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# THE FINAL ISSUE?



**ZERO1 AWARDS**  
**THE YEAR'S**  
**BEST PRODUCTS**







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# ...unless the world ends!

First things first, this is NOT the final issue of Digit. I didn't think I needed to spell it out, but enough subscribers called our helpdesk in concern when they received our sneak-peek mailer to necessitate the clarification. Also, thank you to all of you who contacted us out of concern, or those of you who saw the cover and were concerned, even if for a minute... it's a great feeling for everyone at Team Digit.

In preparation for this issue – which at first was a joke, but grew more concrete by the day as we researched – we went through a lot of conspiracy theory videos and websites out there. Not that we actually believe the world will end... but it was interesting to see the commitment that conspiracy theorists have to their beliefs. From people building homes in bunkers and their own backyards, to storing food supplies that would see them through a year or two... we came across a lot of weird but interesting ideas.

Mostly it all just seems like paranoia, or the general distrust in authorities such as governments and militaries. It doesn't help that science seems to fall in line as well, predicting a change in the solar cycles... people hear that and immediately think “supernova”, instead of just prettier northern lights, which is probably all that would happen anyway.

Is it just a human need to exaggerate? Is it some survival method our ancient ancestors developed, which manifests itself as boasting, lying, exaggerating, making it seem better/worse than it is, putting on spectacular shows, promising the world (and then delivering nothing), warning of an apocalypse... you get the drift.

Marketing is another way of doing the same, and yes, I'll be the first to admit, that we also market this magazine with our covers and cover stories. We have to, simply because everyone else does that too, and falling behind is never an option for anyone in a race – least of all for the one in first place.

Although the apocalypse may not come, I certainly believe that we're on the verge of a major shift as humanity. No, I'm not thinking floods and fire from above – just a maturing of people, being less gullible and ignoring the ‘faff’ (I'm told by the team I use that word a lot).

For India, it's education that's getting us there, and the growing prominence technology is taking in our lives. We're cutting

out the middleman, which is most noticeable in the travel and tourism industry – I haven't been to a ticket agent in at least 5 years, and probably neither have most of you. Online shopping is kicking off, and heck, in my home even groceries are bought online.

It's not just about buying things though. I can't remember the last time I clicked on a web advertisement on purpose, for example – though I'm sure there are millions who do (why else would companies allocate such huge budgets to the web?). However, thanks to being exposed to information, and more importantly, a larger network of people and their opinions. We're less likely to fall for marketing fluff as well, relying instead on unbiased reviews from sources such as Digit.

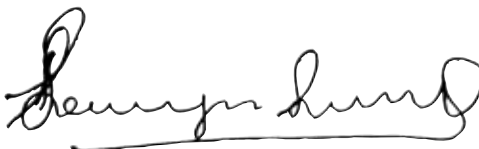
Technology and information equals knowledge, and that in turn equals power, transparency, greater savings and a better life. Being exposed to more makes us more tolerant of differences and less tolerant of idiocy, injustice and corruption.

Although the recent arrest over a casual statement on Facebook might mar the point I'm trying to make, it's thanks to the media and social networks that enough of us found out about it, which put pressure on the powers that be to right the wrongs.

Thanks to the inroads technology has made in our lives, kids these days are a lot smarter, and are finally looking to fulfill the dream that Digit has always had – for India to be known not just as consumers of technology, but creators of it.

Going into 2013, Digit will look to feature young inventors, cover more startups with commendable ideas and reward innovation with recognition. However, it's a social world, and we need your help. Make sure to write in to me if you're doing something interesting, or someone you know is, and I'll be happy to talk to you. Team Digit is also always happy to throw in a few suggestions, or ask you tough questions that could perhaps make your inventions or ideas better.

Here's looking forward to creating technology history in 2013... unless the world ends! 🇮🇳



**Robert Sovereign-Smith**  
Executive Editor  
[editor@thinkdigit.com](mailto:editor@thinkdigit.com)

**“Although the apocalypse may not come, I certainly believe that we're on the verge of a major shift as humanity”**

Liked or hated this column?  
Write in to [editor@thinkdigit.com](mailto:editor@thinkdigit.com) and let me know your thoughts.



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Published, Printed and Owned by Nine Dot Nine Interactive Pvt. Ltd. Published and printed on their behalf by Kanak Ghosh. Published at Bunglow No. 725 Sector - 1, Shirvane, Nerul, Navi Mumbai. 400706. Printed at Print House (India) Pvt. Ltd. R-847, TTC Industrial Area, MIDC, Rabale, Navi Mumbai 400701. Editor: Anuradha Das Mathur

**Disclaimer**

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

**PRODUCTS REVIEWED THIS MONTH**

**Bazaar**

Acer Aspire S7 (11-inch)  
 Akai Smartbox  
 ASUS F2A55-M  
 ASUS GTX 660Ti DirectCU II TOP  
 ASUS VG23AH  
 AVG Internet Security 2013  
 Canon Canoscan 9000F  
 Cooler Master TPC 812  
 Dell S2740L  
 ECS Z77H2-A2X Black Deluxe v2.0  
 F&D V-620  
 HP Spectre XT  
 ioSafe Rugged Portable drive (1 TB)  
 JBL OnBeat Venue  
 LG Optimus Vu  
 Logitech G35  
 Logitech Solar keyboard Folio  
 Nokia DC-16 universal charger  
 Nokia Lumia 900  
 QuickHeal Total Security 2013  
 Sapphire Vapor-X HD 7770  
 Sony XBA 1  
 Sony XBA 3  
 Toshiba Canvio Slim 500 GB  
 Trend Micro Maximum Security  
 ZOTAC GTX 650 Ti AMP Edition (2 GB)  
 ZOTAC GTX 660 AMP Edition

**Zero1 Award Winners**

Apple iPad (3rd Generation)  
 ASUS G75VW  
 BenQ EW2430V  
 Canon EOS 1Dx  
 Canon EOS 5D Mark III  
 Canon EOS 7D  
 Corsair Neutron GTX 240GB  
 Garmin Nuvi 2565LM  
 HP OfficeJet Pro 8600 Plus  
 HTC One S  
 Intel Core i7-3960X  
 Lenovo IdeaPad Z580 (59-339356)  
 Nikon D3200  
 Nikon P510  
 Samsung BD-E6500  
 Samsung Galaxy SIII  
 Samsung Series 9  
 SanDisk Extreme USB 3.0 64 GB  
 Sony RX100  
 TP-LINK TL-WR841N  
 Transcend StoreJet 35T3  
 Western Digital Velociraptor 1 TB  
 ZOTAC GTX 690

**Zero1 Awards Worthy Mentions**

AMD A10-5800K  
 Apple iPhone 5  
 ASUS Direct CUII TOP GTX 680  
 ASUS HD 7970 Matrix Platinum Edition 3GB  
 ASUS RT-N66U  
 ASUS Transformer Prime  
 BenQ XL2420T  
 Brother MFC J625W  
 Canon EOS 650D  
 Canon PIXMA E510  
 Canon Powershot SX500IS  
 Corsair Force GS 240 GB  
 D-Link DIR 636L  
 Dell Alienware M14x  
 Dell Inspiron 14R Special Edition  
 Dell S2740L  
 Dell XPS 14  
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 Fujifilm X10  
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 HP Envy 4-1002tx  
 HP Spectre XT  
 Intel Core i7-3770K  
 Intel Series 520 SSD 240 GB  
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 MapMyIndia ZX250  
 Nikon D4  
 Nikon D800  
 Nokia 808 PureView  
 Panasonic DMP-BDT220GW  
 Philips 273P3LPH  
 Philips BDP-5200/51  
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 Samsung Galaxy Note II  
 Sapphire HD 7770 Vapor-X  
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 Sony SLT-A77  
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 TomTom Via 125  
 Toshiba Satellite L850-Y5310  
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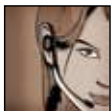
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# INCREDIBLE MARVELLOUS WONDERFUL REMARKABLE



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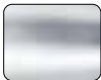
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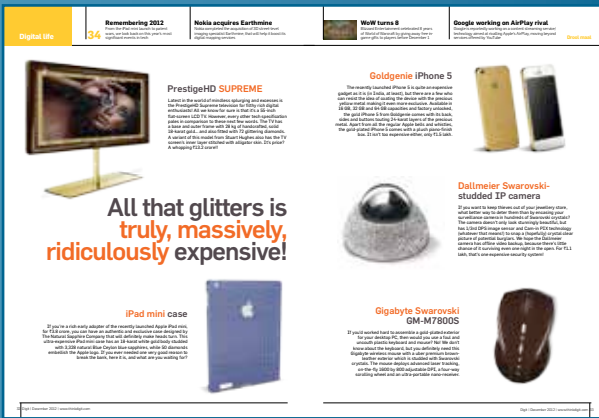
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**Buzz**

From new product launches to newsworthy events. Find out what's happening in the world of technology

**Huge patch releases**

Ubisoft released a massive patch for PS3 and Xbox 360 versions of Assassin's Creed III, shortly after the game's release

☒ Amusing, frolicsome, gleeful, gut-busting, jocular, priceless, rollicking, uproarious and witty – these adjectives perfectly describe Team Digit. This is my first letter, which I wanted to write earlier but was too busy reading the magazine. This month's (Nov) Digit was the most fun to read; the only time I remember laughing so hard reading this magazine earlier was in Jan 2011, specifically the article 'Gender Bender' by Mitali Parekh.

Every month I enjoy reading Robert's editorial. The way he scrutinizes the issues is fun and awakening to read.

I really like your product reviews because of the way you guys specify the test environment and the specs that matter.

Your Spend Smart section is also very helpful when thinking of specs to consider and overlook.

One request: cover other forms of tech also apart from just the web and computers. I know you do it from time to time but wish it were more often. The Cryptography FT was quite informative, but then as someone said "stay hungry stay foolish" so I'm waiting for the December edition to be even more fun. All the Best.

*Pranshu Chaudhary*

☒ We're glad you liked the November issue. We're sometimes accused of being a little too serious and focussed on technology and careers, so we decided a little change in tempo was in order. We hope you will like the December issue, and keep writing to us. We love feedback – positive is good, negative even better; how else will we consistently improve?

*Robert*

☒ Thanks for your valuable tutorials of JAVA, HTML and many other programming language from Bucky Roberts. Hoping to see many more tutorials in your December 2012 issue.

*Ankit Kumar*

☒ We will keep adding tutorials for all aspects of technology in our DVD. This month, we've added coverage from the Game Developer's Conference held at Pune so don't forget to check it out.

*Anirudh*

**Feedback for the November 2012 issue of Digit**

☒ I remember reading Digit from the days when Sujay Nair was Editor. I was in college at that time. It was Digit who gave direction to my technology enthusiasm. I remember being an unofficial technology adviser among my friends and suggesting innumerable gadgets and software to them.

Over all these years, I've seen Digit growing so rapidly – Raaabo taking the big seat, coverage of all the major technology events, introduction of Devworx, lots of app development challenges, and contests such as CTC, education of readers to solve consumer issues, unconventional cover stories etc. The transition has been awesome, and I wish it becomes even better in days to come.

I remember organizing the Digit Chapter meet in my city, winning CTC 1 and 2, and it was hilarious to be featured in the magazine being a Digit fan. The final touch was when you gave me the opportunity to be a part of Digit Community Advisory Council.

This month, I noticed a huge change in the designations of Team Digit. I loved the idea and it's really very creative. Among all, the "unsalaried exploits" are the best.

I also noticed the absence of Community Advisory Council. I believe it means that the Council has been dissolved, though I'm still waiting for an announcement of the same. However, I feel happy that I was

a part of such an initiative. Digit is among the very few journals I've been reading regularly for so many years, undoubtedly because it's one of the best tech journals. Your emphasis on avoiding piracy and using open source is commendable.

Finally, thank you for providing such a valuable product. I wish you keep growing and continue guiding upcoming generations about technology, simultaneously educating them to use it morally, legally and efficiently.

*Abhineet*

☒ Always great to hear from you Abhineet. We've transitioned the Community Advisory Council into the Digit Squad – <http://www.thinkdigit.com/digit-squad/>. We're looking to do more than just give feedback on the magazine. It's more about the members interacting with us to gain mutual benefits. We help them get exposure to cutting edge technology and company spokespeople, and they help drive ideas and offer different perspectives to the technology world. I hope you have applied to be a member.

*Robert*

☒ I've been reading Digit since its first edition. Interesting magazine. In recent days I will have to accept what Mr. Vijay Singh said (October Letter of the month) From the





ASUS recommends Windows 8.



**CG8580 (i7)**

**CPU** : 3rd Generation Intel® Core™ i7-3770K Processor  
**OS** : Genuine Windows 8  
**Chipset** : Intel® Z77  
**Memory** : 8GB DDR3  
**Graphics** : GTX 680 2GB GDDR5  
**HDD Storage** : 1TB  
**SSD Storage** : 128GB  
**Optical Drive** : Blu-ray writer



The Turbo Gear instantly cranks CPU speed at any time, without rebooting



DEFCON Indicator shows system readiness with blue and red LED light

# UPGRADED AND BATTLE READY BORN WITH SUPREMACY



**CM6731 (i3)**

**CPU** : 2nd Generation Intel® Core™ i3-2120 Processor  
**OS** : Genuine Windows® 7 Home Basic  
**Chipset** : Intel® H61  
**Memory** : 2GB DDR3  
**Graphics** : Integrated Intel® HD Graphics  
**HDD Storage** : 500GB  
**Optical Drive** : 24X SuperMulti DVD burner



**CM6830 (i5)**

**CPU** : 2nd Generation Intel® Core™ i5-2320 Processor  
**OS** : Genuine Windows® 7 Home Basic  
**Chipset** : Intel® H61  
**Memory** : 4GB DDR3  
**Graphics** : Integrated Intel® HD Graphics  
**HDD Storage** : 500GB  
**Optical Drive** : 24X SuperMulti DVD burner



**CG8270 (i7)**

**CPU** : 3rd Generation Intel® Core™ i7-3770 Processor  
**OS** : Genuine Windows 8  
**Chipset** : Intel® H77  
**Memory** : 8GB DDR3  
**Graphics** : GT 640 3GB DDR3  
**HDD Storage** : 1TB  
**Optical Drive** : Blu-ray writer



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\*Offer valid from 2 June 2012 to 31 January 2013; for complete details visit <http://windowsupgradeoffer.com>.

Beautiful, fast, fluid Windows 8



**ASUS desktops – Leading in overall satisfaction with reliability**  
 Based on PCWorld USA 2011 Reliability and Service Survey.

[http://www.pcworld.com/article/244481/desktop\\_pc\\_reliability\\_and\\_satisfaction\\_dell\\_and\\_hp\\_home\\_pcs\\_get\\_poor\\_grades.html](http://www.pcworld.com/article/244481/desktop_pc_reliability_and_satisfaction_dell_and_hp_home_pcs_get_poor_grades.html)

## Nintendo give away

The first 100 people to arrive at the UK launch were given two games along with the console for free



## Bose launches speaker

Bose launched the Solo TV Sound System, an unobtrusive single-piece speaker system aimed at households with high-end large televisions

### LETTER OF THE MONTH

✉ I must say that I was very disappointed reading the article 'Gender Benders' in the last edition of Digit. The article was a poor attempt at humor and came across as more of a sexist viewpoint from a male chauvinist. A lot of geeks are not like the male chauvinists portrayed in that article which appears to be only the author's viewpoint. Also, that article was the last thing I expected to read in an advanced technology magazine such as Digit.

I agree that quite a few points made regarding female consumer behavior are true, but the way in which they were expressed was a very poor way of stating it.

"We don't want to say these things don't make sense to a woman, because that shoves us down a hole with no escape. So, instead we will say this..."

I think any person can understand the subtext because of the obvious phrasing of the sentence. This sentence alone ruins the article.

"take solace in the fact that you hold enough power to snap men out of it at will, with just the batting of your eyelids..."

And this is as overtly sexist as you can get.

I suggest that the author meet more women before making such sweeping generalizations regarding the opposite sex. Such articles need to be written by people with a broader viewpoint of the world. I've known a few female geeks and they go against almost all your generalizations. I understand that you've stated that you're not trying to gener-

alize, but writing that statement before enforcing a stereotype, doesn't justify it. We see enough of that otherwise in daily life and really don't need it in a technology magazine.

The article wasn't a bad idea, but it was very poorly executed and far from humorous. Had it been written differently, it would have been an entertaining read.

That article alone soured the experience of reading Digit, and since then I haven't picked up the magazine again.

[I do not want to offend the author, but find no other polite way to phrase this.]

*Asbeesh Ranjan*



☑ The idea of the issue was to be funny, and tongue-in-cheek humour was to be expected. Somehow your letter seems to imply that we Digit guys are social recluses, playing with our gadgets and sitting in awe of the macho studs with girlfriends and wives. You'll be (un)happy to know that almost all of us have better halves, and a lot of friends of the female persuasion – all of whom read this article and giggled at it. Well all of us except Nimish and Anirudh, that is. They are more the Sheldon Cooper type geeks... So for the 4 women out there who read this... very much eligible bachelors available here!

Anyway, jokes aside, I think all of Team Digit is anything but chauvinist. If we were, we'd all have bought 3D LED TVs this Diwali, instead of meekly going "Yes dear." when we were told we can't have them.

*Robert*

Executive Editors Desk is really powerful and shows great intent. It's hard-hitting and shows the thought and effort put in by Digit. The strip that runs on the top is well designed and keeps you up to date. I actually like your ads. Maybe I'm wrong and it's tough to do this, but if you could position the ads near relevant articles it would be like

the cherry on top of the cake. Also, if possible, please filter ads that are sub-standard in artwork. They just mess up the aesthetics of the page layout. Also, kindly place QR codes pointing to links rather than bundling them elsewhere. As for the Alpha and the Omega, they're arriving safely and the tape no longer needs to be ripped. The cardboard

backing, if avoided might make me feel a bit less guilty when I just throw it away. Nice work on the 'Buy Smart' issue, really well appreciated. Finally, interesting days are ahead, and I'm really curious about the next year. Not in terms of content but in terms of cover art and article layout. Come on, you almost follow international standards; it's just a mile ahead. Push yourselves; we're there to support you by buying you out year after year. Just so you know, I also read two of Digit's competing magazines – one national and another international.

*Abhi Kalyan*

☑ The editorial team is in charge of the editorial pages, and the sales team is in charge of the advertisements, and ne'er the twain shall meet! The one thing the Digit Team has always been proud of is the way these two teams work completely independently, with little or no interaction. This is a tried and tested way to ensure that we remain unbiased with every word we write. In fact, I don't allow a sales team member into the editorial bay for even casual chats, and vice versa. Although we pride ourselves on trying to meet almost every reader demand, sadly, this one I will not be able to help with.

As for your feedback about the layout and covers, indeed very doable. We're working on shaking things up a little, and I hope you have seen the change in the cover stories and the covers themselves in the past few months. We can only promise to consistently get better, and although perfection is our goal, we also know we will never reach it – given enough time, effort and money, anything on Earth can be improved upon.

*Robert*

### CORRIGENDUM

Last month, we blundered magnificently with the contact information for Norton Anti-Virus. In fact some readers thought it was just another joke for the humour issue. We assure you, it was an unhappy accident, and the contact details should have read as:

**Symantec Software Solutions Pvt. Ltd**  
**Phone:** +91 22 6695 0227/28/29/30  
**Website:** <http://www.symanteccloud.com/en/in/support/>

We apologise profusely to the companies involved as well as our readers for any inconvenience the error may have caused.



# THE ALL NEW DISCOVER 125ST.

YEH CHALTA NAHIN, DAUDTA HAI.



1st DTS-i

4-VALVE DTS-I ENGINE  
SUPERIOR 13 PS POWER



1st DTS-i

NITROX MONO SHOCK  
SUPERIOR RIDING COMFORT



1st DTS-i

ADVANCED PETAL DISC BRAKE  
SUPERIOR SAFETY



Be unstoppable when you're on the new Discover 125 ST, flawlessly engineered to make every day travel, something to look forward to. With its revolutionary features, it's time to take on the road.

**Discover Range:**

Discover 100 ES	Discover 125 ES	Discover 125ST
₹ 43,299*	₹ 48,815*	₹ 55,500*

Get attractive finance schemes from Bajaj Finance Ltd.



**Discover  
125ST**

CHALTA NAHIN, DAUDTA HAI

## CoD hacker charged

A hacker imprisoned for a series of CoD hacks has been charged separately with launching DDoS attacks against UK universities

## Greek hacker arrested for stealing

Greek police arrested a 35-year-old male programmer for stealing personal information about most of the country's population

# More tablets and ultrabooks, and some new products

A round-up of the hottest products launched last month, including a computer eyewear brand

**T**he tech world had quite a few updates in the past month, with the launches of several new tablets, hybrids and ultrabooks in the country.

## Tablet Ecstasy

As expected, Apple unveiled a smaller version of its iPad tablet, dubbed the iPad mini. The 7.9-inch iPad mini includes a 1,024x768 display, the same as the iPad 2. Pricing starts at \$329 for the 16 GB Wi-Fi version. The 32 GB Wi-Fi is \$429, while the 64 GB will be \$529. The Wi-Fi plus cellular versions will be \$459 (16 GB), \$559 (32 GB) and \$659 (64GB). The tablet is yet to be made available in India however.

The iPad mini runs a dual-core A5 processor from Apple. It supports FaceTime HD and features a 5-megapixel iSight camera. There's LTE connectivity, as well as 802.11 a/b/g/n Wi-Fi. Apple promised 10 hours of battery life. The iPad mini is 7.5mm thin and 0.68

pounds, 23 percent thinner and 53 percent lighter than its 9.7-inch counterpart. Apple's Phil Schiller said the team "worked really hard" thinking about the size of the iPad mini. Cupertino wanted an iPad that was capable of running existing apps, but did not want a device that was so small "that it stops being incredibly usable."

Apple has also replaced the third-generation 9.7-inch iPad with a new fourth-gen tablet, which is pretty much what the third-gen model should have been in the first place. The new tablet looks just like the old one, except for the new Lightning port. It's the same size and the same weight - the difference is inside, in performance. The new iPad has a 1.4 GHz A6X processor, which appears to use the brand-new, Apple-designed processor found in Apple's iPhone 5.

The fourth-generation iPad has been priced at \$499 for a Wi-Fi-only model with 16 GB of storage, \$599 for 32 GB and \$699

for 64 GB. For customers wanting the LTE version, Apple is selling those starting at \$629 for 16 GB, \$729 for 32 GB, and \$829 for 64 GB models. It features a 1.2MP front camera, and a 5MP rear camera.

In the meanwhile, Google's much awaited 'low-cost' Nexus 7 tablet has officially hit Indian stores via ASUS, retailing for ₹19,981 for the 16 GB model. The 8 GB model has been discontinued, and so far, there have been no details about the India availability of the 32 GB version Nexus 7 as well as the flagship Nexus 10.

The Nexus 7 as the name suggests features a 7-inch display with a resolution of 1280x800 pixels and is powered by an NVIDIA Tegra 3 1.3GHz processor, coupled with 1 GB of RAM. It was also the first device that ran on Android 4.1 Jelly Bean.

The Nexus 10 is powered by a Samsung Exynos 5250 dual-core 1.7 GHz processor along with a Mali T640 GPU. There is also 2 GB of RAM, NFC and stereo speakers, but the real kicker lies in the display. The Nexus 10 has a native resolu-



iPad mini pops its head

tion of 2560x1600, pegging its pixel density at a whopping 300 ppi (the iPad 4's display is 264 ppi). Google has priced it \$399 for the 16 GB version and \$499 for the 32 GB version.

Other major tablet launches in the Indian market including two new 3G-enabled devices from Huawei, were the 7-inch MediaPad 7 Lite and the 10-inch MediaPad 10 FHD quad-core tablet. Both tablets run Android 4.0 ICS, feature aluminium uni-body shells and voice calling.

The smaller of the two - the Huawei MediaPad 7 Lite (₹13,700) weighs 370g, and is powered by a Cortex A8 1.2 GHz processor. The display features an IPS panel with a resolution of 1024 x 600 and looks quite



Behold the 4th generation iPad



# Lifestyle goes Wireless



**DIR-505**  
All-in-One Mobile Companion  
Router | Access Point | Repeater



**Free SharePort Mobile App**  
for iOS and Android

## D-Link Cloud Cameras



**DCS-932L**  
Wireless N IR  
Home Network Camera  
• 1/5" CMOS sensor  
• 5m built-in IR  
• MJPEG Video format  
• 4x digital zoom



**DCS-930L**  
Wireless N  
Home Network Camera  
• 1/5" CMOS sensor  
• MJPEG Video format  
• 4x digital zoom



## D-Link 3G Routers



**DWR-131**  
Wireless 3G  
Pocket Router  
With Battery



**DWR-113**  
3G Wireless Router  
With 4 Ethernet Port



**DIR-457U**  
myPocket 3.75G  
SIM Based HSUPA  
Router



**DWM-156**  
3.75G HSUPA  
USB Adapter



**DWR-510 - le Petit**  
Slim and Portable  
3G Router



dlinkindia

## NASA's 'historic' discovery

NASA officials have hinted that there is a "major" discovery to be announced in December, leading to intense speculation. What will it be?



## Huawei Ascend G330

The 'powerful yet economic' android smartphone, including several pre-installed apps, is set to arrive this month



Dell XPS 12-350

good. According to Huawei the tablet is compatible with nearly all multimedia formats which should serve it well as a media consumption device. It also features a 3.2 MP rear camera and a 0.3 MP front-facing camera.

The Huawei MediaPad 10 FHD runs on a Huawei-built SoC powered by a K3v2 Cortex A-9 1.4 GHz quad-core processor and a 16-core GPU. It features a 10.1-inch IPS display with a resolution of 1920 x 1200. The device is pretty slim measuring just 8.8 mm in thickness and weighing in at 580 grams. It features an 8MP autofocus rear camera (with dual LED Flash) that records 1080P HD videos and a 1.3MP front facing camera for video calling. A keyboard dock will also be available. Huawei has not revealed pricing yet, though the tablet should be available by December.

## Hybrids / Ultrabooks

Sony India has unveiled its next generation hybrid ultrabook, the Vaio Duo 11, in India. Its 'Surf Slider' form factor, similar to the ASUS Eee Pad Slider, allows it to function as both a tablet and a full-fledged ultrabook.

The Sony Vaio Duo 11 has an 11.6-inch Full HD touch Opti-Contrast panel which is slightly different from a conventional touchscreen panel – the touch

panel and the LCD are joined together with glue. It will ship with Windows 8 onboard. Sony has said that this device will be available in India starting the end of December 2012, and will be priced at ₹89,990. ASUS

also unveiled its Windows 8 lineup. This includes two touchscreen ultrabooks, and two hybrid devices that can be used as full-fledged laptops as well as tablets.

The two Windows 8 Pro ultrabooks released by ASUS are the VivoBook F202E and the VivoBook S400CA, priced at ₹39,999 and ₹59,999 respectively. The VivoBook F202E features an Intel Core i3-3217M clocking at 1.8 GHz, 4GB RAM, a 500 GB hard drive, Intel HD 4000 graphics, and an 11.6-inch touchscreen display. The VivoBook S400CA is powered by an Intel Core i7-3517M clocking at 1.9 GHz with 4 GB of RAM. There is a 500GB hard drive for your storage requirements and integrated Intel HD 4000 graphics. In a difference to its lesser-priced sibling, this version has a 14-inch touchscreen.

The hybrid ASUS VivoTab TF600TG features a 10.1-inch Super IPS+ display and a quad-core NVIDIA Tegra 3 processor powers it. There is 2 GB of RAM and 64 GB flash storage. This version comes preloaded with Windows RT. Following on from the tradition set by the Transformer, the keyboard dock will come with an additional battery as well as a host of ports for connecting external devices. Its price is ₹61,999.

Lastly, the notebook-tablet hybrid, the ASUS Taichi is powered by an Intel Core i7-3517U processor clocking at 1.9 GHz and 4 GB RAM. The ASUS Taichi has 13.3-inch dual displays, back to front, with one keyboard. You can work on either of the displays when in keyboard mode, including the mirroring option to replicate the same content on both. When closed, this works as a conventional tablet. The display has both pen as well as finger touch support. This comes with a 256 GB SanDisk SSD and Windows 8 Pro is preloaded on the

aluminum and carbon fibre, while the display has the Gorilla Glass add-on. Users will have the choice of a Core i5 and a Core i7 processor, 4 GB or 8 GB of RAM and up to 256 GB SSD. The price of the XPS 12 convertible starts at ₹90,490.

The Dell Latitude 6340u is a refresh of the existing Latitude ultrabook. The new design is 33 percent slimmer and 16 percent lighter than Dell's current 14-inch Latitude notebook. Dell also introduced the Latitude 10 tablet, once again aimed at business users with 'easy management, secu-



MediaPad 10FHD-front-right side-45 degrees-1-777

machine. The price of the ASUS Taichi is ₹1,39,999 and ASUS claims that this will be available in the Indian markets from December 2012.

Dell also launched a new lineup of Windows 8 devices, aimed specifically at business users. First up is the XPS 12 convertible, an interesting concept to say the least. When docked, it looks like a fairly traditional laptop/ultrabook for the most part. But the flip hinge allows you to release the touchscreen full HD (1920 x 1080 pixel) display and use the device like a full-fledged tablet.

The XPS 12 convertible's chassis is a mixture of machined

ity and a swappable battery for on-the-go productivity'.

The tablet can easily be integrated with most existing remote management systems that organisations use. The 10.1-inch display has a 1366 x 768 pixel resolution and gets the Gorilla Glass treatment as well. The Latitude 10 tablet will be available starting end of November with price tag fixed at ₹42,490.

## iStorage launches secure data drives

For people paranoid about securing their data on portable drives or USB flash drives, there's a new product just for

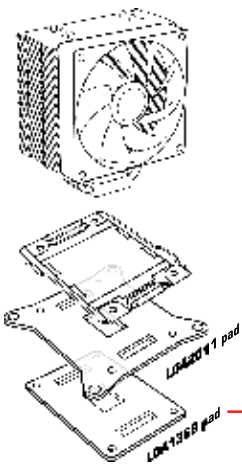


## ASUS ROG Rampage IV Extreme Motherboard

# Extremely Overclockable. Extremely Innovative.

**W**ith the release of Intel's X79 chipset, the usual suspects have showed off what's new in this version. Enter the ASUS ROG challenger, the Rampage IV Extreme. The Rampage Extreme series has always demonstrated phenomenal overclocking prowess and this fourth edition is no different. Dare we say, it could be one of the best motherboard for PC enthusiasts – ever made.

X-Socket



Loaded with new tech, the Rampage IV Extreme debuts overclocking tools that will no doubt make overclockers everywhere happy. To start off, the new X-Socket feature is a swappable bracket that lets you keep on using a LGA1366 based heatsink/cooler. For those that have already dropped a pretty penny on a high end cooling solution, you can definitely get some extra mileage from your older heatsink with the X-Socket. It's a little feature and a tiny detail that definitely makes people appreciate ROG more and sets their boards apart from the competition.

VGA Hotwire

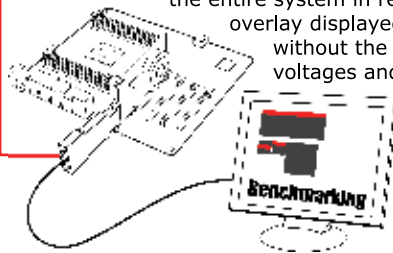


For those that know their way around a soldering iron and want to kick it up a notch, the VGA Hotwire gives users a chance to boost their graphics cards performance. In order to overvolt graphics cards in the past, one needed to have a steady hand to solder, but amidst the numerous tiny resistors in LN2 smoke, that can be a bit difficult. Using the VGA hotwire feature, simply solder two pin wires on to a graphics card and connect them to a dedicated header connection on the motherboard and you'll be overvolting your graphics card in no time. It's easily accessible and adjustable from the UEFI BIOS, OSD TweakIt/Monitor or TurboV EVO screens.

OC Key



Next up are the new overclocking features that come sprinkled throughout the board. The first feature isn't technically ON the board, but rather a dangle that plugs through your graphics card, dubbed the OC Key. When plugged in, OSD TweakIt and OSD Monitor allow users to tweak and monitor the entire system in real-time via an innovative on-screen graphical overlay displayed on your screen, all from your keyboard and without the need to install any software. This way, voltages and frequency settings can be adjusted on the fly, all with a stroke of the keyboard. It has four levels of opacity, so you can bring information to the forefront or background, allowing you to continue to see what's on screen.



Subzero Sense



Subzero Sense

Moving along is the Subzero Sense feature, which is something ROG engineers designed with hardcore overclockers in mind who play with liquid nitrogen. Unless you already have a digital thermometer, determining just how cold system components get when overclocking with LN2 can be a bit tricky. With Subzero Sense, simply connect a K-type thermocouple header to the indicated ports on the motherboard and get an accurate read of not just your CPU and GPU, but wherever you point the probes to. This can save you some serious cash, as a 2 port digital thermometer can run upwards of \$460, so this is a boon for overclockers who can save that money towards other items, like a ROG Matrix GTX 580.

If you think that's all there is with the Rampage IV Extreme, think again. The Rampage IV Extreme can also benefit you through full control of your system with the Extreme Engine Digi+ II, providing precise and stable power control over the CPU and Memory digitally. Dotting the landscape are 10K Black Metallic Caps that ensures only clean, stable power reaches all components, giving users a more reliable computing experience.

If you're in the market for an upgrade to an X79 based system that'll last you a loooooooooong time, do yourself a favor and pick up the Rampage IV Extreme. Its performance and reliability (not to mention its overclocking features) will have plenty of juice to power the next generation of games and then some.



## ROCCAT unleashes Lua

The three-button-mouse has been vamped with a series of upgrades and new features into the new ROCCAT Lua Tri-button Gaming Mouse

## Imation's mobile workstation

Imation announced beta availability of its IronKey Workspace, based on its PC-on-a-stick mobile workstation concept

you. Enter iStorage and their spiffy new secure drives - datAshur and diskAshur.

Dubbed as the most secure storage drives in the world, both the iStorage datAshur (pictured below) and diskAshur are meant for securing your data while on-the-go. The datAshur is a USB pen drive, while the diskAshur is a portable hard drive. Characteristic features of both the products are that they have an alpha-numerical keypad fused right on to their external casing, providing a basic password punching support from the get-go.

But if you thought that's all the security these two drives provide, you couldn't be more wrong. Both drives sport real-



The iStorage datAshur

time 256-bit AES encryption, validated by US Military Grade FIPS standards.

Both the iStorage datAshur and diskAshur drives come with an autolock feature, which lets your drive secure itself if it's lying around unattended. There's also a drive reset feature built into both these iStorage products. The datAshur drives are available in 4, 8, and 16 GB capacity, while the larger diskAshur drive has either 500 GB or 1 TB of data storage support. Both drives connect to the PC via USB 3.0 port.

## GUNNAR Optiks starts its foray in the Indian market

Launched recently in India, GUNNAR Optiks offers a range of computer eyewear for PC users, in general and gaming enthusiasts, in particular.

Launched in the US six years ago, GUNNAR Optiks claims to minimize eye fatigue and visual stress for anyone who spends long hours staring at digital screens. If you're complaining about eye strain caused due to excessively staring at your laptop or PC's monitor screen, feel free to give them a try - apart from consulting a physician, of course. With more people starting to spend more time staring at computer monitors or digital screens in general, our eyes are worse off. With cases of Computer Vision Syndrome only slated to rise, GUNNARs plans to tap into this yet unexplored market by offering unique products.

In a nutshell, what these glasses aim to do is help protect your eye from excessive glare from digital screens, enhance the contrast for better viewing, and therefore relax your eye from undue fatigue and stress. How does GUNNAR Optiks do this? With a trademarked secret recipe called i-AMP lens technology, Gunnar eyewear aims to exorcise all the visual demons of staring at a digital screen at a short distance for too long.

If you're someone who suffers from mildly impaired vision and has to wear lenses or spectacles, GUNNAR Optiks has a partnership program with Carl Zeiss Vision for custom made unique-for-you prescription eyewear.

Apart from several different eyewear products, the ones that



GUNNAR introduces its range of computer and gaming eyewear

Optiks' Professional and Gaming range, respectively. Even though we can't really test them for the purpose of a review, we've had the SS Scope amber-tinted gaming eyewear and Wi-Five Crystalline computer eyewear for use for over a month now. Both glasses are quite light and sit really close to the eye and help reduce incoming glare and relax the eye, especially the SteelSeries (SS) Scope amber-tinted eyewear meant for gaming.

Of course, being specialty eyewear, GUNNARs glasses sell for a premium - both the glasses we mentioned above retail for ₹5,500 each. While some may consider this price to be expensive, it's relatively cheaper compared to US prices. For more information about GUNNARs India, visit <http://gunnars.co.in>

## Antec's advanced cleaning solution

If there's one thing we all know about PCs and electronic gadgets is that they attract a lot of dust - a LOT - and all the time. To tackle this problem, Antec's Advance Cleaning Solutions is launched and available in the market. The solutions launched by Antec are of three different types: 100 per cent Natural, 3x Strength and a Deep Cleaning Gel.

The 3x Strength cleaning solution is non-drip which prevents it from running down a monitor screen when

applied for cleansing. And it doesn't only clean but also disinfects surfaces when applied on them. The 100 per cent natural as its name suggest has an eco-friendly formula for cleaning and protecting devices and Antec recommends it for travellers on-the-go.

Deep Cleaning Gel is a gel-based cleansing agent that offers maximum cleaning strength

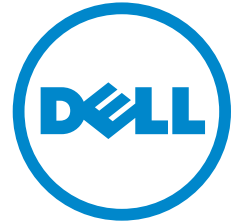


Cleaning kit family

for effectively cleaning even the dirtiest of surfaces, Antec claims. According to Antec its cleaning solutions are compatible for use on monitor screens, touchscreens, game controllers, kitchen appliances, eyewear and even jewellery. With more touch-enabled devices entering the market, products like the Antec Cooling Solution are the need of the hour. The company claims that all Antec cleaning solutions are alcohol and ammonia free. They also help keep your device or electronic accessory fingerprint resistant, bacteria free and static free. ■



Dell™ recommends Windows.



The power to do more

## Touch the future, literally.

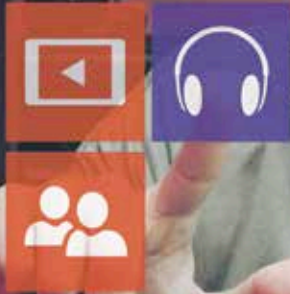
Introducing the touch-and-type  
Dell Inspiron™ 15z Ultrabook™.



Dell™ recommends Windows.



The power to do more



Type out that song you came up with.  
Record it with a touch.

Introducing the touch and type Inspiron™ 15z Ultrabook™ powered by Windows 8.

The Inspiron™ Ultrabook™ Range. Thin yet feature packed.



Windows 8 is uniquely yours.

Windows 8 has been reimagined to be all about you. Put what matters most right on your Start screen, and get instant access to your people, apps, sites and more, so you can spend less time searching and more time doing.

Coming soon to a store near you.

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\*Touchscreen available on select models. DELL'S TERMS AND CONDITIONS: All sales subject to Dell's terms and conditions, see <http://www.dell.co.in/tnc> OR provided on request. MORE INFORMATION: Go to <http://www.dell.co.in/details>. TRADEMARKS: Microsoft and Windows are trademarks of the Microsoft group of companies. All other trademarks are the property of their respective owners. COPYRIGHT: © 2012 Dell Inc. All rights reserved.

Beautiful, fast, fluid Windows 8



“My future,  
secured”



(UIN 512A267V01)

LIC's  
**Jeevan  
Ankur**

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**Mobile Watch**

We take a look at the latest launches in the world of smartphones and tablets

**App Watch**

This time we provide you with 10 of the most popular Android and iOS apps that you must try out

# The state of the web

We take a look at some of the changes implemented by Google and Facebook with their services and also look at other developments in the web world

**T**he state of the web hasn't changed much. Once again, the usual suspects such as Facebook, Google, Microsoft and Twitter have made a few tweaks, launched a few services and otherwise, carried out some maintenance work. There were some interesting developments you should be aware about.

## Google round-up

Google has announced the deepening of the Google+ integration for YouTube, allowing users to link their channels with a Google+ page. The company is pushing out the prompt to all its users and one can opt in right now by tweaking YouTube account settings. Efforts to integrate the two have been on since earlier this year, when the company started asking users to employ their real names while using YouTube. This was followed by Google urging users to hook their Google+ profiles with their YouTube channel/profiles.

Another new Google+ integration is with Android apps. Now users can share links to Android apps with their circles and friends within that circle get an option to install the app directly from the stream itself. To use this feature, you paste the URL of the particular app as your status. Google+ will automatically embed an Install/Buy button beside it. Once the app is visible in the status, you can replace the link with your status message.

The search giant is also working to improve its Google Drive service, with a new update making it easier for users to access the Drive cloud-

storage service from the Chrome browser, by rolling out relevant apps of Drive to the Chrome Web Store. Users can now also more easily find, organize and view their files on Drive. It also brings support for Google Earth files. Other updates include auto-completion of names, creation of new folders while organising files, folder drag-and-drop abilities in Chrome and files in the trash appearing during search.

If you've sent out mails from Gmail over the past month, you may have noticed an updated compose feature. On clicking on 'Compose Mail', a New Message box will open just like a chat window would. So say you are looking at mails in your inbox and you want to compose a mail, Gmail won't open a separate compose mail page. Instead, you'll be able to see the contents of your inbox while typing out your mail in the New Message box. You can even insert images inline. Another Gmail update, meanwhile, focuses on making it easier to find mail. Now users can look for email by size, exact match and more flexible date options within Gmail.

The search page layout has some changes as well, with its navigational tools shifted from the upper-left of the page to the top of the page.

Google has also updated its Maps service and Google Earth with high resolution aerial and satellite imagery for a number of new cities and has added 45-degree imagery for scores of locales across the globe. According to the company's official blog, so far 164 cities

and 108 countries/regions have the high resolution images, including Washington and Austria. The new 45-degree imagery has been applied to 60 cities – 40 of which are located in the U.S.



Google Earth Maps update

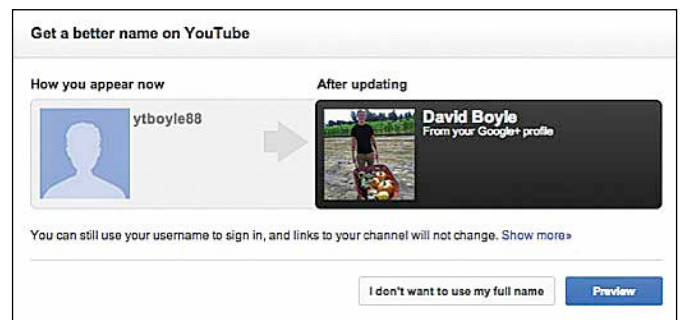
## Facebook round-up

The social networking giant is testing two new features for the News Feed section – Upcoming Events and Recently Released Albums. Reports claim that some users have already begun seeing the two new features in their News Feed. Upcoming Events is quite similar to the “upcoming concerts” module, which some users began to see in October. The Recently Released Albums, as the name suggests, highlights the recently launched album by an artist, which a user has listened to on Spotify or any other music service linked to the social network.

Facebook is reportedly also testing a new format for Timeline, which will put all posts in a single column on the left, while the activity modules and friends, places, apps and other sections will be placed on the right. The new Timeline layout will help Facebook address several complaints from users regarding the display of the posts in the new profile. Timelines for dates, which allows users to jump to a particular month or year, will show up in the top-right of the page.

Back in August, Facebook introduced a new layout for its messages in an attempt to make them read more like email conversations. The new layout now appears to have begun rolling out to more users. The new design features a side-by-side layout that shows your most recent message on the left and the whole conversation on the right. There are options to add multiple photos and emoticons. Users can now also search by typing a sender's name or keyword in the main messages view. To further ease-of-use, there are also new keyboard shortcuts.

Facebook has also rolled out a redesign of 'Friendship



Google allows users to link Google+ profile with YouTube channel



## Security Watch

India ranks #2 in accessing your private details, VOIP interception tech, Android 4.2 Jelly Bean security features and more

## Web Watch



Facebook Timeline layout for messages

Pages', which shows the two friends' history in a Timeline format. Friendship Pages shows both users' mutual friends, likes, photos and interactions with each other on the social network. Facebook's Friendship Pages was one of the last segments of the social network that resembled the old profile. With the addition of Timeline layout, these pages are now easier to navigate.

A new controversy surrounds Facebook as it plans to add a new 'Couple Page', also dubbed the 'Relationship Page', which combines tagged photos and posts of two users in a relationship. Facebook's Couple Page is very similar to its recently revamped Friendship Page, which shows all Facebook content connecting the two users. The relationship page is a virtual tour of your love life, with photos, wall posts and photo comments shared between you and the person with whom you're in a relationship with. There's the huge Timeline cover photo as well.

While many users may like the idea of making public their relationship, some are a bit skeptical and critical of an automatic Facebook page obsessively documenting their relationship. ZDNet's Eileen Brown in her report titled 'Why Facebook's relationship pages creep me out over privacy', points out that the new feature lets others stalk your Facebook friends in a more in-depth way.

In the meanwhile, the social networking giant has also announced a job-search tool, bringing to the forefront its rivalry with LinkedIn. Facebook has entered into a deal with BranchOut, DirectEmployers, Work4Labs, Jobvite,

and Monster.com to launch a free Social Jobs Partnership (SJP) app. Facebook's app, currently available only for U.S. users, lists more than 1.7 million jobs.

## Other major developments

Twitter has announced a feature that allows users to email tweets directly from their Twitter stream.

Twitter also recently rolled out quite a few new features such as Instagram-like photo-filters and an updated Tweet-Deck and newsletter. The company is also working on a tool to allow users to download all their old tweets.

Kim Dotcom's follow-up to Megaupload will be hosted on a New Zealand domain, the beleaguered entrepreneur announced in November. "New Zealand will be the home of our new website: <http://mega.co.nz> - Powered by legality and protected by the law," Dotcom tweeted. Earlier this month, Dotcom unveiled a preview of Mega. It's expected to formally launch in January.

Initially, Dotcom wanted Mega to live at Me.ga, but the African state of Gabon, which controls the .ga domain, blocked access to the site, claiming that it was tantamount to cyber crime.

AMD has announced that it will be adding ARM-based 64-bit server processors in its Opteron line-up, aiming to provide more efficient, low-power solutions to companies with large-scale requirements, and compete with Intel in the server space.

According to the struggling chip maker, a team has begun designing the 64-bit ARMv8 (a.k.a. AArch64) chips and AMD is expected to ship the first units by 2014. The company's acquisition of SeaMicro in March this year, will also come into play alongside, as AMD's offering in the microserver and cloud sphere. AMD feels despite the impression that it would be competing with its customers - other server manufacturers - vending servers would in fact help it keep in touch with the market. **[1]**

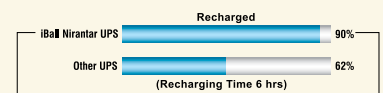


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**Google's indoor maps**

Google Maps' app for Android has been updated to include the mapping of interiors of various stores for easier shopping

**Xbox Live goes down**

Xbox Live went down on November 16th, with a massive number of users reporting an error message citing Error 807b01f7

# Updates to existing OSes, new phone launches and more...

This month we start off with some sales figures to tell you who is standing where, followed by the plethora of phone and tablet launches

**B**ig things have come to pass in the mobile world, yet things still stand precariously at a standstill. Windows Phone 8 is here, and it has been met with mostly positive reviews, once again bemoaning the lack of a sufficiently vibrant ecosystem – something any platform apart from Android and iOS will always have to grapple with, in the hearts of consumers (and reviewers).

## Market Figures

The other platforms aren't sitting idle however, with Google making many strong moves to give its platform a stronger grip on the market – in the third quarter of 2012, Android held a 72.4 per cent market share, with its next closest competitor, iOS, at 13.9 per cent, followed by BlackBerry OS, Bada, Symbian, and Windows Phone.

In terms of manufacturers, there hasn't been much change in the rankings, with Samsung once again selling the most mobile phones (smartphones and feature phones) in Q3 2012 – holding a 22.9 per cent market share. Nokia holds a 19.2 per cent share at second place, while Apple comes in at third with an always astonishing (considering it only makes smartphones) 5.5 per cent. ZTE, LG, Huawei, TCL, Research In Motion, Motorola, and HTC complete the top ten manufacturers.



Android 4.2 Jelly Bean

Android adoption figures are once again through the roof, with KPCB analyst May Meeker revealing that it is growing at least six times faster than Apple's iPhone. The analyst further revealed the number of Internet-enabled Android devices shipped had gone past the number of Internet-enabled Windows devices in Q1 2012. That was when about 90 million units of Android devices shipped per quarter. Meeker expects shipping of about 160 million units of Android devices with 100 million Windows devices and 80 million iOS devices per quarter by 2013.

According to Meeker's research, there will be about 1 billion smartphone users, but 5 billion mobile phone users by 2012-end, highlighting

the growing popularity of budget feature phones.

## Google Android 4.2 Jelly Bean

Google had shown the world just what Android is capable of (in terms of intuitiveness and responsiveness) with the Android 4.1 Jelly Bean update. Now it has once again upped the ante with the Android 4.2 Jelly Bean update, that further refines the much smoother OS, and adds security features.

Improvements include built-in Swype-like gestures for typing, multiple user accounts, improved Panorama (Photo Sphere), lock-screen widgets and wireless media streaming. The new security features ensure that users can safely sideload apps from sources other than the Google Play store, by checking the app for potentially 'harmful behaviour.' There is also a new apps permission-screen, as well as a scanning feature that detects any attempt by an app to send a text message to a known fee-collecting short code.

## LG E960 Nexus 4

The company also unveiled the very exciting LG-made Nexus 4 smartphone, a device that is being looked forward to for its top-end performance at great value for money (\$299 for 8 GB,

\$349 for 16 GB). Unfortunately, not every region will enjoy a low retail price for the Nexus 4, with a price range of \$549 to \$699 (₹28,000 to ₹36,000) expected outside of certain markets where the Google Play hardware store is accessible.

The LG Nexus 4 runs on a quad-core 1.5 GHz Krait Snapdragon S4 Pro coupled with the Adreno 320 GPU and 2 GB of RAM. It sports a 4.7-inch 1280x768 pixel True HD IPS Plus display with Gorilla Glass 2, an 8 MP autofocus camera with LED flash, a 1.3 MP front-facing camera, a 2,100 mAh battery and DC-HSDPA (42 Mbps) connectivity. It has no microSD card-slot, one of the only glaring missing features. It also lacks LTE which is surprising for a flagship device. The phone (at the time of writing) is currently available via eBay India and online retailers such as Saholic. It is expected to be announced by the end of November.



Google Nexus 4



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## 60mn for Samsung in Q4

According to an estimate by UBS financial analytics estimate, Samsung will sell around 61.5 million units in the last quarter of 2012



## 2.5mn Lumia 920?

According to reports, Nokia has received more than 2.5 million orders for the Lumia 920 globally



HTC Windows Phone 8S

## Windows Phone 8's Delayed Attack

Currently, very few Windows Phone 8 devices exist in the market. The HTC Windows Phone 8X (₹34,149) and 8S (₹21,799) can be procured in India, but the devices expected from the rest of the launch partners - Nokia, Samsung and Huawei - are yet to make their way to most markets globally.

So while the reviews have been mostly positive and the obvious apps ecosystem disparity is something that can be fixed, the world still seems to holding its breath before the combination of the Windows 8, WP8, Office 365 and Xbox Live ecosystems make themselves felt in the market. The Redmond giant has also reassured potential adopters that this time around, the Windows Phone 7.8 and 8 iterations of their mobile OS will be supported for quite some time - unlike the fate of Windows Phone 7 devices.

## Other India Launches

In the meanwhile, India has seen some major launches (apart from HTC's two WP8 offerings). Since last month, the much sought after Apple iPhone 5 finally hit the Indian

market, priced at ₹45,500 for the 16 GB model, ₹52,500 for the 32 GB model and ₹59,500 for the 64 GB model. Apple also introduced Rupee pricing in the India iTunes App Store.

Chinese manufacturer, Lenovo also entered the Indian mobile market in a big way, launching five affordable Android phones in the country in its IdeaPhone series, across



Sony C6603 Yuga with the 1080p display spotted in the wild

price ranges, starting from ₹6,499 and topping out at ₹18,999. Three of the launched IdeaPhones support dual-SIM as well.

HTC also launched another dual-SIM Android phone in India in the interim - the Desire SV, which they priced at ₹22,590. It features a 1 GHz dual-core processor, 768 MB of RAM, and a 4.3-inch 800x400 pixel (217 ppi) Super LCD2

display. The company also announced the HTC One X+ for the country, priced at ₹40,190. It features a 1.7 GHz quad-core processor, a 4.7-inch Super LCD2 display with Gorilla Glass and a 720p resolution and 64 GB built-in storage.

## Other Interesting Developments

Samsung has announced the Android 4.1 Jelly Bean-based Galaxy Premier I9260, which bears a 4.65-inch (1280x720) AMOLED display, a 1.5 GHz dual-core processor, 1 GB of RAM, and 8/16 GB built-in storage options. It is expected to roll out globally towards the end of the year, with an approximate ₹32,000 price tag.

Sony is one of the few major manufacturers that has not yet gotten into the quad-core game, and its rumoured that the upcoming Odin and Yuga (codenames) handsets will change that. Early speculation


and the Yuga's specs also boast of a 12 MP camera.

In the meanwhile, a new revolution in touchscreen tech may soon be hitting your mobile phones (and tablets). A scientist at Carnegie Mellon University has successfully modified a Galaxy S III's touchscreen to distinguish between the touches of fingertips, fingernails and



Touchscreen -Knuckle Nail Finger

knuckles. If you thought multi-touch and multi-finger gestures were the limit, this new technology throws some new variables into the mix. The S III was modified to add a small vibration sensor and the FingerSense software that will help identify the acoustic differences that come from different kind of touches.

Interestingly, Research In Motion (RIM) has released the BlackBerry Messenger (BBM) v7 beta, which brings a new voice chat feature to the application. The BBM 7 beta works on BlackBerry smartphones running BlackBerry OS version 6 or higher. The new feature, known as BBM Voice, allows users to make voice calls to other BBM users via wireless Internet connection. The split-screen feature allows users to talk and text at the same time, so for example, they can send a picture to their contact while talking with them. They can also check other BBM text chats, check email or navigate to other apps while engaged on a BBM Voice call. 



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**Firefox 64-bit dev stopped**

Engineering Manager Benjamin Smedberg reportedly asked developers to stop work on the Windows 64-bit version of Firefox due to various technical issues

**Oldest working computer**

The world's oldest working digital computer, the WITCH has been brought back to life and is on display at the UK National Museum of Computing

# 10 must-try apps for you

We take a look at 10 apps from Android and iOS each, that you must try out

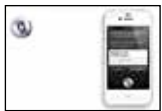
**App news**

## Google acquires Instagram rival, Snapseed



Google has agreed to acquire Nik Software, the development company behind the popular photo editing app Snapseed. The search giant has picked up the German app developer for an undisclosed amount.

## Siri to speak new languages?



A job listing on Apple's website indicates that Siri, the iPhone and iPad's voice controlled personal assistant, will be learning new languages, including Arabic, Chinese, Danish, Dutch, Finnish, French, Korean, Norwegian and Swedish.

## Google updates its Blogger apps for Android, iOS; adds support for iPad



The most notable update that has been rolled out is the support for iPad. Now users can choose landscape mode to compose posts, share posts on Google+ and have the ability to view a scheduled post time. Google has added support for over 30 international languages.

## Finally, Facebook is adding the 'Share' button to its iOS and Android apps

Just like its desktop counterpart, the share button will let people repost links and photos. The share button is like retweeting

someone's photo, status or link as it gives credit to the person who originally posted it.

## Saavn adds English music to its catalogue, brings over 250,000 songs



The music streaming service has tied up with music labels such as Sony Music Entertainment and Universal Music Group for this. Currently, the English songs are only available online and will reflect in the Saavn mobile apps in the days to come.

## Microsoft Office for Android and iOS due in March 2013?



Word is that Office Mobile will first come to iOS, and will be in the form of individual apps that will allow the opening and viewing of documents only. For any kind of editing capabilities, an Office 365 subscription would be required and this subscription will be an in-app purchase.

## Google Play Store seller support

Google has finally included India in its list of countries from where developers can register as Google Checkout merchants and sell paid applications on the Play Store.

## 10 Android Apps You Must Try

### 1. Angry Birds Star Wars – Free

Join the Angry Birds in their biggest adventure yet! New



gameplay mechanics include the use of lightsabers, blasters and Jedi powers to wreak havoc on the imperial pigs!

### 2. Need for Speed Most Wanted – ₹250



With awesome graphics, EA's *Most Wanted* pushes the mobile platform to its utmost limits. Buckle up, hit the gas and hold on tight, you're in for the ride of your life.

### 3. Blood Brothers – Free

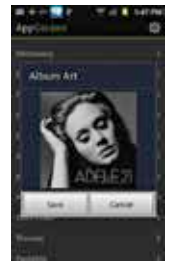


*Blood Brothers* is a dark fantasy game, a tale of a hero turned vampire, who must bind an army in a pact of blood in order to exact vengeance on a corrupt empire. Choose one of eight heroes – knight, samurai, high elf, dark elf, ape, lizardman, dwarf or goblin – to lead your army to victory.

### 4. AppGarden Lite – Free

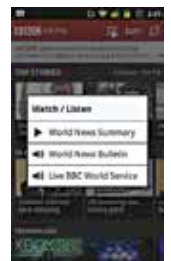
The interface looks dated, but AppGarden Lite is a lightweight, backwards-compatible container with dozens of useful utilities – from conversion charts to a bar-

code scanner to a password generator. You can bookmark your favorite utilities for quick access. My Favorites folder includes the QR scanner, stopwatch, tip calculator, currency calculator, Urban Dictionary lookup and a calorie calculator.



### 5. BBC – Free

BBC's mobile app doesn't disappoint, letting you watch video reports, listen to live radio, clip articles for offline reading and read the latest updates on the fly.



### 6. Bump – Free

Bump lets two users tap their phones together to immediately share photos, contacts and apps. Amazingly, it works cross-platform between iOS and Android users as well.



### 7. GO SMS Pro – Free



Go SMS Pro is the SMS/MMS app for power Android users. You can send "short" messages containing text, voice, doodles and photos. There's a lot of room for tinkers to customise themes, messages and folders for storage.





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## Microsoft announces Xbox TV

Microsoft is working on the Xbox TV which it plans to launch in 2013. It aims to focus on entertainment and not on gaming

## Diwali app

Extensia has launched a Diwali greetings app for the iPad. Now you really can't have any excuse as to why you didn't send any greetings to your loved ones

### 8. Gibberbot – Free



Armed with the right software, it's pretty easy for someone to tap into your cell-phone network and read all the text messages

and chatting you're doing over your device. Gibberbot obscures all this data so that it looks like 'gibberish' to a hacker. This free, open-source chat client offers fully encrypted chatting over Gchat, Facebook and Jabber. Must be used in conjunction with Orbot, the official Tor client for Android.

### 9. Audiogalaxy – Free



This app, still in beta, streams all the music stored on your local drive, for as long as the latter is turned on.

### 10. FxCamera – Free



Not every smartphone running Android has a great camera, so get better

photos with the help of a little software. FxCamera adds filters and effects such as 'toy' and 'fish-eye lens', to enhance even modest of pictures. It also helps to arm yourself with additional tips for getting better photos from your phone.

## 10 iOS Apps You Must Try

### 1. Nokia Here for iOS – Free

Nokia's rebranded Drive navigation app, Here, is here. While it doesn't match up to some of the



features of Google Maps for sure (especially with respect to alternate routes) but it's definitely excellent as far as giving routes is concerned.

### 2. Snapchat – Free



Real-time picture chatting is now available on the iPhone. Claiming to be the fastest way to share a moment with

friends, Snapchat allows you to control how long friends can view a message, lets you know if they take a screenshot, and "build relationships, collect points and view your best friends."

### 3. Adaptu Wallet – Free



Adaptu Wallet for iPhone is both free and ad-free, and is the closest thing to a mobile wallet on an iPhone

yet. It features bank-grade security, keeps track of your latest account balances in real-time, sends you bill-reminders, tracks loyalty programs, forecasts your spending and lots more.

### 4. Adobe Photoshop Express – Free



Digital photography editing, until very recently, has been a task best suited for desktop and laptop com-

puters, but Adobe proved that it could be done in the mobile space with Photoshop Express, a free photo-editing application

for the iPhone and other iOS devices. Photoshop Express is a powerhouse of a mobile app, and can even handle noise reduction (extraneous particles that show up on photos). All in all, Adobe Photoshop Express is a solid tool for making light photo edits on your iPhone.

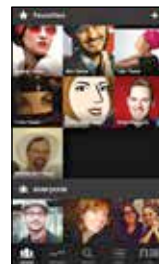
### 5. BBC News – Free



Among news apps, BBC has one of the best interfaces — clean, with relevant headlines, good photos and

no advertisements. (Whether you agree with its angles and choice of coverage is another matter.) As far as international news organisations go, though, the BBC really does have correspondents in every corner of the globe, as well as varied and widespread topics.

### 6. Brewster – Free



The Brewster iPhone app may be one of the most visually appealing contact managers you'll find, tapping into multiple

social networks for images of people you know. It insists on having access to your iPhone Contacts and either Twitter or Facebook to work, though.

### 7. Chrome – Free



Chrome for iPhone is just Safari with a better interface and a few more

features, but it's a must-have app for desktop Chrome users. Anyone who has fallen in love with the "Omnibox," or com-

bined URL address bar and search bar, won't want to use anything else.

### 8. Converter Plus – Free

This all-in-one calculation app, Converter Plus, delivers numbers on nearly everything, from currency conversions to loan-interest figures. It converts metric to imperial measurements for temperature, cooking volumes, length and more.

### 9. Draw Something – Free




Draw Something Free, the latest app craze, pits both iOS and Android users in simple gesture-based drawing competitions. Pick a word from a list of three, draw it on your screen with your finger using a variety of colors and brushes, and then send it to your friend to guess what you've drawn. You win coins if your friend guesses correctly. It's very simple and, like Words With Friends, the addiction lies in the robust social aspect.

### 10. Dropbox – Free



If your files live all over the place — your office computer, home desktop,

laptop, etc., having a dependable syncing program is a must. Dropbox, the service and productivity tool that lets you store your files in the cloud and access them from anywhere you have a signal, fills that role nicely with a Dropbox iPhone app. It has a simple interface, easy uploading, and swift syncing across all accounts. 





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## Linux Mint 14 out

The new Linux Mint 14 desktop OS, 'Nadia', launched with several GUI updates and management tool improvements

## Dell's second ARM platform

A second ARM server, being developed by Dell is going to be donated to the Apache Software Foundation for further application porting and software development

# India ranks second globally in accessing private details of users

According to the latest transparency report released by Google, India ranks second in the world for accessing private details of its citizens, only after the U.S. The Google report lists out requests it received from governments across the world to access details of users of its various services.

Google's data reveals India had made 2,319 requests involving 3,467 users in the period from January to June 2012. The U.S. made 7,969 requests, while Brazil, which ranks third, made 1,566 requests during the same period. World-

wide 20,938 requests were made during the January-June period. The report says the information shared included complete Gmail account, chat logs, Orkut profile and search terms among others.

The requests for accessing user data from India had grown two-fold from 1,061 in July-December 2009 to 2,207 in July-December 2011, the report points out. According to the report, India has been consistently sending requests to remove content which it brands as defamatory and against national security. The court orders, however, to take down content has remained almost

Country	User Data Requests	Percentage of data requests fully or partially compiled with	Users / Accounts specified
United States	7969	90.00%	16281
India	2319	64.00%	3467
Brazil	1566	76.00%	2640
France	1546	42.00%	1880
Germany	1533	39.00%	2007
United Kingdom	1425	64.00%	1732
Italy	841	34.00%	1054
Spain	531	52.00%	1037
Australia	523	64.00%	841
South Korea	423	35.00%	917
Poland	351	21.00%	458
Taiwan	271	63.00%	307
Hong Kong	192	33.00%	192
Portugal	184	14.00%	247
Argentina	137	38.00%	178

As you can see, India has sent around 2319 requests in the time period from January to June 2012, second only to the US

stagnant over the years, though requests from the executive and police have grown.

In the first six months this year, there were 20 court orders and 64 requests from executive / police that resulted in 596 items being taken down from the web. During the January-June 2010 period, there were only eight court orders and 22 executive / police requests, resulting in 125 items being taken down. Read about Google's previous transparency report here: <http://dgit.in/UYK5fP>

"Though India is a large country with a significant number of internet users, this data is nonetheless an indicator of growing surveillance," *Times of India* quoted Pranesh Prakash, policy director at Centre for Internet and Society ( CIS), a Bangalore-based organisation looking at issues of public accountability, internet freedom and openness, as saying. "India lacks a general privacy law that helps set guidelines for such user requests, despite privacy being a constitutional right as part of the right to life," added Prakash.

## New VOIP interception technologies available to governments

Most governments have faced a tough time while tapping into Voice Over Internet Protocol (VoIP) services, but now a new spying technology empowers these agencies to 'silently record' conversations on online chat services such as Skype in real-time.

The VoIP services convert audio signals into digital data packets, which is highly costly and complex for third parties to intercept. This is why various countries have chosen to block VoIP services for security reasons. The US' FBI has sought the internet chat providers to build in 'backdoors' that its agents can use to wiretap suspects' conversations.

A California-based businessman has gained a patent for a 'legal intercept' technology which he says would allow governments to "silently record" VoIP communications. Dennis Chang, president of VoIP-PAL, a chat service similar to Skype, claims the technology will enable authorities to identify and monitor suspects only by accessing their username and subscriber data.

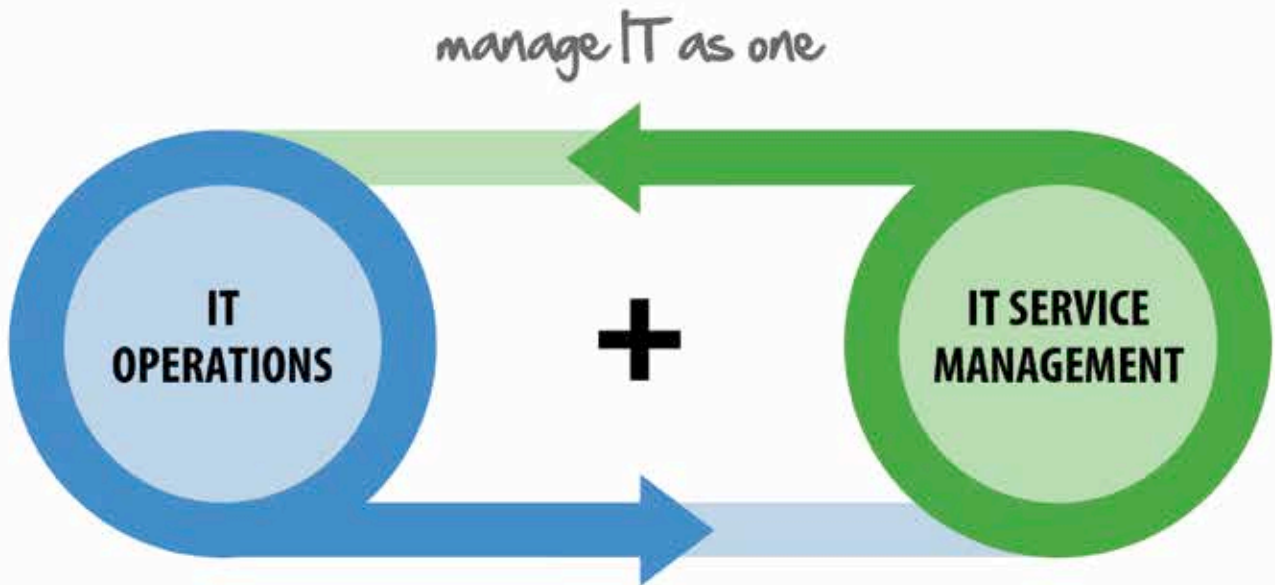
The patent says chats could also be tracked down by billing records that associate names and addresses with usernames. Such technology will help agencies intercept not only audio conversations but 'any other data streams such as pure data and/or video or multimedia data'

As you can imagine, some users who may use false subscriber data and services to hide their IP addresses could manage to circumvent the identification. However, the patent would restructure the way VoIP data is sent over the web, making it easier for the government bodies to track the conversations.

Back in India, the government has directed all the telecom operators providing BlackBerry smartphone services to implement the interception solution offered by Research In Motion by December 31 – a move that's supposed to help security agencies to keep a check on the possible misuse of the encrypted service.

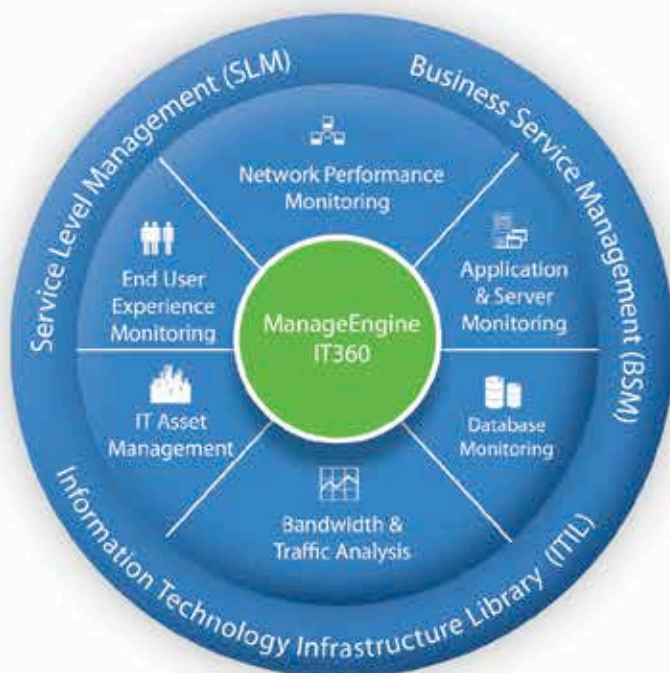


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### Vivo X1 unveiled in China

The Vivo X1 was showcased in China, aiming to become the 'world's slimmest smartphone' at less than 6.65 mm in thickness

### Windows 8 hits 20,000 apps

Following its goal of having 100,000 apps in 3 months after launch, Windows Marketplace hit 20,000 apps. 80k more to go

# Google brings new security features to Android 4.2 Jelly Bean

The advent of Android 4.2 Jelly Bean brings new security features to the platform, features that have been required for a while to protect users from the many dangers associated with malicious apps. The new security features are built natively into Android 4.2 Jelly Bean, and the most vital of them, is in essence similar to the Bouncer feature rolled out for the Google Play store in February this year. While the Google Play store is now supposedly cleaner because of this feature, Android users are still at risk when sideloading apps from other sources.

Completely opt-in, the 'verify app' feature can be toggled from the 'Security' sec-

tion of Android 4.2 settings. Each time users download and sideload an app, it is sandboxed, with virtual walls put up between the app and other software on the device. A pop-up box will then ask the user if they want to check the app for potentially 'harmful behaviour.' The device will then send information about the device to Google's servers and compare it with a database of known applications.

Even if the app is not listed on the Google Play store, Google is confident it can detect if it is safe or not, as the company says it is constantly scanning the web for newly appearing APKs, and has a good understanding of how the ecosystem works. If the app under scrutiny is detected as safe, the installation will con-



tinue but if it is detected as dangerous, it will prevent you from installing it. If however, the app is questionably secure, but not strictly harmful, the user will have the option to continue with the installation.

According to Google, the app installation process will not be greatly slowed down by the new security process, as most of the processing happens on the company's servers and the user device only has to send an APK signature onward.

As for the other new security features, Google has also introduced an improved app permissions screen, for sideloaded apps, which is apparently much simpler to read than before. Android 4.2 also brings a scanning feature, that detects any attempt by an app to send a text message to a known fee-collecting short code (premium number) and will alert the user. The user will have the option to then allow, or deny the app from continuing with sending. [d](#)

## iOS 6 fixes bug that let stolen iPhones read iMessages

Apple has finally fixed a bug that let the iMessages app receive messages even if the iPhone device had been remote wiped in case of theft.

Sources have confirmed to *The Next Web* that Apple has taken steps to correct the matter through a variety of checks placed on iMessage.

The most important of these corrective measures is that Apple uses its push system to force users to re-enter the Apple ID password if any credentials of the Apple ID have been edited or changed.



So, if your phone is stolen, apart from remote wiping it, all users have to do is change their Apple ID password and messages will not be received on the stolen device.

Transferring your SIM card to a new device or remote wiping it with Find My Phone didn't stop the stolen device from receiving messages in iOS 5 but thankfully, now that has changed for good.

Even though the bug has been fixed with iOS 6, what's surprising is that it took Apple a very long time to find a cure for this problem. [d](#)

## Irish regulators ask Facebook to clarify changing privacy plans

Irish regulators have sought clarifications from Facebook over its plans to change its its privacy policy.

Last month, Facebook proposed changes to its site governance and privacy policies, which included its data-use policy and statement of rights and responsibilities. Facebook also informed users it intended to abolish user votes on Facebook's practices.

Facebook says the changes if implemented would provide more detailed information about their data, along with

new features to help users manage their messages and reminders on what content is visible to other members of the social network.

The Irish privacy watchdog's deputy commissioner Gary Davis, however, said, "We will be seeking further clarification from Facebook Ireland and if we consider that the proposed changes require a specific consent from EU users, we will require Facebook to do this," according to Bloomberg Businessweek. [d](#)



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### Remembering 2012

From the iPad mini launch to patent wars, we look back on this year's most significant events in tech

### Nokia acquires Earthmine

Nokia completed the acquisition of 3D street-level imaging specialist Earthmine, that will help it boost its digital mapping services



### PrestigeHD SUPREME

Latest in the world of mindless splurging and excesses is the PrestigeHD Supreme television for filthy rich digital enthusiasts! All we know for sure is that it's a 55-inch flat-screen LCD TV. However, every other tech specification pales in comparison to these next few words. The TV has a base and outer frame with 28 kg of handcrafted, solid 18-karat gold... and also fitted with 72 glittering diamonds. A variant of this model from Stuart Hughes also has the TV screen's inner layer stitched with alligator skin. It's price? A whopping ₹13.2 crore!!

All that glitters is  
truly, massively,  
ridiculously expensive!

### iPad mini case

If you're a rich early adopter of the recently launched Apple iPad mini, for ₹3.8 crore, you can have an authentic and exclusive case designed by The Natural Sapphire Company that will definitely make heads turn. This ultra-expensive iPad mini case has an 18-karat white gold body studded with 3,328 natural Blue Ceylon blue sapphires, while 50 diamonds embellish the Apple logo. If you ever needed one very good reason to break the bank, here it is, and what are you waiting for?





## WoW turns 8

Blizzard Entertainment celebrated 8 years of World of Warcraft by giving away free in-game gifts to players before December 1

## Google working on AirPlay rival

Google is reportedly working on a content streaming service/technology aimed at rivalling Apple's AirPlay, moving beyond services offered by YouTube

Drool maal

## Goldgenie iPhone 5

The recently launched iPhone 5 is quite an expensive gadget as it is (in India, at least), but there are a few who can resist the idea of coating the device with the precious yellow metal making it even more exclusive. Available in 16 GB, 32 GB and 64 GB capacities and factory unlocked, the gold iPhone 5 from Goldgenie comes with its back, sides and buttons touting 24-karat layers of the precious metal. Apart from all the regular Apple bells and whistles, the gold-plated iPhone 5 comes with a plush piano-finish box. It isn't too expensive either, only ₹1.5 lakh.



## Dallmeier Swarovski-studded IP camera

If you want to keep thieves out of your jewellery store, what better way to deter them than by encasing your surveillance camera in hundreds of Swarovski crystals? The camera doesn't only look stunningly beautiful, but has 1/3rd DPS image sensor and Cam-in PIX technology (whatever that means!) to snap a (hopefully) crystal clear picture of potential burglars. We hope the Dallmeier camera has offline video backup, because there's little chance of it surviving even one night in the open. For ₹1.1 lakh, that's one expensive security system!

## Gigabyte Swarovski GM-M7800S

If you'd worked hard to assemble a gold-plated exterior for your desktop PC, then would you use a foul and uncouth plastic keyboard and mouse? No! We don't know about the keyboard, but you definitely need this Gigabyte wireless mouse with a uber premium brown-leather exterior which is studded with Swarovski crystals. The mouse deploys advanced laser tracking, on-the-fly 1600 by 800 adjustable DPI, a four-way scrolling wheel and an ultra-portable nano-receiver.







### Sony's 4k resolution TVs

Sony's upcoming Ultra HDTV series will feature fully compatible support for 4k resolution images and video

### LG wins energy efficiency award

LG's LM6700, a mid-range LED backlit LCD TV, won a Super-Efficient Equipment and Appliance Deployment (SEAD) award. More at <http://dgit.in/UDfDt8>

# Remembering 2012

## The year's most significant events in tech

Sameer Mitha and  
Nimish Sawant  
[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

**T**he year 2012 has been quite an exciting year for tech. We have seen the launch and coming of age of a few product categories, seen companies fight like children over the look and feel of their respective devices and seen the operating system world turn on its head with desktop and mobile integration.

The number of events that have happened in the world of tech are far too many to list in a few pages, so we have tried here to summarise the events of the year between the good (what made us happy), the bad (stuff that saddened us) and the ugly (stuff that we think went totally wrong)!

### The rise of the phablet (Good)

Steve Jobs said that the reason the iPhone had a 3.5-inch screen was because it was easy to navigate with one hand. Then he said that 9.7-inches was right for a tablet was because anything smaller just made no sense.

The consumer market however disagrees. Despite the bulge it will cause in your pocket, the phablet is picking up as a product category that caters to the market that is confused between picking up a smartphone and a tablet.

The Dell Streak, when launched with its five 5-inch display was a precursor of



HTC Droid DNA has failed to make an impression as compared to the Note II

things to come. The implementation was quite shoddy though and consequently the device failed.

Fast-forward to 2011 and Samsung dared to bridge the gap between the smartphone and the tablet with the launch of the Galaxy Note. The device succeeded and the rest, as they say, is history. Asia has seen the biggest demand for the phablet when compared to global sales figure. So its natural, that a country like India has become a hot selling place for these devices. In 2012, we have seen the rise of quite a few smartphone-tablet hybrids that have been christened with the name Phablet. Recently, we saw the launch of the Samsung Galaxy Note II, which has some impressive power under the hood

– a quad-core 1.6 GHz processor, Mali 400MP GPU, a whopping 2 GB of RAM and expandable storage of up to 64 GB, but the price tag of ₹37,000 makes the device quite expensive. There are other products that have tried to take some of the Note's market share like the LG Optimus VU and the HTC Droid DNA but sadly, these products have failed to make an impression.

Since the category is relatively new, we have seen the rise of quite a few local companies entering the fray with budget phablets such as the iBall Andi 5c, Micromax Superfone Canvas A100 and the I10 and the WickedLeak Wammy Note.

The consumer is spoiled for choice. Ant the fact that more and more manufacturers want a bite of the phablet pie indicates that the category has just started heating up.

### Talk to me (Bad)

Five years ago, if someone told you that you'd be able to talk "to" your phone and it would talk back to you, you'd probably not believe it. Now you have several talking phones each with its own electronic avatar – Siri, Aisha, S-Voice – you can take your pick.

Just like many other things, Apple started the trend of talking to your smartphone by launching Siri with the iPhone 4S and a slew of third party apps have followed suit on the Android platform. We have even seen our very own *desi* assistant in the form of Aisha as a voice controlled personal assistant on Micromax budget Android smartphones.

Unfortunately, none of these assistants are perfect and have a long way to go before they reach the capabilities of the "Heart of Gold" (Read *Hitchbiker's guide to*



## Mirror's Edge 2 coming

Former EA Senior Executive Ben Cousins has said that Mirror's Edge 2 is already "in production" at developer DICE

## IE10 out for Windows 7

Microsoft released a redesigned Internet Explorer 10 for Windows 7, with no plans to release it for older versions of Windows

Feature



Apple's voice-assistant Siri

*the galaxy!*). Nevertheless, the trend seems to be picking up quite well and hazardously. Apart from it looking downright silly, we have seen people ask for directions from their phones and jaywalk on to the street. We've even seen people try talking to Siri on a plane and wonder why it isn't working?

## Apple gives in (Bad)

If Steve Jobs could see the state of Apple today, he'd totally turn in his grave. The man was completely against the idea of a smaller iPad and a year after his death the device has seen the light of day. His legacy isn't upheld, but we'd let you decide if this was a good or a bad move on Apple's part. One reason why Apple probably caved in to this device is because in the recent past we have seen the rise of a number of 7-inch tablets and the price starts from a mere ₹6,000 and goes all the way up to ₹30,000. Steve Jobs had said, "The reason we [won't] make a 7-inch tablet isn't because we don't want to hit [a lower] price point. It's because we think the screen is too small to express the software. As a software driven company, we think about the software strategies first."

Android as an OS too is getting better by the day, and with budget tablets running on Android 4.0 ICS at the very least, Apple is facing some serious heat.

When Steve Jobs vowed to destroy Android he would have done a lot more than just shot him-

self in the foot as that's what Apple did. Tim Cook announced the replacement of Google Maps with its own maps app and the removal of YouTube as a native iOS app in iOS 6. Nokia phones today have better maps than iOS 6 and Tim Cook had to issue an apology note to consumers. Not only that, when the iPhone 5 went on sale, the 30-pin to lightning dock converter wasn't available.

Things aren't going well for Apple. In November 2012, the stock price of the company was at a six-month low.

## Things are getting picture perfect (Good)

We have seen quite a few cameras hit store shelves this year that have impressed us. The highlight of the year, apart from the large array of cameras launched has to be that the potential of the cameras is increasing and its form factor and size is decreasing. Big sensors have found their way into small bodies and professional features, once found only in the high end cameras, have started making their way to the entry level and mid range DSLR's. The feature set has reached such a level that we have seen full frame sensors make an appearance in smaller cameras.

Cameras like the Sony RX100 are by no means DSLR replacements but they definitely make for a very good supplement. Its elder brother, the Sony RX1 houses a 24 MP full frame sensor in a compact body, which is great.

Two big guns that made headlines this year had to be the Nikon D800 and the



Sony RX1 sports a 24 MP full frame sensor

Canon 1DX. The Nikon D800 has a 36MP sensor as a highlight as well as some other great features like an RGB Matrix III meter (91,000 pixel), support for dual-memory card slots (CF and SDXC) and more.

The Canon 1DX on the other hand has an 18MP full frame sensor, 14 fps shoot speed, 61 point AF system with exceptional tracking and a weather sealed body making it a professional photographers wet dream.

Canon also released its first mirrorless interchangeable lens camera - the EOS M this year. Olympus updated its PEN line of cameras with the E-PL5 and launched its flagship mirrorless - the retro design sporting OM-D E-M5 earlier in the year. This will be a category to watch out next year.

## Windows universe is divided into two platforms (Ugly)

Windows 8 is one of the biggest revamps to an operating system that we have seen in a long time. And this isn't necessarily a good thing. We put a Windows 8 powered desktop in front of a 45-year-old professional and she was stuck on the lock screen!

Consumers too are finding the new OS quite confusing as it offers a variety of versions (and this time it goes beyond the home, professional and elite editions) that work on a variety of hardware.

Windows 8 was designed keeping the touchscreen as well as mouse and keyboard in mind. This means that there are certain features that work best with a touchscreen, like navigating the start screen and there are some



The iPad Mini and iPad place side by side. Apple launched two new iPads this year



## Gangnam style #1 on Youtube

With over 800 million views, PSY's "Gangnam Style" overtook Justin Bieber's "Baby" to become the most watched video on YouTube



## Gmail's security tightened

Google tightened security on its Gmail service after a researcher exploited a security loophole to send spoof emails to the founders



Windows 8 operating system has a very different user interface and works with gestures

things that work best with the mouse and keyboard, like the traditional desktop.

Microsoft has done away with Basic, Home, Ultimate versions that we'd seen in Windows 7 and instead put out versions that will run on different hardware.

### Windows RT

This is a version of the Windows 8 OS that will work on ARM powered devices such as tablets. The biggest downside to this version is that it will not run legacy apps. Put simply, the device will only run those apps that are available through the app store on the device. So if you want to run a third party browser or a video player, you can rest assured that it won't work. The RT version of Windows won't run x86 programs.

The advantage of Windows RT is that it is relatively easy for developers to port apps that run on Windows Phone 8 and make them run on Windows RT. This is easier said than done though. Remember how some of the iPhone apps were



Microsoft Surface sporting Windows RT

stretched when they ran on the iPad? We hope Microsoft will fix this and not simply import the apps.

### Windows 8

Then there is the x86 version of the OS, which is essentially the desktop version, which will run on Intel or AMD, powered laptops, desktops or the laptop/tablet hybrids that have started to emerge. This version will run all applications/programs, that are available via the Windows Marketplace as well as those that can be downloaded from third party websites. Windows 8 Pro is another flavour of Windows 8, with the only difference being that Pro has the following three features: joining a domain, encrypting your disk with BitLocker and being able to log into your PC remotely.

Microsoft has gone all out with revamping the OS to the point that certain keyboard shortcuts too have changed. Hitting the Windows key on the keyboard no longer opens the start menu, but launches the Start screen. Only time will tell if this move is for the better and from what we have seen, customers are slightly resistant to change, especially since Windows 7 still is a really good and reliable OS.

### The year in sequels (Good)

2012 has been quite a good year for gaming, especially if you are a gamer

in India. The year has seen its share of gaming hardware as well as software launches. Sony finally succumbed to fan pressure and unveiled the PS Vita last year but the device hit the Indian shores in February 2012 and what a treat it was! Not only did it add a second analog stick, but also front and rear touch panels to add a better gaming experience. The end of the year has also seen the launch of the Wii U, the first next-gen console, but unfortunately, Nintendo doesn't officially launch its consoles in India.

The year has also seen a slew of games hit store shelves. Like the past few years, we have seen 2012 release more sequels that big budget AAA new IP's. Games that hit store shelves included *Max Payne 3*, *Hitman Absolution*, *Call of Duty Black Ops 2*, *Assassins Creed 3*, *Borderlands 2*, *Darksiders 2*, *Halo 4*, *Transformers: Fall of Cybertron*, *Resident Evil 6*, *Need for Speed: Most Wanted*, *Forza Horizon* and a whole lot more.

If you thought that paying a whopping ₹2,500 for a console game was bad, you may want to consider becoming a PC gamer as PC games are available for



Wii U was the successor to the Wii launched six years ago

a mere ₹999. On the other hand, some games on the PC have become free to play. Even before *Crysis 3* hits store shelves, Crytech has said that it is planning a free to play *Crysis*. Crytech has been quite open about making its games free-to-play or renting them out to gamers so that more gamers who cannot afford to pay full retail get access to AAA titles. One of the biggest titles to go free to play in 2012 was *Star Wars: The Old Republic*.

OnLive, as a game-streaming service seemed like a great idea on paper but practically didn't seem to take-off. The idea was that users could purchase a bare bones console and could stream the

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## Samsung's 3G camera

Samsung's 3G-connected Galaxy Camera lets users share pictures and videos on social networking sites directly

## Infy Science Prize winners

Infosys announced the winners of its Science Prizes in engineering, computer science, humanities, life sciences, mathematics, physical sciences and social sciences



Rockstar finally released Max Payne 3 after a gap of nine years, and it was worth it!

games from the cloud. The processing would happen server-side. The feature was available for PC users as well as a streamer that could be connected to the TV. Unfortunately, the service never picked up, mostly due to the lag on screen due to the slow back end processing of the game. In the past few months, the service has seen a revamp and is currently being offered as a feature with LG Smart TV and Google TV sets.

Even though we have seen a rise of online gaming in India, the trends hasn't really reached its full potential due to one factor alone - Internet speeds. The average household has a minimum speed of 256 kbps or 512 kbps and these speeds aren't enough to take advantage of either console or PC online gaming.

## Patent wars (Ugly)

Patent wars are nothing new to the world of technology, but the way they have played out this past year has been more childish than anything else. The Apple vs Samsung patent infringement lawsuit that began in 2011 doesn't seem to be reaching any meaningful end. The drama has seen the parties involved accusing each other of copying design elements ranging from the curved edges of the phone to the multi-touch gestures right up to the point that the icons look the same. If that's the case, we wonder why Apple hasn't sued a company like Micromax yet? We don't really know what's up with the US Patent and Trademark Office, as it recently awarded Apple a design patent for - flipping pages digitally.

Since the explanation of the patent wars can fill pages, here's a simple way of understanding it. *Street Fighter* and *Mortal Kombat*, are both fighting games. Both have char-

acters that move left and right on a screen and attack with kicks and punches along with special abilities. But fundamentally both the games are different even though certain mechanics are the same.

In the Apple vs Samsung patent war, the court awarded Apple more than \$1 billion in damages. For those of you that aren't aware, Apple sued Samsung claiming that the Korean giant has copied design elements from the iPhone and the iPad and implemented it in its own product catalogue. Apple went so far as to say that the icons on the Samsung device too were copied from Apple devices.

Apart from this Apple vs Samsung war, there have been quite a few patent battles happening. Here's a list of some:

1. HTC settles with Apple and agrees to pay royalties of an undisclosed sum to Apple.
2. An Apple lawsuit against Google's Motorola Mobility over alleged patent



Apple Vs Samsung patent war was the legal battle of the year, and it's still on

abuse is thrown out by a Wisconsin Federal Court.

3. Oracle sues Google over seven patents relating to the use of Java in Android.
4. Microsoft files an ITC complaint and a lawsuit against Motorola over nine patents.
5. Nokia sues Apple in another German court over five patents.

The list is endless. The real loser in this battle of the patents is the consumer. With companies filing for silly patents that include the curved rectangular edges of a

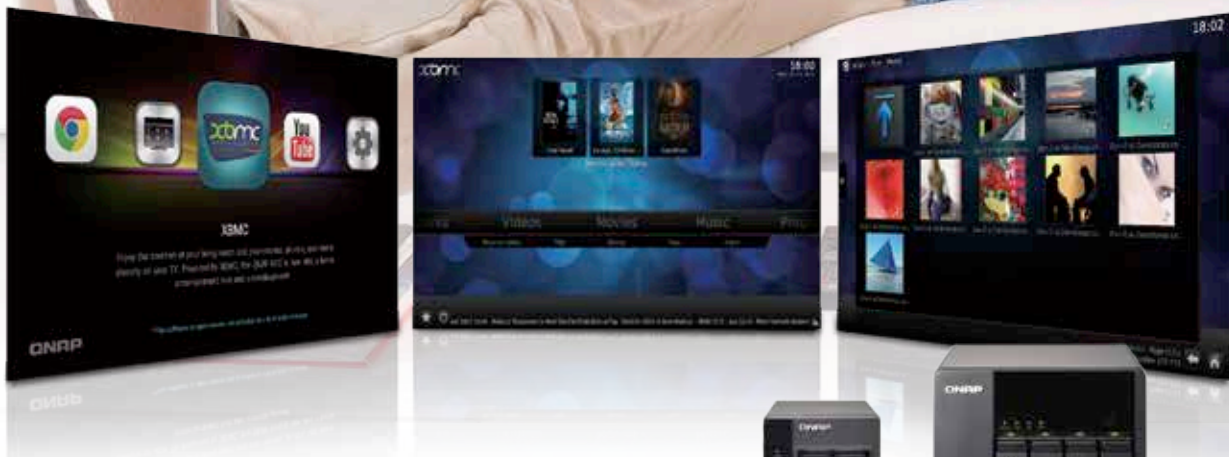
device or the way that pages of an e-book are turned in an app, the number of truly innovative products in a particular category is going to be limited to the big players who can either afford to pay or afford to fight.

## The true age of portability begins (Good)

If 2011 can be called the year where ultrabooks were introduced, then 2012 can easily be called the year when they went mainstream. One indicator of this was the launch of ultrabooks at various price points. The biggest development in 2012 was the launch of the second generation of ultrabooks on the latest Intel Ivy Bridge series processors. One noticeable change in ultrabooks was that they came with an mSATA SSD for caching in case the primary storage drive is a conventional HDD. This has truly helped the performance of the device.

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TS-269L



TS-469L

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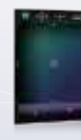
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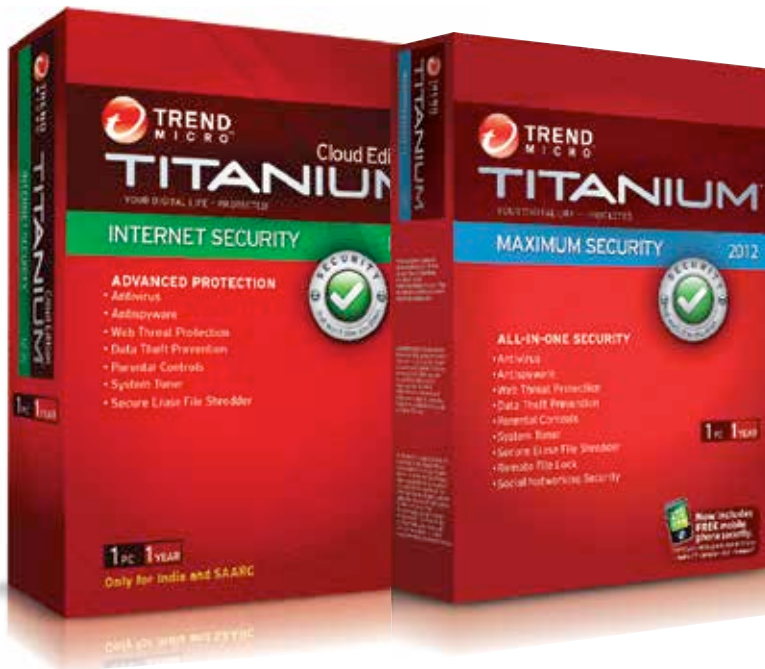
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## Glitchy Black Ops 2

Black Ops 2 had a troubled release as many PS3 users complained that a glitch caused their consoles to freeze and crash

## McAfee wanted for murder

Anti-virus software kingpin John McAfee wanted in Belize for Murder, claims he is being framed and is innocent



HP Spectre XT was one of the better ultrabooks we tested this year

the improvements, some tradeoffs are present in the ultrabook such as lack of an optical drive, the audio output from the built-in speakers not being good enough and some of them come with plasticky build to keep the weight light.

With the Windows 8 fever slowly gripping everyone, there are interesting form factors such as hybrids, slates, convertibles and so on. It will be interesting to see how ultrabooks compete against these new form factors in 2013.

## Overhauled operating systems (Good)

The integration of content between the smartphone and the desktop computer was inevitable, thanks to the powerful innards of the smartphones these days. Phones today have more compute power than PC of just a few years ago.

This year can be called the year where we have seen the integration between the desktop OS and the mobile OS.

iOS and Mountain Lion integration pairs devices quite well. You can wirelessly sync content from your iOS device to your Mac, be it music, videos, photos, iMessages and even notes, all simply via Wi-Fi. Click a picture from your iPhone and watch it pop up on your Mac in a matter of seconds. The integration of iOS and Mountain Lion even lets users play multiplayer games with friends on a Mac, iPhone, iPad, or iPod touch – across devices.

Windows 8 has seen the biggest rehash to an OS in Microsoft's history. Windows 8 too will see the integration of content between Windows Phone 8 and Windows 8, but as of now, the only integration we have seen is through Sky Drive which gives mobile users access

to their documents and data stored on Sky Drive. Microsoft has also integrated users Xbox Live accounts throughout their devices. Users can earn achievement points by playing games on their portable devices and also have access to their Live avatars, modify them and go through their Xbox content on any of their devices.

Windows 8 is also bridging the gap between touchscreen devices and the laptop and we have started seeing devices emerge that offer the best of both worlds.

This technology is still in its nascent stages as this is the first year where we have seen a deep integration between the mobile and the desktop OS and it seems to be moving in the right direction.

The Mobile OS space too has seen some action. iOS 6 still has the same



Android Jelly Bean launched a boatload of features this year

simple interface that people are accustomed to and that isn't a bad thing. Android on the other hand has seen some really awesome improvements. Android 4.1 Jelly Bean brought with it a slew of impressive features such as Chrome becoming the native browser, Android Beam, face unlock, better notifications, Project Butter making devices a lot more smoother and Google Now which gave users relevant information such as weather, traffic and more. With Android 4.2, devices have the ability to have multiple users on one device, wireless viewing of content on your TV (just like AirPlay), gesture typing on the keyboard and a whole lot more.

It's safe to say, that the mobile OS has seen some pretty big improvements this past 12 months. At this rate, the next year should be quite interesting in this space.

## Integrated and discrete graphics (Good)

The traditional rivalry between the two giants from the graphics industry carried on this year as well. The GPU manufacturing process was reduced to 28nm by both the players. AMD rolled out the Radeon HD 7000 series towards the end of December 2011 and it was a good three-month wait before NVIDIA released its GTX 600 series of cards. But the wait was well worth it, as NVIDIA's flagship card – GTX 680 – beat AMD's flagship HD 7970 in the performance arena, although by a small margin. But what impressed everyone was the power efficiency and features offered. The GTX 680 was quickly followed by GTX 670 which was again a better performer than AMD's HD 7950 and so on it continued. In fact, NVIDIA even released its dual-GPU beast – GTX 690 – which retailed at the price point of a good multimedia rig. We didn't get a chance to try out AMD's dual-GPU card, as it wasn't available here till the time of finalising our Zero1 awards. In the second half of the year, came the more mainstream cards with comparatively lower prices from both AMD and NVIDIA, where again NVIDIA kept winning accolades.

AMD introduced a new architecture with the HD 7000 series cards called Graphics Core Next (GCN) which did away with the Very Long Instruction Word (VLIW) architecture to make the GPUs based on the GCN architecture more compute-friendly. VLIW architecture is best for massive parallel processing tasks, but a compute-related task is different. Do read out February 2012 issue for an in-depth look at GCN.

NVIDIA introduced the Kepler architecture which introduced a new stream multiprocessor called SMX, each of which had 192 CUDA cores, as compared to 32 seen on the Fermi cards. Thanks to the 28nm manufacturing process, NVIDIA managed to keep the maximum TDP under 200 Watts, thereby making the graphics cards more power efficient.

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## GTA Vice City PC pulled

Rockstar 'temporarily pulled' copies of GTA Vice City PC from digital distributors while it sorted out issues over music licensing



## Vita Firmware 2.00 goes live

The Playstation Vita's 2.00 Firmware upgrade went live, with major changes including a faster We Browser and an Email Client Plus

NVIDIA introduced the GPU Boost which combines hardware and software to dynamically increase the GPU core clock speed based on the load on the GPU. Sounds very similar to Turbo Boost on Intel processors? Well, it kind of is.

Moving on from discrete graphics cards, we were also quite surprised with the integrated graphics performance on processors. Last year we were impressed with AMD Llano accelerated processing units (APUs) which gave playable frame rates with integrated graphics. This year, the update in terms of Trinity APUs was even better. If you want a graphics-card free system and still be able to play games, get these APUs.

Intel had also given us integrated graphics on Sandy Bridge processors, but for gaming, they were pathetic. This year with the Ivy Bridge processors and Intel HD 4000, the integrated graphics on Intel processors have significantly improved as compared to Intel HD 3000 seen on



AMD Trinity APUs gave fabulous integrated graphics performance

the Sandy Bridge flagship processors. However, the HD 4000 is still nowhere as compared to the HD 7660D found on the flagship Trinity APU.

All-in-all it was a great year for the graphics card industry and we were particularly impressed with the integrated graphics performance on processors. We wonder if card manufacturers will still bother with entry-level graphics cards next year?

## Internet control (Bad)

Anonymous took some serious action in India when content censorship was rampant in mid-2012. When Reliance Communications blocked several websites to curb piracy, they were attacked by Anonymous India who hacked into their servers and made the list of blocked web-

sites public on May 26. Since then, they've hacked into some Indian government websites, defaced BJP and Trinamool Congress websites, and they had even called for a protest across various locations in India on June 9th.

Torrents are a grey area when it comes to sharing content. People can download movies, music and games without paying for it but that is the negative side. There are a whole bunch of legal torrents too. The government tried to block torrents, but users still managed to access them via proxy servers. In the end though, the ban was lifted.

In April, Chennai based Copyrights Labs got a John Doe order (an order against no one in particular) from Madras High Court which ordered ISPs to block several video hosting websites such as Vimeo and Dailymotion along with a string of torrent sites such as Isohunt and Pirate Bay. The motive was to prevent illegal sharing of the movies *3* and *Dhammu*. The ISPs went on this whole website blocking spree welcoming users with messages such as, "This website has been blocked as per instructions from the Department of Telecom (DoT)".

Although the ban on some blocked sites has been removed, the cloud of censorship continues to hover over the Indian cyber-territory. A cartoonist was arrested and charged with sedition for his cartoons, and later released. Two girls were recently arrested for their Facebook activity over the death of a political figure over charges as grave as 'hurting religious sentiments'. Indian government sent the second highest number of take-down notices to Google in the first half of the year. Long story short - the internet is no longer as free as we knew it.

## The war for your living room never reaches you (Bad)

If there is one field of technology that is left behind when compared to the rest of the world, it is with regards to TV content distribution. Digital set top boxes haven't made their way into every living room that has a TV in India. This data partially changed when digitisation became compulsory in the metros, but has the distribution of content reached its fullest potential?

Xbox is more widely considered as a media hub rather than a gaming console. Unfortunately, it hasn't picked up the same reputation in India considering the appalling Internet speeds. Netflix, Hulu, Amazon have replaced the way the west watches their favourite shows and yet India is oblivious to these services. The



Airtel-Digital-tv

youth in India today downloads their favourite TV shows off the Internet, as the latest episodes aren't available on demand via any provider. And when we finally get the old seasons on our TV channels, they are heavily censored (even for language), thereby killing half the fun. Sure, the cable operators and DTH providers do give some channels in HD and offer a few movies on demand, but their services are negligible to the way content is consumed abroad. Google TV, Apple TV, Amazon and more are the one who are fighting to show off the library of content.

India is a potential market for these service providers especially if you see the plethora of soap operas that Indian viewers are addicted to. Localized content is plenty. If the average household could have access to decent Internet speeds and a service provider such as a Hulu or a Netflix would step in, content consumption would change in India considerably.

This is one revolution that needs to start in India and one that we are eagerly awaiting. We have seen some smart TV's and some Internet enabled TV boast of video content but it isn't enough to stir the market. Services such as Big Flix are giving users the ability to stream movies, but then again the constraint of bandwidth is the ultimate kryptonite... **[1]**



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**Space Age**

What will a space-faring human race look like? And how will they return back to Earth?

**Tim Cook highest-paid US executive**

Despite its stock taking a hammering, Apple CEO Tim Cook was recently named the highest-paid chief executive in the US, beating the likes of Larry Ellison and Rupert Murdoch

# The medicine of tomorrow

We take a look at some cutting-edge medical innovations which open up a lot of possibilities in the field of medi-care

Spandan Sharma  
readersletters@tbinkdigit.com

**M**edical diagnosis and technology has progressed by great leaps and bounds in recent years. As more and more innovations are discovered, assessing physical and mental health is becoming highly sophisticated. Here are a few of them.

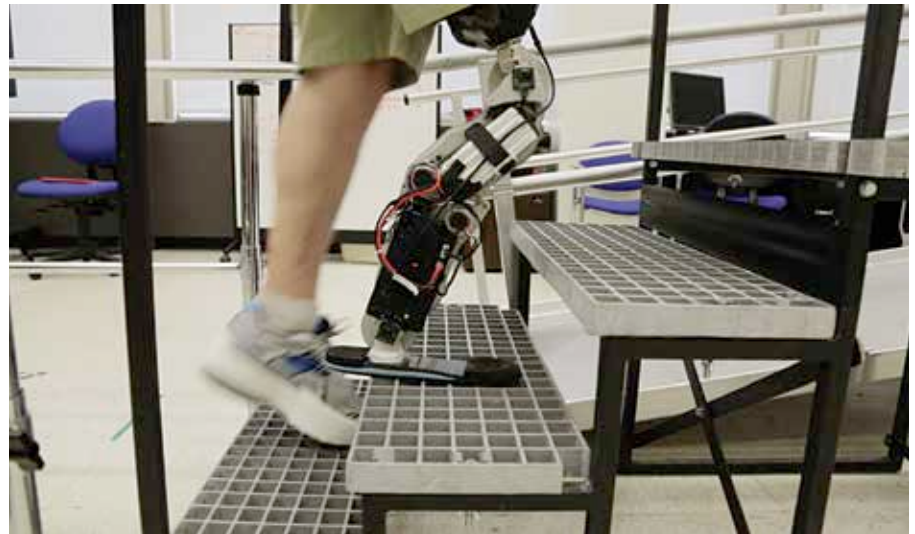
**E-Skin sensitive to touch and healing**

E-skin, or synthetic skin, is nothing new. Indeed, scientists have been able to create small quantities of fake skin in laboratories for quite some time now, however this material lacks a couple of very important properties human skin possesses. The foremost amongst them is the human skin's sensitivity to temperature and the sense of touch, as well as its ability to heal itself. So while the demand for grafting procedures continues to surge, the possibility of it leaving you a little impaired, and not to mention a little scarred was, until now, very real.

Researchers at Stanford say they have created a synthetic material that has overcome the limitations of traditional synthetic skin. The researchers behind the project say it could lead to smarter pros-



The new E-skin promises to open new frontiers for plastic surgery, despite looking ugly



Zac Vawter tests out the new bionic leg design... Remind anyone else of the Terminator

thetics, more resilient and self-repairing electronics and, of course, better synthetic skin. The team started the project with an objective of finding a material that could heal itself, as well as conduct electricity. They found that self-healing was possible if the material was made of long chains of molecules, connected by hydrogen bonds that allowed weak attraction between differently charged regions of atoms. The material is highly flexible as the molecules can split up easily, yet come back together in their original structure.

Material strength can be increased by embedding metals like nickel, that also allows electric charges to flow easily from one particle to another. The final result is a material sensitive enough to detect the most minor of pressures as well as the slightest change in temperature. All hail, the future of skin is here!

**Thought-controlled bionic leg**

Prosthetic limbs have seen steady progress in the quality of materials used in them, with lighter and quicker devices made from new-age materials. However, the biggest problem that remains is their

usability. Apart from prosthetic limbs being bulky, they are difficult to control. Now, researchers in Chicago have come up with a device that may just be the solution to this problem.

Rehabilitation Institute of Chicago (RIC) researchers have created a bionic leg that responds to electrical impulses from muscles in the patient's hamstring, with the user's thoughts synchronising the movements of the prosthetic ankle and knee. The device was tested by amputee Zac Vawter who used it to climb to the top of the Chicago Willis Tower (that's 103 flights of stairs!). He completed the climb in just under an hour, with no breaks, and has successfully proved the usability of the device.

Vawter, who lost his right leg in a motorcycle accident in 2009, underwent a surgical procedure called "targeted muscle reinnervation". The procedure reassigned nerves, allowing him to have more natural control of the prosthetic device. RIC software engineers, physical therapists and doctors worked in a coordinated effort to refine the bionic leg's controls, that read the user's "intent" and work together. The

## LEDs used to fight infant jaundice

Many hospitals have begun using LEDs, instead of traditional fluorescent lamps, in phototherapy machines used to cure jaundice in newborn infants

## New dengue vaccine to be tested

A highly effective new vaccine against dengue will be tested in India soon and may be available globally by 2015. Hopefully, this should help control the disease

Tomorrow's Tech

leg also features a built-in "anti-stumble" feature – if it senses that its user is starting to stumble, it lifts to avoid the obstruction and places the next step firmly to optimize balance. Studies, conducted by Nashville University, have shown that users equipped with the device walk 25 percent faster on level surfaces than when they're using traditional passive prosthetics. Research to improve the device continues at RIC, with bright hopes for easy future market availability.

## Sensor that allows disease detection with the naked eye

With many diseases, the quicker the diagnosis, the better it can be treated. Unfortunately, a lot of diseases, and especially AIDS, are notoriously hard to diagnose in their initial stages. Therefore, usually, by the time the disease is detected via visible physical symptoms, the patient may just be beyond help. In this fight against time, British scientists have come up with a solution that might just give early diagnosis the slight edge it needs.

Created at Imperial College, London, the super-sensitive prototype sensor lets doctors detect early stage diseases with the naked eye, using nanotechnology to analyze blood samples. A positive reaction to p24, a protein that indicates early HIV infection, or PSA, a protein that can indicate prostate cancer, generates irregular clumps of nanoparticles that emit a blue colour in a solution kept in a disposable container. A negative reaction, however, causes the nanoparticles to separate into ball-like shapes, creating



The colour coding makes disease detection quick and simple for the naked eye - red is safe, and blue is 'Yeah, you're infected...'

a reddish hue. The colours are easily distinguishable at a glance.

Simple and quick HIV tests using saliva already exist; however, they can only detect the virus if it is present in highly concentrated amounts. Concentrations of p24 are high in the first few weeks after infection, so a test like this one could be used for quick diagnosis at early stages, without having to wait for the virus to spread in the patient's body.

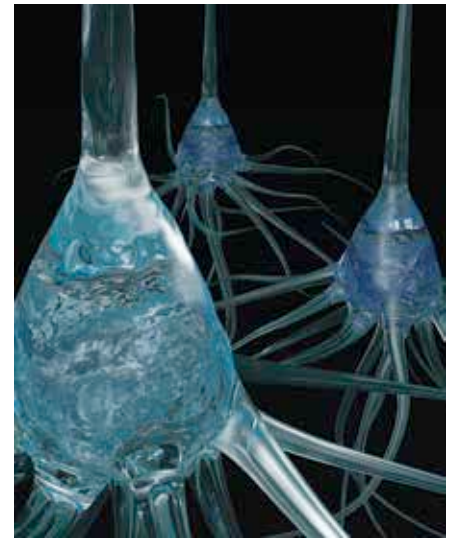
The team behind the project says that their technology is 10 times more sensitive than current methods used for diagnosis via similar biomarking systems, and in fact showed viral loads in HIV-infected patients that were previously undetectable by the far more popular enzyme-linked immunosorbent assay (ELISA) test, as well as another gold-standard nucleic acid-based test. Hopeful news indeed...

## New electrode may help speed of transfer of brain signals

Researchers at the University of Michigan have created a new thin, flexible electrode that they say is 10 times smaller than the nearest competing device, and is likely to finally make long-term mapping of neural activity a practical possibility. This technology could eventually be used to help speed up the rate at which brain signals are communicated to external devices, like prosthetic limbs, which would enable a new generation of artificial devices, like the bionic leg mentioned previously, to be developed.

The problem with traditional electrodes is one of size and incompatibility with neurons. They are not only enormous in comparison, but are also stiff and can cause inflammation in the surrounding region, blocking communication between the electrode and the surrounding cells.

The new electrode, in comparison, is extremely unobtrusive and accommodating. It is made of a thread of highly conductive carbon fibre, coated in plastic to block out all other interfering signals. The conductive gel pad at the end enables a close connection between the electrode and the surrounding cell membranes, resulting in clearer and quicker transmis-




An artist's rendition of individual neurons – the new electrode will make communication between them a lot faster

sions between brain cells. The technology has been tested on rats, with stunning results. In tests, the narrow profile of the electrode allowed it to focus on just one neuron, resulting in sharp and clear electrical signals that could be easily measured and analyzed.

Apart from enabling more advanced methods of control for prosthetics, this technology also has the potential to add greatly to our knowledge of the workings of the human brain. Analysis of the data generated from these electrodes can solve problems whose solutions have long eluded the medical community, such as how do neurons communicate with one another, and what "pathways" are used to relay information across the brain? It appears that we may finally get our answers.

## What the future holds...

These are just some of the myriad new discoveries and inventions occurring in the medical field today. As we progress, we keep looking for new ways to look and feel younger, be more energetic and youthful, and live longer (maybe forever). For all the progress we have made, there still exist entire realms of exciting opportunity and untold possibility with new and developing fields like nanotechnology, genetics and biotechnology. We have barely scratched the surface here, and the journey is just beginning. 



**10bn Euro space budget**

European Space Agency has approved a three-year 10 billion euros budget, although some programmes may be longer or shorter than three years

**Moon Phases 2013**

Scientific Visualization Studio at NASA has released a new animation showing the phases of the moon in 2013: <http://dgit.in/Qhklyd>

# Lifetimes in space and Earthly homecomings

How will space-faring humans live? Will they ever want to return home to Earth?

Swapneel Rane

[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

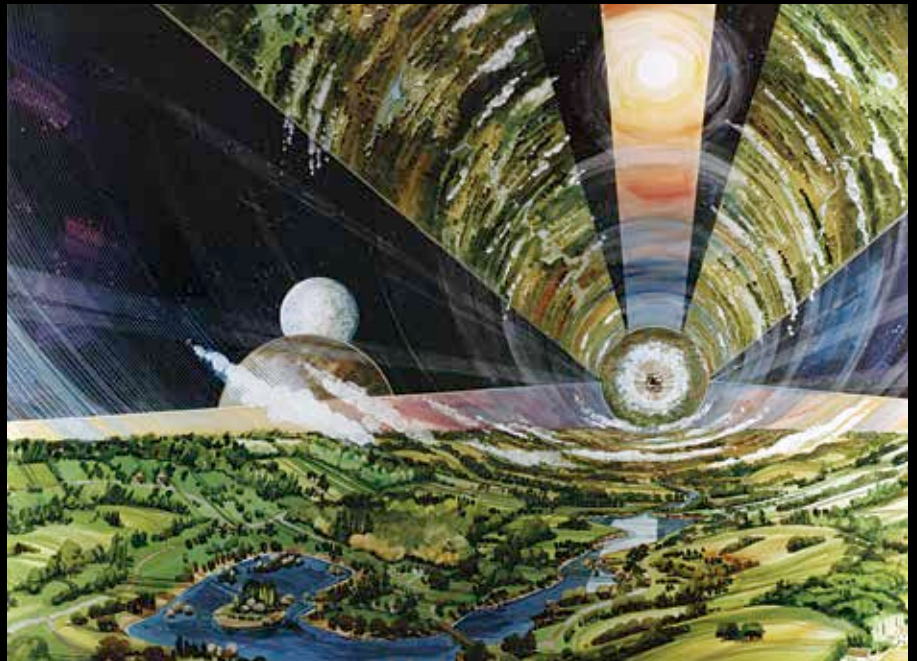
**I**magine the year 2212 AD, and Interplanetary Star Cruiser (ISC) Antriksh gets ready to take off from its home spaceport on New Earth, a planet orbiting the triple star system, Alpha Centauri. This journey will be special, for at the other end lies the planet of origin of the human race, Earth. What sights will greet these descendents of Earth when they finally "come home"? How will they appear and function differently than we do right now? What social structures will bind them? How will they travel the long distance (25.4 trillion miles between the Sun and Alpha Centauri) that separates their origin and destination?

Isaac Asimov, Arthur C. Clarke and several others have long asked similar questions and come up with imagination-testing answers. But the threat of an apocalypse brought on either by environmental collapse, nuclear war, or an unsustainable population have made them increasingly relevant to our daily lives.

## Setting up base

However, hope remains. Evidence of liquid water has been found on Jupiter's moon Europa and Saturn's moon Enceladus, making them prime candidates for a future human colony. Humans may also set up base on exoplanets (planets orbiting stars other than the sun), about 850 of which are already discovered, and the gradually increasing power of both Earthbound and space-based telescopes promise much more soon. The nearest of these, named Alpha Centauri Bb, orbits a triple star system 4.37 light years from the Sun.

Even this distance is too great for currently imaginable technology to cover in a single human lifespan. One possible solu-



An illustration of the Rama spacecraft, which can be as long as 50 km in length

tion would involve multiple generations of humans being born, living their lives, and dying in transit within the boundaries of the Solar system or in interstellar space. Spacecraft designed in the form of O'Neil cylinders (see the Rama spacecraft in "Rendezvous with Rama": <http://youtu.be/zBIQCm54dfY>) could support and shelter these humans in their long journey. These huge vehicles (50 km in length, 8 km in diameter) could produce artificial gravity at their inner surface by constantly rotating along their long axis, thus resulting in a centrifugal force that pushes everything away from the central axis and towards the inner curved surface. Furthermore, sufficient periods of day and night for the habitable areas would be achieved by opening and closing slits in sequence. Such a vehicle would serve the dual purpose of providing a controlled environment for habitation, agriculture, and industry, to

sustain a large population and transport them across interstellar distances.

## Adapting to space

But building an O'Neil cylinder would require large leaps in technology. We only have rocket-propelled spacecraft at our disposal currently, and using them for long-range travel poses several unique challenges. The lack of gravity over extended durations would result in low bone density and cause muscle atrophy. Our bodies would progressively weaken, and we would have to rely on personal robotic assistants for carrying us around and performing menial tasks, as glimpsed in the movie WALL-E. If we decided to rotate our spacecraft to artificially create gravity, we'd find it difficult to maintain a constant communication link with our home base. Once we wander beyond the moon's orbit, we would no longer be protected by the

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27	28	29	30	31		



ESET NOD32 holds the record number of "VB100 Awards" from Virus Bulletin testing organisation.

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## Phantom Island?

Sandy Island, located in the Coral Sea as shown by Google Earth, does not exist. Explorers searched the area for 25 days but found no trace of any island

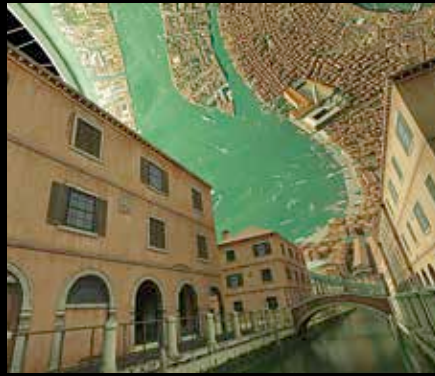
## Space junk problem resolution

Scientists at University of Glasgow have developed the Aerodynamic End of Life Deorbit System (AEOLDOS) which will ensure objects sent in space can be removed at the end of their operational cycle.

Earth's magnetosphere, and high-energy radiation from the sun or other sources will wreck havoc on our bodies, needing us to continually wear protective clothing whenever we are "outdoors". Another issue is the absence of any directional frame of reference. With no direction to call "up", we would need to rely on artificial cues to find our way both within our spacecraft and across space. Furthermore, our sense of time itself would be in for a major revolution. With no sun and moon in interstellar space to constantly remind us of the passage of time, we would have to abandon our 24-hour clocks, and mould ourselves to shorter or longer working hours – whichever suit our current surroundings.

To counter these ill effects, human bodies could be placed in long periods of hibernation. By slowing down metabolism rates to almost zero, mechanically massaging sleeping bodies, and closely monitoring all life-critical parameters, we should be able to preserve human life. However, it would be a rude awakening once the spaceship is close to its destination, and a busy few hours initially, as the first order of business would be to acclimatize and rapidly educate oneself of the planet, moon, or spaceport and its inhabitants.

Given that chemical-based rockets are an extremely inefficient means of transportation (low power-to-weight ratios result in huge rockets carrying small payloads), we could of course "speed up" our journeys



The world inside a cylindrical planet


by adopting other means of propulsion. As a plasma drive is one such alternative, wherein gases such as xenon or krypton are ionized using an electrical source and the ions thus produced are emitted by subjecting them to a voltage. Higher speeds can simply be achieved by applying higher voltages to the plasma. Another idea still on the drawing board is to use a powerful laser and point it at a huge light reflecting surface attached to a payload. The impulse force created by photons hitting the sail should theoretically be enough to drive push a moderately heavy payload, slow at first but with constant acceleration approaching the speed of light. This method doesn't require the spacecraft to carry its own fuel, thus reducing its size and weight. When all else fails, we could go back to our Star Trek routes and bend space and time to our whims or use wormholes and hyperspace to instantly appear at our

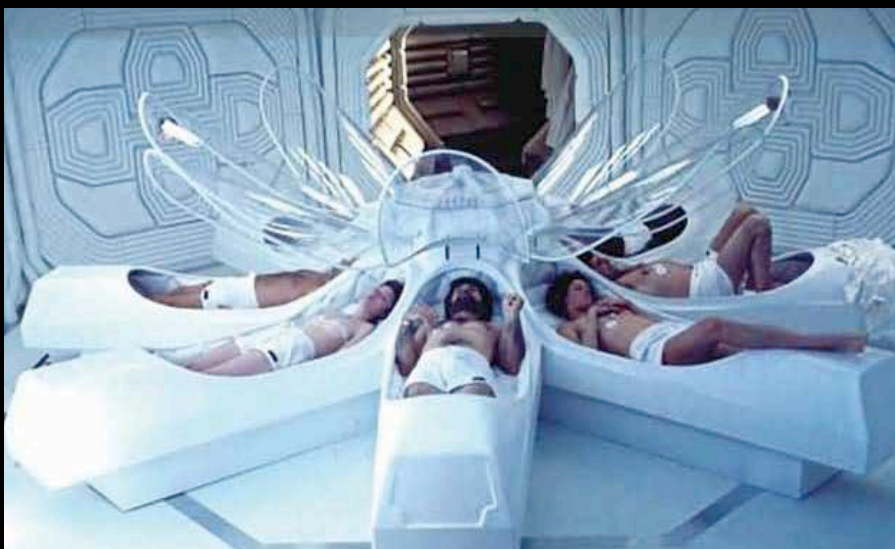
desired destination without traversing all the space in between!

### Work and life

Having lived their entire lifespans in space, would such humans still hold true to the classical human values of liberty, peace, friendship, love, unity, and respect of diversity? To be sure, space would teach us a lesson or two about life. High stress levels and constant demands of discipline would lead to almost military-like lifestyles. Humans might be genetically bred to be professionals (pilots, navigators, medics), and insubordination could result in instant death and "recycling". Regular exercise may be mandated by law, and our time awake pre-scheduled by the mission supercomputer running the latest logistics-allocation algorithms. It would be worthwhile to check if the human construct of "family" survives in the lonely corners of space.

### The return journey

Returning to our spacefarers aboard the ISC Antriksh, we gaze into their eyes as they bid adieu to their loved ones, and try to understand what would really drive these humans of the future, and what would cause them to "come back home". Would it be mere curiosity that would lead them on this journey, or the need to fix the mess of their forefathers? If we still preserve the notion of a home after exploring the cosmos for a millennia or two, we'd surely want to circle back and see where we came from. Furthermore, will this planet now serve as a pilgrim's destination, similar to how our hometowns, villages and several heritage sites on the Earth currently do. It might be a long, long time before we decide to head back home, and returning in flesh may not be feasible. By then, the human species may have evolved into a man-machine hybrid, by transplanting our souls into more durable containers, to carry our thoughts and aspirations for all posterity. But there is a steep price to pay for all our endeavours, for there is a high chance that over the eons, we might lose all knowledge of Earth's location. So we might as well first start by building an inter-galactic homing beacon that will serve us well in the future yet to come!! 



Human hibernation chambers in a space craft are a pre-requisite for long voyages

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**Tips and Tricks**

We tell you little known tricks for tools like Google Earth, Pokki and Adobe Reader. Enjoy!

**IE10 out for Windows 7**

Microsoft released a redesigned Internet Explorer 10 for Windows 7, with no plans to release it for older versions of Windows operating system

# From things that refuse to run to Windows 8 upgrade queries

We go through our [sos@thinkdigit.com](mailto:sos@thinkdigit.com) inbox to answer your distress calls

## Rooting issues

I wanted to root my Galaxy Note 800 because of its inability to transfer apps to external SD card. I'm not interested in installing a custom ROM because I'm happy with the stock one. Can you tell me if I can install OTA software updates directly on a rooted device or should I unroot it first? I'm a big fan of Digit and have been subscribing from the start.

Thanks for your help in advance.

*Vihaan Purohit*

Thanks a lot for writing in, Vihaan. Rooting an Android device brings in a lot of additional functionality, but you do run the risk of breaching warranty and causing some serious damage to the way the hardware and the software interface. People, though, have rooted their Android phones nevertheless!

As for your concern, yes, as long as you remain on the official ROM, your rooted phone will receive all the official updates OTA. However, installing these updates will un-root the phone, and you will have to wait till the root for the updates software version is released. We would suggest not rooting the phone, because the enticement of moving to a custom ROM is just too overwhelming, and then there really is no way of returning to the phone's original ROM. And trust us when we say this - custom ROMs tend to be broken most of the time, and one functionality or the other is either disabled or not compatible with a particular set of hardware. Hope this helps.

## Auto-fill and breaking sound

Hi Team Digit! Here's my problem: 1) Inadvertently I typed some wrong username while on Facebook through Google Chrome. Now the computer has decided to store the username and every time I try to log in it gives me the drop down list of user

names including these junk ones on both Facebook as well as Chrome. How do I delete these usernames?

I have a Win XP / SP2 pirated OS with 2 GB RAM, an Intel Core 2 Duo processor, 500 GB hard disk. Kindly let me know the solution to this problem. And also...

2) When I run the demo movies bundled on the Digit DVD, the sound continuously keeps breaking in micro steps. And this has been happening on all Digit DVDs for the past 3 - 4 months. At first I suspected that VLC / QuickTime player / Windows Media Player software had something to do with it, but it wasn't. This doesn't happen while I watch or listen to other movie or music discs. It looks like there is some issue on the recording of demo movies on Digit DVDs. Please look into this and let me know.

*Gurudev Sahai*



## Clear browsing data

1) You can just open your Chrome browser, type Ctrl+Shift+Del, you will be faced with the Clear Browsing Data pop-up. You will need to select the time frame from the 'Obliterate the following items from:' list. If you can't remember when it happened then select the option that says 'From the beginning of time'. You can then select the option which says 'Clear saved Autofill form data'. That will prevent the list of drop downs when you are logging in.

2) The stuttering is probably happening due to three reasons. Firstly, your system resources may not be up to speed to decode the HD video clips from the DVD. Secondly, if this is a recent phenomenon, then maybe you are running some application in the background that is not leaving your processor with enough juice to run the HD video. Or there might be an anti-virus scan happening in the background.

## Adding extra space to the C drive partition

I am having trouble with my disk partition. When I installed Windows 7 on my PC, I did not keep in mind how important the free space is on the C: Drive, so I kept very little space for C: Drive. How can I now change the disk partition without losing any data on it? I have an assembled Intel Core 2 Duo processor system with 2 GB RAM and a 750 GB hard drive divided into four partitions 50:200:250:250 where C: is just 50GB. Please help.

*Azhar Siddiqui*

You can use a third party free utility called EaseUS partition (<http://goo.gl/rIkV>) to extend the volume on your C Drive. You will first need to extract some free space from any of the other three drives to be added to the C Drive. Now



Extend the space on the C drive by encompassing the empty space on the right. Plain and simple.

## Amazon ends trial for Prime

Amazon ended the subscription trial for Prime, its online video streaming service, reverting to its original up-front annual fee structure earlier last month



## IGN teams up with game retailer

IGN Entertainment has established a partnership with retailer Game, to create and promote digital as well as in-store events



### Reduce space from the 200GB drive

say you are extracting 50 GB from your 200GB drive partition to add to the C Drive, then just as a precautionary measure, take the backup of all the data from the 200 GB partition drive, let's call it D drive. Now install the EaseUS utility on your system. On opening the main screen it will show you all the partitions. Now right click on the D drive (200GB)


partition and click on Resize / Move Partition option. This will open up a Window where you can slide from the left hand edge to upto the amount you want to add on to C drive and click on OK. After that you will notice there will be an asterisk signed drive between the C drive and the D drive which indicates unallocated space. Now you simply right click on the C drive, extend its volume to encompass the unallocated space that you had extracted from the D drive and click OK. You will see an increase in size on C drive. You will have to apply these changes by clicking on the Tick mark sign on the top panel of the EaseUS utility's home screen. Then restart the system to apply the changes.

### Trial version expired

Please help! The trial version of my installed Quickheal antivirus expires after

30 days. After so, I uninstalled it. This restarted my PC. I download a fresh copy of the Quickheal antivirus. Then, I tried to install it. But, a dialog box flashed on the desktop stating "You have used trial version of Quickheal, purchase now". My question is (1) How to remove all the things that makes the computer knows about my previous use of Quickheal? (2) How to install a fresh trial version of Quickheal after the old one expired? I am waiting your valuable instructions. Thanks in Advance.

*Siam Munsong*

 You have already used the Trial version, so it will not reinstall on the same system again. If you want a free anti-virus we would suggest you download Avast or AVG anti-virus. These anti-viruses, once installed, are free for life. Just keep updating them periodically and you're good to go.



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## Disney to kill movie streaming service

Disney announced it will shut down its little-known movie streaming service Disney Movies Online and launch a replacement soon

Toolbox



## Apple's own eBay store

Apple has quietly launched its own official eBay store, where consumers can buy refurbished Apple products, but without cheaper rates

### Windows 8 upgrade

I am not a Windows user but I want to buy Microsoft's new Windows 8 OS. Is the offer of ₹1,999 Windows 8 upgrade only for Windows user or for everyone? If this is for everyone, then please provide me a link Where I can buy licence of Windows 8.

Parveen Sharma

Yes, ₹1,999 is the upgrade price for Windows user and that too only if you download the OS from the Microsoft website. Currently on the Microsoft India site, there is just the upgrade option. Retail box priced at ₹4,000 till Jan2013 and after that it is likely to cost above ₹11,000

### Games won't run

I have Windows 7 32-bit operating system and my system configurations are as follows: CPU - Intel Pentium Dual core CPU E5700 @ 3.00GHz; RAM - 2 GB; HDD - 500GB; OS - Windows 7 Ultimate. For the past couple of months I am not able to run any good game on it, no NFS Carbon or Call of Duty 2. The problem is that when I start the game it runs well for some time before hanging in between and my screen turning black. I cannot get to the root of this problem. Please tell me whether a graphics card or a RAM upgrade would solve this headache. I have a budget of ₹4,000 for this and I can't extend it. I would be grateful if you can please help me out.

Tanmoy Pait

The games will require a graphics card to drive the graphics. Your processor isn't powerful enough to run those games, hence you are getting a hung system. You can get Sapphire Radeon HD 6670 1GB GDDR5 for around ₹4,770 (<http://dgit.in/S4EbLs>). But make sure you are running the game at medium to low settings with all bells and whistles such as AA and AF disabled.

### Games won't run

My laptop, an Acer Aspire 5742G, has been overheating a lot. So I decided to open it up and clean the insides and re-apply thermal paste (fan works properly). I found the "service manual" which shows how to open the laptop in question. So how

should I go about it? There are unnecessary things which are disassembled and I only want to reapply Thermal Interface Material (TIM) and clean the processor fan. I'm planning on using this TIM (CoolerMaster ICE1).

Also tell me what is a thermal pad? The manual says the laptop heat-sink uses thermal pads. Can I replace this thermal pad with fresh thermal paste? Will it harm the processor? Thanks for your time.

CommanderShawzner

Before you embark on your project, you should be aware that opening up your laptop will void your warranty. Also, some laptops are actually easier to open up than put back together so it is best that you don't attempt such a task if you are not fully prepared for it.

The reason for your laptop overheating can be from any of a number of reasons, including background programs making excessive use of your CPU, thus maintaining a high temperature or it could be



Arctic Silver 5

something as simple as dust in the vents. That said, if you are hell-bent on opening up your laptop and replacing the thermal paste, a good quality paste such as the one you have shortlisted, is what you would need. Arctic Silver 5 is also a very good alternative and will actually be cheaper.

Note that many laptops have a common heatsink that covers all the major chipsets in your laptop, including that of the GPU and motherboard, so make sure that you put thermal paste on those as well if you are forced to uncover them during disassembly.

A thermal pad is just another form of a TIM and is easier to apply. You will need to remove the existing one if you want to apply the paste.

### From the Forum

What are the best TCP optimizing settings for Windows 7 on a 3.6 mbps connection

Abhii 1902

Try out TCP Optimizer. I have heard that it works in speeding up in some cases. It had worked for (kind of) me when I was using Windows XP. But after shifting



TCP Optimiser

to Windows 7 & now 8, I don't use such utilities. The compound TCP stack in these later version of Windows is entirely self-tuning, irrespective of the link latency and quality thereby negating any effects of such utilities.

Vignesh B

### Bootable pen drive

My friend accidentally deleted the 100 MB system partition during installation of Windows 7. Now the disc isn't creating it again during installation, so installation is kinda stuck. I found out that after deleting all the partition on that HDD system partition can be created. But the other partition has valuable data which he needs to backup. So is there any way to boot his PC from outside i.e. through a DVD or USB pendrive? Thanks in advance.

Coldhart

Download ubuntu (iso file) and use the free tool 'Universal USB Creator' to create a bootable pendrive containing ubuntu, then just attach the pendrive to the computer and restart your machine to boot into ubuntu and backup your data. Other distro you may consider is Puppy Linux.

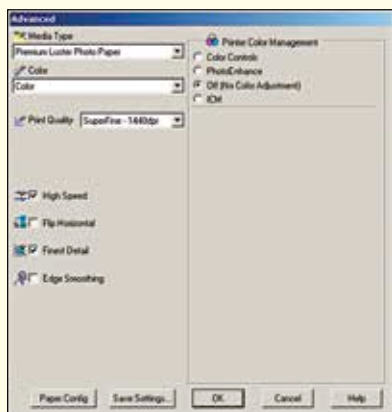
Harshilsharma63 & Sumonpathak

## PHOTO PRINTING

Photo printers for consumers predominantly run on inkjet technology. Laser printers are catching up but they haven't yet matched the best inkjet printer's print quality. But once you get past the buying conundrum and finally purchase a brand new photo printer, how do you ensure it performs optimally and gives you the best quality of photo prints? For an occasional and infrequent user of photo printers who prints an album once or twice a year, here's how you can get the most out of your printer and the features it supports.

### Explore the printer's driver in detail

The greatest mistake you would ever do is to buy a dedicated photo printer and not look through its driver settings. Part of the printer's setup process is its driver installation, which you either do over the web or through the printer's installa-



Printers have an advanced settings options that shouldn't be ignored

tion disc (check the printer's box contents carefully). After installing your printer's appropriate driver, ensure that you take a good look at it.

Right click on your default printer in the Control Panel to launch a dialog box. Take note that you can click on various tabs like Layout, Page Quality,



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*Tips & Tricks has its own page numbers, and does not follow the rest of the magazine's page numbers. This is done to ensure that you can cut out and save T&T in a separate folder for later reference.*

Colors and Color Quality within the dialog box. What they reveal are features that control the performance of the printer extensively. Most users don't know that much of the photo prints' quality is decided by what radio buttons are checked or unchecked under the settings of the various tabs under the dialog box. For example, under one of those driver tabs, if you look up the setting for graphic or print quality, difference between a 300 x 300 dpi and 72 x 72 dpi print will be quite a bit. Feel free to play and tinker with these settings and figure out what works best for your printing needs. For instance, web prints are generally made at 72 dpi, while our magazine images are printed at a higher 300 dpi image quality. Also one of the most common oversight prevalent among photo printer users is to not check whether they've selected the correct paper type in the printer's settings.

### Print directly off an SD card or a USB drive

Some photo printers come with an SD card reader slot, which allows you to quickly insert your digital camera's SD card and print photos off it directly without transferring them to the connected computer. If you've never tried out this option before, please do so before that SD card slot on your printer lies forgotten in a heap of dust. Compare the quality of photo prints of the same image but taken via a PC and the SD card directly. Sometimes, and there's no telling this for sure, but you may notice that prints of photos taken directly off the SD card may actually be better than those when taken off a PC. The same logic holds true for printers that allow connecting to a camera via PictBridge or through USB and directly printing photos from it, without having to transfer the lot onto a computer. Try this a few times and arrive at your own conclusion.

### Choose the right paper

A big factor seldom considered while taking precious photo prints is the quality of paper used, and whether it's the right one for the job. Most photo printers come with their own recommendations as to what type of paper is best suitable for taking photo prints. The type of paper not only determines the quality of the print but also its longevity – how far will the photo print last exactly as it was the day it got printed? Various types of paper are available in the market – glossy, semi-glossy, plain, etc. – and the decision you have to make is which best fits with your printer's output. Check with the user guide or your printer manufacturer's website to find out which paper it recommends for best quality photo print jobs. Also remember that to get the best quality photo prints, you will have to buy the best quality paper, which is often quite expensive.



Printing paper quality matters

### Don't ignore onboard auto-fix

Most dedicated photo printers these days come with some sort of autofix feature, either as a dedicated button on its body or through a bundled software utility. All we have to say regarding these features and software is that don't ignore them. Definitely give them a try, as you never know what trick you may be missing out on.

Auto-fix features found on most photo printers analyze the



shot image and apply corrective measures to fix its attributes like brightness, contrast, red-eye reduction, gamma levels, etc. Compare the quality of prints taken with your printer's autofix feature enabled against the photos when it was disabled and see for yourself which effect you like the most.

### Printing via third-party photo software

Earlier in the article we highlighted the importance of printing directly via a camera's SD card or applying a one-click auto-fix to correct your images before printing them. In an opposite tangent, we also recommend the use of third-party photo tools which can go a long way in enhancing your printed photos quality.

Professional tools like Adobe Photoshop or GIMP are excellent for determining and controlling every minute attribute of a photo. They offer great depth in manipulating and controlling even the smallest aspect of a photo, therefore letting you have the prints you desire to the T. In this case, the features and degree of manipulation offered by these advanced photo editing tools far exceeds the simple, one-click auto-fix solution built into the printers. Even Google Picasa and Irfanview let you tweak and edit your image to a certain degree, and there's no harm in investing some time in them. If you're looking at

an online photo editor, Pixlr is one of the best we've come across. In your quest towards printing great quality photos, you should definitely dedicate some time to learning the ropes of a photo software.

## GOOGLE EARTH

Google Earth is a free software which allows you to explore detailed aerial photos and satellite imagery of planet Earth. Google Earth is easy to use and consists of both professional and community-based contributions. It is undisputedly the best free mapping software available today.

### Learn mouse gestures for easy navigation

Google Earth is fairly easy to navigate on a laptop trackpad but using a mouse with a scroll-wheel makes a whole world of difference. Navigating with a scroll-wheel allows for quick and controlled zooming in and zooming out. Also, holding down the scroll-wheel button lets you tilt the world around, and holding down the right-mouse button turns your mouse into a virtual joystick which lets you freely zoom-in and out with ease.

### Adjust orientation to due north

If you went overboard with the mouse and now your worlds all messed up and upside-



The Wikipedia icon appears as a white box with a black W

down, simply clicking on the N in navigation controls will set you right. Just pressing the [N] key on the keyboard works just as well.

### Go back in time

The Historical Imagery button, i.e. the clock button in the toolbar allows you to turn back time and take a look at what Earth used to look like. This gives you a slider which you can adjust to view images of the Earth dating back to the 1930's. This is especially handy if you want to compare images of Earth before and after major events occurred in the past.

### Zoom Smoother

Victims of slow internet connections and weak machines will find that quickly zooming-in and out is laggy and the imagery takes forever to process, an issue faced by many. In this case, it might be a good idea to go ahead and increase the cache size of stored images. At the cost of using more of your memory/hard disk space, zooming is considerably faster and smoother. This also improves the speed at which layers load, including 3D models. The cache size can be increased by accessing the Tools menu and then selecting Options... and selecting the Cache tab.

### Set a starting location

The Earth is pretty big, and it's easy to get lost exploring it. It happens to the best of us, and nobody blames you. So, if you do find yourself lost with no clue as to where you are, simply double-click on the Primary Database in the layers section. This automatically sets you to O N O E, which is Google Earth's default starting location.

Additionally, you can set your own starting location. After setting the view that you want when you open Google Earth, the 'Make this my start location' option in the View menu will place a marker called Starting Location which can be found under My Places. Double-clicking this marker will return you to your start location.

### Use Google Earth for Research

Google Earth has many layers devoted exclusively to science and information. Additionally, under the More Layers sub-menu, the Wikipedia layer can be turned on at any time. This provides users with a short Wikipedia article related to the specified location. Furthermore, under the Photos Layer sub-menu, 360cities is an interesting layer which takes users



An app like Pixlr has some interesting options for you to try



Hundreds of layer options



Google Earths Weather Layer



Go back in time with Historical Imagery

into hi-res interact-able photos for close-up views of places.

The huge amounts of information stored in these layers is quite staggering. The Ocean, Gallery and Global Awareness layers contain all kinds of material relating to general

and scientific topics, and current events. From text and images contributed by NASA, to audio and video content from National Geographic and Discovery, it's very easy to drown in this sea of information. And this is only scratching the

surface of the abundance of information that Google Earth readily offers its users.

However, having ALL of those layers on at once is not advisable, especially layers which work in real time, i.e., layers like Weather and Traffic. You will find that

Earth will literally slow down. If you do find yourself in a position where you've got too many layers active, simply uncheck the Primary Database, take it slow, and proceed to turn only layers you need on. You'll thank yourself later for doing this.

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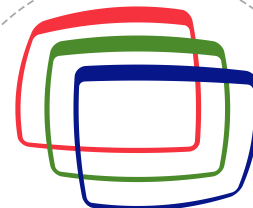
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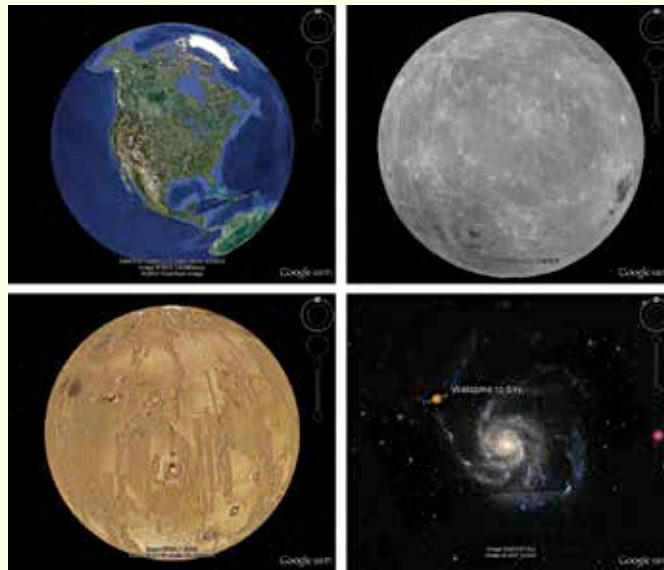


## Try the flight simulator

Google Earth has its very own flight simulator! This can be accessed through the Enter Flight Simulator option in the Tools menu. At the interface, you choose your aircraft and pick a location to start at, which could be any airport in the world. The controls take a little getting used to, but once you get the hang of it, it's quite addictive.

Take to the Sky, or the Moon, or do you fancy Mars? If you get bored of looking down at Earth, you can always switch things up and look up to the skies. Google Earth lets you observe celestial objects and constellations, complete with images and videos provided by NASA. It doesn't end with the Sky though - you could go beyond the skies and go visit Mars, and the Moon, and maybe take a tour or two about the historic Apollo program. Access this feature by clicking on the button with an image of Saturn on it in the toolbar.

Google Earth has no shortage of places to explore and visit. The Layers database and information is constantly being updated and new content is added on a regular basis, so don't stop exploring and look out for newer features in the future.



Explore beyond just Earth

## ADOBE ACROBAT XI

Adobe Acrobat Suite is the accepted standard for creating, editing and viewing PDF files across platforms. Across multiple iterations, the software has added several features to make working with PDFs a lot easier and quicker, and the newest version of the Suite continues in that tradition. We'll look at some tips for getting the most out of Acrobat XI Standard

### Edit PDF documents faster

The newest version of Acrobat has added features that let you

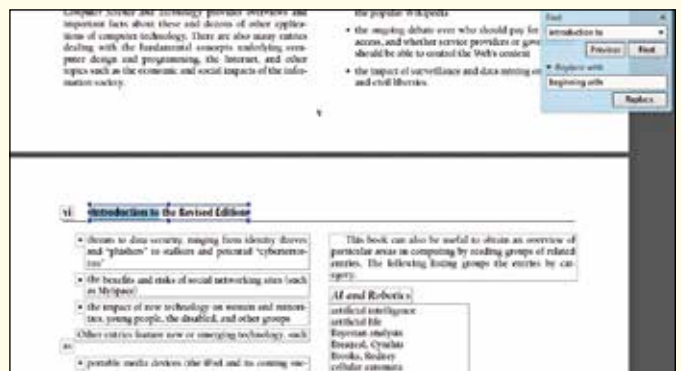
edit PDF documents a lot faster. To edit a document, open the file, then go to Edit>Edit Text & Images. Once there, you can add or remove text and images from the Content Editing panel on the right. It is also a lot easier to move around entire segments of paragraphs/text/images - simply select the box around them, and drag and drop at

the desired new location. Very simple, shouldn't be difficult.

Acrobat XI also introduces the Find & Replace function that lets you search for any text in the PDF document and replace it immediately with the alternate text, all in one quick-and-easy step. Simply go to Edit>Find, or use the keyboard shortcut [Ctrl]+[F] for the function.

### Get signatures on documents via EchoSign

Last year Adobe acquired the EchoSign service that facilitates electronic signatures, and Acrobat XI has support for the facility incorporated. Sign up for the EchoSign service from its website ([www.echosign.adobe.com](http://www.echosign.adobe.com)) and you'll be able to get electronic signatures for your documents quickly via e-mail. Alternatively, you can also ask recipients to fax their written signatures to EchoSign, which will then give you a soft copy of the same. Quick, handy and extremely convenient.



Acrobat Find & Replace



Acrobat PDF Editing



Take in breath-taking views with the flight simulator



Acrobat EchoSign



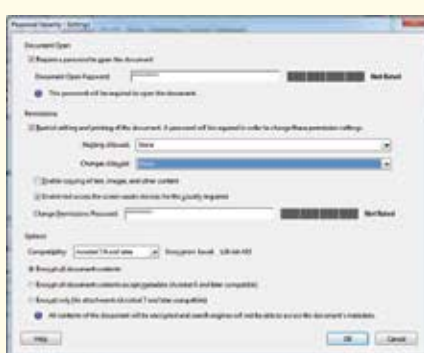
Acrobat Forms

You can also add your own sign to the document, by going to File>Get Documents Signed... In the 'I Need To Sign' panel on the right, select Place Signature. The first time you use this function, you have the option of saving your signature, either by typing it out and selecting one of three preset styles, or by drawing it, or by uploading an image. You can even add a digital certificate as a signature.

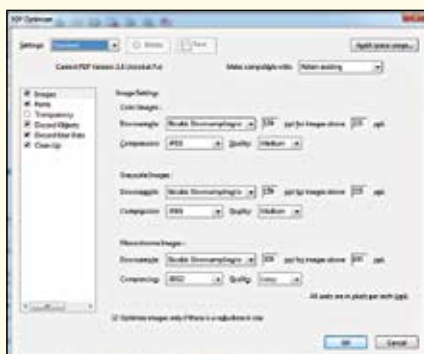
### Restrict copying and editing privileges for your documents

Acrobat XI features improved security features, that let you choose exactly what level of privileges to give to anyone viewing a particular document. Simply go to File>Properties... and select the Security tab. In the Security Method drop-down Menu, select Password Security.

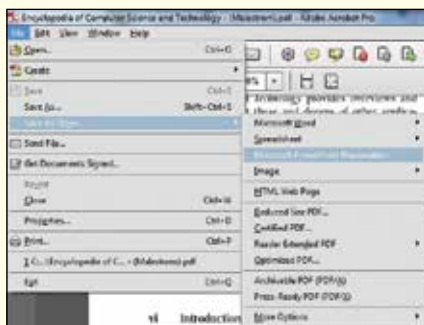
In the new window that opens you can see a range of options available for restricting access, including password-protection for opening the document, what kind of printing to allow, the kind of changes one can make while editing the document, password-protection for permissions required to edit, com-



Acrobat Security



Acrobat Optimization



Acrobat PPT

patibility choice, etc. Choose the options you think will suit your purpose the most and click OK.

### Optimize your documents for other platforms

If you're constantly on-the-go, and don't have access to your computer and need to view documents online via cloud services like Google Drive, Acrobat XI lets you optimise documents for these platforms. Simply go to File>Save As Other >Optimized PDF From there you can select the platform for which you want to optimise the look and feel of the document, and even create a custom layout based on your preferences.

### Save documents as PowerPoint Presentations

In addition to pre-existing options to save documents as Excel sheets, Word documents and a host of other things, Acrobat XI now lets you save PDFs also as Microsoft PowerPoint Presentations directly. Simply go to File>Save As Other >Microsoft PowerPoint Presentation. Once saved it as a PPT, you can edit the layout, content and design of the document just

like any other presentation file you may have worked on.

### Create Forms and web-forms quickly, and view results in real-time

Acrobat XI comes with a desktop app called FormCentral that lets you create forms and web-forms quickly and intuitively. Go to File > Create > Create Form and select from a wide range of templates and pre-existing options for creating forms as per your requirement. Alternatively, you can also create a form from scratch as per your needs, or even scan an existing Word, Excel or PDF document and create a form from it.

### POKKI

If you've used Microsoft's new Windows 8 operating system, chances are the first thing you thought when you got the OS main screen was, "Dude where's the Start button?!" And quite possibly, you haven't stopped thinking that since. Microsoft's decision to remove the Start button from the Windows 8 interface has left many users completely in the lurch, as they feebly attempt to relearn everything they knew about using their PCs, from scratch. Fear not, however, poor lost souls. There are alternative





solutions available that will bring back the functionality of your beloved Start button, and SweetLabs' Pokki is one of the better ones available right now. Let's take a look at some of the functionality added to your Windows 7 and 8 Desktops by this nifty little application.

### Bring back the Start menu

Pokki's biggest selling point of course, is the Start menu interface it brings back to Windows 8. Once you've downloaded the app (you can download it from [www.pokki.com](http://www.pokki.com)), simply right-click on the small acorn icon you see, go to Settings, and there tick the check-box that says "Show Start Menu sidebar".

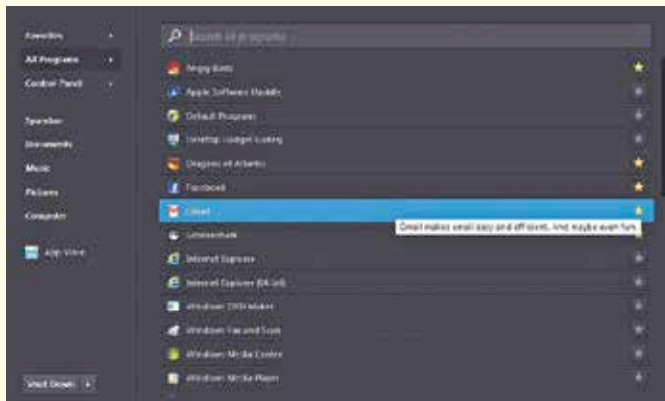
And voila! The Start Menu returns, along with all your familiar options for Programs, Control Panel, Shut Down, etc.

### Boot straight to Desktop Mode

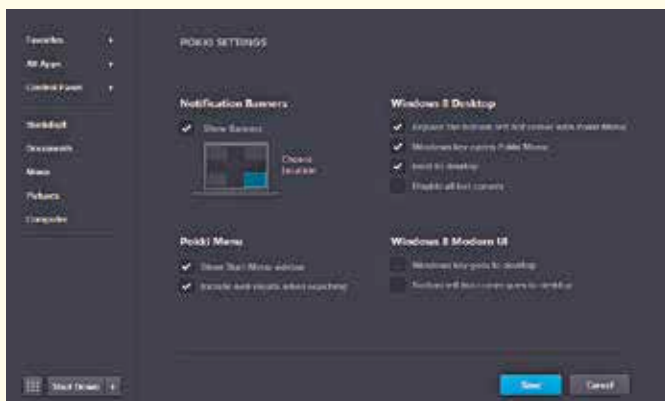
Once you've gotten the hang of using Pokki and the various apps it offers, you might decide that it offers functionality you prefer over the default one offered by Windows 8 (we honestly don't blame you). If you never want to see the Windows 8 Start screen again, right-click the Pokki Start button (the little acorn thing), and under Settings, you'll see an option called 'Boot to Desktop'. Select it, and bingo! Your Windows 8 system will start directly in Desktop mode, so that you never have to switch back to the Start screen for anything.



Pokki Settings



Pokki Start Menu



Pokki Boot-to-Desktop

### Save your Favourite programs for quick access

When you open the Pokki start-up menu, you'll notice that it has three main segments on the top-left side: Favourites, All Programs and Control Panel. The Favourites tab can, and does contain, apps that are frequently used by you, to ensure quick access from the Start menu. Unlike Windows though, which juggles the positions of these programs around based on how frequently you use them, you can actively choose which apps to include here, and which ones to keep away. To add an app to the Favourites, simply highlight the app in the All Programs section, and select the star on the extreme right, and

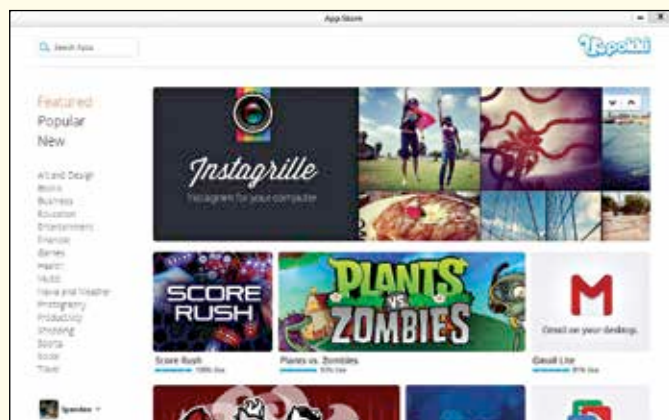
automatically added to your Favourites menu. To move them around, simply drag-and-drop the app icon to the desired position in the palette.

### Install Pokki apps

The biggest benefit of using Pokki is the vast plethora of apps available for your use. You'll find app ranging from the most popular services like Facebook and Gmail to social games, and much much more. The apps don't always sport the full functions offered by the original service (like there is no Priority Inbox in the Gmail app), but that's OK; the primary aim of these apps is speed, so that you can take a quick look at the newest updates in your services before returning to what you were originally doing.

The apps are free to download, and easily available. Simply select the App Store from the Pokki Start menu and browse through the large choice available. There is

it automatically gets added to the Favourites tab. Deselect the star to remove the app from your



Pokki App Store

Favourites. Alternatively, you can also right-click the app and select 'Add to favourites'.

Pokki also lets you pin your favourite apps to the Start menu taskbar. Simply right-click the icon of the app you want to pin, and select 'Pin to taskbar'.

NOTE: Any new apps you download and install are

something here for everyone, and everything.

The following are some of the apps you absolutely must try:

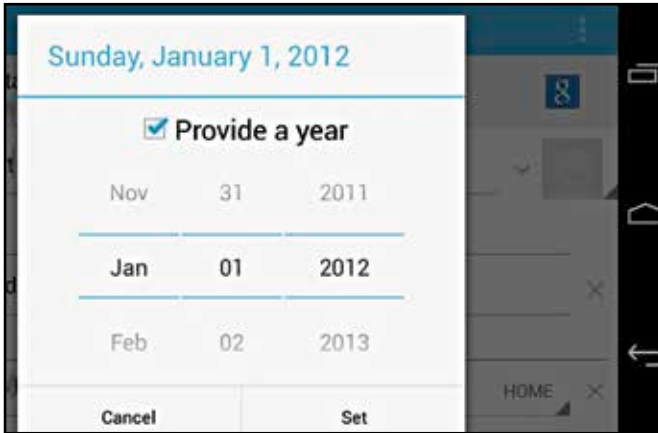
- Facebook
- Gmail
- YouTube
- Tweeki
- Instagrille
- Grooveshark



Interview with  
Ashwin Roychowdhary,  
Founder and CEO,  
Bombil Media  
For the complete interview  
visit:

[devworx.in](http://devworx.in)

## Google forgets December in Android 4.2



Google has landed itself an embarrassing bug in the release of Android 4.2 as it somehow missed mentioning the month of December in the Date Picker of People or Contacts app. The result is the fact that people are unable to choose December for a birthday, anniversary or pretty much any appointment that involves the date field. The date spinner, while selecting the month field, skips straight to January after November.

According to Android Police, Google managed to acknowledge the bug when reports about this issue became public while the bug itself was reported early November. Further comments in the bug report suggest that the bug seems to be restricted only to Android 4.2 release and that too in the People app, the one while creating events in Google Calendar seems to be working fine. This also happens to be a GUI problem as the dates being synchronised with

Google Mail Contacts seem to be working properly.

The main question that remains is, how did such a huge company with so many QA testers at its disposal manage to miss such a significant and obvious bug which could have been spotted easily if thorough testing was conducted. This might lead some people to conclude that the recent Android 4.2 release was deliberately rushed and it could have done much better in terms of overall software quality too.

There has been no reply from Google yet, as to when exactly this will be fixed and when an update will be published to users. Since it might significantly impact the usage of the application and also because December is already here, and it sure has to be fixed on priority. >

Read the entire article at <http://dvwx.in/RNTsA9> and share your comments.

### \*side panel



#### \*Windows 8 Disappointing

>>Usability expert Jakob Nielsen has voiced his opinion via a Windows 8 usability study 'report', expressing his disappointment with Windows 8. Read:

<http://dvwx.in/SMWGSS>

#### \*App Store generated 3L jobs

>>Apple Inc. has reported that it has generated almost 3,00,000 jobs for the US economy till date via its App Store. Read:

<http://dvwx.in/SMV8Z0>



#### \*An app to build apps!

>>A Durham-based start-up, headed by Juan Porras, is developing an app that allows non-developers to build applications for mobile devices. Read:

<http://dvwx.in/SMVBud>

### \*footer

#### \*IE 10 for Windows 7

>>Internet Explorer does not differ radically from Internet Explorer 9. In fact, at first glance, it is hard to tell that it's a newer version. All the changes are under the hood as it were. There is improved support for functions such as text shadow, gradients and SVG effects, application cache, 3D transforms, HTML5 forms, input controls and validation.

<http://dvwx.in/RNTsA9>



#### \*App Monetisation: Five secrets to success!

>>How good is a business, if it doesn't earn revenue? Pretty much the same applies to an app development business. Read the article at:

<http://dvwx.in/SYOi3e>

#### \*State of Python in India

>> Python grew from a small project into a first class programming language that powers everything from modern websites to games to scientific computing and even inside NASA. It is popular in developer circles, primarily due to its adoption by companies such as Google among several others; and is now gaining momentum in India as well. Read the complete article online at:

<http://dvwx.in/SbLw9G>



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# Under the Hood of Windows 8

>>Windows 8 is highly ambitious in its scope, and comes with a lot of changes under the hood. Should you then, as a developer, be interested?> by Kshitij Sobti

Windows 8 brings the biggest change to the Windows ecosystem yet, and sets the stage for the future of the Windows operating system. Unlike previously, these changes aren't just on the level of a few new APIs here and there. The very way applications are developed for Windows has now changed, and will likely never be the same again. Some of the biggest changes to come with Windows 8 would have to be:

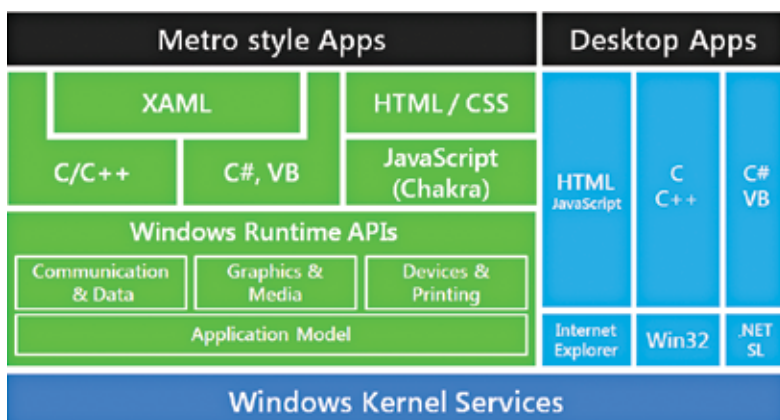
- An entirely new application runtime (WinRT)
- A new interface
- A new Microsoft app store
- Support for ARM-based tablet devices

We will take a look at each of these in turn, starting, of course, with the most divisive of them all, the new UI.

## The Modern UI

This is undoubtedly the most controversial addition to Windows 8, and one of the major reasons that the Windows ecosystem will never be the same again. Originally called Metro, it has now been renamed to Modern UI (or Windows 8-style UI) due to a legal battle. With this approach to its interface, Microsoft now supports a whole new range of applications under Windows.

These applications are designed to run in one of three states, full screen, snapped, or fill. The first state is obvious; in the second case, the application is snapped to the left or the right of the screen at a width of 320 pixels, and in the last state is of an application filling the remaining area after an application is snapped next to it. Additionally applications can be running in portrait or landscape view.



The many layers of Windows 8

Applications can also feed data to the users even when they are inactive via live tiles. Essentially, an application can be programmed to give some information about its state even when it is not running. This information can be presented on the applications "icon" on the start screen. So an email application can show the unread message count on the start screen and can even give pop-up notifications in case there is a new message. For this purpose, a small part of the application will always be running.

The new style for applications is expected to follow Microsoft's UI guidelines, which put a focus on content over chrome. What this means is that applications should avoid skeuomorphic design patterns such as bevelled buttons and frames and instead use the content itself to distinguish different parts of the UI. For example, instead of unnecessary borders and bevels, the placement and typography of content should be used to express its purpose.

This is the new direction of Windows, and though it is unlikely that traditional applications with menus and title bars is going to go away soon, Microsoft seems to have a lot of confidence in this new vision. To support it, they have an entirely new API for Windows applications, which we come to next.

## Windows runtime

WinRT, or Windows Runtime is an API developed for, and available to the new style of applications discussed above. These new APIs allow a much simplified path for those developing Windows applications. However, they are also mostly only available to the new style of applications.

RT-based applications can be written in the usual C#, Visual Basic, and C++, but now there is also the option of web technologies such as HTML, CSS, and JavaScript. Microsoft also provides the Windows Library for JavaScript, which provide JavaScript API for building applications.

However, this new API does not provide all the features that Win32 did before it, and as a result certain kinds of applications are just not possible with the new API. All such applications actually run in a sandbox and have very limited system access. In fact, because browsers need more system-level access than is available to Windows 8 style applications, browser on Windows 8 are given a special exception from the sandbox and can mix normal Windows API and WinRT APIs.

As we mentioned above applications can have live tiles on the start screen that display changing data, and for this there is a new API for creating background tasks. There is also a new API for notifications, which are now natively supported by Windows—even by desktop applications.

Another interesting feature in Windows 8, is contracts. If your application manages some kind of data, you can provide a search contract, so that users can search for data handled by your application with ease. For example a photo management application might allow users to search for images by tags, file names and other data directly through Windows Search. A share contract will allow other applications to share data with your app. A twitter client for example, if it supports a search contract for sharing it will show up when a user tries to share data from another application—which also requires a search contract.

Windows also has the concept of extensions, which add features to Windows, for example by registering as handlers for AutoPlay, or as a provider of contact data, or as a handler of a particular file type. Also there is support for the plethora of sensors out there.

There are a number of other options available to developers. For example, they can take advantage of the fact that all Windows users running their WinRT-based application will have a Microsoft account. So if you don't have your own account system you can use that. You can also take advantage of features such as synchronization across computers using SkyDrive.

You may wonder, why would every Windows users running a WinRT application have a Microsoft account; well it's because of Microsoft's new Store, which is what we come to next.

### Windows Store

The store is an integral part of Windows 8, as it the only way to discover, install, update or remove the new class of Windows applications that we have described before. This also means that it cannot itself be removed, at most it can be hidden.

The new Windows 8 applications running on WinRT cannot be installed without the store. The store in turn needs a Microsoft account in order to work, even if you only wish to install free applications. So essentially, you need a Microsoft account for even something as basic as installing a free app from the internet. This is actually quite common on mobile and tablet platforms, but now desktop users get a taste as well.

Standard desktop applications are not available in the store. While the store can list such applications—for this privilege the application needs Microsoft's certification—they cannot be

## \*pointers

>>Nuggets of cool code at work



### \*Visual Studio Express 2012 Web Tutorial

>>Visual Studio 2012 is the primary development environment for developing application for Microsoft's newest operating system. Here's a series to get you started.

<http://dvwix.in/TVsVAB>



### \*Meet Windows Phone 8

>>Joe Belfiore, Corporate VP of Windows Phone, shows exciting and new features within Windows Phone 8 such as Kid's Corner, collaboration and back up with SkyDrive.

<http://dvwix.in/XYSAXg>



### \*Developing a BB10 app: from start to finish

>>Join Application Development Consultant Shadid Haque on the Native track for this session on developing a BlackBerry 10 Native app from start to finish.

<http://dvwix.in/USG9CJ>



### \*Intro to Kendo UI

>>Telerik VP HTML5 Web & Mobile Tools, Todd Anglin, talks about Kendo UI during the official launch.

<http://dvwix.in/WsOHQR>

installed from there. Actually, there is a way to side-load applications without the store, but it is mostly only applicable to enterprises running Windows 8.

For the new Windows tablets that run Windows RT, the only applications that can be run are WinRT-based applications. In fact the exception browsers enjoy on Windows 8 is not available to such apps and as such the only proper browser for Windows RT tablets is Internet Explorer. Which brings us neatly to Windows on ARM and tablets.

### Windows on ARM

The availability of Windows on an entirely new architecture could have been a cause of celebration. Firstly Windows for ARM is not something you can buy in a store, it is only available to manufacturers to be delivered preinstalled on tablets. Even then what is available on ARM isn't really the traditional Windows.

Windows for ARM, or RT, includes only the new APIs and the new style of applications that are introduced with Windows 8, and cannot run traditional desktop applications even if they are compiled for ARM. So porting an existing application to Windows for ARM requires severe adaption of the UI to make it fit with the new style of applications.

Microsoft of course is exempt from this rule, and as such its own Office 2013 will be available for Windows RT, and will in fact come preinstalled. Also, its Internet Explorer for Windows RT has system access that enables it to perform much better than a traditional Metro application ever can.

This is important because if you were thinking of making a nice document editing app or an alternate browser for Windows tablets, Microsoft has you beat and they have more access than you will ever have.

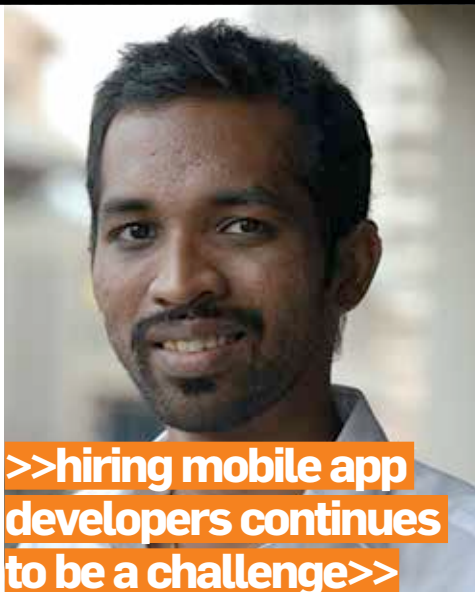
However, Windows Phone 8 now uses the same Windows NT kernel as standard Windows 8. In fact it shares a lot of the WinRT APIs, making it easier to share and port code between Windows Phone 8 and Windows RT / 8.

### Wrapping Up

Windows 8 is a significant release for developers, and offers new opportunities to developers in the form of a fresh, simple and new API for Windows, support for the increasingly popular web apps platform (HTML, CS, JS) and a new store for selling applications. However, there are many thorny issues, and only time will tell how popular Windows 8 will be. >

Read the original article online on devworx. Visit [www.devworx.in](http://www.devworx.in)





**>>hiring mobile app developers continues to be a challenge>>**

**>>Ashwin Roychoudhary, Founder and CEO, Bombil Media**

**You got into the web business very early. How was your experience back then?**

Web businesses primarily work on advertising or transactions as avenues to make money. Earlier most business on the web worked on creating websites with unique content, gaining traction and monetising by way of ads.

**What made you switch to mobile?**

Web to mobile was a natural transition. Mobile has always excited me. Also, as a medium, it is extremely powerful and delivers more value than all the previous mass media channels put together.

**Do you think it's worth developing apps?**

Mobile apps for enterprise is a vast untouched market. There is a lot of opportunity for mobile app developers to develop applications that solve a grave business challenge.

**Do you suggest developers/publishers go with a native or cross platform approach?**

I recommend a native approach for mission critical high performance apps – especially for enterprises and games. HTML5 or hybrid approach can work for show off apps.

**How easy is it to find quality developers?**

Hiring mobile app developers continues to be a challenge. The curriculum in engineering colleges is limited to teaching students technologies that are archaic.

**How could developers monetise their work?**

In India some of the popular ad networks include InMobi, AdMob, Vserv.mobi. >

Read the entire interview online, at [www.devworx.in](http://www.devworx.in) and share your comments.

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**\*open source**



**OpenStack**

>> Founded by Rackspace Hosting and NASA, OpenStack has grown to be a global software community of developers collaborating on a standard and massively scalable open source cloud operating system to control compute, storage and networking resources.

<http://dvwrx.in/Tdt7dP>



**AppFabric**

>> With Continuity's AppFabric, you can build and package your app with drag and drop for easy deployment to the Cloud. You can then scale, manage and monitor with a beautiful interface. AppFabric supports Eclipse plugins, testing frameworks, code samples, and also REST APIs.

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# worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

## (MUST READS)



### HUMAN EYE VS THE CAMERA

Does a 35mm or 50mm lens on a full frame camera give an equivalent field of view of normal human vision? The discussion of this question led to the author exploring the optical physics of the human eye and arriving at his own conclusion. A very interesting read for photography enthusiasts.

<http://dgit.in/SetpSE>

### AN ECOSYSTEM WAR SCENARIO?

It is common knowledge that the tech world is now divided into islands or ecosystems. While in the desktop era it was just Microsoft and Apple, now thanks to the mobile era there is Google, Facebook, Twitter and to an extent RIM in the fray as well. This piece takes a look at the weapons in each one's arsenal and how it may play out in the future.

<http://dgit.in/QuQZxA>

### PASSWORDS, RIP?

Wired's Mat Honan, whose entire digital life was wiped out by a bunch of hackers who were out to acquire his Twitter handle, tells us in this piece, why according to him passwords can no longer protect us. He discusses the flaws present with the way we deal with passwords and highlights the weak links.

<http://dgit.in/XBMILO>

## (Polygon Corner)

### INSIDE HALO 4'S PLAYTEST LABS



So you thought a game was only tested by the indoor QA guys? Read how 343 Industries, the brain behind Microsoft's Halo 4, test the game with regular users, months before it hits the shelves. In this article Polygon journos spend a day at Microsoft's User Research labs to give you insights into what goes on behind the scenes while testing a game. <http://dgit.in/10tr9um>



#### Best job in the world?

"Stop playing games on the PC. That won't get you anywhere?" You must have heard it countless times, right? Now what if you were told that there is a guy who just games and gives a running commentary as he is playing the game to earn his daily bread?

<http://dgit.in/RTN4ap>



#### For the audiophile gamers

Very few people will think of sound design when anyone mentions gaming. The visual aspect of games is definitely important but what good is a game without its sound? See how Dead Space's award-winning sound composer Jason Graves works.

<http://dgit.in/Y2W81D>



#### The Wii has a successor, finally

It has been six years since the Wii came out. Now we have its successor, the Wii U which has innovated on the gaming controller front by adding a touchscreen display along with buttons allowing you to game with or without the TV. So how does it fare? Read on.

<http://dgit.in/SehsMA>



### HOW NOBLE IS INGRESS?



Google's hyper-local futuristic MMORPG alternative

reality game Ingress created a lot of buzz. This article throws light on some ways in which this game data can be misused and how it opens up business opportunities for Google. <http://dgit.in/SeHSho>

### SIRI-US FUTURE

Find out how Siri operates currently, how it breaks up user queries vis-a-vis Google search. The author also explores the aspect of how Siri can drive business for Apple thanks to its integration with apps and user data stored in Apple servers. It also takes a look at Siri's challenges. <http://dgit.in/T6qqq7>

### GOOGLE GLASSES TO HELP WITH DIETING?



Researchers at the University of Tokyo have demonstrated

a very simple AR trick using AR headsets to show how food intake can be reduced by 10 percent by scaling up the size of your food. Check out the video. <http://dgit.in/TR3zlo>

### JELLY BEAN 4.2 101



Jelly Bean 4.2 was launched with the

help of a blog post after Hurricane Sandy made Google cancel its big Nexus 4 and Nexus 10 launch event. Check out what's new in 4.2 in this article. <http://dgit.in/R159Xe>

# Can Windows Phone 8 save Microsoft?

A look at the Windows Phone ecosystem and why WP8 can't afford to fail - By Sebastian Anthony



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For the last couple of years, Windows Phone has been the lame horse of Microsoft's software stable. While Windows 7 has enjoyed massive success, and Xbox continues to go from strength to strength, Windows Phone 7 and 7.5 have pattered along in the wake of iOS and Android, threatening to go under whenever Apple or Google make a sudden move. Through sheer force of will (and brute-force marketing dollars), Microsoft has mustered just 3.5 per cent of the worldwide smartphone market.

If you've ever used Windows Phone 7.5, its diminutive share of the market will probably come as a surprise. You see, one of the best kept secrets of the mobile device domain is that Windows Phone 7.5 is actually rather cool. While it doesn't have the flexibility of Android, or iOS's wealth of apps, Windows Phone is both slicker and easier to use. In much the same way that iOS "just works," as does Windows Phone 7.5. While Android certainly has more home screen real estate, WP7.5's Start screen is much more lively and personal. Really, unless you're a power user (and most smartphone users aren't), Windows Phone is a fantastic mobile OS.

Why has Windows Phone failed to attract users, then? No one knows for sure. The network effect certainly plays a role — when WP7 arrived it had to start from scratch, while there were already millions of iOS and



Android users recommending their respective OSes to friends and family. Ecosystem lock-in also plays a role; once you've got your phone set up, and spent some money on apps, it seems foolhardy to switch to another platform, novelty factor notwithstanding.

### INTRODUCING WINDOWS PHONE 8, THE SAVIOR

Windows Phone 8, then, is all about actually getting people to use it, so that they can fall in love with it and thus tell their friends and family to buy a WP8 device. To pull this off, Microsoft seems to be taking a three-pronged approach, by providing killer features, killer hardware, and killer marketing.

For the most part, Windows Phone 8 looks and feels like WP7 — but that's where the similarities end. Old apps will be forwards-compatible, but the age-old Windows CE underpinnings have been gutted and replaced with an almost-complete Windows 8 kernel and library stack. As a result, Windows 8 Metro apps will work on WP8 with very few changes — and WP8 gains support for apps written in C/C++ native code, too. WP8 also

uses Windows 8's network code, file system, low-level security features, and even has the same support for up to 64 processor cores.

In terms of unique, user-facing features, there is Kids Corner (a sandbox full of kids games available from the lock screen), Data Sense (a suite of tools, including data compression, that cuts down on data usage), and Rooms (a concept similar to Google+'s circles, but on a larger, more inclusive scale).

Perhaps most importantly, though, it finally sounds like WP8 will be able to compete with the app ecosystems of other mobile platforms. WP7 is now up to 120,000 apps, most of which are compatible with WP8. With WP8, Microsoft says it now has 46 out of the top 50 iOS/Android apps. Windows Phone 8 also debuts Live Apps; apps which can interact with your lock screen — such as Facebook, which can update your lock screen with personalized photo mosaics.

On the hardware front, Windows Phone 8 is launching with strong offerings from HTC, Nokia, and Samsung, all of which have a dual-core Snapdragon S4 SoC, a good rear-facing camera, and a large, high-resolution display. As before, Microsoft is keeping a fairly tight leash on Windows Phone hardware specs, so it will be quite hard to find a "bad" WP8 device (though next year, with Exynos 5 and quad-core Snapdragons on the market, Microsoft will hopefully update the minimum spec). Windows Phone 8 also dictates a hardware camera button, which should appeal to avid picture takers. In the Nokia Lumia 920's case, there's a best-in-class, optically stabilized camera, too.

## INSIDE NASA'S MISSION CONTROL CENTRE



Always been fascinated with the idea of space travel? Well this extremely-detailed Ars Technica article goes behind the scenes of NASA's Mission Control Centre where Apollo veteran Seymour Liebergot plays guide.

<http://dgit.in/SFTfpd>

## WAR FOR TV

This series on The Verge takes a look at the future of TV and how relevant is cable TV with all the various media-player ecosystems around. The week-long series has interviews with industry experts and reviews of various ecosystems such as Microsoft, Google, Apple, Sony and so on.

<http://dgit.in/T6yCe7>

## SOCIAL MEDIA (NON) ECONOMY 101



Next time you come across anyone addressing himself or herself

as a Social Media Catalyst or Social Media Consultant or Social Media Accelerator, simply show them this video. A hilarious take on the social media economy.

<http://dgit.in/TheWlv>

## INSIDE GOOGLE NOW

With Jelly Bean 4.1 Google introduced us to the virtual search assistant – Google Now which gets intelligent over time as you use Google and gives you cards with relevant information even before you ask for it. This piece takes an in-depth look at how it was conceptualised and what you can expect in the future.

<http://dgit.in/UpWTOF>

And then there's the marketing — oh boy is Microsoft plowing a lot into marketing. As you may already know, Microsoft's marketing budget for Windows 8, Surface, and Windows Phone 8 is somewhere in the region of \$1.5-\$2 billion. Most of this will be consumed by blanket advertising on TV, websites, and in magazines — but, in a first for the mobile OS wars, Microsoft is also forking out on celebrity endorsements.

## THE FALL OF THE WINDOWS/ OFFICE HEGEMONY

While Windows Phone 7's failure has been buoyed up by Windows 7's success over the last few years, it's now time for the mantle to be passed to Windows 8 and Windows Phone 8. With desktop PC sales stagnant, and tablets and smartphones on a meteoric rise, Microsoft really needs Windows 8 and WP8 to succeed. If Microsoft can't break into the smartphone and tablet markets with this generation of software, it may not get another chance.

For Microsoft, this must be rather scary. For decades, Windows and Office have been the driving forces behind the company — and now, in just a single generation, this partnership has forced apart by an unproven trifecta; a triumvirate of Windows 8, Windows Phone 8, and Xbox.

To date, almost all of Microsoft's business decisions have revolved around the monopolization of maximization of Windows and Office — resulting in oodles of profit, but a severe lack of innovation. Such navel-gazing was fine when PCs were exciting and expensive and enjoying massive sales growth, but in the last 10 years such complacency has mostly resulted in Microsoft attempting to strut about with its pants tangled around its ankles.

Microsoft rather famously dropped the ball with the world wide web, and it certainly



wasn't ready for Apple's creation of both the smartphone and tablet markets. So the rumor goes, Microsoft had a tablet in development — called the Courier — but it was kiboshed by Steven Sinofsky, then head of Windows, just before Apple released the iPad.

The irony is, Microsoft has one of the largest and best-funded R&D departments in the world, working on everything from depth-sensing cameras to muscle-computer interfaces. With the dissipation of the Windows and Office's oppression, though, we have started to see a lot of cool tech from Microsoft Research finally start hitting the market (Kinect, Surface/PixelSense, Gadgeteer, and so on). This is a good thing, and it shows that there's life in the old dog yet.

## WINDOWS PHONE 8 CANNOT FAIL

Microsoft is in a precarious position: On the one hand, Windows and Office account for the vast majority of its profits — but on the other, these profits won't last forever. For the time being, the PC market is only being nibbled at by tablets and smartphones, but in a few years, as performance and wireless connectivity improves, the evisceration will begin in earnest. Microsoft knows this, and Windows Phone 8 and Windows 8 are the result.

Producing two operating systems that completely downplay Office, its largest profit

maker, is a monumental risk for Microsoft that must not fail.

The question, then, is whether Windows 8 and Windows Phone 8 can win Microsoft a spot at the mobile device table. Not a pesky 3 per cent share — a real, 20-30 per cent that will equate to hundreds of millions of new users in the next few years.

Can Microsoft do it? I'm not sure. Windows 8 is an excellent tablet operating system, but its ecosystem is a major letdown. Windows Phone 8 could well be the best mobile OS out there, but it will take a miracle to slow down the Android juggernaut or to steal users away from iOS. My main concern, though, is that Microsoft's chief selling point is the tight integration between its three platforms — SkyDrive sync, Windows Account roaming, and Xbox SmartGlass to bring the living room into the equation.

The problem with this approach is that it implies that adopters of one operating system will also adopt the other. In Apple's case, there is very little evidence that iOS has driven massive numbers of Mac sales; best case, we're talking a few million Mac laptops — not the hundreds of millions that Microsoft needs.

On the flip side, maybe the other direction — from PC to smartphone — is more fruitful. Microsoft is virtually guaranteed that hundreds of millions of PCs will run Windows 8 by this time next year. Maybe touch-enabled Windows 8 PCs will fly off the shelves this winter and fuel some kind of Windows Phone 8 renaissance in the spring. It's definitely possible — but given the importance of Windows and Windows Phone 8, it's an incredible gamble. But who knows: After 20 years of waking up, squeezing the udders of the Windows/Office cash cow, and then dozing off again, maybe a big gamble is exactly what Microsoft needs.



TECHFEED

This channel is a collaboration of famous online tech personalities



including SoldierKnows-Best, TechnoBuffalo and our favourite Veronica Belmont. Each personality has one thematic video per week. For instance, Belmont hosts a show called Fact or Fictional, where she fields questions as varied at J.A.R.V.I.S's AI or parallel universes or ghost hunting among others.

<http://dgit.in/Sb3cFV>

(QR Code)



For a list of all the links from this section, head over to <http://dgit.in/WorldViewDec2012> Or point your phone to the QR code above

(PRODUCT LAUNCHES)

GOOGLE NEXUS 4



Google announced its flagship phone, the Nexus 4 in a soft online launch. It sports Android 4.2 OS, an improved 8MP camera, a Snapdragon S4 SoC, 2 GB of RAM and 4.7-inch screen with 1280x720 pixel resolution. It's priced at a cool USD 299 (8GB) and USD 349 (16 GB).

WII U



Nintendo launched the successor to the Wii after a gap of six years. The joypad has a tablet-like screen. It houses an IBM power multi-core processor, HD Radeon RV740 GPU, 2 GB RAM and has backward compatibility with older Wii games. Priced at USD 299 / 349 for the 8 GB Basic set / 32 GB Deluxe set.

NIKON D5200



The D5200 incorporates a 24.1 megapixel APS-C (1.5x) sensor, a 39-point AF with 9 cross-type focus points, a burst-rate of 5 fps thanks to the EXPEED 3 image processor. It has a 912-k dot articulating LCD screen. Priced at ₹46,950 for the D5200 body and 18-55mm f/3.5-5.6G VR lens.

WORDJUMBLE

ABSOLUTE TIMEPASS

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There are 20 technology terms taken from the Encyclopedia Technica booklet in this grid. Can you find them all?

Top 3 YouTube Picks

Make sure your boss doesn't catch you goofing off with one of these playing on your screen



**DSLR n00bs**  
Duration: 01 min 44 secs  
For them who like buying expensive DSLRs but can't use their cameras to save their lives. <http://dgit.in/TgaliS>



**Why are things cute?**  
Duration: 05 min 51 secs  
This is one scientific explanation of the how, why, where and what aspect of cuteness. <http://dgit.in/UWX3QN>



**Zombie Apocalypse**  
Duration: 02 min 18 secs  
Can humans show zombie-like properties if only specific area of the brain is attacked? <http://dgit.in/SeLDU1>

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# The Ultimate Fight for Supremacy

The Zero1 Awards signify the pinnacle of achievement for products across categories...for this year only, of course!



**E**very year, the Digit Test Centre puts several hundreds of products through rigorous tests, and meticulously ranks and rates them in order of merit. While putting these products through their paces, the objective of our reviewers and analysts is simple – to tell India what products they should buy, and of course, how to get the best bang for their buck... that’s what we Indians are obsessed with most, aren’t we? And why shouldn’t we be? We all deserve the best products, especially when picking the right one for your needs can be so difficult, given the rapid pace of innovation in the consumer tech and electronics gadgets space. Whether its reviewing the latest ultrabooks in a comparison test or firing up a hotly-anticipated graphics card for an in-depth Bazaar review, the Digit Test Centre proceeds with a single-minded goal of giving our readers the best knowledge about the latest and greatest products to launch in the Indian market. That’s always been our aim while reviewing and writing about any product that’s printed in Digit’s Tried and Tested section pages, and it will continue to remain our focus as long as there are products to review in the market.

With that in mind, let’s outline the significance of this story and the iconic trophy visible to you on the page alongside. For the benefit of everyone who’s reading Digit for the very first time, what you see on the left page is the Zero1 Awards trophy. And you’ll see a lot more of it in the next twenty or so pages, for Zero1 Awards is our annual round-up of the best products of the entire year, felicitated for standing the test of time (and a year in Technology is a really long time these

days), to emerge victorious. The products that win Zero1 Awards are special, to say the least.

The Zero1 Award is different from all our other awards that we hand out on a monthly basis in our comparison tests, because it’s a shoot-out of all the Best Performers of the year, and the most recently launched products. So, for example, we pit the Best Performer of all DSLR cameras against any contenders that have been newly launched since our comparison, to arrive at and crown the best DSLR camera that money can buy. We do this for every category of product we test and write about. The product categories for Zero1 Award are carefully picked to ensure we have reviewed enough products in any given category to speak authoritatively about it, subsequently zeroing in on the pick of the bunch. Of course, all the Zero1 Award winners have to be available in the market for readers and gadget enthusiasts to purchase.

We also summarise the highs and lows of a Zero1 Award product category in the introduction of their respective pages, trying to give our readers a sense of what transpired in that product category throughout the year, and predict future trends (if any).

Although Performance really is King in this Award’s category, we also list out some of the recommended buys for different usage scenarios, or budgets, to ensure that with this one issue of Digit, you’re armed with enough knowledge to be able to buy the best product you possibly can for your requirements.

After a rather hectic month of testing, the Digit Test Centre is proud to announce the winners of the Zero1 Awards 2012 in the pages that follow.

## CATEGORIES

<b>Smartphones .....</b>	<b>72</b>	<b>Blu-ray players.....</b>	<b>88</b>
<b>Tablets.....</b>	<b>74</b>	<b>LCD monitors.....</b>	<b>89</b>
<b>Laptops .....</b>	<b>75</b>	<b>GPS devices .....</b>	<b>90</b>
<b>Cameras.....</b>	<b>78</b>	<b>Wireless routers .....</b>	<b>91</b>
<b>Storage.....</b>	<b>84</b>	<b>Processors.....</b>	<b>92</b>
<b>MFDs .....</b>	<b>87</b>	<b>Graphics cards .....</b>	<b>93</b>



# Smartphones

The year 2012 was an absolute blur, particularly for someone who covers smartphones as a beat. No sooner had one phone got launched than you had the 'leaks' and 'rumours' about the next big launch. The market was more aggressive than ever and if this trend continues next year as well, then expect a virtual bloodshed in this segment.

The highlights of the year inevitably included the new iPhone, which sported a bigger display and more power. The Apple Maps' futility, helplessness and incompetence did spoil the fun though.

Samsung led Android's charge with the Galaxy SIII and made the phablet category even more enticing with the very powerful Galaxy Note II. Equally enlightening was the courtroom saga with Apple, something that still continues. Google launched its flagship Nexus 4 in collaboration with LG at a sweet price of USD 300 in the US, but expect Indian pricing to be much higher. It launched with the stock Android 4.2 OS, also named Jelly Bean.

Quad-core processors became commonplace with the HTC One X, HTC One X+ and LG Optimus 4X HD, which are possible alternatives for someone who wanted a very powerful phone. The dual-core processors are now the way forward for mid-range Android phones and Sony is leading that with the NXT range of phones and the Xperia U and Xperia Sola are prime examples. Even so, the more affordable phones now clearly are better built, and have impressive specs – something that was inconspicuous by its absence till now.

Microsoft started off the year with the Tango 7.5 update for Windows Phone. Along the way came some really competent smartphones, with the Lumia 800 and the Lumia 900 being prime examples. The Redmond giant ended the year with a bang – Windows Phone 8. Expect some massive activity around the Windows Phone ecosystem next year.

Symbian possibly took its last mighty swing with the Nokia 808 PureView. The phone was disappointing because the OS is dated, but the camera was rather brilliant. For someone who wants a phone that works and will utilise the camera more, this is a very good option. And with the budget Windows phones now arriving in the sub ₹10,000 price bracket, the consumers now have a wider choice available.

Blackberry has been fairly silent in 2012, with no exciting phones launched. Yes, there was an entry-level Curve for the college crowd, but that's about it.

So let's get down to the awards, shall we.



◀ HIGH-END:  
**SAMSUNG GALAXY SIII**  
Price: ₹37,900

## High-end

**Zero1 Winner**  
**Samsung Galaxy SIII**

This is by far the best Android phone to hit the market this year. Yes, there were the pretenders to the throne – the HTC One X and the LG Optimus 4X HD, but the Galaxy SIII was by far the best phone among all. The performance scores blow the rivals out of the water. We heard a lot of criticism directed at Samsung for sending out the Galaxy SIII with the pentile display, but we had said it back then, and will say it again now – this is a non-issue, and will not stop millions from buying it. Back to the present, and those words of wisdom have come true!

Apart from the excellent performance, the Galaxy SIII also has some very nifty little features. Smart Stay keeps the display switched on as long as you are looking at it. Pop-up play lets you play a video and pin it anywhere on the screen while you continue working on another application. Direct dial lets you call a contact by just opening their contact in the address book and bringing the phone close to your ear. As if all this wasn't enough, the TouchWiz UI is very well optimized and doesn't hamper performance like a lot of Android skins that come with various phones. All in all, this is the phone to buy if you want the top-of-the-line Android phone in the market today.



**Apple iPhone 5**  
Price: ₹45,500



**Samsung Galaxy Note II**  
Price: ₹37,990

**Worthy Mentions**  
**Apple iPhone 5**

The advert says, "Best thing to happen to the iPhone, since the iPhone". We have to agree. As if the iPhone 4S wasn't brilliant enough, the iPhone 5 just takes that extra step in terms of build quality. The bigger footprint comes from the vertical height and that is because of the bigger display. The OS remains



exactly as what we have seen earlier, in terms of the interface and usability, but Apple took the decision to remove certain critical Google services. That wasn't one of the best decisions by a long shot. Apple Maps has become the laughing stock globally, for its complete incompetence. We know people who have painfully downgraded their iPhones back to iOS 5. For anyone who doesn't need the navigation guidance on the iPhone, the iPhone 5 with iOS 6 is a delightful experience. The newer and more powerful processor, more RAM and bumped up graphics chip – the perfect recipe for a very good smartphone. Good? Well, we are being modest!

### Samsung Galaxy Note II

What the first generation Galaxy Note did was to bring the hybrid device between the smartphone and the tablet to the masses. The popularity of the Note surprised us as well, admittedly. What the Note II does is build on that, with a lot more power, an even bigger display and the very latest OS on board. Consumers who prefer a big screen device are the ones who are in surprisingly huge numbers. You have the alternative in the LG Optimus VU, but the Galaxy Note II is just far superior as a whole – the latest OS, excellent performance and very good build quality.

## Mid-range

The mid-range smartphones launched in 2012 were fairly impressive. Dual-core processors became sort of the norm for Android phones. But the major excitement came from price-cuts that saw a lot of 2011's excellent phones become more affordable. While we cannot consider them for this edition of the awards, we must mention that the truly amazing Motorola Razr and the fairly competent HTC Sensation XE are now available below ₹25,000. The Windows Phone enthusiasts will be delighted to hear that the Lumia 800 also saw a price cut, bringing it down to below ₹20,000.

### Zero1 Winner

#### HTC One S

When it was launched, we were quite aghast that HTC had priced it very close to the quad-core processor powered One X. But, over a period of time,



#### Sony Xperia P

Price: ₹22,990



#### Nokia 808 PureView

Price: ₹25,000



the market corrections have brought the HTC One S's price to just below ₹25,000. In this category, it is by far the best performer. When we had reviewed this phone, the benchmark tests made for interesting reading – the scores were well ahead of any dual-core phone in that category and running after the quad-cores rather consistently. It has a fairly good camera and is in line for the Android Jelly Bean update. This leaves no doubt that the One S is by far the fastest phone under ₹25,000 and is a good option to consider.

### Worthy Mentions

#### Sony Xperia P

One thing that went in its favour straightaway was its excellent build quality. The design is very similar to the more expensive Xperia S, and the build quality isn't inferior in any way. Took some time to catch the consumers' attention, because Sony inexplicably sent it initially with Android GingerBread, when phones were coming out of the box with Ice Cream Sandwich. The update took care of that problem, and the Xperia P is one of those consistent performers that know their limits and work well within them. Consider this if unique looks are important to you. Do remember, this has a slightly smaller display than the One S.

#### Nokia 808 PureView

You may be slightly surprised to see this phone mentioned here, but the price changes have also brought this down to ₹25,000 and thereabouts. Yes, Symbian is not the slickest OS around, but do remember that you will get all the popular apps on the Nokia Store. But the biggest factor is the PureView 41 MP camera, which is pretty much unmatched in terms of the performance. Buy this phone if you do take a lot of pictures.



### ◀ MID-RANGE:

#### HTC ONE S

Price: ₹24,990





### ◀ APPLE IPAD (3RD GENERATION)

Price: ₹30,500



## Tablets

As far as big players went, apart from the usual Apple vs. Samsung battle, both on the shop floor and in the courtroom, the other tablet makers, such as Acer, Motorola and HTC were rather silent for the major part of the year. The much-expected HTC fight-back after the Flyer didn't materialise. Blackberry's PlayBook with 3G capabilities launched in some countries, but hasn't reached India yet. Same with Sony's Xperia tablet, which was launched amidst much excitement in the U.S., but some build quality issues halted its march rather prematurely.

ASUS gave us the amazing follow-up to the brilliant Transformer. Apple, uncharacteristically, launched three tablets - the third generation iPad, the iPad Mini and simultaneously the fourth generation iPad. Samsung launched a few tablets, but the Note 800 was the most exciting.

In the Indian market, the budget tablet segment was abuzz with activity. That proved to be the real boost the market needed to get the tablet as a device on to the consumers' radar. The price range for these tablets was between ₹5,000 and ₹15,000. Some of the more popular ones to come out of the crowd include the Micromax FunBook Pro, the Zync Z990 and the



### Samsung Galaxy Note 800

Price: ₹37,500



### ASUS Transformer Prime

Price: ₹46,010

iBerry AUXUS AXO2, which performed really well during the tests. Aakash Tablet was launched amidst much fanfare by Union Minister Kapil Sibal, but the project didn't do well in many regards. Many of the pre-orders were not fulfilled, and the tablets themselves had quality issues. The Aakash II project has successfully commenced, with the recent launch of the tablet. Budget tablet makers are crying foul over the price of the Aakash tablet, which will undercut them massively.

### Zero1 Winner

#### Apple iPad (3rd Generation)

The best tablet in the market just got better. Just to get the timelines right, the 4th generation has also been released globally, along with the iPad Mini, but that is still to be available in India officially. A faster processor, more RAM, more powerful graphics and the Retina display makes the iPad the tablet to own. The moment the rivals come close, Apple just moves the benchmark further. The new iPad is slightly thicker and heavier than the iPad 2.

### Worthy Mentions

#### Samsung Galaxy Note 800

From Android's side, the one that gives the iPad some competition is the Samsung Galaxy Note 800. This is the best Android tablet in terms of performance, and pips the ASUS Transformer Prime, which was the leader till then. Apart from the quad-core processor, the aspect that makes the difference is 2 GB of RAM, which should be the norm going forward, for high-end Android tablets. Excellent display and all the Galaxy Note II phablet's S-Pen capabilities are now also on the full-fledged tablet. The only niggle is its plasticky build. Must consider, if you want the very best Android tablet out there.

#### ASUS Transformer Prime

Its predecessor showed us another side of tablets and the Transformer Prime built on that brilliantly. This was the first quad-core processor powered Android tablet. But the real USP was its full-fledged keyboard dock that offered connectivity options for USB devices and an extra battery pack. Rather expensive, but then again, this is the tablet that comes close to offering the convenience of a netbook's keyboard when you need it urgently. It also offers good display and excellent battery life.



# Mainstream notebooks

The laptops came under considerable threat this year. It was a combination of factors, led by the rise of ultrabooks and tablets. But like true fighters, the notebooks did not give up. At the time of writing this, we are seeing a lot of laptops that are sporting the Windows 8 operating system. This is pretty much in line with the expectations and next year all laptops should sport Windows 8 OS.

## Zero1 Winner

### Lenovo IdeaPad Z580 (59-339356)

On the outside, the IdeaPad Z580 looks as docile, minimalistic and simple as any other mainstream laptop in its category. The Ivy Bridge Core i7 paired with 8 GB of RAM and a 1 TB hard drive makes this a delightful machine to use. The Blu-ray drive will appeal to movie enthusiasts. For a price of around ₹68,000, this is the all-rounder that offers a very good build quality and excellent performance.

## Worthy Mentions

### Dell Inspiron 14R Special Edition

It was one of the first laptops on Ivy Bridge that we had tested, and it was performing well till the Z580 came along. All in all, a great deal at around ₹51,000. But, only a few stocks of this laptop remain, so buy soon.

### Toshiba Satellite L850-Y5310

For around ₹56,000 in the market, you get a machine that is powered by an Ivy Bridge Core i7, 4 GB of RAM and the AMD Radeon HD 7670M (2 GB) graphics. This is purely a desktop replacement laptop, and is ticking most of the critical boxes – solidly built, sophisticated look and very good performance.



Dell Inspiron 14R Special Edition

Price: ₹51,419



Toshiba Satellite L850-Y5310

Price: ₹56,000



◀ LENOVO  
IDEAPAD Z580  
(59-339356)

Price: ₹67,990

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# Gaming Laptops

**G**aming laptops, as a genre, has shrunk considerably this year. With mainstream laptops closing in, at least in terms of performance and being considerably more affordable, most consumers are happy.

Albeit they are some levels lower in terms of performance, mainstream laptops and even ultrabooks are doing rather well with handling the latest games at more than acceptable frame-rates.

But not to be outdone, gaming notebooks have created a separate niche for themselves. Being pushed for performance, they have just taken the hardware and specifications to the next level. There still is a considerable amount of variety in this unique category. The likes of the Alienware still hope that its brand recall and aura will compensate for slightly lesser specs, while ASUS has completely gone hammer and tongs on the hardware with the G-series gaming laptops.

Not many manufacturers have a separate gaming laptop category in their range of offerings, with only Dell retaining its Alienware brand and ASUS giving it some competition. HP, on its part, has the Envy 15 that is a bit of a go-between a very powerful mainstream and an entry level gaming laptop. Hopefully, this will not be a trend going into 2013.

## Zero1 Winner ASUS G75VW

This looks, feels and performs like a gaming laptop! It's quite heavy at 4.5 kg which may be partly due to the 17.3-inch Full HD display. The rest of its weight can be attributed to the specs - Intel Core i7-3610QM, 16 GB RAM, NVIDIA GeForce GTX670M (2 GB), 750 GB hard drive and a 256 GB Lite-on LAT-256M3S SSD on which Windows 7 is installed. The system performs well and the gaming scores were the best among all gaming machines. At almost ₹1,30,000 in the market, this does cost a lot of money. The Alienware M17x, its direct rival, with similar specifications costs almost ₹1,62,000. What the ASUS rig misses out on is the visual experience of colourful lighting that has become a trademark of Alienware machines. The ASUS G75VW is by far the best gaming laptop out there and despite any eye-candy, deserves the Zero1 award for the sheer performance chops.

## Worthy mentions

### Dell Alienware M14x

When Dell sent us the updated M14x, we were a tad surprised that they did not nominate the M17x for



▲ ASUS G75VW

Price: ₹1,29,999

the awards. Maybe that is where they went wrong, because this effort is strong enough for a second place. But there is a logic behind the M14x. Dell's idea was to offer an almost similar spec sheet and an equally powerful experience in a form factor that is more compact, somewhat portable and yet doesn't sacrifice any of Alienware's trademarks - the grilles, the colourful keyboard, customisable LED lights, etc. There are two M14x versions available in the market, and the one that we received costs around ₹95,000 and the spec sheet looks somewhat like this - Intel Core i7-3630QM, 6 GB RAM, 14-inch (1600 x 900 pixel) display, NVIDIA GeForce GT650M and a 750GB hard drive.



Dell Alienware  
M14x

Price: ₹95,237 (excl. tax)



HP Envy  
4-1002tx

Price: ₹56,000

### HP Envy 4-1002tx

We never thought we would say this, but this is the machine that set the affordable ultrabook segment alight with unmatched performance. The benchmark scores are proof of its excellent system performance. Its build quality is also undisputedly the best among ultrabooks in its category. But the real kicker is the AMD Radeon HD 7670M (2 GB) graphics, which ensures that the Envy 4 scores the highest gaming scores among all ultrabooks costing less than ₹75,000. Yes, it is an ultrabook, which means you will get excellent battery life rest of the time. Get this, if you want the best of both worlds - the gaming bit while retaining the complete flexibility of portability and battery life.





# Ultrabooks

**A**ffordable ultrabooks like the Dell Inspiron 14z, certain versions of the Lenovo IdeaPad U310 and the U410 and the Samsung Series 5 were what we call market changers. This year consumers realized that ultrabooks are viable alternatives to the laptop and here are our picks of the year.

## Zero1 Winner

### Samsung Series 9

The Samsung Series 9 is pretty much the benchmark when it comes to ultrabooks. It's blazing fast performance, ultra slim form factor and exquisite build quality are truly awesome. The version that we tested was powered by an Intel Core i7 processor with 4 GB of RAM and a very fast 256 GB SSD. Its 13.3-inch display is very bright and non-reflective, but does lose out a bit in colour-depth. The higher than usual resolution of 1600 x 900 pixels packs in more real estate. A deserving winner!

## Worthy Mentions

### HP Spectre XT

Not only is the SpectreXT similar looking to the MacBook Air, but its built rigidly as well. It offers very good performance and longer real world battery life. It ranks behind the HP Envy in the overall benchmark scores only because it lacks a dedicated graphics chip. Its super fast SSD more than makes this the ultrabook we desire.

### Dell XPS 14

This is the most exotic ultrabook in the market. Its lid is made of aluminum; the keyboard deck is all magnesium while there is a silicon layer on the underside to channel warm air while keeping your thighs cool. Its build quality is undoubtedly premium and the satisfactory performance makes this a good option to consider.



**HP Spectre XT**

**Price: ₹64,990**



**Dell XPS 14**

**Price: ₹79,990**

(exclusive of taxes)



**SAMSUNG SERIES 9 ▶**

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# Point-and-shoot cameras

**A**dvances in the point and shoot cameras category has evolved it from being 'a camera that offers a little more' to a camera that any professional photographer can carry around as a backup.

## Zero1 Winner

### Sony RX100

The RX100 packs in a large 1-inch sensor along with a lens that can open all the way to f/1.8. The size of each individual pixel on the RX100's sensor is 3.6 times the size of pixels in a regular point and shoot. We've used the RX100 and there is no denying of its superiority when it comes to this category. The camera is extremely quick with no shutter lag. All in all, if you're looking for a camera that can do it all, the RX100 would be it and that's why it wins our Zero1 Award.

## Worthy Mention

### Fujifilm X10

The Fujifilm X10 is designed like a rangefinder. The f/2.0-2.8, this camera is all ready to tackle any low light situation. The images out of the X10 are simply stellar, thanks to the tack sharp Fujinon lens (even at F/2.0) matched perfectly by the sensor. The X10 is a great camera for anyone who's looking to make great images, but the only gripe we have with it is the smaller sensor, which didn't really hold the camera back in any way that most people can notice.



## ▲ POINT-AND-SHOOT CAMERA: SONY RX100

Price: ₹34,990



## Fujifilm X10

Price: ₹44,999



## Canon SX500 IS

Price: ₹19,995

# Ultra Zoom

**C**ameras in the ultra-zoom category look and feel a lot like DSLRs and provide a feature set that could match most entry level DSLRs. These cameras offer an optical zoom range anywhere starting at 24mm and going all the way to 1200mm. However, larger reach isn't synonymous with quality. Issues such as focus, sharpness and noise rear their ugly head at maximum zoom. That's what we're looking here into.

## Zero1 Winner

### Nikon Coolpix P510

The P510 has a 16 megapixel back-side illuminated sensor along with a lens that covers the 24-1000mm (35mm equivalent) focal length with a variable aperture of f/3.0-5.9. We found that not only did it take exceptionally good images which were sharp and crisp, it also managed to acquire focus faster. If you're looking for a camera to take you far and wide, help you with shooting far-off objects such as wildlife, flower and birds, then this is the camera for you.

## Worthy Mention

### Canon SX500 IS

The Canon PowerShot SX500 IS packs in a smaller zoom range than the P510, but incorporates a 16 megapixel CCD sensor instead of the BSI kind we're seeing lately. Image quality is quite good. We noticed that the camera tends to hunt a lot when zoomed past half its focal length, especially in low light. However for wide shots, the AF was pretty quick and accurate. The great thing is that it runs on AA batteries, so spares will be easily available anywhere.



## ▲ ULTRA ZOOM CAMERA: NIKON COOLPIX P510

Price: ₹23,950



## DSLRs

The very best in form, function and performance, DSLR cameras have enjoyed the status of being the go-to equipment for any professional requirement and they have evolved an entire ecosystem of their own. The first successful DSLR was created by Steven Sasson of Kodak, building upon the works of Willard Boyle and George Smith (who found a way to capture images using a CCD sensor) and used a sensor that had an output of 100x100 pixels. That was in 1975.

Cut to modern day and we have cameras that produce images spanning 36 megapixels. In less than forty years, imaging technology has come so far, that the resolutions have skyrocketed and image quality has become so great that the only way to gauge it is at the pixel level. AF systems have become so intelligent that we often fear subjecting it to an IQ test. Lenses have become so sharp and optics been so fine-tuned that they can replicate the real world light almost identically onto an image sensor, even in little to negligible light.

However, not all DSLRs were created equal. We've played with every single DSLR that's hit the market in the last year and we're here to award the king with its rightful crown.

### Zero1 Award: Entry Level DSLR Nikon D3200

The Nikon D3200 packs a 24 megapixel APS-C sensor into an entry level DSLR. These sort of num-



Canon EOS 650D

Price: ₹55,950  
(body only)



Sony SLT A-77

Price: ₹69,990  
(body only)



▲ ENTRY LEVEL DSLR:  
NIKON D3200

Price: ₹30,750 (body only)



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◀ SEMI-PROFESSIONAL DSLR:  
**CANON EOS 7D**

Price: ₹87,995 (Body only)

bers were only seen in the full frame cameras that cost upwards of what most people earn in six months. With the large pixel count, we got everything we had hoped for; amazing clarity, great colours and contrast, a very impressive dynamic range and impressively enough, even low levels of noise. The camera is a snug fit in most hands (though not so much in ours), has a very well balanced flash exposure and focuses pretty fast with the right kind of lenses.

**Worthy Mention**

**Canon EOS 650D**

The Canon 650D comes with the first hybrid AF sensor in DSLRs along with the first fully functional touch screen. However, talking about pure performance, the images out of the 650D were a little flat, which can easily be fixed in editing. However, the AF did perform exceptionally well, even better than the D3200 given that it has dedicated pixels for Phase Detect focus. However, to fully utilize this technology, you either need STM or USM lenses. Kit lenses focus just as slowly as any other.

**Zero1 Award: Semi-Professional DSLR**

**Canon EOS 7D**

There is no denying that the 7D rules this kingdom. Even after being in the market for 3 years, the camera shows no signs of needing a refresh. Its impeccable image quality, mind-blowing 8 FPS burst mode and a 19-all-cross-type AF system make this camera a mean contender. Did we mention it does stellar video, so much so that Joss Whedon deemed it worthy enough to film some bits of the final fight scene in his movie *The Avengers*. Can't compete with that!



**Nikon D800**

Price: ₹1,69,950  
(Body only)

**Worthy Mention**

**Sony SLT A-77**

The Sony A-77 packs an impressive 24 megapixel sensor and a semi-translucent mirror that allows it to achieve a burst speed of 12 FPS with full AF. The images were great, but the per-pixel quality just didn't match that of the 7D. Not to mention, we found that when using the EVF in the viewfinder, there was a little lag between when you pressed the shutter and when the photo was clicked. We'd hoped that Sony would fix this through a firmware update, but it hasn't happened so far. Regardless, the camera functions very well, puts out great images and amazing video. The stereo mics also add to the video value of the camera.

**Zero1 Award: Pro DSLR**

**Canon 5D MarkIII**

Building on the extremely successful DNA of the 5D MarkII, the MarkIII brings to the table little growth



▲ PRO DSLR:  
**CANON 5D MARKIII**

Price: ₹2,06,095 (Body only)

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▲ SUPER PRO DSLR:  
**CANON 1DX**

Price: ₹4,29,995 (Body only)

in number of pixels, but does feature a completely redesigned sensor that puts out images with the best quality we have seen so far (barring medium format of course). However, the real clincher for this camera is the insane AF system that Canon has packed into it. With 61 points of AF real estate (41 of which are cross type), there's hardly anything this beast can't lock on or track. The 5D MarkIII maybe be expensive, but the kind of performance it delivers makes every penny spent worth it.

**Worthy Mention**

**Nikon D800**

THIRTY SIX MEGAPIXELS. Yes that's an insanely large number, almost 50 per cent more pixels than its rival and boy does that show. The D800 is an excellent camera if you're in the studio, shooting stills. The images carry details as fine as a strand of hair, something that's very hard to beat.

However, we found that in outdoor situations, the camera is not such a great performer. 36 megapixels means a lot of detail, including any error you might have made during shooting, which is generally prevalent while shooting hand-held. The noise performance also didn't match that of the 5D MarkIII, but regardless, it made for one great camera to use. Being much cheaper than its



**Nikon D4**

Price: ₹3,49,950  
(Body only)

competitor, the D800 would be a great addition if you're looking to shoot inside a studio, regardless of the theme.

**Zero1 Award: Super Pro DSLR**

**Canon 1Dx**

This category of camera includes just two contenders (since no one else has the technical expertise needed to make them). The cameras in this category are made to go to war, both literally and figuratively. They can handle harsh conditions, shoot anything under the sun (or moon, or sky, whatever) and still give performance that beats any and every single DSLR in the market.

It's really hard to pick a top performer here, but we'd have to go with the 1Dx for its full frame 18 megapixel sensor, the 61-point AF system (with 41 cross type). We shot concerts, racing sport-bikes, little hyperactive children and even late night landscape with this camera. There was absolutely nothing it didn't handle with the grace of a ballet dancer. If you can afford it and want the best camera in the market, there isn't anywhere you need to look.

**Worthy Mentions**

**Nikon D4**

We're not mentioning this camera because it's the only other contender. We're mentioning it because it does definitely give the 1Dx a run for its money. Almost similar pixel count, very similar frame rates, but it loses out in the number of cross type AF points, which become very essential when it comes to tracking moving subject.

However, the Nikon D4 is somewhat cheaper than the 1Dx, so we think it's a fair enough trade off. The Nikon D4 is built on the rock solid DNA of the D3 (and D3s). While it doesn't offer many ground breaking upgrades from the D3s, the changes that have been made on the D4 make this camera stand out on its own and appeal to shutterbugs.

The sub-selector joysticks are new, as is the ergonomic redesign of the battery grip, making the Nikon D4 a lot more comfortable to use in portrait orientation. There are a lot of minor tweaks and changes in the D4, along with the introduction of a few focusing system, which allows the D4 to deliver performance that was previously never seen – a handy addition, further boosting the camera's overall appeal.

The D4 is capable of shooting full HD video at 30, 25 and 24 fps. Pretty standard specs, but it can also stream uncompressed footage through the built-in mini-HDMI port to an external recorder.



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◀ **INTERNAL HDDs:**  
**WESTERN DIGITAL  
VELOCIRAPTOR 1 TB**  
Price: ₹15,499

## Internal HDDs

**A**fter the insane sky-rocketing of internal HDD prices last year, due to the Thailand floods, the prices seems to be coming down. But expecting to get HDDs at pre-floods prices isn't practical.

### Zero1 Winner

#### Western Digital Velociraptor 1 TB

Just like last year, the WD Velociraptor has bagged the Zero1 Award this year as well. This time the capacity has been upgraded to 1 TB. It sports a 10,000 RPM drive with a 64 MB of cache buffer. It also comes with a 5-year warranty. Sequential Read/Write in MB/s: 199 / 190 and Assorted Read/Write in MB/s: 170 / 133. Need we say more for those looking at a blazing fast internal hard drive? This is the drive to buy.

### Worthy Mentions

#### Hitachi Deskstar 7K4000

This is the only 4 TB drive that we tested this year and frankly we were impressed with the performance offered. It sports a five-platter design and it performs fabulously across all benchmark tests. Sequential Read / Write (in MB/s): 167.91 / 153.42 and Assorted Read / Write (in MB/s): 162.47 / 138.31.

#### Seagate Momentus XT 750GB

Seagate Momentus XT offers an 8GB of SLC NAND memory which improves access times, reducing application load times for frequently used programs. Performance improvements over the older Momentus XT drive are significant. A hybrid drive worth recommending.



**Hitachi Deskstar  
7K4000**  
Price: ₹25,000



**Seagate  
Momentus XT  
750 GB**  
Price: ₹10,000



**Intel Series  
520 SSD**  
Price: ₹19,500



**Corsair Force GS  
240GB**  
Price: ₹16,500

## SSDs

**S**olid state drives are slowly but surely becoming more mainstream, thanks to prices coming down. The capacities have not increased exponentially but one major difference from last year when it came to SSD testing was that most of the drives sported the SandForce controllers. This is a far cry from the various controllers we saw last year. The differentiation happened with the kinds of memories that were used as the controllers were the same, except for the Zero1 Winner.

### Zero1 Winner

#### Corsair Neutron GTX 240 GB

With the Neutron series, Corsair used a new controller from Link-A-Media - the LM87800. It offers great transfer speeds when compared with Intel Series 520 drive or Corsair Force GS 240 GB drive. Sequential write speeds touch 511 MB/s. random 512k writes were at 448 MB/s. Real life intra-drive speeds were over 160 MB/s. A 5-year warranty is an added plus.

### Worthy Mentions

#### Intel Series 520 SSD 240 GB

It houses a SandForce SF 2281 controller. There are 16 x 16GB of 25nm Intel MLC NAND taking the total to 256 GB, but you will only get 240 GB as 16 GB is reserved for data parity, garbage collection and block replacement. Real-life sequential file-transfer tests easily crossed 290 MB/s.

#### Corsair Force GS 240 GB

It houses Toggle mode NAND modules and performs supremely when it comes to 4K Random Reads and Write speeds, which is important for daily use. The 4K speeds are almost double that of Intel Series 520, Corsair Force GT and Kingston HyperX 240GB SSDs.



▲ **SSDs:**  
**CORSAIR NEUTRON GTX 240 GB**  
Price: ₹18,200

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## External HDDs

**E**xternal drives is a category that did not have many innovations so to speak over last year. SuperSpeed USB 3.0 was the default interface on majority of the external drives. Considering all motherboards these days, barring the extremely budget ones, sport USB 3.0 drives, it makes sense for the external HDD industry to move in that direction. We did come across a couple of Thunderbolt drives which we found to be pointless as their speeds were limited due to the mechanical internal drives.

External HDD makers continued to concentrate on the aesthetics of the drive in order to make it stand out. Last year we had the Seagate Slim drive, which got company this year with Toshiba's Slim drive. Seagate also had an external HDD with a Wi-Fi adapter within it, to be used alongwith your tablet or smart-phone. Capacities for external HDDs reached 2 TB for non-powered drives and 4 TB for powered drives.

### Zero1 Winner

#### Transcend StoreJet 35T3

The Zero1 award for the external HDD was bagged by Transcend StoreJet 35T3 (2 TB) for its fabulous transfer speeds across all tests. In real-life tests, it crossed over 140 MB/s in both sequential read and write operations whereas it gave over 100 MB/s in assorted read transfer. It offered a great cost per GB as well.

### Worthy Mention

#### Hitachi Mobile Touro Pro 750 GB

Among the non-powered external drives, the Touro Mobile Pro is the fastest drive thanks to a 7200 RPM internal drive. None of the other portable drives we tested this year came close to the Hitachi drives performance. It easily crosses over 115 MB/s in sequential tests. It also offers a 3 GB cloud storage option alongwith the regular list of backup and encryption utilities, it makes for a great purchase if performance is what you are after.



◀ **EXTERNAL HDDs:**  
**TRANSCEND STOREJET 35T3**

Price: ₹8,000



**Hitachi Mobile Touro Pro 750 GB**

Price: ₹8,800



**Kingston Data Traveler HyperX 3.0**

Price: ₹18,000

## Flash Drives

While USB 3.0 has become mainstream with flash drives as well, there are cheaper USB 2.0 drives still selling in the market. Capacities have skyrocketed in this space from what we saw last year. We tested pen drives which offered capacities of 8 GB and above and were shocked out of our wits to find a 256 GB Kingston Data Traveler HyperX 3.0 drive in our midst.

### Zero1 Winner

#### SanDisk Extreme USB 3.0 (64 GB)

This actually did prove to be an Extreme drive in the true sense of the word, what with real-life sequential speeds of over 150 MB/s! Yes, it was quite an insane speed for a pen drive. The black slider body looks really good. So if raw performance is what you are after the SanDisk Extreme is the perfect drive for you.

### Worthy Mention

#### Kingston Data Traveler HyperX 3.0

Kingston Data Traveler series of pen drives was great, but when you mash up that series with the HyperX series – offering better build, great looks, and a humongous capacity, you are looking at a stunner. This 256 GB drive does deserve a worthy mention despite its prohibitive pricing (₹18,000) for the sheer fact that it not only offers such huge capacity, but performed second only to the SanDisk Extreme drive.



▲ **FLASH DRIVES:**  
**SANDISK EXTREME USB 3.0 (64 GB)**

Price: ₹5,189



◀ MFDs:

**HP OFFICEJET PRO 8600 PLUS**

Price: ₹20,000

## Multi-functional Devices

**N**ot much has changed in the multi-functional devices space in the last year or so. Most of the MFDs these days come with all the major connectivity features with Wi-Fi being the only network connectivity option in some cases. Some of the MFDs we got this time around have also featured in our previous MFD comparison tests and we included them as they are still selling in the market.

### Zero1 Winner

#### HP OfficeJet Pro 8600 Plus

Apart from offering the standard print, scan and copy functionality, the 8600 Plus also offers ePrint – where you assign an email ID to the printer and send print jobs from anywhere in the world; Airprint – which allows you to print content off your iOS devices; Wi-Fi – which allows you to print over your Wi-Fi network and so on. It also comes with a 4.3-inch touchscreen which acts as the operational panel.

Mastering the operational panel does not take much time. The 8600 Plus comes with a USB port as well as memory card slot for quick off-the-camera printing. It supports auto-duplex printing and also on the automatic-document feeder tray on top. Considering it is an OfficeJet Pro series AIO, it offers high speed prints. For text printing it took 12.97 secs and highlighting with a marker will not leave behind any smudges. High quality mixed document printing was



#### Epson ME Office 960FWD

Price: ₹14,999



#### Canon PIXMA E510

Price: ₹6,780



#### Brother MFC J625W

Price: ₹11,920

also quite fast at 24.12 secs. Colour copying took 14 seconds. It even printed an A4 glossy photograph under 2 minutes. While the print quality is great with paper colour prints, the glossy A4 photo print wasn't that great as we noticed graining in certain regions of our test print.

While the printer costs ₹20,000, the colour cartridges are priced at ₹1,565 (for 1500 prints) and ₹1,455 (for 1100 prints). The 8600 Plus is ideal for a small home-office setup as it gives very fast speeds and good quality prints. Worthy Zero1 award winner.

### Worthy Mentions

#### Epson ME Office 960FWD

The Epson Office 960FWD comes in the traditional all black body. The operational panel can tilt, making it easier to use while in a sitting or standing position. The Epson Office 960FWD sports a lot of features such as PictBridge and memory card slot, that make more sense for home use. It uses Durabrite Ultra ink which successfully resisted smudges when we used a fluorescent marker to highlight text from the test document that we printed. It gave speedy prints and was particularly good with glossy colour photo prints.

#### Canon PIXMA E510

The E510 is geared more towards users who want a photo printer with other functions such as scanning and copying as well. This MFD had bagged the Best Buy award in our comparison test for its great value for money proposition. It had the lowest cost of ownership amongst the competing MFDs in its category.

#### Brother MFC J625W

This is an old MFD but still selling in the market. The J625W sports a memory card slot as well as PictBridge slot. Both these MFDs support the iPrint and Scan app which allows you to print documents from your iOS device as well as scan documents/ pictures directly to them. It offers a decent price to performance ratio and deserves a mention here.



◀ SAMSUNG BD-E6500

Price: ₹16,490

## Blu-ray players

Quite clearly, Blu-ray players saw a surge in popularity this year. They seem to have become the must-have accessory device for most HDTV buyers. There are multiple reasons for this – 1. The Blu-ray discs themselves have become slightly less expensive, particularly the Bollywood ones. 2. The Blu-ray version of the movies are now usually stocked side-by-side with the DVDs in stores and 3. High definition enthusiasts want the best possible movie experience and build on a collection at home.

However, the single biggest reason is the drop in prices of the Blu-ray players. Now you get a host of them available for prices starting around ₹5,000, albeit without Wi-Fi streaming capabilities and slightly slower disc startup times. But the reduced entry price means more consumers are buying these devices and even HDTV manufacturers are bundling them with their TVs.

We also saw this year that stores are now stocking Blu-ray discs rather more freely, than earlier, with the knowledge that they will be picked up by consumers. The DVD and Blu-ray versions of the movies are now hitting shelves simultaneously, unlike the earlier trend of making you wait for the Blu-ray. Prices have come down a bit as well, but do expect that slide to continue next year as labels find the increasing sales more secure. Bollywood movies, for example, are now in the region of ₹800 as compared to ₹1,000 and limited availability earlier. Most Hollywood films now cost between ₹900 and ₹1,200, compared to upwards of ₹1,500 earlier. Not a huge price change, but enough to bring it on the shopping list of a lot of consumers. The sales of HDTVs means that consumers are willing to pay that little extra to get a better movie-viewing experience.

### Zero1 Winner

#### Samsung BD-E6500

If performance and price is something that you want to optimally balance, the Samsung BD-E6500 is the

Blu-ray player to consider. Straight off, it manages to have a rather interesting design, thanks to the subtle variations in comparison to the plain rectangular block look that most other Blu-ray players turn up with. The UI of the BD-E6500 is by far the most visually appealing and intuitive Blu-ray player among all the ones that we tested and remains very functional as well. The player boots up the third quickest and the disc playback speed is the second quickest. What was super surprising was that it played back almost any video file format we threw at it and rivals the WD Live HD Media player in terms of compatibility. Extremely sharp and life-like pictures and very good upscaling of SD content. The Philips Blu-ray players come close with this capability, but the rest are far behind. The ₹16,490 expense will be totally worth it.

### Worthy Mentions

#### Philips BDP-5200/51

This Blu-ray player impressed us considerably in our comparison test. There is a lower spec cousin as well – the BDP-3200/94 that costs less than ₹9,000 but does not have Wi-Fi on board. The BDP-5200/51 costs around ₹12,000 and comes with Wi-Fi on board along with some pre-loaded applications. The user interface is the simplest to get around, and the remote is very well laid out. Picture quality is satisfactory, with the trademark Philips colour presets available as options. Picture quality is slightly on the softer side, but the positive is that there is no noise or any artifacts during Blu-ray playback or when upscaling HD content.



Philips BDP-5200/51

Price: ₹12,990



Panasonic DMP-BDT220GW

Price: ₹11,990

#### Panasonic DMP-BDT220GW

Among all the players that we tested, the Panasonic DMP-BDT220GW (and the BD110GW before that) is the only player to offer on-the-fly 2D to 3D conversion. This will be like the cherry on the top of the cake for those who prefer regular doses of 3D movies. The interface is unique and working around it takes a bit of getting used to the “direction to select” method. Panasonic has worked on improving the video codec compatibility over the previous generation versions. Priced just under ₹12,000.





◀ BenQ EW2430V

Price: ₹20,990

Worthy Mentions

**BenQ XL2420T**

BenQ XL2420T is the successor to last year's Zero1 winner BenQ XL2410T. In terms of performance this was the next best monitor and it packed a boatload of features which made this monitor worth the recommendation. It is a 3D LED backlit LCD monitor targeted at gamers with special options to save up to three gamer profiles. It comes with a black equaliser to get more details from the shadow areas. It employs active 3D. Apart from that you also get other dedicated profiles for movie, text, etc. It comes with a mouse-like accessory called the S-switch along with the monitor to control the OSD with the help of three buttons and a scroll wheel. Black equaliser option is another plus allowing you to extract maximum detail from shadowy areas.

**Dell S2740L**

This is a 27-inch monitor we got towards the end of the year which performed well. It gave a contrast ratio of 630:1 at brightness and contrast levels of 50 per cent. The build quality on this monitor is top notch. It does have a highly reflective screen though. The screen tends to merge with the bezel thereby preventing dust accumulation. It is geared more towards multimedia use or in some cases as a secondary TV screen.

**Philips 273P3LPH**

This 27-inch monitor sported a TN-panel and was the sturdiest monitor we tested. The stand was height-adjustable and had a rotating base. It had special infrared sensors to detect the presence of a user and accordingly adjust the brightness. The only pain were the touch sensitive buttons on the monitor. Its contrast ratio was 908:1 at 100 per cent brightness levels and its colour reproduction was quite good. Viewing angles aren't that great but its black levels were quite decent and it was a pleasure to watch HD movies on this monitor. Its good performance along with an under 20k price point had fetched it the Best Buy award in the 27-inch monitor category.

Monitors

Monitors was a segment where apart from lower prices for larger screen sizes, there wasn't much happening. There was more variety in terms of panels. Most of the monitors we tested this year were LED backlit LCD models and the number of 27-inch monitors we received this year was quite something. 3D monitors were not that hot this year, although we did get a couple of them. We were pleased to have passive 3D monitors among us, in fact that is the one thing that was different from last year, where you needed an NVIDIA 3D Vision kit to really enjoy 3D content on your monitor.

Zero1 Winner

**BenQ EW2430V**

BenQ EW2430V won the Zero1 award this year for its brilliant overall performance across most of our tests. It is a PVA-panel based monitor and comes on a sturdy silver-coloured stand sporting a glossy black bezel. In terms of performance it offered an amazing contrast ratio of 1439:1 at 100 per cent brightness levels. The BenQ XL2420T was the only other monitor which came close to it in terms of pure performance. Black levels were the best on the EW2430.



**BenQ XL2420T**

Price: ₹22,000



**Dell S2740L**

Price: ₹23,000



**Philips 273P3LPH**

Price: ₹19,990



### ◀ GARMIN NUVI 2565LM

Price: ₹17,600

# GPS in-car Navigators

This year, we did a comparison test of the best GPS in-car navigators available in the market. The response to the test, from all the brands currently selling devices in India, was enthusiastic. The devices were even more exciting with some having a plain-Jane navigator blasting out directions as we drove around the city and then some. However, the gamut of features even the basic navigators are loaded with is quite a surprise.

Like last year, GPS navigators are still not really on the map of most consumers. From what we have been able to understand after receiving feedback from our readers, rolling down the window and asking someone for directions is still considered the safest option! Also, GPS navigators in India struggle at times because the routes, road layout and directions tend to change often – constructions, diversions, etc. to blame. This, for no fault of the device itself, hinders the precision of the overall navigation quality.

Another reason is the price of the devices themselves. The entry level ones start around ₹6,000, but the good ones are all upwards of ₹11,000. This not only creates a doubt in the consumer's mind about the necessity, but the alternative of free guidance from the auto-wallah seems a lot more enticing! Having said that, a GPS navigator is a must-have device if you travel a lot to different places, or happen travel at night where there may not be someone to ask around.

## Zero1 Winner Garmin Nuvi 2565LM

This was the best performer in our GPS navigator comparison test. We were very impressed with the

overall package offered – solid build with the rubberised back, excellent display, visually appealing user interface and possibly the best navigation quality, particularly with the precise voice commands. The maps are not the best 3D maps we have seen, despite the nuvi 2565LM costing a bit more than ₹17,500. But then again, there is no taking away the functionality of the device itself. For those of you who like to challenge yourself, there is the Eco-Drive feature that assesses your driving style and gives you an approximate fuel economy figure.

## Worthy Mentions

### MapmyIndia ZX250

Between the winner – the Nuvi 2565LM and MapmyIndia ZX250, the battle went down to the proverbial wire. Their build quality is very similar, and the display in both the devices is among the better ones in the entire category. Where the ZX250 takes the lead is with the quality of maps. While navigation quality is relatively similar, the Aura 3D Maps on the MapmyIndia navigator just take the navigation experience to a whole new level, unseen before. Every little elevation change is brilliantly rendered, and certain buildings and most monuments in their 3D avatar look brilliant on the map. For a classy navigation experience, this is the navigator to consider.



### MapMyIndia ZX250

Price: ₹15,990



### TomTom Via 125

Price: ₹15,999

### TomTom Via 125

The TomTom Via 125 is the most matter of fact GPS navigator we have tested. And we appreciate that immensely. Switch it on, and you straightaway have the maps open and ready for navigation. Other features are in a sort of secondary layer, which makes this the most easy-to-use navigator. The windshield mount stand is integrated on the device itself, making it easy to store. Maps have been updated as well for better address search support. Buy this if you want a device that is ready to guide you, without you having to cajole it into doing so!



◀ **TP-LINK TL-WR841N**  
Price: ₹2,000

## Wireless Routers

**W**ireless routers are a very obscure category for most users. This is mainly because most users are unaware of the intricacies involved in correctly setting up and managing a router. Keeping that in mind, we would classify a good router as one that would be easy to setup and one that offers hassle-free performance. Judging by the numerous routers that have passed through our test centre so far, we would have to say that over the years, TP-LINK has impressed us with the performance of their devices. Relatively cheap, almost all their routers blow the socks off the competition. They are also extremely easy to setup and quick to respond, while giving plenty of customisation options to the power user.

There are a few things that you need to keep in mind before purchasing a router though. Dual-band routers are only important if you have devices that are capable of operating in that band, and your network is so congested that a single-band router is insufficient. This is not an issue in the average home environment so most of you will not require a dual-band router. NAS is another feature that is featured on routers nowadays and in our testing we found that accessing most NAS drives is a headache. Routers like the WD MyNet N900 Central which have an in-built HDD seem to have much faster access times and will be a better option if speed is a priority. Such devices do come at a premium though.



**TP-LINK TL-WR740N**  
Price: ₹1,100



**ASUS RT-N66U**  
Price: ₹13,000



**D-Link DIR 636L**  
Price: ₹5,000

USB 3.0 ports are mostly unnecessary, unless you intend to access your drive via LAN and not Wi-Fi, given the speed limitations. Gigabit Ethernet is an absolute must if transfer speeds are a priority, but for normal internet sharing and LAN gaming and such, a gigabit Ethernet port won't be required.

### Zero1 Winner TP-LINK TL-WR841N

If it is performance you want, this is the router for you. The best performing router in our tests so far, this single-band router was almost twice as fast as most competing dual-band routers selling at more than three times the price. The signal strength was also excellent and while it lacks features such as USB, this much performance at such a low price (₹2,000), nets this router our Zero1 award.

### Worthy Mentions TP-LINK TL-WR740N

At ₹1,100, this was the cheapest router in our tests and the performance at that price was astounding. The router performed much better than many of the more 'powerful' dual-band routers and though it is a very basic router, it does its job beautifully. For a basic home Wi-Fi setup, you really can't go wrong with this router.

### ASUS RT-N66U

This was the best performing dual-band router in our tests. It is a bit expensive at ₹13,000, but it does include almost everything that you would need from any router, including DD-WRT support. While the router has USB ports (2.0) at the back, setting up an HDD can be a pain and while it isn't really recommended, the option is present if you really need it. Performance at 2.4 GHz is a bit lacking and it is only in the 5 GHz band that this router comes into its own. That said, the range at which this router can operate (at 2.4 GHz) is quite good, even if the speeds are comparatively lower than the TP-LINK TL-WR841N.

### D-Link DIR 636L

This D-link router represents the best performance and value for money in the dual-band segment and even though it has a lower overall bandwidth (300N vs 900N) than monsters like the ASUS RT-N66U, the bandwidth should be sufficient for an average home user who wants/needs a dual-band capable router. The router itself has sufficient features for most usage scenarios and the USB port is just a bonus. Not a bad deal at ₹5,000.





# Processors

As far as processors go, this was an out and out Intel year, which had its Sandy Bridge E series of processors at the beginning of the year and the Ivy Bridge processors launch in April. The flagship Ivy Bridge launch was followed by a wide range of SKUs for various budgets. This made the Sandy Bridge processor prices quite attractive. On the AMD front, last year we saw the 8-core FX-8150 which was taken over by the 4-core Intel Sandy Bridge Core i7-2600K in terms of performance, offered hardly any competition in that department. AMD did come out with its Trinity line of APUs towards the end of the year, which gave a brilliant integrated graphics performance as compared to an already impressive Llano APUs which were launched last year. We did not get the latest Piledriver processor – the FX-8350 from AMD at the time of writing, so its review can be expected next year.

## Zero1 Winner

### Intel Core i7-3960X

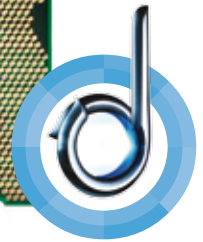
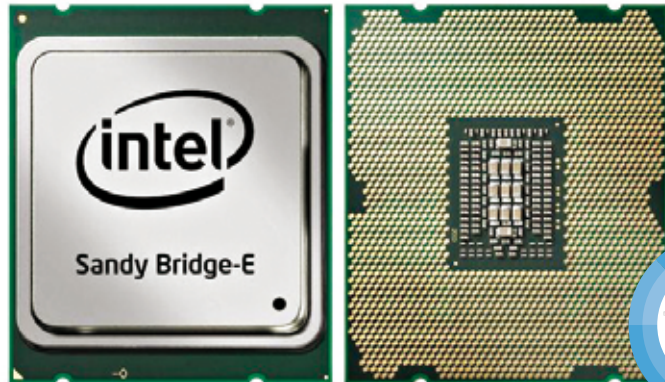
The Sandy Bridge E processor – the Core i7-3960X running at a clock speed of 3.3 GHz with a max Turbo frequency of 3.9GHz, with a shared L3 cache of 15MB, looks great on paper. There are lot of common aspects from the Sandy Bridge microarchitecture that have been carried forward. Performance scores were insane. Cinebench R11.5 gave a score of 11.27 as compared with 5.96 of the AMD FX-8150 and 6.79 of Core i7-2600K. X264 HD encoding at 720p gave a whopping 58.47FPS (FX-8150 @36.76). WinRAR compression/decompression happened at 4282 KB/s up from 3505 KB/s of the 2600K. If you are a power user and multi-threaded applications are what you indulge in the most, this is the beast of a processor for you. Of course, be ready to shell out a fortune for this processor.

*Recommended Motherboard: ASUS Rampage IV Extreme*

## Worthy Mentions

### Intel Core i7-3770K

Intel Sandy Bridge processors have been the favourite of mainstream system builders, but their integrated graphics namely HD 3000 and HD 2000 did not offer much in terms of gaming. With the first Intel Ivy Bridge processor, namely Core i7-3770K, we see an improvement on the gaming front. The Core i7-3770K is based on a 22nm process incorporating tri-gate transistors popularly known as 3D



### ▲ INTEL CORE I7-3960X

Price: ₹58,000

transistors, which allows faster switching of states, and packing in more transistors.

Intel HD 4000 graphics gave very good frame rates in most of the games. But the AMD A8-3850's HD 6550D graphics still gave superior frame rates. For Sandy Bridge users, it does not make much sense to upgrade to the i7-3770K.

For a pre-Sandy Bridge system builder this is a very good upgrade option if you are looking to build a high-end gaming and multimedia system.

*Recommended Motherboard: ASUS Maximus V Extreme*

### AMD A10-5800K

AMD had us all impressed with the graphics performance of their Fusion series Llano APU – AMD A8-3850 last year. Carrying that tradition forward, AMD's latest APU - the A10-5800K, gives even better graphics performance. The quad-core A10-5800K is the flagship APU codenamed Trinity, has a base clock of 3.8 GHz which can scale up to 4.2 GHz on Turbo. It houses the 384-core Radeon HD 7660D GPU clocked at 800 MHz. This is quite an upgrade from the HD 6550D that was seen on the A8-3850.

The compute performance level is at par with the Intel Core i3 Ivy bridge processors. But the real strength of the A10-5800K lies in its gaming performance. *Resident Evil 5* (1680x1050, medium, DX10) gave 52 FPS; *STALKER: COP* (1680x1050, medium, DX11) gave a decent 32.4 FPS and *DIRT 3* (1680x1050, med) gave 42.1 fps. These readings were much better than HD 4000 on the Intel Core i7-3770K. If you are looking for a GPU-independent system, this is the processor for you. It offers the best gaming performance that we have seen on any processor, but is not so great at computing tasks.

*Recommended Motherboard: Gigabyte GA F2A85X-UP4*



### Intel Core i7-3770K

Price: ₹20,000



### AMD A10-5800K

Price: ₹7,000



# Graphics Cards

The graphics card segment is one which more or less has the same characters and same storyline with a few twists thrown in for good measure. The twists this year were introduction of the PCIe 3.0 interface on the HD 7000 series and GTX 600 series from AMD and NVIDIA respectively. NVIDIA also introduced a new architectural component called the SMX – a glorified stream multiprocessor, a boost clock – which increases GPU clock speed under load. AMD introduced the Graphics Core Next architecture. Both AMD and NVIDIA switched from the 40nm to 28nm manufacturing process.

## Zero1 Winner ZOTAC GTX 690

As if the GTX 680 wasn't enough, NVIDIA came out with a GTX 690 which sports two GK104 GPUs and a massive 3072 CUDA cores. Needless to say, this ZOTAC GTX 690 gave the best performance in every benchmark or game we threw at it. And it manages to look great as well, thanks to the metal chassis with a huge fan in the centre. ZOTAC hasn't altered the reference design much and we like it that way. So far as performance goes, there was no equal and it rightfully deserves the Zero1 Award. Its pricing is prohibitive at over 65k, but then, this is not a card for the average user. Till the date of writing this, we had not received the HD 7990 – AMD's dual-GPU answer to the GTX 690.

## Worthy Mentions

### ASUS HD 7970 Matrix Platinum Edition 3GB

This is an ROG branded GPU and is the best performing AMD card we tested this year. It comes with a massive factory overclock and has headroom for much more. The card comes with a custom PCB as expected with features like VGA Hotwire, Tweak IT, Load Indicator, etc. As far as performance goes, it was still lower than ASUS GTX 680 DC2T, but the HD 7970 still kicks butt. Adding the fact that the overclocking headroom is quite good, this deserves a worthy mention.

### ASUS Direct CUII Top GTX 680

This variation of ASUS GTX 680 has a mammoth 4 GB memory and it narrowly raced past the HD 7970 DC2T in terms of performance. This card which is part of the Direct CU II series happens to be overclocked than the stock GTX 680 by 131 MHz. The 7970, also



◀ ZOTAC GTX 690  
Price: ₹67,200



ASUS HD 7970  
Matrix Platinum  
Edition 3GB  
Price: ₹36,499



ASUS Direct  
CUII TOP  
GTX 680  
Price: ₹40,500



Sapphire HD  
7770 Vapor-X  
Price: ₹9,990

from ASUS came second because it's also clocked 75 MHz higher than a stock card. Both cards come with improved coolers consisting of twin fans spread over 6 and 5 heat pipes for the 7970 and 680 respectively. Not to mention the solid design features which include protective metal back plates and twin fans. Without a doubt, it deserves a worthy mention for its prowess in performance as well as design and build.

## Mid-Range Worthy Mentions

### Sapphire HD 7770 Vapor-X

This factory-overclocked card from Sapphire not only offers a good value for money (at a sub 10k pricing) but it also runs quite cool with maximum load temperature at 56 degrees, which is very good. For those looking at an affordable but decently performing AMD card, this makes for a decent choice.

### ZOTAC GTX 650Ti AMP Edition

Not everyone can afford the 25k plus GTX 680s and HD 7970s. So for those who have a limited budget



ZOTAC GTX  
650Ti AMP  
Edition (2 GB)  
Price: ₹12,999

but want a Kepler GPU, the ZOTAC GTX 650Ti AMP Edition offers a very good choice thanks to its sub-15k pricing. The performance offered is mighty capable of running full HD games with medium to low AA and AF settings.

# Bazaar

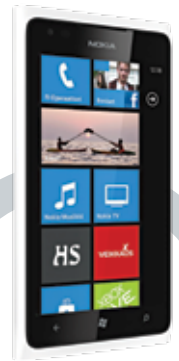
THE LATEST PRODUCTS  
REVIEWED FOR YOU

The Digit Test Centre receives hundreds of products every month. Each of these products is put through a series of tests and is finally given a score. The final score is arrived at after considering a number of factors and evaluating them in terms of features, performance, value for money, build quality, and, in the case of software, even ease of use.

For better understanding of our ratings, here's a quick guide to our overall score

- 
**Extremely poor product.**  
Keep away!
- 
**Strictly OK.**  
Not recommended
- 
**Decent product.**  
Go for it, but there may be better products out there.
- 
**Very good product.**  
Highly recommended.
- 
**Ground-breaking product.**  
We've never seen anything like it before.  
A definite must buy!

▶ Page **96**  
Nokia Lumia 900



▶ Page **97**  
ASUS  
VG23AH



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Trend Micro  
Maximum  
Security



▼ Page **99**  
ioSafe Rugged  
Portable drive  
(1 TB)



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Sony XBA 3



▲ Page **104**  
Acer Aspire S7  
(11-inch)

## PLUS

- 96** Akai Smartbox
- 96** Toshiba Canvio Slim 500 GB
- 97** LG Optimus Vu
- 98** Dell S2740L
- 99** Cooler Master TPC 812
- 100** Zotac GTX 660 AMP Edition
- 100** Logitech Solar Keyboard Folio
- 102** ECS Z77H2-A2X Black Deluxe v2.0
- 103** Canon Canoscan 9000F
- 104** QuickHeal Total Security 2013
- 105** Sony XBA 1
- 105** Logitech G35

& MORE...







### Apple's combo speakers

Apple has patented a planned set of headphones that may automatically switch to a loudspeaker mode depending on position



### World's biggest HDTV

Samsung is set to unveil the world's biggest UHD TV with an 85-inch screen, at the upcoming Consumer Electronics Show 2013

Bazaar

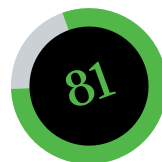
# HP Spectre XT

## Brilliant performance and sophisticated looks

We have tested some very well built ultrabooks, the Dell XPS 14 and the Samsung Series 9 being prime examples. The HP Spectre XT is cut from a similar cloth with its very good build quality. Its magnesium alloy frame lends it solidity, despite maintaining a slim form factor. The Spectre XT's lid has brushed metal finish, much like the Envy 4's, but in a lighter silver hue, which carries on throughout the ultrabook's surface. The lid hinge design is very similar too, but in the Spectre XT, the screen sits slightly higher with a distinct gap between its bottom lid and spine. Parallel layers of cooling vents on the XT's underside helps with ventilation. Ports are distributed on both sides, but there's no optical drive. The HP Spectre XT's build quality is pretty much on par with the best of the ultrabooks out there. And do keep in mind that the XPS 14 and the Series 9 are considerably more expensive than the Spectre XT.

The performance of the Spectre XT is truly astonishing, considering it is keeping up with the much more powerful (and more expensive) Series 9 rather easily. In the PC Mark Vantage test, the Spectre XT scores 12176 while the Series 9 scores 12972. With the same processor, the second closest machine to the Spectre XT is the HP Envy 4 with a score of 9966. Clearly, the Spectre XT's Intel Core i5-3317U processor and 4GB of RAM is keeping pace with the Intel Core i7-3517U on the Series 9. Till now, the SSD speeds on the Series 9 was the best, but the 128GB SSD on the Spectre XT trounces that rather easily. This machine has the fastest SSD that we've tested on a commercial ultrabook.

The Spectre XT's lack of a dedicated graphics chip ensures that its lesser-priced sibling, the Envy 4-1002tx ends up with better overall performance scores. So much so that the Radeon HD 7670M on the Envy scores the best in graphics test among all ultrabooks we have tested. But we would not read much into that considering the major demographic considering an ultrabook would look for performance, slim form factor and specs that should ideally include a full-fledged SSD, with the graphics card being a secondary concern. The tested battery life of 187 minutes on the Spectre XT would be good enough for around 5 hours of real-world usage at work, but there is no running away from the fact that it is lesser than the best out there - Samsung



Features .....	85
Performance.....	85
Build .....	80
Value .....	75

### Specifications

**Processor:** Intel Core i5-3317U @ 1.7GHz; **RAM:** 4GB; **Graphics:** Intel HD 4000; **Storage:** 128GB SSD; **Display:** 13.3-inch (1366 x 768); **Ports:** 2 USB, HDMI, card reader, LAN; **OS:** Windows 7 Home Premium

### Contact

**HP India**  
**Phone:** (city code) 30304499  
**Email:** N.A.

Series 9 (246 min), HP Envy 4 (223 min) and the Dell XPS 14 (210 min).

While the display is a tad reflective, the brightness levels are rather good on the Spectre XT; so is the vividness of colour and sharpness of text. The black level test results pegged the scores in the top half. While the resolution is merely 1366 x 768 pixels, it's easily among the better ones we've tested. The Samsung Series 9 has the best display by far on current ultrabooks, with the Lenovo IdeaPad U410 not too far behind.

The Spectre XT's keyboard is excellent to work on, with precise feedback. The key size is very similar to MacBook's keyboard, and so is the overall layout. Unlike the concave keys that have become a fashion, this keyboard has flat key design.

While our experience with Beats Audio has been rather tepid, the speakers on the Spectre XT are rather good. The primary reason is there are four speakers, with the layout ensuring two upward firing and two down firing.

Why we keep comparing the Spectre XT to the Series 9 is largely because (a) The Series 9 is the best overall performing ultrabook and (b) We want to establish that for a lot less, you can get almost similar performance in a largely identical form factor. The HP Spectre XT is possibly the best ultrabook you can buy at the moment, if slimness, exquisite build and an SSD are critical aspects for you.

*Vishal Mathur*

## Lego Lord of the Rings fiasco

Warner Bros. recalled some LEGO Lord of The Rings copies as they had demo discs instead of the full retail versions



## LG pioneers Smart TV gaming

LG launched a Game World portal for its Smart TVs, bringing gaming to the world of Smart TVs via 80 titles

# Nokia Lumia 900

Better late than never, but late nevertheless

The brilliant polycarbonate unibody design is very similar to the one we saw on the Lumia 800, but feels even better in the bigger form factor. The volume rocker, unlock key and the camera key placed on the curved side spine are a tad too flush with the rest of the chassis, and a little more height on them would have helped.

The 4.3-inch AMOLED display is among the better ones we have seen across multiple phones. Nokia's ClearBlack technology does make a positive difference, because the black levels are rather deep. Very good sharpness that lets you read text with ease, and colour handling is impressive. Yes, just 512 MB of RAM would look

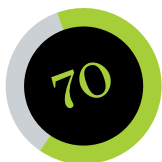


Price ₹32,999

less on any Android phone, but WP7.5 manages very well on it. Apps will open swiftly, and even with the likes of Facebook, Twitter, WhatsApp and mails syncing in the background, the Lumia 900's UI didn't show any visible signs of sluggishness or stutters. Battery life is good enough for a day and a half of medium usage, with data connected throughout. But it doesn't have expandable memory. Call quality is quite good, but its earpiece and speaker volume levels seem to be lower than even an older Blackberry! The good part is that the audio is softer on the ear.

Most users will dismiss the Lumia 900 once the Windows Phone 8 devices arrive in stores. This is the best Windows Phone of its generation, by far. The Windows Phone 7.8 update might keep it going for a while longer, but this generation ends now.

Visbal Mathur



Features .....70  
Performance.....75  
Build Quality .....85  
Value for money.....50

### Specifications

**Processor:** Qualcomm APQ8055 Snapdragon 1.4GHz; **Graphics:** Adreno 205; **RAM:** 512MB; **Display:** 4.3-inch AMOLED (480 x 800 pixels); **Storage:** 16GB; **Camera:** 8MP with 720p videos; **Platform:** Windows Phone 7.5

### Contact

**Nokia India**  
**Phone:** +91 (STD Code) 30303838  
**Email:** <http://www.nokia.com/in-en/support/contactus/>

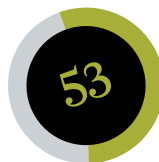
# Akai Smartbox

Android on your TV



Price ₹6,590

The Akai Smartbox does offer more features and flexibility than a standard HD media player, but the boring user interface, a not-so-great mouse, average performance on 1080p clips, old Android 2.3 OS clubbed with a restrictive pricing of ₹6,590 make it very difficult for us to recommend it. It could play most of the video formats comfortably including .MOV, .MKV, .MP4, .AVI but failed with .FLV. The Android 4.0 Mini PC although has less USB 2.0 ports, still offers a better value for money at lesser price.



Features .....70  
Performance.....45  
Build Quality .....40  
Value for money.....55

### Specifications

**Operating System:** Android 2.3; **Processor:** ARM Cortex A8, 1.2GHz single core; **Video formats:** DAT, MPG, VOB, TS, AVI, MKV, MP4, MOV, 3GP; **Audio formats:** MP1, MP2, MP3, WMA, WAV, APE, OGG, OGA, FLAC, AAC; **USB ports:** 4; **HDMI out:** Yes; **Bundle:** Bluetooth Mouse, HDMI cable, Power Port

### Contact

**Akai India Pvt Ltd**  
**Phone:** 1860 180 2524  
**Email:** [wecare@gbes.asia](mailto:wecare@gbes.asia)  
**Website:** [www.akai-india.net](http://www.akai-india.net)

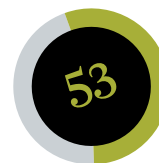
# Toshiba Canvio Slim 500 GB

Great looks with decent performance



Price ₹4,500

Toshiba's Canvio Slim drive measures only 8.5mm thin and has a lovely brush metal finish on either sides. It comes with a USB 3.0 interface and a dedicated utility for data backup. Sequential read/write (in MB/s): 106.44 / 104.89 and Assorted Read/Write (in MB/s): 101.3 / 58.17. These are decent speeds for such a good looking slim drive. It is priced at ₹4,500 offering just under ₹10 per GB. This is an ideal product for those who want to complement their good looking laptops with an equally good looking external drive.



Features .....30  
Performance.....60  
Build Quality .....70  
Value for money.....50

### Specifications

**Interface:** USB 3.0; **Capacity:** 500 GB; **Unformatted Capacity (GB):** 465.76; **Cache buffer:** 8 MB; **Rotational Speed:** 5400 RPM

### Contact

**Toshiba Storage**  
**Email:** [polad.garda@toshiba-india.com](mailto:polad.garda@toshiba-india.com)  
**Website:** [www.toshibastorage.com](http://www.toshibastorage.com)



## LG/3doo tie-up

3doo, the world's first pure 3D service, has announced the launch of pre-installed platforms on upcoming LG 3-D televisions

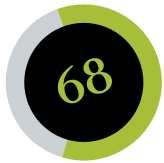
## New RC features for iPhone, iPod Touch

UK TV operator Sky's new Sky+ app adds remote control features to the iPhone and iPod Touch, with gesture support, making it easier than ever to interact with the tele

Bazaar

# LG Optimus Vu

## An alternative to the Samsung Galaxy Note II



- Features ..... 75
- Performance..... 70
- Build Quality ..... 70
- Value for money..... 55

### Specifications

**Processor:** 1.5GHz quad core Nvidia Tegra 3; **RAM:** 1GB; **Display:** 5-inch HD-IPS LCD (1024 x 768 pixels); **Storage:** 32GB; **Camera:** 8MP; **OS:** Android 4.0.4

### Contact

**LG India**  
**Phone:** 1800 180 9999  
**Email:** <https://www.lg.com/in/support/contact-login>

The Optimus Vu is a rather unique device. Its display has a pure 4:3 aspect ratio, and we don't really see any benefit of that, but it does make the Optimus Vu considerably wider than the Galaxy Note II. This despite the fact that the Note II has a 5.5-inch display while the Optimus Vu has a 5-inch display and lesser pixels. There's no shortage of sharpness on the Optimus Vu's screen, and text readability is a breeze. Colour vividness offered by this HD-IPS LCD is quite good, but the Note II's Super AMOLED offers richer colours.

The Galaxy Note II is consistently faster than the Optimus Vu in our benchmark tests. That being said, the performance of the Optimus Vu is still quite acceptable. The Vu has a 2100mAh battery, which is straightaway 1000 mAh lesser



Price ₹34,500

than the Note II. Expect a day of backup with ease, but stretching that more would be a problem. Call quality is very good, but holding the Optimus Vu to the ear isn't comfortable. As expected, its on-screen keyboard is very comfortable to use. The Notes application is rather neat and you can set a gesture to pop it open regardless of which app you may be using.

There is 32GB on-board memory, but no card slot. The build quality is quite acceptable. We got the white coloured Optimus Vu for testing. Its

back has the textured plastic finish, while the front has the shiny bezel. Despite being slightly slimmer than the Galaxy Note II, the extra width means it is unusable with the same hand holding it. The Galaxy Note is a better option.

*Vishal Mathur*

# ASUS VG23AH

## Decent full-HD monitor, but its 3D experience disappoints

The VG23AH is a 23-inch passive 3D full HD resolution monitor from ASUS.

Its design aesthetics are very similar to the VG278H monitor that we had seen during our LED monitor comparison test. The VG23AH supports tilt and swivel mechanism and you can adjust the height of the monitor as well. The monitor comes with a pair of polarised 3D glasses as well as a pair of clip-on 3D glasses for those wearing spectacles. The OSD provides a lot of options to play around with including six preset modes, four colour temperature modes, three skin-tone modes among other things.

We checked the contrast ratio using Spyder Elite 3 colorimeter and got a value of 461.3:1 at 50 percent brightness and contrast levels whereas at 100 per-



Price ₹18,500

cent brightness levels we got 454.72. The black levels on the VG23A aren't that great. In the Lagom.nl test, in the gradient banding test, we did notice banding in the black region which is not desirable.

After having been impressed with the VG278H, the 3D experience on this monitor was a letdown. The depth was lacking and gaming was not

fun at all specially with foliage in the scene. Watching HD clips was the only thing that was great about the monitor, although we did notice backlight bleeding on pitch-black scenes.

At ₹18,500 the pricing does not justify its performance. If you had to go for a 3D monitor, spend some more money and get the VG278H.

*Nimish Sawant*



- Features ..... 70
- Performance..... 55
- Build Quality ..... 70
- Value for money..... 50

### Specifications

**Screen size:** 23-inch; **Resolution:** 1920x1080; **Panel:** IPS; **Aspect Ratio:** 16:9; **Display Ports:** 2xHDMI 1.4, 1xD-Sub, 1xDVI-D; **Stereo Speakers:** 3W x 2 Stereo RMS

### Contact

**ASUS Technology Pvt Ltd**  
**Phone:** 1800 209 0365  
**Email:** [reachus@asus.com](mailto:reachus@asus.com)  
**Website:** [www.asus.in](http://www.asus.in)





### Google Fiber in Kansas

Google's "ultra high-speed fiber-to-the-home" internet services kicked-off in Kansas promising 1GBps internet speeds



### DmC PS3 demo launch

DmC: Devil May Cry's PS3 launched in Japan, with different gameplay from previous builds, and a DLC: 'Vergil's Downfall'

# Dell S2740L

Wonderful looks, decent performance, but a high asking price

Dell is renowned for its Ultrasharp series of monitors, but with the S2740L it is breaking away from that series to give us an LED backlit monitor with an IPS panel. The S2740L does not have the robust feature-set one expects from an Ultrasharp series monitor, but is geared more towards multimedia use or as a second TV screen for some. The Dell S2740L comes with an all-glass front face which merges with the bezel which prevents dust accumulation along the bezel of the monitor, but is a magnet for smudges and fingerprints. The operational panel is very similar to the one seen on other Dell and Alienware monitors, with touch buttons on the bottom right. The assembly of the monitor only allows you to tilt the display and the rear



Price ₹23,000

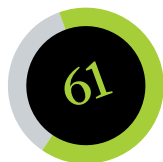
side has a smooth tapering design. Display ports are a bit too recessed for our liking. Build quality on the whole is quite sturdy.

When it came to performance, it gave a contrast ratio of 630:1 at brightness and contrast levels of 50 per cent. Black levels were not the best and thanks to the extremely glossy surface, during dark scenes the display tends to reflect a lot. In the Lagom.nl test, the black and white contrast tests were quite good but in the gradient banding test we noticed definite banding with a greenish tinge in the grey regions.

We did not notice any issues with noise or banding while watching HD clips. Skin tones looked great and even in fast-moving action scenes, there was no noticeable framing. Viewing angles are great thanks to the IPS display on the Dell S2740L.

The price of ₹23,000 for this monitor is on the higher side when compared with competing 27-inch monitors. In fact ASUS offers a 27-inch 3D monitor for around ₹1,000 less, while the BenQ GL2750 retails for ₹18,500.

Nimish Sawant



Features .....	50
Performance.....	65
Build Quality .....	75
Value for money.....	55

### Specifications

Screen size: 27-inch; Resolution: 1920x1080; Panel: IPS; Backlight: LED; Display Ports: 1xHDMI, 1xDVI, 1xD-sub; Tilt: Yes; Swivel: No

### Contact

Dell India Pvt. Ltd.  
Phone: 1800 425 4026  
Email: NA  
Website: www.dell.co.in

# Sapphire Vapor-X HD 7770

A cool customer



Price ₹9,990

The Vapor-X edition card is a factory overclocked HD 7770 to 1100 MHz with a video memory of 1 GB. It runs cool with maximum load temperature at 56 degrees which is very good. Performance wise, it beats the MSI R7770 and ASUS HD 7770 DC by a small margin, but is still slower than the ZOTAC GTX 650 Ti. Unigine Heaven 2.5 gave 20 FPS on maximum settings, which was 2 FPS more than MSI R7770 and ASUS HD 7770. Most of the games are playable at 1080p Max settings except *Sniper Elite V*. At ₹9,990 it makes for a good purchase option.



Features .....	70
Performance.....	45
Build Quality .....	70
Value for money.....	65

### Specifications

GPU Clock: 1100 MHz; Memory Clock: 5200MHz; Memory Bus: 128-bit; Memory size: 1024MB; Display ports: 2x DVI, 1x HDMI, 1x DisplayPort; Stream Processors: 640

### Contact

Sapphire Technology  
Phone: NA  
Email: NA

# JBL OnBeat Venue

Surprisingly falls short on mid-range performance



Price ₹15,990

Its design is rather interesting and the OnBeat Venue does not come with a physical remote control. JBL tries to compensate this by offering an app for iOS toys.

Its voice clarity is acceptable for vocals with enough mid-range depth. We tested this with equaliser on the playback device set to off. Push up the volume above 50 per cent and the clarity goes down drastically. Bass is punchy, but definitely sounds doctored most of the time. It's expensive and doesn't perform as well as the Yamaha PDX-31 with a Logitech Bluetooth adapter, and just not worth it.



Features .....	65
Performance.....	60
Build Quality .....	70
Value for money.....	40

### Specifications

Type: Audio Dock; Compatible with: iPod Touch, iPhone and iPad; Connectivity: Dock, Bluetooth and AUX-in; Frequency Response: 60Hz - 20KHz; Input Impedance: 8ohms; Weight: 2.25kg

### Contact

JBL by Harman  
Phone: 011-40538425  
Email: tausif.ansari@indiajbl.com



# Cooler Master TPC 812

Sturdy build, great performance with multiple socket compatibility



Features ..... 70  
Performance..... 85  
Build Quality ..... 80  
Value for money:..... 60

## Specifications

**Socket:** Intel Socket: LGA 2011 / 1366 / 1156 / 1155 / 775, AMD Socket: FM1 / AM3+ / AM3 / AM2+ / AM2;  
**Dimensions:** 138x103x163 mm; **Weight:** 826g; **Fan speed:** 600 - 2400 RPM; **Connector:** 4-pin

## Contact

**Cooler Master**  
**Email:** info@coolermaster.com.tw  
**Website:** http://www.coolermaster.in

The Cooler Master TPC 812 uses traditional heat pipes as well as vertical vapour chambers to dissipate heat via the multiple fin design. The L-shaped vapour chamber evaporates the liquid within it, which rises upwards, thereby helping in heat dissipation as the vapour chamber is connected to the multiple fins. The condensed liquid then collects at the base which is in touch with the CPU which again repeats the evaporation and condensation process.

The cooling process is further assisted by the 120mm PWM fan can be attached on either sides of the cooler. TPC 812 can support a wide range of sockets for both Intel and AMD.

Assembling it on the board is a bit of a task involving tools. The TPC 812 has two parts for the



Price ₹4,500

socket mounting system: the backplate to hold the cooler and the arms of the mount with a central hinge. The arms have four spring loaded screws on the four sides and their positions can be adjusted based on the socket. The arms have three preset angles settings across the device's central hinge.

We tested the cooler on an Intel Core i5-2500K processor and ran the Cinebench R11.5 benchmark on loop for 5 runs. We found the load temperatures not crossing 50 degrees Celcius. The temperature delta (load temp - idle temp) was a mere 15 degrees Celcius. When compared with a stock Intel cooler we got a load temperature of 89 degrees Celcius and a temperature delta of 48 degrees which is almost thrice that of the TPC 812.

Nimish Sawant

# ioSafe Rugged Portable drive (1 TB)

A benchmark for rugged drives, but at a massive premium

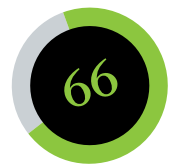
We have seen rugged drives in the past, but the ioSafe Rugged Portable drive takes it to another level. It's a 1 TB external drive which has a USB 3.0 interface. It is housed in an aluminum enclosure and the design aesthetics almost make it look like an Apple product, what with a silver-grey unibody metallic finish. It comes with a rubber casing to provide further resistance to drops. The ioSafe drive can resist drops from heights of 6 to 10 feet, it is water-proof and by that we mean it can work despite staying immersed in upto 10 feet of water for three days. It can also work after being immersed in chemical fuels or oils for close to an hour without any data loss. It also offers upto USD 5,000 worth of data recovery in case the



Price ₹21,490

drive stops working, including shipping costs. The ioSafe Rugged drive is not meant to be a performance powerhouse, but it still gives a decent performance. We got over 100 MB/s in real-life sequential transfers. Assorted read/write tests gave speeds over 70 MB/s which is good enough. We dropped the drive with the rubber casing and without it many times and later checked to find the drive working. On immersing in water for over an hour, we could still connect the drive and see it working. So those two claims are backed up. At ₹21,490 it is certainly only meant for those who are looking at a tank of a drive with maximum data security. Despite the rugged build, the USD 5000 worth of data recovery option really adds a lot of value.

Nimish Sawant



Features ..... 75  
Performance..... 65  
Build Quality ..... 95  
Value for money ..... 30

## Specifications

**Interface:** USB 3.0; **Capacity:** 1 TB; **Unformatted Space (GB):** 931; **cache size:** 8 MB; **Rotational speed:** 5400 RPM

## Contact

**ICONS Group**  
**Phone:** +91 22 4094 2600  
**Email:** mittul@icons.net.in  
**Website:** www.iosafe.in



### Sony's 3D A/V Receiver

Sony announced the launch of its first A/V Receiver capable of supporting 3-D audio and video



### MSI GX60 finally ships

MSI Computers began shipping its GX60 gaming notebook, with quad-core AMD Trinity A10 processors

# ZOTAC GTX 660 AMP Edition

A mid-range Kepler variant

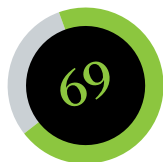


The NVIDIA GTX 660 is supposed to be a mid-range graphics card. With the ZOTAC GTX 660 AMP edition, you get a factory overclocked card which takes the core clock from 980 MHz (stock) to 1046 MHz, thereby offering a better performance than stock GTX 660s. It's based on the GK106 GPU which is different from the GK104 GPUs that was seen on

the GTX 660 Ti's and higher. The GK106 has 2.54 billion transistors as opposed to 3.54 billion found on the GK104, but the Kepler design philosophy has remained unchanged with the SMX's (streaming multiprocessors) identical to those on the GK104.

It sports the same dual-silencer cooling assembly that was seen on the GTX 660 Ti AMP Edition card. The cooler is open air with dual 70mm fans mounted on an aluminum heat sink with three copper heat-pipes running out of the heat sink.

It gave a 3D Mark 11 score of 7064 at performance preset and Unigine Heaven 2.5 (1080p max settings) score of 34.1 FPS. It cruises in most of the games under test at 1080p maximum settings giving 140 FPS in *Resident Evil 5*, 75 FPS in *Dirt 3* and so on. *Sniper Elite V* gave 15 FPS at max settings, but at low settings we were able to get over 100 FPS on the GTX 660 AMP Edition. Performance wise it fits right in between the HD 7850 and HD 7870. It is priced quite well for its performance.



Features .....	65
Performance.....	65
Build Quality .....	75
Value for money.....	70

### Specifications

**Core Clock:** 1046 MHz; **Boost Clock:** 1111 MHz; **Memory Clock:** 6608 MHz; **Memory size:** 2 GB; **Memory Bus:** 192-bit; **Stream Processors:** 960; **Display ports:** 2xDVI, 1xHDMI, 1xDisplayPort

### Contact

**Aditya Infotech Ltd**  
**Phone:** 120-4555666  
**E-mail:** sales@adityagroup.com  
**Website:** http://www.zotac.com/

Nimish Sawant

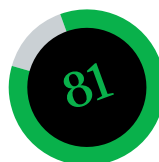
# Nokia DC-16 universal charger

A must-have tool on-the-go



The DC-16 is small enough to be carried around in your pocket. The materials used are plastic throughout, but fairly good quality. Its 2200mAh battery will fully charge a completely discharged phone in around 2.5 hours, around the same time taken by a full-fledged wall charger.

The DC-16 takes around 5 hours to fully charge itself and is surely a time consuming process. At this price, we recommend everyone should buy one and keep in the backpack. It can always come in handy.



Features .....	80
Performance.....	80
Build Quality .....	75
Value for money.....	90

### Specifications

**Battery capacity:** 2200mAh; **Output current:** 950 mA; **Charging interface:** micro-USB (in/out) and standard USB (out); **Battery cycle life:** 500+ cycles; **Dimensions:** 120mm x 23.3mm x 23.3mm; **Weight:** 75g

### Contact

**Nokia India**  
**Phone:** +91 (STD Code) 30303838  
**Email:** http://www.nokia.com/in-en/support/contactus/

# Logitech Solar keyboard Folio

One of the better iPad keyboards, but quite expensive



The batteries on this keyboard gets charged from any artificial light source.

The entire package feels like a mixture of plastic and leather. To start off, there is no power key – it turns on when you open it to the docking state. Securing the iPad isn't simple but once done, we find this keyboard among the most comfortable ones to use on the iPad. There is adequate travel. Shortcut keys for Home, search, media playback and for making the keyboard visible/invisible. Key layout is slightly cramped though. It's expensive, and only for those who really need it will buy.



Features .....	80
Performance.....	75
Build Quality .....	75
Value for money.....	50

### Specifications

**Type:** Keyboard for iPad; **Connectivity:** Bluetooth; **Compatible with:** Apple iPad 2 and new iPad; **Battery:** NiMH with solar cells for recharging

### Contact

**Logitech India**  
**Phone:** 1800 600 1133  
**Email:** http://dgit.in/TkxOCL



## JBL unveils iPhone 5 docks

JBL unveiled two new speaker systems that allow docking facilities for the iPhone 5's new smaller Lightning connector



## New Rocksmith Pack available

Ubisoft has announced a new alternative rock songs pack for the critically acclaimed 'Rocksmith', available on Xbox Live and Playstation Network

Bazaar

# ASUS GTX 660Ti DirectCU II TOP

A complete value for money card and a gamer's delight



- Features ..... 70
- Performance..... 75
- Build Quality ..... 75
- Value for money..... 75

### Specifications

**GPU Core clock:** 1058 MHz; **GPU Boost clock:** 1137 MHz; **CUDA cores:** 1344; **Memory:** 2048MB; **Memory bus width:** 192-bit; **Display ports:** 2xDVI, 1xHDMI, 1xDisplayPort; **Accessories:** 1 x DVI to D-Sub adaptor, 1 x Power cable

### Contact

**ASUS Technology Pvt Ltd.**  
**Phone:** 1800 209 0365  
**Email:** reachus@asus.com  
**Website:** www.asus.in

**A**SUS DirectCU II TOP edition cards are renowned for their top notch build quality and this GTX 660Ti card is no different. Its design though, is a bit different with the Direct CU II cooling unit and the fan section on top of it, extending beyond the PCB of the card by close to 40 mm. Heat-pipes protrude out from the top and the bottom of the heat sink. On the whole, it's an excellently constructed card. There are two DVI ports along with a single HDMI and DisplayPort respectively.

The GTX 660Ti is based on the GK104 GPU, the shaders are limited to 1344 and the memory bus-width has been reduced from 256-bit (which is seen on the GTX 670 and GTX 680) to 192-bit. Being a TOP edition card, this is factory

overclocked to 1058 MHz which is quite a jump from the stock 915 MHz clock speed.

Performance-wise it excels in all the benchmarks giving scores that are comparable to a stock GTX 670 card or a stock HD 7970. It is certainly better than HD 7950 according to our benchmarks. Even with the ASUS GTX. As compared to other GTX 660Ti cards, it performed at par with the ZOTAC GTX 660Ti AMP Edition card and was faster than Galaxy GTX 660 Ti GC 2GB card. At ₹20,000 the ASUS GTX 660Ti DC2T offers great value for money when compared to the more expensive ZOTAC GTX 660Ti AMP edition which sells for around ₹24,000. Definitely worth considering.



Price ₹20,000

Nimish Sawant

# ASUS F2A55-M

A decent board for your next HTPC, but price is a dampener

**S**upporting the AMD A55 chipset, this ASUS F2A55-M board comes with the FM2 socket which is meant for the latest Trinity series of APUs that have started coming in the market. The A55 chipset is the same one which was seen with the last generation of Llano APUs, but the socket is different with Trinity APUs. The A55 has certain limitations as compared to the higher end chipsets such as A75 or A85X. The A55 chipset doesn't natively support USB 3.0 or SATA III. ASUS makes use of the ASMedia controller for the USB 3.0 ports. Absence of SATA III will hit SATA III SSD performance and there is no third party SATA III controller on this board.

The board is well laid out, but we would have liked to have a heatsink atop the VRM module. It

comes with an on-board GPU boost which helps in overclocking the onboard GPU clock.

Finally, the board comes with proprietary ASUS features such as TurboV, EZStart, Fan Xpert, AI Suite II and so on.



Price ₹5,950

We put in an AMD A10-5800K APU in this board along with 2x4GB of Kingston HyperX RAM at 1333MHz. The benchmark scores were slightly lower than what we had seen on the Gigabyte F2A85X-UP4 board. We were pleasantly surprised to see the APU overclocking to 4.2 GHz giving around 18 per cent boost in the CineBench R11.5 readings.

This is a very decent board for the feature-set provided, but we feel the price is high. At around ₹4,000 this is a good buy.

Nimish Sawant



- Features ..... 45
- Overclocking..... 75
- Build Quality ..... 45
- Value for money..... 50

### Specifications

**Chipset:** AMD A55; **Socket:** FM2; **DIMMs:** 4; **SATA 2 ports:** 6; **PCIe x16 slots:** 2; **Display Ports:** 1xHDMI, 1xDVI, 1xD-Sub; **Form Factor:** Micro ATX; **USB 3.0 ports:** 2

### Contact

**ASUS Technology Pvt Ltd**  
**Phone:** 1800 209 0365  
**Email:** reachus@asus.com  
**Website:** www.asus.in



### Sony pulls off ultra-thin TV

Sony announced its decision to stop selling its ultra-thin TV, made from organic materials, in Japan due to low demand



### LG updates Google TV

LG became the first partner to add enhanced voice search and guidance to its Google TV offerings - the G2 Series

# ECS Z77H2-A2X Black Deluxe v2.0

What the ECS Gold Edition board should've been



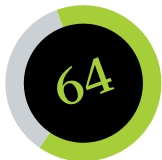
The naming convention used by ECS can be a bit confusing as there are three Z77H2-A2X Deluxe boards. We got v2.0 which comes in an all-black PCB body with hints of white and grey thrown in. Components are very well laid out, but we found the RAM slots to be quite close to the CPU cooler and also the placement of the

8-pin power connector and the power/reset buttons is quite unconventional.

We had tested the gold and black coloured ECS Z77H2-A2X motherboard in our Z77 motherboards comparison test and we weren't really satisfied with the overclocking on that board. The Z77H2-A2X is much better in that department. The UEFI BIOS has a dedicated section for CPU overclocking with the option to adjust the multiplier and base clock frequency as well as options to set XMP profiles. We could overclock the Intel Core i7-3770K from 3.5 GHz to 4.4 GHz getting a 15 per cent jump in our readings. Other performance parameters were quite similar to other Z77 boards. We didn't really find the heatsinks around the VRM or the chipset to be as sturdy as the ones on Z77H2-A2X.

The price point of ₹13,300 is ideal for anyone looking to get a budget ECS board, although there are better alternatives if you are looking at a good overclocking board.

*Nimish Sawant*



Features .....	55
Overclocking.....	65
Build Quality .....	70
Value for money.....	65

### Specifications

Chipset: Intel Z77; Max. Memory Supported (GB) / DIMMs: 32 / 4; No. of SATA 2 / SATA 3 Ports: 2/4; Display ports: 1xHDMI, 1xDVI, 1xD-Sub; Multi GPU (SLI/CrossFire) Support: Y / Y; POST error code LED: Yes

### Contact

Rashi Peripherals Pvt Ltd  
Email: response@rptechindia.com  
Website: www.ecs.com.tw

# AVG Internet Security 2013

A reasonably priced suite that seems a bit lacklustre compared to the competition



AVG has taken some trouble to revamp its drab interface from before and have done a decent job. In terms of functionality, it still falls short compared to many of the offerings available, but considering the fact that this is among the cheaper AV suites, it is acceptable. In terms of features, the suite has the basics intact but misses out on other things such as tune-up utilities and startup managers, etc. These are available as optional (paid) downloads though. Overall, it still feels like something from a bygone era when you look at the design of current suites.



Features .....	70
Usability .....	65
Internet Security .....	75
Value for money.....	65

### Specifications

Anti-Virus; Anti-Spyware; Anti-Root kit; Game Mode; Update Manager; System Tools; Worm protection; Parental control management

### Contact

Website: <http://www.avg.com/in-en/customer-support>

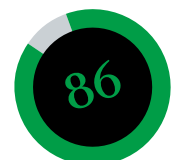
[This review reprinted due to error]

# Trend Micro Maximum Security

Aiming to be the complete home security solution, this suite largely succeeds



This suite consists of everything that a basic internet security suite would need, along with a few additions such as a Facebook scanner and "social network scanner". These might seem like fluff and actually are fluff for a power user, but for the average home user, these features can be very useful. The suite also provides some basic security features like a secure vault to store precious data and a system tuner and startup manager. Also, the parental control options are excellent and do a good job.



Features .....	90
Usability .....	85
Internet Security .....	90
Value for money.....	80

### Specifications

Anti-Virus; Anti-Malware; Social Network Protection; Facebook Privacy scanner; Web threat protection; Parental Controls; Online Storage; Vault; Data Theft Prevention; System Tuner

### Contact

Trend Micro India  
Phone: 1800-425-2667



**SkyDrive gets selective**  
Microsoft added a feature to its SkyDrive cloud storage service, that lets users sync only selected folders (but not files)

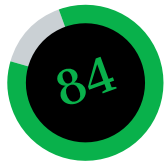


**Hacked PS3's face the axe**  
Sony responds to PS3 hack doing rounds with direct warning to users and threaten "permanent termination" from Sony Online Services

**Bazaar**

# Sony XBA 3

An excellent pair of headphones, marred by one maddening flaw



- Accessories ..... 90
- Performance ..... 85
- Build Quality ..... 85
- Value for Money ..... 75

### Specifications

**Sensitivity:** 108dB; **Power Handling:** 100 mW; **Cord:** 1.2m; **Frequency:** 4-28,000Hz

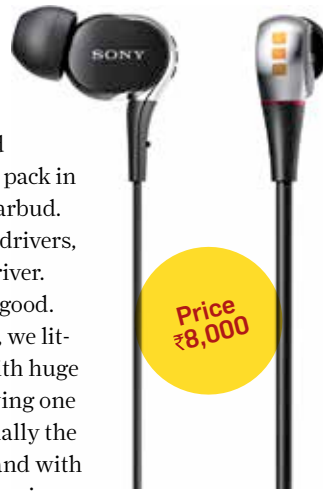
### Contact

**Sony India**  
**Website:** www.sony.co.in  
**Phone:** 1800-103-7799

The Sony XBA series of earphones were one that we were quite eager to try out. The balanced armature design which Sony has employed (hence the XBA name) allows Sony to pack in up to four discrete drivers into each earbud. The XBA 3 comes with three discrete drivers, a tweeter, a woofer and a full-range driver.

These earphones are good, really good. When we initially tried the speakers, we literally wandered around the office with huge smiles plastered across our faces, trying one track after another. The audio, especially the highs, were very nicely reproduced and with none of the screechiness that accompanies most in-ear sets. The bass was also excellent and never seemed overpowered.

The problem we faced with these earphones was with regards to heavy, action-packed tracks such as those from Metallica or Dream Theatre among



**Price ₹8,000**

others. While the tracks sounded good, for some reason it felt like the XBA-3 couldn't handle the load at the fast-paced sections, with certain frequencies getting a bit muted at times. Overall, these are an excellent pair of earphones as long as you're listening to the right tracks. For those interested in classical music or opera, or generally vocal heavy tracks, this set is sublime; for fans of metal and rock, a strict no-no.

The overall packaging of these earphones is nice and they come with every possible earbud that you may need. It also comes with a very nice carrying case as well as a 'Cord

Adjuster' to adjust the length of the cord. For more information on balanced armature drivers, head over to <http://dgit.in/Q9I96Z>

*Anirudh Regidi*

# Canon Canoscan 9000F

An excellent film scanner, not so good for anything else

In this day and age of everything digital, film scanners are something of a rarity among the average users and it is probably something that someone would buy if they have a few old memories (film) that they need scanned. This scanner is a very decent performer overall and while it does fall short when scanning images, it does a very good job with film negatives. On the default settings, most colour documents we scanned had overly saturated colours or slightly washed out images depending on whether we were scanning in magazine mode or colour photo mode. There was also quite a bit of noise present in the colour scans. The scans were extremely well-detailed however, with every flaw in the paper and print standing out.

Scanning negatives was an entirely different matter though. The scanner comes bundled with a few assorted guide strips for 35mm to 120mm film and setting up the negatives on them

was a breeze. Scan times were easily above 2 minutes for a 35mm negative at 4800dpi, but the quality of the output was excellent.

The scan process is also simple and there is no hassle with regards to inverting the colours on the negative and such.

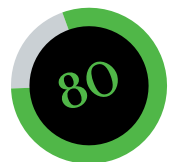
This is not a scanner we would recommend for scanning documents and prints, but as a negative scanner, it does stand out.

The price is a tad too high and 30 per cent more than what it sells for abroad, but for a person in real need of a film scanner, this can be a good deal.

*Anirudh Regidi*



**Price ₹14,995**



- Accessories ..... 85
- Performance ..... 85
- Build Quality ..... 80
- Value for Money ..... 70

### Specifications

**Scanner Element:** CCD  
**12-line colour; Light Source:** White LED; **Selectable resolution:** 25-19200dpi; **Max document size:** A4/Letter

### Contact

**Canon India Pvt.Ltd.**  
**Phone:** 1800 345 3366  
**Email:** info@canon.co.in  
**Website:** www.canon.co.in



### Acer Aspire S7 detailed review

We've reviewed the Aspire S7 in detail and we also have a hands-on video. To read more on it, head over to our website: <http://dgit.in/T9BLK2>



### Logitech's wireless combo

Logitech announced its Wireless Desktop MK710, which boasts of a three-year battery life for the combo.

# Acer Aspire S7 (11-inch)

Fabulous design, great performance



Price ₹95,999

The first Windows 8 ultrabook to arrive in our test centre was the 11-inch Acer Aspire S7. Looks-wise we feel only the MacBook Air comes close to it. It sports a slim profile, full HD touchscreen, a chiclet keyboard with the keys which don't seem to have much travel.

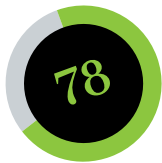
The PC Mark 7 Score was the highest among all the ultrabooks standing at 4829 which was 182 points over the

Samsung Series 9 ultrabook which was the leader so far. The CineBench R11.5 multi-core rendering score was a respectable 2.58 which is lower than the 2.79 offered by ASUS S56CA, and the Lenovo IdeaPad U410.

The Aspire S7 is among one of the best ultrabooks we have tested so far, and with its touchscreen display, it is built specifically to be used with Windows 8. The build quality is also brilliant, the looks are premium, and the RAID 0 SSD setup is the fastest we have seen in an ultrabook and transfer speeds are ridiculously fast.

Acer Aspire S7 also bundles in a wireless mouse and an extra battery pack which add a lot of value to the whole package. There are very few things we did not like about the S7 except for one thing - pricing. Agreed, Acer is addressing the premium segment with this beautiful ultrabook. But a price-point of close to a lakh for an 11.6-inch ultrabook is a bit much. So while the product is great, the pricing is off the charts.

Nimish Sawant



Features .....	80
Performance.....	90
Build Quality.....	85
Value for money .....	55

### Specifications

Processor: Intel Core i7-3517U; Speed: 1.9 GHz; RAM: 4 GB; Screen size: 11.6-inches; Resolution: 1920x1080; Operating System: Windows 8; Storage: 2x128 GB SSD

### Contact

Acer India Pvt Ltd  
Phone: 1800 11 6677  
Email: [ail\\_easycare@acer.co.in](mailto:ail_easycare@acer.co.in)  
Website: [www.acer.co.in](http://www.acer.co.in)

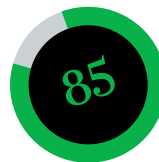
# QuickHeal Total Security 2013

Parental control seems a bit lax but it is an excellent suite overall



Price ₹1,949

This is an expensive suite by any standard and it is expected that it will deliver on all fronts. For the most part, it does. The interface is clean and functional, it scans your memory before installation and it has some very useful utilities bundled along with the core AV engine. Parental Control is very detailed, but some of the risqué sites we tried managed to get through the shield and we had to manually block those out. Other than that, the suite was excellent. The response was fluid, the controls simple and the security, in our limited testing at least, uniformly excellent.



Features .....	90
Usability.....	90
Internet Security .....	85
Value for Money .....	75

### Specifications

Anti-Virus; Anti-Malware; Anti-Spyware; Anti-Rootkit; Firewall protection; Parental Controls; Browsing protection; Anti-Phishing;

### Contact

Quick Heal  
Phone: 1800-209-1500

# ZOTAC GTX 650 Ti AMP Edition (2 GB)

Decent performer at a high price point



Price ₹12,999

This is a mid-range card from ZOTAC which comes with single fan unit and a 6-pin power connector. It is factory overclocked by 108 MHz on the core clock. It offered a performance that was better than the AMD HD 7770 cards and it heats up to 63 degrees on load which is still lower than its higher end AMP edition cards. Barring *Sniper Elite V*, it offered playable frame rates on all games at 1080p resolution. Around ₹12,999 this card is priced on the higher side. Go for the ZOTAC GTX 650Ti 1 GB instead.



Features .....	70
Performance.....	55
Build Quality.....	65
Value for money.....	65

### Specifications

GPU: GK106; CUDA Cores: 768; Core clock: 1033 MHz; Memory Clock: 1550 MHz; Memory: 2048 MB; GPU Boost: None; Memory bud: 128-bit;

### Contact

Aditya Infotech Ltd  
Phone: 120-4555666  
E-mail: [sales@adityagroup.com](mailto:sales@adityagroup.com)  
Website: <http://www.zotac.com/>

## Rayman Legends Demo Launched

A special demo for Rayman Legends was launched on November 18th, after a launch delay for the much-awaited Nintendo Wii U gaming console



## Fortune launches festive drives

Fortune Marketing launched new pen-drives on Diwali - Zodiac series based on sun signs, and Divine series based on deities

**Bazaar**

# Sony XBA 1

A good pair of headphones at this price

**T**he Sony XBA-1 is the younger brother of the XBA-3 and uses the same balanced armature drivers used there. The only difference is that this version has only one full-range driver in each earpiece as opposed to the three individual drivers in the XBA-3s. These earphones come with a wide range of silicone buds and should be sufficient for ears of almost any size; also included in the package is a cloth pouch to store these earphones in.

The audio quality of these drivers is quite good, but as with most in-ear headphones such as these, the highs tend to get screechy. Don't get us wrong, this isn't a problem with this specific pair of headphones, most in-ear headphones have this issue. Ignoring the above issue, the audio was good. The bass did not seem to be deliberately enhanced the way it is in the

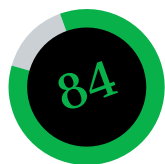


Klipsch S4 earphones, though if you really want a lot of pounding bass, the Klipsch would be a better deal since that is the only obvious difference between the two.

To test this pair, we used the same tracks on this as we did the XBA-3 and the difference was very apparent, but the fact that this sells at half the price of the XBA-3 makes this a good deal, especially as this is among the better headphones we've heard in this price range. This is a nice choice for someone who is on the lookout for a pair of comparatively neutral in-ear headphones in this price range.

At this price these headphones are a very good deal but the only problem is that, other than the variety of bundled earbuds and the novelty of claiming to use balanced armature drivers, their really isn't much to strongly recommend this product over the competition.

*Anirudh Regidi*



Accessories.....	90
Performance.....	80
Build Quality.....	85
Value for money.....	80

### Specifications

Sensitivity: 108dB; Power handling: 100mW; Cord: 1.2m; Frequency: 5-25,000Hz

### Contact

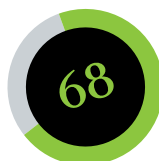
Sony India  
Website: [www.sony.co.in](http://www.sony.co.in)  
Phone: 1800-103-7799

# Logitech G35

Feature rich and expensive



**A** surround gaming headset that comes loaded to the brim with features. You've got three programmable "G" buttons to launch applications such as Ventrilo or performing on-the-fly actions like morphing voice, there's a mic-mute button, and a volume wheel on the left ear cup. There are also features that are downright gimmicky such as swappable headband pads. The in-game performance was at par but the microphone picks up background noises. The ear-cups are fully circumaural but the headband clamping is on the tighter side. Music performance was decent for a gaming headset. Still, for the asking price, the G35 is undoubtedly expensive.



Features.....	83
Performance.....	65
Build Quality.....	75
Value for money.....	48

### Specifications

Driver: 40 mm diameter; Frequency response: 20 Hz - 20 KHz; Impedance: 32 ohm ; Sensitivity: 90 dB

### Contact

Logitech Electronic India Pvt Ltd  
Email: [pgupta@logitech.com](mailto:pgupta@logitech.com)  
Website: [www.logitech.com](http://www.logitech.com)

# F&D V-620

Cute and tiny, but powerful and value for money



**T**his portable 2.0 speaker set draws power from a USB port. The design is quite nice, with its conical design for the driver housing and a soft blue LED glow underneath. In terms of features, there's not much that you can pack onto a portable set this tiny, but F&D seems to have the basics covered such as a volume control dial on the chord.

The sound is clear and there a decent amount of bass too. The quality of wires is a little shoddy but not very bad. At a market price of around ₹900, it's a good purchase for anyone looking for small form factor audio upgrade to say laptop speakers.



Features.....	70
Performance.....	60
Build Quality.....	55
Value for money.....	70

### Specifications

Frequency response: 90 - 20,000 Hz; Power: 2 W RMS x 2; S/N: > 65dB; Separation: > 35dB; Product dimension: 100 x 73 x 66 mm

### Contact

Fenda Audio India Pvt. Ltd.  
Email: [care@soyerelectronics.com](mailto:care@soyerelectronics.com)  
Website: [www.fendaindia.com](http://www.fendaindia.com)  
Tel: 18004255546



# 9 WAYS PLANET EARTH COULD RING IN DOOMSDAY, AND HOW YOU CAN DEAL WITH IT

The internet is rife with rumours about the apocalypse, and there are popular theories on how it would happen. We look at some real threats to Earth

Swapnil Mathur  
[swapnil.mathur@thinkdigit.com](mailto:swapnil.mathur@thinkdigit.com)

**S**o our Doomsday clock is ticking down quickly to December 22, 2012, the day the Mayan calendar runs out, with wild speculation from conspiracy theorists that this could mean the end of the world. There's no truth to it, of course, and we aren't for a minute asking you to believe it. The Mayans actually had a large number of calendars, each for tracking different phenomenon such as crop cycles,

weather cycles, sun cycles and even one based on the position of Venus. However, their largest calendar cycle was called the "Long Count" calendar that lasts 5126 years.

Now this Long Count calendar isn't based on the base of 10 like ours, where after 10, the number goes to 11. For the Mayans, the numbers went up to 19 and then cycled. Their dates were represented as 0.0.0.0.0. So the 19th day on the calendar was represented as 0.0.0.0.19 and the 20th day would look like 0.0.0.1.0. One year looks like 0.0.1.0.0 while 20 years

look like 0.1.0.0.0. It's a little confusing, but just move one zero over every time you reach a multiple of 20 (such as 20, 40, 60 etc). Now, the Mayans also loved the number 13, using it as a base as well. Some believe that the calendar ends at 13.0.0.0.0, which is a total of 5126 years (one cycle of their Long Count calendar).

Archaeologists, historians, mathematicians, etc., estimate that the "0.0.0.0.0" period began on August 11, 3114 BC and the 13.0.0.0.0 date corresponds to December 21, 2012.



Since that cycle ends soon, and the Mayans didn't bother to pen down more cycles, some people believe they knew something we don't. However, the most plausible explanation is that just as the world doesn't end on December 31st every year, concludes and January 1 begins, so why panic over the ending of an ancient civilisation's weird calendar? But if you really are hung up on the topic, let us give you 9 ways the world could end.

## Doomsday Scenario



### Alien Invasion

For all we know, the Mayans received an inter-galactic memo, stating that the planet was about to be wiped clean come December 22, 2012. Pretty sure the Mayans are sitting somewhere, with smug smiles on their faces as we get zapped to fairy dust. Heck it's even possible that the civilisation was obliterated by said aliens' last visit whilst in the process of working out the calendar, thus bringing their writing adventures to a halt. Kind of Mass Effect style. Only, less galactic fireworks and more pew-pew.

#### How to survive

You could build a tin-foil hat to prevent the aliens from hijacking your brain. No but seriously, best way to survive if the Earth is under siege is to, well, you guess it, not to be on Earth! The moon would be a good bet to hide on, but we recommend carefully timing your stay on the rock as it gets insanely hot and cold there. You could also build an underground stronghold, but that's assuming they don't have weapons strong enough to pretty much vaporize the earth (Hitchhiker's Guide to the Galaxy Anyone?) National Geographic has also revealed in a series that many militaries across the globe have plans in place for every scenario when extra-terrestrial makes contact. Everything from initiating friendly contact to contingencies in the event that the invaders are hostile has been accounted for and though the plans are probably more classified than the truth about JFK's assassination, we have been assured that



We come in Peace. Giggity

these plans are solid and that we wouldn't go down without a fight (if at all).

#### Why it may not happen

Well, first and foremost, we ALL know that Aliens don't exist. Right? Even if they did, we've all seen enough movies to know that they're going to only go after the United States, so we're pretty safe and sound in this part of the world. Cockiness aside, our deep space radios are so fine tuned to the celestial motions that the minute anything seems out of place, all prominent space and military establishments would know it.

## Doomsday Scenario



### Asteroid or meteor impact

So who reading this remembers the movie Armageddon or Deep Impact? In case

you don't, well, essentially humanity discovers (albeit just in the nick of time) that a giant mass of weird rock is hurtling towards earth at cataclysmic speeds. Impact with the planet would definitely result in the extinction of life. This is a very likely scenario, especially given that it was what most likely caused

the extinction of the dinosaurs. If only the dinosaurs had the technology we have today, they'd still be alive and we'd know what dino-meat tastes like. But here's something to get your stomach in a knot. Statistically, the earth is being bombarded with my meteor fragments almost on an hourly basis. They just burn up in the atmosphere, so we don't see them. However, every 100 years or so comes along an asteroid that can cause mass scale destruction, wiping out all life in a radius of about a couple of thousand kilometre radius. However, every 50-100 million years or so comes along a body of size 10km or larger that would wipe out the entire planet. The Chicxulub crater in the Yucatan Peninsula is the largest known impact crater, probably from the asteroid whose impact was responsible for wiping out the dinosaurs.

#### How to survive

Surviving an asteroid impact can be anywhere from "pretty simple" to "impossible." Here's why. If the Asteroid is not going to cause a planet-wide rejection of all things living, then an underground



Looks like the universe might want to play target practice with our planet

facility, or simply moving to a new geographic locale would definitely help. Of course the underground theory would depend on not just the mass and velocity of the asteroid, but also its composition. An ice-made asteroid would wouldn't penetrate as deep as an asteroid made of, let's say metal, travelling at the same velocities. Newton came up with this nifty formula to calculate how deep a projectile would go if it hit something. The depth will be given by the length of the projectile multiplied by the density of the projectile divided by the density of the material its hitting ( $D=LA/B$ , where  $A$ = density of projectile and  $B$ = density of object being penetrated).

### Why it may not happen

One word. Science! We have enough technology to spot any object in space years before it's within destructive distance of the atmosphere, and we are also sitting on enough weaponry to blow that thing to smithereens. We wouldn't worry too much about this one. Asteroids and meteors have not yet mastered the art of sneaking up on planets.

Besides, we're sitting on a nuclear arsenal large enough to blow up our planet several times over, so why couldn't we blast a rogue asteroid out of the sky? Obviously there is the concern that it might just split into still dangerous parts and hit earth in multiple places, but that's exactly why we have scientists who can come up with ways to safely knock these giant rocks out of our planet's way. There is also the possibly that burying ourselves deep into the recess of the mountain ranges like the Himalayas and the Appalachians would allow us to survive the blast. However, long term survival would only be contingent upon how well we've managed to carve out the interiors to support human life that is, fitted with air filtration systems, farms for consistently growing a food supply etc. It sounds very difficult to achieve, but is definitely doable.

Just to get you thinking, currently NASA's Jet Propulsion Laboratory is tracking close to 20 asteroids that have a potential of crashing into the earth. The good news, however is that neither of them are "planet killers" and none of them are going to be rendezvousing with us anytime in the next hundred years.



### Nuclear War

World peace has become the punch line for fancy speeches to win hearts and votes. While few individuals still strive tirelessly for a nuclear weapon free planet, nations perpetuate fear amongst its citizens, justifying the ever increasing stockpile of nuclear arsenal. We're talking not just atom bombs, but hydrogen bombs too.

Currently, there's a stockpile of about 20,000 nuclear warheads, sufficient to wipe out the planet several times over. Surface to air detonation would cause a radiation fallout that would span centuries, not to mention, nuclear winter. Water would be polluted beyond drinkable levels and the land would turn toxic. Maybe now we can all have mutant super-powers. No but seriously, all it takes for this scenario to occur is one wrong move on the part of someone very nervous (or trigger happy, or egotistical or whatever).

### How to survive

Surviving a nuclear war can be pretty tricky, almost bordering on impossible. Even if you do survive the initial bombing session, there's always the radiation fallout to worry about. Soon, we'd be seeing mutations in humans, and no, nothing like the Teenage Mutant Ninja Turtles. Think more like "The Hills Have Eyes." Even if we did figure out a way to survive the initial blasts, and keep away from radiation, there's still the issue of the holocaust. See, once the nuclear bombs detonate, the shockwave from the explosions are going to rock the earth's upper layer loose (no pun intended), decimating most of it into fine particulate matter. This matter, would then mix with the air and rise up into our atmosphere, where it's going to stay put. Now that there is solid rock particulate matter in the air, it's going to essentially block out the sun for years, causing temperatures to drop faster than you can say "bazzinga" and before we know it, its freezing cold and we've all gone back to the ice-age, but

only with a lot of toxic radiation to boot. Plant and vegetation life would cease to exist, so we're pretty sure the vegetarians will be the first to perish.

You may hole yourself up in a cave with plenty of food (make sure it's dehydrated) with access to a water source that originates from deep under the ground. You could even shack up in the Mountains using the same rule of supplies. However, you might not last too long because of various factors. Firstly, there is the concern of living in an enclosed space for year on end. Chances are, unless you're a Zen master, your psyche would break down. Then there is also the issue that a nuclear blast of this magnitude would decimate the Ozone layer, allowing the very harmful UV rays to reach the Earth's surface. So even if you manage to step out for a bit after the nuclear radiation has died out, chances are you're going to get toasted (quite literally) by the harmful UV rays.

### Why it may not happen

Okay let's face it. Nuclear war isn't a joke and the people who hold the key to launching a nuclear strike know that. We have seen a lot of tension in modern times, including wars and despite nuclear arsenal being present, its use has not been considered an option so far. If it hasn't happened yet, it's a good chance it won't happen in the near future, but of course, that's only an optimistic assumption.

However, there is one danger. Currently, all militaries have detection systems which sound an alert when a nuclear warhead is detected as launched. The General Chief (or whoever is the top gun in the military) will only have minutes to gauge whether the warning is genuine, followed by letting the Prime Minister/President/King know of the situation.

Further to that, the ruling authority will have fewer minutes to decide whether to retaliate or not. Now this detection system is electronic, and as with any electronic devices, they can malfunction. In fact, in 1983, Stanislav Petrov, the Lieutenant Colonel of the Soviet Air Defence Forces at the time, refrained from telling his superiors that his nuclear warhead detection system was signalling a battalion of nuclear weapons heading towards Russia. If he had done otherwise, Russia would have retaliated, launching

a nuclear strike against the USA based on what turned out to actually be a malfunction. So even with the possibility of malfunctions, we have good people who will keep an eye on these machines, to make sure we don't kill ourselves.

**Doomsday Scenario**



**National Ignition Facility**

So first off, what is the NIF? Well, it's this really cool facility which is a part of the Lawrence Livermore National Laboratory in California. Why are they so cool?



Mishap at the National Ignition Facility – damn it who divided by Zero

Because they have lasers... lasers you hear! The NIF is a large facility that is used to study nuclear fusion, using lasers. They currently have the world's most powerful laser, an Ultraviolet laser that outputs 500 terawatts of laser-y goodness. If you're wondering how much power that is, it's more than the electricity consumption of the entire United States of America at any given instance of time. This laser is only fired in a single pulse burst to get a nuclear fusion reaction going (nuclear fusion reactions require somewhere close to a 100 million degrees just to start) and that pulse lasts only a few nanoseconds.

Those few Nano seconds are enough to ignite the heavy hydrogen fuel in the chamber to get a nuclear fusion reaction going. With starting temperature of about a 100 million degrees, the experiment is designed to release enough energy to make the reaction self-sustaining. One wrong move and we've got an artificial sun rampant on the surface of the planet. The reaction could continue in a sustained way, where the "sun" keeps releasing millions of degrees worth of heat onto the surface, destroying the atmosphere, and all life.

**How to survive**

How do you survive a blazing ball of fire that scorches the dance floor at a hundred million degrees? You don't. There's no amount of lemonade you can have to cool yourself off when the heat gets turned up that high.

**Why it may not happen**

Because the guys at NIF are pretty damn smart. They've got safety measures in place to not just shut the laser down before it delivers its energy in entirety, but also to arrest the nuclear fusion reaction.

The walls of the test chamber are made of concrete infused with Boron, which is a standard retardant in arresting nuclear reactions as it's an excellent absorber of stray neutrons and x-rays. If a nuclear reaction was to go rogue in this facility, it would be something that the scientists would become aware of well in time to do something about it.

**Doomsday Scenario**



**Zombie apocalypse**

Zombies! Who doesn't love them? Well, as long as they're not biting you. There's an entire empire of franchises behind the zombie culture, TV shows, movies, video games and a very hefty costume industry too. The most popular symbols of the Zombie culture in our times is Resident Evil, The Walking Dead, Left 4 Dead and the very popular movie Zombieland.

If you're thinking that things like the T-virus (or G-Virus, or C-virus, or any-other-letter-virus) is only a thing of the movies, then there is a possibility that you may be mistaken. Going out on a conspiracy theory limb here altogether, but how would you know for sure there isn't a super-secret underground facility right underneath your city? Or that a virus that can re-animate the dead doesn't already exist? There's actually a parasite named Toxoplasma that can control the brains of rats and guide them to impending doom and apparently, half (if not more) of the planet's population is already infected with



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this bug. Of course, the parasite isn't yet complex enough to take over our brain. But how long till it evolves, and we...devolve?

### How to survive

Watch the movie *Zombieland*. It's a pretty damn good guide to surviving the Zombie apocalypse, at least for the time being. You should also start practicing throwing heavy objects with the goal of crushing something hard, like the head of the undead. We also recommend watching the first two seasons of *The Walking Dead* back-to-back to perfect your technique in zombie killing, which covers everything from sniper shots, to close-range hand-to-hand combat. Remember to make sure not to let any zombie goo get in your mouth or open wounds. Besides tasting like crap, it will also cause the infection to spread through your body.

Once you've got the combat down, remember to always travel in packs. Safety in numbers has definitely worked to the advantage of every protagonist in a Zombie franchise, be it Leon (or Alice) from *Resident Evil* or Columbus (Jesse Eisenberg) in *Zombieland*. Of course, it doesn't hurt to have someone as gorgeous looking as Emma Stone in your entourage, but we wouldn't have you bank on the eventualities.

### Why it may not happen

One of the primary reasons a Zombie apocalypse won't end up happening because we're pretty sure nobody is stupid enough to wipe out the entire population of the planet. What would they have to gain from that? Also, if something as dangerous as a T-virus



Hey who said zombies are no fun?

does exist, we're pretty sure that it's locked up so tight that even the people who've locked it up don't know about it. However, we cannot guarantee that some evil scientists aren't already looking into using the *Toxoplasma* parasite as a means to control the minds of the general public. So much can go wrong here!

### Doomsday Scenario



### Mini Black Hole

We're starting to get serious here now, with stuff that's real. Have you heard about CERN? They're a European organisation whose sole job is to operate what is the world's largest Hardon Collider, the Large Hadron Collider (LHC). The LHC essentially is a large tube through which particles are accelerated to near the speed to light, before making them collide with a target. What results is a beautiful pseudo-cosmic explosion, releasing exotic particles. Scientists hope that in this spray of exotic particles, they will find the Higgs Boson, the elusive, theoretical particle that would help prove string theory and thus give us the one unifying theory of the universe. The problem could arise when the proton-proton collision could theoretically create microscopic black-holes, but scientists say that these would disappear almost instantaneously. But what if they don't? Then there is a crazy bunch of scientists who are (and have) tried to create mini black holes in laboratories for scientific study. Researchers also believe that there are close to 3000 black holes in our galaxy alone, with a Super Massive Black Hole at the very centre, keeping our galactic system in order. If our solar system was to enter anywhere near the gravitational field of one black hole with enough mass, then there is a good chance we're all headed into the gravitational abyss.

### How to survive

Well, frankly, short of creating a device that can safely neutralise a black hole,

there's no getting away from this one. We could hope and pray as we get spaghetti-ed into a black hole that at its end, is another black hole, effectively creating a worm-hole, through which we shall all emerge, hopefully safe.

### Why it may not happen

So first tackling the concerns with the LHC experiments, the scientists at CERN and many other research labs across the world have said that a microscopic black hole would dissipate much faster than it could absorb anything. The phenomenon is known as Hawking Radiation, where a black hole must give off its mass in the form of particles. If it is unable to absorb mass more than it's giving off, then it dissipates. In the case of micro black holes, this is almost always the case.

### Doomsday Scenario



### Gamma radiation

No but seriously, cinema aside, Gamma rays are the most dangerous, lethal form of radiation out there. It's pretty much the Chuck Norris of electromagnetic radiation. Nothing's more unforgiving and dangerous. The slightest of exposure to humans can lead to radiation poisoning that can be potentially lethal, and no, it will not turn you into *The Hulk*. Sorry to shatter your "Hulk-Smash" fantasies.

Now the gamma radiation on Earth can come from any kind of nuclear accident/war, but that wouldn't really be enough to wipe us out. What is, however, of significance is the gamma radiation through cosmic events. When a super massive star collapses or two neutron stars collide, a massive amount of gamma radiation shoots out in the direction of the two poles.

Currently, there is a star called the WR104 that is very near the end of its life, about to go Supernova and astrophysicists say that it is turned in our direction. However, if the star does explode, it's not necessary that the result would be a Gamma Radiation Burst,

although it is likely. If these Gamma rays do hit our planet, the surface would turn smouldering hot, wiping out all surface life. Do note that the WR104 is not to be confused with the Betelgeuse debacle that happened a few years ago. While Betelgeuse has been conclusively proven as harmless, WR104 is very much a real threat.

### How to survive

The only sure shot way to survive this incident would be to colonise the bottom of our oceans. And we mean like a mass-scale colonisation, move all surface life to the bottom. The depth and the water would shield anything down there from the gamma ray burst. Another way to survive this would be to send to the bottom of the ocean a "Noah's Arc" of our times, so that once the surface of the planet has calmed down, the planet can be repopulated, although this scenario is unlikely as radiation would take several centuries to reduce to non-toxic levels.

### Why it may not happen

The primary reason scientists are sceptical about this occurrence is because what they are observing right now is data that has travelled some 8000 light years. So it's old. For all we know, WR104 might have shifted its axis, now pointing in a new direction, which the earth is not in the way of anymore.



### Polar ice dissipation

Chalk this one up to global warming. We've already noted that this planet's getting pretty hot. Global surface temperatures have risen by about a degree over the last two centuries, and while that may not seem like much in figures, we're all aware of how it's been effecting the weather. Summers have become hotter, winters colder, the timeline for weather has become totally skewed and we're seeing more natural disasters happen now than ever before. However, the one

aspect we're missing out on is the dissipating polar ice caps. Environment activists have been ranting and raving about the polar bears losing their habitat, but we were far more focussed on other things. Well, now the polar caps are melting significantly and the water level is rising. Currently, it is estimated that the Antarctic ice cap is equivalent to about 30 million cubic kilometres of water. Where do you think all this water is going to go once the ice caps melt?

### How to survive

Learn to Surf, Stock up on tons of summer and winter clothing that would be accessible at an instant's notice. Also, you're going to have to make all your belongings "floatable", and make sure everything is water resistant. Last we checked, cats hated to swim, so if you have a pet cat, you might want to do something about it.

### Why it may not happen

The massive chunk of the polar ice caps is still frozen solid, so unless there is a massive heat ray unleashed by a villain, the polar ice caps will not be melting all the way soon enough to fulfil the Mayan "prophecy."



### Super volcanos

Bet you didn't know about these bad boys. A super volcano is to regular (most violent noted) volcanos what a nuclear weapon is to a firecracker. A super volcano will contain anywhere around a few hundred million times more lava than the one spewed out in the eruption of Mt. St. Helen in the United States. Once a supervolcano goes off, it is hypothesized that it would continue to erupt for days, sending lava and ash



Earth's just getting a core transplant. no big deal

into the air for days, before calming down into a stage where the magma just pouts out the crater. Essentially, each one is a global catastrophic event. Currently there are 7 known supervolcanos around the world, with the most active threat being the Yellowstone Caldera, located in Yellowstone National Park.

The last time the Yellowstone Caldera exploded, it was 640,000 years ago and ejected about 1000 cubic kilometres of rock, dust and volcanic ash into the air. In the last 2.1 million years, the caldera has gone violent three times and the scientific community is divided on whether its over-due for a fourth episode or not. However, given that between 2004-2008, the Yellowstone Plateau rose by upwards by almost 3 inches per year, which is three times greater than ever observed.

### How to survive

If you live in the vicinity of the supervolcano (Wyoming, Idaho, Washington, Oregon) then you are in the immediate danger zone. Get the hell out! Once the supervolcano erupts, it will eject dust, ash and rock into the air, which will make the air unbreathable because when the ash-rock combination inhaled mixes with the moisture in the lungs, it will turn to cement, causing you to drown internally. The rock-ash would also render all electronic equipment useless due to their conductivity. Surviving this horrible disaster would require careful planning. Building a shielded shelter will be of utmost importance along with figuring out how to develop an air filtration system. Of course, stocking up on food and rations will also become absolutely essential. We recommend you not panic and grab a wet towel. **[1]**

# GADGETS TO BEAT THE APOCALYPSE

Let's say the world does end for whatever reason... what gadgets should you ensure to take to your bunker?

Abhishek Choudhary  
readersletters@thinkdigit.com

So this is it. Judgement Day. Err... Judgement Month? Either way, the time is nigh. After years of conspiracy theorists and roadside vagrants holding up signs, and not to forget the lot of (\*cough\*) crappy movies about it, soon we will all know the truth about the Apocalypse hype. If you watched any of the aforementioned movies, you would know that the only part that makes them viewable is the fact that *somebody* beats the odds and survives.

For us it's simple. Like the Titanic band, we're doing our duty and ensuring that we keep you all calm and collected, and share our life jackets. We hope you survive, if and when the day comes.

In order to boost your chances, we thought we'd throw together a list of stuff that would aid you in your post-apocalyptic existence. And if D-Day doesn't arrive, hey, it's still some great stuff to own anyway!

**Warning:** We have taken the liberty of assuming that you have a bunker, cave, safehouse or even a ditch lined up to retreat to. If you don't...start digging. Yes, even you big city folk – it's not like anyone will know the difference between half-dug bunkers and existing potholes anyway!

If you are completely lost, and want basic tips on starting your survival plan, head over to 2012base.com.

## The must haves

These are the absolute essentials. You might wonder why we've listed separate devices when most of the tasks can be grouped together into a few

multipurpose devices, such as a compass and the GPS; hammer and the Nokia 1100 – there are a few possibilities, and we thought long and hard about it. But the fact is that in a survival situation you need to diversify your portfolio, so that dependencies are minimal. That's Investing 101. And here you thought the planet would be rid of materialistic ideas when the great storm comes.

### 1. Nokia 1100

A generation of Indians (and from the looks of it, foreigners too), swear by the indestructible prowess of the Nokia. And after all the thrills and frills of the latest smartphones, you need something that you can proverbially come home to. If you



Buy: ₹ 1.5K  
At: <http://dgit.in/TcxSYj>

need a phone for eternity, then there is almost no other comparable device. We've experienced the indestructible power firsthand, when one of us took it upon himself to try and destroy the mini tanks that were the Nokia phones.

### 2. A Super Zoom Camera

To hell with logic, you know in your heart that an apocalyptic scenario is a photographers' wet dream. And



Buy: ₹ 24.5K  
At: <http://dgit.in/SaPx01>

whatever be your skill in that department earlier, you are, at that point, the best photographer on Earth. Might as well click a few snaps. It's not like you will ever be judged on it anyway. We recommend the Sony HX200V. Or something else. You take your pick, because again, you will have the best camera on the planet at that moment. Choose wisely since neo-humans a thousand years down the line will find your fossils, and try and get out what they can, from those images you shot. Neat, right?

### 3. A Tablet

We were thinking about a smartphone, but since the Nokia has you covered you might as well go all way and get a tablet for the proper large screen experience. We're thinking Android here, because when you will own just one more tablet



Buy: ₹ 15-30K  
At: Neighbourhood store



for as long as you live, then you might need more than a better screen. Maybe change themes, once in awhile. Or icons. Or anything else. Sorry Apple.

#### 4. A music player

Just because there will never be any more new music in the market, primarily because there is no market, does not mean you should give up on your tunes. Go around collecting every song that you've ever liked the slightest bit,



because there is a good chance you will never hear it again. As for our recommendation, we think you should be good with any old-fashioned player, in which a touchscreen was a lower priority than a two day song-play battery backup. Maybe the 160 GB iPod Classic. Yeah, that should serve you well. Take the black one, while you're at it - there's a good chance of some dirt in the near future.

#### 5. An indestructible laptop and hard drive

Assuming that you have worked with a laptop before, you know that they are not the easiest devices to work with, what with the fragility and everything,



But there have been quite a few 'military grade' devices that have been built, and our pick from those is the Panasonic ToughBook 53. Built for the US military, this one is no slouch either. Running on i5 with 4GB of RAM and a touchscreen, it comes with magnesium casing, a liquid resistant keyboard, and you have the answer to your hassles. And the Robin to its Batman is the ioSafe hard drive. Its makers compare it to an aircraft's black box. In your final days you're bound to generate data from all the pictures and videos you'll shoot for the rest of your life. Some really, really good samaritans would probably want to put it in a time capsule for the future inhabitants of the world, to give them the sum total of the human knowledge and intelligence, which we think is overrated. But anyway, whatever the data, you would want it to be disaster proof. They say the ioSafe can withstand a Hummer. You know things get serious when a Hummer is mentioned.

#### 6. A GPS

Because you have already put yourself up with all the basic necessities for life, the next logical step would be to look around and explore. Assuming that the satellite system was not wiped out (hope),

then a GPS would be a huge asset. If the conditions are favourable enough to move around, then maybe you can go on an exploration spree. Then you could see yourself over the goggles of the 'old school' maps, and know the name of the place, the remains of which you currently stand on. Considering that you're based in India, go for some device from the MapMyIndia stable. Or the Garmin Oregon 450T, which



prides itself with being pretty tough. Not the best coverage of India, but we're sure you might not really miss turn by turn driving assist.

#### 7. A Compass

We are assuming that you would not like to spend the rest of your life snuggled up in a hole that was originally designed to get you through the worst part of the disaster. A compass then is the navigator's most basic tool. Buy: Anywhere between ₹1-2K at a nearby store

#### 8. An axe

This tool will come in handy, whether you want to kill another unsuspecting survivor for food/necessities/altercations, or for cutting stuff

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up. Zombies maybe? Believe us, you would want to be cutting stuff up.  
Buy: ₹1,395 at <http://dgit.in/YkNeNp>

## 9. A synthetic rope

Self explanatory, but still. Multi purpose item, which will not die down at solar exposure.  
Buy: ₹4.5K at <http://dgit.in/UElnkg>

## 10. Trekking Boots

Because the rest of your life will be one long trek, other than the off chance that you find those Chinese mega vessels that 2012 predicted have already been built.  
Buy: Anywhere between ₹5-15K at <http://dgit.in/UbIUed>

## 11. HAM Radio

Never give up, right? Don't ever believe that you are alone. If nothing else, there are thousands of people who are reading this month's magazine, and some of you might bump into each other, someday. A HAM radio in that case will be your beacon in the vast wilderness.  
Buy: ₹75K at <http://dgit.in/SLjHPf>

## 12. A regular radio

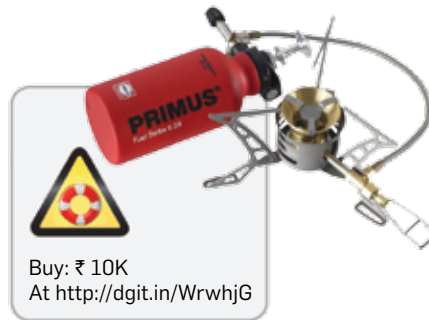
Who knows what communication media will be used by the other survivors. You need to be prepared. A sturdy radio we found was the Roberts Terrain R9966. It's water and impact proof.



Buy: ₹ 7K  
At <http://dgit.in/Wrw6VA>

## 13. Multi-fuel burner

Though you could rub a couple of stones together to light a fire, we're guessing it would take you just as much time as it took early man to develop an expertise in that. And so we took the liberty to find this device called the Primus OmniLite Ti, which can burn almost any fuel be it butane, gasoline, diesel, white gas, kerosene, and aviation fuel.



Buy: ₹ 10K  
At <http://dgit.in/WrwhjG>

Now only if somebody invented this technology for cars.

## 14. A hand turbine

While you would obviously have stocked up on energy resources, you would still need something for those trivial needs, such as charging that tablet. For that, there are many hand turbines out there, but this one takes the cake for its inbuilt AM/Fm radio and



Buy: ₹ 4K  
At <http://dgit.in/URTMIP>

flashlight. We present to you the Eton FRX3 Hand Turbine AM/FM Weather Radio Alert. The era of the strange device mash-ups is back. But meh, who cares anymore?

## 15. A flashlight

Another handy item for your exploration odysseys, you would almost always want a flashlight with you on your person. Go for waterproof variants which give at least 85 Lumens.  
Buy: Anywhere between ₹1-2K at <http://dgit.in/T8iIQL>

## 16. A portable respirator

Pictured alongside is a portable face mask to help you get through any fumes that might be encountered. For that, an ordinary face mask should

do. Ask your friendly neighbourhood police station for some free dole outs.

## 17. A stalker's guide to Bear Grylls

No such book exists. Yet. Start writing. If there is anybody beside you who stands a chance to survive in a post apocalyptic set-up, it is our very own, Man v/s Wild , Mr. Bear Grylls. Make contact with him before it is too late. Also, stock up on the episodes of Man vs Wild, it will surely give you the strength to live on in those harsh times, along with some pretty neat tips to get by.

## 18. A helmet with a mounted cam

The rest of your life will probably be full of new experiences and encounters. And if you manage to beat the odds and die a natural death, you might want to relive some of them when you get old. Pictured on the next page is a perfect safety device cum video blogging tool.

## 19. The ultimate swiss army knife

You didn't think we'd miss this, did you? Of course the picture on the next page is over kill but the model we're suggesting (The SwissChamp XAVT) is a force to reckon with.

## 20. A satellite phone

If you can get your hands on one, then you sir would have absolutely no use of it at all. But the fact is that if you can, you probably know other people who can too. We hear they're awesome. Maybe you can start some communication if some of your friends survive. Or order some home deliveries from the neighbourhood Dominos (lol jk, le master troll 2k12).  
Buy: ₹50K at <http://dgit.in/UbL6IX>



Buy: ₹ 5K  
At <http://dgit.in/QqZ8TE>



Buy: ₹ 1K  
At <http://dgit.in/SLh6vi>

## The Conditionals

We take it upon ourselves to prepare your bags to match the nature of said apocalypse, grouping the stuff that you would rather take, in case of the respective emergencies.

### 21. Underwater camera

In case of the ultimate flood, there is not much that can save you for a long time, except for maybe your swimming skills, for some time. But if we were to imagine that you care to live for a little longer, then maybe you should take up an underwater camera, because underwater photos are so exquisitely beautiful that it would take a lot on your part to mess those up. Have a look at the SeaLife DC1000. Neat stuff, and a decent snapper. Buy: ₹50K at <http://dgit.in/Q6zuCf>

### 22. A hammer

Of all the scenarios we discuss in the previous story, an earthquake seems the most probable way. Also the most unpredictable, because there is still no reliable way to predict this occurrence. But probabilities aside, this is what you should have on yourself if you were to have survived the big-daddy of all earthquakes. Break stuff, crawl back to the light



Buy: ₹ 1K  
At <http://dgit.in/UQ7Oif>



Buy: ₹ 16K  
At <http://dgit.in/SaQ16i>

from sudden cave-ins, whatever. Buy: ₹3K at <http://dgit.in/TNmCgF>

### 23. A tent

Take a small portable shelter with you. You never know when you would need it. Actually you do – all the time, if the safe house fails you. If your bunker is serving you well, then it might double up as your private holiday home, where you would go to escape from the rigours of daily life. Buy: Anywhere between ₹1-3K at <http://dgit.in/10j5aX6>

### 24. A chainsaw

This is a really fun scenario. Having played countless zombie themed games throughout our lives as gamers, we'd hope that we stand half a chance against hordes of zombie attackers. Not that we don't know it would be a gory death, but we would at least hope to go out with glory. For that we need a Chainsaw. There is just some raw feeling of unbridled rockstarness associated with the idea of slaying those death-clad slugheads with this weapon. You get the idea, because you have obviously daydreamed a lot about it yourself. And there can be few better joys in your last days than carrying a (fully charged) chainsaw, waiting for the next horsebeast to come around and you gut the little knucklehead. Wow, we're pumped. This calls for a round of fistfights Buy ₹11,599 from <http://dgit.in/WSQXBb>.

### 25. Flame Thrower


The only idea that comes close to cutting the living hell out zombies would be to burn them alive. Just imagine yourself playing Call of Duty: World at War and burning zombies except in real life. We honestly don't know where to get a flame thrower from but if you're resourceful enough an acetylene

or butane torch would do too. [Note: If the world doesn't end you know what next month's DIY is going to be] Buy ₹3,499 <http://dgit.in/XWZKUb>

### 26. Bible / Quran / Bhagwad Gita / The Gospel of the Flying Spaghetti Monster

Solar flares are among the most potent of weapons, and expected to be one of the most killer forms of apocalypse, if there was ever to come one. And this is one risk that is extremely difficult to guard against, seeing as how one of the chief issues that arise with solar flares is that it also manages to wipe out the functionality of all electronic devices in its path. If you actually manage to survive, your best chance of being happy to any degree would be to find out that another person has made it through, too. Preferably of the opposite sex.

Now Asteroids are another case. While our prep kits for tsunami and earthquake scenarios would suffice in case you are alive and the planet is still habitable, with asteroids that will almost definitely not be the case. Not because we don't wish you well, but because, we know this: the moon that we see today was sliced away from the earth by a hit from what was practically a child asteroid. Every self respecting asteroid will pride itself in being able to wipe life clean off the planet with one firm stroke. If the impact doesn't kill you, it might be the consequent earthquakes, storms, or the lack of any sort of Sunlight to sustain anything at all, or the ever-supreme trump card of no atmosphere, will. Remember, that is how the dinos went away. Not pretty. In both these cases, we suggest taking with yourself your favourite religious text. If you're not religious, we suggest taking a few comics. Take Batman comics. Because batman is awesome (anyone who disagrees does not deserve to be the last human survivor). And what better ways to die than in the presence of awesomeness?

So in all, our suggestions set you back by about 4 or 5 lakhs. And if you are so insanely rich that you just don't care, then may we suggest that latest JetLev-Flyer (remember that one?), which will surely increase your life expectancy in any circumstance. Or perhaps that Seabreacher boat, which also lets you swim with those dolphins in your free time, Master Wayne? Nope, we're not kidding. 



# IT'S GOING TO BE... WAIT FOR IT... THE END

The world is going to end. What will you do about it? Will you lie whimpering in a corner and let your life's greatest event just pass you by?

Anirudh Regidi & The Extraterrestrial  
[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

So what do you have planned for Christmas this year? Oh wait... Stupid question... Haven't you seen *2012*, the movie? No? Good, you saved yourself two and a half hours of excruciating facepalm moments. What we're getting at is that a minority of people believe the world is supposed to end soon - December 21st or 22nd to be precise - and it's high time you stop procrastinating and make the most of the time you have left.

Instead of just sitting there and waiting for the earthquake / tsunami / alien invasion / giant earth fart to swallow you up, we propose that you rock the bejesus out of this Apocalypse and bid the perfect farewell! Which is why, we've whipped up a list of things you could do during the apocalypse. And yes, we really do have lives...really... honest...Oh fine, you caught us.

### #1 Become a twit

And live tweet the Apocalypse. Why not? You've tweeted about your break-up, morning coffee, favourite music, what your dog threw up, and even pictures of what those tequila shots look like coming

back out after you've had one too many... All of a sudden you're shy? Or is it because you only tweet to impress people, and since there are going to be none left... Still, remember the apocalypse happens only once and this is your chance to prove that you really do love to tweet, and not just to be noticed. Start a hashtag and LIVE tweet like there's no tomorrow (See what we did there?! Who knows, your tweets could act like the ruins of Alexandria in the future.

### #2 Let it all hang out

Get that mind out of the gutter. We're talking about scheduling a Google+ Hangout with your friends on the 21st of December 2012. That is if you have any friends left by then, if you have electricity, water, a net connection, the will to go on...

Anyway, here's what we're thinking. It's so boring to be sitting in your home experiencing only your demise. Worst of all, while the floods might get the US, it could be super volcanoes for the Icelanders, and maybe earthquakes for the Koreans. Don't you want to see all of that and experience it all? Start by making friends all over the world, in every time-zone possible. This is no time to be awkward and anti-social. Make said friends, hell, the world is about to end, send eve-

ryone you can find an invite, what harm can it do? Invite them all to a Google+ Hangout, start chatting all day on the 20th, just in case we're a day or two off, get yourself a lot of Red Bull, and watch each other like hawks. Pretty soon they'll start getting swallowed up one-by-one, making the movie *2012* look like a college project in special effects (if it wasn't already). Unless of course you're one of the first to go, in which case you will be remembered as the person who set up the hangout, and forgotten in about three minutes.

### #3 Unleash your fury

As a child, the prohibitive nature of your upbringing would have left many of you as discontented individuals with a lot of inbuilt fury just waiting to unleash itself. Why do you want to keep it bottled inside yourself even when you know that the world is going to end?

Let the world know that hell hath no fury like an oppressed child that finds an outlet by letting lose a scream that will put a Gargantua's dying roar to shame. Rip your clothes off, bash your pesky neighbour's brains to a pulp with your bare hands and piss on Steve Jobs's grave if your heart so desires. This is not the time to hold back. Go on your rampage of self-discovery, if only to prove to yourself that you are still alive and kicking, a human being with hopes and dreams. Fly! Be Free! Face the apocalypse head on with a wild glint in your eye and the taste of true freedom in your heart. Show the world that you will not cower. Die happy!



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Looks like the fire and brimstone is just about kicking in! Get over to the Test Center for our very own end of the world party! #NoTomorrow  
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Let the party begin

#### #4 Go SPARTAAAA 'em

Greet the zombie apocalypse with all the raw emotion and courage that you can bring forth in your underwear clad form. A pair of undies, a curtain, an over-sized kitchen knife and the side panel of your PC cabinet should make a convincing enough 300-esque outfit. Attach the knife to a branch or pole that you found somewhere if you want

a spear. If you can convince a couple of hundred (shameless) friends to join you in this last stand, you're in for the treat of your life. No zombie will be able to do anything against such a fearsome hoard and your shrill, pre-pubescent shrieks will send a shiver down their insensitive spines. Who knows, if you can survive long enough, you might just manage to stave off the apocalypse.



Bringing in the apocalypse in style

#### #5 Going out in style

Bringing in the apocalypse needn't be all about a gloriously overt party where you get completely plastered and can't even feel your face and die in a puddle of your own vomit. No, that would be disgusting. A true gentleman goes out in style. If you have ample warning, say, an asteroid that is coming to obliterate the Earth, take some time off. Build a monument to yourself. A supremely awesome structure not unlike Barad Dur (from LOTR) and perch yourself at a stone throne you build at the very top, facing the direction that the blast wave is expected to hit you.

Now all you need is an Armani suit, a cup of tea, an old gramophone and an LP of Wagner's Ride of the Valkyries. If all has gone according to plan, you will have a grandstand seat of



This is the attitude that ruined our planet

the impending disaster and as you see the world ending comet blazing a trail across the sky, vapourizing the atmosphere as it hurtles through the air at over 22,000 km/hr, you know that you have seen the grandest sight ever seen in the whole course of human history and you can die in peace. Time is short; there are only seconds to impact and the shockwave a mere minute away. Just barely enough time to compose yourself on your throne for the final snapshot of your life, a snapshot that, in the right circumstances, would be preserved for all of eternity.

Millennia later, when some future race comes across the ruins of your tower, still standing despite the erosion of time, and find your remains, flash fried into place by the supersonic fireball that engulfed the entire planet, immortalized in stone, you will be the new God. The Fearless one; the Man who sat unshaken, in utter contempt of the wrath of the elder Gods; now that is truly THE way to bring in any apocalypse! Show Them who's boss! 🇩🇪



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# THE GEEK BUCKETLIST

In celebration of classic and contemporary geek culture, we list the Top 50 books and movies you simply must experience to get your geek on



**The Matrix**  
Year: 1999  
Director: Larry and Andy Wachowski  
For most people, this movie was their first encounter with a concept that was truly mind blowing. Just in case you haven't seen it yet, we won't spoil it for you by telling you what it is. Watch it for awesome special effects and some of the best sci-fi action till date. Choose the blue pill and give the sequels a miss.



**Ender's Game**  
Author: Orson Scott Card  
The earth is facing a threat from a hive-mind alien lifeform and the only hope of defeating this scourge is by creating an army of gifted children who will one day command earth's last hope at victory. A truly fascinating tale about gifted children and definite must read.



**Moon**  
Year: 2009  
Director: Duncan Jones  
All alone on a moon base. A creepy robot by your side and a routine mining operation that needs your attention from time to time. All is well? Not quite. Watch this gripping, chilling suspense sci-fi thriller to find out the sinister truth.



**Gattaca**  
Year: 1997  
Director: Andrew Niccol  
A visually stylistic sci-fi film that is more about the indomitable will of the human spirit, than the actual premise of the movie – a social divide caused by genetic engineering in the not so distant future. Watch it for the concept and stellar performances by Uma Thurman, Jude Law and Ethan Hawke.



**Ender's Shadow**  
Author: Orson Scott Card  
You're used to prequels and sequels by now right? Almost bored of them. But how about a paralax? What's that you ask? The same story told from the perspective of another character! Ender's Shadow is story of Bean – another gifted child, but with a much darker past.



**Foundation's Edge**  
Author: Isaac Asimov  
This is actually the fourth book in Asimov's brilliant Foundation series, but can (and probably should) be read as a standalone novel. The word "epic" would be an understatement when describing this brilliant work of art.



**12 Monkeys**  
Year: 1995  
Director: Terry Gilliam  
Stories about time travel are incredibly difficult to execute. There's that looping logic conundrum to overcome, loopholes to plug, and all the while avoid sounding clichéd in the process. And yet 12 Monkeys takes care of all of that with amazing presentation, fantastic music, and (literally) insane performances by Brad Pitt and Bruce Willis.





**28 Days Later...**  
Year: 2002  
Director: Danny Boyle

As far as Zombie movies go, this one broke away from the mould and introduced a very different type of Zombie. No more of those mindless slow braintead creeps, these were fast, furious and even slightly scary. Plus the virus spread and survival depictions were pretty realistic.



**Childhood's End**  
Author: Arthur C. Clarke  
Out of the blue, massive spaceships suddenly appear over earth's major cities. Under the reign of these "Overlords" mankind enters it's golden era – the end of war, world hunger etc. But what do these overlords want? Could they have a sinister plan?



**Zombieland**  
Year: 2009  
Director: Ruben Fleischer

This is the quintessential geek movie simply because the protagonist is himself a geek who manages to survive a zombie apocalypse (and get the girl) because of his immense repertoire of zombie knowledge, presumably acquired by watching / reading zombie stuff. The Rules in the movie will surely come in handy if nothing else.



**Voyage from yesteryear**  
Author: James P. Hogan  
On the brink of self annihilation earth sends out human embryos to populate a distant habitable planet. Years later a manned mission reaches there only to find that the culture, technology, and society on the new planet is quite different from ours.



**The Da Vinci Code**  
Author: Dan Brown

In this controversy-magnet of a novel, symbologist Robert Langdon and cryptographer Sophie Neveu are called to investigate a murder at the Louvre museum. What follows is a roller coaster ride involving secret underground societies and some clever code breaking.



**District 9**  
Year: 2009  
Director: Neill Blomkamp

What happens when Aliens arrive planetside not as invaders but rather as weary distraught travelers seeking refuge? Their tech is obviously superior, but something has gone wrong. The movie takes a stark and incredibly realistic look at mankind's innate desire to exploit from the point of view of a city bureaucrat who unwittingly finds himself at the receiving end of what he aims to accomplish.



**The Hitchhiker's Guide to the Galaxy**  
Author: Douglas Adams

If you've not read any of the other books on this list we'd recommend that you read them first. Because Hitchhiker's is after all a parody. Yet is not just that. It's probably one of the funniest books you'll ever read.



**The Fifth Element**  
Year: 1997  
Director: Luc Besson

A mixture of sci-fi, western, action and comedy styles, this is one of those weird and wonderful movies that begs to be seen multiple times. It's filled to the brim with cliches and extremes. The perfect being in the form of a woman (Milla Jovovich), a badass ex-soldier played by Bruce Willis and a maniacal villain played by Gary Oldman. This is the perfect geek movie.



**1984**  
Author: George Orwell  
"Dystopian, totalitarian, Orwellian"; these words have been ridiculously overused and have lost some of the horror that should have been associated with them. Released in 1949, George Orwell painted a chillingly plausible vision of the future.



**Man from Earth**  
Year: 2007  
Director: Richard Schenkman

A middle-aged professor is about to relocate and a couple of his closest friends gather for a farewell get-together of sorts on the eve of his departure. At this gathering he makes a startling revelation. The audience goes through a whole gamut of reactions from disbelief to outrage and denial. So will you.





**Starship Troopers**

Year: 1997  
Director: Paul Verhoeven

A subtle and insidiously subversive film that examines a future society where military service dictates social hierarchy. As space marines take on an alien invasion of insect-like creatures, this iconic movie is your quintessential action film, with lots of explosions, and humanity-wins moments, with a deeper satire on fascism.



**Independence Day**

Year: 1996  
Director: Roland Emmerich

Independence Day is the kind of alien-invasion film that needs to be seen on a massive screen with state-of-the-art surround sound. Over-the-top in every aspect (except the absurdly simplistic story), this movie is a visual and auditory treat that laid the foundation of pretty much every alien-invasion film to come.



**A Brief History Of Time**

Author: Stephen Hawking

This is one of those rare books that manages to enrapture the regular reader as well as hardcore science fanatic at the same time. Almost everything you ever wanted to know about the universe is encapsulated in this one book with simplicity and elegance.



**The Social Network**

Year: 2010  
Director: David Fincher

The story of Facebook's inception told through an exceptionally well written script by Aaron Sorkin. The movie manages to perfectly portray the cut-throat start-up culture and what it is like to be a geek on the cutting edge of web technology. As the tagline says, "You don't get to 500 million friends without making a few enemies".



**The Day the Earth Stood Still**

Year: 2008  
Director: Scott Derrickson

A remake of the 1951 classic namesake, the movie is a forceful analysis of humanity and our nature, and the damage we have done to the planet in our wake. The movie, although nowhere near the original, is one worth watching simply for its scale and treatment.



**Source Code**

Year: 2011  
Director: Duncan Jones

A movie that looks straightforward enough, but actually sucks you into its brilliant plot and concept. Source Code is intellectually stimulating enough for even the most hardcore geeks. Exploring the concept of parallel universes as a soldier attempts to stop a bomber before it's too late, this is a must-watch.



**The Martian Chronicles**

Author: Ray Bradbury

Written over half a century ago, this book focuses on real human and fictional Martian emotion, and what transpires when the two civilizations meet somewhere in 1999.



**Limitless**

Year: 2011  
Director: Neil Burger

Few stars portray 'cool' as effortlessly as Bradley Cooper, and in this movie, he's at his best, playing a writer who discovers a top-secret drug that boosts his brain functions, giving him superhuman intelligence. Fantastic movie, with a snarky commentary on people addicted to pills and "performance enhancers".





**2001: A Space Odyssey**  
Arthur: C. Clarke

Scientists discover an ancient, alien monolith on the moon and one near Jupiter. The tale revolves around the subsequent trip to the third monolith and the consequences of that trip. Read for: the gripping narrative, HAL and the mysteries of the universe



**Minority Report**  
Year: 2002  
Director: Steven Spielberg

Set in a time where predicting the future has become a reality, this neo-noir thriller looks at the ways this technology might be manipulated and misused. Watch for the iconic scenes with Tom Cruise handling and viewing data on a gesture controlled holographic screen.



**Dark City**  
Year: 1998  
Director: Alex Proyas

Dark City is a magnum opus that will change your beliefs about the brain and its power, of what we are capable of doing, and the world around us we take for granted. Intellectually and spiritually challenging, this is not a film for everyone, yet one everyone must watch.



**The Abyss**  
Year: 1989  
Director: James Cameron

It is said that we know more about the surface of the moon than we do about our own oceans. The movie explores this premise as a group of deep sea divers are roped in to search for a lost nuclear submarine at the bottom of the ocean. Going deeper than most men have ever gone, they encounter something very strange. A must watch.



**Movie: The Island**  
Year: 2005  
Director: Michael Bay

What if you found out one day that your entire existence was simply to serve as a source of organs, a "harvestable being"? The Island asks exactly that question. Watch this sci-fi thriller for its eye-candy factor – the futuristic sets, cinematography, the action sequences, or simply the stunning Scarlett Johansson.



**Brave New World**  
Author: Aldous Huxley

Written in an effort to parody the utopian worlds found in HG Wells' books, Aldous Huxley, got caught up in his own imagination and ended up with this great work. Introducing concepts such as not-for-reproduction sex, sleep learning and unusual drug use, the book is not for the faint hearted.



**Rendezvous with Rama**  
Author: Arthur C. Clarke

When the spaceguard program discovers a 54km long cylinder approaching our solar system at incredible speeds, it sends the whole planet into a tizzy. This novel is considered to be among Arthur C. Clarke's best works and that is saying a lot.

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**iCon: Steve Jobs**  
 Authors: Jeffrey S. Young and William L. Simon

An enigmatic character immensely scrutinised by tech media all over the world, Steve Jobs was a man of multiple layers. This book chronicles the making of Jobs' infamous "reality distortion field" and his journey with Apple, fall from grace, and triumphant return.



**War of the Worlds**  
 Year: 2005  
 Director: Steven Spielberg

Spielberg specializes in pulling off seemingly impossible stories with visual splendour, and this movie is no different. The story of an alien invasion told as a backdrop to a divorced father and his children's fight for survival. Watch for the special effects and atmosphere if nothing else.



**Pandorum**  
 Year: 2009  
 Director: Christian Alvart

One of the most underrated movies ever, Pandorum is in reality a psychological thriller packaged as a sci-fi movie. Two crew members on a deep space vessel wake up from hypersleep and face some incredible odds – they're suffering from amnesia, they're trapped on the bridge, and the rest of the ship seems to have been overrun by some alien lifeform.



**Fermat's Last Theorem**  
 Author: Simon Singh

A mischievous French mathematician scribbles a note in the margin of a personal book and creates a problem that takes close to 400 years to solve. Simon Singh gives us a layman-friendly account of the birth and conclusion of Fermat's Theorem.



**Happy Accidents**  
 Year: 2000  
 Director: Brad Anderson

The geek rarely finds a movie to watch with the opposite sex. Wait, a better way to look at this would be, "a geek rarely finds someone of the opposite sex to watch a movie with". But just in case you do manage to get a girl to watch a movie with you (without the involvement of any chloroform) this has to be it. A sweet and simple love story set in a sci-fi premise, which like The Man From Earth, will keep you guessing right till the end whether the protagonist is off his rocker or is actually what he claims he is.



**Iron Man**  
 Year: 2008  
 Director: Jon Favreau

Billionaire genius Tony Stark gets captured by terrorists and builds himself an armoured super-suit to escape. After returning, he takes to the skies to fight Injustice. An enjoyable movie with gadgets and special effects that will leave you starry-eyed with elements of comedy and action. Just in case you haven't seen it already, it's a definite must-watch.



**Predator**  
 Year: 1987  
 Director: John McTiernan

Predator helped create one of the most instantly recognizable alien creatures in cinematic history. A simple story of a commando team that finds itself hunted by an alien predator while on a mission in Central America, this movie is spellbinding for the convincing atmosphere and Schwarzenegger at his destructive best.



**Isaac Asimov's Book Of Facts**  
 Author: Isaac Asimov

You'll find 3000 of the most obscure, fascinating and astonishing facts within the pages of this book. Flip to any page and you are guaranteed to get immersed in it for at least a couple of hours. A small sample: did you know that a mosquito has 47 teeth?



**Watchmen**  
 Year: 2009  
 Director: Zack Snyder

No, the movie ISN'T as good as the graphic novel. The original graphic novel is too intricate to be condensed into a movie, so certain liberties have been taken. Yet, it's a brilliant film about superheroes and the debilitating effects of paranoia on society and relationships. Definitely worth a watch.



**The Lord Of The Rings (Trilogy)**  
 Author: J.R.R. Tolkien

A fantasy literature and mythical world unparalleled; dwarves, elves and orcs in modern RPGs date back to this book. We would only repeat the words of The Sunday Times that "the English speaking world is divided into people who have read The Lord Of The Rings and The Hobbit and those who are going to read them."





**Tron**

Year: 1982, 2010 (Legacy)  
 Director: Stephen Lisberger/  
 Joseph Kosinski

When Tron was first released in 1982, it wowed cinema audiences with its concept of virtual reality and Artificial Intelligence. For a time when computers were barely beginning to pick up, the movie was futuristic indeed. And the 2010 sequel took the series to a next level.



**V for Vendetta**

Year: 2005  
 Director: James McTeigue

In 1984, George Orwell wonderfully predicted a world where Big Brother would be all encompassing. V for Vendetta, puts that theme in the contemporary context, in the London of 2030s to be more precise. The protagonist V sporting a Guy Fawkes' mask is the common man's reply to the atrocities of the totalitarian regime. Natalie Portman as Evey represents the vox populi and V has his own motivations. Watch it to understand why the mask has now become a symbol of sorts.



**Dune**

Author: Frank Herbert

Most people who have read Dune call it an experience rather than just a book. It's the story of a strange civilisation of the future where "spice" is the most precious commodity. There are highly evolved mentalists and yea there are giant sand worms. Sounds strange? Read it.



**Pirates of the Silicon Valley**

Year: 1999  
 Director: Martyn Burke

This movie tells the story of perhaps the most significant duos in computing history – none other than Steve Jobs and Bill Gates. The movie traces back their intertwined past and does a great job of revealing some of the lesser known milestones in the formation of their respective empires. The movie is a lesson in geek history, entertaining and at the same time ethereal and beautiful quality of the original. A visual and auditory treat.



**Frankenstein**

Author: Mary Shelley

One of the oldest novels in this roundup, (1818) it is the story of an individual called Dr. Frankenstein and his antagonist. Dr Frankenstein is obsessed with creating life and ultimately succeeds in doing it, but his creation is severely disfigured and is mocked by everyone.



**Back to the Future**

Year: 1985  
 Director: Robert Zemeckis

Back to the future put the DeLorean on every geek's must have list. It also established firmly into the fabric of pop culture the importance of travelling at 88 miles per hour for successful time travel. Of course the entire franchise is worth a watch but don't miss the first movie in the series. And keep an eye out for retro geek references which you might have missed the first time around.



**Children of Men**

Year: 2006  
 Director: Alfonso Cuarón

This movie introduces you to a very chilling concept - what if mankind forever lost it's ability to perpetuate the species? If overnight everyone became sterile, what would all of our accomplish amount to? Who are we doing anything for, if there are no future generations? A fascinating movie indeed.



**Digital Fortress**

Author: Dan Brown

While The Da Vinci Code introduced readers to cryptography, this book by Dan Brown upped the ante further. The plot follows the events after the NSA finds an unbreakable code in the wild and their chief cryptographer is called in on the case.

**Price Watch**

Get the latest market prices of ultrabooks, budget tablets and gaming mice before you heat out to buy them

**Killer Rigs**

Thinking of building a new rig for yourself or have a friend bugging you for rig suggestions?

# HD Media Players

Have an HDTV, but no access to HD channels? Want to access the net on your non-smart TV? Read on...

Agent 001

agent001@thinkdigit.com

**H**ave a lot of HD movies on your external drive and your HDTV won't play certain formats? Want to access the internet, but don't have a smart TV? Well, in that case, investing in an HD media player is your best bet. And I will tell you how you go about doing that.

## The case for HD media players

First up, the very basic premise of this device is to play video files off any USB storage – portable hard drives, pen drives, whatever you may have stored the files on. Most media players can playback almost all the popular video formats, but some are more capable than others. Secondly, the player uses complex algorithms to upscale the resolution of the video being played back, on the fly. Simply put, your low-res media will be processed to enhance the quality on higher res screens. Most HD media players will let you set the maximum resolution for the upscaling process – 720p or 1080p. In essence, these devices act as the perfect go-between for your HDTV and the media you may have on your drive. The main purpose of the device is to playback video and that is what it does best. It can render your old DVD or Blu-Ray drive redundant because of the media capability it offers.

## Will they play all my video files?

These devices will handle most of the video formats you throw their way; the popular ones being – AVI, MP4, MKV



and WMV. Within these formats, there may be containers that may be incompatible, but by and large, everything is well configured. If you want a media player that plays back all video formats you throw at it without any hassle, the likes of the WD Live (2012 update), the Seagate GoFlex TV and the Asus O! Play Air are some of the really good options among the ones we have tested. These three are available in the ₹6,500 to ₹8,000 price bracket, and will even let you access certain web services and stream content on the network thanks to its integrated Wi-Fi.

## What else can they do?

Most mid-range and high-end media players will be able to connect to the web, either via a LAN connection, an optional

Wi-Fi dongle or integrated wireless adapter. You can access apps, play games, view web services, stream content from services like Live 365 and Deezer, watch YouTube and even download movie information in some cases. If online services matter a lot to you, we recommend the D-Link Boxee Box. It is a premium product, and costs around ₹10,500, with the widest range of web services packaged as apps. Alternatively, the Portronics LimeBox (around ₹10,000) is an Android based HD media player, which allows you to use a rather good browser, and pick from a huge range of apps. Speaking of which, the Amkette Evo TV (₹12,000) is also one such option, with a slicker interface and motion control remote offering a unique user experience.

## Which are the best ones to buy?

There is a fair amount of variety within this category. For a basic device that also does wireless streaming and a bit of web apps, the WD Live makes perfect sense. If you also want the flexibility of playback along with a better plethora of web apps and services, the D-Link Boxee Box for around ₹10,500 is a better bet. You get a fairly geeky user interface, but it is very usable once you get the hang of it.

The WD Live Hub has been in the market for a while now, but offers something most others don't – a 1TB hard drive built-in. This one does miss out on integrated Wi-Fi, but has the same robust media playback capabilities of the WD Live. **[i]**





## Worlds fastest supercomputer

Oakridge National Lab's Titan has been crowned the world's fastest supercomputer in the recent semi-annual top 500 supercomputer list

## Intel CEO announces retirement

In an announcement that surprised everyone, Intel CEO Paul Otellini said that he will retire from his post by May 2013

Agent 001

## Ultrabook confusion

I have read reviews in the magazine as well as on the website and I found that HP-Envy 4-1002TX and Samsung Series 5 ultra books were good. Samsung is good but has less performance scores than Envy, also it looks ordinary whereas Envy scores in both departments. I heard that Samsung is launching new touch display ultrabook and



HP Envy 4 1002TX

HP has introduced a new Envy 4-1102 TX with same configuration as Envy 4-1002TX except that it has Windows 8 OS.

So should I wait for Samsung's new touch-based ultrabook? Or go for the HP Envy 4 1102TX? Or stick with HP Envy4-1002TX? Are there other better options? Do let me know.

Rohit Wahane

**A** First off, in the current generation of ultrabooks under ₹60,000, the HP Envy 4-1002tx is by far the best option. The Samsung Series 5 runs it close in terms of performance, but the somewhat lacklustre build quality spoils the overall package.

As for touchscreen based ultrabooks, yes, almost all manufacturers will be launching them. ASUS just announced a couple, and Dell did the same earlier this week. We also reviewed the Acer Aspire S7 which has a touchscreen. Windows 8 will usher in the generation of ultrabooks that will come with touchscreens, as well as hybrid devices that double up as a conventional laptop when needed, and remain a tablet the rest of the time.

## Two desktop rigs

I want to buy two desktops for my family as a Diwali gift. The plethora of options has confused me a lot. Please give system options based on Intel's 3rd gen Core

i5 and one based on AMD's FM1 or FM2 architecture. My budget is ₹35 to ₹45K max. Discrete graphics card is not required at this point of time but i plan to upgrade it on a later stage.

I intend to use Windows 8, so if the monitor has touch option it would be good to use all the features. Please help with system config. Expecting a good solution from Agent 001.

S Sathiya Narayanan

**A** Intel Rig: We would advise against touch-screen monitors at the moment. If you intend to buy one, you should wait till there are many players in the market. By then the prices will normalise and you will have got an idea of which touchscreen monitor is the best.

- Processor: Intel Core i5-3450 (₹11,500)
- Motherboard: ASRock Z77 Pro4 4 (₹8,900)
- RAM: Corsair Vengeance 4 GB (₹1,450)
- HDD: Seagate 7200.12 500 GB (₹3,650)
- Monitor: Samsung 23 inch 23B370H (₹10,800)
- Power Supply: Corsair GS 600 (₹4,000)
- Cabinet: NZXT LEXA S (₹3,950)
- Keyboard/Mouse combo: Logitech MK250 combo (₹1,200)
- Total: ₹45,450

If you want to go for a hybrid drive, the Seagate Momentus XT will cost you ₹10K and up and it is a laptop drive.

AMD Rig: We have kept this system basic, as we are assuming you will not really need a hybrid drive for both systems.

- Processor: AMD A10-5800K (₹7,200)
- Motherboard: ASUS F2A55-M (₹5,900)
- RAM: Gskill F3-10600CL9S-4GBNT (₹1,050)
- HDD: Seagate 7200.12 500 GB (₹3,650)
- Monitor: BenQ G2222HD (₹7,000)
- Power Supply: Corsair CX430 (₹2,300)
- Cabinet: Cooler Master CM Elite 310 (₹1,600)
- Keyboard/Mouse combo: Zebronics Judwaa Bundle (₹450)
- Total: ₹30,250

## Which graphics card?

I'm planning to buy a PC mainly for the purpose of gaming. I have finalized the following details:

- Processor: Intel i5-3570K
- RAM: 8 GB DDR3 RAM

I shall be purchasing a PSU of 850W or above so that shall not be an issue.

However I'm really confused about the Graphic Card I should buy. I have decided that the GPU must be NVIDIA GTX 670.

I have short-listed 3 Graphic Cards :

- 1 ASUS GTX670-DC2T-2GD5
- 2 EVGA GeForce GTX 670 FTW
3. ZOTAC GeForce GTX 670 AMP! Edition

I've read many reviews on the internet that the ASUS TOP model is a defective card and it has conked off for a lot of users after 3 months because ASUS made it unstable by OCing it beyond the GPU's capability. I'm really apprehensive about this since I will be investing about ₹30k in the graphic card. Would really appreciate if you could point me in the right direction.

Aditya



ZOTAC GTX 670

**A** Problems that you have mentioned will arise if you go ahead and still overclock these (already overclocked) cards. Considering that you have read opinions on the durability of these cards, it is natural for you to be apprehensive before going in for a factory overclocked card. In such a scenario we would suggest that you go with GTX 670s that are running at reference speeds. The GTX 670 is a beast in itself and works wonderfully even without overclocking.

Of the cards you have mentioned, the ASUS card is the best of the lot. But since you have reservations against factory overclocked card we would suggest you get the ZOTAC GTX 670 2 GB which is selling for ₹28,200 or ASUS Direct CU II GTX 670 (the non-TOP version) which sells for around ₹27,500. **A**

**Google out of China**

Google's search engine, Gmail and Google Play store all supposedly stopped working with Google's own statistics showing a sharp decline in Chinese traffic

**PS Vita firmware update**

Sony announced a new 2.00 firmware update for the PS Vita, coinciding with system's Playstation Plus subscription service launch

# SPEND SMART

Check out the latest prices of Ultrabooks, Budget tablets and Gaming mice



## ULTRABOOKS

Brand	Model	Processor	RAM (GB)	Discrete GPU (apart from the integrated Intel HD graphics)	Storage Type	Storage Size (GB)	Display Size (inches)	Display Resolution	Price (₹)
Dell	Inspiron 14z	Intel Core i5 - 3317U	4	AMD Radeon HD 7570M	HDD	500	14	1366 x 768	45,990
Dell	XPS 14	Intel Core i5 - 3317U	4	NVIDIA GeForce GT630M	HDD	500	14	1600 x 900	85,990
Toshiba	Satellite U840	Intel Core i5 - 3317U	4	NA	HDD	500	14	1366 x 768	53,500
Toshiba	Satellite U840w	Intel Core i5 - 3317U	4	NA	HDD	500	14.4	1792 x 768	63,500
HP	Envy Spectre	Intel Core i5 - 3317U	4	NA	SSD	128	13.3	1366 x 768	64,990
HP	Envy 4-1002TX	Intel Core i5 - 3317U	4	AMD Radeon HD 7670M	HDD	500	14	1366 x 768	57,990
HP	Envy 4-1103TX	Intel Core i5 - 3317U	4	AMD Radeon HD 7670M	HDD	500	14	1366 x 768	59,367
HP	Envy 4-1104TU	Intel Core i5 - 3317U	4	NA	HDD	500	14	1366 x 768	52,583
HP	Envy 4-1105TX	Intel Core i5 - 3317U	4	AMD Radeon HD 7670M	HDD	500	14	1366 x 768	54,294
Lenovo	Ideapad U310 (59-341-069)	Intel Core i3 - 2365M	4	NA	HDD	500	13.3	1366 x 768	42,631
Lenovo	Ideapad U310 (59-342-830)	Intel Core i5 - 3317U	4	NA	HDD	500	13.3	1366 x 768	50,951
Lenovo	Ideapad U410 (59-342-778)	Intel Core i5 - 3317U	4	NVIDIA GeForce GT610M	HDD	500	14	1366 x 768	58,990
Lenovo	Ideapad U410 (59-342-788)	Intel Core i7 - 3517U	4	NVIDIA GeForce GT610M	HDD	500	14	1366 x 768	63,990
Samsung	Series 5 (NP-530U4C)	Intel Core i5 - 3317U	6	NVIDIA GeForce GT620M	HDD	1024	14	1366 x 768	62,990
Samsung	Series 9 (NP-900X3C)	Intel Core i7 - 3517U	4	NA	SSD	256	13.3	1600 x 900	1,02,990
Acer	Timeline Ultra M5-481T	Intel Core i5 - 3317U	4	NA	HDD	500	14	1366 x 768	52,000
Acer	Aspire S3	Intel Core i5 - 3317U	4	NA	HDD	500	13.3	1366 x 768	55,499
Acer	Aspire S3-391	Intel Core i7 - 3517U	4	NA	HDD	500	13.3	1366 x 768	66,949
Fujitsu	LifeBook U772 Red	Intel Core i5 - 3317U	4	NA	SSD	128	14	1366 x 768	75,900
ASUS	S56CA-XX030R	Intel Core i3 - 3217U	4	NA	HDD	500	15.6	1366 x 768	43,850
ASUS	S56CA-XX056R	Intel Core i5 - 3317U	4	NA	HDD	750	15.6	1366 x 768	49,197
Sony	Vaio T Series (SVT13113EN)	Intel Core i3 - 2367M	4	NA	HDD	500	13.3	1366 x 768	45,000
Sony	VAIO T14113CN	Intel Core i3 - 3217U	4	NA	HDD	500	14	1366 x 768	49,000
Sony	VAIO T13126CN	Intel Core i5 - 3317U	4	NA	SSD	128	13.3	1366 x 768	63,500
Sony	Vaio T-11 (SVT-11113FGS)	Intel Core i5 - 3317U	4	NA	HDD	500	11.6	1366 x 768	49,990

## DX 11.1 Only for Windows 8

Microsoft's latest Direct X update to release only for Windows 8 claiming full-on OS switch required to leap forward in media

## Zynga CFO quits

Chief Financial Officer Dave Wehner resigns for Senior Finance position at Facebook, causes wave of corporate changes at Zynga



## BUDGET TABLETS

Brand	Model	Processor speed	RAM	Storage	Display Size (inches)	Display Resolution	Primary Camera / Megapixel count (MP)	3G	Price (₹)
Zync	Z909 Plus	1GHz	256 MB	4 GB expandable up to 32 GB	7	800 x 480	Yes / 0.3	Y	3,990
DOMO	Slate N8 SE	800MHz	256 MB	4 GB expandable up to 32 GB	7	800 x 480	Yes / 0.3	Y	3,990
iBerry	Auxus AX02	1GHz	1 GB	4 GB expandable up to 32 GB	7	800 x 480	Yes / 2.0	Y	9,990
Byond	Mi-book Mi1	1.2GHz	512 MB	4 GB expandable up to 32 GB	7	800 x 480	Yes / 0.3	Y	4,250
WickedLeak	Wammy Desire	1.5GHz	1 GB	8 GB expandable up to 32 GB	7	800 x 480	Yes / 1.3	Y	6,800
Lava	E-Tab	1.2GHz	512 MB	4 GB expandable up to 32 GB	7	800 x 480	Yes / 0.3	Y	5,500
Micromax	Funbook Pro	1.2GHz	1 GB	8 GB expandable up to 32 GB	10.1	1024 x 600	Yes / 2.0	Y	10,000
Micromax	Funbook	1.2GHz	512 MB	4 GB expandable up to 32 GB	7	800 x 480	Yes / 0.3	Y	6,499
Intex	i-Tab	1GHz	1 GB	8 GB expandable up to 32 GB	8	800 x 600	Yes / 0.3	Y	8,990
Zync	Z999 Plus	1.5GHz	512 MB	8 GB expandable up to 32 GB	7	800 x 480	Yes / 2.0	Y	11,990
iBall	Slide	1GHz	512 MB	8 GB expandable up to 32 GB	7	800 x 480	Yes / 2.0	Y	12,449
Beetel	Magiq Glide	1GHz	512 MB	8 GB expandable up to 32 GB	7	800 x 480	Yes / 2.0	Y	11,999
Reliace	3G Tab	800MHz	512 MB	4 GB expandable up to 32 GB	7	800 x 480	Yes / 2.0	Y	12,999
BlackBerry	Playbook	1GHz	1 GB	16 GB	7	1024 x 600	Yes / 5.0	N	13,990



## GAMING MICE

Company	Model	Button Count	Adjustable Weights (Y/N)	DPI Switch (Y/N)	Profile Switch (Y/N)	DPI indicator (Y/N)	DPI/CPI range	Profile Indicator (Y/N)	Price (₹)
Steelseries	Kinzu V2	3	N	Y	N	N	400-3200	N	1,500
Steelseries	Sensei (Fnatic)	8	N	Y	Y	Y	1-5700	Y	8,665
Steelseries	Sensei (Raw)	8	N	Y	N	Y	90-5670	N	5,200
Steelseries	Sensei Pro Grade Laser	8	N	Y	Y	Y	1-5700	Y	7,590
Steelseries	Diablo III	8	N	Y	N	Y	1-5700	N	5,999
Steelseries	KANA	4	N	Y	N	Y	400-3200	N	4,237
Corsair	M-60	8	Y	Y	N	Y	Up to 5700	N	3,920
Corsair	M-90	15	N	Y	Y	Y	Up to 5700	N	4,480
Logitech	G400	8	N	Y	Y	N	400-3600	N	2,095
Logitech	G9x	7	Y	Y	Y	Y	200-5700	Y	4,500
Logitech	G500	7	Y	Y	N	Y	200-5700	N	4,000
Logitech	G300	9	N	Y	N	N	500-2500	N	1,725
Cooler Master	CM Storm Sentinel Advance II	8	Y	Y	Y	Y	200-8200	Y	3,999
Cooler Master	CM Storm Recon	9	N	Y	N	Y	800-4000	N	3,000
Cooler Master	Spawn	7	N	Y	N	N	800-3500	N	2,250



# digit KILLER RIGS

Everything you'll ever need to build your own PC. Whatever your budget.

■ Basic rig = ₹24,124 ■ HTPC = ₹22,600 ■ Entry-level gaming = ₹34,140 ■ Mid-range gaming = ₹55,350 ■ Ultra high-end = ₹1,51,769

## BASIC RIG

<b>Processor</b>	Intel Pentium G840	4000
<b>Motherboard</b>	Asus P8H61-M LX3	2810
<b>RAM</b>	Corsair 2GB DDR3 1333MHz	650
<b>HDD</b>	Toshiba 500GB HD 721050DLE630	3350
<b>Monitor</b>	ViewSonic VA2038WM	6499
<b>Graphics Card</b>	None	0
<b>Cabinet</b>	Cooler Master Elite 310	1600
<b>PSU</b>	Seasonic SS-400ES	2700
<b>Speaker (2.1)</b>	Altec Classic Audio BXR1221	1100
<b>Mouse</b>	Zebronics Judwaa 5 (Bundle)	0
<b>Optical Drive</b>	Samsung 22x SATA DVD Writer	950
<b>Keyboard</b>	Zebronics Judwaa 5 (Bundle)	465
<b>Sound Card</b>	None	0
<b>Total</b>		<b>24,124</b>

## HTPC

<b>Processor</b>	AMD A6-3650	5900
<b>Motherboard</b>	ASRock A75M	4300
<b>RAM</b>	Corsair 2GB DDR3 1333MHz	650
<b>HDD</b>	Western Digital WD20EARX 2TB	6050
<b>Monitor</b>	None (your TV)	0
<b>Graphics Card</b>	None (HD6530D onboard)	0
<b>Cabinet</b>	Zebronics Tambi	2000
<b>PSU</b>	Bundled (150W)	0
<b>Speaker</b>	None	0
<b>Mouse</b>	MS Wireless laser Combo XVA-00020	2750
<b>Keyboard</b>	Bundled	0
<b>Optical Drive</b>	Samsung 22x SATA DVD Writer	950
<b>Sound Card</b>	None	0
<b>Total</b>		<b>22,600</b>

## ENTRY-LEVEL GAMING

<b>Processor</b>	AMD A8-3850	7400
<b>Motherboard</b>	GIGABYTE GA-A75M-D2H	6800
<b>RAM</b>	G-skill F3-10600CL9S-4GBNT	1050
<b>HDD</b>	Seagate 1 TB ST2000DL001	4725
<b>Monitor</b>	BenQ G2222HD	7000
<b>Graphics Card</b>	None	0
<b>Cabinet</b>	Cooler Master Elite 310	1600
<b>PSU</b>	Corsair CX430	2300
<b>Speaker</b>	Altec Lansing V2621	1850
<b>Mouse</b>	Zebronics Judwaa 5 (Bundle)	0
<b>Optical Drive</b>	Samsung 22x SATA DVD Writer	950
<b>Keyboard</b>	Zebronics Judwaa 5 (Bundle)	465
<b>Sound Card</b>	None	0
<b>Total</b>		<b>34,140</b>

## MID-RANGE GAMING

<b>Processor</b>	Intel Core i5-3450	11500
<b>Motherboard</b>	Intel DB75EN	5600
<b>RAM</b>	Corsair Vengeance 4 GB	1450
<b>HDD</b>	Seagate 500GB 7200.12	3650
<b>Monitor</b>	Samsung P2350	10800
<b>Graphics Card</b>	ASUS GTX 650 Ti	11250
<b>Cabinet</b>	Cooler Master Elite 310	1600
<b>PSU</b>	Corsair GS 600	4000
<b>Speaker</b>	Altec Lansing V2621	1850
<b>Mouse</b>	Razer Abyssus (bundled)	0
<b>Optical Drive</b>	Samsung 22x SATA DVD Writer	950
<b>Keyboard</b>	Razer Cyclosa (Bundled)	2700
<b>Sound Card</b>	None	0
<b>Total</b>		<b>55,350</b>

## ULTRA HIGH-END GAMING

<b>Processor</b>	Intel Core i7-3770K	20000
<b>Motherboard</b>	ASRock Fatal1ty Z77 Professional	15999
<b>RAM</b>	Gskill F3-12800CL9D-8GBXL	3150
<b>HDD</b>	WD30EZRX 3TB + Corsair Neutron 120 GB	17000
<b>Monitor</b>	BenQ XL2420T	21000
<b>Graphics Card</b>	ZOTAC GTX 680 2 GB	33500
<b>Cabinet</b>	Cooler Master HAF922	7200
<b>PSU</b>	Seasonic X850 (80+ Gold)	10000
<b>Speaker</b>	F&D F680	3500
<b>Mouse</b>	Corsair M-60	3920
<b>Optical Drive</b>	LG Blu-ray WH14NS40 RW	7000
<b>Keyboard</b>	Logitech G510	4800
<b>Sound Card</b>	ASUS Xonar DX 7.1	4700
<b>Total</b>		<b>1,51,769</b>

## OPTIONAL ACCESSORIES

<b>Speakers (5.1)</b>	Logitech Z5500	17500
<b>Controller</b>	Xbox360 Controller (wired)	1350
<b>UPS</b>	APC 700VA (BE 700Y-IN)	3550
<b>UPS</b>	APC 1500VA (SUA1500I)	10700
<b>Webcam</b>	Microsoft LifeCam Cinema	4300
<b>Headphones</b>	Klipsch Image S4i	3850
<b>Mousepad</b>	Razer Vespula	1700
<b>External DVD-Writer</b>	Asus/Toshiba/Buffalo	1900
<b>Sound Card</b>	ASUS Xonar Essence STX	7300
<b>USB Hub</b>	Belkin 7 port USB HUB	1000
<b>Wireless router</b>	TP-Link WR740N	1100
<b>CPU Cooler</b>	Corsair H100	7400
<b>Thermal Paste</b>	Arctic Cooling MX2	400

**In-flight internet**

United plans to offer internet on all its international flights by next year  
<http://bit.ly/uku7nC>

**Missing Assassin**

A truck containing pre-ordered editions of Assassin's Creed III disappeared in the Netherlands

# Beyond Celluloid

Technicolor has its fingers in virtually every visual technology ranging from film production to AAA gaming titles. And when we recently bumped into **Biren Ghose**, Country Head, Technicolor India, we wasted no time firing some quick questions his way. Excerpts from our interview:

Jayesh Shinde

[jayesh.shinde@thinkdigit.com](mailto:jayesh.shinde@thinkdigit.com)

## 1 What is Technicolor and what relevance does it have to the world of entertainment?

Technicolor is essentially a company that develops technologies and provides state of the art services to the creative companies. In partnership with these creators, the products of such collaboration which include movies, TV series, DVDs, games, etc., touch people's lives across the globe. Nothing enchants the common man more than the magic of Harry Potter, the thrills of a Superman or Robin Hood, the action of FIFA console games, etc. Embedded in such iconic entertainment is an array of technologies from Technicolor. This includes world-class design, authoring, media production and delivery services, animation and visual effects for motion pictures and television broadcast productions.

## 2 What is the scope of your engagement with Bollywood or Indian Cinema as a whole?

Many of the Bollywood/Indian cinema productions have utilized Technicolor's facilities in Hollywood, London, Madrid, Bangkok, Montreal, Spain, Thailand, etc., these include on-location services, post



Biren Ghose, Country Head, Technicolor India

production services, 3D services or Sound post services. In hi-end film productions, creators need a customised workforce for camera/recording/post-production efficiency, etc. Furthermore, Technicolor's leadership in Color Sciences helps in constantly reinventing the "New" look. Several facilities including 3D dailies and on-set playback are part of the company offerings.

## 3 Any interesting technology innovation that your company's working on?

Technicolor 3D is a cutting edge proprietary "production to projection" system that leverages 35mm film projectors, in use today by the majority of international theatres, to deliver a high-quality 3D presentation to moviegoers. A patent-pending lens system splits the left and right eye images as the film runs through the projector and delivers a 3D -ready image onto the silver screen. There is a need for showing 3D movies without the high

capital cost of installing digital projection equipment. So Technicolor came out with this short-term alternative to bridge the gap until the theatres can invest in digital.

## 4 Watching 3D movies in here is still a pain. Your views?

This year saw a string of 3D releases and there are more releases planned, much to the delight of audiences who have taken to the experience very well. But for experiencing the technology at its best, the theatres also need to be well equipped. Easier said than done, given the fact that showing 3D content is an expensive affair. It entails upgrading of projectors and screens to digital systems. In India, smaller theaters in particular cannot showcase these movies as they are challenged with format choice, investment and the long-term ROI of digital systems. As a better ecosystem for 3D technology builds, it will pave the way for movies with content more suited to 3D technology. This will ensure better and more customised 3D movies and thereby increase interest among the audience. In the US and Western Europe, Technicolor is already making rapid headway in leading the new digital cinema wave. This includes a satellite distribution system which simplifies operations through electronic delivery which seamlessly integrates with the theatre complex.

## 5 How's Technicolor associated with animation and gaming?

Technicolor has been part of animation history since 1932, when Disney first used Technicolor's 3-strip color process in the short animated film, *Flowers and Trees*. Technicolor provides state-of-the art 3D, CG animation for TV direct to DVD, commercials, location based films and games. Technicolor is capable of end to end productions from initial design to final completion. Our recent projects include world leading titles for world majors such as DreamWorks, Nickelodeon, Rockstar Games, EA, Square Enix, Sony, Mattel, etc. 1

## Unwind

Mankind has come close to extinction several times before. Here are those times we almost had an apocalypse

## Communications

In a post-apocalyptic world how will you communicate with the remainder of humanity without telecommunications?

We asked you for your nominations for game of the year and your response was overwhelming. Check out the post below, and also some of the other discussions taking place at [www.thinkdigit.com/facebook](http://www.thinkdigit.com/facebook)

**Digit**  
17 November

We're approaching the end of the year now and many great games have been released so far. Which game do you think is worthy of our Game Of The Year title?

Like · Comment · Share 2

Kargil Technical Institute, Harish Chandak, Rohit Kujur and 66 others like this.

View previous comments 52 of 154

**Prateek Tewari** I cant understand why we always ignore Online games?? These are the games which a whole nation called Facebook plays. Why dont you guys also make a category for it??  
17 November at 21:58 · Like

**David Kai Singson** Borderlands 2. Awesum game. And ME3 too!  
17 November at 22:00 via mobile · Like

**Varun Muley** Counter Strike : Global Offensive  
17 November at 22:01 · Like

**Pratik Mathur** COD BO 2  
17 November at 22:02 · Like

**Sumeet Thakur** PES2013  
17 November at 22:09 via mobile · Like

**Saksham Gulati** dota 2 most wanted 2012  
17 November at 22:19 via mobile · Like · 1

**Saleem Vegitto** Need For Speed Most Wanted 2012  
17 November at 22:22 · Like

**Saleem Vegitto** Assassins creed 3  
17 November at 22:22 · Like

**Swyrik Ravi** Fifa 13  
17 November at 22:22 via mobile · Like

**Swyrik Ravi** Assasins creed 3  
17 November at 22:23 via mobile · Like

**Mohit Pawar** ASSASSIN'S CREED 3  
17 November at 22:26 · Like · 1

**Mohit Pawar** ASSASSIN'S CREED 3.Best game ever by UBISOFT.  
17 November at 22:28 · Like · 3

**Nipun Kumar** as3, n cod bo2.....  
17 November at 22:41 via mobile · Like

**NOMit RawAt** Assasin's creed!  
17 November at 23:01 via mobile · Like

**Denachen Lama** cod blk ops 2..  
17 November at 23:07 via mobile · Like

GOTY voting in progress

**Tashi Falco Starset**  
My Radeon HD graphics card is not functioning. It's not even shown in Device Manager (Windows 7). When I check the card, it has become warm, but isn't working. I have ASUS motherboard with BIOS updated. In November issue of Digit, there was a solution saying that I should change between on-board and gpu card from BIOS, but I can't find that option. I have on board NVIDIA gpu. Can anyone help me? I didn't name the hardwares because I forgot the name. I think it is Radeon HD 3450. It didn't work after I installed Windows 7 with Windows XP. Help!

Like · Comment · Friday at 01:39

Saneet Fulsunder likes this.

**Saneet Fulsunder** Hi, it seems like you have selected the onboard graphics accelerator as default. This isn't any issue at all. To revert back to the external one, firstly ensure that the card is inserted in the PCI slot. Then go in BIOS settings menu. In the menu, go in advanced > video config. > primary video adaptor. There will be three options: Auto, PCIe, and PCI. Select 'auto', save changes, exit the setup and boot your computer. Your card will be recognized. Hope that was helpful. Cheers!! 😊  
22 hours ago via mobile · Like · 1

**Tashi Falco Starset** Thanks for the solution! I will try it  
22 hours ago · Like · 1

**Tashi Falco Starset** I think your BIOS and mine is different because I cannot find video Config under Advanced. I don't know which is the one to select. There are JumperFree Configuration, CPU Configuration, Chipset, Onboard Device Configuration, PCIPnP and USB Configuration. Which one to select?  
22 hours ago · Like

**Saneet Fulsunder** Follow the same procedure as was described in the magazine...and select auto.  
22 hours ago via mobile · Like · 1

**Saneet Fulsunder** or try under onboard device config, or PCIPnP  
22 hours ago via mobile · Like · 1

**Tashi Falco Starset** I tried all, no such thing as that. And thank you for your suggestions and help. I will take the PC to a shop to fix it.  
20 hours ago · Like · 1

**Saneet Fulsunder** Good luck...😊  
19 hours ago via mobile · Like · 1

Write a comment...

GPU issues

**Sanchit Bansal**  
need urgent help

laptop wanted  
budget 33k ..not more  
req - i3 or i5  
ram 2 or 4 (will expand them )  
graphic card (are intel 4000 good ? ? )  
screen 15.6  
looks :P

Like · Comment · 14 November at 18:55

Master Jammu likes this.

**Haater Jammu** gateway ne56ro21 which cost around 20,000 rupees only  
16 November at 22:06 · Like

**Ajit Singha** Roy HP Pavilion DV6-3120TX Specifications  
Processor: Dual Core Intel Core i3-370M Processor (2.4GHz)

A new laptop





## Samsung with Google

Samsung plans to introduce Smart TVs with integrated support for Google services in the coming year



## YouTube for U

YouTube's app on the new Wii U console officially went live, joining subscription-based TV service, Netflix, on the device

Community

Head over to **online communities** for some of the best discussions, buying advice and user reviews. Of course, you'll meet like-minded (and not-so-like-minded) geeks, leading to some of the most constructive arguments you'll ever have.

Get help and keep track of your gaming progress, check out some snippets below...

24-11-2012, 01:21 PM

**Arnab boss**  
In The Zone  
  
Join Date: Mar 2009  
Location: Kolkata  
Posts: 432

**Re: Your Gaming Backlog/Progress Report!**

started painkiller hell & damnation , max payne 3 and medal of honor warfighter ft...!!!  
completed nfs run 2nd time , battle field bad company 2 , sniper ghost warrior...!!!  
cant go through level 4 of painkiller without cheats...no cheats is available till yet...!!  
any cheats known for this edition would b helpful..!!

P2 x4 955 i5.e, ga800gm-usb3, corsair 8gb,msi R7770, tx650,sea 4tb+500\*2,cm690 with 7 fans 120mm,logitech g400 & k200,sony s/lhp optical drive,blue led strips ,benq g htc lv ,galaxy y pro duos, tab710 ,bb9350 ,ex115..  
canon bus,d550,sony hndyam 80gb...

---

Yesterday, 09:26 AM

**ishan99**  
Right Off the Assembly Line  
Join Date: Nov 2012  
Posts: 6

**Re: Your Gaming Backlog/Progress Report!**

Stared NFS Most wanted 2012, going to complete Saints Row The third for the 3 time.  
Thinking to buy MOH Warfighter and COD BO 2  
Also playing PES 13.....

---

Yesterday, 10:13 AM

**Tribalgeek**  
Guilt Of River  
  
Join Date: Nov 2011  
Location: Pune, Maharashtra, India  
Posts: 227

**Re: Your Gaming Backlog/Progress Report!**

Playing Assassins Creed III on Sequence 2 !! 😊👍

In the end, it's never just the light you need,  
when balance slays the demon, you'll find peace.

Your gaming progress report

20-11-2012, 11:05 PM

**Mishra08**  
Lama n roting nassaz  
  
Join Date: Dec 2008  
Location: Mumbai, India  
Posts: 736

**GPU under 4k**

1. Which Power Supply do you have? (Be EXACT while naming the company and model)  
Ans: PSP Stage II 500w (40% efficiency)
2. What is your budget?  
Ans: max 4k...can add 5k if i get any good deal...
3. Which resolution will you game at?  
Ans: i'd be using 14" CRT monitor...have played many games on 800x600, 1024x768...but not on 1312x894 Ruddy...still nfs run gives slow fps even on 900x600..my monitor is working fine now..i don't want to spend money on new hd lcd or led monitor..happy with the crt right now..will get new one once i get job next year..
4. What are your current computer specifications?  
Ans: 2nd Generation i5 2400 3.3ghz  
 Asus P8H61-M Rev2 (Intel HD1 showel)  
 4GB corsair DDR3 (3X2)  
 Onboard Intel HD Graphics 3000  
 16000' diamma case  
 500GB Hitachi HDD  
 PSP Stage II 500w (>40% efficiency)

this will be my first dedicated gpu...i'm totally noob in gpu segment...need better gpu than Intel HD Graphics 3000...games should run good enough on 1024x768 XGA resolution...i know 4-5k is not good enough to buy good gpu at all but as i will be running all games on this low resolution all games will run smoothly i guess.

have heard price to performance ratio of NVIDIA gpus are better than AMD/ATI...also heard gpu running GDDR5 even with 512MB memory gives better performance than gpu running GDDR3 with 1GB memory...

am anshu@punjab> 20-11-2012 at 10:20 PM

**My Sony Xperia P Review**

Checkbook Google+

Intel Core i5 2430 | Asus P8H61-M Rev 2 | Corsair 4GB DDR3 1600 (2028 kit) | PSP Stage II 500w | NZXT Gamma | Seagate 500 GB 7200 | Asus 14" HD 900 15.5"

What graphics card should I buy?



### ROCCAT launches Lua

ROCCAT announced their latest gaming accessory, the 3-button Lua gaming mouse from their venerable stables

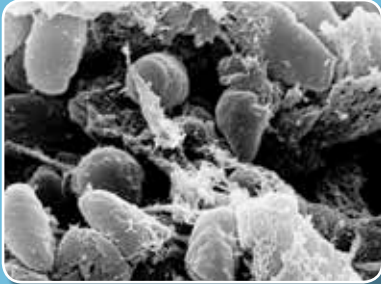


### \$1 billion in one day

Online sales on Black Friday saw a 26% increase from last year with a record revenue of \$1.042 Billion

# The world would have ended

Doomsday conspiracies aside, there have been numerous instances when we've had a really close shave with an "end-of-the-world" scenario. Here are our picks...



### Bubonic plague

A disease that wiped out a third of the world's population and most of Europe's population is a killer disease indeed. While it wasn't a zombie apocalypse (that would have been fun), the chaos that ensued was almost as bad. Witches burned at stakes, crosses carved on doors. People literally thought that all hell broke loose.

### World War II

The greatest war in history and an inspiration of an endless stream of video games. This was the most destructive war and almost brought the entire world economy to its knees. If the war hadn't finished when it did, we would have probably wiped ourselves off the face of the Earth. Another war like that, we really will wipe ourselves out.



### 50 cents to destruction

When a computer in NORAD tells you that there are 220 nuclear missiles headed for you, you know that the proverbial s\*\*\* has hit the fan. It was only after bombers were scrambled that someone realized that there were no missiles on radar and the alert was cancelled. It turns out, a 50 cent chip malfunctioned, resulting in the ensuing panic.



### Research that kills

January 25th, 1995 was the day that Russia almost wiped out the US (and the world in the long run). A research rocket was launched from Norway that day and for whatever reason, the Russians didn't get the message in time. Assuming it to be a nuclear missile, the Russian premiere had only 10 minutes in which to decide the fate of the world.

### A massive flyby

We escaped annihilation by just 6 hours on March 22, 1989. An asteroid with an impact power of a 600 megaton bomb missed the Earth by barely 6 hours. When did we learn of its existence? Nine days after it passed us by. Fortunately for us, this state of affairs hasn't continued and we can now be assured ample warning if an event like this occurs again.



### The Super Volcano

74,000 years ago, a volcano erupted in Sumatra that almost resulted in the end of the world. An explosion so powerful that it ripped a 100km diameter crater in the Earth's crust and even plunged it into a volcanic winter for almost a decade. It is rumoured that the volcano single-handedly bottlenecked the human race's evolution at the time.

## Plantronics wins big at CES 2013

Plantronics won multiple awards (six) for the fifth consecutive year at the CES 2013 Innovations Design and Engineering Awards



## Survivor video-game

Bigben Interactive launched a video-game for Android, iOS and Nintendo 3DS devices, based on the hit television show

Unwind

## How we unwind



### Of bins and balls

When Raaabo discovered that we had a pile of aluminium foil left over there was only one thing to be done with it. Crush it into a ball, wrap it in some tape, commandeer a couple of dustbins and extricate some of his "boys" from their "hard" work and make them play a game of throw-the-ball-in-the-bin with him. The winner? Raaabo. But (in a hushed whisper), we let him win!

### Karaoke nights

When we discovered a pair of speakers that we received had come with a mic and that karaoke was a possibility, all hell broke loose. Sid and Jayesh hunted out tracks on YouTube and proceeded to unleash their aural prowess for all to hear. We would have preferred a screaming banshee to the hideous cacophony that followed, but we had fun nevertheless. Our ear drums are still ringing though.



### Steam sales

Jayesh and Anirudh always work with one eye fixed on the Steam store. When Steam announced their Autumn sales, both of them went ballistic, buying games left and right and adding to their ever growing collection. Now both of them are struggling through the month, bank accounts considerably depleted but gaming library richer by at least half a dozen games each.

## digit DIARY

We are a weird bunch at Digit. As the work increases, normal people lose their cool, blow their top, break down in tears or just switch to zombie mode. At Digit, we seem to have an inbuilt safety device, a failsafe that ensures we don't blow a blood vessel or die of heart failure. We start targeting hapless individuals and start "taking their case." Manish, our new intern, was one such hapless victim and Jayesh in particular was drawn to him (or vice versa as Manish would say). Jayesh, after hours spent staring bleary-eyed at a computer screen would suddenly look up, point to Manish and in a deep, resonating voice (not unlike Gandalf's at the Balrog) utter, "Come hither young one!", envelop him in a capacious grip and hold him with a glittering eye before proceeding to (imperiously) interrogate him on every topic under the sun. The merciless bunch that we are, we would all drop our work and gather around to watch, and even participate in, the "fun." It is a form of stress relief after all. We just hope that the poor lamb (Manish) hasn't been scarred for life. In other news, Spandan left us this month. It wasn't easy though, we will have our price and Spandan had to promise us some fresh minions before we set him free.



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## 300 sites hacked in Pakistan

A Turkish hacker group Eboz took down local Pakistani versions of almost 300 websites, including big names like Google and Apple



## Nexus 7 3G gets Android 4.2

Nexus 7 3G users got their first chance to use the Android 4.2 OS, courtesy a custom mod by MoDaCo ROMv

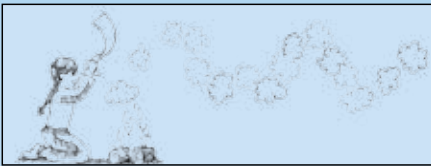
# Communication skills

In a post-apocalyptic world if you are the only group of humans littered across the globe, how will you communicate? What is the best way to communicate, spread the word?

**W**hat if the world does end this month and you are one of the select groups of survivors tasked with reviving the entire planet? How would you communicate with the rest of the world, or even with the next town? Something like a nuclear war would be sure to wipe out most of the electronic means of communication. Here is a rundown of our previous attempts at efficient communication.

## Smoke signals

Smoke signals or fires and other such beacons were the norm in the prehistoric era. Setting up such a signal couldn't be easier. Set something on fire, preferably damp wood and let



the smoke tell the tale. Unfortunately, in most disaster scenarios there will probably be so much smoke and fire that the whole idea will be rendered useless.

## Snail mail

This is still a very reliable method of communication right now, especially in countries such as ours. In an apocalyptic situation however, there will be no courier or mail system and you can't just hope to



drop some mail into the mailbox. Who knows we'll probably establish some rudimentary mail system after the apocalypse. Have runners, people tough enough to brave the dangers of the big bad world for a fee.

## Pigeons

Carrier pigeons were used around the 5th century BC, but unless you have an established base, carrying around an entourage of pigeons might not be such a good idea. Also, crows would probably have a better chance of surviving in any case; and what's to stop ravenous humans (and other animals) making mince-meat of your precious birds?



## Heliograph

Invented around 490 BC, these have been in use for literally thousands of years and have been standard army issue in certain armed forces as recently as 1975. It is a very simple apparatus that reflects sunlight and has a shutter mechanism to control the flashes. Such a robust device will find a place for itself in the aftermath of an apocalypse. Of course you don't necessarily need a full-fledged heliograph, a simple mirror will do.



## Signal lamps

Similar to the heliograph in operation, these are nothing more than lamps with shutters; excellent for night time communication.



## Semaphore code

This is a very simple visual code that can be transmitted via flags. In fact, it was in the 1800s that the French established semaphore-lines during the war with Austria and it was quite an efficient system. While this system

has its merits as a signalling system, the standard code will probably not be recognized by many. Of course, you can easily establish your own private lines of communication and code if you so feel like. You've got a chance to rebuild the world after all and this might be a good idea once some semblance of civilization is re-established.



## Trumpets and drums

All those drummers and trumpeters that you've seen in war movies and even Lord of the Rings for that matter aren't just for show. Those men were an essential part of the communication system during a battle and when you rally your fellow humans against the zombie horde, this might be the fastest means of communication available to you.



## Radio

These devices (and their battery chargers) will probably be worth their weight in gold once the apocalypse strikes. Radio transceivers might be the only means of modern communication that actually survives an apocalypse, given that each device is a self-contained apparatus and everything from communication to triangulation and tracking can be achieved with these devices. Make sure you stock up on these. 📻



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