires you to download the LastPass standalone application found on [www.lastpass.com](http://www.lastpass.com).



Apture in action

## 7 Play music in your browser - Last.fm free music player

<http://bit.ly/cOkj7T>




Being complete music junkies this extension was the most fun discovery for the Digit Team. The extension allows you to play any list of tracks on www.last.fm directly from your browser. The list gets loaded into the extension and you get various play options such as repeat, shuffle and volume control. The reason why it got all of us giggling like giddy little school girls is because ordinarily last.fm gives non-subscribers only a 30 second preview of tracks. The exten-

**SORRY MICHELANGELO,**  
IT TOOK US 500 YEARS TO ADD THAT FINISHING TOUCH.





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## View documents instantly

The Docs PDF/PowerPoint Viewer (by Google) extension instantly opens document files in Google Doc Viewer

## Android Winamped!

World's favourite desktop media player, Winamp, is now available in Android Market in beta

sion however picks up track details and streams it from alternate sources – full songs for everyone! The best way to use it for discovering tracks is to play the ‘top tracks’ list or ‘loved tracks’ list of users on last.fm whose taste matches yours. If you link your last.fm account it’ll even scrobble tracks.

### 8 Gesture control - Mouse Stroke

<http://bit.ly/8YwVTN>

Those of you who have migrated to Chrome from Opera will surely miss using mouse gestures. The Mouse Stroke extension adds this much appreciated functionality to Chrome. Mouse gestures are patterns that you need to perform while holding down the right mouse button (usually) to execute some basic navigation functions such as going back, forward, closing tab, scrolling up/down etc. The extension has the possibility to add complex functions through custom gestures that you can program.

### 9 Gmail notifications - Google



Listen to music with Last.fm

### Mail Checker Plus

<http://bit.ly/92jBxs>

Most of us have our Gmail inbox open in one of the tabs all the time. Still, it becomes painful to keep shuffling between what you’re doing currently and checking mail. This awesome extension will let you check your mail without ever leaving the tab you’re currently on. Click on the icon and you get a pop-down dialog box which shows you your latest mail. You have options to only preview the mail or expand the entire message right in the pop-down window. You can also delete, archive, spam, star and mark mail as read. The extension also displays notifications for new mail. It’s quite customisable too – you have options to change the notification icon, turn off/on notification sound, and icon animation.

### 10 Keep track of tasks - New Tab to Tasks

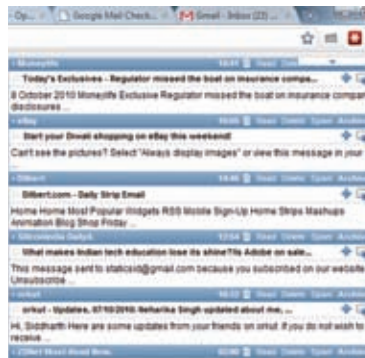
<http://bit.ly/5lx8Kv>

A simple extension that makes your New Tab Page display a listing of your Google Tasks. This way each time you [Ctrl] + [Tab] you see an in-your-face update on where you stand with your to-do list. If you don’t like tasks displayed in a new tab and would like a pop-out format try the Google Tasks extension instead (<http://bit.ly/53C2XY>).

### 11 Emulate IE - IE Tab

<http://bit.ly/91sBeC>

Emulate IE? If you’re wondering why someone would do that, you’re not alone. After all IE is the most popular browser to download other browsers from. This is more of a developer extension but



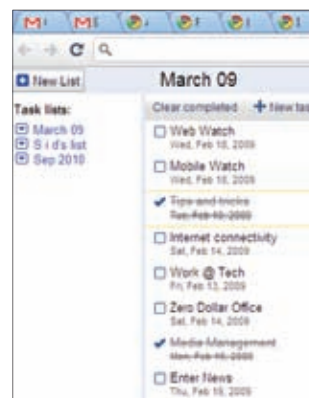
Gmail notifications on Chrome

can come in handy to regular users too. Some intranet sites, corporate mail accounts and even bank websites need you to use Internet Explorer. In these usecase scenarios this extension saves you a certain amount of trouble. IE Tab uses your currently installed version of Internet Explorer to render web pages in Chrome. Worried about security? Since it uses the IE engine it’s as secure (or not) as the version of IE installed on your system. The extension offers the ability to configure a page to open automatically in IE Tab. You can feed in a set of auto URLs that the extension will then automatically open through IE within Chrome.

### 12 Customise the web - Stylebot

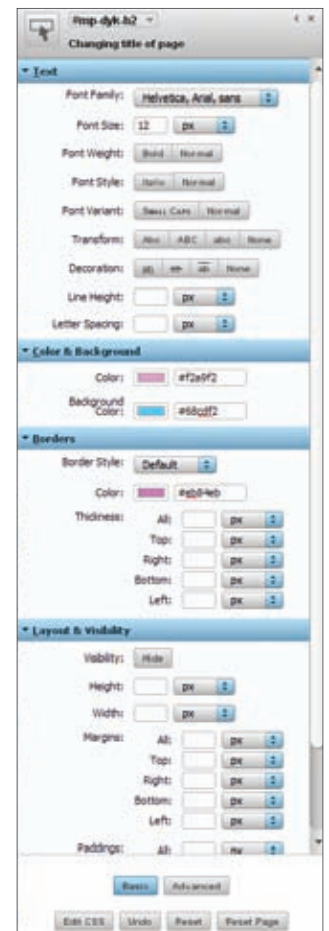
<http://bit.ly/czo6Je>

This is another developer specific extension, but regular users can also have some fun



Tabs to tasks

with it. The extension was created as part of Google Summer of Code 2010 by an Indian student named Ankit Ahuja. It basically allows you to change the appearance of any webpage by altering the CSS. The beauty of it is in the fact that you don’t need to know CSS at all. Simply install the extension and go about altering elements on a web page by clicking the CSS button in the address bar.



The power of CSS

You get a side panel that lets you change things like colour, layout, text styles, and sizes of elements on the page.

Styles are saved persistently, so the next time you visit the same page, they’re already applied. There’s even an experimental option to sync styles across multiple computers. **d**



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Rudresh Jariwala  
rudresh.j@thinkdigit.com

### "My Precious"

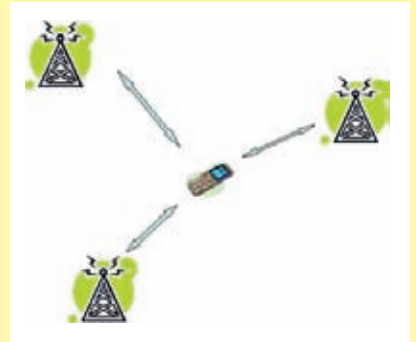
As a member of the information age, you would probably agree with us when we say that our mobile phones hold just as much importance to us (if not more) as do our wallets or house keys. Walking around without that slight bulge in our pants paralyses us (figuratively of course) and renders us helpless. A mobile phone has become such an integral part of our daily lives that one would feel utterly abysmal should their prized possession get lost or worse still, stolen!

tips provided here, you would successfully be able to atleast protect your valuable data if not recover your phone itself.

### Hey buddy, that's MY phone

For those of you who prefer productivity on the go and choose to spend your hard earned moolah on a smartphone over a standard sub 7k phone, you must understand that with your 'smart'phone, comes the ability to install smart applications. Now unless the thief is intelligent enough to totally wipe the device and install a fresh operating system before even inserting a SIM card, you are protected. There are various means of tracking

### Don't rely on IMEI!



The International Mobile Equipment Identity is no longer a reliable way of tracking your phone. Hacks have been developed which change the devices universal IMEI hence rendering that primitive way of tracking useless.

# Find your missing partner

What about your precious data? What about all your hundreds of contacts... and of those precious hours you spent fiddling with your shiny new handset customising and personalising it to suit your needs and preferences!? Scary thought isn't it? Fret not my friend, help is on the way...

### Oh crap! Someone please call my phone!

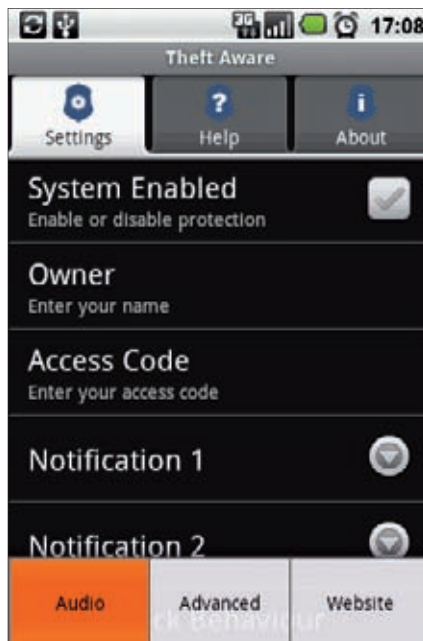
So lets assume that the worst has happened. Someone has made off with your

#### Siren!

Many applications we tested also come with a remote siren activation feature. So if you are in the vicinity of your phone, the loud noise emitted will lead you directly to the perpetrator's pocket!

significant other. What now? File an FIR in the police, report it to your service provider yada yada...you know the drill. But you know what, if you are ignorant enough to think that your phone is going to be 'tracked' down using your 'IMEI number thingy', then you are highly mistaken my friend. You need to put yourself in the driver's seat and make sure that the perpetrator is caught. With the tools and

## Your definitive guide to mobile phone theft



Theft Aware on Android

down your device which you must leverage to your advantage. We tested various free and paid applications across all the popular platforms and have compiled our findings into a neat tabular column.

**SMS:** Most of these tracking appli-

cations work on a system wherein you are required to set the application up with a 'buddy' telephone number of a friend/relative that you trust. The way in which this works is that the insertion of a new SIM other than yours will set off a trigger and inform your buddy number via SMS providing you the telephone number of the person currently in possession of your phone! This is a great option as you don't have to be bothered about whether or not the robber has got GPRS enabled on his SIM or not.

**GPS & GPRS:** Phones with an inbuilt GPS chip can use geographical information to inform your buddy of the current location of your phone in latitude and

### Take photos of the thief!

Apple has recently applied for patents that will enable you to take a photo of the thief or record the voice of the thief currently in possession of your beloved Apple device. An existing implementation of something similar on Android exists on [www.androidtheft.com](http://www.androidtheft.com). For now, iPhone users may enable a passcode from the general settings and also enable erase data which will delete all your data if there are 10 incorrect attempts.

longitude via SMS. There are alternatives which require the new SIM inserted to have GPRS enabled as well which is simply wishful thinking for us in India at this point in time. There are also existing services to remotely track your phone using a browser, but the down-

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## Kaala Bandar

The city of Delhi alone has registered close to 5000 mobile phone robberies in the past year

## Cloud services you may want to try

Sprite Migrate: <http://goo.gl/Lugm>

Mobical: <http://goo.gl/tOQG>

Dashwire: <http://goo.gl/Zqd0>

	Symbian S60	Android	Windows Mobile	Blackberry
We recommend	Guardian Mobile	Theft Aware	RemoteTracker	PhoneBAK Anti Theft
URL	<a href="http://goo.gl/8QGD">http://goo.gl/8QGD</a>	<a href="http://goo.gl/t5GA">http://goo.gl/t5GA</a>	<a href="http://goo.gl/cx7p">http://goo.gl/cx7p</a>	<a href="http://goo.gl/nkaJ">http://goo.gl/nkaJ</a>
Cost	Free	Eur 9.99	Free	\$9.90
<b>Features</b>				
SIM change Notification	Y	Y	Y	Y
100% Invisible	N	Y	Y	N
Remote Lock	N	Y	Y	Y
Remote Data Wipe	N	Y	Y	Y
GPS Tracking	N	Y	Y	Y
Siren	N	Y	Y	N
Multi SIM support	N	Y	Y	Y
Notes	Gold and Platinum available with most features available	Free trial version expires in 3 days, Many free alternatives	Many more features available as well	Free trial version expires in 30 days
<b>Other apps available</b>				
Name	Theft Aware	Anti Theft Lite	GuardMobile	Roblock
URL	<a href="http://goo.gl/t5GA">http://goo.gl/t5GA</a>	<a href="http://goo.gl/XF50">http://goo.gl/XF50</a>	<a href="http://goo.gl/m2Es">http://goo.gl/m2Es</a>	<a href="http://goo.gl/NNLQ">http://goo.gl/NNLQ</a>
Name	F-Secure Anti Theft	F-Secure Anti Theft	F-Secure Anti Theft	Berry Locator
URL	<a href="http://goo.gl/FO8T">http://goo.gl/FO8T</a>	<a href="http://goo.gl/FO8T">http://goo.gl/FO8T</a>	<a href="http://goo.gl/FO8T">http://goo.gl/FO8T</a>	<a href="http://goo.gl/BOns">http://goo.gl/BOns</a>
Name	SecureMe S60	ATF Lock	RecoveryCop	Getitback
URL	<a href="http://goo.gl/RJcK">http://goo.gl/RJcK</a>	<a href="http://goo.gl/JrmJ">http://goo.gl/JrmJ</a>	<a href="http://goo.gl/CuRo">http://goo.gl/CuRo</a>	<a href="http://goo.gl/0pi6">http://goo.gl/0pi6</a>
Name	SmrtGuard	SmrtGuard	mSafe	SmrtGuard
URL	<a href="http://goo.gl/iq8n">http://goo.gl/iq8n</a>	<a href="http://goo.gl/iq8n">http://goo.gl/iq8n</a>	<a href="http://goo.gl/byqu">http://goo.gl/byqu</a>	<a href="http://goo.gl/iq8n">http://goo.gl/iq8n</a>
Name	WaveSecure	WaveSecure	WaveSecure	WaveSecure
URL	<a href="http://goo.gl/Ts4c">http://goo.gl/Ts4c</a>	<a href="http://goo.gl/Ts4c">http://goo.gl/Ts4c</a>	<a href="http://goo.gl/Ts4c">http://goo.gl/Ts4c</a>	<a href="http://goo.gl/Ts4c">http://goo.gl/Ts4c</a>
Name	UMU StopThief	Lookout	Lookout	Lookout
URL	<a href="http://goo.gl/jtrg">http://goo.gl/jtrg</a>	<a href="http://goo.gl/5251">http://goo.gl/5251</a>	<a href="http://goo.gl/5251">http://goo.gl/5251</a>	<a href="http://goo.gl/5251">http://goo.gl/5251</a>

side is that if the GPS has been disabled, you will have nothing to work with.

**Tip:** GPS based applications work best when you are outdoors.

### Samsung Mobile Tracker

Samsung mobiles have been coming equipped with a tracking facility for a while now. The user has to simply enter two mobile numbers of trusted people and when a new SIM is inserted, the buddy numbers automatically get a message which can be used to track down the phone.

## Protect your privates

If you have ever spent late nights in the privacy of your bedroom sending lewd S(ex)MS's to your better half, you ought to be really worried right about now. Don't torment yourself, because there are an abundance of options out there to keep yours (and everyone else's) dignity intact.

**Data Encryption:** Using a password protected encryption on your memory card is the first step towards ensuring that what's meant for your eyes only stays that way even if your mobile is stolen. Recent Symbian S60 devices such as the E series provide an inbuilt encryption facility. Android has 'Tasker' (non market version) and Windows mobile users have 'Mobile Encryption'. Black-

berry users have encryption as a feature in their phones by default and can set a password for their memory card access.

**Remote Wipe and Lock:** Another means of protecting your data and making sure that all the data is wiped off your phone is by way of using the same tracking software mentioned above to send a command to your phone which would basically wipe all data off your phone. Android users currently running FroYo have the remote wipe feature built in (<http://goo.gl/ICpL>). Some of the featured applications can even lock your phone down and essentially make it a brick preventing the user from even booting up.

This is not advisable though as it will only coerce the robber into paying a 'know-it-all' mobile guru in your local mobile phone repair store to format the phone completely and reinstall the operating system... which is disastrous as far as recovering your mobile is concerned. These actions can again be performed using either an SMS or the web depending on your preference.

## Step into the cloud

Ok, last resort! Your mobile has been stolen and that dastardly devil has had

the smarts to go and format your phone disabling all your tracking services in effect. Does that mean you have lost all your contacts, SMS messages, multimedia, applications and data? Absolutely not. The old school option is to perform regular backups of the above using the software that came bundled with your phone, regular being the operative word.

Then again, you could choose to take the route that's got the whole IT world abuzz and allow all the things you care about to be uploaded to the internet. What this would require you to do then is simply buy a phone running the same operating system and an internet connection to get everything you care about back on your new phone just the way it was. These backups are automated and done for you on a regular basis, so you don't ever have to worry about doing it manually.

## In hindsight

Looking back at the time you had your beloved in your hands instead of the cheap replacement you had to buy in its place is something most of us can relate to. Simply hoping that you had taken some preventive measures will not

### Build your own



If none of the security software featured meet your exact needs and requirements you can consider building an application on your own. Check out the Tech@Work section for information on building mobile applications for a living and you could be laughing all the way to the bank.

magically bring your blissful beauty back into your caring hands. Point being that though smartphones cost that extra rupee or two, when utilised the right way are worth it in the end. The added value that comes in due to applications that are customisable for your needs can help ensure that what's rightfully yours, stays yours.

So step out of the Shire my friend, and embrace technology for what it can make possible instead of going on a wild goose chase (like our friend the Gollum) for a ring that has no tracking system on it!

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## Gmail users can dial other Gmail Users

Recently Gmail started a new facility that allows users in USA to make phone calls to numbers within USA or in Canada numbers for free

## Indexing Billions of Pages

When Google started, the company indexed 25,000 web pages; today it indexes billions

Anoop Verma

readersletters@thinkdigit.com

Google seems to be in some kind of existentialist dilemma. It desperately wants to dethrone Microsoft, and yet majority of its services like the search engine, Gmail and Google Docs are mostly accessed through the IE browser, running on a Windows powered system. The only way Google can change its equation, vis-à-vis Microsoft, is by coming up with its own OS. But that is easier said than done. It was

system. According to Google, its operating system is a natural extension of its Google Chrome browser, and it has been named Google Chrome Operating System.

### Chrome OS vs. Windows 7

The exact date is still a subject of intense speculation, but some analysts have been predicting that netbooks powered by Google's OS might become available towards the end of 2010. An OS that is open source, efficient and is available for free is like a dream come true for every computer user. Cheerleaders for Google

of programmers can undo. It is as simple as that. If the Chrome OS becomes really popular, hackers will definitely target it, and then it will become as vulnerable as the Windows, and it might also require frequent updates to keep the system safe.

However, there is one area where the Chrome OS might actually prove to be awesome. While developing this OS, Google is said to be taking the minimalist approach, like it did in case of the Chrome Browser, which is known for its barebones and super fast approach to browsing. Performance is going to be optimised, and

# Why Google can never beat Microsoft!



Microsoft founder Bill Gates with Google CEO Eric Schmidt

in 1983 that the first Windows operating system was introduced, and since then Microsoft has dominated the world of computing. The idea that more than 90% of PCs run on Windows sounds to some ears like an archetypal cliché, which might remain true forever. In the ancient era, a young David was able to slay the mighty Goliath. But it is not necessary that the denouement to the OS wars should follow the same pattern.

Google is really good at what it does, but is it capable of coming up with an OS comparable to Windows 7? Rumours about Google's plans for a new operating system had been around for quite sometime, and in the middle of 2009, the company accepted that it was aiming to create an open source, lightweight operating

are gleefully declaring that the Chrome OS could pose as a direct challenge to Microsoft and its Windows operating system. In its blog, Google has announced, "Google Chrome OS will run on both x86 as well as ARM chips and we are working with multiple OEMs to bring a number of netbooks to market next year." In the same blog, Google also claims that its aim is "completely redesigning the underlying security architecture of the OS so that users don't have to deal with viruses, malware and security updates. It should just work."

The words to be noted in the Google's blog-post are, "users don't have to deal with viruses, malware and security updates." You find yourself scratching your head and screaming - really? Is Chrome OS going to be a proverbial magic carpet that will transport computer users to a paradise, which is completely cleansed of the evil programmers who have a fetish for creating viruses and malware? It is quite probable that Google is getting too ambitious when it promises us an OS that is completely immune to viruses and malware. An OS is, after all, a program that one set of programmers write; and what one set of programmers do, another set

the eye-candy will be non-existent. You can expect the Google Chrome OS to perk up on the screen in a jiffy; imagine turning on your computer and being able to browse in 7 seconds. Primarily because of its minimalist design, the Chrome OS will consume only a fraction of the space that an OS like Windows 7 does. It will capitalize on the cloud computing paraphernalia and will be geared to grant access to Google's existing web services in a moment's notice.

This kind of a makeup makes Google Chrome OS perfect for a netbook user, who uses his system primarily for browsing the Internet and for accomplishing low intensity computing tasks in the cloud space. But what about those who prefer to use their systems for playing graphics rich games, download all kind so multimedia and software files from the Internet, and even indulge in activities like photo/video editing and special effects. Will the lightweight model of Chrome OS be able to support such activities? It is a breeze to download and install pirated software on Windows platform, will Chrome OS be this helpful? The point is that emailing and hanging out in the Google's cloud world is not the only activity

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\$2.3 Billion in 3 years

## Microsoft Embraces the Cloud

With Windows 8, Microsoft plans to embrace the cloud, by letting users take their workspace from one PC to another

## Initial Public Offer

On August 19, 2004, Google offered an IPO in which 19,605,052 shares were offered at a price of \$85 per share

that a typical computer user indulges in. Google Docs is a seminal achievement, and yet Microsoft Office continues to be the choice of majority of the users. In India more than 90 per cent of computers are run pirated versions of Microsoft Office, even though the original version of Google Docs is available for free online.

Despite Google's best efforts, things are not moving towards the cloud space in a really big way. The desktop model of computing is not going to go away in near future. The only way the Chrome OS can make headway is by offering users a better desktop computing experience than Windows 7 does. Even the most fervent supporters of Google are not claiming that the company is capable of pulling off such a feat in near future. The version of Chrome OS that we are expecting towards the end of this year might not be able to garner more than a single digit market share if its desktop potentialities are not comparable to Windows 7. What users really need is a powerful OS, which is capable of taking care of all kinds of entertainment and work related needs. In order to reach out to a really large audience, the Chrome OS will have to support systems like MS Office, gaming software, all kinds of music and video players and much else.

The oft-repeated complaint about Windows is that it evokes the feel of the pre-Internet era. With the launch of Windows 7, the company has done a lot to change this perception. But there is the factor of cost. Windows 7 is pricey, as compared to Chrome OS being made available for free. It is possible that the netbooks powered by Chrome OS might turn out to be cheaper as compared to those powered by Windows 7. But free OS is not such a big deal. After all, there are so many Linux - a free OS - powered netbooks in the market that are also quite cheap, but they have a very limited appeal. Users don't mind paying a reasonable amount of money for the OS, if it is as good as Windows 7. So if any company dreams that netbooks powered with its OS will fly off the shelf just because they are cheap, then they are probably living in a fool's paradise.

Clearly the expectations are high from the Chrome OS, and Google will have to be at its innovative best to meet them

all. As of now netbook users are appreciating Windows 7, and the Redmond based company is claiming that 96% of the world's netbooks run on Windows. The Chrome OS must make it a point to be really good; otherwise it might not be able to wean users away from their more than 20-year-old addiction to Windows.



Google's core Chrome team with founders Larry Page and Sergey Brin during Chrome's launch in 2008. Photo: Reuters

## Will Chrome OS merge with Android?

There is one OS battle that Google seems to be on verge of winning. Its Android OS is currently powering some of the hottest mobile phones. With advent of new handsets like Samsung Galaxy S and HTC Desire, Android has attained a kind of cult status. As of now the Symbian Operating system from Nokia is the number one in the mobile OS space, RIM the maker of BlackBerry occupies the number two spot, and Apple is at number three. But the amazing thing about Google's Android is its massive growth. If it continues to grow at the same pace, then by 2013, the Android might become the world's most favoured mobile OS. Microsoft's Windows Mobile is also in the race, but it is the Android that is creating the highest amount of buzz. Close to 10,000 new apps are being created every month to cater to the myriad needs of Android based smartphones.

What if Google were to have the same kind of success in the PC and netbook OS space? Google's success with Android must be giving nightmares to Microsoft, especially because Android has already made a foray into netbooks. Even though Google continues to stick to its official position that Android is only for mobiles, the truth is that it is possible for us to get hold of a netbook powered by this OS. Predict-

ably, these devices are slightly cheaper than what we would normally pay for a Windows powered netbook. But as it has been said earlier in this article, mere lowering of prices is not going to do much for winning over customers. If a free OS were the key to notch up big sales, then Linux would have been the world's top OS for many years. That is not the case. Linux powered systems have single digit market share.

There is also speculation that in future the Android and the Chrome OS might converge into a single platform that powers all kinds of devices, from smartphones, to netbooks, tablets and PCs. Google's co-founder Sergey Brin, has commented on the possibility of Chrome OS and Android coming together in the future. So if that is what is going to eventually happen, then why did Google start two different projects? This is part of the company's strategy for creating an atmosphere of friendly internal competition, between the teams developing Android and the Chrome OS. In the end, Google will be able to pick and choose the best ideas that emerge from the two projects and weld them into a single unbeatable OS. No one should harbour a figment of doubt about Google's determination to beat Microsoft in the OS game; Android and the Chrome OS are two pathways that, the company hopes, will lead it to a perfect OS.

## Waiting for victor

It is not as if the success of Android means it is game over for Microsoft. In fact, the launch of Android might have helped Microsoft to formulate a strategy to tackle the Chrome OS when it is launched. It has already become obvious that the Android powered handsets are not that cheap. Case in point is the new Samsung Galaxy S, which costs around ₹30,000. Google has not been able to reduce prices in the mobile handset space. A similar scenario could play out in the netbook domain. If Google's Chrome OS is not able to reduce the cost of hardware significantly, then users will have much less incentive to move away from the tried and tested Windows platform. In any case, it is not going to be that easy to wean people away from desktop centric systems in which Microsoft continues to be in a dominant position. **d**





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Accessories shown in the ad may not be an actual part of the bike.

### Augment your reality

A look at the wonders of augmented reality in modern phones



### Most expensive iPhone4

Hand crafted using five hundred individual diamonds, this edition of the 32GB iPhone 4 is priced at \$8 million

### Bond Bike

If you ever fancied your bike to have a flame thrower with an anti-theft ejection seat, look no further. The BOND (Built of Notorious Deterrents) bike is meant for those who want to add a little daredevil stunt to their ride. The all-terrain caterpillar track makes the bike more agile on any surface, the front wheel can be replaced by a ski-board for riding the bike in cold weather. You can throw flames on cars coming too close to your uber ride or just paint a dragon with flared-up nostrils. No word on the price though, check out the video on <http://bit.ly/drUEcV>.



### Crystal Clear Arabesques

On the outside, it's made of glass. On the inside, especially in the insulator, pure silver and 24 carat gold is used to fabricate these speakers. No wonder they're heavy, even on your pocket - they weigh a mammoth 100 kgs each and cost \$68,187 for a pair. The wiring used inside them costs \$9609 per metre. Leaving the big bucks aside, these speakers perform worth the fortune they cost giving the hi-fi connoisseur sense of money well spent.

### AudioNote Ongaku

Built using a silver wired transformer, the Ongaku amplifier will surely blow your mind and also burn a deep hole in your pocket. The amplifier has five line inputs using two NOS VT4-C tubes along with a NOS Telefunken 6463. It's sure to give you an upper hand when it comes to deep bass and dynamic compression. If you're a true music geek, then you can have one for \$95,000.



## Portable Xbox 360 starting at \$3000

Renowned game console modder Ben Heck has designed Xbox 360 in laptop style, it features a 17 inch HD screen and internal hard drive

## Android food!

With its earlier versions named after different desserts, Android OS 4 which is slated for a mid 2011 release is rumored to be codenamed Ice cream.

Drool maal

## Mini rocks Sonoro

Following the design philosophy of Mini, this device provides more while consuming less. A joint collaboration between Mini and German audio manufacturer Sonoro, the Mini rocks Sonoro (yeah that's what it's called) is a limited edition internet radio and is made from the same wood casing that is used on the exterior of the Mini Cooper. Some of its features include a 3-inch full range speaker, inbuilt digital equalizer along with bass reflex tube.



## Antelope Audio Zodiac

Considering the high priced equipment, Antelope Audio makes, the Zodiac D/A converter is priced at just \$4030. The Zodiac features Antelope's renowned oven-controlled clock which is placed in a shielded temperature controlled container to give the discerning audiophile precise sound output. Power supplies and digital circuits are placed separately on a gold plated boards to avoid cross-talk which gives excellent noise cancellation.

## Aiptek Pocket Cinema V20

Tired of watching your favourite video on a small screen PMP? Then get yourself an Aiptek pocket cinema projector. This pocket device is capable of projecting 60 inch image on any surface and has built in stereo speakers. Its memory can be expanded to 32 GB using an SD card. Its a great tool for office presentations and playing games.



## Origin of AR

AR has been around for a while now (the term was coined in 1992) but has only started gaining momentum in the latter half of this decade

## How it works

Learn how AR works  
<http://goo.gl/FI5F>



# AUGMENT YOUR REALITY

## Enter the fourth dimension

Rudresh Jariwala  
[rudresh.j@thinkdigit.com](mailto:rudresh.j@thinkdigit.com)

Imagine walking down the street with little bubbles of information floating in your field of view giving you information about the world around you. This is not something out of an Isaac Asimov novel mind you, its augmented reality and the funny thing is that in the future all this is going to be as routine as brushing your teeth.

### Brace Yourself

Augmented Reality (a.k.a AR) in lay man's terms is the addition (augmentation) of digital information over what we see in the real world. Imagine standing in front of your computer's webcam and being able to see on the



AR has more applications than you think!

monitor how certain clothes would look on you, or maybe how a new hairstyle would go on your face without even having to move from your spot!

Don't go running off to your computer just yet, like all new technology, it has its requirements. Now with more and

more people meeting those requirements AR is slowly evolving from something of a novelty into something that people really want to know about.

### Facing Reality

AR is about digital lifestyle, its about meeting people and finding out exactly what you want when you want it in the

### Must watch videos!

**AR in the automobile industry**

<http://goo.gl/Dto3>

**AR as it is in our world today**

<http://goo.gl/OQkE>

**Watch this TV show**

<http://goo.gl/Lm40>

**AR of the 22nd century?**

<http://goo.gl/oLDR>



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### AR in your shoes

Adidas has embedded AR content in their shoes

### Straight from the horse's mouth

Father of the Internet – Vint Cerf  
<http://goo.gl/QZMM>

### CHICKEN OR THE EGG?

That's precisely the game being played by hardware and the content in the AR world today, and we can't decide which looks more ridiculous, wearing a HMD (Head Mounted Display) or walking around pointing your phone at everything!

format you desire. Its going to be personal and natural. While it still has some maturing to do, corporations are pouring money into its research, and it will probably arrive earlier than expected. Unfortunately it would be hard for you as a reader to understand the power

of AR if you have never seen what it is capable of. Which is why you will find the inclusion of many videos (shortened for you of course!) to aid you in your understanding of



AR as it is today



How augmented reality will one day work for us



Information about a building augmented to suite your requirements

the applications of this game changer.

The aviation and automobile industries use AR for guided repairs and assembly quality checks among many other things. Advertising companies are using it as a marketing tool and artists have already started making their masterpieces in the virtual world that have no limits unlike the traditional canvas. Even real estate agencies are giving out information about vacancies and their exact location on the building in a land far far away.

These examples are merely the tip of the iceberg that is AR and its applications are limitless provided you are willing to open your eyes (literally). All you need is a smartphone/tablet that has an internet connection, a GPS, a compass and the

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### 3D Camera

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www.visualcard.me



## Trendy eye wear?

Vuzix augmented reality  
Wrap 920AR

software. Wearable glasses are also going to be available soon, and if companies



AR of tomorrow

like Vuzix have their way, at least we wont end up looking like cyborgs. Alas, unless we see Steve Jobs unveil such an innovation, it is going to continue

to be a hammer in search of nails.

The software is present on almost all modern smartphones today and examples of such applications are the Layar browser and the Junaio browser which can be found on both the iPhone and Android. The Ovi store from Nokia also has many AR applications if you wish to get your hands dirty.

The problem however for us in the real world today is the content. There is just not enough content in the AR world today to give users that nudge they need to whip out their mobile phone and look around. Content creation is primarily a user oriented task and you can find a very nice example of user created content in the "Tweeps Around" app that runs in the Layar browser.

## Limitations

AR is not all rosy though. It has limitations where GPS accuracy comes into the picture. Until we see an accuracy of less then one meter in our own hand held devices, we wont be able to truly leverage what it has to offer. But it is starting to show signs of improvement. Intel recently used AR at their annual Developers Conference to give users of AR browsers directions to various venues where the events were taking place, and it worked indoors! Now that's useful.



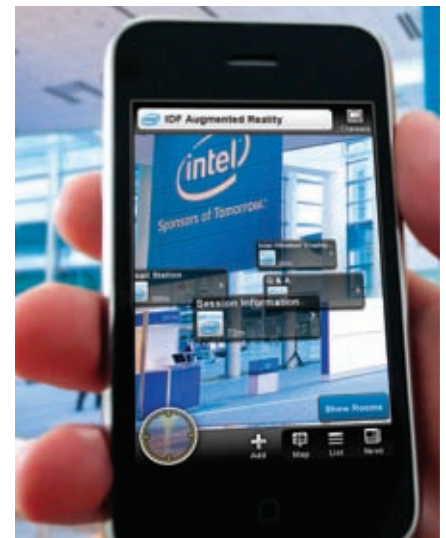
Augmented reality used in social networking

## Look into the crystal ball

Once using AR becomes second nature, things like interaction with button presses and 3D animations being used for presentations (.ppt 2020?) will become commonplace. Content will be pushed on to our field of view instead of only requesting for it and we cannot even begin to explain the new frontiers it will open for education and engineering.



Content is king but context is queen: AR must work for us, not against us



IDF 2010 with AR indoors

Imagine taking driving lessons from the windscreen in front of you, with a yellow paved road showing you the way. Its better than sitting in front of a computer because it is reality you are experiencing, but you have information at your disposal right in front of your eyes! There are possibilities of it becoming 'in your face' as well should the early adopter not ensure the blocking of unwanted content.

All in all, by the time we get to experience augmented reality integrated into the facets of our daily lives here in India, we will probably be reading an augmented reality version of the Digit ebook in the comfort of our rocking chairs, wondering about the time gone by and how far we have come. **d**





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**E**very Diwali, people all across the country indulge and spend on purchases of all kinds – food, decorations, house renovations, furniture, household appliances, you name it. The folks at Digit are most excited about the festive season too. I, for one, have no plans to go out shopping for fancy curtains and footwear. As always, I'm most eager to see what consumer electronics goodies I can get some deals on. I also have geeky friends who expect me to find good deals.

In the last couple of years, Indians have splurged on gadgets and consumer electronics like never before. Every festive season through the year, manufacturers make large price cuts on some of their products. Newspapers, sites and TV channels are flooded with offers and discounts of all kinds. Walk into a mall, and you'll see more than the usual share of hoardings and

advertisements showing off the offers and discounts. Obviously, everyone is excited to buy something or the other.

**What's wrong with that?**

Nothing, really. So long as you understand that companies don't suddenly go soft and decide to take huge losses to make your holiday a festive one by offering killer deals. It's a numbers game, and although you will get gadgets for cheaper, most of the time, there are still times you might end up paying *more* than you usually would!

Now before you think I've gone stark-raving mad, or call me a con-

spiracy theorist, all I ask is that you read the whole article and decide for yourself whether I'm as crazy as you think. I just might be able to save you some money, or at least help you buy better products for the same price.

It's not like these companies are evil, and looking to cheat you out of your hard earned cash; it's just that everyone's trying to outdo each other in terms of the deals they put on offer. There are even instances when companies sell you older models, in sort of a stock clearing sale. Yes there are good deals to be had here, but if you think you're getting top of the

**Maybe you shouldn't buy right now...**

As much as we'd like to believe that prices are dropping and there are plenty of amazing deals on the web and in the shopping malls, it's not easy to find a deal that is actually amazing. For example, if you are looking to buy a laptop, and you want something expensive, it may be wiser to wait till the festival period ends. You might find that post the festival season, prices actually fall. Why? For one all those "bundle offers" will have gone away, meaning that the manufacturers are not trying to palm off stuff in bundles, and you will actually pay for the price of the product you want. Also, sometimes companies produce or import more than they can sell, and this results in a surplus, which obviously means cheaper prices...

## Google TV being blocked

Certain networks in the US are blocking access to content on Google TV

line technology for a bargain, think again. You're buying from a business, not a charitable organization, so money is still being made – by the manufacturer, the retailer, and even the guys who sell refreshments at higher prices in crowded areas on hot days. Sorry, I digressed, but hate being ripped off, don't you?

In order to best understand how you could be ripped off, I've spent the last month window shopping, talking to shop keepers and people inside the business, and trying to figure out whether or not there really are any good deals out there. I started at the beginning, looking at what was on offer, and then trying to figure out how good or bad this deal was.



Look out for free bundles for camera in the lower price brackets

### Are prices really lower?

Since Google searches spike the most during the Diwali season, it's obvious that hordes of us are out there buying. The most common way of marketing the offers is to describe them as rock-bottom prices, and in terms of percentage discounts.

### What the deal?

Like any other year, some categories will have hot deals, and others will not. The festival of Dussera in November gave me an idea of the kind of deals we can expect this Diwali. I had my work cut out for me. Stacks of newspapers and brochures have since flooded my room, and my walls are covered with advertisements that I've been decoding, and then sorting as "Shop" or "Stop".



Free bundled memory cards are great, but only beyond a certain capacity

The most popular type of deal is the whole "discount" one. These are always on MRPs, which is good if it's on eatables, but completely useless in the consumer tech world. Not one of us should pay MRP for tech shopping. Ever!

Don't get suckered into believing that sign that screams "50% Discount". More often than not, the products with such high discounts are older models, and the discount you're actually getting on the product is more likely to be about 5 to 10 per cent the market operating price (MOP).

Another popular way of pushing stuff on to you is freebies. Although what follows is just an example, you should soon be able to start thinking along these lines for most of these "Free abc worth ₹xyz" deals.

Let's say you want to buy a TV, and there's an offer for a free digital photo frame, worth ₹6,000 with it. The best way to confront such deals is to go look at the prices of photo frames. If not in that retail store,



Mobiles phones are popular all through the year, so price drops are rare


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## GPU price drops expected

NVIDIA is expected to drop prices of their GeForce line of cards soon after AMD launched the Radeon HD6000 series

perhaps in another you will find that the same photo frame is being sold at something like ₹1,800, or basically at a much lower price. So, if another shop has the same TV on offer for ₹2,000 cheaper, without any freebies, you're actually getting a better deal.

Another way to look at our example is to look at the photo frame as product you want to purchase. Would you spend that money (₹6,000 in our example) on a photo frame? If not, don't even consider the offer. If you're not the shy type, do what I do and say, "I don't want the photo frame. I'll pay you ₹3,000 less and take the TV and you sell the photo frame for ₹6,000 and



Be sure of the kind of wall mount being provided

make an even bigger profit." This is when I usually get the customary dirty-look or wry smile from the salesman, and that's the end of that. Of course, I have to admit that sometimes these deals do add up quite nicely, so don't think they're always bad...just as you shouldn't think that they're always good deals, either...

The next type of pull is the lucky



Home Theater Systems given away with TVs are useful, as TVs have poor speakers



A free Blu-ray player with a LCD or Plasma TV makes good sense

draw. Don't get swayed by the shiny new car, bike or whatever's on display as the lucky prize. If you're really feeling lucky, buy a lottery ticket for a several crore bumper draw. You have about the same chances of winning either of them.

Also, don't forget to check out the smaller retailers. It's not a hard and fast rule or anything like that, but I've found that a lot of smaller retailers are generally more interested in making a sale, and will give you freebies that you can actually use, or want. They are also more open to bargaining, which means you're paying closer to the real price. After



Free portable data cards are handy, but monthly charges might be high

all, they spend less on rent, electricity and advertising, and thus can actually afford to have smaller profit margins.

Now, let's take a look at some of the hottest categories individually and I'll walk you through what I found.

### Digital cameras

Do your own research, because almost all of the sales people I met just do not know what they're talking about. They

just try and sway your decision based on what's not selling, or what they will get higher commissions for. Make up your mind about what camera you want, and then look for comparisons online or in magazines like Digit.

With cameras especially, look for freebies like memory cards, carry pouches or sleeves. You can also get these at smaller dealers, but you might have to ask for them.

### Exchange offers

Some of the offers in the market today might have something to do with exchanging older products and getting new ones in their place. Of course, you'll have pay a big chunk of the new product's price. There's a possibility that you will end up spending more or less the same amount as the new product. Look for at least a 20 per cent reduction in the retail price before opting for an exchange. If not, you'll most likely be giving away your old product for free and getting the new product for the usual MOP you'd pay anyway.

Of course this sometimes only applies to the more popular price ranges. It's not uncommon to find that festive season or not, you'll get no freebies with dSLRs.

As for memory cards, with a 4 GB SD memory card available for a mere ₹800, don't even try and feign interest in any offer less than an 8GB memory card. This is for cameras that are in the price range of ₹7,000 to ₹10,000. For more expensive cameras, there better be much more than just a memory card in the bundle.

Cameras are an oddity, because I've found that the smaller shops actually have many more models for sale than you'll find at a large mall.

You might also come across offers of a bundled watch, and other point-less accessories. Don't fall for those; the watches are almost always cheap, and don't even last very long.

### Phones

Mobile phones are another active category of products. Some of us switch phones every year, or even more often.

## GTX580 soon?

Rumours of NVIDIA launching their new GPU the GTX580 sometime towards the end of this year

## 1 TB optical disc

TDK shows off optical disc with a total capacity of 1 terabyte; it contains 16 double layered-layers

Cover Feature

### When will I see these deals again?

Deals and price drops occur many times in the year. The festival of Diwali surely is the most popular period. Statistics also show that price drop also occur during other festivities such as Ganesh Chaturthi and Dussera. The week leading up to the New Year is also a good period to go shopping. Of course, these days, even "friendship day" is enough to get retailers in a frenzy advertising "amazing deals". So basically, the answer is all year round.

It's the lower prices that make phones more popular than cameras or TVs. Thanks to the cut-throat competition and a huge number of brands competing for the same space, prices are almost always at rock-bottom throughout the year. You will be hard pressed to find any good deals in the festive season, on any but the most expensive models.

Even on the expensive models, the offers are usually limited to Bluetooth headsets and in some rare cases, external speakers. However, customising the look of your phone is catching on, so expect to see some phone covers, or screen protectors on offer. However,

since the phone market is very price competitive, you can also ask for the



Free portable speakers might be falsely bundled as being very expensive

price without the bundled freebies, and you're likely to get a further discount – though minimal, it's still a discount!

Once again, look to buy phones in smaller shops if you're on a budget. They're cheaper here. If you like living on the wild side, you could even ask for a further discount without bill and warranty, if the phone's not too expensive anyway, but I hate recommending this to anyone.

### Televisions

There are more people thronging the shopping malls looking for HDTVs than I've ever seen before. And the fact that we barely got used to LCDs and Plasmas when LEDs came out; and then before we knew it, there were 3D LEDs in the market. There's a lot of interest being generated by all this new technology, because no other category has had such publicised innovations. The recent slew of



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\*Results under test condition conducted by "International Centre for Automotive Technology"

## New Intel SSDs coming

Intel to launch its next generation of solid state drives in the first quarter of 2011



Some of the cell phone deals include free Bluetooth headsets

movie releases in 3D have helped too.

The most common free offering with TVs are the free wall mount with free installation. Some dealers might try and charge you for the installation, but you should know that the manufacturers themselves are now providing this service free of cost, so refuse to buy from someone who doesn't install for free, if you're buying a big brand TV.

If you don't need the wall mount, try your best to get a further discount on the price. If all else fails, take the wall mount, even if you don't need it now – you might want one later, and no use paying for one later when it's available for free now. Besides, you could also

### MOP? MRP?

Maximum retail prices can differ vastly from market operating prices. As we've mentioned before, never pay as per MRP in consumer tech. The MOP is the actual street price.

Most "discounts" are given on the MRP, in order for them to appear to be at a higher percentage. So a product that has an MRP of ₹1,000, but is actually sold at ₹550, might be offered to you at a whopping discount of 50 per cent. Which is basically an actual price drop of ₹50, masquerading as a ₹500 discount! Sneaky, huh? It's best to monitor prices of things you want to buy before the sales begin, and then decide if you're actually getting a good deal.



gift it to someone who does need it.

Many brands that make TVs also manufacture related consumer electronics products such as home theater systems, DVD and Blu-ray players, or other kinds of audio-video equipment. Expect entertainment bundles from such brands on TVs of higher values. You will find Blu-ray players and HDMI cables bundled. Again, remember that the prices of these products are bound to be exaggerated. For example, if you're buying an LCD TV for ₹70,000, and there's an offer to bundle a Blu-ray player and home theatre worth ₹50,000 – that's obviously exaggerated.

Also, we are fond of 3D, but not

3DTVs. It's always best to wait until more movie titles are available, only the rich can afford to be early adopters, the rest of us should wait and get a good deal on the technology when it's matured and when it makes sense.

Bundled movie titles are also a common offer, but may or may not matter much to you, depending on how fast your internet connection is. Also make sure you look at the variety of choice, because the movies are usually the ones you would *not* buy.

Deals to avoid are the ones that aren't related at all. I found some deals of a free internet connection with a TV. You want an internet connection, choose one wisely, don't just accept one along with a TV...

The same applies for a DTH service. Although it may sound like a good deal, make sure you do your research on the DTH service provider. You can opt for this if it happens to be the DTH provider you were going to opt for anyway.

Free bundles might also include products that are advertised without model numbers or details. Avoid these deals, because you're probably going to get the lowest-end model of all. One example I saw was "Free DVD-player with 42-inch LCD TV".

### Laptops

Laptops are another big category of products being sold in the market. Usually, individuals are the ones buying them, not families. So this is a category where you should be sure of your needs, and make sure you buy something's that's right for you. Laptop prices do dip in the festive season, but not as much as home theaters or TVs.

### Daily Online Deals

If you are tired waiting for deals, there are a few sites online that have regular deals. They aren't the absolute best deals available, but they will save you the trouble of running around crowded malls and streets hunting for them. There are quite a few sites online, but very few of them are based in India. One of the more relevant ones is Bindaas Bargain ([www.bindaasbargain.com](http://www.bindaasbargain.com)). The site has new products with discounts being put up everyday. Not all of their products are consumer electronics, but every couple of days, you'll find stuff like DVD players, Bluetooth headsets, phones, etc being sold. Similarly, Loot More ([www.lootmore.com](http://www.lootmore.com)) offers deals on electronics and PC peripherals. Prices are more or less the same as in retail, but you get free shipping on most of the products. 123Loot ([www.123loot.com](http://www.123loot.com)) is another similar site which isn't as pretty looking at the previous two, but has quite a lot of cameras, speakers, phones, storage drives and other PC and laptop accessories being sold regularly.



Bindaasbargain.com



Lootmore.com

## \$3000 for a Firefox bug

A 12 year old was awarded \$3000 for discovering a Firefox vulnerability

## China's mapping service

China launches its own world mapping service called Map World ([www.tianditu.cn](http://www.tianditu.cn))

Cover Feature

### SHOP OR STOP?

Decided on what you want to get this Diwali? Make sure to read the Stop Before You Shop story in our November 2010 issue.

Bundle deals mostly include accessories that you may or may not need – USB extension cords, mice, a flash



Ensure that discounted laptops don't include downgraded hardware

drive or if you're "lucky" a colour printer. However, remember that although it may sound good to get a free printer, you might end up spending a lot more because of your "free" gift. I've noticed that the cheaper printers which are bundled usually have the highest running costs, and since most printer manufacturers now make their money through the cartridges you buy, it makes sense to give away cheap printers with just about anything. You'd be better off buying a more expensive printer – they have cheaper cartridges and are cheaper to run in the long haul.

As for the other goodies, the USB cord, mouse and other accessories that may be offered are rarely worth more than a few hundred rupees, so don't base your buying decision on them. I've actually noticed that the better laptop models don't actually have any offers on them. They just let the hardware specs sell themselves.

That reminds me, I saw a lot of older processor-based laptops with offers on them. These are clearance sales, and are good if you use the laptop only occasionally, but if you're buying one as your primary PC, look for new generation hardware.

Laptop models are also somewhat complicated, and it's not uncommon for configuration to be downgraded and offered for a discount. When looking at comparisons online, don't just look at the model number and the performance scores, but also look at the hardware specs. You don't want to buy a model that won our tests, only to find out that during the festive season the configurations were changed and you actually got a lot less than you expected.

I hope I was able to help you buy smarter this Diwali. Remember, you can also write in to me if you run into a deal that you just cannot decipher. Wish you a very happy Diwali, and I hope you will shop smart, and shop safe. **d**

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Partial List

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YellowBird is a new service that allows user's to click and view 360 degree view of YouTube videos. Visit <http://goo.gl/DLvF>

# Who do you trust? Which brands does India's most influential community trust the most? Find out...

**Team Digit**

With valuable feedback from our readers  
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**G**eorge Macdonald once said "To be trusted is a greater compliment than to be loved". At Digit, every year, we've been reaching out to our readers all over India. Our mission is to gauge their T-factor on the players in the personal technology space. We've heard our readers out, and have collated and tabulated the results. Here's what India's oldest, and most influential technology community has to say.

**Icons Of Trust?**

Ideally, a good product would sell more than a bad one. In reality, this is not always the case. There are always variables – marketing and aggressive advertising for instance, can often cover up for a weak product, especially, in a country like India,

where perceptions play an important role in purchase decisions. And perceptions can be swayed in a number of ways.

As a media company ourselves, our job has been primarily one of education, because an informed consumer is an empowered consumer. Empowered to wade through the fancy marketing and jargon, the purple prose and hype, and make a rational pur-

chasing decision, thereby buying something that is reliable and suits his needs.

For you, this survey is a collation of experiences, and will ensure that you, your friends and your family will buy smarter.

For brands this is a reality check allowing them to gauge if they're really listening to their customers (existing or potential).

**CELL PHONES**

The word cell phones might be a little outdated itself for these converged tiny multimedia computers of today. Distinct categories have emerged, such as smart-phones, PDA phones, touch-phones, camera phones, music phones, etc. The number of models collectively churned out every year is mind-boggling, and no product enjoys so stable a sales curve as cell phones. Neither has any product penetrated the masses so thoroughly.

**HOW WE TRUSTED****How is trust calculated?**

All respondents are asked to complete a rather long and comprehensive questionnaire, which aims at arriving at scores for five parameters: Awareness, Satisfaction, Cost of Ownership, Credibility and Loyalty. These five factors are what determine how much the respondents "trust" a brand.

**Awareness:** Not all of you own a product from all the categories we cover, but buying decisions – in the future for yourself, or even in the present for others who seek your opinion – depend a lot on your awareness and the market's awareness of a brand. You're not likely to buy or recommend something you've never heard of before, are you? To get figures for awareness, we asked the respondents some questions to see how many knew of the brands in this segment. This is again sub-divided into first, unaided recall, such as, "Which is the first brand that comes to mind", and "What other brands are you aware of"; later, we provided people with a list of the brands, and asked them which they were aware of to measure aided recall.

**Credibility:** Under this heading we questioned respondents about how much they trusted a brand. Questions were asked to gauge what respondents felt about the quality, durability, technological advancement, design, innovativeness, etc., of each brand. This is by far the biggest contributor to the overall trust index, weighing in at 40 per cent.

**Satisfaction:** As owners of a brand's products, how satisfied you are with their products is one of the key factors that influence how much you trust the brand. In this regard, we questioned

the respondents as to how satisfied they were after purchasing a product, how easily available was it, how hard was it to find information about it, how well-informed were the sales people about the product, how easy was it to get after-sales support. As expected, this was the second biggest factor in determining the overall trust index.

**Loyalty:** A lot goes into making people stay loyal to a brand. Although our interactions with fan-boys online is not always a good experience, you have to give credit to brands for being able to incite passion in their buyers. To ascertain the loyalty that respondents held for brands, we asked them a series of questions such as "Would you buy another cell phone of the same brand again", and whether, based on their experiences, they would buy a product in a different category from the same brand. We also gauged how eager the respondents were to recommend products from this brand to friends and relatives, and whether the respondent generally spoke positively or negatively about the brand.

**Cost of ownership:** Not all products can be bought once, used forever. There's expenditure even after the purchase for servicing and repair, which may or may not fall under the warranty period, thus affecting your total cost of ownership. To ascertain this, we asked the respondents a series of questions to determine how much they had spent on a brand after purchase. This factors in the warranty, repair costs, upgrading (if any), etc. We also sought the respondents' opinions about which brands they felt were cheaper to own, overall, as compared to other brands.



## Chrome delivers on promise

Google's Chrome web browser is now into version 7. As promised, Google sends out a new version of Chrome every six weeks

## Market watch

This year has seen an interesting emergence of domestic brands, and in a big way. We saw the launch of no less than five new brands, and the year isn't even over yet. Most of these brands are cautious, initially launching entry-level phones. This is obviously the way to go, in a market that is dominated by big names. And most people like to play the volumes game, for that is what builds revenue. Building and (successfully) marketing a handset worth ₹30,000, is not an easy task, and requires lots of initial investments and expertise.

Over the year, we've seen some of these minnows gradually move up the price ladder, obviously buoyed by their success in the lower rungs. This is heartening from our perspective, as more competition can only be good for us consumers. In fact, breaking into a market already replete with brands is no easy task, and kudos to minnows such as Spice, Intex, Micromax, Lava, Karbonn, Maxx, Rage, Lemon, Videocon and others who we haven't mentioned here. They have forced some bigger brands to drop prices of mid-range products and introduce entry-level phones!

Android has emerged as a platform to be reckoned with. We've seen a number of vendors jump on to the Android platform, and we've seen a number of flagship devices on this platform this year, from the likes of Motorola, HTC and Samsung. We've also seen a few cheaper Android phones, close to the ₹10,000 mark. This is also welcome, since initially we perceived this to be an expensive platform.

Windows Phone 7 (WP7) has just launched, and as expected, there have been a slew of new releases from LG, HTC, Samsung and even Dell. WP 7 challenges Android, for it is a complete redesign, and nothing like its predecessor - it's modern, highly usable and customisable and the lack of native capacitive touch support, which was a serious chink in Microsoft's armour has been overcome.

This year also sees the welcome return of the teetering giant Motorola. Once perceived to be on the brink of extinction, they're back, and quite miraculously, on account of a single phone - the Motorola Droid (or Motorola Milestone), whose sales, single-handedly restored their treasury reserves. As a salute to Android that powered the Droid, they now have an entire range of phones, on the platform.

## Important results from our survey

- 1) The biggest shift in Nokia's dominance of power came in the awareness index, where Motorola and Samsung caught up to Nokia, with identical scores and other brands like LG, Apple, Blackberry and Sony Ericsson trailing slightly.
- 2) Last year, Nokia had a 2.5x lead over its nearest competitor in the awareness arena. This dominion is history. People are more aware of the other options available. The awareness level for Motorola climbed 8 times, and HTC 6 times. So more of our readers are aware that there are other viable brands.
- 3) Lots of people trust Apple, just a fraction less than those who trust Nokia. People also trust Samsung, Sony Ericsson and Blackberry, but less than the first two. A lot of people trust Samsung over LG, although both are Korean brands.
- 4) Blackberry was the major climber in terms of satisfaction from last year. It climbed six points, meaning fewer BlackBerry owners have anything to complain about.

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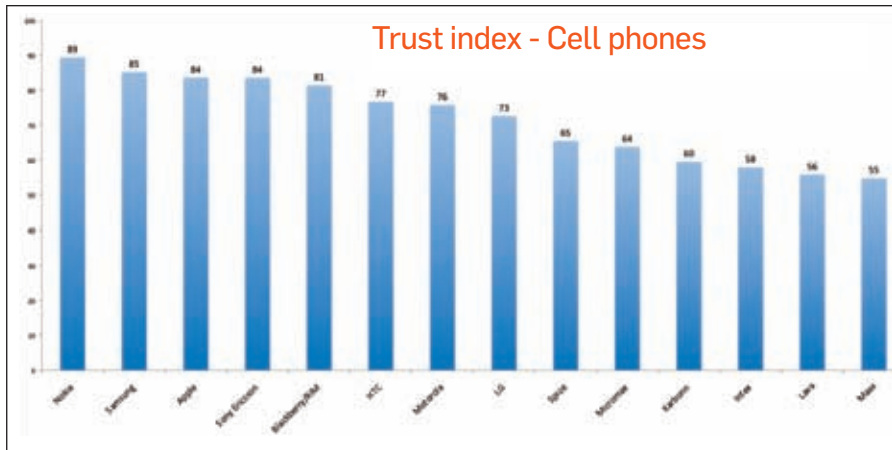


### Lego's MINDriod

The Android app MINDriod allows users to remotely control Lego's Mindstorm NXT robots

### Smooth talking nerds

The Conversacube is a device that helps nerds make conversation with people by giving them cues of what to talk about next



- 5) People felt Nokia make the sturdiest devices – lasting longer than others.
- 6) Apple was voted as the most innovative brand. Nokia scored a close second, while Samsung and Blackberry tie for a distant third. Apple was also voted as the most technologically advanced brand. Interestingly Blackberry came in second here.
- 7) People don't find the smaller brands to be as innovative. Micromax led the minnows, but still only got one-fourth of the votes that Apple did.
- 8) Nokias were undisputedly voted as the easiest phones to use. Interestingly, Samsung and Apple score second and third, respectively. Perhaps the touch interface hasn't caught on as much as we thought.
- 9) Most Nokia users said they'd happily buy another Nokia when upgrading. Apple came second here.
- 10) Generally, more people were happy with their Nokia phones, and they felt their devices were well priced, and offered a comparatively better feature set. When asked, they also said that they found buying a Nokia phone relatively hassle-free, due to an abundance of supply. Additionally, servicing of Nokia phones was cheaper, and dealing with their customer support was also a better experience. Sony Ericsson and Samsung were the next most preferred brands on these counts.
- 11) From the minnows' point of view, one thing is quite heartening. When looking at perceived value of owing a cell phone belonging to a particular brand, there's not much separating the bigger brands

from the small ones. This means quite a few people are satisfied with their Micromax's, Intex's and the like.

### The most trusted

Nokia wins again. But then the momentum they've gained over the past five years will take even longer to whittle down, if at all, so this comes as no surprise. However, globally, other brands have taken a larger chunk out of their sales pie, and our survey seems to indicate this too. Apple is gaining ground, and gradually improving on their iPhone design. Sony Ericsson is also an omnipresent threat, with a multitude of handsets catering to a wide audience. Riding the Android wave we have Motorola, HTC and Samsung, closing in, but still a bit behind. Windows Phone 7 could be another catalyst for these brands to further close the gap. Let's see how the next year pans out.

### HDTVs

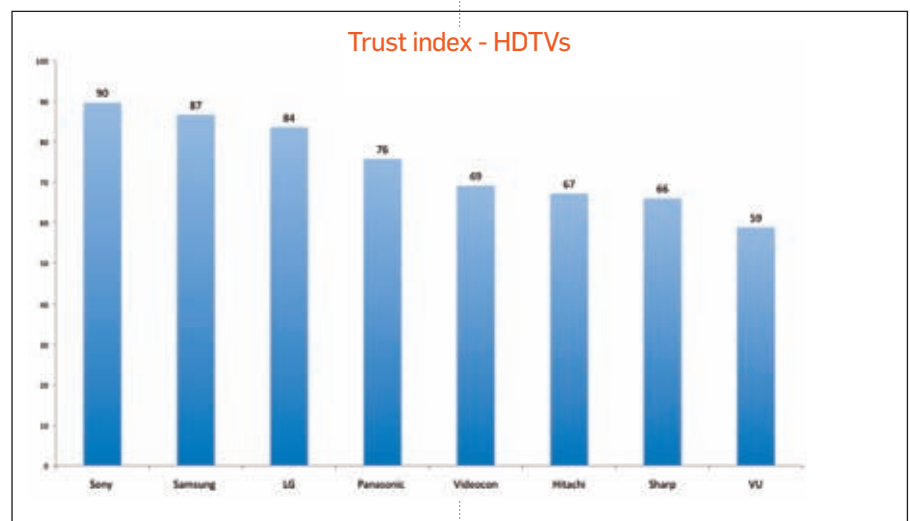
LCD and plasma TVs have taken over the market. Just visit any of the electronics chains in the country, and you'll see flat panels dominate the show. However, there's a lot of jargon flying around and often one doesn't know which brand to trust.

### Market watch

This year has not been the year of the HDTV. That was last year. However, this year has been the year of market penetration, as we see more and more people opting for a flat-screen and chucking out their older TVs. Most importantly, this year has been a year of falling prices, especially of the larger sets. We've seen 32-inch TVs from brands like Samsung, LG, Sony and Philips fall from their lofty ₹40,000 prices, to ₹30,000. An even larger drop is in the 42-inch segment that has fallen to below ₹55,000, making it even more affordable.

3D televisions have appeared this year, and most of the big vendors are offering them. While market adoption is yet to pick up, the pricing of such displays has become more competitive. There's a dearth of 3D content, but on account of future proofing, if the premium's not too great, it's a nice feature to have. We've also seen brands like Videocon and Moserbaer become more competitive by offering better models that are slowly reaching the level of the big players like Samsung, LG and Sony.

LED TVs have become cheaper, and there are more options available. Full LED displays are slowly entering our market, as options to the inferior Edge LED models.



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## Asus's 1080p Eee PC

Asus's Eee PC 1015PN is now confirmed and will be powered by a dual core Atom processor to dish out full 1080p HD content

## Stanford's test

Google is beta testing their high speed 1 Gbps fiber internet service at Stanford's residential subdivision

### Important results

- 1) Sony has gained a slightly better footing in the market, while LG and Samsung seem to remain right where they were last year in terms of overall trust. This is probably because Sony cut prices this year. This gives them a competitive edge, as traditionally Sony has always been perceived as a costlier brand.
- 2) Sony takes a very strong lead in credibility. They had a 25 per cent higher level of trust in their brand, followed by Samsung. Sony's HDTVs were also rated as being at least 30 per cent more durable than those of other brands. This we feel, has less to do with the actual quality of build, and more a brand perception.
- 3) Sony also emerged a clear winner in the loyalty stake; 30 per cent more people who buy a Sony TV, tend to stick with Sony, and recommend it to others. Samsung follows in second spot, while LG trails to take third.
- 4) Panasonic has gained three points in terms of overall trust, whereas VU, Sharp and Hitachi have maintained last years level of trust with almost no growth in our survey.
- 5) Results for innovation: Sony and Samsung were the first and second choice, respectively, with around 8 points separating them. LG is a distant third. Samsung was the first to introduce LED TVs and 3D TVs to India. We feel these two elements might have played an important part in the perception.
- 6) Sony enjoys a 195 per cent lead over LG from the responses we got about display quality - rather shocking. Even Samsung enjoys a massive 145 percent lead over LG. This might have something to do with the fact that Samsung uses PVA panels that are known to produce deeper blacks and generally enjoy a better contrast ratio. And, we should add, that our tests have shown that such a big difference is not warranted. Looks like LG needs to improve their customer perception, more than their displays.

### The most trusted

Sony has done it again, holding on to their top spot by a small margin. Samsung is the next most popular brand among our readers, garnering the second highest number of votes for reliability, trust, performance, innovation, after sales, longevity, features and quality. LG is a close number three.

## DIGITAL CAMERAS

Now considered a necessity, digital cameras are a product category that really heats up in the festive season. Arguably one of the most important categories of all, for these little devices capture memories that are irreplaceable - bad photographs haunt you for life. There are a number of smaller brands that have emerged as players, offering competitive prices. A digital camera is also one of the few devices that one can actually grow out of. For example, someone buying a cheap point-n-shoot may upgrade to an ultra zoom later, or even to a digital SLR camera.

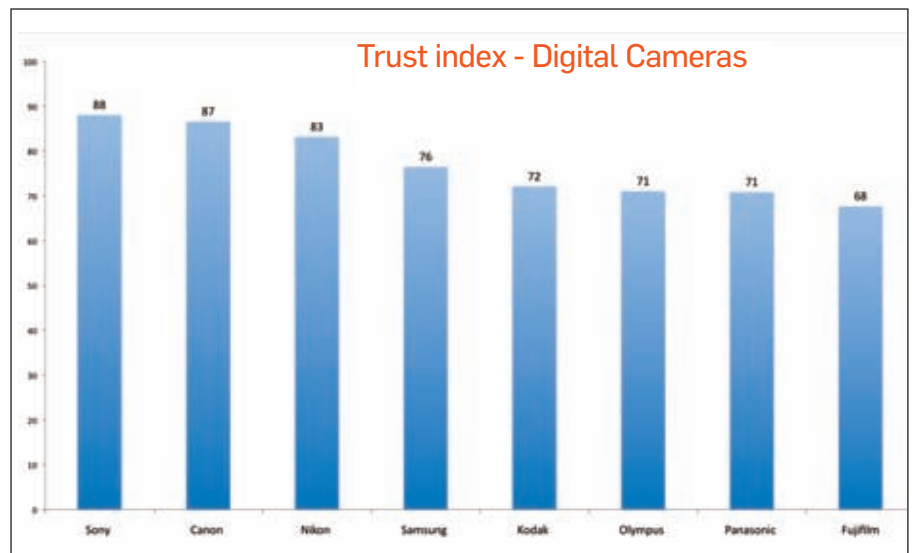
### Market watch

We're slowly seeing a second wave of penetration for cameras happening in India, as first timers continue to purchase cameras. Meanwhile megapixels continue to grow, with no seeming heed paid to noise ratios of sensors. The feature sets also continue to expand, and we're seeing models with optical zooms of up to 35x emerge.

Ultra compacts are getting smaller, and more powerful, even as video is emerging as a competitive feature. dSLR cameras also continue to get cheaper, and today, a dSLR with lens can be had for the same price as some higher end ultra zooms. New models have been launched by most big players, and the others have followed suit, evidently anticipating a good boost in sales this holiday season.

### Important results

- 1) 23 per cent of our respondents have purchased a digital camera in the past year; 53 per cent of them in the last two years. This tells us that barring cell phones, digital cameras are the hottest consumer electronics equipment around amongst our readers.
- 2) Most people know about Sony or Canon cameras without being aided.
- 3) Canon is perceived to be the most rugged brand, trailed closely by Sony, and then comes Nikon.
- 4) It's almost a tie between Canon and Sony when it comes to who has the technological edge.
- 5) When it comes to style, it's Sony all the way. Nearly 40 per cent more people feel Sony makes stylish cameras. Kudos to Sony's marketing team for their success in maintaining this image. Fujifilm and Kodak got the lowest votes here.
- 6) One important victory for Canon is their after sales service. People felt Canon is more responsive, and their





**Siddharth Sinha**  
**Investment Banker at 39**  
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## Android is No.1

Wall Street Journal conducted a poll for the best mobile OS; with 6365 votes registered, Android scored a hefty 50.7% still on orbit

## India is the cheapest

A recent report from OTI shows that India has one of the cheapest cell phone plans in the world! Indians pay an average of \$12.90 per month in comparison to Canadians who pay a whopping \$67.50

repair facilities took less time to fix problems. Canon edges out Sony by 2.3 per cent, and Nikon trails by almost 50 per cent of the votes.

- 7) On an average, Canon users are the most loyal, and tend to recommend the brand to others.
- 8) People also feel that Canon cameras are cheaper to maintain.
- 9) Sony sneaks ahead in terms of overall credibility and satisfaction. We feel Sony's wider portfolio of products might have something to do with this, although we can't be 100 per cent sure.
- 10) The biggest jumper this year is Samsung. We feel this newfound popularity is in part due to a slew of new models launched in 2010.

## The most trusted

Finally, we have a change at the top. Sony topples Canon's lead, and surpasses it as the most trusted brand. Although the difference is minimal and involves a change of only three points from last year, this is a big plus for Sony. While Canon jumped up two points from last year, Sony jumped five points. Nikon also rose, but by a single point and remains at number three.

## FLASH STORAGE

If we could think of one aspect of computing technology that has grown by leaps and bounds, it has to be flash storage. Sure, today you can buy a 2 terabyte hard drive, but hard drive technology has hardly evolved in the last three years. Its younger sibling flash however, is evolving by leaps and bounds. Needless to say, flash will probably be the future of storage - it's compact, dissipates less heat, has no moving parts and is thus rugged. There are caveats too, but these seem to be on the mend.

Whether it be inside your digital camera, or as an SSD inside your notebook, or even a USB drive, chances are flash has already touched your life. We expect to see a lot more of it in the future. Last year, our survey was for external devices. This year, we've featured dedicated sections to flash and hard drive, as both technologies differ sufficiently in technology, price and usage scenarios to warrant this distinction.

## Market watch

SSDs have emerged in the Indian market, available for the taking. Granted, the pricing is atrocious, and often inordinately higher than US prices, but this is the premium one pays for being an early adopter. However, on the whole flash is cheaper than it used to be, and with a 32 GB pen drive costing merely ₹4,000, pocket storage is getting better. Currently, 64 and 128 GB USB drives are very costly, but we hope to see prices slowly drop as people slowly start purchasing 32 GB drives.

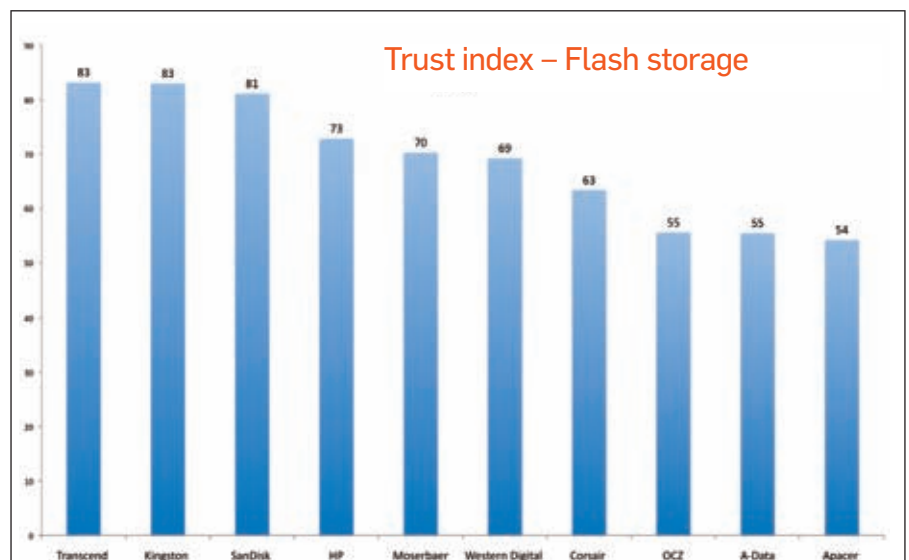
Flash is also used in cameras, and with HD video recording coming in, we've seen an increase in the density of flash modules used. 8 GB is pretty much the norm these days, while 16GB and 32 GB cards have also become cheaper.

## Important results

- 1) Kingston takes the lead when it comes to quality, with Transcend and SanDisk trailing close behind. Surprisingly, Corsair lost out big time. In fact, even HP, who is not a big player in the flash market took the lead over Corsair. Evidently, people associate Western Digital with "storage", whether Flash or hard drive, and a lot of people mentioned it.
- 2) A-Data is one of the larger players in the flash arena globally. However, they garner a very low trust level in

India. They've only just entered the Indian market this year, so perhaps this will change next year.

- 3) When it comes to innovation, the scales tip in Transcend's favour. Kingston loses out even to SanDisk, and is at third spot here. Interestingly, HP occupies the fourth spot, while Corsair languishes some 30 per cent behind.
- 4) Most people feel Kingston flash products are technologically advanced, and also stylish. This could be on account of the compact drives and the larger metal-body AES drives that Kingston produces. Transcend and SanDisk occupy the second and third spot, while HP is a close fourth.
- 5) Consumer satisfaction is an all-important element. How satisfied are you with your flash-based product? Transcend owners love the quality of theirs, but they feel that Kingston drives are slightly more plentiful in the market. Their thoughts mirror ours.
- 6) Kingston offers the best after sales support, according to our readers. They also resolve queries quicker, aptly.
- 7) 56 per cent of people who've bought Kingston say that they'd surely buy another product (other than flash) from the same brand - a winning score. 69.8 per cent of them say they'd buy another flash drive from King-



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## Sony makes fans await GT5

For the second time Sony has delayed the launch of Gran Turismo 5 in view of launching the much awaited Move motion controlled games

## Icons of Trust

For results on Laptops, PMPs, Cameras, Printers and desktop PCs, make sure to get your hands on the special December Collector's edition

ston, but 71 per cent of Transcend users remain loyal to their chosen brand – a mixed bag.

- Market awareness for Transcend is higher. Interestingly SanDisk also enjoys a good reputation – probably because of their good reputation in the photography circles.

### The most trusted

Our first tie! Kingston and Transcend cannot outdo the other, and SanDisk follows closely. HP occupies the third/fourth place depending on whether you count our winners collectively or not. This is surprising, for we haven't seen much flash products from them, but a strong brand name can overcome the worst of situations and this is a pristine example of this adage at work.

## WIRELESS NETWORKING

Thanks to the Internet revolution, Wi-Fi routers have become more commonplace these days. Wi-Fi routers are gaining popularity mainly because they're the easiest way to share an Internet connection. With the way broadband has penetrated the bigger cities, the inevitable push for a convenient, wire-free means to share a high bandwidth line, surely couldn't be far behind. From humble routers supporting 802.11/g to the latest ones supporting 802.11/n and a host of other features geared towards better performance and signal coverage there are a slew of models available. Up to three years back, only enterprises looked for wireless solutions, now walk into any computer hardware shop, and there's a good chances you'll come across a couple of options. There are a number of brands too, and with this segment heating up, we had to do a market check.

### Market Watch

802.11n is the latest specification and routers based on this standard have become affordable enough for you to consider them. Some brands are trying to break away from the boredom of wireless specifications and standards and simply segregate products on the basis of usage patterns, using related terms like "value", "performance", "home", "enthusiast" and so on. We applaud this move, but at times it's better to know a bit

about the specifications than relative terms.

Wireless networking is also getting a shot in the arm, courtesy of an unexpected quarter – HDTVs. Many such displays come advertising features like wireless browsing, and such, and while they require a PC to work with (after all how do you configure your router?) you can essentially browse using your wireless connection. Such TVs are wireless ready, and require a small dongle to work with.

### Perceptions from our survey

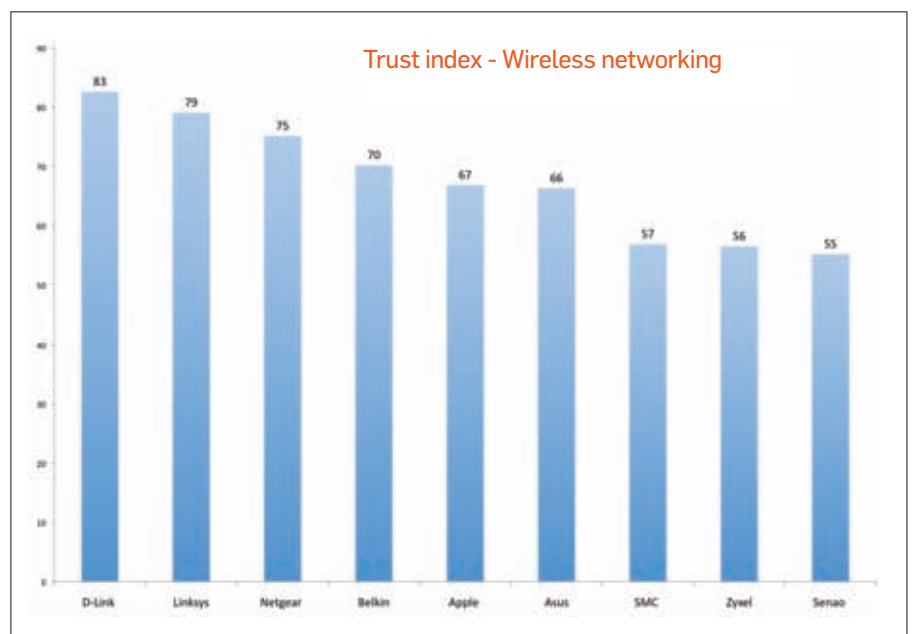
- D-Link is generally synonymous with wireless products. Ask anyone to name a brand dealing in these products, and chances are nearly 50 per cent of them will say D-Link. We feel this is due to them being in the market longer than other brands. In addition to this, D-Link does quite a bit of advertising through various media.
- When it comes to brand and quality trust, it's D-Link all the way. Linksys trails by around 19 per cent, while Netgear is 36 per cent behind. Belkin occupies fourth position. While the other three are fairly old players, Belkin is newer, and has been doing business here for around four years, no more. Interestingly, quite a few people have heard of ASUS, a brand that made wireless routers, but are much more fabled for their

motherboards and graphic cards.

- If you've heard of it more than anything else, chances are you'll trust it in terms of reliability. D-Link wins here, with a small margin between Linksys and Netgear, who are number two and three respectively.
- D-Link is also perceived to be the most technologically advanced brand. We feel this has less to do with actual fact, and more to do with popularity.
- Apple's strong reputation holds them in good stead. Despite having the tiniest product portfolio in the business, their routers enjoy a good reputation. In fact they out pace some heavyweights such as Belkin, Zyxel, Senao and SMC in this regard. The leaders remain D-Link, Linksys and Netgear (in that order)
- Many people recommend D-Link to others, but Linksys trails closely in this regard. We feel Linksys' recent marketing campaign for their routers seems to have helped their position. Belkin has also done a lot of promotion, but we see them languishing at the bottom. Evidently, the brand still needs to penetrate the market better.

### The most trusted

D-Link maintained a lead on all five parameters, thereby taking top spot. Linksys is a very close second, while Netgear an equidistant third. ■







Netgear ranked #1 in the India WLAN equipment market in Q1 2010 (Jan.-March 2010) in terms of customer revenue\*



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\*Source: IDC's Asia/Pacific Semi-Annual WLAN Tracker Q1 2010, Jan.-March 2010.

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## Micromax Modu T

Micromax launched the world's lightest 2.2-inch touchscreen phone in collaboration with Modu T, an Israel based company

## 12 Indian languages

Lava Mobiles' KKT-15 comes pre loaded with 12 Indian languages in a move to attract more local users

# The Legend Killers

A look at some emerging brands, across product categories, that have the potential to be future Icons of Trust

Nimish Sawant

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**I**cons of Trust, our annual survey tries to award brands that provide excellent products and great service. This article is an attempt to spot brands which have the potential to become an Icon of Trust in the coming years. We have recognised five product categories where we feel some brands can provide a challenge to the existing "big" brands. So without further ado, let's start with the product category whose leader is definitely facing some heat.

## CELL PHONES

Back in the day (which was barely five years ago) Nokia had a near monopoly in the cell phone market – around 80 per cent market share according to some reports – with hardly any challenges. The scene is completely different now, with Nokia being threatened on all fronts by challenger brands. They're not just nipping away at Nokia's feet, but actually taking a sizable bite. Apple, Blackberry and various others have created a serious dent in Nokia's market share in the smartphone category. Currently, even though Nokia still has a larger market share than any other handset manufacturer in India, its growth is not as aggressive as it used to be.

Thanks to new dual-SIM entry-level phone brands such as Micromax, Karbonn, Lava etc., coming in to India, competition is fiercer than ever before. Consider this: Micromax, despite starting out a mere two years ago, already has a whopping 10 per cent market share! Although Nokia still has a commanding lead with 54 per cent market share, this is still a lot less than it's heyday.



Micromax sells over a million phones every month

Micromax started as a rural player, coming out with affordable phones that had really innovative features, such as a 30-day standby battery. This was important because electricity is scarce in rural areas. The X1i, which was Micromax's first offering was a thundering success.

Micromax gradually built its base in the rural segment with phones having most of the features found in high-end phones (obviously not of the same quality), and entered the Tier I markets over

the past year. With most of its phones priced under ₹5,000, you may think Micromax is just looking at volumes by pushing cheap phones – not the best of practices. Although this may be true to some extent, you can't deny the fact that a brand that sells over ten lakh phones a month is hardly a minnow. In fact, Micromax can hardly be accused of sitting on its

laurels – it's aggressively targeting the next higher segment with innovative features and unbelievable prices.

The Q7, for instance, is a Wi-Fi-enabled, QWERTY, dual-SIM phone, priced under ₹5,000. Of late, the company has released touchscreen phones that are well designed and aesthetic – the Micromax Pike for example. Other innovations include a 3D user interface in Qube, a phone that lets you use it as a remote control for other gadgets, and they're also reported to be launching an Android phone very soon.

Micromax was also one of the first players to successfully tap into the dual-SIM market, when none of the established brands like Nokia or Samsung had any offerings in that space. The company exploited that option leading the way for many other brands, which eventually caused the current flood of dual-SIM phones. Even Nokia and Samsung had to follow, and now offer dual-SIM handsets priced under ₹5,000.

Although most Micromax phones are still manufactured in South East Asia (Taiwan and China), it has also started a manufacturing unit in Baddi, Himachal Pradesh. It already has operations in Sri Lanka, Nepal and Bangladesh and has recently launched in Dubai as well.

All of this tells us that Micromax is a brand to watch out for in the near future. Although many other new brands have also made a splash in the Indian market, none have had as great an impact as Micromax.

In terms of brand building, Micromax has also spent big bucks on advertising – it's reported to have an advertising budget of ₹100 crore,

## Must Read

<http://bit.ly/bvB5WN>

An article profiling the rise of Micromax and some of its future plans

<http://bit.ly/ckYzCs>

What are the ingredients that have worked in the favour of Indian dual-SIM handset manufacturers?



## AL670

### Media Player Full HD 1080P

#### Ultra-High Definition

AL670 plays 1920x1080p high resolution video smoothly featuring six times the resolution in details compared with DVD. Even the most finicky watchers will leave no criticism thanks to the perfect image quality, saturated colors and vivid details.

#### High Fidelity Audio & Multi-format Support

AL670 comes equipped with the DTS digital audio decoding function that can automatically decode the DTS format. Besides, AL670 supports the most file formats, including RMVB/RM for 720p, TS and ISO files for 1080p, AVI and MPG files.



## AL720

### Media Player Full HD 1080P

#### Micro-Portable size with a built in 2.5 inch SATA II HDD

The AL720 is slim and micro-portable with its simple, avant-garde metallic sliver black square case. The AL720 boosts excellent playback performance with its 2.5 inch built-in SATAII HDD, which can accommodate more than hundreds of videos, tens of thousands of songs and photos.

#### Multi-format and multiple subtitles support

Reliable support of a number of common multimedia formats such as 720P RMVB and RM, 1080P TS and ISO files, as well as the conventional AVI, MPG or even the subtitle SRT, SSA, SUB, SMI+IDX files.





## Olympus E-5

Olympus E-5 will start shipping from October end and is expected to sell at \$1,700

## Fujifilm's new line up

Fujifilm has announced three new cameras: REAL 3D W3, FinePix F300EXR and FinePix Z800EXR

which is substantial by any means.

Karbons and Lava are two other companies in the dual-SIM market that are slowly but surely catching up. The basic strategy is the same – release entry-level, dual-SIM cellphones. Recently Lava has tied up with the National Geographic Channel (NGC) to pre-load NGC content on all Lava handsets. Videocon has also released an Android offering in the form of Zeus.

All-in-all, the cellphone market is seeing a lot of challengers. Since the price barrier has been conquered, the only way for these companies to survive is to up their innovation ante, and improve on the after-sales service. Nokia is the undisputed ruler right now as far as the numbers go, but for once we really don't know what the future holds.

## DIGITAL CAMERAS

Canon, Sony and Nikon have dominated the digital camera market, as far as India is concerned. According to market share figures in India, Canon is the leader in the dSLR segment, while Sony rules the point-and-shoot arena.

If we consider the number of models launched across all categories, from January 2008 to date – Canon 58, Nikon 51, Sony 60, Olympus 55, Panasonic 59 – it's obvious that everyone's releasing the same amount of new models. The difference lies in the fact that Olympus and Panasonic launched many more point-and-shoots, while Canon, Nikon and Sony launched more mid- and high-end models. These are the ones that make the headlines, and the results of this are highlighted when you look at the Google Insights data – Olympus and Panasonic trail the top three by a huge margin.

However, both these manufacturers are responsible for one innovative technology in particular that has caught our attention – the Micro Four Thirds standard. It was introduced by Olympus and Panasonic in 2008. This technology does away with the mirror inside a dSLR camera, thus allowing the same sensor size

as most entry-level dSLRs, but with sleeker camera bodies.

Olympus has three cameras in this series – the PEN E-P1, E-P2 and E-PL1 – whereas Panasonic has five cameras here, including the Lumix DMC-G1, G2, G10 and GH1 among others. The success of this format can be gauged from the fact that Sony and Samsung have also come out with Micro Four Thirds – Sony's NEX3 and NEX5 and Samsung's NX10. Canon and Nikon, so far have not come out with any cameras in this segment. Clearly, Olympus and Panasonic have a first mover advantage in this segment.

While Panasonic has a good pan India presence with over 100 branded shops, Olympus severely lacks the same. One of the main reasons Canon, Sony and Nikon are top-of-the-line, as far as camera sales is concerned, is due to their robust network in the country. Apart from service centres and dealerships spread across the length and breadth of the country, Canon, Sony and Nikon also have exclusive showrooms. To pose a threat to this domination, Panasonic and Olympus will just have to increase their presence in the country.

Advertising spends of each of the big three – Canon, Nikon and Sony – are much higher than the budgets that Olympus and Panasonic have, combined!

It's obvious that both Olympus and Panasonic need to create more awareness about their innovations. Canon has a thriving community of photographers with a program called Canon Edge, thus reinforcing brand value. Nikon has also innovated on the advertising front by having a product placement in a Bollywood movie. It is about time



Olympus E-P2 is one of the Micro Four Thirds - system camera

Olympus and Panasonic went beyond traditional methods of advertising.

As of now, Olympus and Panasonic are no threats to the top three. But they have a winner on their hands with the Micro Four Thirds camera. In the future other players may get into this, but both Olympus and Panasonic need to leverage this innovation as the market for dSLR's is on the rise according to industry reports. From just 20,000 units sold, industry estimates

put the annual sales of dSLR units to around 40,000 – a major chunk of which is expected to come from entry-level dSLRs.

**Because Micro Four Thirds system cameras drop the mirror section, there is no scope to have a viewfinder in these cameras. So all you have to rely on is the electronic viewfinder**

## HDTVs

The HDTV market is currently ruled by Sony which has around 25 per cent market share. The LCD TV market is expected to grow from 16 lakh units last year to 27 lakh units in FY 2010-11. This is one category where the top three rule the roost comprehensively.

Videocon seems to be the only brand at present which can provide a hint of a challenge to the top three. With many players entering the DTH market, we are seeing a lot of LCD TV sales being bundled with one or the other DTH service provider. Videocon has already introduced satellite LCD TVs in the market, an industry first, that come along with complimentary subscription of the Videocon d2h DTH service. Satellite LCD TVs bypass the need to purchase a set top box (STB). Also Videocon is setting up a TV manufacturing unit at Manamadurai in Tamil Nadu

## Must Read

<http://bit.ly/bNSISX>  
Everything you wanted to know about Micro Four Thirds

## New XPS laptops

Dell has launched three new notebooks and has decided to concentrate on Alienware, Inspiron and XPS series and do away with the Adamo line

## Tenders floated for \$35 laptop

The Ministry of Human Resource Development has floated a tender for the cheapest laptop / tablet that is expected to come out

Cover Feature

### Must Read

<http://bit.ly/cPSW3N>

A feature on In Plane Switching panels on ThinkDigit's newest segment on Home Entertainment

with an investment of ₹1,500 crore, which may bring down prices further.

Videocon is also a contract manufacturer for a lot of companies. Philips has entered a 5-year deal with Videocon, and the latter will manufacture, market and distribute Philips TVs in the country. The point we are trying to make here is, this gives Videocon the edge over other LCD TV companies, who generally source panels from abroad, and do most of the assembling abroad as well. With a manufacturing unit in India, combined with Videocon's robust distribution network, we should see an increase of its market share.

There are other players like Moser-Baer and Godrej for instance, who offer LCD TVs at economical prices. However, based on our test results, we can tell you that they have a long way to go before they can pose a serious threat to Sony or Samsung. Offerings like 3D or something innovative like gesture gaming which was seen in Godrej's Game LCD TV look nice, but this is a time when consumers in general and first time buyers' in particular are more interested in better quality for the money they spend.

## LAPTOPS / NETBOOKS

Laptops is one product category that is seeing increasing differentiation by the day. With netbooks added to the fray, this market has become very diverse. Here again we foresee a lot of challengers. But first up lets look at some numbers to get an overall picture of who stands where.

As far as sales go, 8.05 lakh units were sold between April and June 2010. This is a staggering 61 per cent growth over the same period last year. The undisputed leader here is Dell, with a market share of 29.2 per cent, followed by HP and Acer.

Netbook sales have also grown at an

unprecedented rate globally and India is no exception to the rule. According to Gartner, first quarter sales of laptops grew by around 43 per cent. Although HP and Dell are leaders as far as laptops are concerned, ASUS registered a staggering growth of 113 per cent as compared to just 23.2 per cent growth for HP, and 33.1 per cent for Dell.

Just like its desktop counterparts, laptops now cater to different target users based on their usage scenarios. For example, there are laptops aimed at everyday users, business users, gamers, multimedia junkies, users who are always on the go, etc. So even though we have the leaders defined – HP, Dell and Acer – we think we can stick our necks out and try to predict challengers in each of the aforementioned segments.

### Netbooks

No matter what the statistics say, there is only one clear challenger in this category – ASUS. With its EeePC brand of netbooks, and an exhaustive portfolio teamed with competitive pricing, we feel that it will take a lot for the leaders to dismantle ASUS from this market. ASUS has a whopping 16 models in this segment alone, with some interesting innovations – their touchscreen netbooks (EeePC T91MT, 3G netbook, etc.), for example, are certainly making waves. MSI's Wind series of netbooks is the only other competitively priced range with a wide product portfolio, and desirable qualities such as HD readiness, chiclet keyboards, etc.

### Gaming laptops

Here MSI has around 15 products on offer for the gaming community with specifications to cover all types of gamers. ASUS on the other hand has only two offerings in this space, but its G51Jx laptop is a 3D gaming laptop, a unique offering separating it from the rest. Gaming forums and circles are buzzing about HP and Dell working on its own line of 3D laptops.



A high end 3D gaming laptop - ASUS G51Jx

Dell's Alienware series of laptops are the only competitors here with their insane configurations and innovative designing of the M series laptops.

### Multimedia laptops

ASUS NX90Jq completely blew us away because of its unconventional design featuring an 18.4-inch screen with two vertical tower speakers, something that has not been seen on any laptop before. Apple is another brand to look at, as far as this category of laptops go. Now with the introduction of Intel Core i series of laptops in the Indian market, it is a definite challenger to HP's Envy series of laptops.

### Regular and business laptops

The only way ASUS and MSI can compete with the leaders is on the pricing front, but Acer also has very competitive pricing. It's hard to see ASUS and MSI truly challenging the leaders here.

After scanning through some forums, we realised that users are willing to spend extra money on a branded laptop which offers better after-sales service. HP and Dell are way ahead of others as far as the number of service centres go. HP's India web site has an exhaustive list of service centres. This is one area where brands like ASUS and MSI need to play catch up. **D**

**Laptop sales grew by around 43 per cent in India in the first quarter, of which growth in Netbook sales rose by a whopping 71 per cent in the same period**

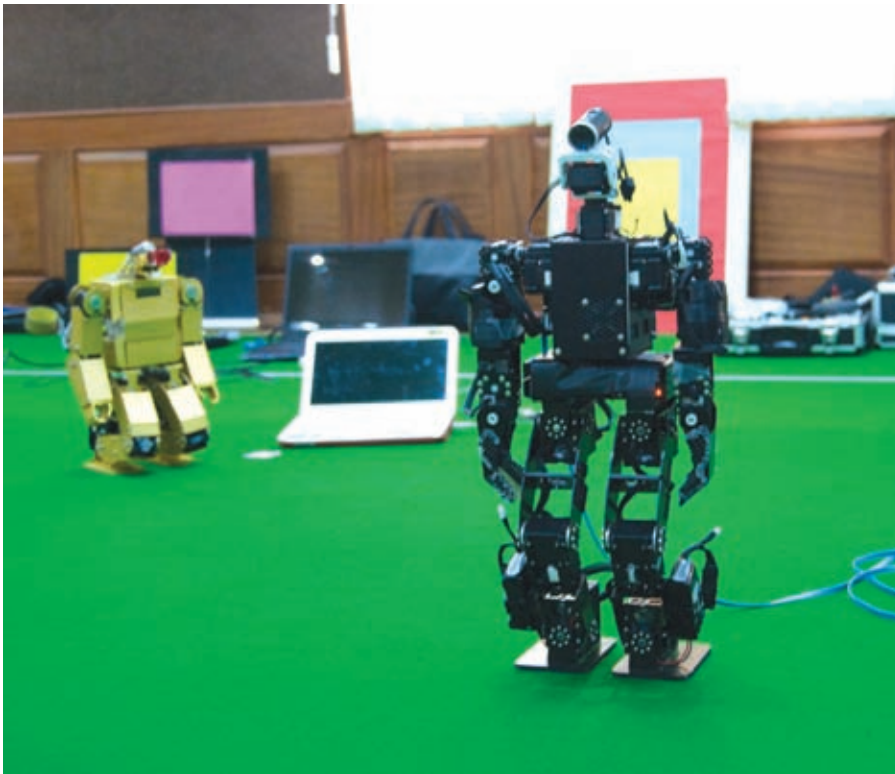


**Caretaker**

Willow Garage, a Silicon Valley start-up has recently launched its PR2- a robot that can fold towels, recharge itself and even bring you a can of coke

**Built to deceive**

Georgia Tech researchers have developed an algorithm for robots that will enable them to deceive human beings



# The Rise of the Robots

Whether you know it or not, the invasion of the bots has begun. It's a slow-moving take over, and they come in peace

Over 50 teams, 200 participants from across the globe, and we were there to cover every minute

## A soccer World Cup in India?

Nash David  
*nash.david@thinkdigit.com*

The Federation of International Robot Soccer Association (FIRA) organised the 15th Robot Soccer World Cup in India this year. We were excited at the opportunity to witness robots fighting it out at a game of soccer, in addition to other activities such as weightlifting, walking and climbing. Moreover, several of these robots were fully autonomous - humans don't control their moves.

**The cup**

FIRA 2010 was filled with surprises and among them the most pleasant of all were the Indian participants. Two highlights are a 17-year old called Fateh, and



## Robot Institute of America

The Robot Institute of America, in 1979, defined a robot as 'A reprogrammable, multifunctional manipulator designed to move material, part, tools, or specialized devices

## Indian Robot Olympiad

Three young girls from the Canadian International School in Yelahanka, near Bangalore, won the Indian Robot Olympiad held in September 2010

Feature

Madhusudan Mukerjee  
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Star Wars fans will remember the scene in *The Empire Strikes Back* when C3PO, reprimanding R2-D2, says, "R2-D2, you know better than to trust a strange computer!" Since Lucas and Spielberg began to make Hollywood movies, scenes like these have ensured that AI and robots have become a part of the popular imagination. It's a-bot time (pardon the shameless pun) that someone separated fact from fiction. So if you've ever wondered where we actually stand in the field of robotics today, read on.

### The robot story

Although there may be several ways of defining what a robot is, we like the simple way Robin Murphy, a Professor of computer science and engineering at Texas University, puts it – "a

mechanical creature which can function autonomously". Robots don't have to be anthropomorphic (human-like) or bestial (animal-like), but the bottom line is, they should be able to (a) do things on their own with minimal or no human intervention, and (b) adapt to changes in their environment.

Leonardo Da Vinci is credited with the first design concept of a robot, around 1495. William Grey Walter's *Elmer and Elsie* (1948) were the first electronic autonomous robots that had touch and light sensors, two vacuum tubes, basic analogue circuits and could even recharge their own batteries. Shakey, the first mobile robot that had a form of AI, was built by the Stanford Research Institute between 1967 and 1970. Shakey could move, turn around, and plan its own route, using bump sensors, a TV camera, a triangulating range finder and was connected to DEC Programmed Data Processor microcomputers (PDP-10



The popular perception of Robots is often based on Hollywood representations such as these

and PDP-15) computers via radio.

Primarily, the four areas where robots have been most useful are manufacturing, space exploration, the

AcYUT. Fateh is dear to us because he's a part of the Digit community, and at just 17 is already building robots all by himself. He started playing with robots when he was still in school, and is proficient with C and micro-controller level programming, and also putting together the hardware.

Fateh credits Thinklabs at IIT Bombay for his foray into robotics. Not only did they help him hone up his skills in programming, they also got him familiar with the building blocks involved. Dr. Prahlad Vadakkepat, General Secretary, FIRA, believes youngsters such as Fateh, "are an



Fateh and his robot

example of the passion that the young population of Indian students display. India has immense talent and potential, however, many of these are unable to tap into their true potential for lack of

resources or opportunities."

FIRA 2010 also marked the foundation of FIRA India, and with it, the path for a national robotics event on a yearly basis. Hopefully, this would serve as the much needed fillip for universities and colleges to come together under a single umbrella to showcase their

innovations and technical prowess in the field of robotics. Janesh Janardhanan, Secretariat and co-host, FIRA 2010 echoes these sentiments and is quite optimistic about the opportunity the

# ASUS ENGTX460 DirectCU Graphics Card

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### Robohelp

Mitsubishi tried to sell baby-sized Wakamaru robots, in Japan, in 2003 as domestic helpers, but the product failed

military and healthcare. Typically, in these sectors, tasks that are repetitive, hazardous, or need precision have been taken over by robots. Since the 1980s there's been a growing interest in robots, but it's the 2000s that will be their millennium. So are we going to witness the rise of the robots?

### Types of robots

Robots, today, could be autonomous, semi-autonomous or fully controlled, and can broadly be classified into the following types:

- 1. Manipulators:** Robotic Manipulators are typically static (fixed-base) robots that are typically used in manufacturing. These are routinely visible in most assembly line factories all over the world, but a sequential phone-switching system could be called a manipulator too.
- 2. Mobile robots:** Mobile (movable) robots are usually platforms with



AIBO, the robotic pet was discontinued in 2006

- wheels, tracks or legs. We've already told you about Shakey, and newer examples include Honda's ASIMO (a humanoid that can run at a speed of 6 kmph), and Sony's AIBO (an autonomous pet robot that looks like a dog).
- 3. Telerobots:** Tele-operation is when a human operator controls a robot from a distance – of a few feet or halfway across the solar system. The Sojourner robot, which explored the surface of the Mars in 1997, is one such example. Unmanned aerial

### Robotics in Digit

Read Dr. Prof. Prahlad Vadakkepat's article on 'Robotics, India and the Future' in the January 2010 issue

vehicles (UAVs) have been around since the Vietnam War, and UGVs (unmanned ground vehicles) and UUVs (unmanned underwater vehicles) have been around since the 1960s, and several are now autonomous. The Mars Rover robots, Spirit and Opportunity, have been working almost independently with timely tele-operated guidance from their NASA mentors since 2003 (only Opportunity remains functional as of now).



Spirit - the NASA Rover for Mars

national event would provide. According to him, this would provide a perfect blend of knowledge and opportunity in addition to an indispensable community that would harness the Indian contribution to the field of robotics. The need of the hour is increased awareness on the activities currently underway in Indian educational communities.

We also spoke to the team behind AcYut, the autonomous robot from BITS Pilani. AcYut won a special prize at the event for registering a World Record in weightlifting – 40 CDs (a standard for weights in robotics events). The team was quite forthcoming in explaining several terminologies associated with robotics. What began as a student-led



(L-r) Samir, Sushma, AcYut and Akash

project has moved across batches of students passing out of BITS Pilani. Newer students are inducted into the team as seniors pass out each year.

Next, we met up with students and professors from countries such as the UK, Singapore and Taiwan to get a feel of what the future holds. One of the people we met was Dr. Tzuu-Hseng S. Li, Dean, College of Electrical Engineering and Computer Science, National United University, Taiwan.



Dr. Li pointed at the significance of digital signal processing for logic and AI

Dr. Li played referee for the semi-autonomous and also autonomous Androsot robot soccer events. In the semi-autonomous event, each robot was coded using coloured paper on its

“head”. An overhead camera tracks the robot and a server instructs it to move in the required direction. The robot is autonomous – it knows how to kick the ball, how to get up if it trips and falls, and how to chase the ball. The only information provided by

### Classification of FIRA robots

The event was segregated into five categories as follows: MiroSot, HuroCup, AndroSot, RoboSot and SimuroSot as defined by FIRA.

MiroSots are rather small robotic bodies with dimensions restricted to 7.5x7.5x7.5cm. These compete in a game of soccer, played with an orange golf ball. The teams are controlled via one host computer per team. Similarly, HuroCup involves physical activities such as sprint, penalty kick, obstacle run, lifting and carrying, weight lifting, marathon, basketball and wall climbing.

AndroSots closely resemble humans to scale and proportion. These are two-legged robots that interpret the position of the ball, goal and members of the opposite team in a game of soccer. Also, these robots are fully autonomous.

RoboSots can be either fully or semi-autonomous. In the semi-autonomous mode, the on-board camera is used by the host computer to guide its movements.



## Robotics education

Robhatah and PurpleLeap have tied up to provide high quality robotics education in India

## Electronic skin

Using nano-scale transistors and rubber, Stanford University researchers have created an electronic skin – an artificial layer with tactile sensitivity – that could replace touch-sensors pretty soon, in robots

Feature

- 4. Virtual robots:** Also known as bots or web-bots, these are actually software programmes that simulate real robots or function like human beings in the virtual world. WebCrawlers and ELIZA – the chatterbot that simulates conversation between two people on the web – are examples of virtual bots.
- 5. Shape-shifting robots:** Recently, platforms for robots have moved towards polymorphism. Serpentine robots are the best example of shape-changing robots. Recently, Carnegie Mellon University's Biorobotics Lab developed a snake-like modular robot called Uncle Sam that looks like a series of tin cans and climbs poles and trees before it surveys the landscape with a camera on its head.
- 6. Swarm robots:** Inspired by the teamwork of insects like ants, scientists have been working on creating a large number of little robots working on a single task – multi-agent teams that

## TETE-A-TETE WITH ABHEEK BOSE, FOUNDER, ROBOTS ALIVE



Mr. Abheek Bose, founder Robots Alive

of skill and know-how as far as robotics is concerned so it is very difficult to get the correct kind of people in the job.

### Is the Indian education system conducive to robotics?

The educational system in India is not conducive to Robotics, because it is still considered a subject instead of a stream of engineering. In developed nations, robotics is taught as an engineering discipline.

### Are the entrepreneurial efforts in the field of robotics succeeding in India?

Starting up in the robotics domain is still a struggle. There is a significant lack

### What about government policies?

Robotics is still very new in India and the government is still trying to get the relevant policies in space.

### What does the future hold, over the next 50 years?

There are already successful robots which perform small scale domestic tasks like vacuum cleaning (Roomba & Scooba from iRobot). There is also large scale research especially in US, Japan, Korea and Germany which deal with fully capable house-keeping robots. Further, there is a worldwide competition of house-keeping robotics, Robocup at Home.

In the next 50 years, robots will be most definitely be doing some of mankind's everyday domestic chores. I am still doubtful, however, that we will see this in India over the next 50 years...

the server is the location of the ball.

Given the rapid developments in the field of robotics, what can we expect in the future? According to Dr. Vadakkepat and FIRA President Dr. Kim Jong-Hwan, "we, as humans have not been able to adopt robots into our daily lives because we are emotional beings. Aibo, Sony's robot pet for example, wasn't adopted as popularly for the lack of association in a more realistic nature. You could tap and pet it, but you couldn't get it to act naturally stupid!"

### Why, robot?

Robots are also finding their way into fields such as surgery and medicine.

During an important operation, where human errors can occur, perhaps the future really is robot surgeons that are overseen by human doctors. It might scare you to know that a robot is operating on you, but it's no scarier than worrying about whether your human surgeon has slept, isn't in a bad mood or under stress.

In the automotive industry, when your car is being painted, you can be sure that the robot painter has used the optimum amount of paint with an evenness of the coat not achievable by human hands.

When building or repairing complex structures such as suspension

bridges, which currently require humans to risk life and limb to get to the areas in need of repair, a robot could do the job without any nervousness.

However, all said and done, perhaps we're expecting too much too soon from the robotics field. Yes we can't have our own Bicentennial Man in our lifetimes, but we're certainly going to see robots enter our lives. However, in order for our country to stay amongst the top runners of this exciting and promising segment of technology, there needs to be youth involvement. Watch out for our December 2010 issue, when we will bring you closer to the world of robotics. **d**

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## Exclusive FIRA 2010 videos

You can watch exciting videos from FIRA 2010 on the Playware DVD and the YouTube Digit channel at [www.youtube.com/digit](http://www.youtube.com/digit)

have become quite popular, especially with the two international robot sporting competitions – RoboCup and MIROSOT. Several robots need to work individually as well as in tandem with one another. This is possible thanks to a branch of AI called Distributed Artificial Intelligence – the same kind of software that powers web-bots or know-bots.

7. **Nanobots:** Robots at the nanometre level are still more sci-fi than reality, but recent advances in nanotechnology have made them a distinct possibility sometime in the near future.

### How robots work

In popular science fiction, Isaac Asimov's three laws of robotics describe how robots should be programmed:

- A robot may not injure a human being or, through inaction, allow a human being to come to harm.
- A robot must obey any orders given to it by human beings, except where such orders would conflict with the First Law.
- A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

However, robot programmers haven't really reached far ahead yet in reality.

### Face forward

In May 2010, Microsoft released its first stable version of the Microsoft Robotics Developer Studio (Microsoft RDS, MRDS) - a Windows-based environment for robot control and simulation. It has a high degree of compatibility and is useful for students, professionals and commercial applications as well. The interest of giants such as Microsoft in robotics signals an exciting future



Spielberg's version of I, Robot revealed a fallacy in the three laws

in the field. Panasonic's HOSPI (a hospital robot that serves, cleans and takes X-rays), humanoids like TOPIO (a robot that plays table tennis) and recent bionic innovations indicate that a growing presence of robots in our daily life is inevitable. Automated transport vehicles, rescue robots and robotic explorers are already being worked on to be enhanced for interaction with the general populace. The multi-disciplinary influences of cognitive sciences, bio-robotics and linguistics are bound to come up with better robots. So, although you're not going to see WALL-E just yet, you will see robots help you out with your housework in the near future.

### India connections

According to Prof. Gayatri Menon, Faculty and Coordinator of the Toy and Game Design Department at the National Institute of Design, Gandhinagar, industrial robotics have seen a spurt in development in India over the last decade. ABB, the European automation giant, has a burgeoning business in India, with Indian companies buying industrial robots for a variety of functions like welding, paint finishing and material handling. In view of this, it has set up a Robotics Application Centre in Bangalore especially for the purpose. Prof. Menon feels that the Indian industries have shed their inhibitions about using robots in their factories over the last few years and the perception that roboticization would lead to unemployment is no longer in vogue.

Start-ups like Pulkit Gaur's Gridbots (Ahmedabad), Dr. Prahlad Vedakkepat's Robhatah (Bangalore) and Abheek Bose's Robots Alive (Bangalore) are not only actively pursuing innovations in robotics but also interacting with faculty, students and researchers through specially designed workshops on robotic technology. These are usually designed to provide a balanced exposure to the theoretical as well as the practical aspects to robotics.

However, Prof. Menon feels that the introduction of Mechatronics as a subject in engineering colleges in India – and the growing number of robotics competitions such as the SmartMove contest in Banga-

lore on January 30, 2010 – are steps in the right direction and will serve to increase the awareness of the layman to robotics.

Pranjal Rai, a research student in Education through robotics at the National Institute of Design, Ahmedabad, who has spent several months surveying the robotics scene in schools of India, found that most school authorities and faculty see robotics as a hobby activity. At the personal level, Lego's Mindstorms kits took the world by storm in 1998 but are still quite expensive by Indian standards. Rai, to his surprise, found that most robot-kits for children ended up in disuse, being ignored after a few attempts at play. In fact, let's face it, for most of us, studying robotics



Prof. Gayatri Menon sees a bright future for Robotics in Education

is not just a geek-thing, but perhaps the geekiest of all the geeky things to do.

The general perception in India is that robotics is hyper-technical. Prof. Menon believes that a serious attempt needs to be made to dispel these misgivings – because robotics is probably the only thing that could teach children mechatronics, computer programming, electronics, mechanics and bio-mechanics in one shot – and with tons of fun in the bargain. No doubt, if India wants to seriously enter the international robotics scene in a significant way and make good use of the vast pool of technical talent that we already have a collaborative effort between industry and academia is the need of the hour. Watch out for next month's Collector's Edition for more on robotics. **d**

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**Oldest junk**

US satellite, the Vanguard I, which launched in 1958 and worked for only six years, enjoys the unsavoury distinction of being the oldest debris still on orbit

**India's first satellite**

Aryabhata, India's first satellite weighed 360 kg and was launched by the erstwhile Soviet Union on April 19, 1975

# Cleaning up the Cosmos

We're talked about e-waste before, but there's a whole other type that's threatening our future – orbital debris, or space junk, as it's more popularly known...

Anoop Verma

readersletters@thinkdigit.com

In September this year, Boeing announced its intention to purchase a ticket for the new space race. It's not all about getting spy satellites and ICBM busters into orbit anymore. The future is space tourism! If Boeing's efforts go as planned, by 2015, a lucky few of us will blast-off from Florida's Cape Canaveral in a state-of-the-art "Space Taxi". Of course, this Space Taxi won't be as crowded as the transportation we're used to...it will have a maximum of seven people onboard – at least three of which will be professional astronauts. And you won't even have to pay extra for meals, or water!

British tycoon, Richard Branson, truly believes that space is the final frontier. He founded a company called Virgin Galactic, which is expected to begin test flights beyond Earth's atmosphere in 2012.

In less than a decade, space around Earth is going to get crowded – teeming with tourists. However, it's already crowded up there. In fact, Mumbai's crowded local trains would seem empty, in relative terms.

## Dodging bullets

We're surprised no one's calling their space project Neo, after Keanu Reeves' character in the Matrix trilogy. Why? Because launching into space these days is like dodging Agents who are shooting at you with sub-machine guns.

Future space tourists in so-called Space Taxis will actually face higher risks than drivers on the worst Indian roads.

On the periphery of our atmosphere, there are about 5,00,000 objects flying about at breakneck speed. Nuts, bolts, shards of metal, plastic, etc. – all remnants of previous space missions, and old satellites, and all deathly dangerous.

Now, before you accuse us of sensationalism, and think, "Sheesh, talk about over-hyped! Nuts and bolts indeed," try and imagine what a nut would feel like if it were shot at you at over 40,000+ kilometers per hour! At such speeds, a nut would go *through* a tank; and in space, that's one dead tank.

Already there have been numerous cases of near misses for vital satellites orbiting the earth. On one occasion NASA had to replace a window on a space

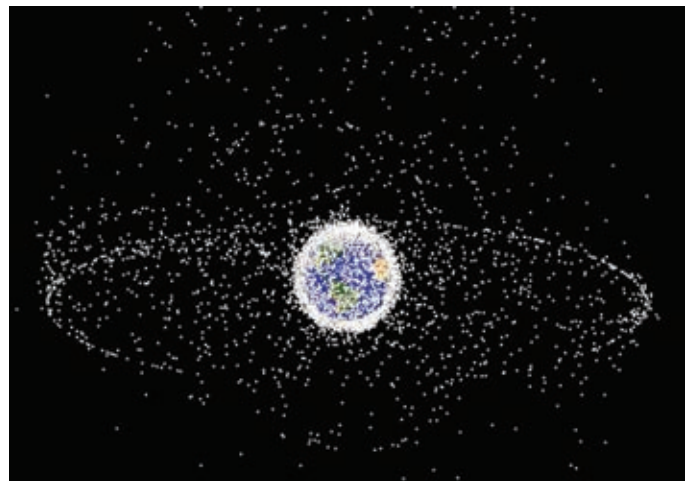
shuttle, and that damage was caused by a mere flake of paint – one tenth of a millimetre wide!

In February this year, the world woke up to the news that a near head-on collision between the residual portions of a spent Chinese rocket and the European Space Agency's (ESA) huge Envisat Earth remote-sensing spacecraft had been narrowly averted. The tracking information released by the US and Germany shows that these two objects had floated past each other at a nail-biting distance of a mere 160 feet. The ESA's Envisat tips the scales at 8 tonnes, and the old Chinese rocket is estimated to weigh 3.8 tonnes. In space, that's like two bullet trains at full speed missing each other by micro-meters.

What's worse, if such a collision had taken place, the threats of space junk would have increased in orders of magnitude because of all the additional debris that these two huge objects would have left behind after they were destroyed. Thankfully, scientists on the ground were able to steer the ESA Envisat out of harm's way. All we can say is we have new-found respect for the astronauts who live aboard the International Space Station – flirting with constant threats.

## Monitoring the junk

Mankind is yet to come up with a workable solution to clearing our own garbage in space. With increased activity in space – DTh and HD channels need satellites now, don't they – the amount of junk is only going to rise. IN fact, if we don't find a



Images from NASA's orbital debris site might be able to emphasize the perils of space junk a lot better than all of the words in this article!



## First tourist in space

In 2001, Denis Tito became the world's first space tourist to enjoy an eight-day holiday aboard the International Space Station. His ticket cost him \$20 million

## Laika's sacrifice

Laika, a Soviet dog, became the first animal to orbit the Earth, aboard the spacecraft Sputnik 2. Sadly, Laika died in space, as it couldn't be brought back to earth

Feature

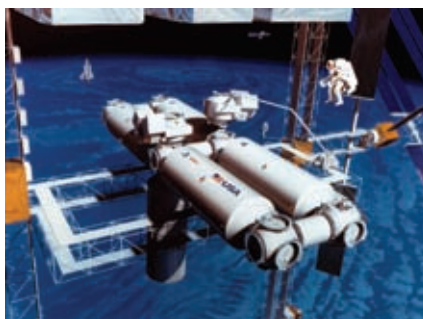
solution soon, some theories suggest that we may be on the verge of a rather serious series of accidents – one big collision in orbit could cause a chain reaction of sorts, sending debris everywhere, taking out all our satellites and knocking us back to the days of radio!

The good news is that the those responsible for most of the junk to begin with, are finally waking up to the dangers.

NASA has started the Orbital Debris Program, which can't really run a clean-up job just yet, but currently tracks the size and speed of the debris in orbit around Earth. At least if they know what's out there they can try and avoid it.

## Cleaning up

There are a lot of ideas on how we could do a cosmic cleanup, but not many are doable just yet. For instance, Jim Holloper, the man who helped designed rockets during the 1980s, has suggested that aging rockets loaded with water



The International Space Station

could be used to spray orbiting junk and knock them towards the atmosphere to burn up. Other ideas include junk-zapping lasers that would put Hollywood sfx to shame – after all, if lasers can take out missiles, they can also incinerate junk?

Some suggestions just border on crazy, like deploying large nets magnets to snag the junk. Actually, even blasting big shards of junk would only lead to smaller more dangerous particles – more dangerous because

they become almost impossible to track the smaller they get. Suggestions get weirder still – like making a gigantic vacuum cleaner! What exactly would a vacuum cleaner suck in, when space is vacuum to begin with?

The bigger pieces of junk are a little easier to solve for. Ideas include sending-up special space vehicles that can rendezvous with the largest of the junk and attach a propulsion system to send them crashing back to Earth.

The best way forward is in fact to stop polluting space to begin with. Whether governments or private organizations, we need to make it mandatory to carry back everything a mission carries into space. We don't know about you, but we'd very much like to have the option of visiting space in our lifetime made available to us. This won't happen, unless we make it a point to let the powers that be know how much we dislike the great garbage dump in the sky. **d**

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### Firefox Mobile

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We've tested some of the latest and best cellphones available today, in the price range of ₹10,000 and up. For those shopping for a feature rich, multimedia phone, there's something for everyone

For logsheets and scores for these phones, check out this month's Mindware DVD.

Michael Browne  
Vinod Yalburgi  
Abhinav Lal  
Archit Kumar  
[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

While multimedia phones and smartphones have been around for a while, this has truly been the year of the high-end smartphone, representing to the cellphone market what six core processors mean to desktops. One GHz processors, 512 MB of RAM, 1 GB of ROM, you'd be

forgiven for thinking we're referring to a desktop computer of five years past. At this point, you may wonder if you really need these specs on your cellphone. You still only use it to make calls and send text messages right? You'd be correct. But you're also missing out on a large chunk of the fun.

Cellphones these days are a lot more than portable phones. Sure, we lust after the best of them, but in a world full of marketing jargon, what does more RAM and a better graphic chip do for you? Cellphones, just like display technologies are moving towards

captivating you and doing more, better. Gaming, visually rich interfaces, Flash browsers and HD content are all pushing to cram into your pocket. Today's quad core desktop processors could well appear on a cellphone five years down the line. But this test is not all about performance monsters. It's about sleek bodies, finesse, style as well as usability, ergonomics, productivity and entertainment. It's about choosing the right cellphone for you from among viable options. And yes, there are an abundance of one GHz processors too...

# The Best

## Cellphones Your Money Can

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## Morotola sues Apple

Motorola has sued Apple for patent infringement to add to the ever growing web of law suits in the mobile industry

## Google Latitide for desktop

Google has integrated latitide into the desktops as well [www.google.com/latitide](http://www.google.com/latitide)

Cellphone

### HOW WE TESTED

This test has two components to it - features and performance. The former is equal parts a listing of specifications and a checklist of features present/absent. Each phone is evaluated on the basis of build quality, ergonomics and usability. We rate both physical keypads and on-screen keypads similarly.

On the performance front, signal quality, clarity and integrity is on top of our priority list. We divide our testing of the signal quality, which is a look at the quality of internals like the antenna and baseband, into three zones. Zone one has maximum signal strength, zone two is indoors, whereas zone three represents the worst possible case of signal attenuation one can find. For zone three, we generally use a basement, or a region with bad reception. We also test the quality and loudness of the loudspeaker, as well as the quality of the bundled earphones. The camera and video capturing components are also tested and rated, as is the video playback, for which, the display is the major factor, along with the speed of processing. Bluetooth speed is measured by transferring an 11 MB file to the phone, via an Apple MacBook. For judging photo quality, we look for colour accuracy, noise and grain, and focussing. The display is rated on the basis of its colour, contrast and blackness levels.

### CELLPHONES



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**HTC Desire**  
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**HTC Touch HD2**  
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#### SPECIFICATIONS

Display: 3.3-inches; CPU: ARM Cortex A8 1 GHz; RAM: 2 GB; ROM: 512MB; Expansion: microSD; Camera: 5 Mega-pixel; Battery: 1500mAh

Display: 3.7-inch; CPU: Qualcomm QSD8250 (1 GHz); RAM: 576 MB; ROM: 512 MB; Expansion: microSD; Camera: 5-megapixel; Battery: 1400 mAh

Display: 4.3-inch; CPU: Qualcomm QSD8250 (1 GHz); RAM: 448 MB; ROM: 512 MB; Expansion: microSD; Camera: 5-megapixel; Battery: 1230 mAh

#### TEST CENTRE RATINGS (All Scores out of 10)

**Features.....7.5**  
Great AMOLED display and camera. Lack of QWERTY keypad is a big minus

**Features.....8.0**  
Great interface, sublime display, and top notch hardware for a phone.

**Features.....7.0**  
Huge display and a pretty decent platform that Sense UI makes better.

**Performance .....7.0**  
The Wave is a decent performer with an impressive audio and display quality. Quick and responsive touch interface.

**Performance .....8.0**  
Fast CPU and great overall hardware. Poor battery life and loudspeaker distorts. Keypad performs accurately.

**Performance .....7.5**  
Snappy, but not as snappy as the HTC Desire. Good camera and surprisingly good battery life for large display.

**Build quality .....8.0**  
The Wave is solidly built with an all-metallic body and incorporates a human body curve design.

**Build quality .....7.0**  
The Desire is well built, and looks quite stunning. Plastic battery cover looks cheap - it's only minus in this test.

**Build quality .....7.5**  
Built like a tank, with a solid metal battery cover. The extra large display might not survive a drop though.

**Value for money .....7.0**  
At ₹20,000, it turns a deep hole in your pocket. Still, it makes a decent buy.

**Value for money .....7.0**  
₹28,900 isn't cheap, but the Desire is a lot of phone for what you pay.

**Value for money .....6.0**  
Price is expensive as WM 6.5 is archaic and HD2 is simply an old timer now.

#### WE SAY

7.5

The Samsung Wave has a no frills user interface. The solid build quality and design aesthetics provide good value for money. Good multimedia performance adds the icing on the cake.

7.5

Desire is one of the best Android phones. Superb display, touch interface, hardware and looks. Battery life and loudspeaker could be better. Worth it if you want something light yet powerful.

7.0

Good phone but better options available. Unless you must have a 4.3-inch display right now, wait. Touch response and display are better on Desire. We say wait for HTC's WP7-based handsets.

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### Bluetooth's be gone

NTT Docomo has introduced headset for smartphones that sits in front of your eyes

### Save your Facebook

Facebook now allows users to download a copy of their profile into a .zip file

## CELLPHONES



**Apple iPhone 3GS 32 GB**  
Price: ₹41,500



**Sony Ericsson Xperia X10 Mini Pro**  
Price: ₹16,000 (MRP)



**BEST BUY**  
**digit**  
NOVEMBER 2010

**Nokia E72**  
Price: ₹16,000 (MRP)



**BEST PERFORMER**  
**digit**  
NOVEMBER 2010

**Nokia N8**  
Price: ₹26,259

### SPECIFICATIONS

Display: 3.5-inch, 16-million, 480x320 pixels; CPU: ARM Cortex A8 (600 MHz); RAM: 256 MB; Camera: 3-megapixel (VGA video recording); Weight: 135 g; Dimensions : 115.5 x 62.1 x 12.3 mm

OS: Android 1.6; CPU: Qualcomm MSM7227 600 MHz; RAM: 128 MB; Camera : 5-megapixel; Battery: 930 mAh; Display: 2.55-inches (240 x 320 pixels); Weight: 120 g; Dimensions : 90 x 52 x 17 mm

Display: 2.4-inch, 16-million, 240x320 pixels; CPU: 600 MHz ARM 11; RAM: 128 MB; ROM: 250 MB; Expansion: microSD; Camera: 5-megapixel; Battery: 1500 mAh; Weight: 128 g; Dimensions : 114 x 58 x 10 mm

OS: Symbian ^3; CPU: ARM 11 680 MHz; RAM : 256 MB; ROM : 512 MB; Display: 3.5-inch (360x640 pixels), 16 million colours; Battery: 1200 mAh; Weight: 135 g; Dimensions : 113.5 x 59.1 x 12.9 mm

### TEST CENTRE RATINGS (All Scores out of 10)

**Features.....8.0**  
One of the best touch interfaces. The list of features is wide, as is application support.

**Features.....8.0**  
Compact with a good feature set, a QWERTY keypad that is actually quite usable.

**Features.....8.0**  
The E72 is a loaded device: good camera, great battery, great QWERTY keypad.

**Features.....8.0**  
The camera dominates proceedings with a lot of settings. Symbian^3 on a capacitive display is also good.

**Performance.....8.0**  
Audio and video playback rocks. As a phone, performance is decent, but not at par with phones from Nokia and BlackBerry. The capacitive-touch keypad is still one of the best around.

**Performance.....8.0**  
This phone is a good performer – music quality, the camera, call clarity, its zippy, and best of all, battery life is pretty decent. Overall we were quite satisfied.

**Performance.....8.0**  
Sublime battery life is pretty unmatched as is the superb music quality. Call clarity is very good, better than other most non-Nokia phones, but not the best around.

**Performance.....7.5**  
The N8 performs well as a multimedia device. It's also pretty snappy, and we liked the performance of the on-screen keypad. Call clarity was very good.

**Build quality.....8.5**  
Sturdy all-metal construction. Only the display is delicate, and you might not want to drop it.

**Build quality.....7.0**  
Pretty solidly built and we liked the slider mechanism – slick and robust. Compact factor adds to the solid feel.

**Build quality.....7.0**  
Solid steel battery cover, thick plastic used all around, the E72 is slim too and that adds rigidity. Keypad is built well.

**Build quality.....8.0**  
The casing is almost entirely aluminium and also has extremely strong Gorilla glass

**Value for money.....5.5**  
₹41,500 is a lot to pay. Decent value for around ₹30,000.

**Value for money.....7.0**  
Great value for money for QWERTY, Android 2.1 and good performer.

**Value for money.....7.0**  
If you don't want a touch-based device, then the E72 is superb value for money.

**Value for money.....7.0**  
Little expensive, but for the features we feel this phone is pretty much worth it.

### WE SAY

7.5

The iPhone 3GS is a very nice phone with a lot of things going for it and a few shortcomings – we did not like the mediocre performance while on a call, and the fact of the matter is that better displays from other vendors are emerging like the display on the Samsung Galaxy S. It is also overpriced in comparison to other smartphones in the market, and therefore cannot be recommended, especially since the iPhone 4 might be available soon in India.

7.5

The Sony Ericsson X10 mini Pro has a small but well laid out keypad. It is a compact and well rounded device, delivering good all round performance. It features an upgradeable and future proof platform. At ₹16,000 the Sony Ericsson XPERIA X10 Mini Pro is a very nice device and for its price, it overshadows even the XPERIA X10 in terms of appeal, if not sheer presence. It can be obtained at a lower price if you look deep enough.

7.5

With most people migrating to touch-based phones, it's all too easy to overlook QWERTY based workhorses such as these. Nokia knows how to make a great handset, and the E72 is probably the pick of the QWERTY-based E series devices. It offers more features than BlackBerry devices in the same league and what's more important is the affordable price point at which Nokia is offering this phone.

7.5

The new Nokia N8 is a step in the right direction. A great camera that actually offers a lot of manual control, a good, snappy interface, a very nice on-screen QWERTY keypad, and the usual Symbian goodness that makes their devices good phones. The N8 is well built too with a metal body. We'd like a higher resolution screen though, and the price tag is slightly on the higher side. Other than that, the N8 is a very feature rich phone, missing out only, on a hardware keypad.



## Super Shooter

Sony has introduced the first ever 16.41 megapixel sensor for mobile phones. The megapixel race continues

## WiMax2 for HD streaming

The new 802.11m standard for WiMax2 is capable of wireless streaming of HD content delivering speeds in excess of 100Mbps!

Cellphone

### CELLPHONES



HTC Wildfire  
Price: ₹16,590



Sony Ericsson  
Xperia X8  
Price: ₹15,990



HTC HD Mini  
Price: ₹23,490 (MOP)



Nokia N97 Mini  
Price: ₹18,000

#### SPECIFICATIONS

Display: 3.2-inch, 16-million, 240x320 pixels; CPU: Qualcomm MSM 7225 (528 MHz); RAM: 384 MB; ROM: 512 MB; Expansion: microSD; Camera: 5-megapixel; Battery: 1300 mAh; Weight: 135 g

Display: 3-inch, 16-million, 480x320 pixels; CPU: Qualcomm MSM7227 600 MHz; RAM: 168 MB; Expansion: microSD; Camera: 3.15-megapixel; Battery: 1200 mAh; Weight: 104 g; Dimensions : 99 x 54 x 15 mm

Network: 3G/2G, Windows Mobile Prof 6.5 with HTC Sense, CPU: 600 MHz; ROM: 512 MB; RAM: 384MB, Display: 320x480 HVGA with capacitive touch Screen, Camera: 5.0 MP with autofocus; Weight: 110 g

OS: Symbian Series 60 rel. 5; CPU: 434MHz; RAM: 128MB; Camera: 5MP; Screen 3.2-inches resistive touchscreen (360x640 pixels); Weight: 138 g; Battery: 1200 mAh

#### TEST CENTRE RATINGS (All Scores out of 10)

Features ..... 7.5  
Performance ..... 6.5  
Build Quality ..... 7.5  
Value for money ..... 6.5

Features ..... 6.5  
Performance ..... 6.5  
Build Quality ..... 7.0  
Value for money ..... 6.0

Features ..... 7.5  
Performance ..... 6.5  
Build Quality ..... 7.5  
Value for money ..... 5.0

Features ..... 7.5  
Performance ..... 7.0  
Build Quality ..... 6.5  
Value for money ..... 8.0

#### WE SAY

The HTC Wildfire can be looked at as a mini Desire. Display is nowhere near as crisp, and the interface is not as nice. Reason enough to stay away, as nearly everything is in what you see and touch in a touchscreen phone. Price isn't much, but there are better alternatives. **7.0**

A decent phone with a decent feature set, the XPERIA X8 has a very mediocre display, and Android also faces issues with lag, owing to slower hardware. Overall performance is good. The price tag makes it a bit more appealing, but there are better options. **6.5**

The HTC HD Mini is a pretty decent cellphone in its own right, and as a handset, a better buy than the HTC Wildfire, mainly on account of the better, higher resolution display. If you're looking for a touch screen around 25K, there are way better options available. **6.5**

Perfect for those who want to enjoy a large touchscreen and a QWERTY keyboard on the Symbian platform. It's a good media player, but lacks DivX playback. All in all, it offers good value for money at its much reduced price of approximately ₹18,000. **7.0**

### CELLPHONES



Sony Ericsson  
Xperia X10  
Price: ₹28,000



Motorola  
Milestone  
Price: ₹24,000



Samsung  
Galaxy S  
Price: ₹31,500



LG GM360i  
Price: ₹10,250

#### SPECIFICATIONS

OS: Android 1.6, CPU: Qualcomm QSD8250 Snapdragon (1GHz); RAM: 256MB; Camera: 8.1 MP; Screen 4-inch capacitive touchscreen (480x854 pixels); Weight: 135g; Battery: 1500 mAh; Dimensions : 119 x 63 x 13 mm

OS: Android 2.1, CPU: 1GHz; RAM: 512MB; Camera: 5MP; Screen 4-inch capacitive touchscreen (480x854 pixels); Weight: 165g; Battery: 1400 mAh Up to 350 h / Up to 6 h 30 m

Display: 4.0 inch 16M colors, 480x800 pixels, Super AMOLED; CPU: Qualcomm ARM Cortex A8 1 GHz processor; RAM: 512 MB RAM; ROM: 2 GB; Expansion: microSD; Camera: 5-megapixel (720p video recording); Battery: 1500 mAh; Weight: 119 grams

Display : 3-inch. 262K colors, 240 x 400 pixels resistive touch; Facebook; 3 way home screen with customizable widgets; Camera : 5 MP; Expansion : microSD; WiFi; 3.5mm headphone jack; push email; Weight : 89 grams

#### TEST CENTRE RATINGS (All Scores out of 10)

Features ..... 7.5  
Performance ..... 7.5  
Build Quality ..... 6.5  
Value for money ..... 7.0

Features ..... 8.0  
Performance ..... 8.0  
Build Quality ..... 7.5  
Value for money ..... 7.5

Features ..... 8.0  
Performance ..... 8.0  
Build Quality ..... 6.5  
Value for money ..... 7.0

Features ..... 6.0  
Performance ..... 7.0  
Build Quality ..... 6.0  
Value for money ..... 5.0

#### WE SAY

At ₹28,000, the phone lacks many features that will be missed by regular smartphone users, such as a Flash support, multi-touch, 65k colour screen etc. However, it has a capable camera and a snazzy Timescape UI. **7.0**

Milestone, at its reduced price – ₹24,000, is quite good. It's got a hardware keyboard to boot, apart from its large screen, which makes for good video output as well as a good browsing experience. **7.5**

Probably one of the most powerful and fastest Android smartphones around. Display is bright even from the sharpest angles. It has a mediocre camera, that is about the only let down. A very good phone for a price of ₹31,500. **7.0**

For a Price of ₹10,250 the LG GM360i doesn't offer much of an upgrade over their Cookie models except a 5 MP camera and Wi-Fi with push mail support. Better options are available for the same or lesser price in the market. **6.0**

# digit

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### Sony's Google TV remote

Sony has revealed details of its upcoming Google TV remote

### In-flight calling?

Singapore airlines is going to introduce in-flight calling and WiFi access in 2011

## BEST BUY digIT NOVEMBER 2010 CELLPHONES

**Samsung I5800 Galaxy 3**  
Price: ₹12,300



**Blackberry Pearl 3G 9105**  
Price: ₹19,900



**Fly Ivory**  
Price: ₹15,499



**LG Optimus GT540**  
Price: ₹12,900



#### SPECIFICATIONS

Display: 3.2-inches, 16 million colours, 240 x 400 pixels; CPU: ARM 11 667 MHz; RAM: 256 MB; ROM: 512MB; Expansion: microSD; Camera: 3.15 megapixel; Battery: 1500mAh; Weight: 109 g

Display: 2.25-inches, 256K colours, 360 x 400 pixels; CPU: 624MHz; RAM: 256MB; Expansion: microSD; Camera: 3.15 megapixel; Battery: 1150mAh; Weight: 93.6 g

Display: 3.2-inches, 262K colours, 240 x 400 pixels; CPU: ARM920T; ROM: 512MB; Expansion: microSD; Camera: 2.0 megapixel; Battery: 1200 mAh; Weight: 125 g

3.0-inches, 256K colours, 320 x 480; CPU: 600 MHz; RAM: 156 MB; Expansion: microSD; Camera: 3.15 megapixel; Battery: 1500 mAh; Weight: 115.5 g

#### TEST CENTRE RATINGS (All Scores out of 10)

Features ..... 7.0  
Performance ..... 7.0  
Build Quality ..... 7.0  
Value for money ..... 8.0

Features ..... 6.0  
Performance ..... 7.0  
Build Quality ..... 7.5  
Value for money ..... 6.0

Features ..... 5.5  
Performance ..... 6.5  
Build Quality ..... 6.0  
Value for money ..... 6.0

Features ..... 7.0  
Performance ..... 6.5  
Build Quality ..... 8.0  
Value for money ..... 7.5

#### WE SAY

7.0

Impressive features like remote file-sharing and media playback, real-time news and stock updates, MS-Office compatible bundled office suite and hassle-free access to online storage account through thinkfree.com. At ₹12,300, it's great buy if you can overlook its low-battery life and ordinary loudspeaker quality. Running Android v2.1, it truly incorporates a powerful user interface, well complemented by the ARM processor.

6.5

At ₹19,900, The Blackberry Pearl 3G 9105 is quite expensive. Although, the touch-sensitive optical track-pad is a saving grace for the phone, it does not compare well with the Samsung Galaxy 3 and LG Optimus GT540. It was a decent performer across all the tests and were not able to find any chinks in its armour. Though the phone is very well thought out, the price leaves a lot to be desired. Look at Nokia before you buy this phone.

6.0

The Fly Ivory lacks many features and is an average performer. Slightly overpriced at ₹13,999, it lacks the subtle user-friendliness of an Android OS or Bada OS. Build quality is cheap as well. Touchscreen is not that responsive even with the stylus. There is nothing much to offer in terms of quality applications except for the data encryption tool. Overall, the Fly Ivory leaves a lot to be desired to earn some respect in this price category.

7.0

The LG Optimus GT540 incorporates a neat and well-organized menu interface, that is aptly complemented by the feature-rich Android operating system and a very responsive touch-screen UI. It is a decent performer with an impressive video playback quality being the super-highlight of the product. The GPS based navigation guide and the popular Google Maps add value for money. Overall, it makes a good buy at ₹12,990.

### Buying guide - Cellphones

You want	We Suggest	Price range
A large capacitive touch screen with a full QWERTY hardware keypad	Motorola Droid (Milestone), also look out for the upcoming HTC Desire Z	₹25,000 (Motorola Droid) - ₹31,000 (Desire Z)
The biggest display you can get	HTC Touch HD2, Samsung Galaxy S, Sony Ericsson XPERIA X10	₹28,000 - ₹31,000
Full QWERTY keypad, but on a compact device	Sony Ericsson XPERIA X10 Mini Pro	₹16,000
Best display around, I want to use this for movies	HTC Desire	₹28,900
No touch screen for me, I want a good QWERTY though	Nokia E72	₹16,000
Sleek smartphone around ₹20,000	Samsung Wave S8500	₹20,000
The best camera phone around	Nokia N8	₹26,259
The most fluid touch display, and the best on screen keypad	Apple iPhone 3GS	₹32,000 - ₹41,500 (8 GB, 16 GB, 32 GB are options)

## New Acer G monitors

Acer launches G-Series displays with 3D content support



## Arab's Streak

Dell launches Streak in UAE for AED 2299. Coming soon to India

Bazaar

# Apple 21.5 inch iMac

## Faster iMac for your desk



Unlike the previous generation of iMacs, this generation does not have any in-built graphics solutions. NVIDIA GeForce 330M is replaced by ATI Radeon HD 4670 discrete graphics solution. Discrete graphic solution means HD 4670 has its own video RAM memory of 256 MB

board and Magic Mouse as the same from the previous generation. On the right hand side you have the slot loading SuperDrive and an SD card slot just beneath it. The SD card slot can also support the newer SDXC card format. As we mentioned during the iMac 27-inch review, the absence of a Blu-ray drive on such a product is baffling. Specially so because the monitor's resolution is perfect for Blu-ray content.

Applications have surprising omissions like Aperture and iWork which are both present in the previous generation iMac that we had tested in May.

Synthetic tests like Geekbench gave a score of 5,735 (which is higher than the 4,750 observed in Core i5 MacBook Pro as well as 4214 which was obtained in the 27 inch iMac Core 2 Duo test). Xbench aced as well with a score of 223.06 as opposed to 158.2 of the MacBook Pro and 176 of the 27 inch iMac. Real life tests like data transfer also gave impressive rates of around 48 MB/s. Encoding around six MP3 files (approx size 54 MB) to AAC format in iTunes 10 took around 56 seconds. We noticed that the iMac gets considerably hot on the bottom left hand corner on the rear side after prolonged usage.

As is the case with all Apple products, the pricing is premium. The iMac costs ₹74,900. Ideal product for working professionals or a first time iMac buyer. Multimedia experience on the iMac is stunning.

**A**fter testing the new Core i series MacBook Pro last month, we got the latest iMac which sports an Intel Core i3 processor at a good 3.06 GHz. Looks wise, as is the case with the iMac and MacBook Pro lineup, there are hardly any noticeable changes. All the changes are present under the hood. Let's start by taking a look at the new features.

The 21.5 inch Core i3 model supports Hyperthreading which is expected from Core i series of Intel processors. This feature allows the two cores in the processor to run four threads (or tasks) simultaneously, thus speeding up processor intensive tasks like video editing, rendering in 3D modeling etc. It does not support Turbo Boost technology which is present in the higher end Core i5 series iMacs.

which is sufficient for graphics intensive work or gaming.

The 21.5 inch iMac still contains the same 4 GB of DDR3 RAM running at a higher 1333 MHz, up from 1066 MHz of the previous generation. Memory can be upgraded to up to 16 GB. As far as the aesthetics go, Apple has not implemented any changes as far as the overall design goes. The unibody aluminum body with sharp edges is still there. Screen looks as beautiful as always thanks to the backlit LED with an IPS panel, having a resolution of 1920 x 1080 with a 16:9 aspect ratio. Viewing angles like its predecessor are quite good. Due to the glass cover, the screen tends to be reflective and watching movies with lights around you can kill the experience.

The Bluetooth wireless key-

## Specifications

Processor : Intel Core i3 3.06 GHz; Screen size : 21.5 inch Backlit LED; RAM : 4GB GPU: ATI Radeon HD 4670

## Contact

**Apple India**

**Phone:** 1800-425-0744

**Email:** [indiasales@mac.com](mailto:indiasales@mac.com)

**Web site:** [www.apple.com/in/imac/](http://www.apple.com/in/imac/)

**Price:** ₹74,900

7.0  
/10

Features.....	7.0
Performance.....	7.0
Build.....	8.5
Value for money.....	6.0

**Ultra Sony!**

Sony introduces world's first 16.4 MP Camera in a cell phone, the Cyber-shot S006



**Android for ASUS**

Garmin-Asus puts Android 2.1 in Indian market for ₹18,990

# Creative Zen X-Fi Style

A good alternative to the iPod Nano

**Z**en X-Fi Style is a non touchscreen PMP having similar aesthetics to Zen MX or the Zen Style 300. We received the compact 8 GB model which has a glossy black and grey chequered top portion contrasted by a solid white plastic rear finish. The X-Fi Style also has nine operational buttons.

The home screen has menus stacked on top of each other. As you go up and down on the nav pad, the menu expands along with an icon on the right hand side. Very self explanatory and easy to navigate.

Similar to the Zen X-Fi 2, the X-Fi Style also has an RSS reader,

although you need to connect to a system connected to the internet and manually add feeds in the RSS Synchroniser.

Pink Floyd's Time was quite good during the instrumental intro - specially the high pitched sounds of the alarms ringing - but the separation was not that impressive when the vocal portions come along. Also at higher volumes one can hear mild distortion. Highs in Therion's O Fortuna were not at all good. There was definite clipping of higher frequencies.



The player is very responsive in the mid-frequency range. Bass is quite poor in most tracks. It is priced decently at ₹6,999. But invest in a decent pair of ear-phones as the bundled in ear-phones aren't good.

**Specifications**

Screen size : 2.4-inch 262k  
Color TFT LCD; Audio  
Formats: MP3, WMA  
(DRM9), WAV, Audible4,  
AAC, FLAC; Capacity : 8GB

**Contact**

**Vinayendra Singh**  
**Phone:** +91-92231 01322  
**Email:** india\_getcreativek@  
ctl.creative.com  
**Web site:** http://in.creative.  
com  
**Price:** ₹6,999



Features.....	6.5
Performance.....	7.0
Build.....	6.5
Value for money.....	6.0

**Specifications**

Capacity : 16 GB; Audio formats : MP3, WMA, AAC-LC, Linear PCM; Video formats : AVC, WMV9, AAC-LC, MP4

**Contact**

**Sony India**

**Phone:** 1800-103-7799

**Email:** sonyindia.care@  
ap.sony.com

**Web site:** www.sony.co.in

**Price:** ₹11,990



Features.....	6.5
Performance.....	7.0
Build Quality.....	7.5
Value for money.....	6.5

# Sony Walkman NWZ-A845

Sony's reply to the iPod nano

**W**ith the A-series NWZ A845, Sony has come out with its answer to the iPod 5G sans the camera. Coming in a sleek form factor, the A845 has a 2.8 inch OLED screen, metallic buttons which have a round dial type design and Sony EX noise cancelling earphones. It has a sturdy plastic rear side and can hold 16 GB content. The volume rocker and hold button are present along the right hand edge. The home page comprises nine menus including music, video, photos, noise cancellation among others. Media can be transferred by connecting the bundled USB cable. The option button opens up contextual options. You have a



lot of options to play around with like VPT surround sound, equaliser settings, sound enhancement among others.

Sound quality is quite good thanks in part to the noise cancelling Sony EX earphones. It was able to produce great sound across the entire spectrum. Bass was quite noticeable in Massive

Attack's Angel. Sound separation in Floyd's Money and Time was brilliant.

The video quality is the strong point of this PMP. It is far superior to anything we have seen on a 2.8 inch compact so far. The contrast is stunning. It throws up error messages if a format is not playable on the PMP. Sadly it does not support a wide range of formats. You will have to import playlists either from Windows Media player or iTunes, but you cannot create playlists on the go, which is strange. Screen display goes for a toss in sunlit conditions.

At ₹11,990 this player is quite decently priced for the features and performance it offers. It does have with some minor flaws such as adding songs to playlist on the move, limited format support.

## Fujitsu 3D for cars

Fujitsu new MB86R11 graphics controller gives car systems 3D 360 degree video support



## Vertu's Quest

Vertu adds one more to its Constellation series of phones, The Constellation Quest incorporating a QWERTY keyboard

**Bazaar**

# Seagate FreeAgent GoFlex TV

## It flexes your media player beyond HD playback

Seagate's FreeAgent GoFlex TV HD media player is more than just a plain old media player. It comes in a compact black plastic box having a matte finish throughout. The front panel opens to reveal a compartment wherein you can insert a Seagate GoFlex portable hard drive.

The user interface does leave you impressed. It has a three nice rows of menus which makes navigation a breeze. The top most segment comprises the regular Movies, Music, Pictures, Internet and Browse menus arranged horizontally with each menu represented by an icon. Internet widgets section comprising YouTube, Flickr, Video Feeds, MediaFly, vTuner etc. The third and final segment comprises

all the various connectors to the GoFlex TV with connected devices highlighted.

non - QWERTY keyboard on the screen is a big pain to type on using the remote.



It took around 24 seconds to get to the main home page after we switched on the GoFlex TV. The video quality was brilliant. There was no skipping. Only when it comes to the Internet videos, the speed can really enhance or completely ruin your video viewing experience. Using the virtual

We feel that ₹6,900 is a brilliant price point for its features and performance. It is ideal for movie enthusiasts who have a drive full of movies across file formats, and intend on watching it on big screens. Also the internet streaming options will leave net junkies happy.

## Specifications

Internet Sites Supported : Video Feeds; Text Feeds; Weather; Finance; YouTube; Picasa; Video Formats : MP4, MP2, Xvid HD, AVC HD, RMVB, WMV9, H.264, MKV, MOV, AVI

## Contact

**Fortune Marketing**

**Phone:** +91-11-2641 4468

**Email:** sales@fortune-it.com

**Web site:** www.seagate.com

**Price:** ₹6,900



Features.....	7.0
Performance.....	6.5
Build Quality.....	6.5
Value for Money.....	7.0

## Specifications

Socket: AM3  
Chipset: AMD 890FX  
Memory type: DDR3  
PCIe x16/PCI: 5/1  
SATA/e-SATA: 8/2  
Bundled features: Bluetooth v2.0/v2.1 + EDR, ROG Connect, Probelt kit, Crossfire cable.

## Contact

**Vinay Shetty**

**Phone:** +91-22-6766 8800

/1-800-2090365

**Email:** reachus@asus.com

**Web site:** www.asus.in

**Price:** ₹18,600



Features.....	7.5
Performance.....	7.5
Build Quality.....	7.5
Value for money.....	6.0

# ASUS Crosshair IV Extreme

## Mix-n-Match all the way!

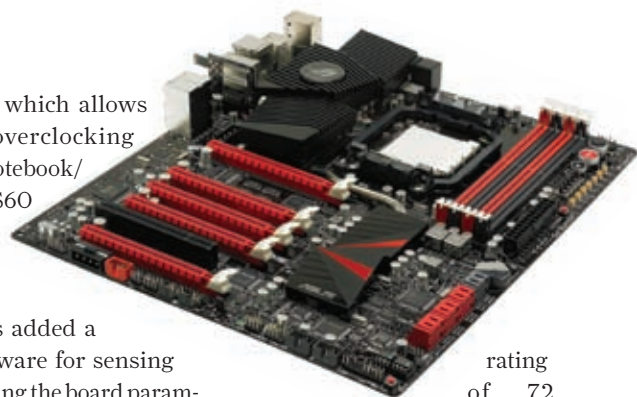
Gaming will never be the same with ASUS's Crosshair IV Extreme. It's a top of the line AMD motherboard with an AMD 890FX chipset. One of the key highlighted features of this board is its ability to use multi-GPUs from any vendor using Lucid's Hydralogix chip which is embedded on the board. This is one of the newer enthusiast boards for AMD processors.

The board has an extended-ATX form factor and is neatly laid out with each part uniquely colour coded. Features is what this board is all about. The rear of the board has a ROG Connect

USB port which allows remote overclocking using a notebook/Symbian S60 phone/iPhone/Android.

ASUS has added a lot of software for sensing and tweaking the board parameters.

We tested this motherboard using an AMD Phenom II X6 1090T, Corsair 4 GB DDR3 RAM and ZOTAC's GeForce GTX 285 as primary GPU. Crysis gave out 101 fps for resolution of 1280x1024 with high details whereas S.T.A.L.K.E.R Clear Sky gave average day



rating of 72 fps at 1280x1024 with low details.

We overclocked our Phenom X6 1090T to a stable 3.89 GHz using this board and it passed all our stress tests.

We would like to recommend this board only to aspiring programmers with deep pockets and a lot of free time.

## Apple to go CDMA, the Indian way!

Reliance And Tata hold talks with to launch first Apple iPhone CDMA phone in India



## Million Dollar iPhone

UK based designer makes a 5 million pound iPhone studded with 7.4 carat pink diamond called as Diamond Rose Edition

# Corsair Graphite CC600T

## Cool Steel(Steal)!

**M**aking its mark on the computer peripherals industry, Corsair had released a new series of PC cabinets. The CC600T is a part of Graphite series of cabinets.

It is an ATX/mATX Mid-Tower cabinet with stainless steel built and ABS plastic parts. It has rubber feet and side skirts. The side panels are of stainless steel and easily removable with the help of latch mechanisms. There are two 200mm cooling fans at top and front of the cabinet. These fans are covered with a honeycomb mesh and easily removable. The side panel is lockable with a key provided. There is one 150 mm fan at the back. The entire cabinet has



rounded edges to prevent any accidental injuries.

We installed an Intel X58 motherboard without any tools whatsoever. All the screws require only your thumb to operate. The cabinet has been

designed for better cable management. This reduces clutter in the cabinet and increases cooling efficiency. There is a provision for water-piped cooling with the help of holes pre-drilled into the cabinet's partition. We did find some discrepancies in the cabinet.

The front power and reset buttons are not well placed and are of poor quality.

We recommend this cabinet for those who wish to spend time overclocking their CPU over a long period of time.

### Specifications

Dimensions : 591.8 x 264.1 x 508 mm  
5.25-inch/3.5-inch bays : 4/6  
Front Ports : USB 3.0, firewire, 2-channel audio knob for fan speed control.

### Contact

**Corsair Memory**  
**Phone:** 1-800-4255464  
**Email:** salesindia@corsair.com  
**Web site:** www.corsair.com  
**Price:** ₹10,900



Features.....	7.0
Performance.....	7.0
Build Quality.....	7.0
Value for money.....	6.0

### Specifications

Gigabyte GA-X58A-UD5 motherboard, Intel core i7 950 @ 3.07GHz, 6GB DDR3 RAM, OCZ Vertex 2 SSD, NZXT Sentry LX fan monitor, Tuniq tower 120 extreme CPU cooler, Cosair HX850W PSU, LG BD-RW, Windows 7 Ultimate 32 bit.

### Contact

**Jude de Souza**  
**Phone:** +91-22-67402000  
**Email:** jude@bragpc.com  
**Web site:** www.bragpc.com  
**Price:** ₹1,45,000



Features.....	8.0
Performance.....	8.0
Build Quality.....	8.0
Value for money.....	5.0

# Brag DB10

## Brand new entrant flexes its muscle

**A** brand new entrant into the Indian custom PC building market, Brag seems to have hit the nail on the head with their flagship gaming rig, the Brag DB10. The DB10 is totally customisable according to the user's requirements and budget. BRAG is an initiative of Prime ABGB and their knowledge and experience in component selection is very apparent looking at the build.

With a Windows experience index of 7.5 and housed in a Silverstone Raven chassis, one can't help but be overwhelmed by the sheer size of the uber cool beast. Uncovering the top panel

revealed two NVIDIA GeForce GTX 460 cards in running in SLI among many other eye catching connectivity options.

The desktop itself ran very silently even with the side panel open and heat dissipation is very well managed by the chassis. Bundling of the wires was also very well executed with no clutter whatsoever visible in plain sight. One noteworthy feature is the inclusion of an SSD in addition to a HDD for storage which gave the system performance boost where most others fall short.

The bundled Microsoft Reclusa keyboard and Razer DeathAdder mouse accentuated



the overall feel of the rig. All in all, this is a step forward for the professional gaming world in the Indian custom PC market and we hope to see these killer rigs pick up momentum in the near future. If you're looking for high-end gaming rigs, Alienware isn't your only option anymore.



## Micro Mode

Micromax and modu tie-up to present the world's lightest 3.5G touch phone in India



## Nokia C6 to hit India

Nokia to showcase new C6 phone in India by December 2010

Bazaar

# SMC Ez StylePad

### Resistance is futile!

They say the seven inch media tablet is the fast emerging sweet spot lying snugly between smartphone upgrades like the five inch Dell Streak and huge 10 inch iPad. The EZ StylePad is the newest entrant into this burgeoning market and SMC has chosen to launch starting with the Indian market.

It is built around a 720 MHz Cortex's ARM 11 processor which may not have the 1 GHz magic number, but is still a decent performer. It plays 720p video flawlessly with a wide range of file/codec support – a perfect media player than a browsing device. Whatever lag we noticed can be attributed to the resistive touch screen. Yup, that right it's a resistive screen.



So while Android 2.1 (with Marketplace) runs smoothly you will soon be resorting to using your fingernails and scrolling will still be a pain.

The back panel is glossy black and encloses two speakers – which incidentally are surprisingly loud. The right edge sports two rather interesting ports - USB 2.0 and HDMI 1.3C. The USB port can read FAT 32

flash drives and the Mini-HDMI port can stream 1080p content to an HD TV that is equivalent to any standalone HD media player. It clocked a battery life of 2.5 hours while playing video on the device.

**Editor's Comment :** The tablet is well laid out and is feature-packed. But I would rather spend \$100 more and buy the capacitive version.

### Specifications

- OS : Android 2.1
- Processor : Cortex's ARM 11
- RAM : 256MB
- Memory: 32GB (SD card slot)
- Connectivity : Wi-Fi 802.11b/g
- Video out : mini-HDMI 1.3

### Contact

- SMC Networks India**
- Phone :** +91-22-6741 9133
- Email:** sales@smc-india.com
- Web site:** www.smc-asia.com
- Price:** ₹15,990

6.5/10

Features.....	7.5
Performance.....	6.5
Build Quality.....	6.0
Value for money.....	6.0

### Specifications

- OS: OS X 10.6 (Snow Leopard)
- CPU: Core 2 Duo P8800
- RAM: 4 GB DDR3
- GPU: NVIDIA GeForce 320M
- HDD: 320 GB 5400 rpm
- Resolution: 1280x800 pixels

### Contact

Apple India

- Phone:** +91-80-41409000
- Email:** indiasales@mac.com
- Web site:** www.apple.com/in/buy/shop/
- Price:** ₹89,900

7.0/10

Features.....	7.0
Performance.....	6.5
Build Quality.....	8.5
Value for money.....	6.0

# Apple MacBook Pro 13 inch

### Almost the same...

Apple has provided their line of MacBook Pros some much needed boost in juice with the introduction of Core i5 and i7 processors. While the exterior looks exactly the same (sorry to disappoint!), it's a step in the right direction giving the Core 2 Duos the boot.

Sadly for us though, the model we received was a Core 2 Duo version, reiterating the "nothing is new" tag. The CPU was a Core 2 Duo P8800 running at 2.66 GHz. Sheesh!

Another gripe we had is with the display quality. It



of the same generation. The GeForce 320M doesn't seem to be a solution for a casual gamer. Our tests show it to be no faster than the 9400M solution found on earlier models. At an MRP of ₹89,900, the

latest Mac Book Pro 13 inch is not for everybody. But its a rugged, highly functional piece of equipment. Not exactly value for money, but one would need to think very hard to find an Apple product that is. Just try to skip the Core 2 Duo version if your budget permits it.

seems there is a drop in quality when compared to the 15-inch MacBook Pro that has a marked better display – not only is the contrast slightly better, colours unfortunately owing to the outdated processor, this Mac Book could not keep up with the same 15-inch Mac Book Pro

**Moto-droid galore**

Motorola has just announced seven new recruits to the ever growing Android army!



**HP's upcoming phones**

HP plans on launching their WebOS based phones in 2011. HP acquired Palm and return WebOS not too long ago.

**LCD**

**HTPC**

**CABINET**



**BenQ GL2030**

Price: ₹8,199



**BenQ V2410**

Price: ₹15,499



**Brag FJ8**

Price: ₹87,000



**Zebronic Strider**

Price: ₹1,999

**SPECIFICATIONS**

Screen size ..... 20-inch LED  
Resolution ..... 1600 x 900  
Response time ..... 5 ms  
Connectors ..... 1 x VGA

Screen size ..... 24-inch  
Resolution ..... 1920 x 1080  
Response time ..... 5 ms  
Connectors ..... 1 x VGA, 1 x HDMI

Processor ...AMD Phenom X6 1090T  
RAM ..... 4 GB DDR3, 1200 MHz  
HDD ....1 x 40 GB SSD + 1 x 1 TB HDD  
Optical Drive..... Blu-ray ROM

Dimensions ..... 180 x 400 x 410 mm  
Form factor ..... ATX/Micro ATX  
ODD bays ..... 3 x 5.25-inch  
HDD bays ..... 5 x 3.5-inch

**TEST CENTRE RATINGS (All Scores out of 10)**

**Features.....5.5**  
GL2030 has a humble 1600 x 900 resolution. Glossy black bezel is lovely. Lacks connectivity options.

**Features.....6.0**  
24-inch LED backlit monitor. It has the HDMI and VGA connectors on the rear side.

**Features.....6.5**  
This Brag HTPC is a fully functional Home Theater PC that gives you all connectivity options.

**Features.....6.0**  
Not very feature rich. Provision for fan at the rear. Fan on the side panel with speed control.

**Performance.....6.5**  
Spyder 3 Elite gave good contrast ratio. Impressive colour accuracy. Watching movies was a good experience.

**Performance.....5.5**  
Spyder 3 Elite gave a poor contrast ratio. Display Mate tests showed backlight bleeding. Movie viewing could be better.

**Performance.....7.0**  
Excellent performer with a great graphics solution and a 40 GB SSD thrown into the mix.

**Performance.....5.5**  
Reset button is difficult to press. Smoothened edges for places your hands might reach.

**Build quality.....6.5**  
Bulky rear. Round glossy black base allows the monitor to swivel vertically.

**Build quality.....6.5**  
Strong black matte finished bezel. Sturdy rectangular stand.

**Build quality.....5.5**  
The plastic exterior does not give it the most polished look for your living room.

**Build quality.....6.0**  
Quality of metal and fan is not very good. The overall build quality is strictly mediocre.

**Value for money.....6.0**  
The LED monitor comes at a decent price tag of ₹8,199.

**Value for money.....5.5**  
At ₹15,499, this monitor is a tad expensive for its performance.

**Value for money.....5.0**  
Highly overpriced in its category. Display not included in price.

**Value for money.....6.5**  
It is priced quite economically at ₹1,999.

**WE SAY**

**6.0**

The monitor has good contrast ratio, but the 1600x900 resolution may disappoint those looking for a full HD monitor. Gaming on the monitor was not as great as the movies experience. There are very few video settings thanks to the 1600x900 pixel resolution. It also lacks some essential connectivity options such as the DVI connection.

**6.0**

The V2410 is a sturdy monitor full HD monitor which should have been priced more competitively. Gaming experience was quite pleasant but not very good while watching movies due to the poor contrast ratio and bleeding backlight. Even the cheaper GL2030 was visibly better. The pricing is not justified by the performance of the display.

**6.0**

Though the Brag FJ8 is a solid performer though such high performance is not a necessity on a Home Theater PC. Connectivity options are aplenty and games (at medium resolutions) can be played on this high performance rig, but its price leaves a lot to be desired. Its plastic exterior also will not go too well in the living room. Although the Brag FJ8 is high on hardware, but very high on price as well. Cheaper HTPCs can be built if playing HD videos is all you need. However, if you want a compact gaming rig for your living room, this might be it.

**6.0**

The Zebronic Strider is definitely not a gamer's delight as claimed by the manufacturer. It is somewhat attractive, which makes it a rare specimen in the entry-level cabinet category. Another unique feature is the removable side panel with the built-in fan. The build quality is not really good but better than many basic chassis. Priced at ₹1,999, it is a fair deal for those who are looking to build a cheap gaming PC on a low budget. You can easily find tons of options in the price bracket

**ALSO SEE:**  
1) **BenQ G920WL**  
*Digit March 2010*  
2) **ASUS VH202D**  
*Digit March 2010*

**ALSO SEE:**  
1) **ASUS VH242H**  
*Digit March 2010*  
2) **BenQ G2420HD**  
*Digit March 2010*

## Cisco's home solution

Cisco has announced Umi - the consumer level HD conferencing system



## Fastest ever

It's official, the iPad is the fastest selling gadget of all time, even surpassing the DVD player!

**Bazaar mini**

### MOUSE

### TRACKPAD



#### Roccat Kone +

Price: ₹7,500



#### Roccat Pyra

Price: ₹4,750



#### Cooler Master Storm Inferno

Price: ₹5,900



#### Apple Magic Trackpad

Price: ₹4,000

#### SPECIFICATIONS

Sensor resolution..... 6000 dpi  
Polling rate..... 1000 Hz  
Buttons..... 8  
Sensor type..... Laser

Sensor resolution..... 1600 dpi  
Polling rate..... 1000 Hz  
Buttons..... 5  
Sensor type..... Optical

Sensor resolution..... 4000 dpi  
Polling rate..... 1000 Hz  
Buttons..... 11  
Sensor Type..... Twin Laser

Power source..... 2 AA batteries  
Multi-touch gestures..... Y  
Bluetooth..... Y  
OS..... Mac OS X, 10.6.4 and later

#### TEST CENTRE RATINGS (All Scores out of 10)

**Features..... 7.5**  
Highly customisable when it comes to performance, looks and functionality.

**Performance..... 7.5**  
Excellent performance across FPS games, very easy to tweak sensitivity and acceleration settings to your liking.

**Build quality..... 7.0**  
Good overall build quality. Scroll wheel and buttons around it could have been a little sturdier.

**Value for money..... 4.0**  
Definitely one of the more expensive gaming mice at ₹7,500.

**Features..... 6.5**  
Has five buttons which can be programmed easily. Provision for macro programming.

**Performance..... 7.0**  
Good quality receiver. Grip provided on sides. The scroll button is very hard to press.

**Build quality..... 6.0**  
Very nice design. The quality of plastic used and button quality are both good.

**Value for money..... 5.5**  
Priced at ₹4,750 it is expensive. Meant for gamers on the go.

**Features..... 7.5**  
Has inbuilt memory which memorizes settings (software not required).

**Performance..... 7.0**  
Good overall performance. Performs well on all surfaces. 9 out of 11 keys are programmable.

**Build quality..... 6.5**  
It's a palm-fit, right-handed, large mouse. Form factor similar to Roccat's Pyra.

**Value for money..... 7.0**  
The price of ₹5,900 is justified for pro-gaming use only.

**Features..... 6.0**  
Works on Bluetooth technology. It accepts all the multi-touch gestures.

**Performance..... 6.5**  
Requires hard click due to buttons at the base. Multi-touch gestures work flawlessly.

**Build quality..... 7.0**  
Sturdy, minimalist design. Cylindrical battery section houses two AA sized batteries.

**Value for money..... 5.0**  
At ₹4,000, it's expensive. Saves desk space.

#### WE SAY

6.5

It's a very capable gaming mouse, but comfort levels for larger mice such as this one are left to personal comfort and also, the size of your palm. Price should have been a little less, and it would be easier to recommend it for any serious gamer. As of now, there are much cheaper options that will give you the same performance and response times as this mouse.

**ALSO SEE:**  
1) Razer DeathAdder  
Digit July 2010

6.5

Design wise the mouse has a lot going for it despite some of its flaws. The compact mouse is somewhat difficult to get used to. It has the similar macro functionality that you find with full fledged gaming mice such as the Kone [+]. At a price of ₹4,750, this is ideal for enthusiasts gaming regularly on their high-end gaming laptops. Those who aren't, keep safe distance.

**ALSO SEE:**  
1) Razer DeathAdder  
Digit July 2010

7.0

Nine out of the eleven buttons are customisable. We recommend this mouse only for those who are into pro-gaming. You can buy this mouse at a street price of ₹3,350. Mouse is not ambidextrous. It's a little more expensive than some of the older mice such as the DeathAdder and the Diamondback.

**ALSO SEE:**  
1) Roccat Pyra  
Digit November 2010  
2) Razer Imperator  
Digit July 2010  
3) Roccat Kova  
Digit July 2010

6.0

It definitely takes time getting used to, as you no longer have anything to hold on to as you would with a mouse. Definitely not meant for gamers. It is well suited for office tasks and casual users will enjoy the experience of working with it. Don't replace your mouse with the Magic Trackpad just yet. The pricing is way off the charts even for an Apple product. We would recommend you wait till the prices drop or a better alternative comes along. Good solution if you always wanted multitouch functionality on your Mac desktops.



**Indian Torch**

India welcomes the launch of RIM's BlackBerry Torch with new BlackBerry OS 6.

**AMD's Llano**

AMD shows off next-gen 'Llano' APU which offers integrated computation and graphics capabilities onto the same piece of silicon

**GRAPHICS CARD**

**LAPTOP**



**Galaxy GeForce GTX 460 GC Version**

Price: ₹14,000



**MSI NGTX465 Twin Frozer II Golden edition**

Price: ₹14,600



**Palit GeForce GTX460 Sonic**

Price: ₹14,500



**Acer Aspire One 532h**

Price: ₹19,499

**SPECIFICATIONS**

GPU.....NVIDIA GeForce GTX 460  
Core clock.....700 MHz  
Memory size/type .....768 MB/GDDR5  
Outputs .....2 x DVI , Mini HDMI

GPU.....NVIDIA GeForce GTX 465  
Core Clock .....607 MHz  
Memory size/type ...1024 MB/GDDR5  
Outputs.....2 x DVI, mini HDMI

GPU.....NVIDIA GeForce GTX 460  
Core Clok.....700 MHz  
Memory size/type .....1024 MB/GDDR5  
Outputs ..... 2 x DVI ,HDMI

Processor.....Intel Atom 1.66 GHz  
Hard drive .....160 GB  
Display size.....10.1 inch  
Weight.....1.26 kg

**TEST CENTRE RATINGS (All Scores out of 10)**

**Features.....7.0**  
Latest GF104 "Fermi" chip, SLI support, detachable fan makes it simpler to clean the heatsink.

**Features.....7.0**  
Full copper body, two fans, all solid state capacitors, supports 3D Vision Surround technology.

**Features.....6.5**  
Overclocked by 25MHz. DirectX 11 compatible. NVIDIA 3D vision ready.

**Features.....7.0**  
3G USB modem supported. Backlit keyboard. Ships with a carry bag.

**Performance.....7.0**  
Performs at par with GTX 465 on many benchmarks, factory overclocked means no effort to get extra performance.

**Performance.....7.0**  
Frame rates are at par with other GTX465 cards. Operates 20 per cent cooler than other GTX465 cards we have tested.

**Performance.....7.0**  
3D mark gives an overall score of 15611. No noticeable increase in performance after overclocking.

**Performance.....6.0**  
Poor battery life. Under average performer on benchmarks. Poor inbuilt webcam.

**Build quality.....6.0**  
Simple plastic exterior, sturdy build, will fit in most chassis without any trouble.

**Build quality.....7.0**  
The full copper body makes the card very sturdy and also very heavy at the same time.

**Build quality.....5.5**  
Quality of plastic body is cheap. Quality of fan is also mediocre. Smaller in size than other cards.

**Build quality.....8.0**  
Sleek stylish design. Ultra portable, lightweight and solid build quality.

**Value for money.....7.0**  
Great value for its price when compared to similar cards.

**Value for money.....7.0**  
At ₹14,600 we feel it is a very decently priced product.

**Value for money.....7.0**  
Decent price point. Performance could have been better.

**Value for money.....7.5**  
Highly economical at ₹19,499. Gives a good bang for your buck!

**WE SAY**

**7.0**

Considering it is the 768 MB variant and performs very well across the board, it is an excellent option to consider when either upgrading from an older card or if assembling a brand new gaming rig. The detachable fan is an added bonus when cleaning the card but care must be taken not to run the card with the fan detached. Overall, a good value for money card with some unique features.

**ALSO SEE:**  
1) **MSI N465GTX**  
Digit November 2010

**7.0**

The MSI NGTX465 Twin Frozer II Golden Edition does not pack any extra features. It is not even overclocked. If you have not invested too much on cooling system for your PC and not using it in an AC room Twin Frozer is a product made especially for you. Also an overclocking enthusiast might be interested in this card.

**ALSO SEE:**  
1) **ASUS ENGTX 465**  
Digit September 2010  
2) **Sparkle GTX465**  
Digit September 2010  
3) **ZOTAC Geforce GTX465**  
Digit September 2010

**6.5**

Performance of this card is similar to other GTX460 cards. One of the cheaper cards around. At the same time, we would have liked better build quality. Also, Zotac's GeForce GTX460 AMP edition performs better than Palit GeForce GTX460 Sonic so you can easily skip this one.

**ALSO SEE:**  
1) **Zotac GeForce GTX 460 AMP!**  
Digit September 2010  
2) **Zotac GeForce GTX 460**  
Digit August 2010  
3) **ASUS ENGTX 460**  
Digit August 2010

**7.0**

The Acer Aspire One 532h is an ultra-portable netbook that typically suits the needs of a frequent traveller. It has a sleek and compact design. The optional 3G connectivity adds additional functionality by letting you get online wherever you are. Better battery life would have made it a much more compelling buy.

**ALSO SEE:**  
1) **ASUS Eee PC 1201HA**  
Digit February 2010  
2) **Olive Zipbook x107h**  
Digit February 2010

## Samsung's hotcakes

Samsung claims they have sold more than 5 million Galaxy S smartphones since its launch in June



## More Air

Apple unveiled two new MacBook Air laptops in 11.6 and 13.3-inch screen sizes

**Bazaar mini**

### MOTHERBOARD



#### ASUS Crosshair IV Formula

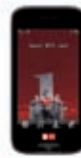
Price: ₹15,500



#### Biostar TA880GB+

Price: ₹5,000

### CELLPHONE



#### Micromax E390

Price: ₹6,999

### DIGITAL PHOTO FRAME



#### Sony DPF-X95

Price: ₹11,990

#### SPECIFICATIONS

Socket/Chipset..... AM3/AMD 890FX  
Memory ..upto 16 GB DDR3 1333 MHz  
PCIe x16/x4/PCI 2.2.....3/2/1.  
SATA/e-SATA.....7/2.

Socket/Chipset..... AM3/AMD 880G  
Memory ..upto 16GB DDR3 1333 MHz  
PCIe x16/x4/PCI 2.2.....1/0/2  
SATA/e-SATA.....6 /0

Network.....CDMA  
Screen.....2.8-inch resistive  
Battery.....1000 mAh Li-ion  
Camera.....1.3 MP

Internal memory.....2 GB  
Resolution.....WVGA 800 x 600  
Viewing area.....177.85 x 111.1 mm  
Image formats.....JPEG, RAW

#### TEST CENTRE RATINGS (All Scores out of 10)

**Features.....7.5**  
SupremeFX X-Fi 8-channel audio codec with Blu-Ray support. Onboard overclocking button.

**Performance.....6.5**  
Average performance on synthetic benchmarks. WinRAR performance rating was good. Crisis rating was above average.

**Build quality.....7.5**  
The board is neatly laid out with all solid state caps. It is built around an ATX form factor.

**Value for money.....6.0**  
Very good price point for its better than average performance.

**Features.....6.5**  
AM3 socket supports Phenom II CPUs. On-board ATI HD4250 graphics (DVI-D/HDMI output).

**Performance.....6.0**  
Benchmarks gave decent scores. Crisis gave a rating of 95 fps at high details for resolution of 1024x768 which is decent.

**Build quality.....6.0**  
Build quality is not up to the mark. Form factor is mATX. Light weight, poor quality plastic.

**Value for money.....7.0**  
At ₹5,000, it offers high end features for a low price.

**Features.....6.0**  
Resistive display. Missing volume up/down keys. Display quality is good and it has good battery life.

**Performance.....5.0**  
Touch interface is better than expected and it does not show too much lag. Poor audio quality on speakers and earphones.

**Build quality.....6.0**  
Earphones are not good quality but overall build-quality is slightly above average.

**Value for money.....5.0**  
Shortcomings in the audio and ergonomics departments.

**Features.....6.0**  
No additional features like alarm, or music playback. Many themes for slideshow.

**Performance.....7.5**  
Images are crisp and colours are rich. Does not take much time to turn on or access images from memory card.

**Build quality.....7.0**  
Sturdy build. Metal stand is of good quality. The remote provided is of mediocre quality.

**Value for money.....6.5**  
Too overpriced for just a photo frame. More features required.

#### WE SAY

7.0

We recommended this board only if you are looking to build a performance-oriented gaming rig in a budget of ₹70,000 - ₹80,000 combining any of the Phenom II X6 processors. The onboard core unlocking button gives an instant boost in performance which is a very good feature for gamers. RAID 0,1,5,10 configurations are supported. Great option if you want the Crosshair IV Extreme, but are following short on some cash.

**ALSO SEE:**  
1) ECS P55H-AK  
Digit October 2010

6.5

This board is available for ₹5,000 and is a very good option for a HTPC/SoHo under ₹35,000 but not viable for a hardcore gaming rig. It supports DirectX 10.1. Board can be overclocked in Windows as well using the bundled software from the CD. Upon overclocking, temperatures remain relatively stable. We managed to overclock the X6 1090T to 3.66 GHz.

**ALSO SEE:**  
1) ECS Elitegroup A890GXM-A  
Digit April 2010

5.5

A slight improvement on the audio and we would be able to justify its ₹6,999 price tag which seems to be pretty steep for a phone with such a small display. Battery life is good, and the interface is intuitive. Other than that, there is scope for improvement. Better phones at cheaper rates are available from other manufacturers.

**ALSO SEE:**  
1) Micromax Qube  
Digit October 2010  
2) Wyncomm Y50  
Digit September 2010  
3) Intex IN 4410  
Digit April 2010

6.5

No doubt Sony DPF-X95 is an expensive device and has a niche market. The quality of the product is extremely good. If you have a huge house and have everything but still you feel you are missing something, you might have your answer in Sony DPF-X95. Also it makes a great gift for that special someone. While it performs flawlessly, we would have liked a larger screen and support for other multimedia playback options especially when you're spending so much. There are cheaper alternatives if you are looking for a similarly sized digital photo frame.

## Nokia's Meego in 2011

Nokia CEO has announced that its first MeeGo device will be out next year

# Bazaar

QUICK  
INSIGHTS  
FROM INDEPTH  
TESTS



The Digit Test Centre receives and tests enough products on a monthly basis to fill hundreds of pages with reviews. Each and every one of the products reviewed in Digit is tested thoroughly, and put through the same rigour as you're used to seeing in our comparison tests. Bazaar mini is our way of ensuring that you get the results of our extensive testing in a more timely manner, and in a compact and easy-to-read format. Send feedback and suggestions on this new section to [testcenter@thinkdigit.com](mailto:testcenter@thinkdigit.com).

## PROCESSORS



AMD Phenom II X2 560 Black Edition  
Price: ₹5,500



AMD Phenom II X6 1075T  
Price: ₹10,600

### SPECIFICATIONS

Core frequency: 3.3 GHz; Socket: AM3/AM2+; L3 Cache: 6 MB (Shared), Cores: 2

Core frequency: 3.0 GHz; Socket: AM3/AM2+; L3 Cache Size: 6MB (shared), Cores: 6

### TEST CENTRE RATINGS (All Scores out of 10)

Features ..... 8.0  
Performance ..... 7.0  
Build Quality ..... 7.0  
Value for money ..... 7.0

Features ..... 7.0  
Performance ..... 8.0  
Build Quality ..... 7.0  
Value for money ..... 8.0

### WE SAY

At a price point of ₹5,500, it is an affordable processor for daily office and internet work. For those who want to play around with over-clocking without shelling out of your pockets, this is a good option. For a little more, an Athlon II X4 945 would make better sense.

7.0

Gave good performance in most tests. Crysis gave an average of 288 fps at 1024x768 resolution with low detailing. Also, Cinebench R10 gave 13,600 for CPU rendering. Great value for money offering at just ₹10,600 which is much cheaper than Intel's equivalent offering.

7.5

## ANTI VIRUS



eScan 11 Internet Security Suite  
Price: ₹1,250 (1 licence)



Norton Internet Security 2011  
Price: ₹1,220 (1 licence)

### SPECIFICATIONS

OS: Windows XP / Vista / 7;  
Processor : Pentium II 200 or higher; RAM: 256MB

OS: Windows XP / Vista / 7;  
Processor: 300MHz or faster; Size: 114 MB

### TEST CENTRE RATINGS (All Scores out of 10)

Features ..... 7.0  
Performance ..... 6.5  
Ease of use ..... 6.5  
Value for money ..... 6.5

Features ..... 7.5  
Performance ..... 7.0  
Ease of use ..... 6.5  
Value for money ..... 7.0

### WE SAY

This is a light internet security suite and has a very impressive dock-based interface. At ₹1,250, it is quite economical. eScan Remote Support facility allows a tech support representative to access your system remotely and trouble shoot, an interesting feature.

6.5

Features like safe web, application scanning and Facebook wall scanner are interesting and cover a wider spectrum. It is a good antivirus-internet security combo. At ₹1,220, it is economically priced and you get a host of unique features and a refined user interface.

7.0



## Concept phone goes retro

Jot is a concept phone for Samsung which consists of an OLED screen and a physical rotary dial

## Opera 11 is out

Opera 11 is currently available in the 'alpha' mode and features extensions for the first time

Bazaar mini

### PMP



Zebronics Zebmate20 2 GB  
Price: ₹1,350

### HDD CASE



Lian Li EX 30  
Price: ₹12,000

### SOFTWARE



Read to Me English Helper  
Price: ₹360 (shared environment),  
₹2,100 (single user)

### PORTABLE HDD



Silicon Power Armor A50 250GB  
Price: ₹2,800

#### SPECIFICATIONS

2 GB non-expandable memory;  
1-inch multicolor screen; FM/  
Voice Recording; Text Reader

Dimensions: 175 x 123 x 260 mm;  
HDD sizes supported: 3.5-inch  
SATA; Interface: USB 2.0, eSATA

19 different voice over presets;  
Formats supported : DOC, DOCX,  
TXT, RTF, PDF etc.

Interface : USB 2.0; Capacity: 250  
GB; Dimensions: 133.8 x 78.3 x  
16.2 mm; Weight: 200 g

#### TEST CENTRE RATINGS (All Scores out of 10)

Features ..... 6.5  
Performance ..... 6.5  
Build Quality ..... 5.0  
Value for money ..... 7.0

Features ..... 6.0  
Performance ..... 6.0  
Build Quality ..... 7.5  
Value for money ..... 4.5

Features ..... 7.0  
Performance ..... 7.0  
Ease of use ..... 7.0  
Value for money ..... 7.0

Features ..... 6.5  
Performance ..... 7.0  
Build Quality ..... 7.0  
Value for money ..... 5.5

#### WE SAY

Zebmate 20 has a poor build quality with buttons requiring hard press. It does produce decent sound, if you use a good pair of earphones. At ₹1,350, this PMP is very economical for casual listening. Not meant for music enthusiasts.

6.0

EX 30 is not disappointing at all in terms of quality. The performance is also decent. But at ₹12,000, it's hard to recommend. We would rather recommend you to go for a chassis and motherboard upgrade. Go for it only if you need external storage.

6.0

Ideal for classrooms. We recommend this product for educational purposes and has tremendous potential to grow in that area if developed correctly. User interface design is simple and easy to understand. Layout is pretty good as well.

7.0

Good overall performance – transfer rates are 27.1 MB/s for write and 33.6 MB/s while reading. The aluminium body gives it an elegant finish and a good build. The price of ₹2,800 is a bit expensive. Should have been around ₹2,100 to ₹2,400.

6.5

### SPEAKERS



X-mini Max II  
Price: ₹2,990



X-Mini V1.1 Black  
Price: ₹1,290



Tech Com SSD 600 USB  
Price: ₹1,300



X-Mini Capsule  
Price: ₹1,990

#### SPECIFICATIONS

Output : 5W; Frequency response:  
200 to 18kHz; Battery capacity:  
400mAH

Output : 2W; Frequency response:  
120 Hz to 20 kHz

Power Supply: USB port, Li-ion  
Battery or DC 5V; Output power  
:6W; Direct USB / SD playback

Loudspeaker output : 2.5W;  
Dimension : 60 x 60 x 44 (closed  
resonator); Battery : 400 mAh

#### TEST CENTRE RATINGS (All Scores out of 10)

Features ..... 5.5  
Performance ..... 5.5  
Build Quality ..... 6.5  
Value for money ..... 4.0

Features ..... 6.0  
Performance ..... 6.5  
Build Quality ..... 6.5  
Value for money ..... 6.5

Features ..... 6.0  
Performance ..... 5.5  
Build Quality ..... 5.5  
Value for money ..... 4.0

Features ..... 6.0  
Performance ..... 6.5  
Build Quality ..... 6.5  
Value for money ..... 6.0

#### WE SAY

No replacement for desktop speakers. But ideal for carrying around and playing music from your MP3 player or phone provided it has an audio jack. At ₹2,990, this is a bit expensive for a pair of speakers that could have been great performers.

5.5

We recommend it for its competitive pricing and decent sound quality. Also, the option to connect as many X-Mini capsules via the buddy Jack connection, makes it quite impressive. The price of ₹1,290 is quite a decent price for this portable speaker.

6.5

Entry level speaker with passable mid frequency response. Clarity is not one of its high points. But it can be used for casual listening. At a price point of ₹1,300, we feel this product is priced on the higher side. The gaudy red colour does not add to the aesthetic appeal.

5.0

An ideal product for those who would like to share the listening experience of their MP3 music player with a group. Resonator section adds some depth to the music which is good. It is priced at ₹1990 which we felt is a bit expensive.

6.0

**Happy Birthday Win7!**

Microsoft celebrated Windows 7's first birthday on 22nd October 2010; claims it to be the fastest selling OS ever!

**Million Pound iPhone**

A UK based designer has made a 5 million pound iPhone studded with 7.4 carat pink diamond called as Diamond Rose Edition

**EARPHONES**



**Skullcandy iCon 2**  
Price: ₹1,479



**MEElectronics M6**  
Price: ₹1,990



**MEElectronics M9**  
Price: ₹1,250



**G-Fone 777**  
Price: ₹5,299

**SPECIFICATIONS**

Form factor: On ear headphones;  
Impedance: 32 ohms; Cord length: 1.2m

Form factor: In-ear earbud;  
Impedance: 16 ohm; Cord length: 1.4m

Form factor: In-ear earbud;  
Sensitivity: 95 dB; Impedance : 16 ohms; Cord length: 1.4m

Dual SIM; Display: 3.2-inch WQVGA; Camera: 3 MP; Integrated social networking

**TEST CENTRE RATINGS (All Scores out of 10)**

Features ..... **6.5**  
Performance ..... **6.0**  
Build Quality ..... **6.5**  
Value for money ..... **6.5**

Features ..... **6.0**  
Performance ..... **7.5**  
Build Quality ..... **6.0**  
Value for money ..... **6.5**

Features ..... **6.0**  
Performance ..... **6.0**  
Build Quality ..... **6.0**  
Value for money ..... **5.5**

Features ..... **6.5**  
Performance ..... **5.0**  
Build Quality ..... **6.0**  
Value for money ..... **6.5**

**WE SAY**

Ideal for teenagers, who are into gaming as the design makes them stand out. Not for the discerning listener as the sound quality is not upto the mark and due to slanting design, ear pieces do slip. At ₹1,479, the iCon 2 is quite economically priced. **6.5**

Mid range frequencies were quite good. Amazingly tight bass. Crisp highs. This is one great set of in-ears that we have tested in quite a while. Its response across the frequency spectrum is flawless. Recommended at the price of ₹1,990. **6.5**

It sounded coloured in some tracks, not in a good way. Bass was decent but higher frequencies leave a lot to be desired. Sound isolation is quite good though. Comes with many ear tips across sizes. The price of ₹1,250 is economical. **6.0**

G-Fone 777 is ideal for those who are looking at a budget touch-screen phone with decent camera and who will indulge in a lot of social networking. Multi tasking is absent and touch response is not that great either. Competitive pricing at ₹5,299. **6.0**

**MOBILE PHONES**



**Movil MC100**  
Price: ₹4,499



**Fly MV135**  
Price: ₹3,949



**Huawei U9130**  
Price: ₹6,999



**Huawei C5600**  
Price: ₹3,999

**SPECIFICATIONS**

Dual-SIM (GSM+GSM); Display: 3-inch TFT, Resolution: 240 x 400, Colours: 262K; Battery: 1350mAh

Dual-SIM(GSM+GSM); Display: 2.4-inch TFT screen; Resolution: 240 x 320; Battery: 1050mAh

SIM card: 3G GSM; Display: 2.4-inches TFT, Screen size: 320 x 240; Battery: 1250 mAh

CDMA SIM card; Display: 2-inch TFT; Screen resolution: 240 x 320; Battery: 800mAh

**TEST CENTRE RATINGS (All Scores out of 10)**

Features ..... **7.5**  
Performance ..... **6.5**  
Build Quality ..... **6.0**  
Value for money ..... **6.5**

Features ..... **6.5**  
Performance ..... **7.0**  
Build Quality ..... **7.0**  
Value for money ..... **7.0**

Features ..... **7.0**  
Performance ..... **6.5**  
Build Quality ..... **7.5**  
Value for money ..... **7.0**

Features ..... **7.0**  
Performance ..... **6.0**  
Build Quality ..... **7.0**  
Value for money ..... **7.5**

**WE SAY**

Touch-screen smart-phone targeted at the multimedia segment, with the 3D-Yamaha power amplifier. At the price point of ₹4,499, the MC100 gives you true value with apps like mobile tracker. Camera quality is not so good though. **6.5**

MV135 is a good dual-SIM multimedia cellphone justifying the tag - "phone theatre". At a price of ₹3,949, it makes a good buy with appealing display quality and multimedia speaker performance. However, video recording is not very good. **7.0**

The Huawei U9130 is a feature-rich business cellphone with 3G data services including browsing, email client service with push email etc. Overall, it makes a great buy at ₹6,999, if you could overlook the quality of the camera and loudspeaker. **7.0**

The Huawei C5600 is a feature-rich multimedia smart-phone with OMH CDMA data-service capability as its USP. Lifestyle features like sensex updates, sports updates etc. add value. Overall, it is a good buy at ₹3,999. **7.0**



## Adobe Photoshop: Blending Exposures

One major issue every serious photographer has to consider with nature or landscape photography is varying exposure and the lightest and darkest areas of an image.

But luckily with modern methods of HDR (high dynamic range) and the ability to take pictures with more than one exposure using modern digital cameras, it becomes very easy to blend images taken with varying exposures together into one single image with the right contrast. This also allows the image to more accurately portray the wide range of intensity levels found in real scenes, may it be with bright sunlight or faint sunlight. Another way



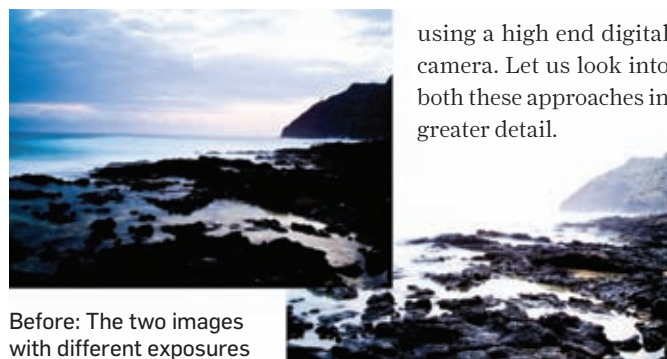
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3ds Max.....	86

of the images taken. It is best to take the images after setting the camera on a tripod or in a perfectly stationary position. For this example, we have taken two photos of the scene with a shutter speed of 13 seconds and 25 seconds, respectively.

In the 13-second exposure image, the sky and most of the ocean looks good, while rocks are darkened because of the shadows. On the other hand, the image with the 25-second exposure presents a good amount of detail in the dark foreground colours of the rocks that make the sky and water extremely bright and practically invisible.

### Getting started in Photoshop

With the two images in hand, let us move on to Photoshop to blend in both the images to get our final image. Open both the images in Photoshop and copy one of the images into the file containing the other image.



Before: The two images with different exposures

using a high end digital camera. Let us look into both these approaches in greater detail.

different regions are exposed to varying intensities of sunlight. First we have to obtain different images of the same scene, so that each part of the scene has a good exposure in at least one

of doing the same would be by applying different settings for processing the RAW file taken

### Different Exposures

To illustrate this method we shall consider a scene where



After – The final image which is a result of blending in the two images



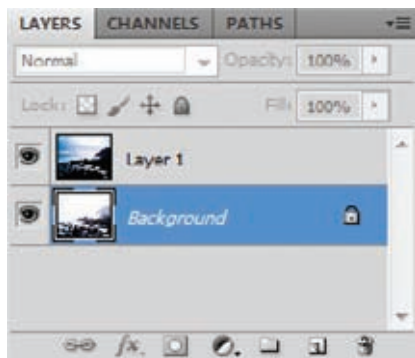
Shutter Speed - 25 sec @ f/16 100 ISO

25 second exposure at f/16 and 100 ISO



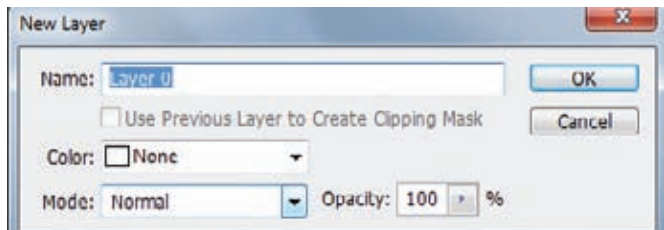
Shutter Speed - 13 sec @ f/16 100 ISO

13 second exposure at f/16 and 100 ISO



Get both the images as different layers into the same file

You can do this by right-clicking the image layer and duplicating it into the other file or by dragging and dropping the image into the other file. Make sure both images are in different layers and none of them is a background image. You can convert a background to a layer by double clicking on it from the Layers Panel and clicking OK.



Double click on the background to convert it to a normal layer

We shall start by adding the layer with the darker exposure to the image with the lighter exposure, so that the darker one is on top of the lighter one. Make sure that both the layers are perfectly aligned by moving the layer after clicking 'V' to get the move tool and then move the layer holding the [Shift] key to perfectly position the layer in the image window.

### Adding a Layer Mask to the top Layer

The next step is the most important step in this process. We shall add a layer mask on the top layer to mask the regions that do not have a good exposure and show only the good parts of the layer. The

mask will cover up the bad regions and will let the regions with better exposure in the layer below blend into the final image.

Now if there are three or more images with varying exposure instead of just two like we have taken in this illustration, based on the type of the images you are blending and the complexity of the edges in each of them you will be using the same process on each of them adding a mask to each of the layers on top. The mask makes sure that only the good parts from every layer are visible.

To add a mask to a layer, first make sure the layer is selected from the Layers Panel. Then click the Add Vector Mask button at the bottom of the

Layers Panel or add a Layer Mask from the Layers Menu. A mask which is displayed by a white thumbnail appears next to the layer thumbnail. The white colour of the mask indicates that the mask is opaque. Painting a region of this mask black makes it transparent depending on the amount of black and the layer below becomes visible through the mask. The amount of grey on it indicates how transparent or opaque the mask is. So the mask transparency changes based on the colour range between white and black painted onto the mask

### Paint the Layer Mask

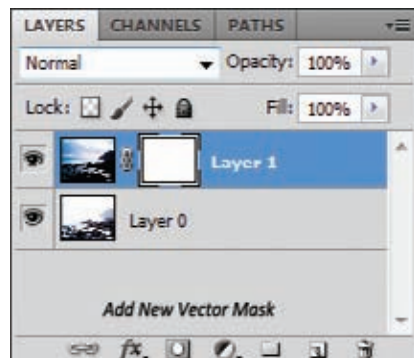
Now select the Brush Tool from the tools menu on the left or hit the B key on your keyboard. Set

the Foreground Colour to Black and from the Brushes options bar on top set the Opacity of the Brush to 50%. Select a soft edged brush or just change the hardness of a solid round brush to zero. Choose a Brush size large enough to be able to paint over the entire bottom part of the image. In this case, we do this since the view of the rocks where there is good detail is only from the lighter image. Now select the Layer Mask and paint over it using this brush.

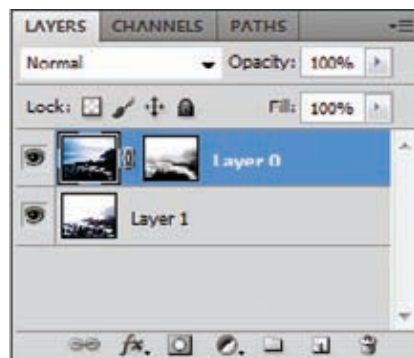
Keep repeating the brush strokes multiple times to show more colour tones from the layer below. Reduce the brush size if needed and work on other parts of the layer as required. In this case, the entire bottom of the mask is painted black and the other regions where the rocks meet the water should be painted a little more carefully. If you need to reverse any of the changes on the mask, just change the brush colour to white and paint over the region of the mask you want to change or revert back.

### Add an Adjustment Layer

In this particular illustration we lowered the opacity of the brush even further to 20% and painted over the region of the hill so that it blends properly with the image below. Now we will try to bring out even greater contrast by adding an adjustment layer on top.



Click the Add Vector Mask button with the Layer selected

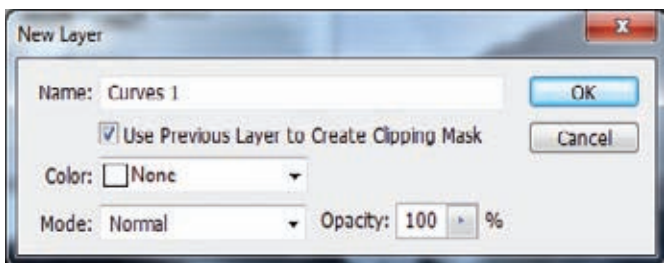


Select the layer and paint using the brush

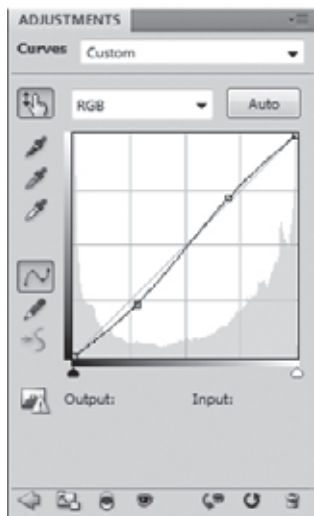
[Alt]+Click on the Create New Adjustment Layer Icon, i.e. click on it keeping the Alt key on the keyboard pressed and then choose to add a Curves Adjustment Layer. Make sure you have checked the Create a Clipping Mask checkbox and then click OK. Make sure to adjust the curves as shown in the image. Ticking the Clipping Mask makes sure that



Add a new Curves Layer on top of the layer



Select Curves from New Adjustment Layer in the Layers Menu



You can make minor adjustments manually

the Curves Adjustment Layer affects only the layer directly below it.

## Making the Final Changes

Now to verify the exact regions of each of the layer that are visible or the percentage of the image that has been blended in to obtain the final outcome, click on the individual layers Eye icon and note which parts of the layers are made visible due to the layer mask on the top layer. The compound of both the layers after masking and adjusting the curves gives rise to the final image. You can also click the Layer Mask while holding down the [Shift] key to temporarily disable it and view the original layer. [Shift] + click it again to enable it again. Notice since the mask has soft edges, we don't have to specifically work on lines where the darker regions intersect the lighter regions.

## Dual processing of the Raw image

There is another way to do the exact same thing as illustrated above. If you have a high-end digital SLR camera, you can make sure you take only a Raw file of a picture and not process it for a final image. You only need a single exposure and make sure the exposure is from an unprocessed Raw file. You can basically create the same effects as above using this process. This is not possible though, if the still contains moving objects or if the picture was not taken while the camera was perfectly stationary. The primary method here is to bias the histogram to the right as much as possible without clipping the bright spots with respect to the exposure. Ensure that you have best exposure for the darker areas.

Now process the first edition of the image using Adobe Camera Raw software for a particular region of the image. Select the blue Options for Work flow button located below the preview button and open this file in Adobe Photoshop as a smart object. In Photoshop, create a new smart object by selecting the New Smart Object option under Layers > Smart Objects. Duplicate the smart object Layer. Double-clicking it will let the duplicate smart object get affected by the Raw dialogue box. Make adjustments as needed. You can use exposure, light fill and brightness by making the appropriate changes in the slider. Use the same process of masking above

to blend in the two images.

## Multi Camera Workflow using Adobe Premiere Pro

One crucial factor for every videographer and video editor is to get the right camera angle in a video sequence with the right texture, light conditions and contrast. While shooting professional videos, films and television programs; this is achieved by using a setup of multiple cameras (combination of video or/and still) which record simultaneously. The recorded media is then imported to a digital editing environment. Adobe Premiere Pro is a professional video editing software covering all aspects of professional video editing, starting from capturing the video, processing and final packaging.

You can start by taping an event with four video cameras (the maximum limit of the Premiere Pro CS3, the version we are using for this workshop). For more footage you can nest clips and sequences as shown later. Ensure good lighting conditions to get a decent clip to edit. Set acoustics according to position of the subjects of the video, for each camera. The cameras must be placed such that all subjects are covered in the footage. Do not record over retakes, but keep multiple copies till the editing stage and import these clips into a new Adobe Premiere Pro project.

Adobe Premiere Pro allows you to sync source footage from multiple cameras. You can edit the footage by switching between sources during playback. Premiere Pro has a tool named multi-camera monitor that is used for this editing, more like simulating live camera switching. After capturing the footage in Adobe Premiere Pro, you can implement a simple workflow to edit the footage.

Start with stacking the clips from all cameras onto separate tracks of a new instance of a sequence. You then need to synchronise these clips by marking the sync point with numbered clip markers, or simply reassign the sync point to a specific time-code for each camera.

Create a multi-camera target sequence by nesting the sequences of synchronised clips into new sequences. Record the multi-camera edits by viewing the footage of all four cameras simultaneously on all four cameras along with the option to switch between cameras to choose footage for the final sequence. In the end of the workflow, you will need to adjust and refine the edits already made. The final sequence can be re-recorded from one of the other cameras. The sequence can be edited using standard tools and techniques for editing, applying effects, or multi track composition.

## Assembling multicamera footage

Open Adobe Premiere Pro and import the recorded clips into a new project. Open a clip by double-clicking on its instance in the Project panel. Load the audio waveform in the source monitor by toggling the "Toggle Video and Audio" (⏏) button on the source monitor till it is set as "Take Audio" (🔊). Use the waveform to sync the sound clip to the video and then set the Toggle Video and Audio button back to Video and Audio. Now right-click on the current time indicator and mark the clip using a numbered clip marker from the Clip menu. Repeat this for each footage. Now all you need to do is drag and drop the clips from the project panel into an independent video track in the timeline.

## Displaying the Multi Camera Monitor

Multi-camera monitor plays footage of each camera and a preview of the final edited sequence. After recording the final sequence, camera preview makes it active and record footage from that camera. In playback mode, the active camera is indicated by a yellow border and red while recording. This monitor includes the controls for standard playback and transport. The sequence in the preview display can be played using the play around button (⏮) including any pre- or post-

edge or corner. In multi camera mode, you can use a few handy keyboard shortcuts such as Spacebar to pause / resume the preview, [J] to run the preview backwards, [K] to stop the preview, and L to run the preview forward.

## Adding clips for multi-camera editing

You can use any type of media in multi-camera editing session, including footage from various cameras or still images. The media can be assembled into sequences of up to four videos and four audio tracks

attempting to synchronise them. Sync points can be marked by setting similarly numbered markers for each clip or setting the time code manually for the clip, as was done in the assembly of the clips. Avoid overwriting adjacent clips if you have multiple clips on the same track.

Select the clips to be synchronised and target a track by clicking its track header to align other clips to it. If synchronisation is by the in-point, the beginning of each clip aligns with the in-point of the target track. If the in-point falls before the point

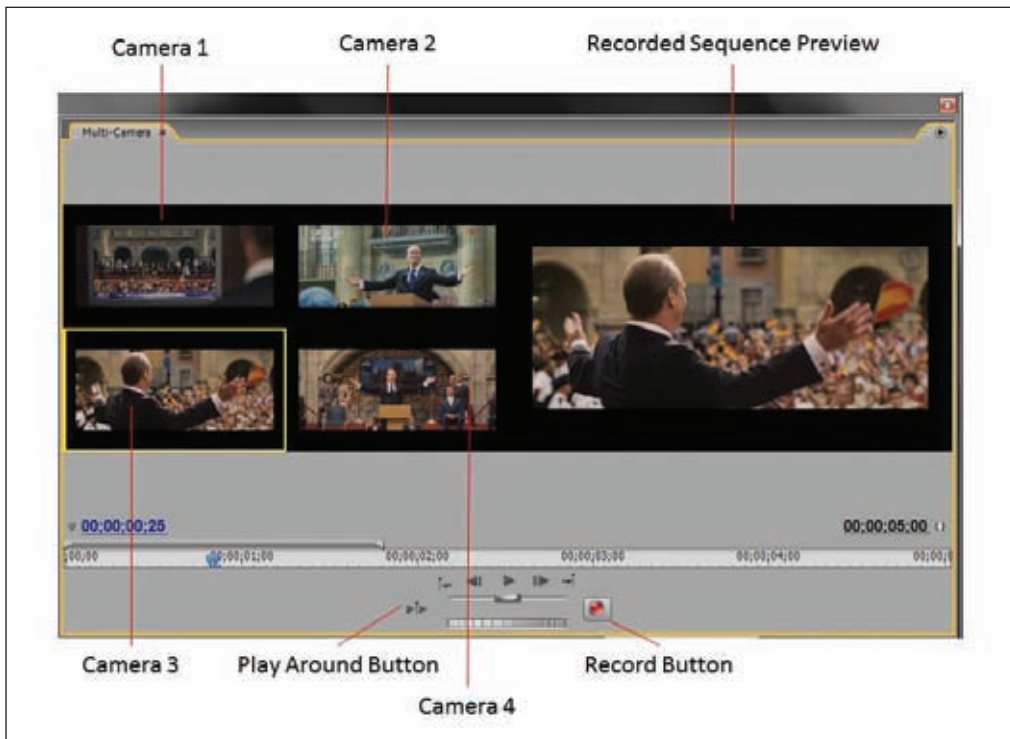
according to the out points of the clips.

- Time code synchronizes by a specified timecode. To make this less cumbersome, video editing professionals choose to use only minutes, seconds and frames to synchronize the clips. This can be done by selecting the ignore hours option.
- Numbered clip marker synchronizes by the assigned markers placed on the clip.

## Creating multi camera target / nested sequence

Create a new sequence from the file menu and drag the sequence with the multi-camera clips into one of the video tracks on the new sequence. This is nesting of a sequence. Sequences can be nested within sequences to innumerable depths in order to create diverse groups and structure. Multi-camera can be enabled for selected clips by enabling it in the clip menu. Nested sequences appear as single clip even though the source may contain multiple tracks. Operations such as moving, trimming and applying effects to a nested sequence is similar to any other clip. Changes in source sequence are automatically applied to the nest. Nesting enables a video editor to repeat complex sequences without the necessity of reworking the entire set of effects and operations. Playing same sequence with different effect at each playback. Reduce the estate used on the editing menu and keeps the workspace primp and neat, and hence reducing any possibility of losing sync during editing.

Apply new transition to each clip in the nest, which in case of clips can be done for only one transition. A sequence, however, cannot be nested within itself and nesting takes up more processing time



Multi-Camera Monitor workspace

roll frames.

To display the Multi-Camera Monitor, select the multi-camera target sequence in the timeline panel and then choose the multi-camera monitor from the window menu. Disable the show preview monitor from Multi-Camera monitor panel menu to display only camera previews (and hide the recorded sequence preview). The multi-camera monitor can be resized by dragging any

and you can add more than one clip to a track if required. Upon assembly of clips, synchronise them and create the target sequence by firstly creating a new sequence and placing clips from each camera on a separate video (and audio) track. Only one clip per track can be synchronised.

## Synchronising clips

Mark the sync points for each camera's footage before

zero, the clip will be trimmed accordingly during synchronization. If a track of the linked video/audio pair is unselected, the pair becomes out of sync, and out-of-sync indicators will appear on the clips.

Choose Synchronize from the Clip menu and select among:

- Clip Start synchronizes clips according to the in points of the clips.
- Clip End synchronizes clips

due to the possibility of long references. Nested sequence changes on any change made to the contents of the nest, however the duration and timecode is not affected. Empty spaces at the beginning (not end) of a source sequence determines the start point of the nested sequence. Editing a nested sequence does not require re-rendering of the clips. Source of nested sequences can be opened by double-clicking on the nested sequence.

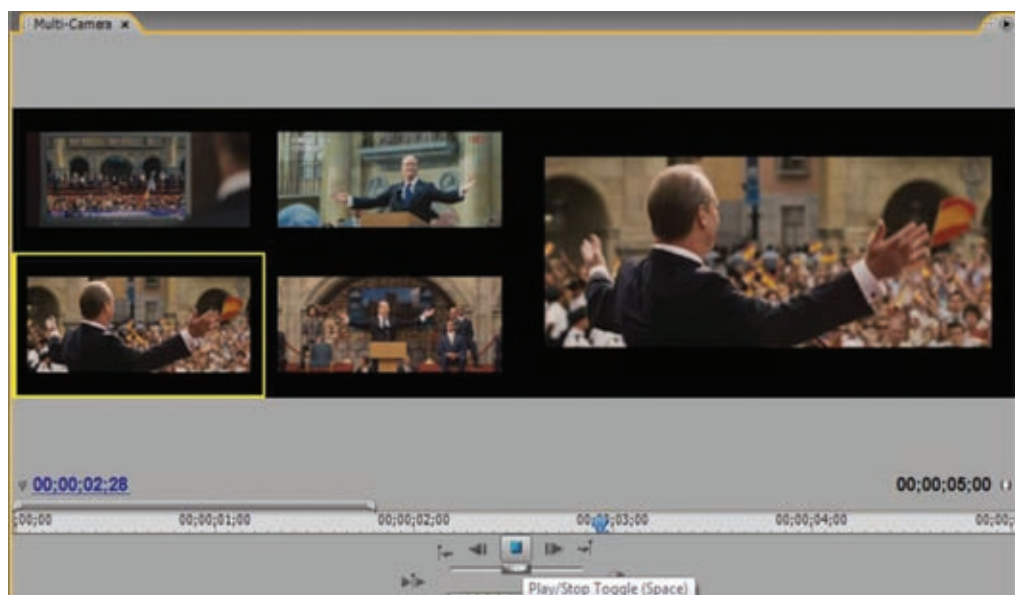
### Recording multi-camera edits

Open the multi camera monitor for a multi-cam sequence and click the button for record on/off (⏺). To enable recording during playback, click preview of the camera you want to record on the multi-camera monitor. Selecting Audio follows Video in the multi-camera panel menu, enables recording audio from the selected camera. Mix the desired tracks to one track on the source sequence, and select the resulting audio to record audio from the selected camera to the audio track (Audio follows video option must be disabled in this case).

The playback button plays video from all the cameras, and the footage from active camera is recorded in the target sequence of multi-camera. You can switch between cameras by selecting the particular preview or hitting the corresponding keyboard number key (for example, 1 for camera 1).

The stop or the record button releases the recording mode. Playback controls can be used for preview after the recording stops. This does not overwrite the recorded sequence. Effects recorded in a target sequence are not displayed in the multi-camera monitor preview. For viewing with effects, play the track in the program monitor.

To re-record multi-camera edits, the current time indi-



Before clicking on the Record, the selected clip has Yellow Border



After clicking on the Record, the selected clip has Red Border

cator must be positioned before the edit requiring adjustment. Run the multi-camera monitor preview, and change the active camera by clicking on the desired camera, whence the yellow selection turns red, indicating a record enabled status. The editing can be stopped by hitting the stop playback button.

### Adjusting / refining multi camera edits

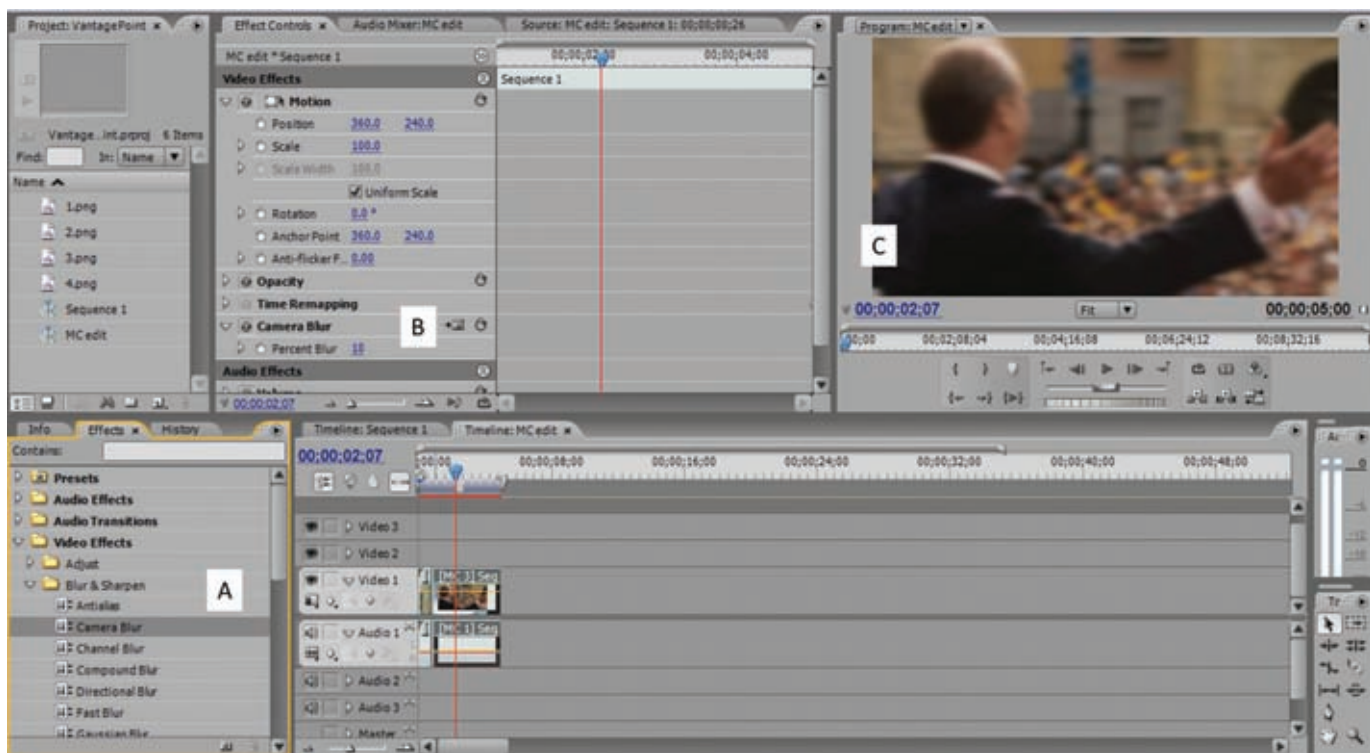
You can replace clips with other footages by simply replacing the clip on the timeline panel

with the new footage. In some cases you may need to swap between different views of a scene taken from different cameras, such clips can be overlaid or inserted in the multi camera sequence. This can be done by double clicking on the target sequence in the timeline which opens it in the source monitor which displays footage previews of original clips. Select the display for the footage to be added to the sequence (on select, the display border is in yellow) and choose the source you want to modify

and drag the clip to the timeline. You can also use the insert (⏵) or overlay (⏶) buttons in the source monitor for the same purpose.

### Adding transitions

You would like to add some transitions like colour correction, adding titles and green screen overlays to your clips. Video and audio transitions can be added by using the shortcuts to add the default transition for both audio and video. Roll the current time indicator on the timeline to the beginning and



Applying Transitions. A:List of effects (Camera Blur Selected); B:Effect Controls(Blur set to 10); C:Preview shows blur.

press Page Down which takes you to the next edit point. Default video transition can be simply added by pressing [Ctrl]+[D], and the default audio transition by pressing [Ctrl]+Shift+[D]. You can add other effects and transitions from the Effect controls panel which has several Presets and Audio and Video effects and Transitions.

### 3ds Max Tracking Assets

3ds Max has an inbuilt asset management system that is extremely helpful in keeping track of where your maps and

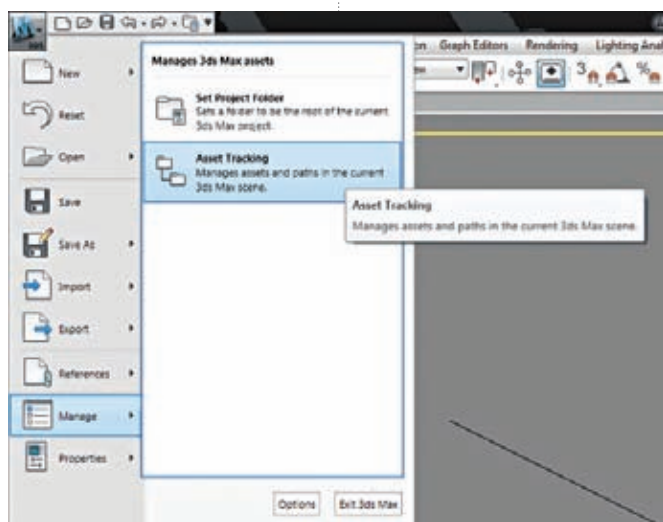
textures paths are pointing to, and ensuring it's the correct path to the file on your system or network server. Normally though, the feature most people overlook but which is still a very powerful feature is the asset tracking system and its capability to allot multiple custom dependencies into the same file. This lets you store any file present within the 3ds Max scene from any location very quickly. This could be anything from a simple project status note, to complex environment location photos, or concept art in general. What this helps you with, is the fact



Autodesk 3ds Max

that when the same 3ds Max file is distributed or transferred between artists and designers, you can make sure that the necessary information needed to finish the project is always tagged and marked in the specific max file.

1) To access this feature and toolset



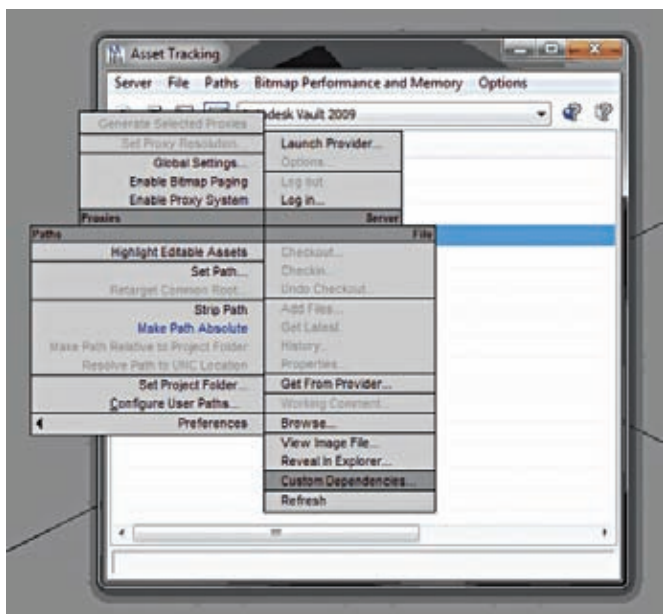
Select Asset Tracking from the Manage menu

press the Shift + [T] shortcut, or click on the Jewel Icon on the left top, 'File' in older versions, then under the Manage menu select Asset Tracking.

2) After clicking on Asset Tracking, a floating window should appear with the different Asset Tracking options. Now simply right-click to open a quadruple options menu with four different lists of options. Select 'Assign Custom dependencies' by navigating

through the menu. Now you can assign files within the current 3ds Max scene file for future reference.

After assigning a dependency, you can simply right-click the file, and then you can either 'View Image File' or select 'Reveal in Explorer'. By following this simple process, you can speed up your workflow several fold. It helps significantly when you constantly need to access the respective files.



Select Custom Dependencies from the Quad Menu

## Decreasing render time

One of the most common things you do when building complex poly models is keep rendering the image to keep testing for the final outcome. It is very important to lower the time it takes for the test render to speed up the testing process and the general workflow.

1) We first need to reduce the size of the image that needs to be rendered. It is recommended you use a 150x110 pixel size output. Although this may not let you see the details of the object, it is good to test lighting conditions and shadows in the

final output.

2) Decreasing the quality of the shadow will speed up the render time significantly.

3) Decreasing the number of polygons in the object also speeds up your render time. You can try and use the optimize modifier if you are not using any mesh modifier on the objects.

4) You can also reduce the photon number and the settings for “sample” in the render engine options.

engine options.

5) Make sure you haven't used excessive lights where they are not necessary. Higher the number of lights, the slower the process of rendering is.

## Light and Shadows

1) Generally architectural

materials and self-illuminated materials are light emitting for rendering engines like Mental Ray & Vray. Using these particular materials on an object like a box will have the same effect as that of a photometric area light or a Vray light.

2) Always make sure you are using soft shadows in most common cases before rendering. Hard shadows have a tendency of making the object and the final image appear fake. You can change the settings on the Mr Omni / Spot scale by changing the size of the light in the area light parameters. For rendering using Mental Ray you will have to make use of RAYTRACED shadows. For Vray just enable

for Mental Ray. The best and usually the quickest way for obtaining effective results are by using the Raytrace shadows. In case you are working with the ‘light tracer’ and use ‘area shadows’ the result should ideally be the same as that of MentalRay with Raytrace shadows.

## Mesh and Polygons

1) It is always good to use an ‘editable poly’ rather than a Mesh. An Editable Poly is optimized and required for any advanced modelling. Using an editable poly has a lesser scope of you committing errors than working with an editable mesh and an editable poly has way more options than you would get with an editable mesh. Even

if you are working on an object with an editable mesh it is very easy to convert it into an editable poly object.

2) Instead of smoothing a box with mesh smooth, you can make use of “extended primitives” or a “chamfer box”, the result of which will be the same. But note that the chamfer box has lesser polygons.

3) Instead of using mesh smooth you can also simply use the built in nurms feature

for the editable poly. Just bind a hot key to the “NURMS Toggle - Poly” option and you should be

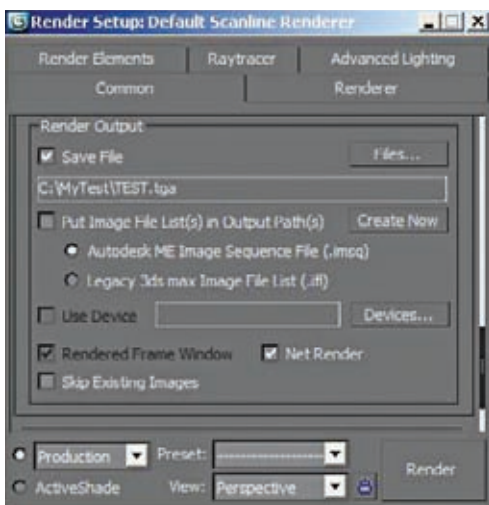


Render Preferences

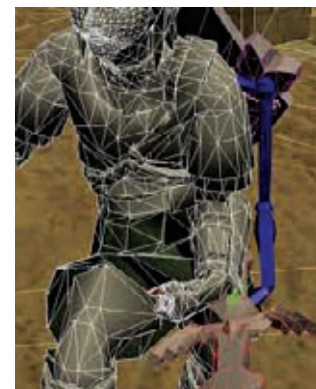
‘area shadow’ in the Omni / Spot settings and change the size of the light. But note that in general, soft shadows take more time to render. To have perfect shadows it is necessary to create all objects with real dimensions.

3) To get the best highlights and effects on highlights Omni light or MR Omni is the most preferred light.

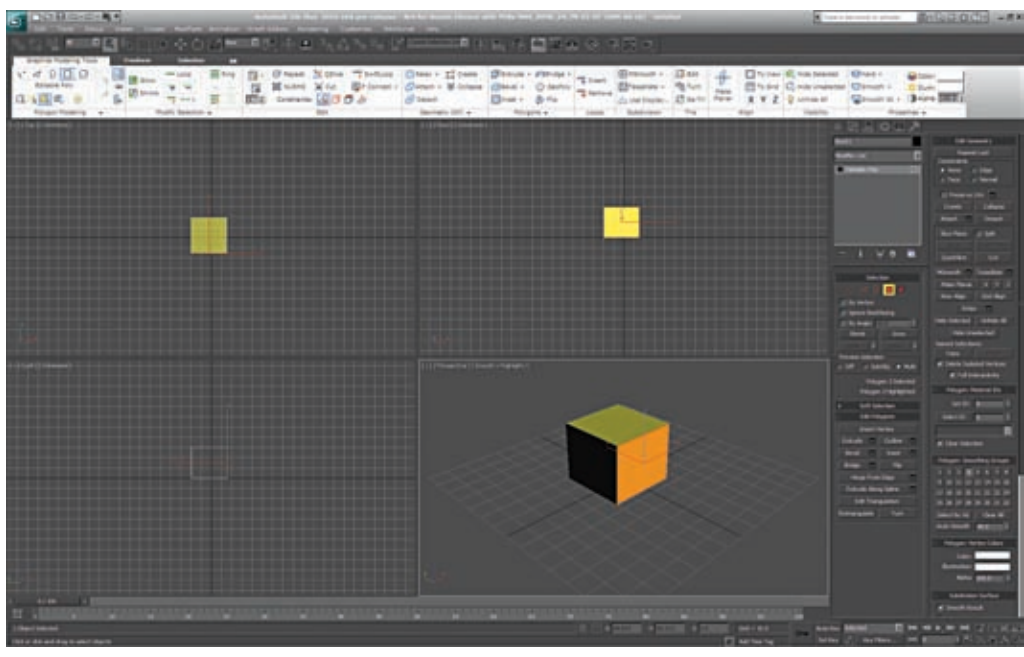
4) Make sure to never use any area shadows while rendering with Mental Ray since area shadows are firstly very slow and also they are not optimized



Render Setup



Mesh vs. Poly



3ds Max interface

able to switch between low and high poly meshes by pressing this one key without having to use the mesh smooth modifier. Similarly you can also set a hotkey for the Display Floater option and use it for having quicker access to the control of the visibility and the properties of the elements present in your scene. You can also use the Light Lister Tool which will be very handy when there are a number of lights in your scene. 4) Sometimes while modeling an object using Max, all of your created vertices might disappear. This is a bug with

3ds Max. To fix this problem just convert your object to an editable poly and then convert it back into an editable mesh. Convert it to an editable poly again and save the file. Now just restart 3ds max and open the saved file. Now merge the same object in a new file to get back the vertices. 5) If you are accustomed to using splines to create new shapes, make sure you use a small number of vertices. Once you convert these vertices into smooth, bezier or bezier-corners you will be able to create very organic and round

shapes without having too high a number of vertices.

### Getting back lost interface windows, toolbars or panels

One of the biggest problems beginners face is the change in the existing max user interface. There are many reasons because of which your interface might have changes or panels might have been removed from your workspace. To revert back to your original settings,

- 1) Check if you switched to 'expert mode' by accident. Try pressing Cntrl + X to switch between expert and normal modes
- 2) You can simply reset the workspace to default settings by going to the 'Customize User Interface' menu under the 'Customize' tab. There go to the Toolbars tab and hit reset.
- 3) You can also reset the interface by changing the settings file. Find the 3dsmax.ini file in your max folder which should be present in your autodesk

folder within the windows folder. Delete this file and restart 3ds max. Now under 'Customize' select load custom UI scheme.

### Other tips and tricks

- 1) To get rid of all the textures you have used and applied in your scene without having to go to the map editor and deleting each one of them one by one, simply go to the material editor and select 'Reset material editor slots' under the 'Utilities' menu. Now to get rid of all the textures in the scene after resetting the material editor just select everything in your scene and apply the blank mat to the selection.
- 2) Normally while moving across or rotating a specific view port if your model turns into a wireframe it can be very annoying. To get rid of this problem, simply press the 'o' key on your keyboard and that should do the trick.
- 3) If you want to save a .mov file



Alpha Channel

or a .tiff file with a simple blank background, from the .mov settings select the animation codec which comes with millions+ colors. The + in this notation implies that an alpha channel will also be present with it. Similarly with tiffs, you will have to save it as a 32 bit tiff and you will have the option to save alphas as well. In case you have used any transparent materials in your model note that they will also be included in these alpha channels but sometimes you might come across problems with a few mental ray materials.



Transparent Materials



## HTC doubles profit

Taiwanese phonemaker HTC's earnings report shows their profits have doubled thanks to Android sales



## Internet Explorer falls!

Statcounter revealed that last month, the number of people using IE fell below 50%

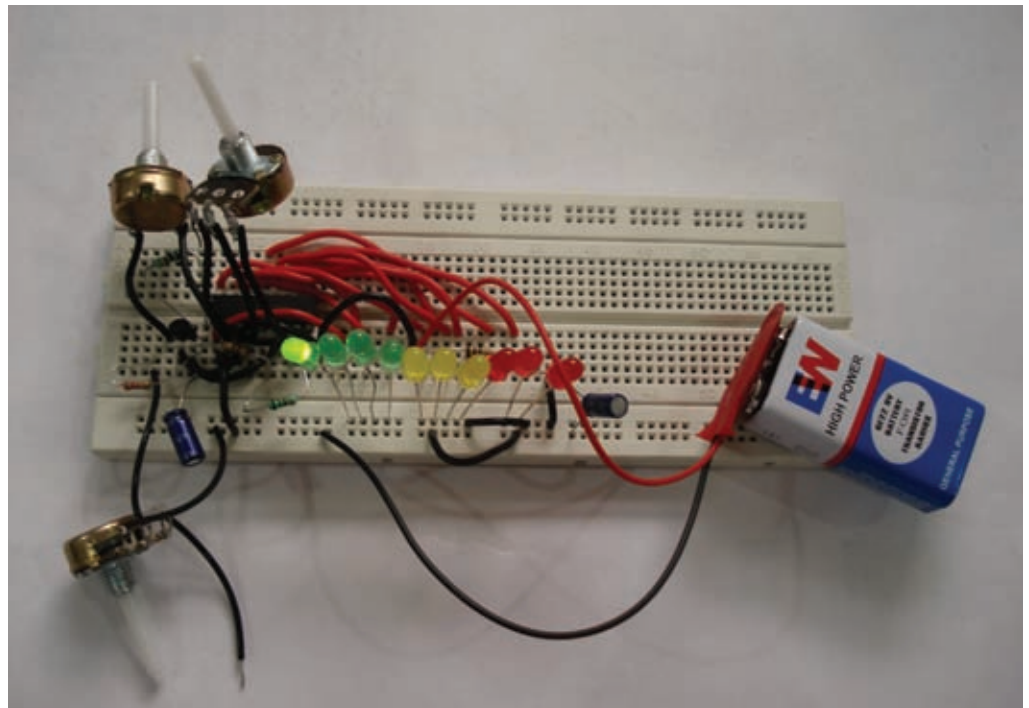
DIY

Nash David

nash.david@thinkdigit.com

When we've bought ourselves a brand new computer, we tend to take good care of it, ensuring temperatures don't rise beyond the recommended level. Sooner or later we tend to take our computing marvel for granted, such as much as we can from it, till it finally comes to a standstill – refusing to budge this time!

All of this could be avoided with corrective and preventive measures taken before hand. For one, most people find it inconvenient to repeatedly go to the BIOS of their system to check the processor and cabinet



Each LED glows as the temperature increases

# PC temperature monitor

This month, we look at an electronic circuit that would help you monitor your PC's temperature. All you need to do is build this circuit and place it near your processor. Depending on the temperature, the LED array would light up indicating a rising temperature

temperature. Again, installing a software purely for diagnostics is unfortunately perceived

as a waste of system resources. Popularly, users would rather have the system informing

them of critical milestones.

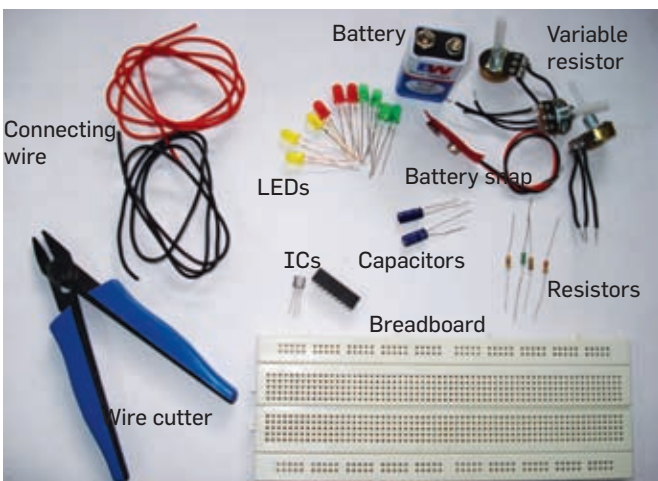
## What to expect

The primary objective of this circuit is to inform you of the temperature of its vicinity, so that you can take precautionary measures. IC LM35DZ is a precision Celsius temperature sensor. It converts ambient temperature into an equivalent analogue voltage. This analogue signal is translated into an equivalent bar graph by the bar/dot graph driver IC LM3914. Ten LEDs form the bar graph. We recommend using three colours – green, yellow and red to depict the bar graph. Green indicating

normal operational temperature, yellow indicating the warming up phase and red approaching breakdown point.

## Assembly

Refer to the circuit diagram. Begin with temperature sensor LM35DZ. If you look at the bottom side with the pins facing you and the flat side facing up, then the terminals



Make sure you have all the components before you begin building

## What you will need

- Capacitors**
  - C1 - 1uF / 25V Electrolytic
  - C2 - 10uF / 25V Electrolytic
- Resistors**
  - R1 - 2.2k
  - R2, R5, R7 - 1k variable resistor
  - R3 - 1k
  - R4 - 1.5k
  - R6 - 470 ohms
  - R8 - 100 ohms
- Diodes**
  - D1-D10 - LEDs
- ICs**
  - U1 - LM35DZ Precision Centigrade Temperature sensor
  - U2 - LM3914 Bar/Dot graph driver IC
- Miscellaneous**
  - Breadboard, connecting wire, wire cutter/stripper, 9V battery, battery snap



## Paid Android Market

Google has enabled paid apps in the Market for Android devices in India in mid-October

## Glass-free 3D TVs coming

Toshiba plans to launch 3D TVs later this year that don't require those shoddy glasses

Q&A

# Messed up drives, flooded mailboxes and quickly deflating

Digit QnA helps you undo all these, and more..

## Direct3D device errors while playing games

My computer has Windows XP SP3 installed on it with 1GB of RAM. I installed a game called 'Quadro Racing' from your August 2010 DVD. However, after installing it, when I tried to run it, it shows the following error and then terminates - 'Could not create Direct3DDevice9! (error: D3DERR\_INVALIDCALL)'

Nisarg Shah



Direct3D errors showing up while playing games

The error you are seeing either could be due to drivers, or simply because your card does not support the game. We recommend you to download the latest drivers for your graphics card from the manufacturer's web site. If that doesn't work, you'll need to replace your graphics card.

## Battery drops to 42 per cent in a second

Last year, I bought a Compaq Presario laptop (model NO. CQ40 301TU) It came with 1GB RAM, 160 GB hard disk and an Intel Celeron dual-core processor. Last month, I formatted my system and installed Windows Vista Home. Since then, I've got a problem with my system. As soon as I unplug the power, my battery level instantly comes down to 42 per cent from 100 per cent. It's been happening for some time now.

Pankaj Bharvey  
Ujjain

It's important to see if the battery still ends up powering the laptop as long as it normally does. If it does, then there isn't much to worry about. It might be just a problem with the readings. If the battery isn't lasting long enough, then the laptop might have a failing battery. If that is the case, you'll have to take it to the service centre and ask them to help you get a new one. There's also a chance of the charger being faulty.

## Chaos, thanks to virus

I came across this virus two days ago and it has been infecting every executable file on my computer. Currently, I am using Windows 7 along with Microsoft Security Essentials. I feel it isn't very good, but I have no other options. I scanned my PC with it and it showed nearly 10 to 20 files in the temporary folder affected with virus names such as:

" Virus:Win32/Parite.B"

According to Microsoft Security Essentials, all the viruses have been removed from my system. But when I scanned my system again, selecting the whole hard disk as the option, I saw the same virus present everywhere in my C partition.

Installation of games and even flash games are corrupted. The virus - " Virus:Win32/Parite.B" has attached itself to the files, so I have removed them. But on rescanning, it was there again. The only files with viruses are music and video files.

Himanshu Prakash Pal

It's difficult to give a foolproof solution to your problem. If Microsoft Security Essentials isn't removing the virus from your PC, then you need to find an alternative. Try a different anti-virus or security suite software such as Norton Internet Security, ESET NOD32 or Kaspersky anti-virus.

## System ready for GeForce GTS450

Can I install NVIDIA's GeForce GTS450 graphics card on my ASUS M2N68-AM PLUS motherboard?

My system configuration is: AMD Athlon II X2 240 Processor 2.80 GHz. 2 GB RAM, 320 GB HDD, 450 W power supply and graphics card is MSI 9400 GT 1 GB.

Bhva Tiwari

Yes, you can install NVIDIA GTS450 on your system.

## Dummy Windows installation

My PC's configuration is as follows: Intel Core 2 Duo E7500 2.93 GHz, 4 GB Kingston RAM, 500 GB Seagate hard drive, Biostar GeForce 9400 GT 1 GB Graphics Card, ASUS DVD-RW, 450 W SMPS, Samsung SyncMaster B2030 (20-inch), Windows XP Professional SP3

When I was installing Windows on my computer, it started installing the OS in the D: drive, so I manually switched it off. Finally, I successfully installed Windows on the C: drive. When I restarted my PC, the boot menu showed two operating systems.

The first instance of Windows worked properly on booting, but the second one was the dummy one created by forcibly powering off my PC during installation. I once again formatted my C: drive, but the problem remains. How can I directly boot to the first OS without seeing the boot menu?

Whenever I check my Computer System properties, it shows 3 GB of RAM. In the system BIOS menu, it shows 4 GB. Why is it so? What is the best resolution to run games such as Splinter Cell: Conviction and Assassin's Creed II to run smooth?

Abhigyan

## Turbocores appear

HP's new desktops powered AMD's Turbocores appear; allows some of the cores to overclock by 300 to 500 MHz

## Google Street Spy

Google's Street View cars grabbed WiFi data as it drove along; data included emails, URLs and passwords.

**!** You should first delete any temporary folders that might have been created for the failed Windows installation. The entries for the second installation can

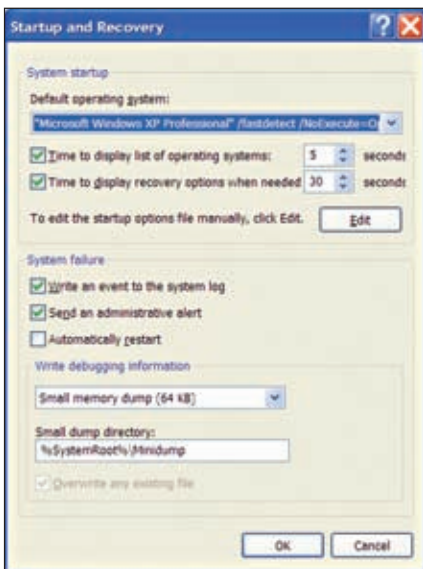


32-bit Windows OS cannot utilise RAM more than 3.25 GB

be removed from the boot loader. First, go to the Control Panel > System. Then, go to Advanced > Startup and Recovery. Here, you can edit the entries and also set the timeout value for the bootloader.

Your system can only use approximate 3 to 3.25GB of memory if you use a 32-bit operating system.

With your current graphics card, you might have to reduce the game resolutions right down to 1280x720 or



Removing and making changes to the bootloader entries on Windows

1024x768. For smooth frame rates, you'll also need to reduce the image quality settings to medium or low.

## What is overclocking?

I recently purchased a Dell Inspiron 580s desktop. I don't understand the meaning of TurboBoost. Can you explain what it means, and what is overclocking? Can you also tell me how to overclock my processor? I have a game *Crysis Warhead*, but when I play the game, it runs very slow. Does it have something to do with the operating system. Can you suggest a solution for it?

My system configuration:  
Intel Core i5 processor  
4 GB DDR3 RAM  
OS: Windows 7 Home Premium  
NVIDIA GeForce G310 graphics card

Pratik

**!** TurboBoost is a kind of auto-overclock feature found on Intel's new line of processors. It automatically sets the processor to run faster. Overclocking is forcing the processor to run faster than its stock speed. This is done by increasing the FSB speed and processor multiplier from the BIOS. It's very risky and you can damage your hardware trying to do it.

You haven't mentioned what graphics card came with your PC. The GeForce G310 is a very entry-level graphics card, which isn't ideal for games such as *Crysis Warhead*. You'll need to upgrade to a faster graphics card such as a GeForce GTX460.

## Questions on Linux

My system configuration is  
MS Windows XP Professional SP2,  
Intel Core 2 Duo CPU E4600 @ 2.40 GHz,  
2 GB X 2 Kingston RAM,  
ZOTAC GeForce 9400GT  
I would like to know some things about Linux. Firstly, will I be able to run Linux OS smoothly on my PC? From where

can I get the Linux OS? Do I need to get a licensed copy of Linux OS? Which is better OS - Windows XP Pro or Linux? Does Linux have better games than Windows XP?

From where can I get your "Fastrack To Ethical Hacking" on the net?  
Prathamesh Parab

**!** Linux is a free and open-source operating system, which quite some people these days are using as an alternative to Windows.

Linux will run smoothly on your PC. Linux is available in the form of different distributions depending on what your needs are. Ubuntu is a popular Linux distribution for new comers.

It's freely available for download from [www.ubuntu.com](http://www.ubuntu.com). Since Linux is free, you do not need a license to run it on your PC.

It's hard to say which of the two operating systems is better. If you like playing games and need to run software that runs on Windows, then it's better that you continue using Windows. Windows has many more games than Linux. You can buy the FastTrack to Ethical Hacking from [www.thinkdigit.com/cart.php](http://www.thinkdigit.com/cart.php).

## PC audio ports

I have a 2-year old PC with the following configuration:

Processor: Intel Core 2 Duo E7400  
2.8 GHz  
Motherboard: Intel DG43NB



Buying previous Digit and Fastrack issues on Thinkdigit.com

## Samsung-Symbian

Samsung has announced that it will stop making Symbian phones post 2010

## LG cancels tablet

LG drops plans of making Android 2.2 tablets, instead focuses on 3.0 devices

Q&A

DVD Writer: Asus  
Graphics Card: Intel X4500  
Sound Card: Realtek HD Audio  
RAM: 2 GB 666 MHz DDR2  
Cabinet: Zebronic Antibiotic  
I want to overclock the processor but I don't know how. Also, my 3.5 mm jacks in the front of my PC are not working.  
Zavid Nikita Mahbub

**!** Overclocking the processor is a somewhat risky thing to do. You can end up damaging the processor and board in the process. You can overclock the system by carefully increasing the CPU multiplier and FSB through the BIOS. The motherboard you are using isn't ideal for overclocking the system though. The front ports of the cabinet may not be working, or they may be disconnected. Look in the manual for the front panel ports for audio. Then, connect the corresponding cables for the audio ports to the motherboard using the bundled cables.

### **?** Lost my graphics card driver CD

I lost my driver CD for my GeForce FX5200 AGP graphics card. I searched NVIDIA's site but I couldn't find the right one. Where can I get the driver for my graphics card?

Sanoob

**!** NVIDIA's site has downloadable drivers for the GeForce FX5200. Click on Download Drivers > Download Drivers. Choose the Product Series as GeForce 5 FX Series, and then the Product itself. Finally, choose the operating system and Search.

### **?** Game recommendations for my PC

I have few queries regarding my PC. Configuration is as follows:  
Motherboard: ASRock G31M-VS.  
Processor: Intel Pentium dual core E5200.  
Ram: 1 GB DDR2 800 MHz.

Graphics card: Palit GeForce 6200TC  
Storage: 80 GB hard disk.  
I wanted to know the actual amount of memory on my graphics card. Can you suggest some games which I can play with this configuration? Is there any DDR2 RAM sticks with 3 GB memory on it. If not, then which RAM would be the best and cheapest with 2 GB DDR2?

Sonu Kumar

**!** Using software such as GPU-z will tell you the exact amount of memory on the card. The GeForce 6200TC is a really old graphics card. You should be able to play games such as Half Life 2, Unreal Tournament 2004, Doom 3, GTA III, etc. DDR2 memory is popularly available only in the 2 GB format. 2 GB of Kingston Value RAM should cost you around ₹2,000.

### **?** C++ compiler refuses to work

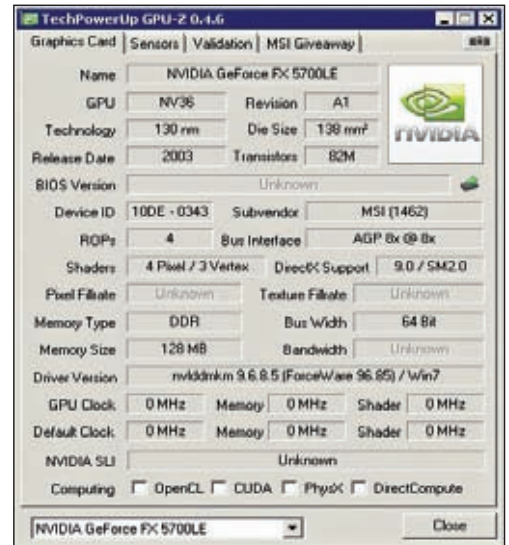
Please suggest a C++ compiler for 64-bit Windows 7. I am unable to find any and I've heard that Turbo C++ is not compatible with Windows.

Sam



Downloading drivers from NVIDIA's web site

**!** One of the easiest solutions to use the DOSBox environment and run the usual Turbo C++ compiler on it. DOSBox is free for download from [www.dosbox.com](http://www.dosbox.com).



GPU-z is a graphics card information utility

### **?** Greasemonkey scripts

Recently, I had logged on to my Orkut account to customise it but failed. I came across some Orkut themes which required some kind of an application called Greasemonkey user script, but I was unable to get it. I would be very grateful if you can show me a better way of customising it, and also are there any ways of sending songs, videos and pictures as a scrap from Orkut? If so, then please help me out.

Swagat Barkakoty

**!** Greasemonkey is a plugin for Firefox. If you use Chrome, you won't need it. Install the addon for Firefox, and you should be able to use those customised themes. Remember that, these themes will only change the way you see Orkut's site, not your friends.

### **?** Installing \*nix system over Windows XP

I want to use this October's DVD and install the Unix operating system. Is it possible to install an Unix OS system on top of Windows XP OS?

Yash Pal

**!** It is possible to install a \*nix distribution once you've installed Windows XP or any other version. Linux will install a bootloader, which on bootup, will give you an option to boot through Linux or Windows. **d**



# Q&A Special

Agent 001 answers all your buying queries

## Q Graphics card purchase tips

I need your help in making up my mind before buying myself a graphics card. I use my machine primarily for gaming and want to upgrade only my GPU to a DX 11 model. At the same time, I don't want a very expensive card as my system config is outdated. I'm looking at a price range of ₹7,000 to ₹9,000.

Is ATI Radeon HD 5770 a good choice or should I opt for a Geforce GTX 460 series card? My config is as follows: Intel Core 2 Duo E8400 @ 3.00 GHz  
ASUS P5Q - E. Transcend 3 x 2 GB Ram @ 800 MHz, Seagate 2 x 500 GB HDD, CoolerMaster eXtreme Power Plus 600 W XFX 8800 GT - Alpha Dog Edition, Samsung 2233 SW Monitor

Jayesh Potdar

**A** The GeForce GTX460 is the faster of the two cards, and I would recommend going for it. Look for overclocked AMP! models from ZOTAC or ASUS's TOP models.

While it's a valid concern, your processor should not be too much of a bottleneck. Just make sure you run games at higher resolutions and with FSAA turned on.

## Q New power supply for upgrade?

My system configuration is as follows:

Intel Core i3-530,  
Intel DH55TC motherboard  
Kingston 2 GB DDR3 RAM  
Samsung 80 GB HDD  
Seagate 500 GB HDD  
XFX 9400GT 1GB  
LG DVD Writer  
Foxin ATX 400 W PSU (No 6 pin connector)  
I am planning to upgrade my system with a GTX460 or GTS450 card. I want to know what PSU I would need to run the system.

Ayan Bhattacharya

**A** Look for the Corsair VX450. It's a stable power supply that should be



The Corsair VX450 is a reliable 450W PSU

sufficient for pretty much any system running a single upper mid-range graphics card.

## Q Suggestions for graphics card

My PC has the following configuration: Compaq Presario desktop  
RAM - 512 MB DDR2  
Motherboard - Intel  
Monitor - BenQ 17-inch

Currently, I'm using Windows Vista Business service pack 2. I have a budget of ₹6,000. Please suggest an ATI graphics card. I also have a few questions: What is a chipset? What are its uses? How can one increase browsing, download and upload speed?

Jack Krauser

**A** The system configuration you have mentioned isn't complete, and it also looks pretty outdated. If you're looking to add a graphics card to play PC games, then I would suggest against it. You need to upgrade the rest of the components before upgrading the graphics card.

A bunch of chips that work hand-in-hand can be called a chipset. Motherboards normally have chipsets. If you are looking for a basic graphics card for desktop use, then look for a GeForce 8400GS, or a Radeon 4350 if you're particularly looking for an AMD card.

Your internet connection speed depends completely on your service provider. There is little you can do to speed it up.

## Q PC upgrade queries

The thing is, I just bought an AOC 18.5 inch LCD monitor. The maximum resolution supported is 1366x768. Currently I am using an Athlon X26000+ with 9500GT. Now, most of the latest games are turning out to be too much for my system to handle. It's time I upgrade my system. I thought of the ASUS M4n68t-m DDR3 motherboard with Corsair 4 GB 1333 MHz RAM. For my CPU, I was contemplating the Phenom II 550. Buying all these leaves me around 7000 INR for my graphics card. Please suggest a good one and also suggest whether my processor upgrade is okay or not. My PSU is 500 W and has a PCI-E power connector.

Soumyajit Ganguly

**A** Look for a Biostar or a Gigabyte AMD785G or 880G-based chipset motherboard. The Phenom 2 555 BE is highly overclockable, and it would be a better option. A Radeon 5750 from XFX or ASUS should fit your budget just fine. The 500 W power supply should run the new graphics card without any problems.

## Q Mobile phone around Rs. 20,000

I want to buy a mobile phone for around ₹20,000. I have shortlisted two phones - Nokia XpressMusic 5800 and N97 mini. Can you suggest which one of the two would be better for multimedia purposes?

Chadan Bora

**A** Nokia Express Music is available under ₹12,000 and N97 mini is around ₹19,000. Features wise both are quite similar except in the camera department; where N97 has a 5MP camera and 5800 has a 3.15 MP one. The major difference however is that N97 has a slide-out full QWERTY keypad while 5800 is complete resistive touchscreen.

Going by value for money, we feel Nokia 5800 makes more sense unless you like the hardware keypad. Other features are quite similar like support for WiFi, same processor etc.

## DNF showcased

Duke Nukem Forever gameplay shown off in Amsterdam; launch rumored to be in early 2011

## Team Fortress 2 trading

Valve adds in-game trading of items for the popular Team Fortress 2 title

Agent 001

### Q Laptop within budget of ₹40,000

I want to buy a lappie. My budget is 40k and I want a config that includes a 500 GB HDD, 4GB RAM and Core i3 or i5 (which ever is better). Can you suggest which one to go in for?

Rahul Sahu

**A** Look at the Dell Inspiron 15 series. There are plenty of models in your price range. You should be able to find Core i5 430M processor configuration with a 500GB drive for a tad over the ₹40,000 mark.



Dell's Inspiron 15 series offer good bang for your buck.

### Q Phone under ₹6,000

I want to buy a mobile for around ₹6000 and I am confused between Nokia X2 and Samsung Champ. Which one is better and does the Champ have a long lasting touchscreen? Any other phone with similar features would do as well.

Rishab Garg

**A** Samsung Champ has a resistive touch screen which is not the best as after prolonged usage you will have to press the screen to generate a response. It has a mediocre 1.3MP camera. On the other hand, Nokia X2 has a regular keypad with a 5MP camera. Also X2 supports Push mail and IM which is a nice addition.

As far as pricing goes X2 is around ₹5,000 and Champ is around ₹4,000. Looking at the specs it's safe to go with the Nokia model. Both are not 3G compliant. Another interesting phone is the Intex IN 6633 which is a QWERTY phone

which has WiFi with a 2 MP camera and is priced at around ₹4,000.

### Q Want to buy a LCD monitor-TV

I want to buy full HD monitor with a screen size between 22 to 24 inches. It should have inbuilt TV plug. My budget is stretchable up to ₹12,500. If possible suggest one with 2ms response time and an LED screen. The TV plug is a must while response time is not so important. My preference is towards the following brands:

Benq, Asus, Acer, Samsung

Vishal Karade

**A** If you want to use composite or component connections to connect your DTH set top box to your LCD monitor, then there aren't any options in your price range. Very basic 24-inch LCD monitors start from around that price range. There are very few displays with TV tuners built into them. The few that have it are priced that high.

Look for the Samsung P2370MS if you can stretch the budget up to ₹15,000 or so. It's a monitor with all the video connectivity options you'll need for a DTH set top box, gaming console or PC. It has built-in speakers as well.

### Q Memory related queries

I wanted to inquire about the process for upgrading the RAM in my Desktop. The PC config is as follows:

Intel Pentium 4, 256 MB DDR2, 80 GB Hard Drive at 7200 rpm, Windows XP Home Edition.

Also, I would like to know about the factors that determine the maximum limit to which RAM can be upgraded. What does MHz have to do with RAM? What would happen if I just upgraded to 4 GB even if my PC supports only 2?

Mrinal Dhar

**A** The maximum limit upto which PC RAM can be upgraded depends on the motherboard itself, and a little bit on the chipset used. The MHz denotes the speed



The Samsung P2370 has all the video connectivity options you would ever need.

of the memory, not the capacity. Faster the memory, the slightly higher performance you get. Faster RAM also allows you space to overclock your system. If you put in more RAM than the motherboard supports, you'll most likely hear error beeps. For your system, you can spend ₹2,000 on a 2 GB RAM stick.

### Q Laptop suggestions required

I have been a regular reader since 2003 and now I need your help to buy a laptop. My budget is ₹60,000 and I need a laptop with good build quality. My requirements are- Intel i7 6MB Cache, 1 GB graphics DX11 (Switchable graphics if available) 15.6" HD screen with the highest possible resolution, a 7200 rpm HDD (or SSD), 250 GB. SATA 3 would be preferred. RAM - 4 GB DDR3. Instant on feature is a must. At least one USB 3.0 port, Finger print scanner, DVD or Blu-ray drive

Navneet

**A** The configuration you're demanding is difficult to find at ₹60,000. The closest models we can suggest are the Lenovo Y560 (59-055616) and HP DV6 (3050TX). They both come with similar configurations as you would like. There are currently no laptops in this price range with SSD drives in them. USB 3.0 and Blu-ray drives are also missing. USB 3.0 is somewhat new and not all manufacturers have updated their configurations. Increasing your budget by another ₹15,000 should get you laptops with SSD and Blu-ray drives though. **d**

**Gingerbread man at Googleplex**

A massive Gingerbread man was placed next to the desserts (Android OS) at the Google campus, indicating the imminent launch of the next version of Android

# SPEND SMART

The latest peripheral prices updated every month. Go ahead, shop this festive season

Processors					
Brand	Model	Market Price (₹)	Socket/Interface	Number of cores	Clock speed
AMD	Athlon II X2 250	3,500	AM3	2	3.00 GHz
AMD	Athlon II X3 440	4,500	AM3	3	3.00 GHz
AMD	Phenom II X2 550 Black Edition	4,940	AM3	2	3.10 GHz
AMD	Athlon II X4 630	5,150	AM3	4	2.80 GHz
AMD	Phenom II X4 925	7,110	AM3	4	2.80 GHz
AMD	Phenom II X6 1055T	11,250	AM3	6	2.80 GHz
AMD	Phenom II X6 1090T	16,030	AM3	6	3.20 GHz
Intel	Core i3-530	5,620	LGA 1156	2	2.93 GHz
Intel	Core i3-540	6,440	LGA 1156	2	3.06 GHz
Intel	Core i5-650	9,270	LGA 1156	2	3.20 GHz
Intel	Core i5-661	10,470	LGA 1156	4	2.66 GHz
Intel	Core i5-760	14,880	LGA 1156	4	2.80 GHz
Intel	Core i7 940	14,940	LGA 1156	4	2.93 GHz
Intel	Core i7-930	15,410	LGA 1366	4	2.80 GHz
Intel	Core i7-960	29,760	LGA 1366	4	3.20 GHz
Intel	Core i7-980X	55,530	LGA 1366	6	3.33 GHz

Motherboards - AMD					
Brand	Model	Market Price (₹)	Socket/Interface	Chipset	PCI X16/PCI/SATA/USB
Asus	M2N68-AM Plus	2,530	AM2+	NVIDIA Geforce 7025/nForce 630a	1/2/4/4
Asus	M4A785TD-V Evo	6,650	AM3	AMD 785G + AMD SB710	1/3/5/6
Asus	M4A78T-E	6,930	AM3	AMD 790GX + SB750	2/2/2/5
Asus	M4A79 Deluxe	12,550	AM3	AMD 790FX + SB750	4/2/5/12
Biostar	TA785GE	3,940	AM2+	AMD 785G + AMD SB710	1/2/6/7
Biostar	TA880GB+	6,390	AM3	AMD 880G + AMD SB710	1/2/6/7
Biostar	A880G+	5,870	AM3	AMD 880G + AMD SB710	1/2/4/6
Biostar	TA880G HD	7,830	AM3	AMD 880G + AMD SB850	1/2/6/7
Gigabyte	GA-M68M-S2P	2,400	AM2	NVIDIA GeForce 7025 + nForce 630a	1/2/4/8
Gigabyte	GA-MA785GMT-US2H	5,260	AM3	AMD 785G + AMD SB710	1/2/5/6
Gigabyte	GA-880GM-USB3	5,570	AM3	AMD 880G + AMD SB710	1/2/5/12
MSI	K9N6PGM2-V	2,270	AM2+/AM2	NVIDIA GeForce 6100	1/2/2/4
MSI	785GM-E51	4,500	AM3	AMD 785G + SB710	1/1/2/5
MSI	785G-E53	5,260	AM3	AMD 785G + AMD SB710	1/2/5/6
MSI	890FXA-GD70	10,150	AM3	AMD RD890 + AMD SB850	2/2/6/14

Motherboards - Intel					
Brand	Model	Market Price (₹)	Socket/Interface	Chipset	PCI X16/PCI/SATA/USB
Asus	P5G41-M LE	2,830	LGA 775	Intel G41 + ICH7	1/2/4/4
Asus	P5Q-VM	5,490	LGA 775	Intel G45 + ICH10	1/1/6/12
Asus	Rampage II Exteme	26,060	LGA 1366	Intel X58 + Intel ICH10R	2/2/6/12
Biostar	TPower I55	11,900	LGA 1156	Intel P55	2/2/6/8
Gigabyte	GA-G41M-Combo	2,660	LGA 775	Intel G41 + Intel ICH7	1/2/4/2
Gigabyte	GA-H55M-D2H	4,460	LGA 1156	Intel H55 Express	1/2/6/12
Gigabyte	GA-H55M-S2H	5,100	LGA 1156	Intel H55 Express	1/2/6/12
Gigabyte	GA-X58A-UD3R	11,560	LGA 1366	Intel X58 Express + Intel ICH10R	2/1/8/10
Gigabyte	Rampage II Gene	15,740	LGA 1366	Intel X58 + Intel ICH10R	2/1/6/12
MSI	G31TM-P35	2,600	LGA 775	Intel G31 + ICH7	1/2/4/4
MSI	G41TM-P33	2,680	LGA 775	Intel G41 + ICH7	1/2/4/4
MSI	P55M-GD45	5,640	LGA 1156	Intel P55	2/1/6/10
MSI	P55-CD53	6,080	LGA 1156	Intel P55	1/3/8/10



## Google Music India

Google Music Search (India) is a free legal online music service catering to Indian audiences and streams Bollywood songs as of now in partnership with three Indian companies

### Laptops

Brand	Model	Market Price (₹)	Processor	OS	Memory
Acer	5745	34,600	Intel Core i5	Linux	4 GB
Acer	5745 G	43,600	Intel Core i5	Win 7 HP	2 GB
Asus	1001P	16,970	Intel Atom	Win XP Home	1 GB
Asus	K40AF	33,940	AMD Turion X2	DOS	4 GB
Asus	A52JR	41,920	Intel Core i3	Win 7 HB	4 GB
Compaq	CQ41-221AU	30,030	AMD Athlon II Dual-Core	Win 7 HB	3 GB
Dell	1014	29,290	Intel Core 2 Duo	Linux	2 GB
Dell	1464	34,650	Intel Core i3	Win 7 HB	2 GB
Dell	1464	36,470	Intel Core i3	Win 7 HB	3 GB
Dell	1564	40,710	Intel Core i3	Win 7 HB	4 GB
Fujitsu	AH530	42,410	Intel Core i5	Win 7 HP	2 GB
HP	Mini 210-1099TU	17,225	Intel Atom	Win 7 starter	1 GB
HP	CQ62-105	34,350	Intel Core i3	Win 7 Pro	3 GB
HP	DV4-2113TU	37,950	Intel Core i3	Win 7 HP	2 GB
HP	DV6-3009TU	38,700	Intel Core i3	Win 7 HP	2 GB
HP	DV6-3011TU	38,700	Intel Core i3	Win 7 HP	2 GB
iBall	Lilbook-1044	18,890	Intel Atom	Linux	2 GB
Lenovo	B450	30,560	Intel Pentium Dual Core	DOS	2 GB
Lenovo	G560	35,860	Intel Core i3	Win 7 HP	3 GB
Lenovo	ThinkPad Edge 14	43,130	Intel Core i5	Win 7 Pro	2 GB
Lenovo	V460	48,280	Intel Core i3	Win 7 Pro	4 GB
Lenovo	V460	50,710	Intel Core i5	Win 7 Pro	4 GB
MSI	U100	14,000	Intel Atom	Win XP Home	1 GB
MSI	Wind U135 Atom	17,290	Intel Atom	Win 7 Starter	1 GB
MSI	CX500	35,850	Intel Core 2 Duo	Win 7 HP	4 GB
MSI	CX420	41,330	Intel Core i5	Win 7 HP	4 GB
Samsung	N210	21,100	Intel Atom	Win 7 Starter	2 GB
Samsung	R428	33,320	Intel Core i3	DOS	4 GB
Samsung	NP-R439-DT03IN	35,980	Intel Core i3	DOS	4 GB
Samsung	NP-R430-JA04	36,140	Intel Core 2 Duo	Win 7 HP	4 GB
Samsung	R480	43,740	Intel Core i3	Win 7 HP	4 GB
Sony	VPCEA3BGN	43,180	Intel Core i3	Win 7 Pro	2 GB
Sony	VPCEA35F/P	46,060	Intel Core i3	Win 7 HB	4 GB
Sony	VPCS133GN	50,860	Intel Core i3	Win 7 Pro	3 GB
Sony	VPCEA36FG/G	55,660	Intel Core i5	Win 7 HB	4 GB
Sony	VPCEC35FG	62,360	Intel Core i5	Win 7 HB	4 GB
Sony	VPCF137HG	124,660	Intel Core i7	Win 7 Ultimate	8 GB
Toshiba	NB250-A1110	20,020	Intel Atom	Win 7 Starter	1 GB
Toshiba	L640-M4010	30,810	AMD Athlon Dual Core	DOS	3 GB
Toshiba	L640-I4012	34,550	Intel Core i3	DOS	8 GB
Toshiba	L640-I4011	35,040	Intel Core i3	DOS	8 GB
Toshiba	C640-I4531	44,240	Intel Core i3	Win 7 Pro	8 GB

### Camcorders

Brand	Model	Market Price (₹)	Optical Zoom	Aperture
Canon	FS 36	19,200	37x	f/2-5.2 mm
Canon	HF R17	30,130	20x	f/1.8-3.6 mm
Canon	HF S200	57,480	10x	f/1.8-3.0 mm
Canon	HF S21	79,620	10x	f/1.8-3.0 mm
Samsung	C20	9,070	10x	f/1.8-2.4 mm
Samsung	F40	10,900	52x	f/1.8 mm
Samsung	F33	15,270	34x	f/1.6-4.3 mm
Samsung	K45	17,390	52x	f/1.8 mm
Sony	DCR-SX63E	16,280	60x	f1.8-f6 mm
Sony	DCR-SR88E	22,990	60x	f/1.8-6.0 mm
Sony	XR 150	37,080	25x	f/1.8-3.2 mm
Sony	XR 550	55,620	10x	f/1.8-3.4 mm

### Projectors

Brand	Model	Market Price (₹)	Type	Brightness
BenQ	MP515	27,810	DLP	2500 Lumens
LG	BS275	31,110	DLP	2700 Lumens
LG	HX-301-G	66,950	DLP	270 Lumens
LG	DX540	102,180	DLP	4000 Lumens
Sharp	XR50S	37,080	DLP	2700 Lumens
Sharp	PGF-200-X	46,930	DLP	2100 Lumens
Sharp	PGD2500	50,990	DLP	2500 Lumens
Sharp	PGF312X	75,320	DLP	3000 Lumens
Sharp	PGD-3510-X	93,280	DLP	3500 lumens
Sony	VPL-EX7	38,320	LCD	2000 Lumens
Sony	VPL-EX70	53,770	LCD	2500 Lumens
Sony	VPLEX130	73,860	LCD	3000 lumens

**Apple's Quarter**

Apple sells 14.1mn iPhones, scores another record-breaking quarter

**Sony's Treat!**

Sony's Xperia X10 gets an Eclair Treat with HD video playback. Now it boasts 720p video recording

# Taking the first step towards protecting your investment

This Diwali, make sure you're buying smart, and buying safe; it is your hard-earned money we're talking about here after all, isn't it?

**T**he technology industry has scaled new heights over the past few years. However, so have your problems as a consumer. Products just aren't built the way they used to be, and if you're not careful, you might end up with a dud, and one you paid a pretty penny for too. How do you avoid getting ripped-off, when you go out and buy this festival season? It's hard isn't it, with thousands of offers being thrown in your face, and cut-throat price wars vying for your attention.

All you really have on your side is knowledge. If you prepare yourself you can navigate through the treacherous waters that our shopping malls have become – relatively unscathed. It is, after all, a lot better to be careful before you buy than to run about from pillar to post trying to get a faulty product repaired, or approaching a consumer court to try and get some justice, if you were cheated.

The operative word here is “consumer”. This is because as a consumer, you graduate from being a mere buyer, to someone, anyone, who consumes the goods or services that you (or someone else) paid for. This could be eatables bought from a shop, a service you paid for, or basically anything in which a monetary transaction was involved.

The Consumer Protection Act of 1986 confirms this, by dealing with the word “consumer” in two ways. The first is with respect to goods, and the second pertains to services. This is important to know, because the term consumer covers a lot more; it includes not just the person who actually paid for a

product or service, but also the person who consumed it. For example, if your parents bought you a gadget – although the bill may be in your father's name, if something went wrong, both you and your father would have equal rights to demand compensation as per the warranty terms and conditions, and also be equally eligible to initiate action against a service provider or seller, who did not fulfill the promise of warranty.

Before any purchase, you should use any means to find out more about the actual product/service and the brand name you're paying for. You can do this by consulting with other buyers, or just looking up reviews online. There are dedicated web sites that provide immense information and comparisons of products, without the bias of a seller

be there today. Try getting a replacement if something goes wrong, and you could even get beaten up in extreme cases. And for what? A few Rupees less? Is it really worth the hassle? Also, you could be buying pirated products, or cheap knock-offs, and paying almost full price!

## Brands and warranties

A lot of new companies enter the market well-prepared, and are often looking to gain as much market share by giving you irresistible offers. Before you buy anything from a new brand, try and find out more about them. For example, don't be afraid to ask the seller how many of the brand's service centres are in your city, and how many are near your home or office. Also make it a point to read their warranty terms. Sometimes you might find that new brands offer better warranty terms, such as an onsite warranty, as opposed to carry-in by other brands. Of course the reverse might also hold true, as not all new brands can afford this. In certain

categories, such as TVs or refrigerators, where an onsite warranty is the norm, it's all the more important to check the terms for a new brand, and not just assume that everything's as expected.



## We can help!

If you're facing a problem with your purchase, write to us at [help@consumermate.com](mailto:help@consumermate.com)

who may just be trying to offload the stock that hasn't been selling.

## Where you buy

Next on your list of things to be careful about is where you're buying your product from. It's obviously better to buy from more reputed outlets, and try as far as possible to avoid roadside vendors for important technology purchases. You never know what you're getting from these roadside shops, and many of them are fly-by-night operators. Just because you saw them there yesterday, doesn't guarantee that they'll

## Expert buying advice

Visit [Consumermate.com](http://Consumermate.com) for expert buying advice and comprehensive information on Laptops, Mobiles, TVs, Cameras and Camcorders

## Great news!

Physics says cell phones can't cause cancer  
<http://goo.gl/kv2N>

## Angry birds flying

Android users can now download the full version of the popular Angry Birds game from [getjar.com](http://getjar.com) or the Market

Consumer protection

## Know your rights

### Warranty cards

Another mistake we're almost always culpable of is worrying about the price, and not the documentation. Make sure to get those warranty documents stamped and filled out.

Although most of us don't really care about this, and most big brands will still honour their warranty just by looking at your bill, don't assume that this will always be the case. By law, if the warranty card is not filled out properly by the dealer, the brand has the right to refuse you service. If you don't believe us, read the fine print on the warranty card.

Why take chances with expensive purchases, when it will only waste a few minutes of your time to get the dealer to fill it out?

### MRP

The maximum retail price (MRP) of a product is binding by law. You have the right to lodge a complaint with the Weights and

Measurement Department, or with a consumer court, if anyone sells you a product for more than the MRP. Remember to get the bill of course, so that you can prove it.

In all honesty, if someone tries and sells you something at MRP in the tech field, just walk away – almost every gadget we've ever come across is sold lower than MRP. It has been known to happen though, and vendors claim that this is because of a price rise – however, by law, all old stock has to be sold at the old prices that were in force when the seller purchased it from the distributor.

### Precautions

It is also the duty of the manufacturing company to clearly inform you about specific details of a product. For example, if a mixer-grinder should not be run continuously for more than a specific time, then it is the duty of the company to warn you of that through the documentation provided.

### Warranty cards

Finally, if for some reason, despite all the precautions you take, you find yourself being denied your rights, you should file a complaint in consumer court. You can even argue your own case, since a lawyer is not mandatory. You need to make sure that you have filed a formal complaint with the manufacturer before approaching the courts, though, in order to give the manufacturer the opportunity to address your grievances. In fact, it is often beneficial to your case if you've made formal complaints and sent notices to the manufacturer, which might tilt the court's decision in your favour.

Another advantage of issuing these notices is that the matter is often escalated within the company, and you might find your problem gets resolved quicker.

At the end of the day, all that matters is that you have peace of mind, and are not cheated out of your hard-earned money. **1**

## COMPLAINTS RECEIVED

### Mobile Phones

#### Case File #983

#### Coolpad mobiles are not providing essential accessories like charger

Coolpad mobiles are not providing essential accessories like charger. I have purchased a Coolpad 2938 mobile phone from Reliance store in Hiranandani. The charger of the phone started malfunctioning and I am not able to get the new charger of this phone in open market. The Reliance store directed me to go to Coolpad service center. But their response is very bad despite writing to their head office in Chennai.

I am unable to use the phone and want to make a legal complaint against this dealer and manufacturer.

**Zubair Ahmed Khan Sarguroh**

#### Answer by Consumermate:

Dear Customer,  
It is duty of the company to provide you

the essential accessories of the product without which proper functioning of the products are not possible. You are right in saying that you can file a consumer complaint with consumer court for the same. Before doing that write a letter to them in shape of a legal demand notice to arrange a charger for you within two weeks time failing which you can go ahead with your complaint. I hope some sense will prevail over them and they will arrange charger for you.

### Laptops

#### Case File #1009

#### Not getting the delivery of Laptop

I have booked a laptop and made 100% payment on 27.07.10 my Order No is 840079839. My Quotation number is 24019051 and customer reference number is 781878697. The dealer through whom I have booked the laptop is not responding to me. I have asked them to mail me final date of delivery

but still it is not committed by the sales person nor any customer care executive. Now I am worried whether I will get the laptop or not.

**Sona Kelshiker**

#### Answer by Consumermate:

Dear Consumer,  
Thanks for sharing your grievances with us. But you have not made clear that from where have booked the product. It's not a new case that a company backing out once the product is sold and consideration received. Anyways, you can address a registered letter to the company calling upon them to deliver the product within two weeks. In this case, you should file a complaint before the consumer forum and before the police as well as it may be case of fraud subject to facts of your case. I hope this would be sufficient for the purpose they will deliver the product if they would be sensible enough.

# KILLER RIGS

everything you will ever need to build your own PC. whatever your budget.

- Basic rig = ₹20,545
- Multimedia cum gaming rig = ₹30,415
- High-end Multimedia / Gaming rig = ₹45,395
- High-end gaming PC = ₹58,870
- Ultra high-end PC / Gaming rig = ₹1,59,805

## PRIMARY COMPONENTS



### PROCESSOR

- AMD Athlon II X2 245 / ₹2,750
- AMD Athlon II X4 635 / ₹4,975
- Phenom X4 945 / ₹6,650
- Intel Core i5 760 / ₹9,800
- Intel Core i7 960 / ₹26,500



### MOTHERBOARD

- ASUS NVIDIA 7025 M2N68-AM / ₹2,200
- Gigabyte MA78GM-US2H / ₹4,200
- ASUS M4A78-PRO / ₹5,850
- Biostar Tpower P55 / ₹6,700
- ASUS P6T Deluxe V2 / ₹19,300



### RAM

- 2 x 1 GB DDR2 800 MHz (Kingston) / ₹2,250
- 2 x 1 GB DDR2 800 MHz (Kingston) / ₹2,250
- 2 x 2 GB DDR2 800 MHz (Transcend) / ₹3,900
- 2 x 2 GB DDR3 1333 MHz (Kingston) / ₹3,750
- 3 x 2 GB Kingston HyperX T1 2,000 MHz / ₹10,800

### GRAPHICS CARD

- None
- Galaxy GeForce GT240 / ₹4,750
- Powercolor Radeon HD 5750 / ₹7,525
- XFX Radeon HD 5850 / ₹16,200
- ASUS GeForce GTX 470 x2 (SLI) / ₹41,400



### HARD DRIVE

- Seagate 500 GB 7200.11 / ₹1,850
- Seagate 500 GB 7200.11 / ₹1,850
- Seagate 1 TB 7200.12 / ₹2,850
- Seagate 1 TB 7200.12 / ₹2,850
- WD Black Edition 1 TB x2 / ₹9,000

### MONITOR

- Dell S2009W / ₹6,975
- AOC 2236Vw / ₹7,870
- AOC 2236Vw / ₹7,870
- AOC 2236Vw / ₹7,870
- BenQ G2420HD / ₹11,300



### CABINET



- NZXT Gamma Classic / ₹2,140
- NZXT Gamma Classic / ₹2,140
- Cooler Master 690 / ₹4,200
- Cooler Master 690 / ₹4,200
- Cooler Master HAF 922 / ₹6,600

### SOUND CARD

- None
- None
- None
- None
- ASUS Xonar DX / ₹4,300



## SECONDARY COMPONENTS

### POWER SUPPLY



- VIP 350 Watts / ₹850
- VIP 400W Gold / ₹850
- Corsair VX450 / ₹3,700
- Corsair VX450 / ₹3,700
- Corsair HX850W / ₹9,500



### SPEAKER

- None
- None
- Altec Lansing VS2621 / ₹1,650
- Altec Lansing VS2621 / ₹1,650
- Altec Lansing MX 5021 / ₹6,500



### MOUSE



- Logitech 3 button scroll / ₹300
- Logitech 3 button scroll / ₹300
- Logitech MX518 / ₹1,200
- Logitech MX518 / ₹1,200
- Logitech G5 / ₹3,595



### OPTICAL DRIVE

- LG H55N / ₹950
- LG H55N / ₹950
- LG H55N / ₹950
- LG H55N / ₹950
- LG WH10L.S30 / ₹11,010

### KEYBOARD

- Logitech Classic K100 / ₹280
- Logitech Classic K100 / ₹280
- Logitech Multimedia / ₹450
- Logitech Multimedia / ₹450
- Logitech G15 / ₹4,200

## MISCELLANEOUS

### TABLET



- None
- iBall Design Tablet PFI209 / ₹8,750
- Wacom Intuos4 Medium (PTK-640) ₹21,280



### MOUSEPAD

- None
- Razer Goliathus Speed (Oversized) / ₹1,300
- Everglide Titan / ₹1,450
- Steel Series QCK Heavy / ₹2,000



### HEADPHONES

- None
- Sennheiser HD 202 / ₹1,430
- Sennheiser HD 280 Pro / ₹5,280



### GAMING CONTROLLERS

- MS Xbox 360 Controller / ₹1,300
- Logitech Momo / ₹5,400
- Logitech G27 / ₹15,020



### PRINTING SOLUTIONS

- Canon PIXMA iP1980 / ₹1,750
- Canon iP3680 / ₹5,050
- Epson B-500DN / ₹21,250



### POWER PROTECTION

- None
- APC 600 VA / ₹1,800
- Numeric 1 KVA / ₹4,100

# worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

## (MUST READS)

### THE COOLEST THING \$300 CAN BUY



And no it's not an iPod Touch. It's this really crazy quadcopter called Parrot AR.Drone. Controlled with an iPhone it has two cameras, an onboard computer running Linux, and the ability to play virtual games with real-world hardware. Watch:

<http://www.youtube.com/ardrone>

### THE DEATH DELUSION

Take a detour from technology and have a look at this philosophical take on some of the toughest questions we face in life: Are we really going to die eventually?

<http://bit.ly/dq3qGF>

### THE MAC APP STORE!?

With its latest edition of the Mac OS (dubbed Lion), Apple plans to bring "Managed Software Distribution", found on iOS, to the Personal Computer. We fail to see how this is different from package managers or software repositories that we've seen on Linux since forever. Oh wait you'll probably have to pay for software here.

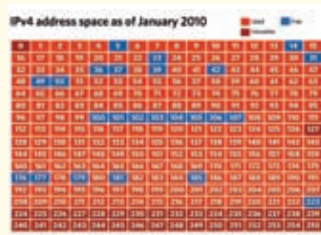
<http://zd.net/cvC7SK>

## (ars technicaCorner) FROM GEEK TO CHIC: A DECADE OF SMARTPHONE EVOLUTION



Over the past ten years, the smartphone has gone from a large, belt-holstered badge of geekiness to a mass-market mobile computing platform. In this photo enhanced feature Ars Technica surveys the last ten years or so of smartphone history with a look at two important smartphones from each year. A must see article with must read comments.

<http://bit.ly/b8axLz>



#### There is no Plan B

The internet is running out of addresses. Find out why the transition from the current internet protocol version 4, which is quickly running out of addresses, to the new version 6 might be a messy affair

<http://bit.ly/dBpblm>



#### Intel: Atom definitely not cannibalized by tablets

Intel insists that the "dominant factor" in Atom's slowdown was not tablets but softness in consumer spending. Read this interesting analysis of the two overlapping segments

<http://bit.ly/92WGaP>

STEVE JOBS HAS BEEN KIDNAPPED BY NINJAS. ARE YOU A BAD ENOUGH TROLL TO RESCUE STEVE JOBS?



#### Platform trolling: Windows edition

A tongue in cheek look at the historical platform wars between Mac fanboys and PC enthusiasts. This is one portrays PCs as irredeemably awful clumsy beings, while Macs as the only sensible choice

<http://bit.ly/dBpblm>

### TWITTER IS QUITE USELESS

Renowned author Malcolm Gladwell puts up a convincing case on how so-called social activism on Twitter and Facebook is quite hollow when compared to real social movements in the past.  
<http://nyr.kr/9Y92DZ>

### BRAIN-MACHINE INTERFACE



Experiments in this field have been going on for some time. The latest is from the University of Tokyo where they've made this rat control a little car with his mind.  
<http://bit.ly/cdlgkU>

### NANOWRIMO GUIDE

Don't understand what you just read up there? It stands for National Novel Writing Month, a monumental project that gets participants to write an entire 50,000 word novel in a month. Here's a Wired Wiki to teach you how.  
<http://bit.ly/c23eZ1>

### THE BATTLE RAGES ON

US citizens could soon find themselves joining Iranians and Chinese in being blocked from accessing broad chunks of the public Internet. Have a look at this report and the supporting petition. What is interesting though is that Demonoid is supporting it!  
<http://huff.to/a0lcAv>

SHORTS

# ExtremeTech: Overclocking Guide 2010

- By Joel Durham Jr. and Denny Atkin



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Holdings Inc.

If you use your computer for any demanding tasks such as gaming, video editing, or transcoding, there's little reason not to overclock. You'll get faster frame rates, quicker renders, and the performance of a system costing hundreds of dollars more. How can you say no to that?

## The Overall Overclocking Technique

Before disclosing the basic overclocking technique that works for everything, there's

one word we really want you to become familiar with: stability.

The key to a successful overclock is being able to use the computer when you're done. That means: You can play games, crunch numbers, transcode video, sync your iPod, or whatever, without the PC locking up, crashing, or suddenly rebooting. If the PC isn't stable, your overclock is a failure.

Anyone can say they got their 2.66-GHz CPU up to 4 GHz with the stock cooler if all it did was POST before it crashed, or even if it ran Windows but crashed when you moved the mouse. We're going to talk about stability testing, which is one of the

necessary steps of overclocking. Passing a stability test is mandatory before you can say you've overclocked anything.

## Our technique for overclocking any part (we'll get into specifics later) is simple:

**1. Tweak.** Raise the clock frequency just a small amount. Overclocking requires baby steps. If you're overclocking a multiplier-unlocked CPU, raise it one number at a time. Raise the Base Clock maybe five to ten megahertz at a time. Same with the graphics core and/or memory. And also, don't change two settings at once.

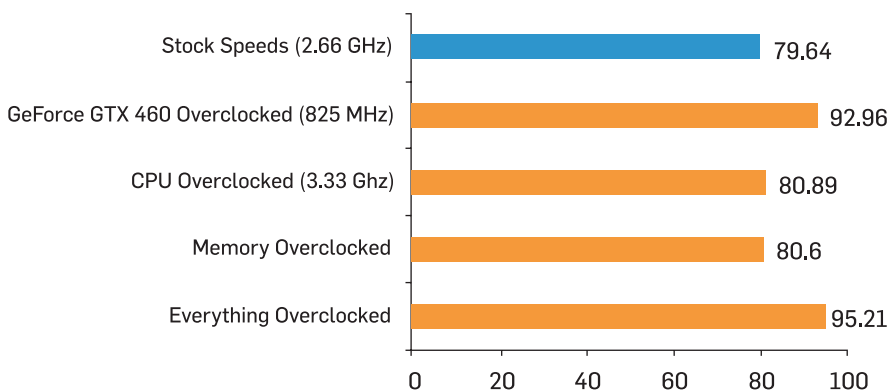
**2. Boot.** Watch the system as it boots. Does it POST? Is the RAM count correct? Does the boot take longer than it usually does? Watch for any signs that your computer isn't acting normally; they could be signs of instability.

**3. Test.** Run a stability test. We usually test CPUs and memory with Prime95 (running one instance per core) for 30 minutes. We prefer to test GPUs by playing a nice, long session of a very recent, graphically intense game. You can also set 3DMark Vantage to loop its Extreme test, but a video card stability test is more effective if you're constantly watching the screen for glitches.

**4. Repeat.** In other words, return to step 1. If the overclock passes your stability test, raise the frequency or multiplier further.

If Step 3 fails, drop back a notch and run the stability test again. Once you've found the absolute fastest frequencies your computer's components can run, you've completed your overclocking experiment.

Far Cry 2 Dx10 (in fps, higher is better)



If you had any doubts about why to Overclock, here's why.

Note: Read these charts knowing that the overclocks they show are modest ones, and they're up just for the sake of argument. Imagine what you could do if you really pushed your stuff!

### BLUE SCREEN OF DEATH LIVES ON

A gallery comprising screenshots of the infamous error appearing at the most inopportune moments (for Microsoft) throughout history. From Hoardings to airport flight schedule screens and even the Windows 98 launch ceremony! <http://zd.net/brqpdG>

### 2 BILLION NETIZENS

A United Nations agency recently found that number of Internet users will surpass two billion by the end of this year. That's a third of the world's population connected! Read this report on how developing countries need to step up access. <http://reut.rs/cf2wYA>



### SMARTPHONE PHOTOGRAPHY

That dSLRs can take good shots could be a wrong assumption, after all. With the rate at which pixelage and image processing is constantly improving in smartphones, it's not at all surprising that Wired Magazine's recent iPhoneography contest got some awesome entries. Check out the gallery for winners and other pictures that were handpicked by Wired. <http://bit.ly/bFbjV4>

### Here are several things to be aware of

When you overclock a PC, you can no longer truly count on it being stable. The PC was not designed to run with different things at different clock rates that aren't necessarily compatible with each other. What you gain in performance you lose in peace of mind: This thing could crash at any moment.

Never overclock a PC with critical data on it. Overclocking affects the memory and the CPU, and those in turn affect data written on the hard drive. Overclocking can end with corrupted data. You could lose stuff. Keep your overclocking relegated to gaming machines, graphics workstations—anything except a PC with mission-critical or personally valuable data on it. If you do choose to overclock your everyday PC, make

sure you back up your important data on a regular basis.

To get Prime95 to run on multiple cores, you must first tweak the desktop shortcut and then tweak the running program. First, open the desktop shortcut properties sheet and the command line switch Ax to the end of the Target box,

where x = the number of instances you need to run (2 for a dual-core, 4 for a quad-core, etc.) Then, launch the program as many times as you need. Finally, in each instance of the program, click Advanced, go to Affinity, and the Specific CPU to run on box, enter 0 for the first core in the first instance and click OK; 1 for the second core in the second instance; and so on. Then you can start your CPU torture tests.

When torture-testing the CPU, monitor the temperature with whatever monitoring tool came with your motherboard. If you don't have a monitoring tool, go to the motherboard's manufacturing page, find the downloads for your specific model, and download the utility.

If you overclock too high and the PC won't POST, you have to reset the CMOS. There's usu-



Overclocking on an ASUS motherboard

ally a switch or a jumper on the motherboard specifically for this purpose. If, for some reason, the switch or jumper doesn't work, or there isn't one at all, power down the PC, unplug it, open the case, and pop out the small, round, disc-shaped battery for about ten minutes. Then, replace it and power back up. The BIOS setup program will be at pure defaults.

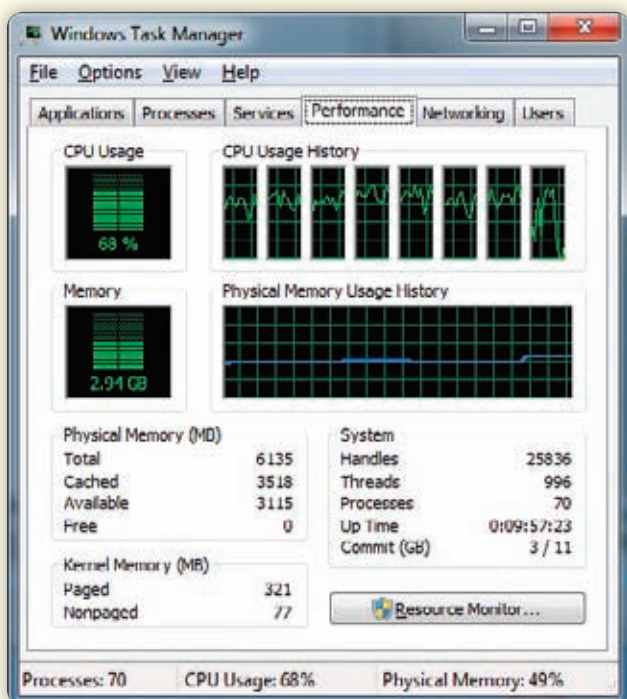
Overclocking doesn't raise the amount of voltage a power supply draws from the wall. We purchased a power meter and tested an overclocked system that drew 119 watts before overclocking, and drew 120 watts while overclocked at 10 percent over spec

### Overclocking a CPU

First off, let's get this out of the way: There are utilities that allow you to overclock a CPU through a Windows desktop.

Ignore them.

Changing the speed your computer runs at on the fly can sometimes result in a system freeze or crash. Even worse, there have been times we have used such a utility, rebooted, and encountered a machine unable to POST. Do your overclocking through the BIOS setup utility. Trust us.



Windows Task Manager

### THE INTERNET OF THINGS

Chances are you've already come across this phrase. It basically indicates an emerging trend wherein more and more 'things' rather than people are connecting to the internet. The result is a "a kind of global data field". Watch the video by IBM featured in this piece: <http://rww.to/c9fpQF>

### QR CODES FOR EVERYONE

Surely you would've come across those squiggly little boxes with data embedded in them some where or the other - be it the last page of a newspaper or some add asking you to point your phone at it. Here's a six step how-to from Mashable that teaches you how to make your own QR codes in a jiffy. <http://on.mash.to/dtcTbe>

### GOOGLE TV: BOOM OR BUST



What makes Google and others think we want the internet on the idiot box? Here's an in-depth look at various approaches in this space including Google TV, Apple TV and Roku <http://bit.ly/b3wWp0>

### TWITTER PREDICTS STOCKMARKETS NOW?

According to a recent study, the emotional upheavals on twitter can predict changes in the Dow Jones three days later, with an accuracy of almost 80 per cent. Of course one mustn't forget the randomness of the markets in the first place and the ability of researchers to co-relate anything. <http://bit.ly/aWDEWP>

There are two ways to overclock some CPUs, but many only support one of the methods. Extreme Edition Intel Core-series and Pentium CPUs, and AMD FX and Black Edition CPUs, allow you to tweak the multiplier. Older Pentium-series and Core 2 processors require you to tweak the FSB (front-side bus). The Intel Core i3, i5, and i7 chips, and the AMD Athlon and Phenom CPUs, don't use an FSB. Instead, the Core i-series chips use a Base Clock, which AMD BIOSes typically refer to as Bus Speed, so you tweak these values instead. We're using Base Clock as an umbrella term for ease of writing this article.

With the Intel Core i-series chips, the CPU's frequency is the Base Clock times the CPU ratio. For instance, a Core i7-965 Extreme Edition CPU has a Base Clock of 133 MHz, and a ratio multiplier of 24, giving a speed of 3.2 GHz (133 MHz x 24 = 3,200 MHz or 3.2 GHz). Note that the numbers are actually rounded, since the base clock is actually 133.33 MHz.

If we then raise the ratio to 27, the CPU's frequency is now 3.6 GHz. (133MHz x 27 = 3600 MHz or 3.6 GHz). That, if stable, is a fairly decent overclock.

For an older Core 2 or Pentium CPU, the method is the same, except you tweak the FSB or Bus Speed values instead of the Base Clock.

To sum up, raising either the Base Clock or the CPU multiplier overclocks the CPU. Most modern BIOS interfaces let you tweak either value. But where you find the CPU speed settings

varies depending on the motherboard. For instance, on an Asus motherboard, you'll find them under the heading of "AI Tweaker," whereas MSI categorizes them under "Cell Menu."

### Raising CPU and Memory Voltage

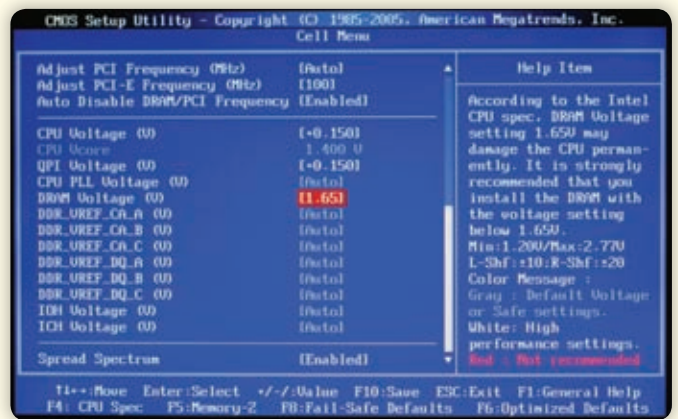
Sometimes you actually have to increase the voltage going to a part in order to successfully overclock it. If you've pushed a component too fast and the PC won't POST, before moving it a step back, raise its voltage ever so slightly.

This requires a bit of research, as different CPUs and memory modules have different

voltages. Some fast memory modules, for instance, require you to raise the RAM voltage above the standard value just to run at their rated speed.

Raise voltage sparingly, and only one selection at a time. Too much voltage is one of the rare things that actually can kill a component dead. We make it a rule of thumb never to raise voltage more than 15 percent; if a component needs more than that for a successful overclock, we're not interested.

Also, a word of warning for owners of Intel Core i-series CPUs: Because the memory controller is inside the CPU package rather than on the motherboard chipset, you must use caution when raising the memory voltage. Raising the voltage past 1.65V can shorten the life-time of, or even damage, your CPU. Some older high-speed DDR3 memory



Increasing Voltage On A MSI Motherboard



Adjusting clock speeds for the graphics card under the Nvidia Control Panel



## A CHIP IS BORN

Ever wondered how those tiny monsters of calculation are made? The process involves ultraclean sealed chambers, robot arms, containment suits, and tanks of caustic chemicals. Have a look at this photo essay from the Gadget Lab.



<http://bit.ly/cMWJK9>

## SOME GOOGLE BASHING PLEASE

Google's last attempt at breaking the social networking code, resulted in the somewhat botched, and at the same time marginally popular Google Buzz. Read this NYT report to know some of Google's short comings in this space and future plans. Will Google knockout Facebook? One thing they want to steer clear from is making people enter personal info all over again. No one wants to fill up another form, right?

<http://nyti.ms/d5wRub>

## THE AGE OF EXABYTES

There's no doubt about the fact that we are experiencing a big data explosion. From just five exabytes of data being online at one time, recent estimates put monthly internet data flow at around 21 exabytes of data. Get your hands on this free report titled "The Age of Exabytes" from ReadWriteWeb and learn how you can manage large volumes of data.

<http://rww.to/byybaN>

modules, released before the Core i7, actually recommended voltages of 1.8 to 2V. You can still use these on Core i-series systems, but because you'll have to keep the voltage down to 1.65V, you'll likely have to run this memory at lower-than-rated speeds.

## Overclocking Memory

On Core i-series processors, the memory speed is tied to the base clock, using a memory ratio multiplier to set its final speed, just like with the CPU. The actual memory speed is based on the Core Clock, times the memory multiplier, times 2. DDR3-1066 memory, for example, has a memory multiplier of 4. ( $133.3 \times 4 \times 2 = 1,066$  MHz).

You might inadvertently overclock the memory on a PC just by overclocking the CPU. For example, if you increase the system Base Clock to 166 MHz, the memory will now be running at 1,333 MHz. ( $166.6 \times 4 \times 2$ ). If your memory is only rated at 1,066-MHz speeds and won't handle 1,333 MHz, you'll need to drop the multiplier down to 3, which will run the memory at 1,000 MHz, which is within its specified speed rating.

Overclocking memory is one area where we're extremely conservative, as corrupted RAM not only can lead to freezes and crashes, but to corrupted data on disk as well. And memory just doesn't typically overclock as readily as CPUs and video cards do. It's fun to run memory slower than the rated speed, but use caution when going much higher. The tiny benefit is outweighed by the possibility



Overclocking an AMD graphics card using the Overdrive utility

of data corruption.

On Core i-series CPUs, faster memory doesn't have a big impact on real-world performance. But the extra headroom of faster memory can make overclocking easier, as high speed ratings let you boost the Base Clock further without having to reduce the RAM multiplier

## Overclocking a Video Card

Overclocking a video card is usually a simple matter of wielding two software-based sliders. Unlike memory and CPU overclocking, you can and should overclock video cards in Windows (or whatever OS you're running).

AMD's video card driver interface has ATI OverDrive, the overclocking page, built right in. For Nvidia cards, you have to download Nvidia System Tools to grab its

overclocking sliders.

To overclock the video card, simply slide the Graphics Clock and Memory Clock sliders to the right.

Use the trial-and-error technique described above; except you don't have to reboot. Slide a notch over a little, test, and repeat. That's all there is to it. First tackle the core frequency, find its max, and then find the max you can overclock the memory frequency.

## Conclusion: Upgrade Your PC for Free

Now you know the basic steps to overclocking your CPU, memory, and video card. Depending on the motherboard, there might be a lot more about your own computer's BIOS setup

program to learn. Some allow you to adjust the speeds that Intel's Turbo Boost feature automatically boosts individual cores to when others are idle, which throws one more control into the CPU/memory overclocking mess. Others let you delve into the timings of the memory's latencies, but that, technically, isn't overclocking (there's no clock frequency involved, but instead there are wait states to play with).

To learn the specifics of your own motherboard, lurk the forums at its manufacturer's site and fan sites. You'll also find overclocking results for some popular motherboards, such as the Asus P6T and MSI Eclipse SLI, on ExtremeTech. You should also learn as much about your computer's CPU and memory as you can. The more you know, the more successfully you can overclock.

[Details on: <http://bit.ly/b0XYMw>]

## (worldview)



Geeks don't just rule the internet. Take a look at this amazing gallery-

cum-article on how geek culture is making its way into street art. Be it a twitter bird taking a dump on an actual wall, or a bold CTRL+ALT+DELETE as call for social change; view them all here.

<http://bit.ly/bCrNrv>

**DO YOU LIKE THE WORLD VIEW SECTION?**

With our new World View section, we're trying to expose you to more international stories and culture.

Instead of just a list, we hand-pick the stories we think you'd like. However, in order to ensure that we're doing a good enough job, we'd love to hear your feedback and comments.

**IF YOU LIKE, HATE, SKIP OR ABSOLUTELY LOVE THIS SECTION, LET US KNOW.**

Send in your feedback to [editor@thinkdigit.com](mailto:editor@thinkdigit.com)

## (PRODUCT LAUNCHES)

### MACBOOK AIR 11.6 INCH



This new Apple Air sports a Dual core 1.4 GHz Intel Core 2 Duo CPU, 1366 x 768 resolution and options for SSD 64 GB or 128 GB all in a slimmer than ever aluminium unibody construction. This sleek notebook is priced at \$999

### DELL XPS



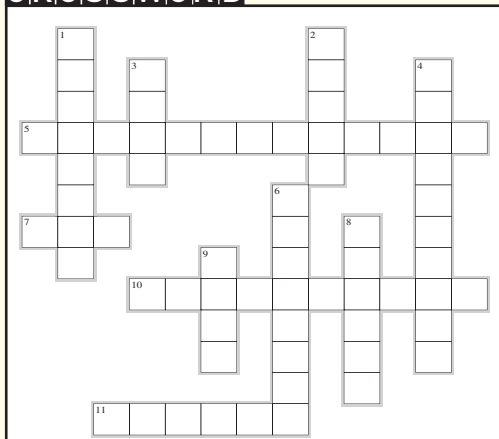
The company has refreshed its XPS lineup with Nvidia Optimus and JBL Audio. The laptops now sport a new design and the 14, 15 and 17 inch models start from \$899, \$849, and \$949, respectively. All the base models have 1GB NVIDIA 420M graphics.

### SAMSUNG GALAXY TAB



This new tablet from Samsung sports a 7 inch WSVGA capacitive screen, 1 GHz processor, Android 2.2, and promises 7 hours battery life for movie playback. The first of these will be available Nov 11 from Verizon for \$600.

## CROSSWORD



### ACROSS

5. Process of locating mobile device using towers it receives a signal from
7. Modes of thermometer project - Bar and...
10. Fear of losing your mobile phone
11. LM35DZ temperature

### DOWN

1. Resembling human, sounds like a mobile app
2. A popular augmented reality browser
3. Fastest selling gadget of all time
4. Small magnetic disk enclosed in a plastic body for storing data
6. Time magazine man of the year 1982
8. Alternate Keyboard Layout
9. A number, usually unique to identify mobile phones

ABSOLUTE TIMEPASS

## Top 3 YouTube Picks

Make sure your boss doesn't catch you goofing off with one of these playing on your PC screen



<http://bit.ly/8ZEqP4>

1min 37 sec

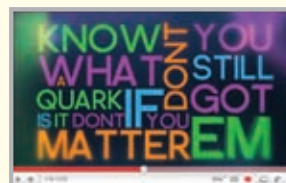
Meet Dot, the world smallest stop motion character shot using a Nokia N8, with its 12 megapixel camera



<http://bit.ly/cyrs9u>

3min 49 secs

BlendTech.com finds an iPhone 4 at a bar and blends it to iDust. We're sure you'll cringe at it disintegrates



<http://bit.ly/axg1HL>

2min 33secs

An amazing Illustrator + After Effects sequence that musically explains to you what a quark is

## Awash with camera

With more than 4 million CCTV cameras operating around the country, UK has more video surveillance than anywhere else in the world

## Recognise the culprit

In USA the government is currently funding research into technologies that will allow a camera to identify a person at up to 500 ft by their facial features

Smart SoHo

# STAY SAFE with electronic security systems

Anoop Verma

readersletters@thinkdigit.com

Reports of burglaries have become so common in the media that they have started sounding clichéd to the denizens of our urban concrete jungle. Quite often burglaries entail not just loss of material wealth, but also the very tragic loss of lives. Then there is the threat posed by fire. Most of the buildings are typically encumbered with myriad elements that can easily serve as a catalyst for a fire to break out. While many of us follow the method of security known as “let’s pray to God that nothing bad will happen to our home or office,” a multitude of electronic security solutions are available to protect our precious belongings from falling prey to fire or burglary. When Robin Sinha bought his house in New Delhi, he wanted to have an extra layer of safety to protect his wife and one year old kid, during the hours that he would be away working in his office.

“The crime rate in my city continues to go up on a day-to-day basis, and I didn’t want to take any chances,” he says, “so I decided to go in for Electronic Security, which comprises CCTV system at the main door, and an alarm system.” Today, there is simply no dearth of excellent security systems that incorporate hi-tech wizardry of next-gen electronics. With many companies in the fray, for making and marketing such systems, there is enough competition to keep prices at a reasonable level. Electronic security systems are available to suit all kinds of needs and budgets. Robin Sinha is a middle class IT professional, but the amount that he spent in installing the security system in his house has, in his own reasoning, turned out to be worth

the peace of mind and the new sense of security that he and his family can now bask in.

Two Indian companies, Zicom and Micro Technologies, have garnered a lot of buzz when it comes to electronic security devices. They are into providing tools for home and office security and prevention of vehicle theft. You can buy their systems online or from myriad retail outlets across the country. Some of the equipment that these companies manufacture certainly seems conducive to raising the confidence levels of residents. For instance, with Zicom Safehomes, the company is offering an “i-alert 24/7 service.” This is an emergency response system that is active 24x7, 365 days. If any emergency situation is detected in your house, the system immediately sends a signal to the i-alert 24x7 service for appropriate action. Similarly, Micro



Technologies, in its home security system, is offering an emergency SMS service, through which you can receive alerts.

A congested modern urban environment can easily turn into the breeding ground for myriad threats and so it makes sense for the residents and office owners to take assistance of electronic security measures.

## Keeping the home safe

Imagine the plight of a family that in the thick of night is sleeping

soundly at home, when out of nowhere a gang of burglars turn up. Soon the family is tied up, and the burglars have a free run of the house. In order to avoid such an

## The Crime Busters

A recent study in UK has revealed that almost every murder inquiry has ended up using some kind of footage from a CCTV as evidence.

eventuality we need to stop burglars from gaining entry. That is where electronic devices such as magnetic sensors, glass break detectors and microwave motion detectors, come in. These are efficient in foiling intrusion attempts. The Microwave Motion Detector uses sophisticated technology to detect human body movement within the range of a protected area. The digital processing used in this system ensures high level of immunity from false alarms. In case of an intrusion, a loud hooter (enough to be heard in the entire building), will go off. If such an arrangement is in place, alerts are sent to a 24/7 monitoring station and in the form of SMS to the subscribed numbers.

Another interesting item for home security is the CCTV system. This system of two-way communication is a great tool for viewing and interacting with any visitor without having to open the door. You can observe suspicious movements outside your door by activating the camera through the indoor unit. The system comes in many different models from which the user can choose after taking into consideration the budget and safety requirements of a house. For safety from fire related hazards, you can also opt for smoke detectors and the gas leak detectors. However, smoke detectors may not be useful in a house where people smoke as cigarette smoke is notoriously prone to triggering the system. All electronic security systems must draw their power through the grid, so somewhere down the line there's going to be an addition to electricity bills.

Residents in high-rise buildings can go in for a product, which in the lexicon of electronic surveillance is known as multi-apartment video door phone. The main advantage of this system is that it provides two layers of security - the first at the building's gate, and the second at the resident's door. The system envisages a panel at the main gate of the building that has a keypad on which any visitor has to press the number of the apartment he intends to visit. This will lead to a chime in the home unit of the desired apartment. The main advantage of this system is that it performs the task of a watchman. You don't have to

### INTERVIEW

Interview with Anand Swaminathan, Director, Zicom Retails

#### What kind security system do you think a normal middle class home needs to install?

There are two types of security systems for a household namely - Home Alarm System and Video Door phone. While Video Door Phone is a stand-alone system to detect and prevent intrusion; 'Home Alarm System' is a holistic system, which protects a household on the parameters of intrusion, motion, glass break, fire and gas leak. In case an event is detected by the system, then the Hooter will start sounding an alarm.



#### How difficult is it to use and maintain such security systems?

It is not difficult at all to use these security systems, which come with user-friendly applications that are easy to operate. Like any other electronic items, they are susceptible to dust, moisture etc. so if proper care is taken and regular upkeep is maintained, then the system will keep on giving good service. Plus, Zicom also has an online trouble-shooting centre, where a user can get any query answered.

#### Tell us about your best-selling home security systems?

Video Door Phone is our best-selling home security system. This system gives you the ability to peep out of the front door from any room of the house and interact with the visitor without opening the door. We have an extensive range of aesthetically designed and elegant looking Video Door Phones to suit every buyer's need. The product range consists of Black & White with Handset, Black & White Hands free, Large Screen Colour Handsfree, and Large Screen Colour Handsfree with Photoframe.

#### What initiatives are you taking to bring about growth in your company?

We are focussing on penetrating deeper into the market. We plan to appoint 5000 dealers in the next 2-3 years. Our plan envisages a focus on corporate and institutional segment, where the business potential is very high. Recently we have put in place a direct sales team, which will exclusively focus on the builders and architects vertical.

#### Who is your main competitor in India?

Competition is getting hotter by the day, especially in the corporate segment. But the good news is that now we are seeing branded entrants in this market and so there is a level playing field unlike in the past, when we were having competition from unbranded Made in China products.

hire extra security personnel either, and the building saves money that it would normally pay as watchman's salary. When a visitor arrives at the gate, and he presses the number of the apartment, the owner of that apartment will be able to talk to the visitor via intercom and verify their identity. After that the owner presses a button in the interface while in the apartment to open the main gate.

As most of these systems are powered by rechargeable batteries, they're not affected by power cuts. However, once the systems are installed in their homes, home owners have to ensure that the

rechargeable batteries are working in perfect order. The most common mistake that people make is that they don't take maintenance too seriously. There could also be dispute between different members of the society over who would actually foot the bill for a system such as a multi-apartment video door phone. But if installed properly, and maintained at regular intervals, such a system can definitely add to the sense of security.

### Car Security

In USA, a car is stolen every 26 seconds, and in urban India the trend is

## Mumbai diamond heist solved with CCTV

The four jewel thieves who carried out the audacious diamond heist worth over Rs.6.6 crore in Mumbai were caught after they were identified in CCTV footage.



not encouraging either. The good news is that most of the car thieves are low-tech guys and can be beaten at their game with the use of multiple security solutions. In India, the most common car theft system in use is the one with a loud siren, alerting the driver, who hopefully is within earshot. The siren can be triggered due to unauthorised entry, glass breakage, sudden movement, and perimeter violation.

Vehicle owners can also opt for mechanical immobilisers and electronic immobilisers that will completely lock the vehicle's engine in case the system detects any kind of foul play. Some car companies currently offer a system, where a GPS device comes hidden in the vehicle. In case of theft, the GPS system can be activated through remote control and used for tracking the vehicle.

## Securing the Office Space

The threats that an office faces from a burglar or from an element like fire is the same as residential premises. So essentially, you can install similar devices in offices too. The only thing is that the office security systems will have to take into account specific factors such as the number of employees working at the facility, the surface area, and entry and exit points in the complex. After a study of such factors, a security system that is unique to the needs of the facility can be developed. If the office is processing lot of sensitive information, then systems such as mobile signal jammers can also be used. In fact Zicom is currently offering a private mobile signal jammer, which is capable of jamming cellular network in its vicinity. Then there are CCTV systems that incor-

porate latest IP network technology, and make it is possible for you to have a view of what is happening in the premises from any part of the world.

In case of an intrusion or any untoward incident there will be video evidence, available on a user-friendly interface from which you can chronologically retrieve data and use it to aid investigation. A biometric access control system is fairly common these days and is used in several large complexes to identify employees. Identification can also be done through retina scan, which is considered most secure. However, every new layer of security that an office installs might also have the effect of slowing down the day-to-day functions of the establishment. So to remain efficient, a business organisation has to develop an electronic system that is capable of seamlessly processing large numbers of employees and visitors. In large factories and in establishments such as airports, railways stations, across the country such systems are already in place.

With sensible usage of electronic security systems, we can easily ensure that the horrors surrounding losses arising from theft or fire can be avoided to a large extent **d**



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## Windows Phone

Although it currently has a negligible market share, with the launch of 7 many factions, including developers are considering taking it seriously

## Make an app now

Go to the link below for a video on how to create a simple data app in Visual Studio <http://bit.ly/cvICTg>

# Careers in Mobile App Development

**With the Apps and Smartphone industry growing in leaps and bounds it's the perfect time to think about a career in this field**



Siddharth Parwatay

[siddharth.parwatay@thinkdigit.com](mailto:siddharth.parwatay@thinkdigit.com)

**W**ho could've imagined in the time of an innocuous little app called Snake, that the Mobile App Development Industry would be where it is today. A recent ABI Research report found that consumers downloaded 2.4 billion applications last year, and the downloads are on an explosive rise to the tune of 7 billion by 2013. Others estimate the industry size to grow to about \$17.2 billion by 2013.

Back in the day carriers had a walled garden approach, strictly controlling the app content worldwide and in countries like India the developer revenue share was as low as 30%. Apple came in with the AppStore and in one fell swoop changed the game for everyone, developers et al. This was followed by the Android Market and Ovi Store from Nokia. Today we have

various platforms present in the market that run on mobile phones, tablets and even netbooks; viz Adobe AIR, Java ME, Meego, Symbian, Android, iOS (Apple), Samsung bada, RIM (Blackberry), Windows Mobile, Brew and many more.

"The app industry is one of the most rapidly evolving technology fronts right now. Devices like Mobile Phones, Tablets and very soon home appliances are going to run apps. Apps that can be downloaded, Apps that can connect to the internet and Apps that can define lifestyles," said Noaman Kazi, Business lead at Hungama Digital Media Entertainment Limited. "We are currently leveraging the Android SDK to build

solutions for customised Tablet devices" said Siddharth Sharma from RapidSoft Technologies, an Indian app development company which caters to telecom clients such as AT&T, Telefonica and Verizon.

## Development landscape demystified

The entire developer ecosystem can broadly be categorised the demand side and the supply side. On the demand side you have gaming, publishing, and content companies trying to develop something on their own in the mobile space. This kind of content could even be in the cloud since you have a web interface on mobiles as well. The second category are people who are developing their own applications and porting those application on to the different marketplaces. The third category are OPDs or Offshore Product Development companies that exploit the arbitrage opportunity that is created in this space. On the supply side there are again three profiles for mobile developers - MIS developers who form a part of a large enterprise organisation whose concerns are compatibility, scalability, security etc. The second are the game developers who work across the platforms. The third category is web developers working in the mobile space who develop mobile web pages or Rich Internet Applications.

## Education, Certification and Employment

The people most suited for this field are those coming from a technical background. They could be BE or BTech, BCA, MCA or Computer Science graduates. Such courses impart a certain amount of base knowledge in terms of coding such as C++ or C# or technologies such as J2EE. But these curriculum driven skill-sets do not necessarily prepare students for employability. Perhaps this is why you have India-based training institutes such as [www.FresherLab.com](http://www.FresherLab.com) and [www.edumobile.org](http://www.edumobile.org) cropping up. "In



**"We are now working through our academic initiatives, to reach out to the entire academic community in India to build capabilities both on the mobile and cloud fronts"**

**Moorthy Uppaluri**, General Manager, Developer Partner Evangelism, Microsoft India



## BB joins the bandwagon

With the launch of PlayBook apps will soon need to be written for this tablet too. Such opportunities keep opening up for app developers

## Learn for free

The good folk over at [mobile.tutsplus.com](http://mobile.tutsplus.com) offer free development tutorials for all major mobile platforms, and here's the kicker - it's all free

Work@tech

the course of the last seven years we felt that there is wide gap between the knowledge imparted by universities and that required for the market place and so we thought of creating modular training programs to augment the university training available to most engineers", said Sushant, CTO of Porting Lab that runs EDUMobile. Devi Ahilya college in Indore offers an M Tech in Mobile Technologies and companies too are trying to bridge the divide between academically qualified candidates and employable ones.

"As Windows Phone 7 launches, we've put in place a lot of support systems for developers. Be it access to devices to test their applications, access to the latest SDKs, and even getting their applications on to the marketplace. DreamSpark ([www.dreamspark.com](http://www.dreamspark.com)) is such an initiative that gives out free tools such as Visual Studio to students. In India we have about 3 million students who are part of these programmes", said Mr. Moorthy Uppaluri, General Manager, Developer Partner Evangelism, Microsoft India.

## Knowledge base

If students want to gain capability, they should have the requisite skill sets to develop across all Platforms. A platform is like a Channel of distribution. If you have expertise on only one type of Platform you are leaving out opportunities to monetize on other channels. If you're comfortable say with development in J2ME and want to port on to the Symbian platform you need to look at developing a few ancillary skills. "Qt is a good place to start" says Anup C Shan who is a web developer at Oracle and builds mobile apps as a hobby. "It's Nokia's latest cross-platform application and UI framework. It's used for the KDE environment on Linux and is platform independent. With Qt you can write code once and it'll (supposedly) work on all Symbian, Maemo and Meego devices. Besides, there's a decent amount of documentation available online. Symbian C/C++ which is like objective C and gives decent performance for games is being phased out by Nokia because it's a little painful to code. Then there is the Pys60 project which has ported python to Symbian. All you need to know is Python - which is not really taught anywhere as such,

but very easy to pick up if you know object oriented concepts. Nokia Web Runtime (WRT) is for web developers to write widgets in HTML/JS/CSS. If you know basic web development, you know how to use WRT. It's very easy to write code in but you don't have as much flexibility/access to platform stuff as the other three options." concludes Anup. Similar is the case for the Windows Phone 7 platform. "We have come up with a completely new architecture, but as long as you know C#, Silverlight or .Net you can develop for the Windows platform" said Mr. Moorthy Uppaluri, General Manager, Developer Partner Evangelism, Microsoft India. Though diversity is desirable it's not always favourable in all cases. The MIS type of enterprise developers generally work in platform specific teams. Hence the opposite, leading to specialisation.

## Is code enough?

Mobile app development has two factors to it - coding and user experience. "Even if you've written highly optimised code but



**"Being an independent application developer is a lucrative but slightly risky career option. But say you get your app featured on an App store and it becomes very popular, you may not make much money off it, but it will be of immense value when seeking a job"**

Sushant Das, CTO, Chakra Interactive (EDU Mobile)

have not paid attention to how a user will interact with the application, it will fall flat." said Moorthy from Microsoft. Developers must have design/interface skills in addition to technical knowledge. In India coding is not the differentiator. According to Noaman, "Multi touch, Pinch to Zoom, Accelerometers, are the trends and App developers have to use these concepts to make the experience richer, enticing and exciting - the underlying technology is a mere tool for which the developer's expertise is a basic hygiene requirement."

## Pay Scales and Career Path

Pay scales in App development companies are a little higher than those of IT professionals from other backgrounds such as Java or .Net, simply because of current demand. iPhone and Android developers

## Resource Central

- [http://www.forum.nokia.com/Library/Tools\\_and\\_downloads/](http://www.forum.nokia.com/Library/Tools_and_downloads/)
- <https://garage.maemo.org/projects/pys60/>
- <http://qt.nokia.com/products/>
- <http://developer.android.com/index.html>
- <http://developer.apple.com/programs/ios/>
- <http://na.blackberry.com/eng/developers/started/>
- <http://developer.bada.com>
- <http://create.msdn.com/en-US/>

are more preferred right now. By and large freshers can expect to make anywhere between 2.5 to 3 lakhs.

"Most of the IT companies in India have Mobile Software departments and the exploding Smart phone market is a big opportunity for everyone. On an average anyone with one year of experience in iPhone or Android gets anywhere from Rs. 25,000 to Rs. 35,000 per month", said Sushant. "Candidates are expected to pick up languages and programming concepts through their formal education course but not so much the actual working on develop-

ment tools."

From a fresher's hiring standpoint we check analytical ability and algorithm making ability at entry point." added Siddharth from RapidSoft. Companies depending on their size can take candidates who have trained with say Aptech or NIIT, or depending on their hiring guidelines insist on Engineering/MCA degrees. When hiring freshers, companies put them through about six months of training, in which they make them conversant with the different platforms and technologies. In RapidSoft the career path goes something like this - Junior Developer, Program Lead, Team Lead, Project / Delivery Manager. The position of Project Manager can be attained in about 10 years and people in this position can hope to conservatively draw 14 to 17 lakhs. The sky is the limit.

**Blizzard**

Game creator sues  
StarCraftII hack creators

**Windows games marketplace**

Microsoft is launching a marketplace for Windows and Xbox users called "Games for Windows" marketplace on November 15th



# DEAD RISING 2

By Faiyaz Shaikh

**D**ead Rising 2, just like its predecessor, has a lot of potential to be a mindless zombie killing carnival; however, some aspects of the game suck the fun right out.

The zombie outbreak from the first game — as zombie outbreaks typically do — have spread to other parts of the Dead Rising game world. *Dead Rising 2* follows one such massive outbreak in a place called Fortune City which is not much different from the location of the first game. A few new game elements have been introduced in the sequel, but largely it is just like the first game.

**Take the good with the bad**

The most interesting and significant of these changes is the introduction of a weapon crafting system called Combo Weapons. Sundry objects and food items scattered throughout the game world can be combined to create new and sometimes powerful weapons. This was the single aspect of the game which kept us going right till the end. While some of these combined weapons are very efficient for racking up zombie kills, others are just good for some laughs at the cost of your undead brethren. However, just like everything else in the game, the designers had to make this just a little too hard. Weapons can only be combined by using work benches in maintenance rooms which are rare and farflung.

**Rapid Questing with high latency**

Just like its ancestor, this game is entirely restricted by time. So, completing the main storyline requires rushing through most of the game. There is a lot of running around back and forth across the map and this translates into a lot of lengthy loading screens. Consequently, you end up spending more time staring at the screen than actually playing the game. Worse still, even the game's cut-scenes have loading screens. The saving system involves saving only at restrooms, which are even rarer than the maintenance rooms. So, failing a quest or dying means that you often have to endure another long session with multiple loading screens. While the game is a lot of fun, this bit really tests the resolve.

**Age of Zombies**

Some may argue that Zombies have been done to death in both movies, and in video games; while others would dismiss this argument as blasphemy.

**Genre:** Action

**Studio:** Blue Castle

**Publisher:** Capcom

**\*Platforms:** PS3, Xbox 360 (reviewed on Xbox 360)

**Price:** PS3, Xbox: ₹2, 999/-

**Pros:**

**Weapons crafting is the best and only significant addition introduced in the sequel.**

**Unlimited zombies for eternal maiming pleasure. Multiple endings**

**Cons:**

**Way too many loading screens**

**Time restricted quests**

**prevents exploration**

**Frustrating save system**

**Badly crafted cut-scenes**

**Verdict:**

**Dead Rising 2, just like its predecessor, has a lot of potential to be a mindless zombie killing carnival; however, some aspects of the game suck the fun right out**

There is something about this theme that enables a unique blend of humor and unabashed violence, minus the guilt. In this respect at least, *Dead Rising 2* is pretty true to its genre. Except the restrictions which are in complete contrast to the game's setting which is meant for exploration and experimentation. ■





## Playstation Store in India

Indian PS owners will now get access to downloadable content of the PS Store with an annual charge of Rs. 2850 for PS Plus program

# F1 2010

By Abhinav Lal

**F**1 2010 certainly had a lot to live up to - being the first FIA licensed game to hit the PC in 8 years. It is also the first F1 title to hit the Xbox 360, and is developed by Codemasters, the guys who brought us Dirt (Colin McRae) and Race Driver.

F1 2010 has four main game modes: Career, Grand Prix, Time Trial and Multi-player. Career is your season, with your player rising up the ranks, starting with one of the lower-ranked teams, based on player performance and contract offers. Grand Prix is the equivalent of Quick Race, allowing you to play as any of the drivers for any of the teams, on any of the circuits.

If you are daunted by having to race all 59 laps of Qatar when you play, you'd be pleased to know the minimum setting is 20% of the Race Weekend, which can be amped up depending on just how many hand-aching minutes you want to spend on track. This would get you approximately 10 laps out of 60, an hour-long practice session, and twenty minutes of qualifying.

As far as graphics go, the game is hardly stunning, but that's not for lack of realism, but more because it's almost realistically boring enough not to stun you. You've got to appreciate the overall nary-a-foot-long look though. Rain is when you truly see the finer touches to the experi-

ence, with the inside and roof camera views rather beautifully obscured - worst in the spray of a car ahead of you. All this makes for some serious load times, even on a rather well-endowed system. However, once race/qualifying/practice sessions are loaded, there are no load times anywhere else.

The plethora of view options is also very satisfying, and very Codemasters, with three outside views, one cockpit view, one bumper view, and one roof view. Sitting inside the cockpit, with the low height giving you a seriously close horizon, is something you want the most of when you have to spot the next corner at 280km per hour.

On the simulation front, F1 2010 follows much of Codemasters' previously established formulas, where controls and physics are accurate enough not to feel arcade-like, yet, are not as unforgiving as you know the real deal would be, especially in the rain. More proof of this being a Codemasters' game comes from the inclusion of Flashbacks, which is a useful feature that sets back the clock on your accidents/errors a limited number of times depending on your difficulty

settings. This really shows its worth in F1 2010, where you will be very grateful for its presence if you spin out on Lap 9/10.

Tweaking stuff in the paddock is part of the fun. So while you can upgrade your car over the course of the season, you can also mess with a nicely detailed list of performance settings, from engine to gearbox to balance to tyres.

Multiplayer is surprisingly easy to setup and fun, requiring just a Windows Live ID, and is rather fast even on a low/medium broadband connection. You can also set up a custom multiplayer Grand Prix season, as well as of course, LAN gaming.

Overall it's a worthy game to have mastered. It will also last you a while, with quite a few hours for the learning curve, and then an entire season to finish, more contract offers and teams to join, multiplayer gaming, and beating your own best times in Time Trial. All in all, at Rs. 999 for the PC, F1 2010 is definitely a must have for F1 fans



## Home made space video

A Father and son duo from Brooklyn launched an iPhone 4 and a HD camera into space. The two objects were attached to a weather balloon which sent home some awesome footage. Check it out now <http://on.mash.to/9bQDPS>

Esc

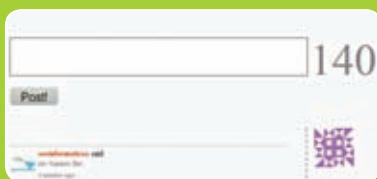
## Twitter spoofs

### Alternative services to post your irritating one liners

Well these websites are not exactly spoofs of twitter but they sure work on the similar micro blogging platform. While some are close replicas of the 'blue bird' the rest are just innovative in their own right. So get over your Twitter fixation and explore!

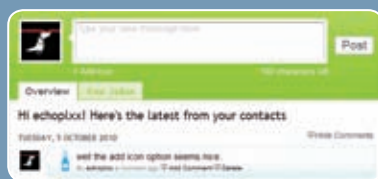
#### Sweetter 3.0

Along the same lines as Twitter we have Sweetter (what an original name). Here you can elevate your online nirvana by posting a 140 character message and earning Karma points. The more you 'sweett' the more Karma points you earn.



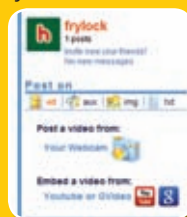
#### Jaiku

Apart from the usual 140 characters, we found a refreshing add-on in Jaiku that lets you add an icon (several choices) along with your message. The #tags don't show with your message they appear separately beneath the feed. Start Jaikuing now!



#### Hictu!

Hictu! has a lot of variations and add-ons other than the custom message. Just like icons in Jaiku, Hictu! has moods which you can tag along with your status. You can post your feeds



in specific channels like Science & Technology, Music, Humor. There are options for video, audio and rss posts as well.

### Here a few micro-blogging sites with a twist to them!

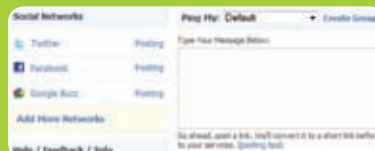
#### Blip.fm

If you want to broadcast your playlist then blip.fm is the place to be. Start your internet radio station and leave a 140 character message with each song you blip. Create playlists and watch your subscribers grow. Acquire level badges when you reach certain number of listeners.



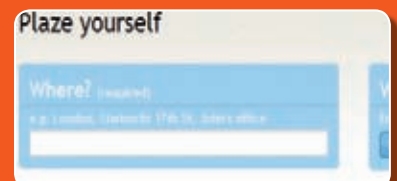
#### Ping.fm

Ping.fm allows you to update your status message on more than 40 sites. Users can link their Ping.fm page to their other accounts like Facebook, Twitter, Buzz, WordPress and so on and create a message which shows up on their shared accounts.



#### Plazes

Share your location with your friends in real time. It uses Google Earth to map your position. Feeds of 140 characters can be updated which also link with your Twitter account. Once your location is mapped can find people around you.



## Best video game innovations

From the classic 8-bit to Halo Reach, video games have always thrilled the 'gamer' inside us. But it takes years of developing to come out with a super cool feature which becomes the main USP behind a game's success. Here are some cool game changing innovations.

#### Regenerative health

Regenerative health was considered the best feature of Halo 2. After getting hit, the player's health would regenerate upon hiding behind cover if he was wearing the special suit.



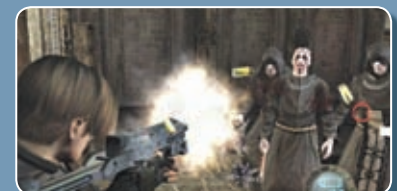
#### Running on walls

Prince of Persia has been around since the 80's. The breakthrough was when Prince of Persia: Sands of time included the running on walls feature. This enabled the player to run along the walls.



#### Shoulder View

The much awaited Resident Evil 4 broke the barrier between first and third person shooter. The game's over shoulder camera allowed the user to be in better control of his surrounding.



## See more, talk more

The face time app in the iPhone4 could soon accommodate multiple connections allowing users to video chat with more than one user. No official confirmation from Apple though

## Autocad on Mac?

After eighteen long years, the Autocad software is once again available on Mac. Switching shouldn't be a problem for users as all their Autocad files from Windows would be Mac compatible

Unwind

# Top 3 ways to waste time on SEO

Search engine optimisation is something which each blogger or site owner would invest his time in. However its not always that your time spent would result in more traffic or increased visitors. Here's a look at how bloggers optimise their SEOs while in reality it yields nothing.

### Commenting on blogs

Oh! you just left a constructive comment hoping people would click back on your suggestion. Well its almost certain that it won't happen, for the fact that 99% of the blogs have a no-follow link for comments. This means that the site owner does not endorse your link, hence it does not count as a vote for your site.

### Submitting site to various directories

Although submitting your site to a number of directories takes only a few minutes, most of these directories send so little link juice to your site that it's not worth the effort. Apart from paid directories like Best of the web and Business.com, free directories take little regulatory measures and often include spam sites.

### Building another site and linking it to yourself

The last resort in any blogger's book, building additional sites that just link back to your main site does not make any sense. Google recognises such web addresses even though they are built from a different server. This idea is not only time consuming, it's also stupid.

DIARY  
digit

Nash went to Taiwan, Rossi to Norway, the rest of us were here - in the office, working! No we are not complaining (not yet!) just giving you guys an update about the happenings. As a matter of fact their trips were work related but who would mind hanging out with some of the most advanced robots from around the world and watching them turn each other into twisted metal! Or for that matter going to Norway and rubbing shoulders with the guys who create the Opera browser. Monil, Samyukta and Vinay (the interns - as they were called) have left us, leaving behind a more peaceful and organised test center; we miss them though. Speaking of leaving, Shweta is back after a month long hiatus; she resumed work after a gruelling exam session (atleast that's what she told us). In related news, you can send a big shout out the newest member of Team Digit - Rudresh. Okay now the big news - Kareena (our office cat) has delivered three cute kittens, so expect some home grown Lol Cat videos.

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## Home Entertainment Zone

Digit Launches new section dedicated to LCDs, Home Theaters, and all that is High Def. Visit: [www.thinkdigit.com/HEZ](http://www.thinkdigit.com/HEZ)

## Storage and Memory Center

Along with HEZ we have another new section called Storage and Memory Center. Visit [thinkdigit.com/SMC](http://thinkdigit.com/SMC)

## SKOAR! Expo 2010

Due to circumstances beyond our control, the event has been postponed.

We wish to thank all those who wrote to us for passes.

We're in the process of re-scheduling, and we will make it a priority to inform you of the new dates and send you passes

### Write to:

[editor@thinkdigit.com](mailto:editor@thinkdigit.com)  
for free passes

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Digit **Collector Edition** will be on stands December 1st. Prebook now and get **₹50** discount. Check back cover of Fast Track for further details

### Reader Android App

Digit reader Kunal Dharamsi from Indore sent us a little Android app that he designed. It auto responds to text messages according to the message set. He has devised it such that the number to which reply must be sent should be equal to 10, so that it does not reply to premium numbers. According to him "many such apps on the android market often reply to premium numbers which costs too much". We gave it a whirl and it works just fine. So the next time you're driving or in a meeting you know how to auto respond to incoming texts. Download it at: <http://bit.ly/bs3XBk>

If you are a budding app developer and want your applications featured on the DVD, write to [dvdcontent@thinkdigit.com](mailto:dvdcontent@thinkdigit.com)



### Reader Blog

12 year old Jayant Raj, a "proud reader and thinkdigit forum member" emailed us about a new tech blog that he has started recently. His most recent post is titled "8 advantages of having a slow internet connection". Not bad for a first time effort. Here is an extract :

>Losing weight because of nervousness while you are keep waiting for the your browser to respond [LOL]  
>You can experience internet browsing in slow motion  
>Blaming the internet when you get late on a task  
Visit: <http://jayantjargon.wordpress.com> for more



Nov 2010

**digit**  
**EVENTS**

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

## Overclocking



**NOVEMBER 13**  
**TIME: 1700 HRS**

Tired of your slow processor and graphics card? Fed up of long loading screens and appalling frame rates in games? Join us for the Digit Overclocking Webinar, where we'll take processors and graphics cards unwillingly to their very limits. There'll be plenty of playing around with multipliers, FSB, some tweaking of voltages; hopefully we'll have only a few BSODs and no fried hardware! And remember, don't try this at home! (unless you have attended this webinar)

For details on upcoming webinars and to view past webinars, visit [thinkdigit.com/webinars](http://thinkdigit.com/webinars)

## Digit Diary

Check out digit diary in the Unwind section to catch up with the latest happenings in the Digit Office

## Obsidian's FallOut

Obsidian Entertainment launches Fallout - New Vegas, which is not a sequel to FallOut 3?

Community

Head over to [www.thinkdigit.com/forum](http://www.thinkdigit.com/forum), for some of best discussions, buying advice, and user reviews. Of course, you will meet like minded (and not so like-minded) geeks, leading to some of the most constructive arguments you'll ever have.

Check out this thread which discusses "Hardware that you should NOT buy"

11-08-2010, 12:37 PM

tkin

Wise Old Owl



Join Date: Aug 2008  
Location: Kolkata  
Posts: 1,681

### Re: Hardware that you should NOT buy

If you buy HD5770 then be warned about some of the issues that you may face

Intel E8400||Asus P5Q||XFX HD5850||4GB 800MHz DDR2||Samsung T220  
||Corsair 620HX SMPS||Zebtronics Bijli Cabbinet||APC 650va UPS||

11-08-2010, 01:14 PM

KaranTh85

Getsuga Tenshou.....



Join Date: Jan 2008  
Location: Soul Society

### Re: Hardware that you should NOT buy

Not to worry. The 5770 cards manufactured after Feb2010 are less prone to the gray bug.

Core-i5 750,Gigabyte P55 US3L,Corsair 4GB DDR3 1333Mhz,500GB WD Blue,NZXT Gamma,Corsair VX450 PSU,Sapphire ATI Radeon HD5770 1GB GDDR5

11-08-2010, 01:33 PM

tkin

Wise Old Owl



Join Date: Aug 2008  
Location: Kolkata  
Posts: 1,681

### Re: Hardware that you should NOT buy

Yet a bunch of posts about HD5770 bugs are cropping up everywhere. It's always a gamble with HD5xxx cards, mine was a non reference version and said ver 3.1 on the box, but it had that issue (although sometimes I feel that I've never tested the issue thoroughly and sent away a perfectly fine card, the guys there said this is the first HD5850 that was being rma'd (and only one HD5770 had been rma'd so far), maybe MSI kombustor killed my card?? Gonna stay away from kombustor and furmark from now on.

Intel E8400 | Asus P5Q | XFX HD5850 | 4GB 800MHz DDR2 | Samsung T220 | Corsair 620HX SMPS | Zebtronics Bijli

11-08-2010, 01:37 PM

asingh

Super Moderator



### Re: Hardware that you should NOT buy

It was working fine before you ran Kombustor and Furmark?

MSI P45 Platinum|Q9550[E0]@3.85Ghz@1.32VINH-D14|TWIN2X4096-8500C5(5-5-5-15)@2.1VIHD4890[Xfire]  
Corsair 650TX|Seagate 180GB+80GB|SONY-DVD-RICM690I|Scythe Kaze Ultrax2|S2409W|APC 1100VA|Scythe Server

11-08-2010, 01:43 PM

tkin

Wise Old Owl



Join Date: Aug 2008  
Location: Kolkata  
Posts: 1,681

### Re: Hardware that you should NOT buy

Yes, it was actually fine before running kombustor in that blasted unlock power draw mode. I played about 2hrs of Metro 2033 and Just Cause 2 maxed out. Played another hour of crysis warhead and also ran 30 mins of furmark in xtreme burning mode and such, ran occt for 30 mins no issue, that blasted kombustor killed my card, never run kombustor in an ATI card with unlock power draw, all the people in different forums are saying this but I overlooked it, damn.

Intel E8400||Asus P5Q||XFX HD5850||4GB 800MHz DDR2||Samsung T220  
||Corsair 620HX SMPS||Zebtronics Bijli Cabbinet||APC 650va UPS||

# Rescue from the webpage jungle

Confused with what you see on a webpage? Stop annoying people around you with stupid questions by referring to this guide.

## Those logos below your webpage!

What is the world coming to? You can't even figure out those small logos you see at the end of every third website you surf? Is it some hidden propaganda that the evil web wizard is spreading through these barely visible icons? Nah, it's nothing like that. Those icons you see beneath your webpage are nothing but links to different social websites like Facebook, Twitter, Digg, Stumble Upon and so on. If you haven't heard of any of them, worry no more. This detailed table below would explain each darn link you see on your page. Starting with the simplest one



The Facebook icon – Any six year old would know that the FB icon links that site to its facebook page.



By clicking this icon you 'like' the particular article or picture you are currently viewing.



If you see this blue bird icon then just click on it to tweet (post on your twitter account)



When you 'Digg' interesting stories that you come across, you simply share them on your Digg account. You can start digging on a story by registering on digg.com or log in through your facebook or twitter account to continue digging

Did you just stumble upon some interesting website then share it on



stumble upon. Its a discovery engine which finds you the most suitable sites according to your like. Just start stumbling.



Google Buzz is integrated within your Gmail account. Using this service, you can share videos, photos, status messages using your Buzz account.



This little orange icon is for subscribing to RSS feeds. Once you have added the feeds on your RSS reader like Google reader, the feeds will update themselves from the site giving you the latest feeds



Tumblr is a microblogging site, where users can create their tumblr and share text posts, videos, images, audio, quotes and so on.



Delicious is a social bookmarking service where you can save and share all your bookmarks You can directly log-in using your Yahoo account.

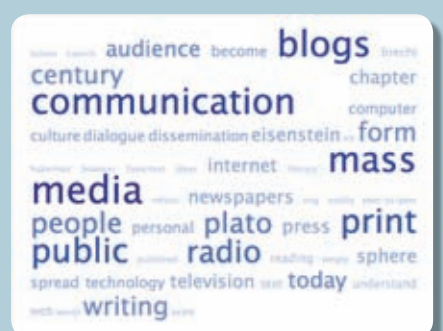


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## RSS readers and where to find them

An RSS reader basically gets all the feeds you have subscribed to one place and manages them in a chronological order. Its like reading mails in your inbox, over here you read your subscriptions. Famous RSS readers are Google Reader, Feed demon, Net vibes and so on



## What's a Tag cloud?

Many a times while browsing you might come across a tag which looks like this. These are nothing but tags or keywords that the website contains. The bigger a tag appears the more popular it is.

## Social Bookmarking

Bookmarking a website for future reference on your computer is a common practice. However there is something called as social bookmarking, which simply means saving bookmarks to a social website where you can add your own comments and tag the bookmarks with keywords. The websites mentioned above are more or less examples of social bookmarking, where you share something interesting with other users on a social network website. Users with whom you share can be known or unknown to you.

# Newspaper on your PC

We're all habituated to reading our morning newspaper with a cup of tea. Won't it be great to get the same news on your PC, and on your phone? Enter Calibre (<http://calibre-ebook.com>), a free software which will download your favorite newspapers from anywhere in the world to your PC. Once installed, simply click on the Fetch News button and you can choose the news sources you want. You can even set schedules for your newspapers, so you have them downloaded when you wake up in the morning. If you have a phone that has an eBook reader on it, you can transfer your newspapers to your device in seconds.



# Instant Facebook chat

Facebook chat is highly addictive especially when you have hundreds of friends. But using it within FB chat is quite cumbersome. Brower extensions are here to your rescue.

For Chrome – Facebook Chat extension (<http://bit.ly/cuFDtA>)  
Install the add-on. Once installed, click on the Chat button in menu bar. You have to log into your Facebook account. Press the button again, and you should find the Facebook chat window open there.

For Firefox  
Add a bookmark for the URL [www.facebook.com/presence/popout.php](http://www.facebook.com/presence/popout.php) in Firefox. Right-click on the bookmark from the Bookmarks menu, and click on Properties. Set it to load the bookmark in the sidebar. Open the bookmark and it'll load in the Firefox sidebar.



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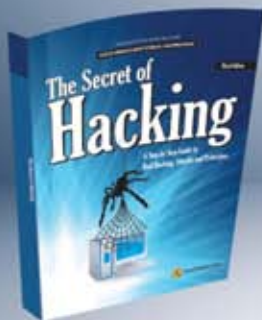
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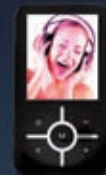
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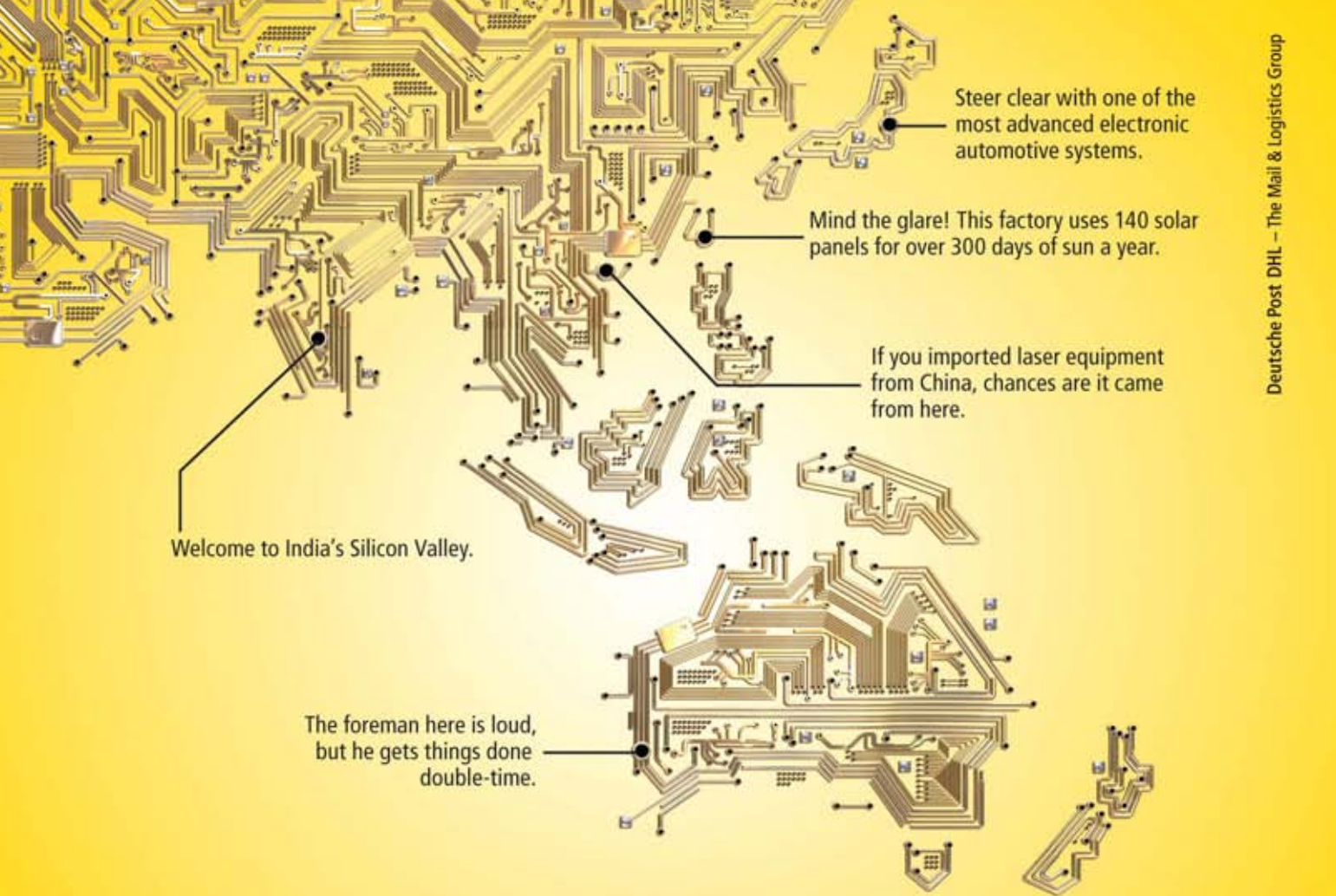
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