
Price ₹150
BAZAAR HIGHLIGHTS
Iomega MX HD
Canon SX30IS
Creative ZiiSound D5
Dell Inspiron M501R
A 9.9 Media Publication
digit
YOUR TECHNOLOGY NAVI
HINKDIGIT.COM | VOL.11 ISSUE 04
Subscriber copy not for sale
GNOME 3: A first look
+
News from CeBIT
BUILD
A MULTI-BOOT PEN DRIVE
LEARN
THE WEIRDEST CODING LANGUAGES
COMPARE
SECURITY SUITES TESTED
PLAY
THE TOP 5 IPAD GAMES
ARE YOU (IN)SECURE?
AN IN-DEPTH LOOK AT HOW SECURE YOU, YOUR DATA AND YOUR MONEY REALLY ARE TODAY
IS ANDROID SECURE?
SECURITY THREATS YOU SHOULD KNOW ABOUT
WEB SITE HACKING – HOW EASY IS IT?
CYBER CRIME'S MOST (IN)FAMOUS
SECURITY COMPANIES: THE FUTURE
HOW SECURE ARE THE LATEST BROWSERS?
ANDROID AHOY!
25+ ANDROID PHONES TESTED
WHICH ONE SHOULD YOU BUY?
WORLD VIEW
THE BEST TECH ARTICLES FROM AROUND THE GLOBE
Tips & Tricks: Ubuntu 10.10, Maya 2011, Pidgin and more... | Agent001: Graphics cards

HIT **PRINT**
INTELLIGENTLY

The Mono
HP LaserJet AiO
PAYS
for **ITSELF** *in 2 months.*

After that,
it PAYS YOUR **BUSINESS.**



HP LaserJet M1536dnf MFP. MRP Rs. 24999/-
Print, Scan, Copy, Fax, Network – 5 in 1 printer.

- Print speed up to 26ppm. 128 MB RAM, 500 MHz Processor
- Automatic two sided printing (Duplex)
- 35 page ADF, Flatbed scanner with 1200 dpi Optical resolution
- 1 year Onsite warranty.

Energy Saving Features:
Save upto 3 times energy with HP Auto ON/Off and upto 4 times with Instant ON/copy technology.

When was the last time you bought something for your business that actually paid for itself? As the leader in business printing, HP has developed the only printing device your office will need. The mono **HP LaserJet AiO** prints crisp text and sharp images at high speeds while enabling you to save on energy, maintenance, resources and office space. Invest in HP LaserJet. It pays you back.*

Phone 1800 425 4999 (toll-free)
or 3030 4499 (from mobile prefix your STD code)
Visit www.hp.com/in/paysyouback
SMS 'LASER' to 56070

HP LaserJets Search

BBDO INDIA/HP/IPG/465/10

Discover value in your old printer with
HP LASERJET BUY BACK OFFER
Visit: www.hp.com/in/laserjetbuyback for more information.
T & C apply. Offer valid till 30th April 2011. Claims must be received by 30th May 2011.

REPLACE | RECYCLE | REWARD
YOUR OLD PRINTER — TO CREATE A GREENER WORLD — SAVE MORE

©2010 Hewlett Packard Development Company, L.P. *The calculations are based on comparison between retail price of HP LaserJet M1536 DNF AiO and dollarized monthly median savings of consolidating single function or competitive AiO printing, copying, faxing and scanning devices into HP LaserJet M1536 DNF AiO Laser printers, as reported by AsiaInsights, a study commissioned by HP in 2009 of 40 small medium businesses of various ownership and profiles in Singapore and Shanghai. Above return is based on 10 SMBs (10-20 employees from Singapore), for details: www.hp.com/in/paysyouback

The devils of tomorrow

Over the past decade, I've noticed a trend of sorts. Between 2001 and 2006, a majority of the mail we received from readers was virus troubleshooting in nature. Those were the days when almost everyone was running Windows 98 or XP, and we always seemed to find new and interesting ways of screwing things up. Using computers was always a frustrating experience, but we learned from it.

However, in the past three to four years at Digit – although the actual volume of email we receive has gone up by orders of magnitudes – we've noted a rapid decline in troubleshooting emails. It's mostly about "What should I buy?" these days. Are PC problems a thing of the past? Has the security software out there just got better, or is it the Windows OS? Perhaps the malware makers have all given up...

I remember slip-streaming an antivirus and spyware software into my installer copy of XP, because I knew sooner or later I'd need to format, and I didn't want to be unprotected for even five minutes on a network or the internet. These days, it's quite a different story. Windows 7 is one of the most secure OSes Microsoft has ever put out, and the free Microsoft Security Essentials (MSE) just sweetens the deal.

I'm not running about anymore looking to download a firewall, or desperate to keep my anti-spyware program updated, or ensuring that I have a USB drive with HiJackThis and Process Explorer on it. Of course I still have anti-virus software (I'm not stupid) – a free version at home and a company-paid-for version at work. Thanks to more secure browsers, I don't worry too much about malicious sites, and because I own a smart phone, I spend more time trying out apps than I do looking for new software for my PC.

Am I the exception or the norm?

In a country where mobile penetration is magnitudes higher than PC penetration, and smartphone sales are skyrocketing, I think I'm the norm. In this mobile age, are we really more secure than we were a decade ago? The stories in this issue stem from this question.

The most common mistake we make is to assume that because there are only a handful of mobile malware as opposed to millions for the PC platform, our mobiles are safe. What we're experiencing right now is the calm before the storm – with OSes such as Android becoming popular and apps coming out by the thousands, expect this to change. In fact, in one of the stories in this issue you will be introduced to some malware that already targets the Android platform. Sure, they don't really do much damage right now, but wait and watch.

What will be instrumental in changing mobile security is the huge upheaval that's coming in mobile processing – thanks to brand new system-on-a-chip (SoC) designs, we're going to have mobiles that will be powerful enough to play HD videos and 3D games using multi-core parallel processing, and also bring more functions of the traditional PC to your phone. All this processing power will obviously bring smarter OSes, and as a result, smarter and more powerful malware. Read the article on SoC in this issue for more details.

Will companies be shifting focus away from desktop security suites for end users soon? Are paid security suites for home users are just dying a slow death because of free software such as MSE? We interviewed a few security companies to get their take.

Security companies and desktop OS makers alike are now battle-hardened veterans, and we users are no different. The truth is that we've gotten so good at tackling PC viruses, that we don't fear them as much anymore. Yet we never think about securing the other devices we use, which probably have a lot more personal information than our PCs. This is what needs to change – rapidly.

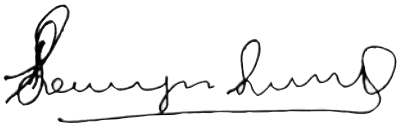
With 3G, many more of us will be always-on, and from anywhere, using devices that thus far aren't thought of as insecure. If we aren't careful, we'll end up being as flabbergasted as the ARPANET scientists were when they discovered the very first virus, back in 1971.

The devils you know might be easier to deal with, but it's the ones you don't that will dictate how secure you are tomorrow.



Robert Sovereign-Smith
Executive Editor
editor@thinkdigit.com

"The most common mistake we make is to assume that because there are only a handful of mobile malware as opposed to millions for the PC platform, our mobiles are safe"



Liked or hated the views in this column? Write in to me and express your own opinions and ideas.

APRIL 2011 VOLUME 11 \ ISSUE 04

Contents

QUICK NAVIGATOR

008 **ENTER**
Inbox
Buzz

018 **CONNECTIONS**
Web Watch
Mobile Watch

026 **DIGITAL LIFE**
Droolmaal
Android Really
Web Hacking
Cyber Criminals
Security Threats you should know about

046 **TRIED & TESTED**
Andoid Phones
Security Suites
Bazaar

075 **TOOLBOX**
Tips & Tricks
Q&A
DIY

088 **SCI-TECH**
How Stuff Works
World View

097 **STREET SMART**
Consumer Protection Agent 001

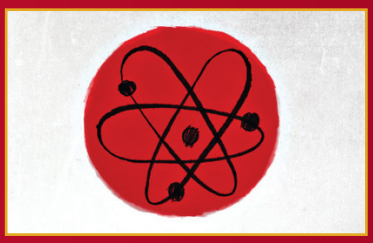
108 **TECH @ WORK**
Networking
Developer Corner

112 **ESC**
Unwind
SKOAR!
Digit 101



042 **SECURITY THREATS YOU SHOULD KNOW ABOUT**
Find out about the top security holes, lurking around to get your data, money and life!

93 **World View**
This time we bring you the best from ARS Technica and tell you if there is a cure for bad apps!



TRIED & TESTED



066 **CANON SX30IS**
High quality ultra zoom



067 **DELL INSPIRON M501R**
Quad-Core power on a budget



068 **CREATIVE ZIISOUND D5**
Wireless freedom but sound could have been better



26 Droolmaal

A look at some of the most droolworthy stuff!

088 How stuff works

Lucid Hydra - Run an AMD as well as an NVIDIA card off the same motherboard

028 Android Really?

We take a closer look at the murky realities surrounding Android's security

115



Bulletstorm Review

Is this reinvention of the FPS genre? Find out what we have to say



116

Best Games for iPad

Our pick of the top five iPad-based iOS games.



CRYSIS 2 MULTIPLAYER DEMO

ON THE DVD

ALPHA

Security Suites
Ad-Aware Total Security
avast! Internet Security 6
Avira Premium Security
eScan Internet Security Suite
Kaspersky PURE
K7
Norton 360
Trend Micro Titanium
Quick Heal Total Security

TREND MICRO TITANIUM INTERNET SECURITY THAT WON'T SLOW YOU DOWN

Desktop tools
3RVX
Anime Icon Pack
AutoHotkey
AutoTurnOff 6

Mac Tools
Burn 2.9u Pre
FairMount 1.1
iShowU 1.87
MacTheRipper 2.6
Mount Me! X 2.0.5a
Quicksilver 1.0 Beta

Gaming
Crysis 2 Demo
Dungeons Demo
CheatBook DataBase 2011
CS: Source Silver Skin Pack
GArena Launcher

Linux
AcetoneISO 6.7 Advance
Albus 0.12
Allegro Sprite Editor 0.7
amaroK 2.4

OMEGA

Design tools
Advanced Effect Maker
aXmag Free
Craft Director Studio
DynamicFactory
Flash in a Shell
Flash Manager
Flash Slideshow Maker
Font Xplorer

Learn Python programming
Installing Python
Numbers and Math
Variables
Modules and Functions
How to Save Your Programs

Play
Dragon Age 2 Demo
Cities in Motion
Dragon Ball Arcade
Little Fighter II
Orbiter 2010

Enjoy game trailers
Forsaken World
Prototype 2!
Castlevania: Lords of Shadow
BeatBooster
WWE All-Stars



Movie Trailers
Hanna
The Lincoln Lawyer
Bad Teacher
Conan the Barbarian





070 SAMSUNG S8530 WAVE-II
A bigger and better Wave



071 ASUS N53JQ
A complete entertainment powerhouse

digit
thinkdigit.com

Managing Director
Dr Pramath Raj Sinha

Printer and Publisher
Kanak Ghosh

Publishing Director
Asheesh Gupta

Editorial
Executive Editor **Robert Sovereign-Smith**
Contributing Editor **Ahmed Shaikh**
Online Editor **Soham Raninga**
Head - Copy Desk **Nash David**
Technology Writers **Siddharth Parwatay, Kshitij Sobti, Abhinav Lal**
Multimedia Co-ordinator **Sambhav Daffu**
Contributing writers **Anoop Verma, Hanu Prateek K, Nishith Rastogi, Rahil Banthia, Vaibhav Kaushal, Vishweshwar Jatain**

Test Centre
Manager (Delhi) **Michael Browne**
Reviewers **Nimish Sawant, Vinod Yalburgi, Vishal Mathur**
Product Co-ordinator **Shweta Mali**
Assistant **Vikas Patil**

Design
Sr Creative Director **Jayan Narayanan**
Art Director **Binesh Sreedharan**
Associate Art Director **Anil VK**
Sr Visualisers **PC Anoop**
Sr Designers **Prasanth TR, Anil T, Joffy Jose, Anoop Verma, NV Baiju, Chander Dange, Vinod Shinde**
Designer **Sristi Maurya, Suneesh K, Shigil N, Charu Dwivedi**
Chief Photographer **Subhojit Paul**
Sr Photographer **Jiten Gandhi**

Production and Logistics
Sr GM - Operations **Shivshankar Hiremath**
Manager Operations **Rakesh Upadhyay**
Asst Production Manager **Vilas Mhatre**
Asst Mgr **Vijay Menon**
Mgmt Trainee **Omkar Tarde**
Executives **M P Singh, Mohd. Nadeem Ansari**

Brand
Product Mgr **Abhishek Poddar, Prachee Banthia**
Mgr - Online Shauvik Kumar
Mgr - Product Marketing **Chandan Singh**
Co-ordinator / Scheduling **Kishan Singh**

Circulation Sales
National Co-ordinator **Samir Mehta**
Regional Mgrs **Jayanta Bhattacharyya, Norbert Joseph**
Executive **Vijay Mhatre**

Reader Services
Lead Associate **Sourabha**
Executives **Itishree, Pinky, Sudhir, Sufiyan**
+91-22-678 99 678 / help@thinkdigit.com

Community Advisory Council
Ejaz Ashraf, Mayur Gaikwad, Bhuveneshwar Gupta, Prashant Joshi, Romin Joshi, Natraj Kadur, Rohan Mathew, Amitabh Mishra, Abhineet Mittal, Dev Mukerjee, Anuvrat Parashar, Dipankar Saha, Dilip Sanghvi, Suvra Sarkar, Arun Sriraman

Cover design **Anoop PC**

TO ADVERTISE

VP, Sales & Marketing:
Naveen Chand Singh
Mobile: **+91-99717 94688**
Email: **sales@thinkdigit.com**

Regional Manager (North):
Lalit Arun, Mobile: **+91-95822 62959**
Regional Manager (South, West, East):
Vinodh Kaliappan, Mobile: **+91-97407 14817**
Manager (Delhi):
Debleena Majumdar, Mobile: **+91-98101 19492**
Manager (Bangalore):
Ram Sarangi, Mobile: **+91-98864 06961**
Manager (Mumbai):
Sameer Gore, Mobile: **+91-99209 93737**
Manager (Pune):
Suvarna S, Mobile: **+91-93249 28247**
Manager (Kolkata):
Jayanta Bhattacharyya, Mobile: **+91-93318 29284**

AD INDEX

Brand	Page No
Asia Powercom	120
Asus	83, 87
Bajaj	21
Base	33
Dell	13
DSK SuperInfo	39
e-Scan	35
ESET	63
HP	IFC
HTC	17
iBall	9, 47
K7	IBC
Kaspersky	BC
Kingston	24, 25
LG	5
Net Gear	43
Net Protector	109
NVIDIA	23
Panda Security	45
Quick Heal	61
Ricoh	7
Safenet	113
Scrum	51
Symantec	31
Top Gun	19
Trend Micro	11
Zyxel	37

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, Rable, Navi Mumbai 400701.
Editor: Anuradha Das Mathur

PRODUCTS REVIEWED

Bazaar
Acer Liquid Metal
ADATA S599
ASUS N53Jq
Boston GP 1120 Server
Canon imageCLASS MF4412
Canon SX301IS
Creative ZiiSound D5
D-Link My Pocket Router
Dell Inspiron M501R
Imation Defender H200+Bio
Iomega ScreenPlay MX
Linksys E1000
LinksysWUSB600N
MSI GT663R
Palit GTX 560Ti Sonic
Platronics K100
Portronics Scanny2
Reliance Digital TV HD DVR
Ricoh SP C232SF
Samsung CLX-3186FN
Samsung HD204UI 2TB
Samsung HM100UI 1TB
Samsung S8530 Wave II
Samsung SCX-3200
Sennheiser HD800
WD Caviar Blue 500GB
WD Scorpio Black WD7500BPKT
WD Scorpio Blue 750 GB

Security suite comparison test
Avast Internet Security
AVG Internet Security 2011
Avira Premium Security Suite
BitDefender Total Security 2011
eScan Total Security 2011
ESET Smart Security 4
F Secure Internet Security 2011
G Data TotalCare 2011
India Antivirus Net Protector 2011
K7 Ultimate Security 2011
Kaspersky PURE
McAfee Total Security 2011
Norton 360
Panda Global Protection 2011
Quick Heal Total 2011
Trend Micro Titanium 2011
TrustPort Total Protection 2011

Android Phone comparison test
Acer Liquid Metal

Dell Streak	Motorola Flipout
Dell Venue	Motorola Milestone XT720
HTC Desire	Motorola Milestone XT800
HTC Desire HD	Motorola QUENCH XT5
HTC Desire Z	Samsung Galaxy 551
HTC Legend	Samsung Galaxy Fit
HTC Wildfire	Samsung i9000 Galaxy S
Huawei U8150	SE XPERIA X10 Mini
LG Optimus P500	SE XPERIA X10 Mini Pro
Micromax A60	SE XPERIA X10i
Motorola Charm	SE XPERIA X8
Motorola Defy	Videocon Zeus V7500

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.

LG
Life's Good

So stylish we put it on a pedestal.

Presenting the slim and sleek
E-60 LED monitor series from LG.



There are monitors and then there's the E-60 series. The new range of 12.9mm thin Full HD monitors that come packed with newage features like LED backlight display, mega contrast ratio, response time of just 5ms and a lot more. All of which come mounted on a stunning clear and moderated transparent neck with cool lights. Get one to get noticed.

SUPER LED | MEGA CONTRAST RATIO | SUPER slim | FULLHD Native Resolution | Energy Saving | STYLISH Design

Life's Good when your experience is extraordinary

LG 24 x 7 CALL CENTER

CALL 1800-180-9999 (Toll Free) | SMS 5757554 (Send SMS) | CLICK www.lg.com serviceindia@lge.com | www.facebook.com/lifesgoodpage www.twitter.com/LGIndiaTweets

To know more about LG, visit www.lg.com
For Corporate/ Institutional enquiries, please write to enquiries@lgindia.com

Regd. Office: LG Electronics India Pvt. Ltd., Plot No. 51, Udyog Vihar, Surajpur Kasna Road, Greater Noida-201 306, U.P.

Rediffusion-Y&R/Del/LG/IT/753

Contact us



Tell us what you feel about Digit
If you have an opinion about anything published in Digit, or about technology in general, write to **editor@thinkdigit.com** or call at **+91-22-678 99 700.** To interact with the authors of specific articles, please write to the email address specified under the author's name



Software on the DVDs
To submit and suggest software or any other type of content, to be included in the Digit DVDs, write to **dvd@thinkdigit.com** or call **+91-22-678 99 707**



Q&A
If you're having trouble with your PC or a gadget, our experts can help solve your problems. Just write in to **sos@thinkdigit.**com. Remember to include full system configurations in your email.



Agent001
Our very own secret agent will give you the low down on what to buy, from where, and for how much. Send in all your buying advice questions to the coolest agent ever. Write to **agent001@thinkdigit.com**



Help!
For copy-related issues, delivery status, or any other complaints regarding out service, write to **help@thinkdigit.com** or call **+91-22-678 99 678**



Subscribe
Want to subscribe to India's #1 Technology Magazine? You should, because we have exciting offers for everyone, and you save money in the bargain. SMS: **<DIGIT SUB> to 92200 92200** or visit **www.thinkdigit.com/subscribe**



Product testing
Want your product reviewed by Digit? Contact our Test Center at **testcenter@thinkdigit.com** or call **+91-22-678 99 708**



News and new product launches
To announce new product launches, and press releases, email us at **pressrelease@thinkdigit.com**



Endorsements / reprints
Interested in ordering article reprints, or using our logos? Get the requisite permissions by contacting us at **reprint@thinkdigit.com**



Business enquiries
Think we can help you grow your business, or maybe you can help us grow ours? Get in touch with us at **business@thinkdigit.com**



Careers
Want to work for Digit? Send us your resume at **careers@thinkdigit.com**



Sponsorship
Want Digit to sponsor your Tech-Event? Send your proposal to **sponsor@thinkdigit.com**

Interact with Team Digit

twitter
thinkdigit.com/twitter

facebook
thinkdigit.com/facebook

YouTube
thinkdigit.com/youtube

thinkdigit Forum
thinkdigit.com/forum

Digit Facebook Pages

Join the group that suits your need!

http://www.facebook.com/thinkdigit
Your favourite magazine on your favourite social network. Interact with thousands of Digit readers and have some geeky fun!



http://www.facebook.com/techkranti
Let's wake ourselves up and gather the tools of tech to change the future of our great nation. Join The Revolution!



http://www.facebook.com/IThinkGadgets
Community of People who love mobiles, laptops, cameras & other gadgets

http://www.facebook.com/consumermate
Expert buying advice and some awesome offers



http://www.facebook.com/gladtobeaprogrammer
Community of software programmers who enjoy writing code and want to grow their career in software development



CAN YOU READ & WRITE?

If you're interested in a career in technology media, send your CV to editor@thinkdigit.com.

We're looking for:
- Technology Writers
- Test Centre Reviewers
- Freelance Writers

RICOH

Productivity partners for SMBs & small workgroups.

Ricoh's wide range of network-ready laser printers help small businesses and workgroups become more productive. When you are looking to address your customers' varied printing requirements, do remember that Ricoh has the right laser printer for every need.

- Affordable and compact mono & colour MFPs
- Ultra-fast and cost-efficient mono & colour laser printers

Register with us now and be part of an exciting scheme during February-March 2011. For more information, contact us at details given below.



Aficio SP C220N | Aficio SP 1100SF | Aficio SP 3400N | Aficio SP C232SF

Besides the models shown above, you can choose from a wide range of laser printers & A4 MFPs, from 16 to 35 ppm



RICOH INDIA LIMITED: Tel: 011-41613010-18 Fax: 011-41612221/ 3019 Email: ril.info@ricoh.co.in SMS: 'RICOH' to 53456 Website: www.ricoh.co.in
BRANCH/ AREA OFFICES: Ahmedabad: (079) 26582883, 26577143, 26588709, 26586905; Bangalore: (080) 41477620/21, 22248829/30; Bhopal: (0755) 2554329; Bhubaneshwar: (0674) 3297977; Chandigarh: (0172) 4312000-26; Chennai: (044) 28246300/01; Coimbatore: (0422) 2482016, 2493948, 2496276/535; Kochi: (0484) 2353997; Delhi: (011) 41731860-65, 23317191; Guwahati: (0361) 2543591/ 2635311; Hyderabad: (040) 44763444; Jaipur: (0141) 2709756, 2707028; Kolkata:(033) 22488641/42; Lucknow: (0522) 2239176/89, 2237381; Mumbai: (022) 67032090-94, 22881953-55; Nagpur: (0712) 2447026/29; Patna: (0612) 2222830, 2201490; Pune: (020) 30580158-60; Ranchi: (0651) 2331426/069, 2203162; Visakhapatnam: (0891) 2754968, 2553466

✉ I am an avid reader of digit. I am pursuing a B.Tech. in Electrical and Electronics Engineering at NIT Jamshedpur. Most of my friends here wonder why I took Electrical Department when I was so much interested in Computers and IT and when I possess a bit more knowledge in Computers than most of them. I am wont to answer that its all due to digit, and as I dream of becoming a VLSI Chip Designer(motivated by one of the tech-career articles on Chip Designing in Digit), I took that branch of engineering. So, I want to thank all you guys over there. I am very impressed by the improvements you've brought in you magazine and site of late, particularly by the green and social innovations that you tried on. This is my first letter to you as I felt the need to thank you all for your great job. This month I was particularly impressed by the cover feature, "Secrets of Social Networking" and the world-view section. Keep up the good job.

- Ashutosh Karna

d We're happy to know that one of our articles guided you to a career that you will enjoy working in. Since a lot of our readers are young students on the crossroads of their careers, making wise choices is very important. This is why we try to be especially thorough and in depth with our Tech Career articles and will continue to do so. Thank you for all the words of encouragement. Its always a good feeling when readers notice improvements, big or small.

- Siddharth

✉ I am an avid fan of Digit, and it has been the primary source of my tech knowledge for a long time. I am doing Second Year Diploma in Computer Technology. As I am a Digit reader, playing around with the system is in my genes. When I was in 7-8th standard I started learning programming and now I have a host of skills under my belt! I've learnt VB.net, Photoshop, Flash, HTML, JavaScript, and more on my own! Last summer, I had developed a program called "SortIt!" and sent it to you. It was also put on the July DVD of Digit. I received a huge response from all the Digit readers, which encouraged me to develop SortIt!2.0 during these winter holidays. It has several new and innovative features added over the previous version.



SSD *NOW* IN ACTION

Solid-state-drive (SSD) is the new buzz word in the storage market. SSDs are all-ready to replace HDDs, given the technology SSDs use. Watch the **SSD *Now* in Action** in the Omega DVD and visit bit.ly/ssdaction to win 20 Limited Edition USB Drives, Kingston Vogue.

I request you to please try it and if you feel it is good, please include it on CD/DVD. It will be great news for all those Digitians who liked SortIt1.0!

- Aditya Medhe (Nasik)

d First of all readers such as yourself make us proud. It's nice to know readers get hooked on to something worthwhile through our efforts. We'll be sure to try the application and include it in next month's DVD.

- Sambhav

✉ I am big fan of your magazine and hope you continue doing good work. I absolutely love your new World View section - the links, the crossword - are absolutely great! I have a few suggestions – can you do a review on the amazing new Dell Inspiron Duo? Also, I want to suggest you to change your old DVD interface and also to publish a Fastrack on "Tablets" or "Advanced PHP".

- Palash Golecha

d Thanks for writing in Palash. The premise behind World View was to give our readers a global perspective on technology and judging by the response we've received so far, you guys seem to like it a lot. The links are all articles and interesting titbits that members of Team Digit have read and liked through the month. Now let me address your suggestions one-by-one. The netbook tablet hybrid, Dell Inspiron Duo, has not yet launched in India. We called up Dell and they've told us that it should be launched here sometime post June. Meanwhile, we'll try to see if we can sneak the device into our Test Center through some other route. A full revamp of the DVD interface is already in the works and it's going

Pure Class!

The most expensive wireless keyboard(with touchpad) for laptop users.

Only for those who look for class!

iball

Your eyeball view.
Our technology new.



6mm Thin Design

2.4GHz Wireless Connection

Built-in Touch Pad

Re-chargeable battery

Li'l Wonder

2.4GHz WIRELESS

www.iBall.co.in| Over 19 million iBall products sold

Best IT World (India) Pvt. Ltd.: Email: sales@iball.co.in **Mumbai -** 022 - 6774 5100 / 3081 5100 / 9820723393, **Ahmedabad -** 079-2743 6373, **Bangalore -** 080-4124 3646, **Bhubaneshawar -** 0674- 329 7372, **Cochin -** 0484- 232 4706, **Chennai -** 044- 4216 8561, **Dehradun -** 0135- 324 4481, **Guwahati -** 094357 31463, **Goa -** 094036 63304, **Hubli -** 0836- 425 7375, **Haryana / Himachal -** 87500 76813, **Indore -** 0731- 404 2509, **Jaipur -** 0141- 313 0340, **Kolkata -** 098301 13980, **New Delhi -** 011- 3088 5088, **Lucknow -** 0522- 400 5840, **Ludhiana -** 0161 - 441 2099, **Nagpur -** 0712-325 3811, **Nashik -** 095526 04485, **Pune -** 093723 37752, **Patna -** 0612- 326 0947, **Raipur -** 0771- 329 3674, **Ranchi -** 0651- 324 4199, **Secunderabad -** 040- 2789 4847.

Don't drink and drive
US Senators are trying to take action against distributing apps that let drunk-drivers avoid police checkpoints

www.instantpiechart.com
Ever wanted a pie chart quickly without firing up the old spreadsheet application? This web app is you answer. Make beautiful pie charts in a jiffy

to include some great surprises, so keep a lookout. A Fast Track on Tablets is a very good idea, however an Advanced PHP Fast-track would be too niche and only a fraction of readers would really appreciate it.

- Robert

✉ Digit is an exceptional Tech Magazine, unfortunately I got to know about it very late when I'm in my second year graduation. Reading issues now, I often think about what I've missed so far and dream of having all the issues till date. I want to purchase the whole bunch of Digit issues. So, if you could help me out with this or suggest a way I'll be very happy.

- Abhishek Natraj

d You can purchase older issues online at the thinkdigit store. I would recommend registering on our forum – www.thinkdigit.com/forum – and trying your luck there. Many forum members have old issues that they would like to sell or giveaway.

- Robert

✉ I grabbed Digit's march issue just before a train ride from Delhi to Bangalore where I am presently, attending conf.kde.in at RV College of Engineering. The 36 hour long journey (read more at http://bit.ly/fymd1X #blog) was obviously hectic and since I thought sleeper class would be good enough in the spring season there was no electricity to charge my laptop. Having Digit with me, naturally, helped me pass considerable time.



CAN YOU READ & WRITE?

If you're interested in a career in technology media, send your CV to editor@thinkdigit.com.

We're looking for:
- Technology Writers
- Test Centre Reviewers
- Freelance Writers

When I saw Digit's march issue I didn't have many expectations. I mean the issue was about social networking. How interesting could it ever get? But when I started reading, I was impressed. I realised that its not just the "technical stuff" of Digit that has something to teach me, I have a lot to learn from the style of writing too.(I started writing for my college's weekly newspaper). For example, the article on 3G Social Superstar and the one on security had a catchy start.

The DIY on spying was really awesome. When I come across such simple and cool tricks, I am like "why didn't I think of it before!". Although I was a little disappointed to know that most Digit readers are not comfortable with using Soldering Iron and low level electronic stuff, I was pleased with the incredible way in which Team Digit overcame the barrier. Apart from the amazing World View section, what I found fascinating were the short snippets on top of every page. I know they have been there for quite some time now but I didn't ever have enough leisure time to go through them. Its like every time I reluctantly opened the magazine after having read each article, there was still something new, hidden somewhere.

It was an excellent issue guys again needless to say keep the good work going :)

P.S : While I was planning my trip to Bangalore I was extremely tempted to halt at Mumbai and meet the Digit Team too apart from visiting my relatives there. But, one can't have everything... Perhaps next time :)

- Anuvrat Parashar

d Always good to hear from one of our Reader Community Advisory Council members. Thanks for the feedback. Drop by anytime you're in Mumbai, we'd love to give you the two minute tour and talk some tech.

- Robert

LETTER OF THE MONTH

✉ I have been reading Digit for almost an year and a half now, buying newstand copies with my pocket-money and finally, yes, I'm a proud subscriber! Now, I'm sure you guys must be bored, reading the same blah blah blah good things about your magazine. So I'm skipping that part and coming straight to the point. I'm a techgeek since class VI. In this long period of time, I've learned a lot about computers and also helped others learn. But, I've also seen many people, my friends, school teachers, relatives, who in spite of being computer literate on the software front and maybe even have theoretical knowledge about hardware, always shriek when a PC malfunctions. All they do is rush to call a local computer technician, who charges high fees, even for an extremely small glitch (in most cases improper OS settings, and also hardware problems like dust accumulation).

Since, you guys aim to educate people about technology, I am requesting you to please feature a "DIY or FastTrack to full assembling of a PC from scratch", as this would help emerging geeks troubleshoot their PC, quite easily. I've noticed that many people who write to you about their PC problems, fear to get inside the PC cabinet and explore it. If you feature this article, I hope many readers will be able to assemble their PC at home, without any hassles, after buying the necessary equipments from the stores (as, assembling doesn't require many tools, only a standard screwdriver and CPU conductor paste etc.) and troubleshoot easily. I do think that you will keep my request under consideration.

- Samrat Naskar

d Although we've done such guides in the past maybe a refresher article is in order. This time around we'll accompany it with a video too. Great idea Samrat. Keep writing in and happy reading.

- Robert

CORRIGENDUM

February Omega DVD had the first ISO image of Scientific Linux whereas for complete installation four are required. Find them in next month's DVDs

www.trendmicro.co.in

TREND MICRO™

TREND MICRO™ TITANIUM™

INTERNET SECURITY THAT WON'T SLOW YOU DOWN



Anti-virus that's Fast and User-friendly |
Based on Cloud Technology | Spam-blocker |
Smart Phone Protection | Real-time Updates |
Light on System Resources | Remote Security |
Parental Controls | Secure Erase |
Data Theft Prevention



DOWNLOAD FREE 30-DAY TRIAL

Call **1800 103 6778**
Log on to **www.trendmicro.co.in**

National Distributor: Neoteric Infomatique Ltd. 21/A, Film Center, 68 Tardeo Road, Mumbai - 400 034
Business Queries ✆ +91-22-40859812 ✉ trendmicro@neoteric.co.in
Corporate Office: Trend Micro India Pvt. Ltd. #501-502, 5th Floor, DLF Place, Saket, New Delhi - 110 017
✆ +91-11-42699015 ✉ titaniumindia@trendmicro.com Toll-free Technical Support ✆ 1800-425-2667

dentsucomm/dig/01/11



Aircell's airborne smartphone
Aircell has announced an Android based smartphone which you can use in your personal jet

HTML5 goodness
Bing for Mobile portal has added HTML5 support and this is expected to be a feature of Windows Phone 7 OS in some time

Clouds and Tablets at CeBIT 2011

CeBIT is the world's largest and most international computer exposition, held each year at the world's largest fairground in Hanover, Germany. The trade fair is considered by many to be the highlight of the year's upcoming technology, both in terms of hardware and software. CeBIT stands for the Center for Office Automation, Information Technology and Telecommunication, and this year was held from March 1st to 5th.

This year's theme was "Work and Life with the Cloud," and so, featured technology related to the fast gaining movement of cloud computing that is affecting businesses across industries. More than 4,200 companies from over 70 countries participated at CeBIT 2011, and the event saw the return of many firms that hadn't attended in many years, including Canon, Epson, HP, Oracle, Siemens Enterprise Communications, and Xerox.

CeBIT featured numerous showcases of cloud computing technology. The importance of cloud computing is obvious, and analysts at IDC say that it will account for 10 percent of all global IT expenditure by 2013. A variety of business, whether small or large, are starting to invest in the cloud instead of their own infrastructure, renting the resources they need from online sources. A lot of hype surrounded the field at CeBIT, with statistics being thrown like confetti – cloud computing will allow for savings in energy consumption of over 50 percent, cloud sales revenues with business and private customers are expected to soar by around 55 percent this year, etc.

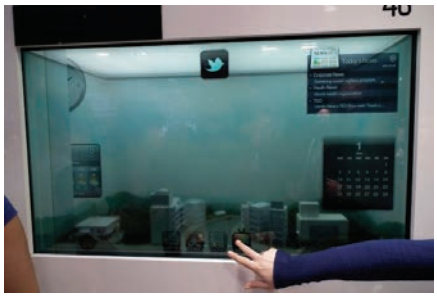


Dell Streak 7

Apart from online collaboration and storage, CeBIT 2011 featured other examples of the interoperable use of cloud technologies, with no media discontinuity problems.

This year also saw the significant presence of telecommunication companies, with many more than in recent years. Numerous technologies were showcased, from LTE to the newest smartphones, and tablet PCs. Tablet PCs was the biggest trend of CeBIT, garnering nearly as much attention as the cloud computing theme of the entire tradeshow. Of course, numerous new laptops were also introduced, bearing brand new hardware such as Intel Sandy Bridge processors and AMD Fusion APUs.

According to the organizers, there were more than 40 tablets showcased at the show, most of which where running on either Android or Windows. The platform is especially momentous for the tablet, considered by many as the future of personal computing, as CeBIT was where the world's first personal computer was showcased, when IBM presented it back in 1983.



Samsung's 46-inch ambient light powered transparent LCD

Twenty eight years later, things have come a long way away from that first personal computer, with finger-friendly, 1080p HD streaming, dual-camera bearing devices boasting of processors more than a thousand times as fast, per core. Tablets have already started making a dent in the desktop, netbook and laptop market, and combined with cloud computing, can actually in the foreseeable future replace our entire current ecosystem, in both productivity and entertainment spheres. Tablets are even making a dent in the demand for televisions, video game consoles, and media players, and this is only the beginning.

While 2010 was hailed as the Year of the Tablet by a few, most agree that 2011 will be the turning point in the tide, converging on a single handheld device. According to analysts at Gartner, worldwide sales of tablet PCs are going to reach a total of 55 million units this year.

One of the biggest tablet exhibitors at CeBIT was Asus, showing updated versions of the numerous devices it unveiled at CES 2011, running Android Honeycomb and Windows 7, and bearing innovative transforming and sliding form factors. Asus CEO, Jerry Shen, also announced ASUS will be bringing Android as well as MeeGo netbooks soon, apart from 3D tablets, and Windows Phone 7 devices.

Dell also showed off its new "Streak 7" tablet, the larger version of its relatively 5-inch Streak tablet that was launched last year. Also running on Android Honeycomb, the tablet supports 3G, Wi-Fi, and Bluetooth.

LG Electronics also showed off the Optimus Pad tablet, wowing the crowds with the 3D cameras, 8.9-inch 3D display, dual-core Tegra 2 processor, and myriad wireless connectivity options.

Fujitsu also introduced its first tablet, called the Stylistic Q550 "Slate Tablet," part of the company's Workplace series. A 10.1-inch tablet, it runs on Windows 7, and attempts to combine the best of both worlds from smartphones

Windows®. Life without Walls™. Dell™ recommends Windows 7.

The power to do more

Multitasking isn't a task at all.

The new XPS™ 8300 combines cutting-edge power and graphics to meet your most intensive multimedia demands. **You can tell it's Dell.**



Product shown is for illustration purpose only



Dell™ XPS™ 8300

Rs. 54250*

Inclusive of all taxes; delivery charges extra**.
E-Value Code: T240114IN8

- 2nd generation Intel® Core™ i5-2300 processor
- Genuine Windows® 7 Home Premium
- 6GB DDR3 SDRAM • 500GB SATA HDD
- 1GB NVIDIA® GT420 DDR3 Graphics
- 47 cm (18.5") Dell™ Widescreen Flat Panel Monitor (Model No. IN1920N)
- Single Drive: Blu-ray Combo
- 1-Year XPS™ Premier Service with 1-Year CompleteCover™



Dell™ Inspiron™ 580s

Rs. 30900*

Inclusive of all taxes; delivery charges extra**.
E-Value Code: T240107IN8

- Intel® Core™ i3-550 processor
- Genuine Windows® 7 Home Premium
- 3GB DDR3 SDRAM • 500GB SATA HDD
- 1-Year In-Home Service Plan
- 47 cm (18.5") Dell™ Widescreen Flat Panel Monitor (Model No. IN1920N)

XPS™ 8300 desktop featured here comes with:

Cutting-edge design
Superior tilt-back design with top-recessed tray for easy access to multiple ports

Superior multimedia experience
Integrated 7.1 with THX TruStudio PC™ sound - designed to bring stellar audio to your desktop

All new Stage interface
Experience the new Dell™ Stage User Interface for music, movies, photos - Now closer than ever before

To buy, call us or go online

1800 425 8108
Toll-Free Mon-Sat 9am-6pm
(BSNL & MTNL subscribers only)

080-2510 8973
(Standard charges apply)

www.dell.co.in/home

intel inside™ CORE™ i5 Visibly Smart NEW

For more information, email: dell_enquiries@dell.com. Prices valid till 30th April 2011. **Delivery charges of Rs. 900 per unit on Dell™ XPS™ and Inspiron™ desktops payable by buyer. *Important Dell Details. 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. GOODS BY DELIVERY ONLY. MISTAKES: Please note that Dell will not be responsible for typographical, pricing or other errors and reserves the right not to process orders based on such errors. Dell reserves the right not to process orders for any other reasonable reason as otherwise determined by Dell. MORE INFORMATION: Go to http://www.dell.co.in/details. TRADEMARKS: Intel, the Intel logo, Intel inside, Intel Core and Core Inside are trademarks of Intel Corporation in the U.S. and other countries. COPYRIGHT: © 2011 Dell Inc. All rights reserved.

Honeycomb source under lock
It has been reported that Google will not release Android 3.0 source code, as there is work to be done on it before it is ready for other devices

Dr. Watson?
A professor of clinical medicine is working to retrofit IBM's super-computer Watson to help doctors diagnose and treat patients

and PCs. Definitely geared towards enterprise users, the device features a new Intel Atom Oaktrail processor, fingerprint scanner, card reader, dual cameras for video conferencing, and even support for stylus input apart from regular finger input.

Other tablets showcased included French manufacturer Archos' low-cost Android tablets, as well as its colour e-reader. Best known for its portable media players, Archos has been previewing and churning out low cost tablets since CES last year, with the Archos 7 Home Tablet making waves amongst others. It introduced three new inexpensive devices at CeBIT: a colour e-reader called Archos 7ob, and two Android tablets – the Archos Arnova 8 and Arnova 10. All these devices are supposedly priced at under ₹10,000, sporting the bare minimum required to do the job – resistive touchscreens,





Archos Arnova Android Tablets

600MHz processors, 4 to 8GB of internal storage, etc.

While Archos' Android 2.1 tablets do not have official access to the Android market, access is guaranteed with a sideloader software, apart from access to Archos' own app store, AppsLib.

MSI showed off a variety of WindPad tablets again, as well as some new form factor concepts. The latest WindPad to be showcased was the WindPad 100-232, which sported an SSD hard disk and ran on Windows 7.

Others to join the tablet party included AOC, which introduced its Breeze tablet that runs on Android and has a 7-inch display, while Gigabyte showcased its S1080 model, running on Windows 7.

Another major theme at CeBIT was display technology, especially 3D display technology. Organizers Deutsche Messe AG, dedicated a large display entire to 3D, a feature they called 'Next Level 3D.' By this, they mean glasses-free 3D displays, or, autostereoscopic. Technologies showcased included eye-tracking, touch-free, gesture-control, and more. Several manufacturers, from LG to Samsung to Sony and Panasonic, all showcased their autostereoscopic offerings here.

Samsung also showed off a prototype display technology that is powered by ambient light, making it wirelessly-powered. Featuring a 46-inch transparent LCD display, the prototype had a 1920 x 1080 resolution and supported ten-finger multi-touch input. The display is accompanied by solar cells, which are apparently efficient enough to run on normal, in-house light sources. While for now Samsung's prototype is not going to be able to rival the best LCDs in the market in terms of image quality, of course, we're more than willing to give this interesting technology a chance!

Other major trends at CeBIT included social media, sustainable energy for homes and businesses, smart grids, and the future of the mobile web. Technologies such as Corsair's new and improved Force SSDs, Thermaltake's latest cooling solutions, and Xtreamer's Prodigy media streamer, were also showcased.

Sony Dual-View technology aims to make the fight for the remote obsolete

Stereoscopic-displays provide 3D vision by displaying two separate images of the same scene on one screen, one for each eye. Depending on their technology and implementation, viewing angles wary wildly, and though active shutter-glasses technologies don't really suffer from these obstacles, auto-stereoscopic solutions still struggle trying to display an identical stereo-image for viewers located in different parts of a room, who end up seeing either a mono image, or an incorrectly merged stereo-image, in a significant portion of the viewing angles.

It looks like Sony has decided to capitalize on this disadvantage of auto-stereoscopic (glasses-free) display technology in their 3D HDTVs in a novel manner, one that seems obvious in hindsight, and can seriously up the usefulness and interface options of the television.



Called Dual-View technology, Sony will soon offer 3D TVs with the ability to display two separate images from two separate sources, at the same time. What this allows is the ability for individual users to see different images on the screen, simultaneously, when seated at certain angles with respect to the television set. As seen in the image above, the centre view would probably still be blurred when dual-view is switched on.

The technology behind the innovation is still being developed, and not even a tentative date for production was mentioned. Applications are numerous though, and when coupled with dual-headphone or poly-directional audio features, it can allow two sets of viewers to watch different channels on one television set, at the same time. No more fighting for the remote?

Apple's next-gen MacBook Pro family announced in India, prices slashed

Apple has introduced the new MacBook Pro family, featuring some sparkling new tech and significantly different specs from the previous generation, but remaining much the same on the outside. There are five models split between the three sizes – two 13-inch and 15-inch MacBook Pros, and one 17-inch MacBook Pro – and all of them will feature Intel's Sandy Bridge chips, in Core i5 and i7 variants. Pricing is much lower than last years, with the base model costing Rs. 69,990.



The MacBook Pro family also introduces Intel's first iteration of Light Peak technology, the dual-channel I/O 'Thunderbolt', which promises up to 10Gbps bi-directional transfer speeds. Read more on Thunderbolt, here. But while MacBook Pro notebooks are available with Thunderbolt right now, devices supporting them will only arrive in the latter part of the year. Many major storage manufacturers however, have vowed support for both Thunderbolt and other future Light Peak technologies.

All the MacBook Pro laptops also ship with a FireWire 800 port on board, while the 17-inch model has an ExpressCard/34 slot instead of a SDXC card slot.

Apple's latest generation of MacBook Pro laptops differ from last in two other major aspects – they feature AMD Mobility Radeon graphics (6000M) instead of Nvidia's offerings, and, have new FaceTime HD cameras for video-chat, which offer 3 times the resolution as their iSight predecessors, promising full HD video conferencing. FaceTime for Mac has also been released, available for 99 cents on the Mac Store. All the laptops feature LED-backlit screens, with a choice of glossy or anti-glare coating (not in 13-inch models). The 15-inch models also come with a choice of 1680x1050 high-resolutions screens, instead of the 1440x900 default.

Importantly, the 13-inch MacBook Pro models do not feature discrete graphics, but apparently, Apple and Intel are confident the Sandy Bridge assisted Intel HD 3000 graphics will be up to the challenge.

Microsoft releases Windows 7 SP1

Microsoft has released Windows 7 Service Pack 1, which is now available for download via the Microsoft Download Center, and, via Windows Update of course.

Microsoft said in a blog post: "It does, however, include client-side support for RemoteFX and Dynamic Memory which are two new virtualization features enabled in Windows Server 2008 R2 SP1."

Dynamic Memory will allow Windows Server Hyper-V administrators to increase their virtual machine's density, without having to sacrifice performance or security. RemoteFX will allow for the virtualization of the Graphical Processing Unit on the server side to deliver next-generation rich media and 3D user experiences for Virtual Desktop Infrastructures.

Google Cloud Connect improves MS Office collaboration, for a 'nominal fee'

First there was the Microsoft add-on for H.264 on Chrome, and now, this – Google has taught "your old docs new tricks" with the Google Cloud Connect for Microsoft Office, enabling real-time collaboration of documents, spreadsheets, presentation just like Google Docs, except now, it is for Microsoft Word, Excel, and PowerPoint.

Compatible with everything from Office 2003 to Office 2010, Google Cloud Connect is certainly a cheeky way of leveraging the best aspect (real-time web-based collaboration) of Google Docs, onto Microsoft's comprehensive and powerful productivity suite.

Calling it "multi-person, simultaneous editing," the post enumerated the benefits of Google Cloud Connect's "web-powered collaboration within traditional software." Google is looking to leverage the service at those enterprises who use varying and aging versions of Microsoft Office, and offering everyone a global '90-Day Appsperience' program to try and see for themselves at a nominal fee, before they purchase a $50 a year, per user license.

Simultaneously, a new collaboration dashboard is being launched as well, to help companies measure the productivity of the new framework better. Google Cloud Connect, as well as the new dashboard, are available in English now, and will be available in more languages soon.



GET PAID
TO STAY CONNECTED!
Digit is looking for Technology news and features writers, full-time and freelance.
Send your CVs to editor@thinkdigit.com

Change in name
Samsung Galaxy Tab 10.1 has now been renamed to Tab 10.1V

Nook Update
Due for an update in April, Nook Color would get Flash and apps integration

AMD Radeon HD 6990 arrives - the world's fastest, and noisiest graphics card



AMD has finally launched the successor to the Radeon HD 5970, transferring the crown of the world's fastest graphics card to the new single-slot dual-GPU champion – HD 6990 (Antilles). While the world now awaits a dual-GPU offering from Nvidia ie. the GTX 590, let us give the newly launched card its due before a pair of overclocked GTX 580s snatch its laurels from it.

The Antilles HD 6990 is built out of two Cayman HD 6970 GPUs, with precisely twice the stream processors – 3072, texture units – 192, ROPs – 64, and video memory – 4GB GDDR5. Just like the Hemlock HD 5970 however, which was built out of two Cypress HD 5870 GPUs, the dual GPU core and memory clock speeds have been lowered from their single GPU counter parts. The drop this time however has not been as significant, with a 5.5 per cent drop in core clock speeds to 830 MHz from 880 MHz, and a 9 per cent drop in memory clock speeds to 5.0 GHz from 5.5 GHz. All this equals an average 22 per cent boost in performance over the HD 5970. The card is also a bit less massive as the HD 5970, measuring in at 11.5-inches.

Underclocking the HD 6990's dual-GPU setup was a decision that must have not been taken lightly, but when paired with a launch price of $699, the HD 6990 becomes more than twice as expensive as two HD 6970 cards in CrossFire, a combination that is faster on many fronts – fast enough to nearly outweigh the disadvantages of a CrossFire setup. In fact, the even cheaper HD 6950 CF setup is very comparable in performance to the HD 6990.

Another variable in the above equation is of course power consumption, and the HD 6990 has taken that crown from the HD 5970 as well, ranking up a mind-boggling official load TDP of 375W. Power consumption under serious load goes even higher, up to nearly 500W, and nearly 550W when overclocked. The official idle TDP of the HD 6990 however, is lower than the HD 5970, at 37W.

The card's overclocking headroom is also significant, but would require a seriously heavy duty power supply unit and after market cooling solutions to be able to approach the AMD Overdrive limits. A dual-BIOS switch is also provided, just like the HD 6970 and HD 6950. BIOS2 is pre-configured with AMD overclocked settings, with a 50 MHz boost in core clock speeds, and nothing else.

For now, the AMD Radeon HD 6990 occupies a spot on the mantelpiece of the industry rather than in the fireplace of competition, and is more an exposition in engineering than a sensible purchase – unless of course you don't care about price, noise or power consumption, and got to have the world's fastest graphics card in your cabinet, perhaps in a Quad-CrossFire setup?



LED E60
ELEGANT AND MINIMALIST

LG announced the launch of its brand new **LED E60** monitor series the very latest in monitor high-tech. With a depth of just 12.9mm, the E60 is the **slimmest** of any LG monitor. E60 adds a host of superb features such as LED backlighting, mega contrast ratio, easy-to-use **EZ Control OSD,** photo effects and a 5 ms response time. The E60 monitor series offers a suite of eco-conscious features including **reduced energy** consumption.

Sony: PlayStation 3 pirates will be banned for life

A lot has gone on back and forth between Sony and the hackers recent jailbreak exploits that have made vulnerable the Sony PS3. Legal battles are ensuing, but in the meantime, Sony has issued an ultimatum that should keep most people in check for a while "if a user hacks the PlayStation 3, that user will be banned for life from Sony's online services, permanently." Online services include the PlayStation Network, and Qriocity audio streaming service.

A few days after the above edict was issued, came the news of a method that effectively neutralized the ban threat. The hack claims to be able to unban banned consoles, individually, by sneaking into PSN and making validity changes. The hack methodology can in theory also allow hackers to ban consoles that have not been banned, but before you clutch your PS3-owning heart, rest assured that your console's ID would have to be known by the hackers before they can ban your console from PSN.

As expected, the hackers are adamant that their seemingly vindictive riposte is in fact most righteous, and is in fact only removing the injustices perpetuated by Sony's recent attempts to bully the PS3 mod-scene into submission.

So, it is advantage hackers right now, with possible losers including the general public, apart from Sony of course. We can't wait for deuce, and Sony's response.

htc.com

htc
quietly brilliant

Here's an idea:

Crystal clear memories



Phones that record every moment
in High Definition

HTC Desire HD

with HTC Sense

Kolkata: 9903366665; **Delhi/NCR**: 9810044477, 9999104194; **Lucknow/Kanpur**: 9336960422; **Jaipur**: 9660025999; **Chandigarh**: 8427105040; **ROK**: 9341258747
Chennai: 9380017328; **Hyderabad**: 9346303032; **Bangalore**: 9341258747; **Ahemdabad/Surat**: 9825599440; **Mumbai**: 9930510514; **Pune/Nagpur**: 9325103907

Terms and conditions:

"Copyright © 2011 HTC. All rights reserved. HTC is the trademark or registered trademark of HTC Corporation. The availability of particular products and services may vary by region. Check with the HTC dealer nearest to you. Operations, 3G services and some features maybe dependent on the network. HTC is in no manner responsible for 3G and GPRS Connectivity. The actual colour of the mobile handset maybe different from the visual shown. The features/Specifications & Applications are subject to change without notice".

Browsercalypse!

March has been a month of browser releases, and not just your teeny point version – no mere security updates these!

Google Chrome reached version 10, Microsoft finally released Internet Explorer 9, and if all went well, Firefox 4.0 would finally make up for all the loss in the days to come. Opera released beta 11.10, but more importantly, a slew of mobile browsers.

Google Chrome 10

Google released the most significant update to their engine since Google Chrome 5. Their V8 engine now reaches the third version code-named "Crankshaft". The new engine promises a big boost for JavaScript and boasts of 66 per cent improvement for the browser that was no slouch to begin with.

Another significant update to come with Google Chrome 10 with a settings interface that opens as a tab in the browser. The various settings pages actually have unique URLs so you can simply paste them in an email conversation. You can even search for the particular setting you want using a search box.

Google Chrome 10 also adds support for synchronising saved passwords (encrypted of course), GPU accelerated video, malware reporting, automatic disabling of outdated plugins, and sandboxing for Adobe Flash on Windows.

With background WebApps, your webmail client can keep check your email and notify you even when the tab is minimised or closed.

IE9 is here

Microsoft's latest browser is a bold step forward in standards compliance and performance. It embraces newer open web technologies such as HTML5 and CSS3 with support for video and audio tags, canvas, web fonts, inline SVG support and more.

Microsoft Internet Explorer 9 not only rivals current generation browsers in JavaScript performance, but goes a step further to improve the performance of rich media in the browser with hardware acceleration. In fact, now the browser even checks performance of third-party addons and displays the kind of time each one takes to activate, allowing you to disable them easily.

Internet Explorer 9 features a new highly compact interface that even combines the address-bar and task-bar making it the most compact browser of all currently.

You can also pin your favourite web site to your taskbar, if you are using Windows 7. The site then acts like a web application, with its own JumpList entries and theme colour. You can try this with our own site www.thinkdigit.com.

Opera's bouquet

Great things lie ahead for Opera too as it released Opera 11.10 beta, a minor version bump but still a significant update. Opera 11.10 brings a better speed dial that allows unlimited sites, and a new way for web masters to specify an icon for the speeddial. Opera 11.0 continues its trend in supporting the latest web standards with CSS3 improvements, WOFF support and even support for Google's WebP image format. If you don't have the latest Flash plugin, Opera 11.10 can download it automatically.

Opera also launched Opera Mini 6 for J2ME (most Javaphones), Android, BlackBerry, Symbian / S60, and Opera Mobile 11 for Android, and Symbian. Labs releases of Opera Mobile 11 are also available for Windows 7 desktops / tablets (not Windows 7 Phone), MeeGo, and Maemo. Opera hasn't ignored budget Java-based phones, and its mobile browser is effective on these phones too. You can enjoy multiple tabs with an enhanced browsing experience.

Opera makes its debut on tablets with Opera Mobile builds for MeeGo, Android, and Windows 7 on touch-enabled devices. It features a new tablet-optimised interface that brings the best of Opera features (Turbo and Link) to tablets.

Opera now supports smoother scrolling, panning and zooming, as well as true pinch-to-zoom gestures for zooming in across all platforms. Versions are also enhanced with new sharing features that allow you to post to Twitter, Facebook or MyOpera.



Dean Hachamovitch, corporate vice president, Internet Explorer, presents the keynote speech at the Internet Explorer 9 RTW event on March 14, 2011, at SXSW in Austin, Texas

Pwn2Own

Weeks ahead of the Pwn2Own onslaught, browser vendors began toughening up their browsers – with numerous updates patching bugs and securing vulnerabilities. A total of $125,000 are at stake this year at Pwn2Own, out of which $20,000 comes as bounty from Google themselves, for those who can "best" the Google Chrome browser.

Pwned is leetspeak used by gamers instead of 'owned' especially when they win or conquer their opponents. Pwn2Own is an annual hacking competition that is held as a part of the CanSecWest security conference. Researchers and security experts are asked to hack or 'pwn' the browser, i.e., make it run arbitrary code, and, gain control of the machine it is running on. 2011's Pwn2Own was different in that hackers also had to escape any sandboxes lying in wait – areas that limit a code's access to resources. All winners

are required to sign a non-disclosure agreement, with the bugs being reported exclusively to the vendors.

In previous Pwn2Own competitions, the latest version of the browser and operating system were used. But this time around the latest browser and OS versions were selected and 'frozen'. Exploits had to be carried out on those. Apple seemingly unaware of the new rules, still went ahead and released Safari 5.0.4 one day before the contest, an update that patched more than 60 security holes. However, the new rules also say that in order to win the prize money of a successful exploit, it would have to also work on the latest version available at the time of the competition.

On Day One of Pwn2Own, there were three attempts lined up, white-hat hackers trying to take out Safari, IE8, and Chrome. The first to fall was Safari 5.0.3m running on a patched Mac OS X 10.6.6. VUPEN, a



Vincenzo Iozzo (left), Pwn2Own official Aaron Portnoy and Willem Pinckaers exploiting the BlackBerry

French security firm was behind the attack, taking over the browser and its hardware five seconds after it had landed on its specially engineered web page. It proved it had attacked the hardware by writing a file to hard disk – effectively bypassing the sandbox. The attack also worked on the latest 5.0.4 version.

After the fact, VUPEN co-founder Chaouki Bekrar said his team's attack was not the simplest to engineer, simply because the number of documented exploit techniques for 64-bit Safari are very low, as it is a platform that requires unusual implementations of normal security bypass techniques. The three-man team apparently took two weeks to assemble the attack.

Next up, Harmony Security assaulted 32-bit Internet Explorer 8 running on 64-bit Windows 7 SP1, taking advantage of three separate vulnerabilities of the browser. Two achieved code execution inside the browser, and the third bypassed the 'Protected Mode' sandbox of IE8. The attack was a one-man effort, with security researcher Stephen Frewer taking nearly five weeks to prepare it.

The attack on Chrome wasn't carried out on Day One, with the scheduled contestants not showing up. Chrome of course is known for its lack of vulnerabilities, and Google went ahead and fixed 24 more flaws a day ahead of the competition – effectively removing all hopes of the participant winning prize money by hacking the latest version as well.

Day Two had tests scheduled for Mozilla Firefox, and native browsers of all the major mobile operating systems - Android, Blackberry OS, iOS, Symbian, and Windows Phone 7. Just like Chrome, it seemed Mozilla had successfully patched Firefox versions 3.5.17 and 3.6.14 before the competition, as the hacker once again was a no-show.

The browsers of the iPhone 4 and then the BlackBerry Torch 9800, running the latest OS versions (iOS 4.2.1 and BlackBerry OS 6.0.0.246), were successfully exploited later in the day, with the hackers required to gain the same level of control over the software and hardware of the phone.

The Nexus S was the scheduled Android target in the competition, and the Dell Venue Pro was picked for Windows Phone 7. Both scheduled attempts were no shows, again.

To note however, are words from last year's Internet Explorer hacker, Peter Vreugdenhil: "The survival of a target at Pwn2Own does not automatically declare it safer than a target that went down." According to Vreugdenhil, there are numerous factors determining the difficulty of a particular hack, everything from the safety of the software itself, to the list of known vulnerabilities and the amount of research that has already been conducted. As an example of this logic, Vreugdenhil added: " Chrome has the advantages of having multiple exploit-mitigation techniques that certainly make it more difficult to hack. As for Android, we see no particular reason why Android would be harder to hack than one of the other targets."

TOP GUN TECHNOLOGIES
Best of the Best
PEARSON VUE AUTHORISED CENTRE
The Best Network & Security Labs in India
Others Promise. We Deliver !
Integrated Program for Fresh Graduates
CCIE - Security
CCIE - R & S
Special Offer
CCNA Rs. 5,000/-
CCNP Rs.30,000/-
CCSP Rs.30,000/-
Loans through HDFC BANK

Congrats to our Latest CCIEs

Mr. Sumit Kumar	CCIE Security # 28237
Mr. Muthu Arun	CCIE # 28094 (v4.0)
Mr. Vikash Kumar	CCIE # 27857(v4.0)
Mr. U Mukunthan	CCIE # 27622 (v4.0)
Mr. Jitendra Siyag	CCIE Security # 27022
Mr. Mahesh A	CCIE # 26985 (v4.0)
Mr. Mohammad Saud Reyaz	CCIE # 26899 (v4.0)
Mr. Suresh Kumar K.	CCIE Security # 26621
Mr. Solomon S	CCIE Security # 26508
Mr. Ashis Kumar J	CCIE Security # 26299
Mr. Louis Kalliath	CCIE # 26271 (v4.0)
Mr. Akram El-Samiri	CCIE # 26163 (v4.0)
Mr. Divin Mathew John	CCIE # 25905 (v4.0)
Mr. Renash Chandran	CCIE # 25904 (v4.0)

Courses Offered:
CCIE, CCNP, CCNA, CCSP, CCIP, CWNA, CWNP, CWSP, CCSA, CCSE, CISSP

Well Qualified Instructors

AJAY PANDEY
B.E, MS (USA), CCIE # 14792, (Security / R&S), CISSP, CISA, CISM, CCSE, MCSE, ASAP.

P RAMESH KUMAR
B.E, CCIE # 20107
CCSP, CCNP Security, CCNP & CCNA.

Lab Equipped with :
91 Cisco Routers (2811, 2621 XM, 3600, 2600, 2500, 1700, 700), 24 Cisco Catalyst Switches (5000, 3750, 3560, 3550, 3000, 2950, 2900), Frame - Relay / ISDN, 8 Firewalls : SonicWall, Watch guard, Cisco PIX 515 E (UR), ASA 5510, PIX 501, 3005 VPN concentrator, 4210 IPS sensor, Nokia IP 330, Check Point, CiscoWAP/ NICs, Cisco Call Manager MCS 7825

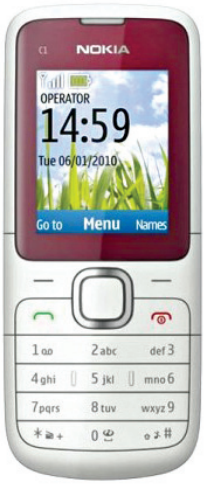
Local Accomodation Available
We have Graduated over 71 CCIEs.
BANGALORE
Visit our Website :
www.topguntechnologies.com
info@topguntechnologies.com
SMS 080- 65616600
080-23528500 / 41277710
If you find a better Institute to do any of these courses, Join it !

Desire Z
HTC has launched the Froyo-powered QWERTY-slider Desire Z in India, at an operating price of ₹25,590

Another Froyo phone
Acer Liquid Metal flows into India, priced at ₹20,990, with Froyo and an 800 MHz processor

Nokia launches five new phones

Nokia has launched five new phones in India, with a sixth expected soon. The new phones are the C1-01 and C1-02 feature phones, the X3-02 and C3-01 Touch and Type, as well as the top-end Symbian^3 business smartphone – the Nokia E7. Expected in April is a low cost music phone, called the Nokia X1-00.



Nokia C1-01



Nokia C1-02

The Nokia C1-01 and C1-02, are entry-level phones, priced at ₹2,789 and ₹2,394, respectively, with Ovi Life Tools capability and one month free access, aiming to bring education, entertainment, and news to consumers from both rural and urban regions. The service is available in 11 languages. Common offerings include GPRS/EDGE connectivity for mobile internet, MMS support, microUSB and Bluetooth connectivity, as well as microSD storage expandability up to 32GB.

The Nokia X3-02 and C3-01 are a part of the 'Touch and Type' range, combining a hardware keypad with a touchscreen - the "best of both worlds" according to Nokia. The X3-02 is priced at ₹8,839, while the C3-01 is ₹9,389. Both are Symbian Series 40 phones with 2.4-inch 256K colour screens, and are quad-band 3G-capable. Both also have 5MP cameras with 4X digital zoom, native social networking apps, stereo FM radio with RDS, USB on-the-go, as well as Wi-Fi b/g/n connectivity. The more expensive C3-01 offers and LED flash in addition, with while the X3-02 Touch and Type is supposed to be one of Nokia's slimmest phones ever, measuring in at 9.6mm, and weighing in at 77.4 grams.

Nokia began pre-order bookings of its E7 business phone in the second week of March, pricing it at ₹35,000. A week later, it launched the device at 'Best Buy' price of ₹29,999, with Shahrukh Khan as its brand ambassador, or as Nokia wants him to be known, as its 'Product Tester.'

The latest entry into Nokia's popular E-series, the Nokia E7 is a Symbian^3 business smartphone with a 4-inch Clear Black Display. Essentially a Nokia N8 with a sliding 4-line QWERTY keypad, document editor, and 8MP camera, the E7 might become almost as popular as its N-series counterpart has been in India, with the essential price difference the determining factor.

Just like with the Nokia N8, Nokia has also introduced a zero percent interest easy payment scheme that will allow potential customers to split the total amount over three equal payments, one per month. The scheme is available at 176 Nokia Priority Stores across eight cities, with four major banks partnering.



Nokia E7

Speaking on his role as product tester at the launch, Shahrukh Khan said "Nokia approached me as a product tester and I was supposed to give feedback to Nokia. I have used the Nokia E7 for over a month. I am totally hooked to it and it has become my constant business companion."



Nokia X3-02



Nokia C3-01

The X1-00 low-cost music phone is expected at the time of writing to arrive sometime in April. Not featuring the Nokia XpressMusic branding, the Series 30 based Nokia X1-00 has most of the signature features of a music phone, from dedicated music keys, a super powerful loudspeaker, storage expandability via microSD card, FM radio, 3.5 mm audio jack, microUSB connectivity for easy media transfer, to what it calls a single-key playlist creator.

The phone also has a large 1320 mAh battery, rated to deliver up to 38 hours of continuous music play, and, the loudspeaker is rated deliver an output of 106 phon (a unit of perceived loudness), and according to Nokia, it has been calibrated so that no distortion is heard even at maximum volume. The phone also has a torch with a dedicated button, but no camera. The phone is one of Nokia's most inexpensive devices, and will be priced at less than €35 or ₹2,100. It will be available in 'Orange, Ocean Blue and Dark Grey.'


BAJAJ
Distinctly Ahead
ZERO TO
ECSTASY
pulsar
INDIA'S NO.1 SPORTS BIKE
www.mypulsar.com
OPM 270

Mobile Skype
Skype offers a low-bandwidth mobile version, designed for GPRS/EDGE access

Sony Ericsson models
Sony Ericsson Xperia Arc (₹28,990), Neo (₹24,990) and Play (₹32,000) are now available for pre-order in India

The new Apple iPad 2, compared to Motorola Xoom and Samsung Galaxy Tab 10.1

	Apple iPad 2	Motorola Xoom	Samsung Galaxy Tab 10.1
Platform	iOS 4.3	Android 3.0	Android 3.0
Display	9.7-inch	10.1-inch	10.1-inch
Resolution	1024 x 768	1280 x 800	1280 x 800
Processor	1 GHz dual-core	1 GHz dual-core	1 GHz dual-core
	Apple A5	NVIDIA Tegra 2	
Memory	512 MB	1 GB RAM	NA
Storage	16GB / 32GB / 64GB	32GB	16GB / 32GB
Front camera	VGA	2 megapixel	2 megapixel
Rear camera	5 megapixel (720p HD video)	5 megapixel (720p HD video)	8 megapixel (720p HD video)
Wi-Fi	802.11a/b/g/n	802.11a/b/g/n	802.11a/b/g/n
Bluetooth	2.1 + EDR	2.1 + EDR	
Battery	6600 mAh	6,500 mAh	6860 mAh
Weight	1.33 pounds (Wi-Fi version)	1.6 pounds	1.3 pounds
Price	$499 onwards	$600 onwards	NA

The latest Apple tablet, the iPad 2 has been officially released. The new device was unveiled by Apple's CEO Steve Jobs, who briefly returned from his extended medical leave. The excitement within Apple Inc. was quite visible as well. Dressed in his trademark blue jeans and black turtleneck sweater, Jobs joked to the audience at the San Francisco launch, "I just didn't want to miss today."

The iPad 2 is 33 per cent thinner and 15 per cent lighter than the predecessor. The iPad 2 is powered by a 1 GHz dual core A5 processor. There is no clarity on how much RAM the iPad 2 has, but it is expected that it is exactly double of the 256 MB in its predecessor. Apple also said that the new iPad 2 will have 9 times more powerful graphics. The battery life remains the same at 10 hours. The device ships with the latest version of the iOS 4.3, which is available across iOS devices for the iPhone4, iPhone 3GS and the iPod. With the HDMI out feature, you can connect your iPad to a TV and mirror the iPad display or enjoy multimedia content on the larger screen. However, users will need to buy the HDMI cable which costs about US$ 30. Also, the iPad 2 will be available in white and black colour options. What the iPad 2 misses out on is its Retina Display. The Indian iPad was launched in late January, with prices starting at ₹27,900 for the base model. The updated prices begin at ₹24,500. With queues again this time, we're sure we won't be seeing the iPad 2 in India anytime soon, in fact, it might even be next January.

The Samsung Galaxy Tab also got a lot cheaper, falling unofficially in price to ₹24,900 on online retail sites such as Flipkart and Letsbuy. Amazingly, the Samsung Galaxy Tab was first launched in India five months ago in November at ₹38,000, before getting an official price drop to ₹31,199 in late December.

Of course, 10.1-inch and 8.9-inch versions of the Galaxy Tab are also in the pipeline, but, there is no news of Samsung's plans to update the hardware of the already retailing 7-inch Galaxy Tab.

HTC Desire Z

HTC has launched the Desire Z in India, pricing it at ₹25,590. Based on Android 2.2 Froyo (Gingerbread) with the Sense UI, the Desire Z has a 3.7-inch touchscreen (no Super LCD in India) and a full four-line hardware QWERTY keypad.

The aluminium unibody-encased HTC Desire Z slides with a 'pop hinge' design, and the keyboard interestingly also features two customizable keys. HTC is clearly aiming at the professional market as well as a social networking one, interestingly also including a unified email inbox.



The Desire Z is powered by an 800MHz Scorpion processor with an Adreno 205 GPU (Qualcomm 7230 chipset), running with 512MB of RAM. It has 1.5GB of inbuilt storage that is expandable to 32GB with a microSD card. The Desire Z's 5MP autofocus camera is equipped with LED flash, and is capable of 720p HD video recording. It is a speedy 3G device, with support for HSDPA at 14.4 Mbps, and HSUPA at 5.76 Mbps. The 1300 mAh battery onboard is manufacturer rated to provide up to 430 hours of standby time, and nearly 10 hours of talk time.

Featuring Android 2.2 Froyo skinned with the acclaimed Sense UI, the Desire Z also has access to HTC Locations for their mapping needs, and HTCSense.com for remote access and wiping functions, as well as backup and cloud storage. As reported earlier though, the phone is due to receive an update to Android 2.3 Gingerbread sometime in the second quarter of 2011.

In other news, the HTC Merge world phone is now available for pre-order in India for ₹35,000, listed on the Letsbuy web site.

NVIDIA

GEFORCE GTX GAMING:
NVIDIA SLI, 3D VISION, 3D SURROUND AND PHYSX.





GET READY FOR THE HOTTEST GAMES OF 2011

WITH OVER 3X THE PERFORMANCE OF YOUR OLD GPU.

For more information, visit: www.nvidia.in/geforce

Authorised Board Partners in India

ASUS
GALAXY
GAINWARD
msi
PALIT
ZOTAC
It's Time to Play
SPARKLE

Authorised Distributors in India

ABACUS PERIPHERALS PVT. LTD.
☎ 918097523166
www.abacusperipherals.com

aditya
☎ 09311282911
www.adityagroup.com

BBC BIG BYTE CORP.
☎ 919324223591
www.bigbyteindia.com

RP Tech
☎ 022-67090828
www.rptechindia.com

TAG Technology and Gadgets
☎ 9321951626
www.technologyandgadgets.com

TIRUPATI ENTERPRISES
Brings You The Best Of Digital World
☎ 09339207519
www.tirupati.net

ZEBRONICS
Always Ahead
☎ 9380216167
www.zebronics.com

www.kingston.com/india/ssd

Kingston TECHNOLOGY

PRESENTS

SSDNOW



A DRIVE THAT IS FASTER, BETTER AND STRONGER THAN A HARD DRIVE

*Tested under ideal lab conditions

Kingston SSDNow, a NAND-Flash Technology that drastically improves your computing experience.

High-speed performance

- Boots 1.5x* faster than a hard drive
- Transfers data 2.3x* faster (approx. 1GB of data in just 6 seconds) than a hard drive
- Starts applications 1.4x* faster than a hard drive and can open 200+ applications in a go

Eco-friendly

- Consumes 93% less energy than a hard drive
- Generates 50% less heat than a hard drive
- Practically noiseless as it has no rotating disks and motor

Virtually indestructible

- Robust
- Heat and Water Resistant
- Shock Proof

And there are still many more reasons to switch to SSDNow. Visit **www.kingston.com/india/ssd** and get ready to race ahead in life.

Withstands Extreme Conditions | Speedier | Reduces Power Consumption | Reliable & Durable | Practically Noiseless | Extremely Lightweight

SSDNOW
RACE AHEAD IN LIFE

For sales enquiry: sales_india@kingston.com | Service toll no.: 1860 233 4515
RMA/Warranty: services_india@kingston.com | For technical support: techsupport_india@kingston.com

Available at:
Neoteric Infomatique Ltd. - www.neoteric.co.in
Avnet India Pvt. Ltd. - www.avnet.com
Compuage Infocom Ltd. - www.compuageindia.com
ShreePati Computech Pvt. Ltd. - www.shreepati.in

Kingston TECHNOLOGY

sixinchesgroup.com

28 **Vulnerabilities in Android**
Get a feel of how secure Android really is. It's time you watch out before downloading that exciting app you just discovered

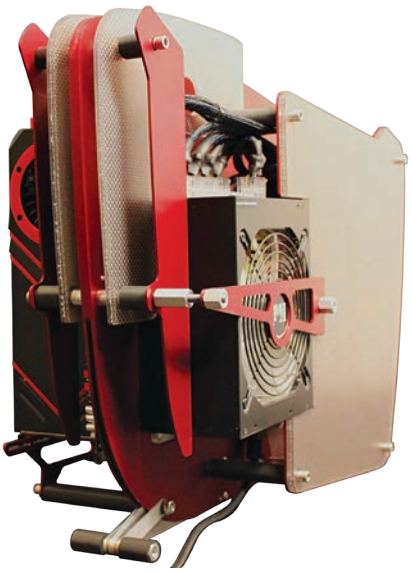
30 **Web hacking**
We look at how easy it is to hack into computers, the possibilities and methods

Darwin Machines 'Pure Luxury PC'

We all have been exposed to some crazy and quirky PC cabinets before, but this one takes the lead. This beast of a machine has an awesome futuristic design. Meant for the absolute hardcore gaming geek, the 'Pure Luxury PC' is a new breed of a monstrous cabinet doubled with an equally insane configuration. Its precision-engineered chassis fabricated by Darwin Machines houses an Intel i7 990x overclocked to 5 GHz, two Nvidia GTX 580s sit proudly on a ASUS X58 Rampage III motherboard. The mind numbing speed is achieved by 24 GB RAM topped with a 2 TB Western Digital HD and a pair of Kingston V+ Solid State Drives. Designed to put games like Crysis 2 to shame the 'Pure Luxury PC' is available for $9,600. Uber Drool!



Gamer's delight back in November 2008 was the Alienware Area 51 which too had specs to die for!





Bang & Olufsen BeoSound 8

Manufacturers of high quality audio speakers are not really open to the idea of compressed audio loaded on your iPod for the apparent reason that the MP3s and the OGGs of the world don't do justice to the hi-fi gear they produce. However the Beosound 8 is a fresh approach to how you listen to you iPod music as it delivers the best audio experience you can get on an iPod dock. Designed for the 'i' family of Apple products the Beosound 8 has an AUX-in and USB port allowing you to play music form your computer. The Beosound 8 is also the first dock to beautifully house the much heavier iPad. Two drivers and amplifiers sit on each of the large conical speakers whose colour is fully customisable. Get your pair for $999.

Philips Cinema 21:9 Gold

Tired of looking at the black bars at the top and bottom of your favourite movie? Cinema 21:9 Gold to the rescue, with it's larger-than-wide screen size this is surely a ticket to your very own 'home theatre'! Packed to the brim with loads of cool features like Ambilight Spectra 2, real time 2D to 3D conversion and the new split screen feature which allows you to view multiple content on your screen with this innovative move you can surf the net, watch TV and update your Facebook account all at the same time. Its 21:9 aspect ratio is a cinephile's delight, with built in Wi-Fi and USB port you can record live TV on to your portable drive which too is a new add-on to this massive TV. Release date and price is yet to be announced.



Cabasse La Sphere

Sure the Cabasse La Sphere has looks which remind us of 1950's sci-fi flick, but that doesn't stop them from being one of the most sought after speakers in the world. Thanks to its 4-way coaxial, point-source loudspeaker, the La Sphere speakers are a delight for an audio connoisseur. La Sphere delivers perfect linear response right up to 25,000 Hz (way more than human hearing limit) which is achieved by the spherical design of the speakers. Given the choice between the La Sphere and an entry-level Ferrari we'd rather go for the latter one as both cost almost same - $1,76,000.





Hasselblad H4D-40 Ferrari Edition

An entry-level camera from the Hasselblad stable and a name which is synonymous to super cars come together to create a special limited edition series – The H4D-40 Ferrari Edition exploits the power of the Phocus 2.0 software created by Hasselblad and gives way to some stunning and truly life-like pictures. Featuring new low noise colour filters on the sensor, the H4D-40 houses a 40 megapixel sensor. Brilliant image quality is ensured by the HC/HCD lens line which gives increased clarity and depth of field. Painted in the unique "rosso fuoco" colour, the camera bears the legendary Ferrari racing shield. With a camera so loaded it's ought to be limited, only 499 of such beauties would be created. Get your hands on one of these rare pieces for $29,499.

Mega Hurtz

We don't often get to see small robot tanks available online for sale but the Mega Hurtz is one such 4-wheeled bot that you can purchase to run some paintball havoc on your friends at twenty rounds per second. The Mega Hurtz is a 127 kg turret that carries a paintball gun on its aluminium base. The base can also be used for uploading an actual gun which makes it useful for the law enforcement agencies. The Mega Hurtz is remote controlled, it uses a pan/tilt camera capable of night vision to move around, it can also be manoeuvred using a virtual reality headset to chase and destroy the enemy. Among its other uses the Mega Hurtz can be employed in medical evacuation to pull the victim as it can tow a Hummer weighing close to 3000 kg. An ideal gift for the next happy occasion you can get this mini tank bot for $3,600 without the paintball gun.



Google steps in
Google plans to activate its remote kill switch to remotely uninstall apps from the over 2,60,000 handset affected by malware

Flash attack
According to Adobe's security advisory, there are reports of vulnerabilities in versions of Flash for Windows, Linux, Solaris and Android.

ANDROID SECURE SAFE STABLE REALLY?

In the midst of all the hype and hoopla surrounding Android, we take a closer look at the murky realities surrounding it...



androidencyclopedia.com

Nash David
nash.david@thinkdigit.com

Android has very rapidly progressed with curiosity in 2007, fascination in 2009, and widespread adoption over the year gone by. It's good too, considering its openness, or rather "free and open source" *ethos*. On one side of it, there's praise being showered on Android: backed by Google! On the other, we find out...

It is estimated that a whopping 2,60,000 Android users are affected by malware and trojan attacks. Lately, there was a similar case of 1,50,000 Gmail users having all their data wiped out from Google's servers. The reason was a backup software update going awry. The number of people affected was just 0.5 per cent of total Gmail users globally. Would you consider that to be serious? If you're not dependent on Google for email services you'd consider that to be a good record on Google's part. Unfortunately, chances are, you use Gmail, and you certainly wouldn't want to be one of the affected. In a buzzing market of cellphones, spearheaded by smartphones, following precautionary measures would take you a long way in security. Altaf Halde, Country Director, Sophos shed some light on the security capabilities of Android. Describing the rapid growth of handheld devices, he said, "In the last few years, we've witnessed a radical change in the way we access and use the internet. The rapid upswing in sophistication of mobile technology resulted in a swift change in the way we provide mobile content and interact with it. However, this change brings with it a wealth of new problems for security."

It isn't surprising then, that mobile attacks have grown and now resemble the space in web security five years ago.

In platforms such as Android, some components are built into parts of the operating system, and therefore require full OS upgrades to patch vulnerabilities. This causes issues for some older devices that can't run newer editions of the platform. The openness of the Linux-based platform makes it possible to access and tinker with low-level components, but also attracts more research into possible flaws and how they might be exploited for profit. He adds, "all in all, Android phones represent a considerable exposure point, but again one that relies heavily on social engineering to lure users into installing rogue or malicious applications that give the bad guys access to their phones."

Attacks in the past...

Venkatasubrahmanyam Krishnapur, Senior Director of Engineering, CMSB, McAfee India shared some insight specific to Android with us. According to him, "As Android gains in market share, the threats to this platform are rapidly increasing as well." Some of the Android specific malwares that McAfee has discovered in recent times are:



"No vendor or mobile OS is immune"
Venkatasubrahmanyam Krishnapur, Senior Director of Engineering, CMSB, McAfee India

At the code level

Exploit	note	push	soft	window	mark
Versions	older than 2.3	older than 2.3	older than 2.3	older than 2.3	older than 2.3
Modus operandi	Sends text messages to premium-rate numbers. If a mobile number is specified, the mobile's number is sent to a remote server to check if it has been blacklisted. In case it is, the message won't be sent. The URL of the service has to be sent as a parameter to the command and the blacklist check will be performed issuing a request. For details, go to tinyurl.com/droid-vul.	Performs SMS-spamming and requires parameters such as 'text message', the target 'URL', and target mobile number.	This command is used to install packages on to the compromised device. The packages are downloaded from a remote URL that has to be sent along with the command as a parameter.	Makes the mobile navigate to a given web site via a browser with the following order of preference: UC, tencent, Opera Mini for Android, Tunny and default Android browser	Adds bookmarks to the compromised device. When the service is first launched, the following bookmarks are added to the device: android.paojiao.cn, ct2.paojiao.cn, and g3g3.cn.
Fix	tinyurl.com/droid-ggl	tinyurl.com/droid-ggl	tinyurl.com/droid-ggl	tinyurl.com/droid-ggl	tinyurl.com/droid-ggl

Fake Player Codec
Poses as a media player application, but once installed starts sending premium rate text messages.

Geinimi
Poses as a legitimate application and is the first Android malware in the wild that displays botnet-like capabilities. Once the malware is installed on a user's phone, it has the potential to receive commands from a remote server that allows the owner of that server to control the phone. In such a situation, an attacker can remotely send location co-ordinates of the user, transmit device identifiers, install malicious applications, read or send text messages, access email or corporate data if the user has such data on the device – in short potentially access and use any device, personal or corporate information that is on the phone for malicious gains.

Mobspy.A
Another Android-based malware that steals information such as both incoming and outgoing phone numbers, incoming and outgoing SMS messages and GPS location.

Google's response

The Android team was made aware of and removed from Android Market a number of malicious apps. We have since taken measures to protect our users by automatically undoing the exploits and contacting law enforcement agencies. The details of our security efforts as listed on the official Google blog (**tinyurl.com/droid-ggl**).

Although all platforms are vulnerable to attacks, hackers prefer the most popular and widely consumed platforms as their primary target. Krishnapur added, "Literally all mobile platforms are vulnerable. The fragility of mobile platforms is proven and exploitation of vulnerabilities is clearly on the rise. No vendor or mobile OS is immune. It does not matter if it is Symbian, Windows Mobile, iOS, Blackberry, Java or Android. In 2009-10, threats to Symbian were the highest, followed by J2E, Android and Windows.

However, at this time Android is rapidly growing as a platform of choice for both vendors and customers. Hackers typically tend to target the most widely used platforms as their intent is to maximise gain. Also given that it is in the early stages of infancy as a platform combined with its increasing popularity it is very likely that attacks on Android will significantly increase in the years to come.

According to Halde, "it's a known fact that the iPhone costs higher in the Indian market compared to the overseas market. Due to this, we have seen a lot of "imported" iPhones coming in the grey market which are being picked up at a much lower cost. Once purchased, the cost to the user to "unlock" / "jailbroken devices" the phone is just a couple of thousand rupees or lower. The users done realise that by "unlocking" an iPhone, they are not only violating the warranty, but more importantly compromising the security of the product and making themselves more vulnerable to new attacks.



"Google's Android tried to keep pace with the iPhone in terms of functionality, and as devices diversify, the Android user base continues to grow. In early 2010, Google found and removed banking malware from a site when a wallpaper application gathered information on over 1 million Android users."
Altaf Halde, Country Director, Sophos

What to expect?
In terms of security, Android is a work in progress. Unlike desktop computing, where openness went in favour of free operating systems, it seems to be a disadvantage for Android. Closed systems such as iOS with a dedicated team to approve developer contributed apps seem to offer better security features. But again, in order to get the iPhone for cheap, users end up compromising with security by resorting to jailbreaking. Even Android users, compromise with security by indulging in rooting their OS to enjoy updates before their official release in the region. Hopefully with Gingerbread and subsequent flavours of Android, Google would pull up their socks.

Microsoft's secure browser
Including tracking protection and control over ActiveX filtering, Microsoft Internet Explorer 9 increases the browsing security.

Security play
"Kaspersky Small Office Security" gives small offices a virus free, spyware free environment along with protection from malicious software, managed from a single PC

Vaibhav Kaushal
readersletters@thinkdigit.com

WARNING!

The deeper, darker secrets behind the web, revealed.

@ Risk – Files, Fate and Fortune

Be it mundane tasks such as checking email, sending messages to friends, or online trading where millions are at stake, the web knits it all together. A minute of service disruption and the fairy-tale transfigures into nightmare. Hackers have always been targeting the bull's eye, exploiting the tiniest loophole in the web and make it all go kaboom. All this was incepted ever since it began getting un-blurred before the common men. We show you some of the simple but important tricks which can be used to make the web a scary place.

Just as with other arenas of hacking, web hacking too have some of its own moves. We'll show you a few.

SQL Injection – Anaesthesia for the DB

In the early days, developers used Microsoft FrontPage to design web sites. Today, we want web sites to have that human accent, understand what we need, and obey our commands. Almost every website you visit is run over some program which receives your requests, analyses it and produces a web page. PHP, ASP.NET, Python and Java are some of the well-known languages used for server side scripting. Along with a language, a dynamic web site also uses a database.

To read and write data from the database, one needs to use a language called Structured Query Language or SQL for short. Whenever you enter data in a form and 'submit' it, the request is converted into an SQL query, which is then sent to the database. For example, if you enter your username and password and 'sign in', they are sent to the database in the form of a query. The database replies back and the server determines whether the login was successful or not.

A simple line in PHP for building the database query from user input would be:

```
$query = "SELECT userid
FROM passwords WHERE
username='$username' and
password='$password'";
```

Here, we assume that the variables `$username` and `$password` already have the necessary values from the form. Assuming that you entered username and password as `madman` and the table where the usernames and passwords are stored is user_table, the query would look like:

```
SELECT userid FROM user_
table WHERE username='madman'
AND password='madman';
```



Assuming the password was correct, the database will return one row containing one column with the userid of the user. If you entered a wrong password such as random, the database will not be able to find the username with such a password and report accordingly, resulting in a failed login.

Now, let's get innovative and enter the username as madman and type the following in the password column:

```
madman' OR password like
'%' AND username='madman';--
```

Considering the way it is working, the server will create a query like:

```
SELECT userid FROM user_
table WHERE username='madman'
AND password='madman' OR
password like '%' AND
username='madman';--';
```

Noticed, the double dash, eh? The database ignores anything after the double dash (--) characters in an SQL query. This means that the above query will request the database to search for a user with username `madman`, and password also `madman` or search for a user with any password, but username `madman`. In such a case, the database basically searches only for a user whose username is `madman` and returns his userid. Oops!

Norton™ by Symantec



Ipad 16 GB +Wifi

BUY

Norton Internet Security 2011 or Norton 360 (1 or 3 User Pack)

n' WIN

assured gift*

*Terms & Conditions Apply.



32 inch LCD TV



Blackberry Curve



Apple Ipod Touch



Sony HandyCam



500 GB External Hard Drive



4 GB Pen Drive



Wireless Mouse



Bluetooth Headset



USB Computer Speakers



Swatch

Offer Valid from 5th March to 30th April 2011

Norton - World's # 1*

security software In Protection and Performance

*Refer: http://www.passmark.com/ftp/antivirus_11-performance-testing-ed2.pdf
Refer: http://www.dennistechnologylabs.com/reports/s/a-m/symantec/DTL_PCVP2011_SYMC.pdf

Images shown above are indicative only.

For more details, please log on to **www.buyandwin.in**

Earthquake Lite
Earthquake Lite is an App which displays global seismic activity, also displays the epicentre of the earthquake with the help of map view

jStat
jStat tends towards building statistics and visualization software, making JavaScript and alternative for MATLAB or R

Countermeasures to SQL injection

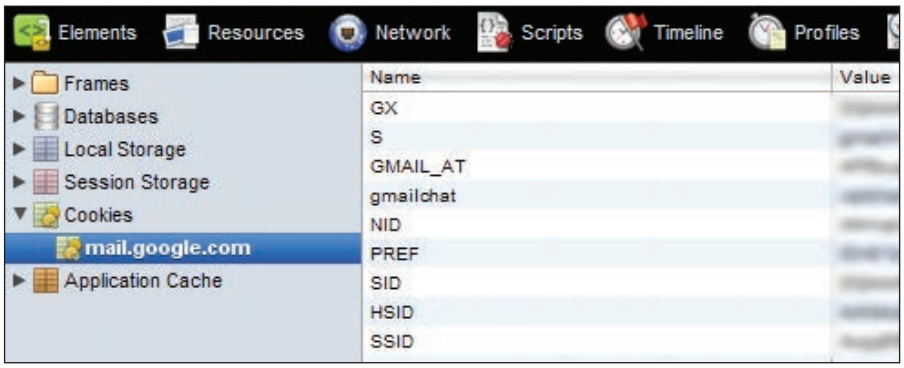
There are a few points to be mindful of. The first is that for the above trick to work, you must know the table column names that are used to store the usernames and passwords, which is not too tough to guess because most database designers would choose obvious and easy to guess names.

There is very little a user can do, but if you are a developer, we have something to say. First, the trick fundamentally works depending on what DBMS you might be bringing into use. Not all databases read the `AND` and `OR` keywords in same style. Depending on the DBMS used, you might like to amend the position of these keywords. Second, different databases treat the newlines within the query differently. While some databases might recreate the complete query as a single liner, others would hate to do this ever. So please read the manual. As a third point, the trick basically works because you have been able to guess the table's column names. Changing them to something which cannot be easily guessed, you might make the work overly complicated for the attacker. For example, if you change the column names to something like username_3397 and passwords_9865, they do not remain easy to be guessed. Do they?

Session Hijacking

As the term suggests, it depends on 'sessions'. Whenever you log into a website, the website creates a new session for you. Most websites create a cookie (don't get mistaken with the yumminess) on your computer which is used only for that session. When you log out, your session ends and cookie expires. Sometimes people are almost always logged into some website. An expired cookie is useless; but it is quite important if you are still logged in.

Take your web mail for example. You do not want to log in again and again so you check that 'keep me signed in' or 'Remember me' checkbox and login. Congrats, a cookie has been embodied on your computer which would not expire for a long time. This cookie can now be used on another machine to gain access



Some details you overlook...

to your account, without knowing your password (and that is the scariest part). If a malicious attacker gains access to your account just once, he can change your password or download everything from your account on his computer and you will have no idea about it. Now that's what you call espionage.

It is not a big deal to steal cookies from your computer. This job is an easy meat for a moderate level hacker. Not only this, they can be seen with naked eyes using any modern web browser. For example, in Google Chrome, right click anywhere and select "Inspect Element". This opens developer tools on the lower half of the window. Now click on the resources section on the top bar of the developer tools section. It will list the different types of resources that Google Chrome manages for you. On the left pane, you will find an expandable menu for 'Cookies' where you can see the cookies set by the website itself as well as by other sites whose elements are displayed on the page (e.g. Facebook Social Plugin). If you are wondering about Firefox, here are the links to help you (it's called SQLite Manager):

https://addons.mozilla.org/en-US/firefox/addon/5817

http://kb.mozillazine.org/Profile_folder_-_Firefox

We believe that any reader aware of the web security 'like you' can make out the rest by himself.

Not every cookie which is enlisted there is important but someone, who has spent some time can easily figure out which one is important and gobble it easily. Methods to steal a cookie can vary, but the effect will be same; your account being compromised, hacked down, and used by someone else. Although most major sites have their defences up against this technique, some are unaware, some are too indifferent.

There is yet another type of session hijacking done via URLs. At many occasions, you might have seen something like `sessid=1ca73292fae72da6ec02c1f17bb61902` on your URL bar. Actually that 'crap' that you are watching is the session ID generated by the website for you. Some (or should we say 'most') users share URL on the web without noticing this part. Feeling déjà-vu? Although most websites using a popular CMS software are safe from the attack, every once in a while some hacker with some innovative material inside his skull comes up with a method to crack the nut. If such a URL is shared and the programs working on the website use only a session ID to recognize and differentiate a user from another, the user to whom the session ID actually belongs is risking his privacy to a great extent.

Countermeasures

Session Hijacking concerns cookies and URLs. As far as URLs are concerned, all you have to take care is to not share URLs which contain your session ID on the web, not at least publicly. Sometimes just removing the part of the URL containing your session ID can work. As far as cookies are concerned, the best way around is to make sure that people other than you are not able to access them. Although paranoid, the best solution is to encrypt the partition in which the cookies rest. With professional and ultimate editions of Win-

UNINTERRUPTED
POWER FOR YOUR BUSSINESS

World class UPS systems from India's leading power back-up solutions provider



BSK 1- 10 KVA



BTO 650 VA

- **Attractive prices for bulk orders.** • **All models ex- stock**
- **Pan India sales and service network** • **650 VA UPS with 12 V, 7.2 Ah battery (2.1 Kgs)**

Inviting dealer and distributor inquiries across India

Call us at : **1800 1800 007**
sms **'Battery'** to **56767**
www.basebatteries.com

BASE
BATTERIES • UPS • INVERTERS

Branches : **NORTH** - Delhi: 98101 36524, Chandigarh: 98145 36524, Ghaziabad: 98719 95542, Gurgaon: 98719 95538, Agra: 98970 36524, Lucknow: 99360 36524, Dehradun:96341 31999, Ambala: 99962 52630, Jammu: 0191 2490476, **CENTRAL** - Jaipur: 98280 36524, Indore: 98930 36524, **SOUTH** - Bangalore: 98440 36524, Chennai: 98401 36524, Palakkad: 98473 36524, Secunderabad 98490 36524, Salem: 98401 36524, Hubli: 98863 21922, Madurai : 98401 36524, **EAST** - Kolkata: 94330 36524, Jamshedpur: 92346 36524, Guwahati: 90850 36524, **WEST** - Mumbai: 98206 36524, Pune: 98231 36524, Aurangabad: 98231 36524, Ahmedabad: 98250 36524, Nagpur: 98227 36524, Raipur: 93039 36524. **And 48 service centers across India.**

Embedly
Embedly is a platform that converts all URLs into enmbeddable content.

Twitterized Newspaper
BroadFeed, a Twitterized newspaper application for iPad, automatically works with twitter account and organizes the topics based on popularity.

dows, you can encrypt your browser's profile directory using the NTFS' encryption feature and stay relaxed. With Linux, you can encrypt your / home partition and it would be very safe (along with your other documents in the /home partition). If that sounds Greek, there are a few third party tools and Google is your best mate as well.

Cross Site Scripting (XSS)

One might perceive the fact that the way to hack a user's information is by exploiting the loopholes on his computer. While it cannot be denied that the above stands right, there is yet another way where a user can be exploited indirectly through a website. An attacker would write some malicious code on a web page and when a user visits the same page, his information might be stolen. The question is HOW?

Let us consider a simple scenario where a page displays what the user enters in a text input area. A sample of such code (in PHP) would be:

```
$input = $_POST[input];
echo $input;
echo '<div id="message">
</div>';
```

Here the input given by user is stored in the $input variable and is then printed on screen. We also create a small div on the page whose id we choose to be message, which we will use later. Let us call the script xss.php.

Let us assume the form which submits data to this PHP script is something like:

```
<form action="xss.
php" method="post">
Enter something: <textarea
name="input"></textarea>
<input type="submit"
value="test" />
</form>
```

Now, if you scribble anything into the box, it will show you the same exact thing as the output. If you were to type abcd, it will show abcd. But that is not our interest. We want to explore possibilities. So we type something like this in the input box:

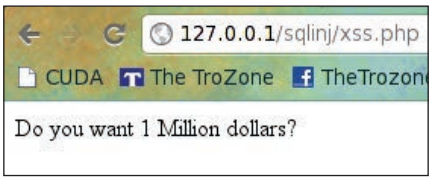
```
<script type="text/javas-
cript"> function myfunc()
{ txt = "<p>Current URL:" +
document.location.href + "</p>";
document.
getElementById("message").
innerHTML=txt; } </script>
<span onmouseover=
"myfunc()">Do you want 1 mil-
lion dollars? :)</span>
```

When you submit this data to xss.php, you will see something like:

It looks pretty simple, doesn't it? Just hover the arrow over the text and you will see it isn't as innocent as it looks:

You can see that just a hover over the text made the page extract your current URL and show it on screen. Our input in the form has been crafted for demonstration. A malicious user can write code which would be potent enough to extract a lot more data or perform other actions, without showing anything materialistic on screen and making everything undone for you. If you remember correctly, even extracting URLs can be perilous. If the site does not take care of the session IDs, even this script with slight modifications, can be used to session-hijack the user.

You often enter a lot of data in web forms especially on discussion boards and blogs. An attacker can create a carefully

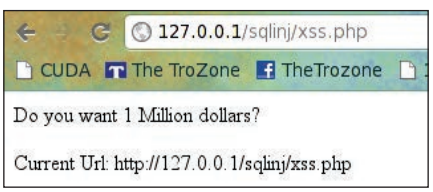


A simple example of XSS

crafted script and data which when visited would steal user information, information you'd never have liked to be shared. Since in this method the attacker is targeting the user indirectly by using a script which has been put up on a website, it is called Cross Site Scripting or XSS for short.

Countermeasures

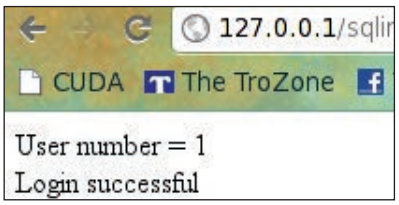
XSS uses the weaknesses of websites. Just leave a single gap and the attacker



Requesting for user response

would make everything a menace for you and maybe you'd never ever smell it even. It is exceptionally challenging for a user to defend because in most cases, unlike the example we provided, the data is stolen mutely. As a matter of fact the only way to save yourself from XSS is to not visit the page with a XSS script on it; but there is almost no automated way for that and the manual methods are mind boggling enough to churn your senses.

The only person, who can rescue you, is the website developer. XSS is one of the prime reasons why most blogs, discussion boards and CMS software would not allow you to enter HTML in the input fields such as comments or article bodies. If you are a site admin, make sure that you do not allow users to use all the available HTML tags. If you are trying to develop a website, do make sure that you allow only basic HTML tags in the input field. There are a lot of open source CMS software projects on the web. You can read the code and implement it in your web application as well (take care of license).



Successful injection of XSS

These three vulnerabilities are one of the major reasons why some people do not prefer modified or custom made CMS software for their websites. It is very much possible that the developer while modifying a CMS might have himself disabled one (or more) of the security features for being able to include some new ones which he can advertise about.

Now having read this piece of text, your senses might have been alarmed. However, you need to caress them because for every question, an answer exists. If you do acknowledge the risks that you might be taking, unknowingly, try and counter it, or else, get ready for the heat. It is worth a mention that we showed you less than the tip of the iceberg. There is a whole lot more into each one of these techniques.

'e Scan™

Are You Completely **Secured** Online?

'e Scan 11

The Next Generation

Anti-Virus

'e Scan™

Anti-Virus

NEW SLEEK & POWERFUL

The New eScan 11 provides a proactive protection against malware and other security threats that lurk over the internet. It represents the Next Generation Information Security Solution that tackles current and future security threats without compromising the speed of your computer.



Available in Windows® & Linux Version

Anti-Virus | Anti-Spam | Anti-Spyware | Anti-Phishing | Application Control | Web Protection
Virtual Keyboard | Gaming Mode | Folder & File Security | Identity Theft Prevention
Advanced Firewall | Privacy Protection | Faster On-Demand Scanning

Awards

Partnerships

Microsoft GOLD CERTIFIED Partner

Support

24x7

FREE Online Technical Support

SECURE • SCALABLE • RELIABLE

www.escanav.com
indiasales@escanav.com

Where do they come from?
A vast majority of the world's cyber criminals are American men. However, a few of them also reside in places like Russia, China Nigeria and other parts of the world.

The ATM hit
On November 8, 2008, many thieves fanned out across the globe. With cloned or stolen debit cards in hand, they hit more than 2,100 money machines in at least 280 cities and in 12 hours, they walked off with more than $9 million in cash.

Cyber Crime's Most (In)Famous

Some did it for kicks, some craved the fame, some thought they were making a political statement while others obviously went for the money. Here's a look at some of cyber crime's most infamous criminals and their hacking exploits.

Anoop Verma
readersletters@thinkdigit.com

There is a very thin line that divides cyber-pranksters from cyber-criminals. Some of the most notorious cyber crimes of the last few years have been attributed to youngsters, who perhaps innocuously thought they were playing a prank when they hacked into networks or created malicious code for viruses, malware, worms or Trojans. Maybe they didn't have the intention of making a financial gain from their activities, nor did they aspire for celebrity status or they did it, purely for the heck of it and as a prank. Did they just want to prove it to themselves?

Whatever their motivation, there is a lot to learn about the psyche of a cyber criminal. Much information can be gathered by studying their profiles and understanding what they did. Without trying to glorify these deviants, they are admittedly above average intelligence.

One might even say in some cases they have a gift. Most of them have a deep understanding of the human mind and how to tempt it. How they use their gifts is under question. They're talented individuals with a tendency to walk on the wrong side of the law. Eventually many of the black-hatters do see the light and clean up their act, becoming consultants or working for big names in the tech industry.

Here is a look at some of the most colourful cyber criminals that the world has known. But of course the real geniuses are those that have never got caught. Yet...



MARK ABENE
(Born 1972)

Born in New York, he had his first contact with computers at the age of 9. It turned out to be a proverbial case of love at first sight. He literally could not keep himself away from computers and he devoted himself to learning the few popular programming languages. In the mid 1980s, he came in contact with a group of teenaged hackers that went by the name of Legion of Doom. Lurking with them he further perfected his hacking techniques. When the group disintegrated due to internal dissension, Mark Abene shifted his loyalties to another group of local hackers, the Masters of Deception.

He had keen interest in telecommunications, and when AT&T's network crashed in January 15, 1990, US authorities held him and other members of Masters of Deception as being responsible. On January 24, 1990, Mark Abene's house was searched and in December 1991, he was formally arrested. When he was released in November 1994, he had a hero's welcome from large number of people who are interested in technology. Today he works as an independent consultant, advising corporations on matters related to cyber security.



KEVIN MITNICK
(Born 1963)

At one point of time in his career, Kevin Mitnick enjoyed the unsavoury distinction of being the most wanted cyber criminal in America. Believe it or not, his tryst with crime started when he was only 12 years old, when he cracked the punch-card system used in Los Angles bus system to gain free rides in any bus in the greater LA area. In 1979, at the age of 16, he gained unauthorised access to the computer system of Digital Equipment Corporation (DEC), from where he copied some crucial software. For this crime, he was convicted and sentenced to 12 months in prison and three years of probation. But the punishment did not make him change his ways.

After his release, he hacked into the systems of some schools in LA and into the one that was owned by Pacific Bell. When a warrant for his arrest was issued, he fled and became a fugitive for almost two and a half years. During his days as a fugitive, he gained further notoriety by gaining unauthorised access into many other computer systems. When he was apprehended in February 1995, many mobile phones, which he had cloned, were found with him. He was also found in possession of multiple false identities. In 1999, he was convicted and sentenced to four years of prison. These days he is running a cyber security company.

ZyXEL
Connecting the Future



WAP-3205

WAP-3205: 2 Ethernet ports, 802.11n 300 mbps, Multiple SSID, Two detachable antenna, WPS, WPA, WDS, MBM, Universal repeater.



NWA-1100

NWA-1100: 1 Ethernet port, PoE. 802.11g 54 mbps, Two detachable antenna 200 mW, WPA-Enterprise, WPA-2 Enterprise.



NWA-3160

NWA-3160: Hybrid controller based wireless solution, 802.11 a/b/g Manage up to 24 AP in single interface, Easy roaming load balancing, Failover, 2 detachable antenna, Multiple SSID.



NWA-3166

NWA-3166: Hybrid controller based wireless solution, 802.11 a/b/g/n Manage up to 24 AP in single interface, Easy roaming load balancing, Failover, Internal antenna, Multiple SSID.



No Gimmicks. Just Performance.

- For High Density and Large-Scale Deployments
- Enterprise Class Security
- Virtual AP for Specific Applications
- Powerful Management with Scalability for Massive Deployment
- Multiple operation modes extend WiFi Applications
- Flexible Deployment with PoE
- Suburb Coverage for Large-Scale Deployments
- Options for Network Management

ZyXEL Technology India Pvt Ltd: 407, Elegance Tower Jasola District Centre, New Delhi-110025. **Tel:** +91-11-47608800 **Toll Free:** 1800-102-9995 **Email:** info@zyxel.in **Website:** www.zyxel.in

Regional Distributors: DELHI ▸**Comnet Vision:** B-1 Aggarwal Bhawan, 35-36, Nehru Place, New Delhi - 110019 **Phone:** 09811026195 **HARYANA** ▸**City Circuit:**O-110, DLF Shopping Mall, Arjun Marg, DLF Phase-I, Gurgaon **Phone:** 09811761318/09311761318 **KERALA** ▸**Coastal Traders:** XL 7003, KAILAS, Sreenivasa Mallan Road, Ernakulam-35 **Phone:** 0484-2362616/2362686/09447744898 **E-mail:** ratheesh@coastaltraders.in **Website:** www.coastaltraders.in **RAJASTHAN** ▸**Jaydeep Mathur Dot Com (JMDC):** F-88, First Floor, Raiser Plaza, Indira bazar, Jaipur-302001 **Phone:** 0141-4026150/5102150/09414229091/09829096862 **E-mail:** mathurjaideep@gmail.com **WEST BENGAL** ▸**Lalani Infotech Ltd**: 25, Ganesh Chandra Avenue, Kolkata-700013 **Phone:** 033-66126400/22115285/09230511413 **E-mail:** lalani@lalaniinfotech.in

Authorised Partners: Ahmedabad ▸Megastar Computer Services: 079-26764812/09227805656 **Chandigarh** ▸Micro Care Professional: 09417200336 **Chennai** ▸Gallant Infosys: 044-24983616/42108636/42108637/42312630/09841090043 ▸Ransys Bios Technologies India Pvt Ltd: 044-42023533/09962016292 **Coimbatore** ▸Ransys Bios Technologies (P) ltd: 09962016295 **Delhi** ▸Bansal Stan Mart: 09313206554 ▸Computer Plaza: 09811415675 ▸Indian Network Co.: 09650591591 ▸Jain Peripherals & Computers: 09810506641 ▸M.S. Enterprises: 09873004331 ▸N. G. Peripherals: 09811463912 ▸Spiral Systems: 098112 66280 ▸Syscom Computers: 09810393523 **Erode** ▸Bravo Systems: 0424-2260226 **Faridabad** ▸Universal Systems: 09312770934 **Ghaziabad** ▸Swas Computers: 09311745458 **Gurgaon** ▸Pixel Computer: 09811019000 **Hyderabad** ▸e-plus IT Solutions (P) Ltd: 040-40025419/07702112020 **Karur** ▸Siva Computer INC: 04324-2602/09965577821 **Kolkata** ▸Syscomp Impex Pvt Ltd: 09433019003 **Madurai** ▸Ransys Bios Technologies (P) ltd.: 099620 16299 **Pondicherry** ▸Gallant Infosys: 7305407779/9380070779 **Rohtak** ▸Jeetu Enterprises: 09812050753 **Tirupur** ▸Divine E Solutions: 0421-4323722/09843020381/09952415402 **Salem** ▸Smart Infotek: 09443747749 **Vellore** ▸Intech Computers: 0416-2224511/09443324511

Operation Phish Phry

FBI launched the Operation Phish Phry in year 2007 and by the time the operation was over, the agency had managed to catch 100 cyber criminals who were involved in phishing.

Cyber warfare

One form of hacking, the denial-of-service (DoS) attack, has now evolved as a tool of war. These attacks are designed to paralyse websites, financial networks and other computer systems by flooding them with useless data from outside computers.



ADRIAN LAMO
(Born 1981)

Adrian Lamo has been making lot of news lately, primarily because of his ongoing tussle with the whistle blower web site WikiLeaks. Although he has taken a dip in the world of cyber crime his claim to fame is rather odd. Intelligence officer Bradley Manning had contacted Adrian Lamo over IM to brag about the fact that he was responsible for leaking thousands of documents to WikiLeaks. Lamo promptly tipped off the FBI with this information. Since then many in the hacker community have been bombarding Lamo with death threats for cooperating with the authorities, but there are also those who call him a national hero. Born in Boston, Lamo spent his early childhood in Arlington, Virginia, before moving to Bogotá, Colombia at the age of 10.

Two years later when he came back to USA, he became obsessed with computers and software. He was barely out of his teens when he started performing authorised or unauthorised vulnerability assessment for several large and small business entities. However, most of his work was done for free. In February 2002 after breaking into The New York Times computer network, he added his name to the internal database of expert sources, and began using the paper's LexisNexis account to conduct research on high-profile subjects. The newspaper filed a complaint and warrant for Lamo's arrest was issued in August 2003. Later on he was convicted of compromising the security of The New York Times, Microsoft, Yahoo! and MCI WorldCom.

CHAD DAVIS
(Born 1981)

The founding member of the globalHell syndicate of hackers, Chad Davis used to operate under the pseudonym, Mindphasr. He is suspected to have played a lead role in the hacking of the web sites of numerous businesses and government agencies. Two weeks after he vandalised the web site of the White House, in June 1999, the authorities searched his apartment. As Chad Davis was underage at that time, he could not be arrested; the cops only fined him $165 for a can of beer that was found in his refrigerator. Within days of the search, Chad Davis retaliated by hacking the home page of the US Army, where he posted the message, "globalHell will not die." This time Chad was taken into custody and in 2001, and after he had pled guilty to the crime of hacking, he was sentenced to six months in prison. The judge also sentenced him to six months of probation, during which period he was ordered to stay away from computers.



JEANSON JAMES ANCHETA
(Born 1985)

Jeanson James Ancheta enjoys the notoriety of being the first person in the world to be convicted of controlling large numbers of hijacked computers or botnets. At one point of time he used to control more than half a million computers, which allowed him to orchestrate large-scale attacks. For this crime, he had to spend five years in jail. He was accused of making profit of more than $70,000 by installing adware on his hijacked computers or botnets. Born in USA, Ancheta attended the Downey High School in California until 2001, when he dropped out of school. After that he is known to have spent some time with the alternative program for students with academic or behavioural problems. He also worked at an internet cafe and from June 2004, he started his work with botnets.

JAN DE WIT
(Born 1981)

Sort of a misfit on this list, this hacker is not nearly as much a computer genius as he is a shrewd observer of human nature. Almost ten years have passed since the famous Anna Kournikova worm spread round the globe. The virus tempted users with naked pictures of the tennis diva and instead they found themselves infected with a malicious email-aware worm once they downloaded the package. What's interesting about this story is that the Netherlands-based, Jan de Wit wasn't a computer wizard; of course, he knew a little bit about coding and things like that, but the Anna Kournikova worm was made out of very basic form of Visual Basic Script (VBS). The worm was successful in wrecking havoc primarily because of its innovative socially viral strategy of reaching lot of users through user's outlook address books. You see a message from a contact saying: "Hi: Check This!", with what appears to be a picture file labelled "AnnaKournikova.jpg.vbs". For his crime Jan de Wit was sentenced for 75 days in jail.

TREND MICRO™
TITANIUM™
INTERNET SECURITY THAT WON'T SLOW YOU DOWN

Microsoft Security has recently identified these threats

- Trojan:Java/Koladeiter.A
- Trojan:Win32/Fibebol.A
- Trojan:Win32/Qhost.JO
- Backdoor:Win32/Momibot
- Virus:Win32/Kheagol.D
- Worm:Win32/Phorpiex.A
- TrojanSpy:AndroidOS/DroidDream.A
- Virus:Win32/Kheagol.C
- Exploit:Java/CVE-2010-0844.D
- TrojanDownloader:Java/OpenConnection.JS

DSK SUPINFOGAME video game

India's first INTERNATIONAL institute for Video Game Design



4 year integrated course : Foundation 2 years | Advanced 2 years



PRODUCTION MANAGEMENT



LEVEL DESIGN



GAME DESIGN

Millions of people around the world can play a game.
But we'll teach you how to

MAKE THE RULES!

We offer a state-of-art infrastructure and equipments. Learn from our international industry experienced full-time trainers from Europe and access to a professional network that spans around the globe.

Entrance Exam on 17th April 2011

Pune • New Delhi • Bengaluru • Chennai • Kolkata

Last date for submission of Form: 10th April 2011

www.dsksic.com

ELIGIBILITY

FOUNDATION COURSE :
12th pass with proven creative abilities and a zeal to excel.

ADVANCED COURSE :
Any degree/diploma/certificate with proven creative and design abilities.
A finished portfolio is mandatory.

A joint venture between DSK Group, India and Supinfocom Group, France

DSK SUPINFOCOM INTERNATIONAL CAMPUS
animation | video game | industrial design

DSK SUPINFOCOM INTERNATIONAL CAMPUS
Pune | Maharashtra | India
E-Mail: info@dsksic.com

Toll free: 1800 2095020
Tel: +91 20 66784310 / 11

digit



Its time to BURN old CDs



Get everything in a PORTABLE HARD DISK



Get 320 GB Hard Disk with 3 year Digit subscription

OR

Get 8 GB Pen Drive with 1 year Digit subscription



OFFER EXPIRES ON 30TH APRIL

ACT NOW!

Visit:
thinkdigit.com/subscribe
OR
SMS DIGIT SUB to 92200 92200
OR
Fill the attached form and send along with a Cheque/DD

1 YEAR OF DIGIT SUBSCRIPTION GIVES YOU

1000+	600+	500+	250+	15+
Product Reviews	Problem Resolutions	Tips & Tricks	GB of Software & Games	Fast Track Books

For more such exciting subscription schemes, please refer to the attached subscription form or visit **thinkdigit.com/subscribe**

www.52ndindia.com

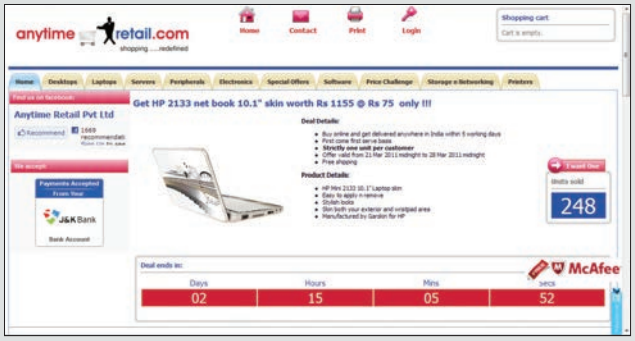
ANYTIMERETAIL.COM

Anytime Retail Pvt. Ltd. is a gadget website founded by UK-returned software professional Krishna Sumanth, in partnership with BITS (Pilani) alumni Vamsi Krishna. Krishna is an ex-employee of Dell his colleague Vamsi used to work at eBay. The company is 100% owned and funded by the family business.

Anytimeretail.com is a gadget website that aims to become a one-stop online store for all gadget and accessory purchases. Multiple gadget categories are covered here, with a wide range of products and accessories available for purchase.

Interface

Anytimeretail.com has a very minimalist layout, with simple menus and boxed product listings. The homepage lists a deal on offer, with the product details the price, any combo offers and the time this offer is valid for. The top part of the page has a horizontal menu, with the gadget categories clearly listed.



The categories on offer are:

- Laptops
- Desktops
- Servers
- Peripherals
- Electronics
- Special offers
- Software
- Price challenge
- Storage and networking
- Printers

When you click on any category tab, a page opens up with a list of brands available, with their logos. This page auto refreshes after a couple of seconds and the product listing page opens. The layout of the products in any category are in big boxes, with the product name, a few details, image of the product and the price available at a glance.

The categories

The main menu has the gadget categories clearly listed. Let us take a look at some of the categories and see what each category offers.

Laptops: When you click on the laptop tab, a page opens up with a list of brands available, with their logos. This page auto refreshes after a couple of seconds and the product listing page opens. The layout of this category means that the list of brands shows up on the vertical menu bar on the left of the page. For all laptop accessories and other components applicable for this category, there are brands listed individually across category. The brands available in this category are Acer, HP, Dell, Lenovo, Sony and Toshiba. A lot of products we saw were available in discounted prices.

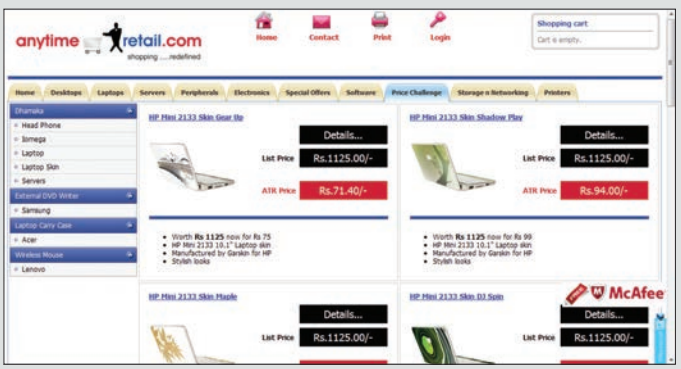


Desktops: Yes, they are still alive and kicking! Acer, Dell, Lenovo and HP-Compaq are available for purchase here. Discounts abound here as well, on almost all desktops.

The "Electronics" category admittedly seems like a confusing category. But heading into it makes one realize that this category lists air conditioners, MP3/MP4 players, projectors, tablet devices and televisions. Brands like Llyod, Dell, Apple, Samsung and Transcend are listed.

The Special Offers category lists a lot of products which are being offered on a discount, irrespective of the category. While the listing of products is random, the brand listing on the left vertical menu makes navigation easier.

The Price Challenge category, according to us, is pretty much a listing of more discounted products. Products with slashed prices and schemes are listed in this category. Again, gadget categories and brands available under this offer are listed on the left vertical menu.



Payment options

Anytimeretail.com allows users to pay for the products in a variety of methods. Credit cards (Visa, MasterCard and Diners Club) are accepted, and so is direct online banking transfer from Citibank, Axis Bank, ICICI Bank, HDFC Bank, J&K Bank and even the ITZ and Citibank cash cards.

Shipping and Delivery

The website promises to ship products within 1 to 3 days of the order being placed. Meanwhile, the terms and conditions also claim that the consignment will be handed over to the courier company / postal authorities within 15 days of placing the order, or completion of payment. This can be a little confusing. Shipping charges depend from product to product, and is mentioned in the final bill before you make the payment.

Warranty

The website does not offer any warranty or such schemes, unless stated otherwise. The products sold are covered by warranty schemes of the manufacturer. Anytime Retail offers the users the scheme of getting any damaged/ non-working gadgets repaired under the terms of the warranty offered by the manufacturer. However, the consumer will have to bear the cost of shipping the product back to Anytime Retail. ■

Sponsored

Acer Iconica Tab A501
AT&T would carry the Acer Iconica Tab A501, it has Android Honeycomb with 4G support.

A 100 million for Samsung
Samsung is rejoicing over the fact that its Apps store has crossed a hundred million downloads

SECURITY THREATS you should know about

Sambhav Daffu
sambhav.daffu@thinkdigit.com

Imagine you're spending a lazy Sunday afternoon at home just chilling, updating your blog with photos of the new bike you just bought, chatting on Facebook at the same time. Suddenly, you get a call from your friend inviting you out for dinner. You start to get ready and tweet about the plan before you leave your house. On your way, you update your status on Foursquare expecting to gather a few more friends.

After a fun filled evening, you return home to find that your house has been broken into. You've been robbed of all your precious belongings. Think some notorious thief is at large? That might be the case, only thing is that this is a more sophisticated kind of thief. He didn't need to anticipate your every move or watch you too closely either. You did all the hard work for him, updating him about everything you're up to. All he had to do was follow.

It may seem a little far fetched today, but isn't that where we're headed? Thanks to technology, it's becoming easier for the nefarious to track our every move. According to the "Norton Cybercrime Report: The Human Impact 2010", 76 per cent of internet users in India have fallen victim to a cyber crime. Of course this includes getting a virus at some point in your life also as a "cyber crime", but social engineering attacks are on the rise.

We decided that it was time to look at the top pitfalls you will face going forth, and try and figure out how to avoid them.

Social media scourges

Everyone you know is using social media, and according to Comscore, India is the eighth largest social networking market in the world.

With increasing integration on our hand-held devices, services such as geo-tagging and geo-location are on rise. Being careless about your location status makes you vulnerable to attacks all the more, as cyber crooks know where and when you're travelling. You leave a wealth of information behind for everyone to see.

Geolocation: Never use geo-location services from your home, this is as good as putting posters around the city declaring your address, follow same practice for your office.

Pattern recognition: If you happen to go to the same coffee shop every Friday evening, it's not difficult to decipher it. Don't update this information each time you visit the place.

Phishing: Watch out for suspicious page invites on Facebook even from trusted sources such as your friends. These are fake log-in pages which seek your permission by asking your credentials. Once they gain access to your page they then exploit information like your pictures and videos which you've uploaded.

TREND MICRO™
TITANIUM™
INTERNET SECURITY THAT WON'T SLOW YOU DOWN

Facebook engineering: It's a well known fact that Facebook privacy setting are loose. Don't reveal too much personal information, avoid posting pictures that compromise your security, avoid posting your address and mobile number.

Passwords: Many people use "Your pet's name" or something similar as their security question. Thanks to social media, such personal details are very easily available. .

Twitter botnets: Similar to the command-and-control IRC botnets, hackers are now using Twitter to spread specific types of malicious malware on a PC which follows these bots on Twitter. Once these bots are on your system they can be commanded to wipe or steal your data. Make sure the people you follow are not bots, and revoke access to all unused apps on your account, as they could share your feeds with third party applications you no longer use.

Cellphone curses

Malware infecting smartphones has increased by 33 per cent in the last year alone. Symbian was the most loved platform for hackers to attack, but that was only until now. With the advent of smartphones and availability of millions of apps, operating systems such as Android will see the most number of attacks this year. Recently Google was forced to pull down 50 apps from Android market as close to 200, 000 users downloaded the 'DroidDream' app.

Gaurav Kanwal, Country Sales Manager Symantec says, "As we go beyond the PC to experience the benefits of the internet, we need to step ahead of cybercriminals in these new environments."

Watch that app: Only download apps which are useful and essential to you. Getting just about every other free app you see online, just to try it out is not very safe. Also, when installing an app, read the permissions it's asking for, and if you're uncomfortable granting it those privaledges, don't! Get a free anitvirus like Lookout Mobile Security to ensure that unwanted malware doesn't creep into your phone, keep in mind that the data and contacts on your phone are more important than the data on your PC. To know more on how you can secure your Android handset read our article on page 28.

Wi-Fi hotspots: Just because you see an open Wi-Fi network, doesn't mean

NETGEAR®
Connect with Innovation™



WNDR3700
RANGEMAX™ DUAL BAND WIRELESS-N GIGABIT ROUTER

The Ultimate Networking Machine

• DLNA Certified • Fine-tuned antennas • Gigabit • Dual Band

More wireless channels, less interference and better connections using Dual Band Wireless-N.
Enterprise class security for business class secured WiFi connectivity.

- ✓ReadySHARE™ USB storage access!
- ✓Live Parental Controls - Free!
- ✓Best wireless speed and range
- ✓Guest network access
- ✓Broadband usage meter
- ✓Video Quality of Service

NETGEAR Technical Support Toll Free No: 1800-425-4327

NETGEAR Technologies India Pvt. Ltd.
Paharpur Business Center, Nehru Place Greens, New Delhi 110019. **Phone (Direct):** + 91-011-26207270,
Fax: + 91-011-26207575,26207606, **Email:** sales.india@netgear.com, **Contact:** Atul Jain - 9899100113,
Harshal Charya - 9820233862 (West), Marthesh Nagendra - 9845041988 (South), Bipin Singh - 9811312002 (North).

NETGEAR Technical Support Toll Free No: 1800-425-4327

AUTHORISED DISTRIBUTORS :

• INGRAM MICRO INDIA PVT. LTD.	-	Prashant Ranjan	- 9987519318
• RASHI PERIPHERALS PVT. LTD.	-	Harish Agarwal	- 9967600079

NETGEAR, the NETGEAR logo, Connect with Innovation are trademarks and/or registered trademarks of NETGEAR, Inc., in the United States and/or other countries. Other brand names mentioned herein are for identification purposes only and may be trademarks of their respective holders(s). © 2007 NETGEAR, Inc. All rights reserved.

www.netgear.com

Father of Mac OS X leaves
Bertrand Serlet, chief designer behind the Mac OS X has left Apple, a day before the OS turned 10 years old

Gogobeans
Gogobeans a digital locker app which keeps backup of things on your phone also acts as a platform where content can be shared by just shaking the phone.

you need to connect to it. Wi-Fi hotspots are rarely secure, and other devices connected to them with malware infections can easily infect you. Make sure you have antivirus installed on your device and double check the firewall settings before logging onto unrestricted Wi-Fi hotspots. According to Symantec 4 out of 10 smartphone users access and check their bank accounts and make online purchases on mobiles. Using your bank's phone services over public networks is a strict no-no – unless you're a poor technology writer with no bank balance to begin with.

Red alert: Most smartphone users are unaware of the fact that a few mobile applications send confidential information such as credit card number without prior consent. Hastily entering your private details into an untrusted third party app is a stupid thing to do. Be extra cautious when dealing with bank and ATM pins to make purchases.

Workplace worries

You might tend to ignore the fact that your work place too poses a few security holes that you're ignoring. Remember, having good security practises in place at work can not only save your data and your money, but might end-up saving your job as well.

Forget me: Your email account is private, and you shouldn't allow anyone else to access it. Choosing the Remember me option on a web mail login are private to you and you wouldn't want anyone else to have access to them, but given our complacent nature to save time we often don't bother to type our full email id's and sometimes even our passwords. Keep in mind never to sign in to your email account with 'Remember Me' feature activated even if it's your personal work PC. Spend a extra few seconds and manually type both fields. Even if your web mail is secure, and you use Outlook but don't password protect it, others can get access to your mail.

Keep it official: Just because you've been allotted a PC at work doesn't mean you can save personal info on it. Never save information such as ATM pins, net banking passwords or personal photos and videos on your work machine. Even deleting them does not keep the information safe, as any idiot can use recovery software and recover deleted information from hard drives..

Portable data: Avoid carrying around sensitive information on your portable drives – either work-related or personal. And if you must, use encryption or at least password protection. The everyday user can also use software like WinRAR to archive and password protect a collection of files and folders. It takes a few minutes more of your time, but can save you a lifetime of regret. The most common leaks happen when you lose such drives, they get stolen or even if the drive dies, and is given back to the company for repair / replacement – you have no clue what data is recoverable from a dead drive, so why risk it?

Email scams: Job advertisements are a common method used to wean information from you. An email might promise a job abroad, and ask for your


Digital Banking
RBS
The Royal Bank of Scotland
Dear Royal Bank of Scotland Customer
We hereby notify you that your account has been suspended due to illegal activities we noticed going on in your account.
We hereby advice you to re-activate your account to identify you as the legitimate owner of this RBS online account.
Important Notice:
you will be asked to provide the following details
1: Customer ID
2: Your full Social Security Number
3: Your full Password
Activate your account information now using the following link.
https://www.clickherenow.com/suspended/pub/pal/reload%account.html
This is to make your account more secure and safe from scammers. Thanks for taking your time to re-activate to the new RBS Security.
Fraudulent Email
Source: www.banksafeonline.org.uk
Fake RBS bank scam mail

school and college certificates, and passport copies. This information is then used to create fakes, or can be used to open an account in your name which nefarious transactions are conducted from. Also, never trust email that claims to be from your bank, and asks you to reset your password, or basically asks you to enter any information of any sort. Banks never ask for such details online, so such mails are always phishing and, and should be ignored, or reported.

Hazardous homes

If you think you're safe and secure at home, think again. You need to be careful about security everywhere these days.

Just Win7?: Sure Windows 7 has an in-built security tool which seems to work fine against regular adware and malware that you encounter on a daily basis when surfing. However, malware that's developed specifically to target PCs with only this form of protection is on the rise. Make sure that you use a real-time scanning anti-virus solution in conjunction with Microsoft Security Essentials to get a dual-layer of protection. Scan your computer at regular intervals and make sure you create a system restore point, so even if your system is compromised you can revert to a previous date.

To know more about which antivirus suits your needs the best, read our comprehensive test on security suites.

Linux / Mac is safe: If you work on a Mac or a Linux machine it's quite obvious that you haven't really bothered about installing any security application. However, just because your platform has only a handful of malware doesn't mean you won't get infected. Although there are no real security suites for both these platforms, you can still get open source anti-virus software at least.

Fake software: If you happen to download a fake antivirus then you're in for quite some trouble. Developed to infect your computer, these rogue viruses not only disable all possible options of recovery but fool you into believing that your PC is infected and you need to pay money in order to get rid of the virus. Applications such as Antivirus Live and Advanced Antivirus Remover are just some of the examples of fake antivirus software. If your PC is infected by such threats, then getting a fake antivirus removal tool is a good option. You



One of the fake antiviruses lurking around is Antivirus Live

can also use SUPERAntiSpyware to remove such malicious malware.

HTML 5: With HTML 5 on the verge to replace flash, browsers no longer need to have additional plug-ins, this makes it all the more exciting for hackers to find and develop security holes in it.



Govind Rammurthy CEO and MD MicroWorld

Govind Rammurthy CEO and MD MicroWorld, says, "With HTML 5 integrating complex functions, there are bound to be vulnerabilities on the browser-level implementation that will be exploited by the cyber criminals." Security holes arising from HTML 5 should start appearing later this year, as hackers work hard to find exploits.

Ticket fraud: A number of web sites offer online ticketing services, and online ticket sales amount to an annual turnover of $10 billion worldwide. Ticket scams run large, and you too might get fooled by them. Apart from falling into the trap of booking counterfeit tickets there is also a risk of reserving tickets which are never delivered to your address.

Always purchase tickets from trusted sources. Check for a secure form when asked to input your credit card number, look for https:// in the URL field, or for a lock icon in the address bar. If both are missing, something is fishy and you should avoid entering any personal data.

Public pitfalls

Copies: Photocopying machines installed outside busy places such as stations and colleges are often not assumed to be a security threat. However, you should watch what the attendant is doing with your documents, and keep an eye to make sure extra copies are not made. Since all you need is a photocopy of personal documents to buy a SIM card or even open an account in a small bank, you should be careful as to who has access to these documents. Also, copying machines with built in hard drives are used in some places, so it's possible to save a scan of your document on a hard drive, and print as many copies later as and when required.

Surf's up: We're all aware of the security flaws at cyber cafes. However a few simple points should be kept in mind whenever you use such public computers. Never do any online banking related work from such public computers, and also avoid clicking on remember me when logging in to any site. You might also want to carry a pen drive with portable apps such as a browser to use instead of the one installed on a cyber cafe PC.

Also, when you're visiting a cafe to print out some important documents that you have received in your mail, make it a point to delete everything you've downloaded on to that PC. If possible use the USB drive mentioned above to copy your documents to.



SciVal Strata
SciVal Strata, a web-based modelling tool from Elsevier, allows users to play scientists in teams

Skeletonics
Created by a Japenese team, Skeletonics is a suit that allows extended movements of human appendages.

SECURING TOMORROW

Does PC security really keep people awake at night anymore? What should you worry about? We spoke to the top security businesses to find out...

There are literally millions of threats out in the wild (the net), and all of them are just waiting for you to do something stupid, like click on a banner that offers you a million bucks, or download a file that promises to give you a "free" copy of Windows. However, we're also well aware that thanks to smarter and more powerful phones and more powerful mobile OSes, there's a new platform for virus and malware writers to target,



Pankaj Jain, Director, ESS Distribution (P) Ltd

and in India, it's certainly a much bigger target than the PC user base. Thanks to 3G, many more of us will be browsing on mobile devices. We'll also be trying out a lot of software on these devices thanks to the skyrocketing app market.

Keeping this in mind, we decided to ask some security vendors about their thoughts on the matter, and whether mobile devices are really the future for their business.

What is your opinion on free anti-virus software available?

Pankaj Jain
Director, ESS Distribution (P) Ltd
"There are free and illegal versions of antiviruses that are doing the rounds in the market (and online too). When it comes to enterprise solutions, there is a need for complete security solutions that cover gateways, servers and workstations. In fact, according to a survey done by a renowned agency, pirated antivirus software contribute approximately 42 per cent of the market. So there is a significant market share that is still unexplored."

Jagannath Patnaik
Director – Channel sales, Kaspersky Labs India
"There is always going to be some, who will opt for freewares but the maximum are willing to pay for security software if they are offered at an affordable price without compromising on security and we have priced our products in such a manner that the end user see value for their money."

How do you plan to compete against such free alternatives?

Srinivasan S
Senior Vice President – Sales and Marketing, K7 Computing
"Free security programs only provide limited protection. They might scan for malware, and often can perform automatic scans, too. However a paid security suite typically offers comprehensive tools such as parental controls and identity theft protection. Purchased security suites are always intended to



Jagannath Patnaik, Director – Channel sales, Kaspersky Labs India

be a one stop security solution. The biggest challenge one might face if they are using a free version is the non-availability of technical support."

Have you noticed any specific trends in recent security attacks?

Pankaj Jain
Director, ESS Distribution (P) Ltd
"Malware is the broader term used for a combination of Trojans, adware, spyware, viruses and worms. You can't get rid of present day attacks with just signature-based detection techniques. Also, malware incidents have almost doubled compared to last year and stand at approximately 50,000 malware reports per day. Social networking sites such as Facebook and Orkut are also being used extensively to carry



Srinivasan S, Senior Vice President – Sales and Marketing, K7 Computing

out virus attacks. Recently, Facebook users were exposed to a slew of worms, including Win32/Yimfoca.AA and Win32/Fbphotofake. Win32/Yimfoca.AA. Yimfoca serves as a backdoor that can be controlled remotely and can also spread through other IM software such as Skype, MSN or Yahoo Messenger."

Sanjay Katkar
CTO, Quick Heal Technologies

Over the past 3 years the security market has seen consistent increase in threats and attacks and it has grown more than double every year. The year 2010 has been the most happening year with lot of new kinds of threat surfacing for the first time in history. Year 2010 begin with



Sanjay Katkar, CTO, Quick Heal Technologies

the news of Chinese hackers stealing intellectual property from the most protected systems in the China-based office of Google and was termed as most sophisticated hacker attack. Then we saw the occurrence of the first cloud-based worm on Facebook and few more during the year. Year 2010 also saw Stuxnet – the most sophisticated malware ever and the first cyber weapon. It is during this year we saw the Wikileaks saga unfolding the most serious data leak from the most protected computers in the US.

With Windows increasing in security and adding tools such as Microsoft Security Essentials, are anti-virus companies still relevant?



Amit Nath, Country Manager, India and SAARC, Trend Micro

Amit Nath
Country Manager, India and SAARC, Trend Micro

The threat landscape is ever evolving and the scale of end user attacks is increasing on a daily basis. Researchers who monitored the cybercrime underground noted that the number of Trojans targeting information and credential theft significantly rose in 2010. That is why it is not a great idea to have simple anti-virus software in place. It is important to have software that provides state-of-the-art protection for consumers' data, delivered with optimal performance and ease-of-use.

Sanjay Katkar
CTO, Quick Heal Technologies

Microsoft has been improving security of its browser, operating system and other products in every new release. This is not the first time we are looking at improved security features in MS products. At the same time, every time we see that cyber criminals successfully come out with new attack vectors that break the security of these new products. This is an ongoing activity that's been happening for over two decades now and I do not see any reason for it to stop. PC anti-virus solutions for the end users are not going to be irrelevant, but they are going to remain the more important factor of PC protection. The age old anti-virus has evolved in to a new generation end point protection system.



58 **Security suites tested**
Keep malware away with the winners of our security suite test for 2011

65 **Bazaar**
The latest products tested and served up hot for you

Droidgasm!

Like it or not, Android has pretty much taken the handset world by storm and there are a legion of determined droids around vying for your hard earned dough. Here's what you should buy, and why...

Michael Browne and Vishal Mathur
readersletters@thinkdigit.com

If you're any kind of gadget freak, you'll know that Donut, Éclair and Gingerbread do not have much in common with tasty treats of similar name. But wait – they do! After all we're consuming devices that feature these versions of Android faster than their namesakes. According to a report published by Canalys, a technology-centric analysis agency, in Q4 2010, Android was the world's best-selling smartphone platform, dethroning Symbian from its 10-year reign. This from a platform that was essentially unveiled by Google in late 2007 is a laudable attempt to say the least. Since then, Android has grown by leaps and bounds, and it is one of the forerunners in pushing hardware demands of smartphones outwards.

Given the popularity of Android, the hype surrounding it (a lot of which is deserved), the sheer options in terms of devices available as well as the number of our beloved readers who enquire about devices on this platform, we felt it only fair to have a comparison shootout between some of the newest, and best Android devices available in the market today.

Phones up to ₹10,000: mini-droids

All things considered the three phones featured in this category are all pretty decent options. However, keep the following points in mind. Firstly, such phones will have lesser speced hardware in comparison to the premium phones, and your experience will thus suffer. We aren't just referring to the processor, RAM and graphics solution, but also the display quality and the feel and responsiveness of the capacitive display. This isn't meant as a scare, but value for money is not to be mistaken for a great product. Therefore, while a phone might be half the price of another, even a 10 per cent drop in performance might be very noticeable and ruin the experience to the extent that the user regrets not paying for the better option.

No phone here was capable of displaying 16 million colours. Also, you do not get a display larger than 3.2-inches. While this might feel great if you're migrating from a regular 2-inch display, when it comes to touchscreens something less than 3.2-inch may feel cramped, however this is subjective.

Features, build and usability:

The Micromax A60 is unusual looking, with a broad upper portion that tapers to a narrow bottom. The rear of the phone is also contoured, and the matt-black, rubberised body of the A60 grips securely. Although the build quality of the battery leaves something to be desired, unlike the Videocon Zeus that feels a lot better built and solid. The Huawei Ideos U8150 feels even more rugged. Both the Zeus and the U8150 do not feel built to a price, at least until you switch them on.

Looks aside, there is very little to pick between these phones, and in terms of features they are neck and neck. The Zeus does make a better impression in terms of features and its appearance owing to a marginally higher resolution display as well as a higher resolution camera.

BEST BUY digit
APRIL 2011



Micromax A60

Performance:

The lack of onscreen resolution and colour becomes apparent as soon as these phones are switched on. There is not a lot that differentiates these three phones when it comes to call clarity, although the Huawei U8150's performance was marginally lower. The Micromax A60 misses a trick with mediocre earpiece volume, where we constantly had to ask the person on the other side to repeat their sentences. All three cameras are fairly mediocre, with not much to choose between them in terms of resolution and detail, and while the Zeus has a higher resolution five-megapixel camera, it doesn't offer any tangible advantages over the 3.2-megapixel units on the other two. Although the Zeus has a higher resolution display, it doesn't do much to distance itself from the Huawei Ideos U8150, which offers better colour.

And the winner is

Given the comparable feature set and performance of these three phones, a winner became a matter of better value, which simply means the most affordable phone to win. The Micromax A60 wins our Best Buy award and for a price of ₹7,999 is the cheap Android phone to get.

Phones between ₹10,001 and ₹17,500

A tricky bunch

Most people shopping for an Android phone will be looking to spend in this price bracket. For the price, you do not get a top-notch Android device. Therefore the perception of Android being a high-end platform hasn't been proven wrong, especially given you can buy a reasonably high-end Symbian device like the Nokia E72 for around ₹15,000. However, you do get a lot of options, in fact, sorting through them is not an easy task. At this point, you need to get your priorities right – do you want a great camera and a good multimedia device, or do you want a well-rounded device. It is also interesting to note that the phones within this price range also have smaller displays – we were surprised after checking prices to find no 3.7-inch display-bearing phone available for less than ₹17,500.

Features, build and usability

There's a lot more variety in this category. From the Samsung Galaxy Fit and the LG Optimus One P500 that are touchscreen-only Android devices to the Sony Ericsson Xperia X10 Mini Pro that integrates a small, yet surprisingly usable QWERTY keypad, to the Sony Ericsson Xperia X8 that comes with a number of attractive back covers, and is obviously aimed at the swanky college-goer, to the unusual Motorola Flipout, that features a very unique form factor and conceals a QWERTY keypad in a rather small footprint.

The Sony Ericsson X10 Mini and X10 Mini Pro are tiny phones – the Pro adds a slide-out keypad. The Xperia X8 is slightly larger, and all these phones feature plastic bodies, that nevertheless feel solid on account of their compactness. The HTC Wildfire looks very similar to a few other larger HTC phones, except that it has a 3.2-inch display. To our dismay, none of the phones in this group had a high-resolution display – the best we got was 320 x 480 pixels.

The Samsung Galaxy Fit stood out as being a bit plain looking, with an exaggerated rounding at the edges. While the small Sony Ericsson X10 Mini Pro manages with a well spaced out keypad that has small keys, the larger Samsung Galaxy 551 has a more spaced out keypad, but with less spacing between the keys. This makes it a great keypad to quickly type of SMS' and mails; Samsung has learned from the Samsung Corby Pro.

Quite a few of the devices in this group missed flash units – surprisingly so, for this is a feature one expects on most cellphones with half decent cameras.

Performance

The Galaxy Fit had some weird issues in zone three, where call clarity dipped. There was static on the line, and the call disconnected thrice. We didn't notice any such issues in the other two zones, and clarity on loudspeaker and earpiece was fairly good. We were in for another surprise – the Sony Ericsson Xperia X8 gave us a whopping Bluetooth transfer score of 239 KBps and it was nearly twice as fast as some of the high-end phones.

The Sony Ericsson Xperia X10 Mini has a really nice loudspeaker for music. Not only is it loud, the quality is also good. This phone is suitable for using as an MP3 player. The HTC Wildfire had a very mediocre handsfree unit – we found volume levels sorely lacking. Even earpiece clarity on the HTC Wildfire is mediocre.

HOW WE TESTED

For the purposes of testing we categorised the phones into four groups on the basis of price – up to ₹10,000, ₹10,001 to ₹17,500, ₹17,501 to ₹23,000 and above ₹23,000. We used street prices for this division, and not MRPs. We used our own class 10 SanDisk microSD 16 GB card for recording images, videos and even storing music files. Bluetooth transfers were done to this memory card, and we didn't use and of the phones' internal memory. Before testing, the phone's battery was charged fully. After this, we upgraded each of the phones to the latest firmware available. In case of the Samsung Galaxy S, we couldn't perform the upgrade, since it seemed the phone came to us with a custom firmware, therefore we stuck with Android 2.1. After a firmware upgrade, the memory card was formatted, and a factory reset was done to restore everything to its native form. We used an Airtel SIM throughout, and the Bluetooth tests were carried out using an Apple MacBook Pro unibody, that supports Bluetooth 2.1.

This time round, we've divided our table into three scoring components – features, build and ergonomics and performance. Here build and ergonomics includes the look, feel and construction of a product as well as its ergonomics, usability and intuitiveness.

The heading "features" doesn't include any testable parameters, but contains device characteristics that we rate – for example address book capacity, connectivity options, certain camera specs, hot swap of the memory card, USB charging among others. Under build we give a score that includes the look, fit and finish, surface materials and quality of moving parts. We look at the shortcut buttons, their intuitiveness, the keypad and its usability to quickly type. When looking at keys and controls, we also check their feedback when used, and the level of ergonomics. If the phone has a touchscreen we rate its usability, sensitivity and accuracy, as well as the usability of the onscreen keypad. We also look at the menu system – how well and intelligently laid out is it, how well are options presented, and to what extent can it be tailored to suit an individual i.e. level of customisation.

Under performance, we divide our call clarity test into three zones, on the basis of signal strength. Zone one and two represent normal usage in city, with excellent to mediocre signal reception. Zone three represents poor reception where the phone shows below 25 per cent of signal strength. We rate calls on the basis of clarity both sides of the line, presence of distortion and so on. Loudspeaker, earpiece and handsfree clarity and volume levels on call are also tested. We also test music quality using two MP3 files encoded at 320 kbps at constant bitrates.

The camera is tested for colour reproduction and sharpness of focus, as well as the detail level it is capable of. All these scores are given on a scale of 10. Finally we grade the display itself – resolution and crispness, colour, and of course sunlight visibility.

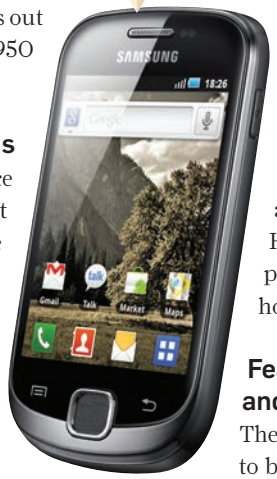
Fine for Google's street view
France has imposed a fine on Google accusing it of gathering unwarranted data

Carriers dread 4G
Service providers are dreading the fact that the faster LTE technology would not suffice the ever increasing bandwidth demands

The Galaxy Fit and the Xperia X10 Mini also had the best cameras of the lot. If anything, Sony Ericsson loses out with a mediocre 950 mAh battery.

And the winner is

Its poor performance in zone three not withstanding, the Galaxy Fit did well in most of the other tests. Its combination of price (₹10,350) and a very nice feature list put it at the top of our value charts. It wins our Digit Best Buy award and is the best multi-purpose Android phone at just over the ₹10,000 mark.



Samsung Galaxy fit

Phones between ₹17,501 and ₹23,000

The true middlemen

Phones in this price category have, perhaps the toughest task of all. They have, on one hand, cheaper phones beneath them that compete tooth and nail for features. On the other hand, if one were to look at spending ₹20,000 or so on a phone, why not spend 5000 bucks more and get a truly high-end device with better hardware and bragging rights? This is a route many users take, while many more go the opposite one – buy a cheaper phone with a smaller display and do without a few extra features and frills, but save a bunch of dough. Yet if you've been looking for a really feature-rich Android phone, and haven't found it thus far, there is a good chance you will find it here. There is a lot of variety in this category, partly due to flagship devices of yesteryear that find themselves in this category – courtesy of price drops, to make way for newer handsets. The HTC Desire and Motorola Milestone are two such phones. In fact the Desire is now a cool ₹5,000 cheaper, and this doesn't make it any less capable. However, newer phones generally hog the limelight.

Features, build and usability

The Motorola Defy has to be the most unique Android phone in this comparison, and we're not talking about gimmicky form factors. It is actually advertised as being water resistant up to 1 meter, which basically means you can submerge it in up to a meter of water with no bad effects. While we couldn't test the validity of this statement, for lack of a deep enough water body near office, we did pour water on it while playing a YouTube – as far as we know, the Defy is still working. The rubberised body and flaps for ports is what makes the innards of this device water resistant. Although the Defy has a 3.7-inch display, it feels quite compact, and despite the selling point being its water resistance, it has a pretty crisp display, and nice clean lines.

The Acer Liquid Metal is heavy on account of its steel construction. The entire phone has a curved design, and this makes the device look thicker than it is.

The HTC Legend is an ageing device that is reasonably compact and feels solid on account of the single piece metal body. The Milestone is a pretty solid device, with a QWERTY keypad that we still feel is a little too flat to be termed as intuitive – key feedback is strictly decent, but the flat keys aren't as usable as Motorola would have you believe. Unlike the Milestone that has dated hardware and feels a bit sluggish, the HTC Desire has a 1 GHz processor, and while it is based on an older SoC, (the QSD8250), it can still run with some of the newer devices around, and with Android 2.2, the Desire doesn't feel sluggish at all.

In terms of interface, we'd say the HTC Desire feels really polished, and HTC's Sense user interface has become better over the past few years.

Performance

The Desire would be our pick of the bunch in the signal reception test. Unfortunate then, that the loudspeaker and earpiece have strictly decent clarity. In fact the loudspeaker in particular sounds tinny, and distorts at maximum volume. None of these phones are really suitable for music and neither are any of the phones very good camera phones. If you're looking for an Android device with an excellent camera, you'll have to look elsewhere.

If you are looking for an excellent display, the HTC Desire with the S-LCD screen is easily the pick of the bunch. The Motorola Defy also has a very crisp display, although it isn't as vivid as the HTC Desire's display.

As we've seen in earlier categories, picking an out and out winner from amongst this group isn't easy, simply because none of them really stands out over the others in any one test.

And the winner is

When features and performance are close price plays a big role in determining our Best Buy. This is because we compute winners on the basis of the overall score of the device versus its price. After grading these phones, we found there were only minor differences in overall scores, although different phones performed differently in individual tests. This



Motorola defy



allows the Motorola Defy to sneak ahead in terms of value for money, and it wins our Best Buy award - a reasonably well rounded, compact and well built device, with the added plus that you can afford to carry it around with impunity during the monsoons!

Phones above ₹23,000
The cream of the bunch

As with any consumer product – pay more, get more is the generic adage. Well, not really, there are exceptions to the rule, but very few. As reviewers, we're supposed to be unbiased, but we're not, especially when it comes to our preference of gadgets we'd like to play with. All our favourite Android phones belonged to this category for obvious reasons – they're flagship devices – built to rule the roost, give you a premium experience and if you're looking for a high-end, lifestyle phone, and are not afraid to splurge, chances are you fill find it here. This category also proves expensive phones can indeed represent good value.

Features, build and usability

The ultra large touchscreen phones make their presence felt here. You will not find anything smaller than a 3.7-inch display here. The Sony Ericsson Xperia X10i and the Samsung Galaxy S i9000 are the older models in this group, and they've both been around for nearly a year. The X10i feels a

DELL STREAK



There are phones, and then there's the Dell Streak. Sound like an advertisement for Dell? Not really – the Streak has a couple of endearing qualities, but ultimately, these prove to be its downfall as a phone. Dell advertises (and continues to proclaim) the Streak as a tablet device. Well, the device firmware, and our MacBook Pro show it to be a smartphone, and we feel Dell has had to change their marketing pitch around after user reactions.

The Streak is too large to be a phone, and too small to be a tablet in our collective opinion. Though not a bad device, people will gape when they see you holding something as large as it to your ear to make calls. So, use a Bluetooth headset, Dell would retort. At least if Dell had made a razor-thin bezel the Streak would passed off, but the thick bezel and weight of 220 grams makes it hard to miss, in your hand, and in your pocket. Owing to its large display, the on-screen keypad is very usable. It feels remarkably well put together and for a large device feels very sturdy in-hand. The display looks reasonably sharp, so the lack of a high pixel density (480 x 800 pixels) isn't hurting 5-inch devices, but put it near a 3.7-inch device, and the Streak feels a bit tardy in this regard. The Streak is however, a lot more responsive than the Dell Venue, and even the camera has much lower lag. Watching videos is a pleasure on the Streak. The loudspeaker on the Streak is pretty powerful, and you can listen to music this way, except at maximum volumes, a bit of distortion creeps in. Oddly, the phones earpiece distorts, but on call, the other persons voice sounds like its constantly distorting. This becomes a little worse when reception is poor, which made us suspect a poor quality antenna, and this affected the call clarity scores.

3M India
MCX
SEBI
HSBC
NSE
Barclays
Stumpp Scheule
GE Money
Religare Realty
ITC Maurya
Hyatt Regency
Taj Lands End
ICICI Knowlegde Park
Hindustan Aeronautics
CP Office Mumbai
Nestle India
Barco
Jubiliant Organosys
Hero Honda Motors
Accenture
Diamond Board
Partial List

VisiteX™ Touch
A Touch screen based visitor management kiosk.

Visitor Management is an internationally accepted safety practice. However due to A plethora of hardware peripherals, operator training, support issue, high running costs etc, many implementations run into troubles.

VisiteX™ Touch is a self help kiosk, which is powerful yet very user-friendly Visitor Management Kiosk which requires No operator ! The running cost is just around 1 cent per visitor !

That is why VisiteX™ is India's most preferred Visitor Management solution ! ...

Call us today for a live demonstration ...



Mumbai - 9324312153
Bangalore - 9379747477
Delhi - 9310889399
Hyderabad - 9347277000
Pune - 9326727467
Chennai - 9381033254
Email - visitex@gmail.com

www.scrum-system.com

VisiteX™
Visitor Management

BEST BUY digit APRIL 2011

BEST BUY digit APRIL 2011

	Up to ₹10,000						
Brand	**Micromax**	**Huawei**	**Videocon**	**Samsung**	**Sony Ericsson**	**LG**	
Model	**A60**	**IDEOS U8150**	**Zeus V7500**	**Galaxy Fit**	**XPERIA X10 Mini**	**Optimus One P500**	
Street Price (₹)	6,584	8,499	9,750	10,350	10,999	11,382	
MRP (₹)	7,999	8,499	10,000	12,860	12,250	12,990	
Plus (+)	Affordable, Decent performer	Good looks Solid build quality	Sleek and Stylish, affordable	Solid build quality, excellent camera	Compact, good music quality	Responsive touchscreen, Value for money	
Minus (-)	No keypad, Sluggish interface	Tiny screen, no flash for camera	No hardware keypad, weak camera	Colours look washed out on display	Small, low res display	Low sunlight legibility, poor loudspeaker quality (esp. in-call)	
Features (Out of 30)	21.39	21.81	23.46	23.79	23.66	22.98	
Build and Ergonomics (Out of 20)	12.68	12.80	12.92	13.54	13.41	13.94	
Performance (Out of 50)	32.39	30.89	33.19	31.92	33.55	31.79	
Grand Totals (Out of 100)	66.46	65.50	69.57	69.25	70.62	68.71	
Features							
Physical Specs							
2G Network Bands	GSM 900/1800	GSM 850 / 900 / 1800 / 1900	GSM 850/900/1800/1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	
3G Network Bands	WCDMA 900/2100	HSDPA 900 / 2100 / AWS HSDPA 850 / 1900 / 2100 / 1700	UMTS 2100 WCDMA	HSDPA 900 / 2100	HSDPA 900 / 2100	HSDPA 900 / 2100	
Screen size (inch) / resolution	2.8 / 240 x 320	2.8 / 240 x 320	3.2 / 480 x 320	3.3 / 240 x 320	2.55 / 240 x 320	3.2 / 320 x 480	
Maximum Screen colours	65K	256k	262K	16M	16M	256K	
Touchscreen / Dual Screen (Y/N)	Y/N	Y/N	Y	Y/N	Y / N	Y (capacitive) / N	
Battery Rating	1280mAh	1200 mAh	1230mAh	1350 mAh	950 mAh	1500 mAh	
Dimensions (L x W x H)	106.8 x 59.2 x 14	104 x 54.8 x 13.5 mm	114.9 x 56.8 x 12.6	110.2 x 61.2 x 12.6 mm	83 x 50 x 16 mm	113.5 x 59 x 13.3 mm	
Weight	105 grams	102gms	114grams	108g	88 grams	129 grams	
Expandable Memory Type	microSD	microSD	microSD	MicroSD	microSD	microSD	
Other Features							
Operating System (Tested with)	Android 2.1 (Eclair)	Android 2.2	Android 1.6 (Eclair Ready)	Android 2.2	Android 1.6	Android 2.2	
Hardware Keypad (Regular/ QWERTY)	N/A	N	N	N/N	N	NA	
Accelerometer (For auto rotate)	Y	Y	Y	Y	Y	Y	
Talk Time / Standby Time *	up to 4 hours / up to 10 days	Up to 220 h (2G) / Up to 300 h (3G) Talk time Up to 4 h (2G) / Up to 5 h (3G	Up to 7 hours / Up to 408 hours	Talk time: up to 620min(2G), up to 370min(3G) Standby time: up to 640Hr(2G), up to 460Hr(3G)	Up to 285 h (2G) / Up to 360 h (3G), Up to 4 h (2G) / Up to 3 h 30 min (3G)	7 hrs, 30 min / 550 hrs	
Inbuilt GPS / A-GPS support (Y / N)	Y / Y	Y / Y	Y / Y	Y/Y	Y / Y	Y / Y	
Connectivity							
Browsing (GPRS/EDGE/3G)	Y / Y / Y	Y / Y / Y	Y/N/Y	Y/Y/Y	Y / Y / Y	Y / Y / Y	
Connectivity (WiFi/Blue-tooth/IR/USB)	Y/Y/Y	Y / Y / N / Y	Y / Y / N / Y	Y/Y/N/Y	Y / Y / N / Y	Y / Y / N / Y	
Camera Specs							
Camera Resolution (Mega Pixels)	3.2	3.15	5	5MP	5	3	
Video Capture Resolution	NA	352 x 288	NA	320 x 240	640 x 480	640 x 480	
Dual Cameras / Auto Focus / Flash (Y/N)	N/Y/N	N/N/N	N/Y/Y	N/Y/N	N / Y / Y	N/Y/N	
Camera Settings (So 10)	6	5	6.5	6	6.5	6.5	
Zoom (Optical/Digital)	Digital	Digital	Digital	Digital	Digital	Digital	
Multimedia							
Formats Supported	MP3, WAV, AMR, MIDI, MP4, 3GP	MP3, WAV, eAAC+, WMA, MP4, H.263, H.264	AMR, AAC, AAC+, EAAC+, MIDI, MP3, WAV, H.263, H.264 AVC, MPEG-4 SP	MP3/WAV/eAAC+, MP4/H.264/H.263	MP3, AAC+, WAV, WMA9, MP4, H.263, H.264	MP3, WAV, eAAC+, WMA, MP4, H.263, H.264, WMV	
FM Radio (Y/N)	N	Y		Y	Y	Y	
Accessories							
Bundled Accessories	Charger, handsfree headset, USB cable, 2GB microSD card	Micro USB cable, hands-free and microSD card	MicroSD card, USB data cable, Car charger, handsfree, extra battery pack, carrying case	Wall charger, handsfree	Charger, data cable, headset	Handsfree, data cable, charger	
Size of memory card provided	2 GB	2 GB	8 GB	2GB	2 GB	2 GB	
Performance							
Signal Reception and Voice Clarity (So 10)							
Zone 1	7.5	7	7.5	8	7.25	7	
Zone 2	6.5	5	6.5	6.5	6.5	7	
Zone 3	6	5	6	3.5	6	6.5	
Bluetooth Transfer Speed (in KBps)	100.5	120.3	106.2	170.6	121.5	175.4	
Imaging and multimedia tests							
Captured Photo Colour	6.5	6	6	7.5	7.5	6	
Captured Photo Crispness	6	7	6	7	7.5	7	
Captuted Photo Detail	6	7	7	7	7.5	7	
Captured Video Quality	5	5	6	5.5	6	6	
Effectiveness of integrated flash	6.5	0	6	0	5.5	0	
Music Quality (loudspeaker)	6.5	6	6	6.5	7.75	6	
Music Quality (handsfree)	6.5	7	7	7	7.75	7	
Display (So 10)							
Crispness	7	7	7	5.5	6	7	
Colour	5.5	7	5.5	6	5	7	
Legibility in bright sunlight	6	6	7	6.5	5.5	5.5	
Video playback	5	5	5	5.5	5.5	6	

₹10,001 to ₹17,500						
Sony Ericsson	**Motorola**	**Sony Ericsson**	**Samsung**	**HTC**	**Motorola**	**Motorola**
Xperia X10 Mini Pro	**Charm**	**Xperia X8**	**Galaxy 551**	**Wildfire**	**QUENCH XT5**	**Flipout**
11,500	11,749	12,596	12,599	13,199	13,299	14,499
14,495	15,990	13,495	15,930	13,990	16,990	16,990
Nice QWERTY keypad	Good keypad, Back-Track touchpad	Flashy looking	Full touch and QWERTY keypad	Nice looking, decent performer	Great build quality and display	Small form factor, Touchscreen and QWERTY combo
Small, low res display	Average battery life, outdated OS	Mediocre all round performance	Plasticky build quality	Low res display	Slow CPU, Android 2.1	Low battery life, only 3.1 MP camera
25.70	23.46	22.35	24.21	23.67	23.52	25.50
13.79	13.26	12.22	10.62	13.26	14.04	9.04
31.93	32.85	31.13	31.05	31.11	32.82	31.47
71.41	69.57	65.70	65.88	68.04	70.38	66.01
GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850/900/1800/1900	GSM 850 / 900 / 1800 / 1900
HSDPA 900 / 2100	HSDPA 1700 / 2100	HSDPA 900 / 2100	3G Network HSDPA 900 / 2100	HSDPA 900 / 2100	HSDPA 850/1900/2100	HSDPA 900 / 2100 HSDPA 850 / 1900
2.55 / 240 x 320	2.8 / 320 x 240	3 / 320 x 480	3.2 / 240 x 400	3.2 / 240 x 320	3.2 / 320 x 480	2.8 / 320 x 240
65K	256K	16M colours	16M	16 million	256K	256k
Y / N	Y/N	touchscreen	Y/N	Touchscreen	Y/N	Y/N
930 mAh	1130 mAh	1200 mAh	1200 mAh	1300 mAh	1270mAh	1130 mAh
90 x 52 x 17 mm	98.4 x 67.2 x 11.4 mm	99 x 54 x 15 mm	111 x 55 x 15.2 mm	106.8 x 60.4 x 12 mm	114.9 x 56.8 x 12.6 mm	67 x 67 x 17 mm
120 grams	110	104 grams	117g	118 grams	114g	120
microSD	microSD	microSD	microSD	microSD	microSD	microSD
Android 1.6	Android 2.1	Android 1.6	Android 2.2	Android 2.1	Android 2.1	Android 2.1
QWERTY	QWERTY	-	QWERTY	N	N/N	QWERTY
Y	Y	Y	Y	Y	Y	Y
3 hrs 30 min, 360 hrs	Stand-by Up to 267 h (2G) / Up to 334 h (3G) Talk time Up to 6 h 45 min (2G) / Up to 5 h (3G)	Stand-by Up to 285 h (2G) / Up to 360 h (3G) Talk time Up to 4 h (2G) / Up to 3 h 30 min (3G)	Stand-by Up to 520 h (2G) / Up to 370 h (3G) Talk time Up to 9 h (2G) / Up to 5 h (3G)	8 hrs, 20 min / 690 hrs	8 hours 20 minutes/ 560 hours	Up to 6 hours/Up to 365hours
Y / Y	Y / Y	Y / Y	Y / Y	Y / Y	Y / Y	Y / Y
Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y
Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y
5	3	3.15	3.15	5	5	3.15
640 x 480	24 fps	640 x 480	640 x 480	640 x 480	320 x 480	352 x 288
N / Y / Y	N/N/N	N/N/N	N/Y/N	Y / Y / Y	N/N/Y	N/N/Y
6.5	6	3.5	4.5	7	7	6
Digital	Digital	Digital	Digital	Digital	Digital	Y
MP3, AAC+, WAV, WMA9, MP4, H.263, H.264	MP3, WAV, eAAC+, WMA, MP4, H.263, H.264, WMV	MP3, eAAC+, WMA, WAV, MP4, H.263, H.264, WMV	MP3, WAV, eAAC+, WMA, MP4, WMV, H.263, H.264	MP3, AAC+, WAV, WMA9, MP4, H.263, H.264, WMV9	MP3, WAV, eAAC+, WMA, MP4, WMV, H.263, H.264	MP3, WAV, eAAC+, WMA, MP4, WMV, H.264, H.263, XviD
Y	Y	Y	Y	Y	Y	Y
Charger, data cable, headset	Data cable, handsfree, AC adapter, user manual	Charger, handsfree, data cable	Wall charger, data cable, microSD card	Charger, data cable, handsfree	MicroSD card, USB cable, handsfree	MicroSD card, Micro USB cable, handsfree
2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
7.5	7.5	7.25	7	7.5	7.5	7.5
6.75	7	6.25	6	6.75	6	6
6.25	6	5	5	5.75	5	5
125	184.3	239	151.2	115	136	93.6
6.5	6	6.25	6.5	6.5	7	5
6.75	6.5	5.5	6	6.25	7	5
5.5	6	5.5	6.5	6	6	6
5.5	6	5	5.5	5.25	6	5
6.5	0	0	0	6	7	6
6	6.5	6	6	6.5	7	7
6.5	7	6	6	6	6	6
6	6	6.5	6.5	5	5	5
6	6.5	6	7	6	6	6
6	7	5.5	7	5.5	7	6
5.5	6	6	5	6	6	6

BEST BUY digit APRIL 2011

	₹17,500 to ₹23,000						
Brand	**Motorola**	**Acer**	**HTC**	**Motorola**	**HTC**	**Sony Ericsson**	
Model	**Defy**	**Liquid Metal**	**Desire**	**Milestone**	**Legend**	**XPERIA X10i**	
Street Price (₹)	18,099	20,500	21,999	22,399	22,990	24,000	
MRP (₹)	21,990	20,500	23,490	22,399	22,990	25,150	
Plus (+)	Solid build	Unique looks, Good battery life	Great display, good performance	Full touch and QWERTY keypad	Good touchscreen response, excellent display quality	Nice looking, decent camera	
Minus (-)	Android 2.1 is a dampner	A bit thick and feels heavy	Feels plasticy	Feels slower than the rivals	Low battery life, multitasking is slow	Slower interface, less responsive display	
Features (Out of 30)	23.64	24.36	24.15	23.55	23.28	22.26	
Ergonomics (Out of 20)	12.16	13.52	13.68	13.91	15.56	14.34	
Performance (Out of 50)	33.84	34.72	34.09	32.96	33.95	34.72	
Grand Totals (Out of 100)	69.64	72.60	71.92	70.42	72.79	71.32	
Features							
Physical Specs							
2G Network Bands	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	
3G Network Bands	HSDPA 900 / 2100	HSDPA 850 / 1900 / 2100	HSDPA 900 / 2100	HSDPA 900 / 2100	HSDPA 900 / 2100	HSDPA 900 / 1700 / 2100	
Screen size / resolution	3.7 / 480 x 854	3.6 / 480 x 800	3.7 / 480 x 800	3.7 / 480 x 854	3.2 / 320 x 480	4 / 480 x 854	
Maximum Screen colours	16M	16M	16M	16M	16M	16M	
Touchscreen / Dual Screen	Y/N	Y/N	Touchscreen	Y/N	Y/N	Y / N	
Battery Rating	1540 mAh	1500 mAh	1400 mAh	1400 mAh	1300 mAh	1500 mAh	
Dimensions (L x W x H)	107 x 59 x 13.4 mm	115 x 63 x 13.5 mm	119 x 60 x 11.9 mm	115.8 x 60 x 13.7 mm	112 x 56.3 x 11.5 mm	119 x 63 x 13 mm	
Weight	118g	135 g	135 grams	165g	126g	135 grams	
Expandable Memory Type	MicroSD	MicroSD	microSD	MicroSD	MicroSD	microSD	
Other Features							
Operating System	Android 2.1	Android 2.2	Android 2.2	Android 2.1	Android 2.2	Android 2.1	
Hardware Keypad	N	N	N	Y (QWERTY)	N	N	
Accelerometer (For auto rotate)	Y	Y	Y	Y	Y	Y	
Talk Time / Standby Time *	Up to 9 h 50 min (2G) / Up to 6 h 40 min (3G)	Up to 450 h (2G) / Up to 550 h (3G) Talk time Up to 11 h (2G) / Up to 8 h (3G)	6 hrs, 30 min / 360 hrs (3G)	Up to 350 h Talk time Up to 6 h 30 min	Up to 440 h (2G) / Up to 560 h (3G) Talk time Up to 7 h (2G) / Up to 6 h 10 min (3G)	Standby Up to 415 h (2G) / Up to 425 h (3G), Talk time Up to 10 h (2G) / Up to 8 h (3G)	
Inbuilt GPS / A-GPS support (Y / N)	Y / Y	Y / Y	Y / Y	Y / Y	Y / Y	Y / Y	
Connectivity							
Browsing (GPRS/EDGE/3G)	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	
Connectivity (WiFi/Bluetooth/IR/USB)	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	
Camera Specs							
Camera Resolution (Mega Pixels)	5	5	5	5	5	8	
Video Capture Resolution	640x480	1280x720	1280 x 720	720X480	640x480	1280 x 720	
Dual Cameras / Auto Focus / Flash (Y/N)	N/Y/Y	N/Y/Y	Y / Y / Y	N/Y/Y	N/Y/Y	N / Y / Y	
Camera Settings (So 10)	5	8	7	7	6	7.5	
Zoom (Optical/Digital)	Digital	Digital	Digital	Digital	Digital	Digital	
Multimedia							
Formats Supported	MP3, WAV, eAAC+, WMA, MP4, WMV, H.263, H.264	MP3, WAV, eAAC+, WMA, XviD/MP4/H.264/H.263	MP3, AAC+, WAV, WMA9, MP4, H.263, H.264, WMV9	MP3, H.263, H.264, MPEG-4, WAV, AAC, AMR WB, OGG, MIDI, AMR NB, eAAC+ , AAC+, MP4, WMV, H.264, H.263, XviD, MV9	MP3, AAC, WMA, WAV, M4A (Apple lossless), AMR, OGG, MIDI, MPEG4, WMV, 3GP, 3G2	MP3, eAAC+, WMA, WAV , MP4, H.263, H.264, WMV	
FM Radio (Y/N)	Y	Y	Y	N	Y	N	
Accessories							
Bundled Accessories	Wall charger, data cable, microSD card	MicroSD card, wall charger, USB cable, carry case, microSD to SD adapter	Charger, handsfree, data cable	Micro USB cable, memory card, handsfree	Micro USB cable, microSD card	Charger, data cable, headset	
Size of memory card provided	2 GB	8 GB	2 GB	2 GB	2 GB	8 GB	
Performance							
Signal Reception and Voice Clarity (So 10)							
Zone 1	7.5	7.5	8	8	8	7.75	
Zone 2	6	6	6.25	6	7	6.5	
Zone 3	5	5	5.5	5	5	5.75	
Bluetooth Transfer Speed (in KBps)	196	198	185.6	102	144	115.2	
Imaging and multimedia tests							
Captured Photo Colour	7	6.5	6.5	6.5	6	7	
Captured Photo Crispness	6.5	7	6.75	6	8	6.75	
Captuted Photo Detail	7	6.5	6.75	6.25	7	7	
Captured Video Quality	5.5	6.5	6.75	6.5	7	6.5	
Effectiveness of integrated flash	7	7	6.5	6	7	6.5	
Music Quality (loudspeaker)	6	6.5	6	6	7	6.75	
Music Quality (handsfree)	6	7	6	6	6	7.75	
Display (So 10)							
Crispness	7	6.5	8.5	6	6.75	6.5	
Colour	7	6.5	7.5	7	7.5	7	
Legibility in bright sunlight	7	7	4	7	6	4.5	
Video playback	6	8	7	7	7	7	

BEST BUY digit APRIL 2011 | EDITOR'S PICK digit APRIL 2011 | BEST PERFORMER digit APRIL 2011

₹23001 and above

HTC	Samsung	Motorola	HTC	Dell	Motorola	Dell
Desire Z	**i9000 Galaxy S**	**Milestone XT720**	**Desire HD**	**Venue**	**Milestone XT800**	**Streak**
24,999	24,999	25,299	26,399	28,999	31,999	32,499
25,590	31,500	29,990	26,990	24,990	31,999	34,990
Great display, decent battery life	Light, slim and good performance	Good camera, solid build	Very good performance, good display	Looks nice	Good build quality	Large display, great music quality
QWERTY is a let down	No flash, on-screen QWERTY	Expensive for the features	Low battery, loudspeaker is tinny	Is bulky, interface needs work	Is underpowered, expensive	Too bulky, earpiece positioned away from mouth
25.32	24.89	24.90	24.60	24.27	23.10	23.34
14.73	13.88	13.76	15.32	15.08	13.52	14.54
36.28	37.04	34.70	38.04	34.97	33.63	34.60
76.33	75.81	73.36	77.96	74.32	70.25	72.48
GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900	GSM 850 / 900 / 1800 / 1900 CDMA 800 / 1900	GSM 850 / 900 / 1800 / 1900
HSDPA 900 / 2100	HSDPA 900 / 1900 / 2100	HSDPA 1700 / 2100	HSDPA 900 / 2100	HSDPA 850 / 1900 / 2100	CDMA2000 1xEV-DO	HSDPA 900 / 2100
3.7 / 480 x 800	4 / 480 x 800	3.7 / 480 x 854	4.3 / 480 x 800	4.1 / 480 x 800	3.7 / 480 x 854	5 / 480 x 800
16M	16M	16M	16M	16M	16M	16M
Y / N	Y / N	Y/N	Y / N	Y/N	Y/N	Y / N
1300 mAh	1500 mAh	1390 mAh	1230 mAh	1400 mAh	1390 mAh	1530 mAh
119 x 60.4 x 14.2 mm	122.4 x 64.2 x 9.9 mm	116 x 60.9 x 10.9 mm	123 x 68 x 11.8 mm	121 x 64 x 12.9 mm	120 x 61.8 x 11.4 mm	152.9 x 79.1 x 10 mm
180 grams	119 grams	139g	164 grams	164g	137g	220 g
microSD	microSD	microSD	microSD	MicroSD	microSD	microSD
Android 2.2 (Gingerbread ready)	2.1	Android 2.1	Android 2.2 (Gingerbread ready)	Android 2.2	Android 2.1	Android 2.2
QWERTY	N	N	N	N	N/N	N / N
Y	Y	Y	Y	Y	Y	Y
Standby time Up to 430 h (2G, 3G) / Talktime 9 hrs 50 min (2G), 6 hrs 40 min (3G)	Up to 750 h (2G), 576 h (3G), Talk time up to 13 h 30 min (2G), 6 h 30 min (3G)	Up to 320 h (2G) / Up to 320 h (3G) Talk time Up to 4 h 30 min (2G) / Up to 9 h (3G)	Up to 490 h (2G) / Up to 420 h (3G) / Up to 9 h 15 min (2G) / Up to 5 h 30 min (3G)	Un-quoted	Stand-by Up to 100 h Talk time Up to 5 h 40 min	Up to 9 h 48 min / Up to 400 h
Y / Y	Y / Y	Y / Y	Y / Y	Y / Y	Y / Y	Y / Y
Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y	Y / Y / Y
Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y
5	5	8	8	8	5	5
1280 x 720	1280 x 720	1280x720	1280 x 720	1280x720	720x480	1280 x 720
N / Y / Y	Y / Y / N	N/Y/Y	N / Y / Y	N/Y/Y	N/Y/Y	Y / Y / Y
7.5	7.75	7	7.5	7	4.5	7
Digital	Digital	Digital	Digital	Digital	Digital	Digital
MP3, WAV, AAC+, MP4, H.264, DivX, XviD	MP3, WAV, eAAC+, AC3, FLAC, MP4, DivX, WMV, H.264, H.263	MP3, WAV, eAAC+, WMA, MP4, WMV, H.263, H.264	MP3, AAC+, WAV, WMA9, DivX, Xvid, MP4, H.263, H.264, WMV9	MP3, WAV, eAAC+, WMA, MP4/H.263/H.264/WMV9	MP3, WAV, eAAC+, WMA, MP4, H.263, H.264, WMV	MP3, WAV, eAAC+, WMA, MP4, H.263, H.264, WMV
Y	Y	Y	Y	Y	Y	N
Data cable, charger, handsfree	Wall charger, data cable, microSD card	Micro USB cable, MicroSD card	Data cable, charger, handsfree	MicroSD card, charger, handsfree, USB cable	Memory card, data cable, wall charger and HDMI video cable	Soft pouch, charger, data cable, handsfree
		8 GB		8 GB	2 GB	16 GB
7.75	8	7.5	8.25	7.5	7.5	6.75
7.25	7.25	6	7.5	6	6	6
6.5	6.5	5	7	4	4.5	5
127.24	142.4	147	140.8	188	151.7	121.2
7.75	8	8.25	7.5	6.25	6.75	7
7.75	7	7	8	6.5	6	7
7.5	7.25	7	8	7.5	7.5	6
7.5	7.25	6.5	7.25	7.5	6	7
6.75	0	8	7.5	7	6.5	6.75
5.75	7	6	6.25	6.5	6.5	7.5
7.5	8	7	7.5	6.5	7	7.5
7.5	7.5	7	7.5	7	7.5	7
7.75	8	7	7.25	6.5	7	6.75
5	5	6	5	6	6.5	5.25
7.75	7.75	6	8	7.5	6.5	6.75

bit slow, even using Android 2.2, and the display, isn't as vivid and crisp as we'd like. Compared to newer phones like the HTC Desire HD the X10i feels its age, especially with the ultra wide bezel that we do not like. Additionally, the camera on the X10i supports touch to focus but touching also clicks off a shot after focussing – it would be nice to have individual control over the shutter like the Samsung Galaxy S and HTC phones. The camera button on the X10i is also a little soft, with less feedback.

Next we looked at the Samsung i9000 a.k.a. the Galaxy S. Although the phone is entirely plastic, it feels extremely well built and is very light – a mere 119 grams. In fact, for a phone with a 4-inch display, this is pretty incredible, especially when you consider the excellent build quality. In terms of weight, it's hard to beat the HTC Desire Z. Built with liberal amounts of aluminium the Desire Z doesn't feel entirely solid, thanks in part to its lift and slide down hardware QWERTY keypad. The Samsung Galaxy S feels more likely to survive a drop, amongst these.

The Motorola XT720 is another solid device, with a lot of metal in the outer body. The XT720 is blessed with a decent interface, and it feels a bit snappier than the Motorola Milestone. The camera on the XT720 is the only one to feature both a Xenon and LED flash. Even the cables bundled are of the highest grade we've seen, and the XT720 also bundled an HDMI cable. The Motorola XT800 is supposed to be an XT720 successor, but to be honest, we find the phone not as attractive looking.

The Venue, with a 4.1-inch display, feels bulkier than the HTC Desire HD that has a 4.3-inch display. The interface on the Venue seems to lag at times, and there is definitely lag when using the camera. Dells interface is not as exciting as the HTC Sense UI and feels a little archaic in comparison. In fact, we find the Galaxy S' interface lacking as well. Samsung's TouchWiz interface doesn't feel as refined as the Sense UI.

The Desire Z has a QWERTY mechanism that feels like it may not wear well, and should develop play with hard use. While an S-LCD is advertised on the Desire Z, it doesn't look as gorgeous as the S-LCD on the original HTC Desire – we wonder why. However, colours are richer than the Desire HD, and when viewed from an angle, colours do not fade as much. The Desire Z has a pretty decent camera button and half press (to autofocus) is quite intuitive. The QWERTY keypad isn't however, and we find the keys too hard to be productive, since it takes a lot of effort to type anything and is not as effortless, (and therefore the keypad isn't as usable), as we'd like.



HTC Desire HD

The Desire HD feels like an expensive phone with its curvy body and large 4.3-inch display. The body is entirely metal, except for the small SIM/memory card cover on the bottom of the phone that is plastic, and the plastic battery cover. The battery cover slides out from the side, and the battery itself slides into the metal unibody, meaning using a larger capacity battery is not possible, even brands like Mugen Power offer a 1300 mAh unit for the Desire HD – a mere 70 mAh more than the stock battery. And you will feel the lack of juice, for it just gives you a day's worth. The display is pretty good for a non S-LCD/AMOLED unit, but colours aren't as vivid as we'd like, though to be honest, the Desire HDs display looks better than the HTC HD 7.

The camera is an 8-megapixel unit with dual LED flash units, but shockingly, there's no dedicated camera button, though the touch interface works perfectly.

Performance

Both HTC phones have tinny, but powerful loudspeakers, unfortunately there is too much power in the treble, and not enough of the mid-range. When using the handsfree, music quality is good. The Desire HD has a good antenna, and in zone one there is near-prefect clarity, and the volume level is also good. In zone three, voice quality remains good, but we faced one disconnection, that was not repeated though we tried thrice. The Galaxy S is also commendable in this regard, and in terms of loudspeaker clarity and volume, it blows both HTC phones out of the water. In fact the tiny vent for the loudspeaker outputs surprisingly punchy sound. Using the handsfree unit, we

SSD *NOW* IN ACTION



Solid-state-drive (SSD) is the new buzz word in the storage market. SSDs are all-ready to replace HDDs, given the technology SSDs use. Watch the **SSD *Now* in Action** in the Omega DVD and visit bit.ly/ssdaction to win 20 Limited Edition USB Drives, Kingston Vogue.

Brand	Phone	Email	Web site
Micromax	011-45082591/92	info@micromaxinfo.com	www.micromaxinfo.com
Acer	1800116677	-	www.acer.co.in
Samsung India	1800-30008282	-	www.in.samsung.com
Dell India	1800-425-4026	-	www.dell.co.in
Videocon	0124-4969999	support@videoconmobiles.com	www.videoconmobiles.com
Motorola	1800-30004343	-	www.motorola.com
Sony Ericsson	1800-111800	-	www.sonyericsson.com
HTC	1800-1033566	-	www.htc.com/in
Huawei	0124-4774700	complain@huawei.com	www.huawei.com
LG	1800-1809999	serviceindia@lge.com	wwwlgezbuy.com

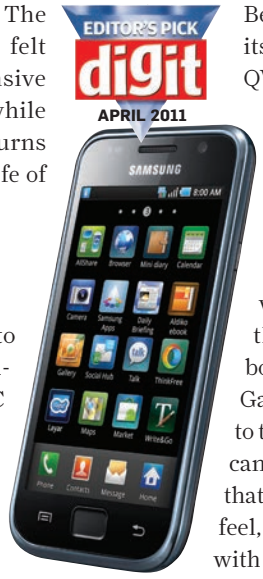
found nothing to criticise. The Xperia X10i also has excellent earphones – they're touted as bass reflex units, and really do produce great bass – a pity that they're not in-ear and the driver unit can hurt your ears on account of its size.

The Motorola XT720 has the best camera in this bunch for shooting in dim lighting, with Xenon flash being the different maker. The LED flash fires first, to enable auto-focus to lock on, and the Xenon flash emits a powerful burst that lights up a distance of 6-feet quite nicely. The unit is also well diffused and doesn't cause unpleasant reflections like the LED flashes, unless of course, you shoot at glass surfaces. Although the HTC Desire HD also has a pretty powerful flash, we found colour lacking, and some colours appeared a bit washed out. However it is quite sharp – capturing great detail, even more than the Xperia X10i that was hailed as having the best camera of its day. The Desire Z has a great balance of colour, detail and sharpness. And let us not forget the Galaxy S, whose 5-megapixel camera captures great detail and colour, although in dim lighting it dies on account of the lack of a flash.

The Galaxy S has the best display among the cameras here, however we feel the AMOLED display is slightly saturated. It is great for reading text, and easier on the eyes than other displays, however the Desire HDs display is a touch crisper for text, and we were able to use a slightly smaller font. The Galaxy S feels a bit slow, probably because it was running Android 2.1 and we couldn't seem to upgrade to 2.2. The HTC Desire HD felt the most responsive of the phones while the Galaxy S returns the best battery life of the bunch.

And the winner is

When it came to overall performance, the HTC Desire HD proved to be too much for the other phones in this test. A new, snappier CPU and 768 MB of RAM gives this phone killer hardware on which to build. It wins our Best Performance award and is closely trailed by the Samsung Galaxy S. The HTC Desire Z wins out Best Buy award for its unbeatable mix of QWERTY keypad, good display, battery life, performance in calls and music tests and a very good camera.



Samsung Galaxy S i9000

If we had to pick a phone we could live with on a daily basis though, we'd skip both HTC phones. The Galaxy S is more suited to that role, provided we can upgrade it to Froyo that is! It has an excellent feel, is very lightweight, with good battery life and camera performance. It is also much more pocketable than the other devices in this group. Even though its interface leaves much to be desired (pun!). We're awarding it our Editors Pick, for its great value at a good price point.

HURRY!

SAVE MONEY

BOOK SUPER-LOADED
10TH ANNIVERSARY
SPECIAL PACKAGE
OF DIGIT WORTH ₹ 250 AND GET
MAY EDITION JUST FOR ₹ 50



Offer details	
You Get	: May + June Special Issue
Cover Price	: ₹ 150 + ₹ 250
You Pay	: ₹ 300

Fill the subscription form attached with this copy OR
visit thinkdigit.com/subscribe

Use promocode <ANNIV2011> to get additional discount of ₹ 30/- *

digit

* Valid till 30 Apr 2011, only though thinkdigit.com/subscribe

Creeper Virus
In 1971, Creeper Virus was the first experimental virus which affected DEC PDP-10 systems running the TENEX operating system

Stuxnet
It is the first programmable logic controller rootkit malware whose target was industrial software and equipment

Shield your PC

With your system facing threats from all endpoints, it is only wise to invest in a complete security solution. We guide you through a maze of 17 security suites to tell you where you should invest.

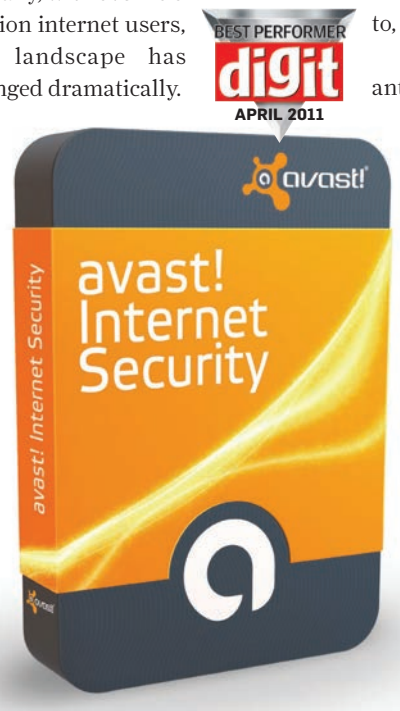
Nimish Sawant
nimish.sawant@thinkdigit.com

Back in the day when the internet was just about taking its baby steps in India, we did not care much about security. That was mainly due to the fact that very few of us were actually 'connected' and security solutions were quite expensive. Cut to today, when India ranks third in terms of Internet user base globally, with over 100 million internet users, the landscape has changed dramatically.

Securing your PC is the first thing that you do after assembling and installing of software is done. Apart from viruses there are trojans, worms, adwares, rootkits that can inversely affect your system, without you even knowing about it. At other times, there are malicious scripts that do not really infect your PC, but will cause wierd behavoiur such as slowing down of performance, random rebooting, services not running when they ought to, etc.

Merely using an anti-virus today is like partly securing your system. This is where complete security suites step in.

They comprise an anti-virus; anti-spyware; internet protection from phishing, spam and malicious links and PC tuning utilities. Some suites even incorporate parental controls while others provide data backup plans, either locally or on the cloud.



avast! Internet Security 6 was quick at scanning and occupies limited memory on load

We decided to pit 17 security suites available in the market against each other to find the best solution for your needs.

Features

All the suites we tested had an anti-virus, an anti-spyware, internet protection and a firewall. The differentiator came in the form of additional features like parental control and data backup that separates the various suites.

In Norton 360, the Norton Reputation Scan analyses a particular application or file and creates the application reputation. This takes into consideration how long the file has been in existence, how many other Norton users use the file, etc. You can see the summary of individual file or summary graphs.

The Performance menu in Norton 360 gives a graphical representation of your CPU and memory usage by the program vis-a-vis the system.

You need to download Norton SafetyMinder software on your PC to activate parental controls. You have to fill in your details along with your family's details. Norton then updates these details in the Norton Online Family server. The Identity Safe feature allows you to store all your login details on various websites, credit card and debit card details in one place.

Panda Global Protection 2011 supports online data backup option, to allow you to access your data from anywhere, so long as you are connected to the net. Optimise performance allows you to schedule clean-up of your computer to make it more speedy.

eScan Internet Security Suite is one of the rare security suites which has a dock based interface. This interface is quite a fresh approach specially in a category as serious as security suites. It does invite the user to explore more options. Under Endpoint security tab, you can set applications to block or set a password to be entered for using a USB device. You can also whitelist certain USB devices which you use frequently. Web Protection allows you to set filters based on keywords or websites. This was much better than the one found on Panda Global Security. Whitelisting also speeds up the scanning process as the safe softwares will not be rescanned. Another interesting feature is the Remote support, which lets an eScan representative access your system remotely to resolve an issue that is not being solved by you.

Trend Micro Titanium does not have an update button as it automatically updates itself when connected to the internet. This is something we like, as you no longer have to

bother about updating your security suite. Secure Erase tool overwrites unwanted files with random data so that those files cannot be retrieved. Another option called Permanent Erase over writes files as many as seven times.

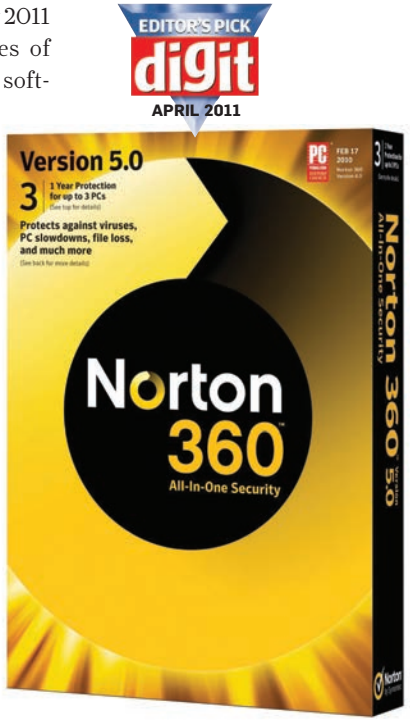
In Avira Premium Internet Security we did find redundancies in the form of repeated menus. The menus bar just under the title bar has the same options that are enlisted on the main dashboard.

TrustPort Total has a Tools section with options to shred your data and it has Disk Protection option that lets you store your data in encrypted volume images which can be mounted and unmounted anytime.

K7 Ultimate security comes with a range of Utilities under the Tools section like Computer TuneUp (for enhancing the system performance), Windows Temp Cleaner (cleans up Windows Temp Files), USB Vaccination (prevents Autorun malware) among others which adds to its versatility.

ESET Smart Security has a very simple interface which comes at the cost of omission of features like parental control, password management and browser protection. Moreover, it provides very limited tweaking options. It consists of the utitlity SysInspector which inspects your system details such as running processes, registry content, startup items and network connections. It then applies heuristics to assign a risk level for objects logged. This is meant for advanced users.

McAfee Total Security 2011 combines the capabilities of around six stand-alone softwares including anti virus, anti spyware, internet security, etc. It also provides additional features like parental controls, online backup of data, among others. The Idle Timer feature in it recognises when your system is idle and starts scanning it then. A similar feature was found in Norton 360 as well. It has a two-way firewall which is quite easy to configure. You can even protect your home network using Home Network



Norton 360 provides data backup, parental controls and has many other features



Qik Video COnnect for iPhone
Skype competitor Qik released the Qik Video Connect for iPhone, which offers two way video calls and lets you record video mails

WebM for IE9
Google released the WebM video plugin for the Internet Explorer 9 to bring web video technology to the browser

Defence which will secure all the devices within your home network from any attack. The link scanner provides a status after every search result, telling you if the site is safe or has some threats lurking. The McAfee Siteadvisor LIVE allows you to safely share links through Facebook or Twitter. The McAfee File Shredder lets you permanently delete sensitive files.

Net Protector 2011 has the option of scanning old Windows OS based mobile phones. You can also select areas not to scan. It has around eight utilities including Worm Trapper, Process checker, USB lock among others. You also get a circular gadget which has direct buttons to go directly to scan, reports, update and settings menus. There is no provision for parental control or data backup.

Kaspersky PURE has a unique technology called Safe Run also known as a Sandbox, which basically lets you run an application in a virtualised enviornment, providing better security. You can add applications to be run in the Sandbox. On enabling Parental control, Kaspersky starts blocking website by heuristic analysis even if you have not mentioned what categories to block by Configuring the parental control.

Avast consists of around eight real-time shields for file systems, mail, web, P2P, etc. An interesting addition to this version is Auto Sandboxing. This feature works like the one in Kaspersky PURE, but in Avast, programs are placed in a virtualised state, if Avast suspects any threats. This is done automatically, hence the name Auto-Sandboxing. You can also manually sandbox programs or browser enviornments. Sandboxing allows the program to run, but its operations are being monitored by the suite. Any changes made to the file system or registry will only affect the virtual enviornment and not have any lasting effect on the actual system.

A browser plug-in called WebRep reports the reputation of the current website and marks links in the search results based on its reputation rating. It works in IE and Firefox browsers. Moreover it offers a free standalone antivirus program.

AVG scans URLs and gives you its safety status, but this works only with Internet Explorer. AVG incorporates an Alternate Data Stream scanner which helps in removing hidden malware. You can get into detailed tweaking by clicking on each icon. There is a small gadget which has options to scan links from Twitter and Facebook as well. There is no parental control option on it. Like Avast, AVG also offers a free antivirus solution.

SSD *NOW* IN ACTION



Solid-state-drive (SSD) is the new buzz word in the storage market. SSDs are all-ready to replace HDDs, given the technology SSDs use. Watch the **SSD *Now* in Action** in the Omega DVD and visit bit.ly/ssdaction to win 20 Limited Edition USB Drives, Kingston Vogue.

Ease of Use

Navigating through Norton 360 is quite easy and the menu system is quite intuitive. It will require a minimal learning curve. The only thing we found somewhat gimmicky was the Activity Map which gives a ticker of the number of virus threats across the world.

In Panda, Parental control installation is quite easy. It has Kids, Teen, Employee, personalised and without filter modes. There are very limited customisation options. You can set a list of blocked websites.

eScan's dock interface is a quite easy to navigate through. The central portion of the interface shows the various tweaking options based on which menu you have selected from the top panel or the lower dock menu.

In the tweaking interface again, you have two demarcations namely Configuration and Reports. This makes using the suite quite easy even for a novice, as it does not overwhelm the user at the main interface level.

In Trend Micro Titanium Parental Control is quite easy to setup. You will have to submit an email ID and then it guides you through the various steps like Web filtering and Web access schedule. The categories in the Web filtering screen are pre-defined, and there is no way for you to filter the web by keyword search.

Kaspersky PURE looks the most pleasing after Norton 360. There is a greenish tinge overall. Navigating the user interface is quite intuitive.

The main home screen is neatly divided into self explanatory segments such as Backup and Restore, Computer Protection and Parental Control. There are direct buttons for virtual keyboard, data encryption, password manager and home network control under the three main tabs.

Performance

Norton 360 gave performance related alerts. For instance, when we were running CineBench R10, it indicated High CPU Usage. Trend Micro Titanium occupies about 26MB of memory in the idle state which was quite surprising. In Quick Heal installation we did run into some issues as the installer was trying to locate some file. We had to uninstall and reinstall to get it working. Quick Heal Total surprised us with a 181 MB memory usage on load whereas on idle it never crossed 4MB. This is a massive jump and hampers any applications that may be running while the system scan is on. For instance, the 100 MB VOB to DIVX conversion took 120 seconds while the AV scan was on, as opposed to just 67 secs without the scan running in the background. This is a huge difference which is not really desirable, considering the other security suites that we tested did not give so much of a difference.

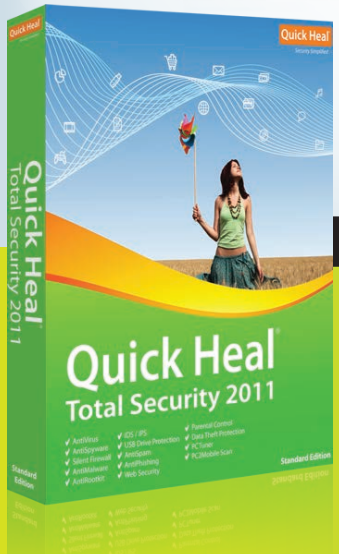
In Avira we were shocked to see it taking 18 minutes to scan the 8GB assorted test folder. All other suites took under 2 mins to scan the same folder, except G Data. We tried re scanning the same folder after some time, and there was hardly any improvement in the scan speed. The memory

Is your kid safe online?

Quick Heal
Security Simplified

Unmonitored access to Internet is unsafe for children as they are vulnerable to threats like Identity theft, password hacking and adult content.Internet can have traps laid by cyber criminals and social media offenders pretending to be friends.





Help is at hand.. protect your PC with Quick Heal Total Security which has a powerful parental control feature. This inbuilt feature allows you to block websites belonging to category of pornography, violence, games, etc. and helps you schedule internet access for your children.

Quick Heal Total Security 2011 gives your PC

- **All round protection from all kinds of internet threat.**
- **Best Internet Security with built in AntiPhishing, IDS, AntiSpam, Web Security and Parental Control.**
- **Data theft protection.**
- **Mobile phone scanning using PC2Mobile Scan.**
- **PC Tune up features to improve PC performance.**

Quick Heal Technologies (P) Ltd.

603, Mayfair Tower II, Wakdewadi, Shivajinagar, Pune - 411 005. Phone : 0927 22 33 000.

info@quickheal.co.in
www.quickheal.com

Ahmedabad 079-32524771, **Allahabad** 9389409365, **Asansol** 9330162367, **Aurangabad** 0240-2336000, **Bengaluru** 080-41211549, **Bhopal** 9826057412, **Bhubaneswar** 0674-2545216 / 2540867 , **Chandigarh** 0172-3250233, **Chennai** 044-42033045, **Coimbatore** 9364155558, **Dehradun** 9368071177, **Delhi** 011-49801100, **Dhanbad** 9304807672, **Gandhidham** 8980012209, **Ghaziabad /Noida** 9311746664, **Goa** 9769014026, **Gurgoan / Faridabad** 9313415188, **Guwahati** 9435506969, **Hyderabad** 040-32953717, **Indore** 0731-4236021, **Jaipur** 9351990050, **Jharkhand** 9304807672, **Kanpur** 9336777085, **Kochi** 9020290202, **Kolkata** 9330162367, **Lucknow** 9336815930, **Ludhiana** 9317728149, **Mangalore** 9343938847, **Meerut** 9368201781, **Mumbai** 022-61379797, **Mysore** 9343093175, **Nagpur** 0712-6620311, 6620314, **Nashik** 0253-2576306, **Parwanoo** 9357266888, **Patna** 9386596725, **Pune** 020-41402888, **Raipur** 0771-2535707, **Rajkot** 0281-3012580, **Siliguri** 9434046636, **Surat** 0261-2478828, **Vadodara** 0265-3297768, **Varanasi** 9305422559, **Vizag** 0891-3245454.

EDITOR'S PICK digit APRIL 2011

Brand	Norton	Panda	eScan	Trend Micro	Quick Heal	Avira	G Data	Kaspersky
Package	**Norton 360**	**Global Protection 2011**	**Total Security 2011**	**Titanium 2011**	**Quick Heal Total 2011**	**Avira Premium Security Suite**	**G Data TotalCare 2011**	**PURE**
Minimum price per unit (₹)	**1,794**	**1,800**	**1,136**	**1,200**	**1,821**	**1,571**	**2,283**	**3,725**
Overall Score (Out of 100)	**47.73**	**41.7**	**45.9**	**41.7**	**38**	**39.54**	**33.42**	**41.98**
Features (Out of 40)	**20**	**20**	**18.5**	**20**	**18.5**	**26**	**18.5**	**20**
Performance (Out of 30)	**12.48**	**7.7**	**12.35**	**8.1**	**6.85**	**3.04**	**4.82**	**7.43**
Ease of Use (Out of 15)	**10.25**	**10**	**10.05**	**8.6**	**8.65**	**8.5**	**8.1**	**9.55**
Support (Out of 5)	**5**	**4**	**5**	**5**	**4**	**2**	**2**	**5**
Features								
Anti Virus	Y	Y	Y	Y	Y	Y	Y	Y
Anti Spyware	Y	Y	Y	Y	Y	Y	Y	Y
Internet Security	Y	Y	Y	Y	Y	Y	Y	Y
Firewall	Y	Y	Y	Y	Y	Y	Y	Y
Parental Controls	Y	Y	Y	Y	Y	Y	Y	Y
Data Backup / Restore	Y	Y	N	Y	N	Y	N	Y
Performance								
Installation time (secs)	51	100	50	144	120	110	148	155
Scanning time (8GB Assorted file) (secs)	74	180	357	87	110	1076	831	967
Memory used (Load) (MB)	19	25	30	46	181	87	22	10
Memory used (Idle) (MB)	5	2	1.2	26	4	19	3	5
Startup Time	50	67	60	54	70	70	47	47
Default pen drive scanning (Y/N)	Y	Y	Y	N	Y	N	N	Y
Flagging of links (IE / Firefox / Chrome / Opera)	Y / Y / N / N	N / N / N / N	N / N / N / N	Y/Y/N/N	N/N/N/N	N/N/N/N	N/N/N/N	N/N/N/N
DivX Video Encoding Delta	24	11	2	23	53	76	13	44
Cinebench R10 Score Delta	2021	2103	730	1442	2537	1950	2327	3190
Ease of use								
Ease of Installation	7.5	6.5	7	6	5	7	5	5
Scanning PC	7	7	7	7	7	6	5	7
GUI	7.5	6	7.5	4	5.5	5	5	7.5
Operating Parental Control	6	7	6	6	6	5	6	6.5
User Survey								
Avg User Score (So 10)	7.14	5.5	5.19	5.71	7.07	5.08	4.69	7.2
Popularity (%)	1.11	0.14	0.19	0.05	0.24	0.33	0.05	1.35
Support								
Email	Y	Y	Y	Y	Y	Y	Y	Y
FAQ	Y	Y	Y	Y	Y	Y	Y	Y
Online Chat	Y	N	Y	Y	N	N	N	Y
Phone	Y	Y	Y	Y	Y	N	N	Y

	K7	Avast	TrustPort	F Secure	BitDefender	ESET	AVG	McAfee	India Antivirus
	Ultimate Security 2011	Internet Security 6	Total Protection 2011	Internet Security 2011	Total Security 2011	ESET Smart Security 4	Internet Security 2011	Total Security 2011	Net Protector 2011
	1,499	2,283	599	1,700	1,500	1,199	1,299	2,270	800
	37.52	48.67	40.87	40.37	39.76	34.78	38.16	45.1	30.75
	20	24.5	18.5	20	20	17	23	20	17
	6.62	12.82	9.52	7.62	6.51	9.18	6.46	10.75	7.1
	8.9	9.35	7.85	8.75	8.25	4.6	5.7	9.35	4.65
	2	2	5	4	5	4	3	5	2
	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Y	Y	Y	Y	Y	N	N	Y	N
	Y	N	N	Y	Y	N	N	Y	N
	93	102	58	143	192	91	197	84	NA
	167	54	1800	240	210	342	160	174	128
	136	10	7	11	30	5	23	24	150
	12	3.2	3	5	8	1.5	5	10	77
	61	62	46	65	102	58	74	60	92
	Y	N	Y	N	Y	N	N	N	Y
	N/N/N/N	N/N/N/N	N/N/N/N	Y/Y/N/N	N/N/N/N	N/N/N/N	Y/N/N/N	Y/N/N/N	N/N/N/N
	40	8	24	74	35	9	16	26	94
	2168	866	3302	891	721	2535	787	147	530
	6	6	5.5	6.5	4	4.5	6.5	6	4
	7	7	5	6	5.5	6.5	6.5	7	7
	6	6.5	4.5	5.5	5.5	5	6	5.5	5.5
	5.5	6	5.5	5.5	6.5	0	0	6.5	0
	6	6.05	5.08	5.06	5.79	5.78	5.84	6.34	4.83
	1.26	1.8	0.05	0.14	0.28	0.45	0.99	0.81	0.19
	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Y	Y	Y	Y	Y	Y	Y	Y	Y
	N	N	Y	N	Y	N	Y	Y	N
	N	N	Y	Y	Y	Y	N	Y	N

usage also hovered around 80MB which was quite a lot.

Just like Avira, G Data also took over 10 minutes to scan the 8 GB assorted file.

BitDefender has the worst installation process among all the suites we tested. If you make users go through 7-8 steps of clicking while installing a suite, then we feel the installer needs a lot of catching up to do as most of the other suites are simple one-click installations. And that is how it should be.

TrustPort Total took over 30 minutes to scan the 8GB assorted folder. To say that this was long, is an understatement. While scanning we noticed that the CPU usage was consistently at 80-100 per cent most of the time, and went below 10 per cent for half a minute and then resumed its peak usage. Memory consumption was always under 10MB even on load which was good. Overall, the performance does not really impress us as far as scanning the system goes.

ESET runs very light on the system, keeping the memory usage around 5-7 MB while scanning. Yes, that is quite low memory usage indeed.

Installation was fastest with Norton and eScan suites taking around 50 seconds on our system. AVG and BitDefender took quite a while to load.

As the scanning involves use of system resources, we decided to stress the system with CPU intensive tasks and noted the difference in performance. eScan suite had minimal effect on DivX encoding with a difference of just two seconds. India Antivirus was the worst when it came to encoding with a system scan running in the background, thanks to its memory usage of around 150 MB on load.

Cinebench R10 performance was also hit the most when TrustPort scan was running in the background. McAfee had the least effect on Cinebench R10 scores.

Flagging of links by default was enabled in only a handful of suites and the ones which had it supported only Internet Explorer and Firefox browsers.

In the user survey that we carried out, where we asked respondents to rate security suites based on a range of parameters, Kaspersky came out tops with a user rating of 6.52, followed very closely by Norton's solutions with 6.47 and Quick Heal with 6.4. G Data had the least score.

In terms of popularity, as expected, Avast was at the top with 18.1 per cent followed by Kaspersky at 13.57 per cent. Norton came in fourth. This can be attributed to the fact Avast provides a free anti-virus solution on its site. Only other suites also offering a free anti-virus solution were AVG and Avira.



Kaspersky security solutions topped the user average scores in the Digit Security Survey

HOW WE TESTED

Security suite testing is never really accurate. Most labs will throw a virus and spyware bank at the suite and test them for accuracy. However, once a virus is detected, its signature and attack pattern is recognised, and AV updates released. It may take a few days at max, but this knowledge then permeates to all security companies, and almost all security suites can then catch that particular virus. We have an advantage over most labs, YOU. We ran a survey instead, and tens of thousands of you responded. This helped us collect data about your experiences with your security suite and how safe you've been when using it. Your ratings are what we used to determine detection and failure rates of the security suites. To test system loads, we used a modest real-world system comprising an AMD Athlon X2 processor (3 GHz), 2 GB RAM running Windows 7 Ultimate Edition.

Suites were tested for their features. We noted the time taken to install the suite, ease of installation, time taken to scan an 8 GB assorted file on our HDD and also the memory used when idle and scanning. Instead of just noting CPU usage when scanning, we did a more real world test, and ran CPU intensive tasks whilst scanning the system. We ran a DivX Encoding test and a Cinebench R10 rendering, and noted the difference in performance scores.

Ease of use was also scored for all the suites, as that is an important deciding factor with security suites. Brands who offer any free standalone products for home users were awarded extra points in the features section. Finally, we also scored the customer support methods that each brand offers.

Verdict

Apart from the obvious outliers, it was a very closely fought battle. The top three performers namely Avast, Norton and eScan were within breathing distance of each other, but the **Best Performer** had to go to **Avast! Internet Security 6**, as it was the quickest at scanning and used the least memory on load among the three. **TrustPort Total Security 2011** with its pricing close to ₹600 won the **Best Buy** as all the other products were priced above a grand except India Antivirus's Net Protector.

Norton 360 was awarded the **Editor's Pick** as it had an overall score which was very close to that of Avast. Moreover, in terms of usability, the depth and sheer number of features provided, it clearly rolled over all the other suites and all this at an economical prcing of ₹1794.

So go ahead, give your PC that shield from malicious softwares, as its better to be safe than sorry.

Reliance Digital TV HD DVR

Enjoy the HD mania



FIRST LOOK

Reliance Digital TV's HD DVR box ("the box", from here on) is one of the few HD DVR solutions available today. The remote is universal, and can control up to 3 gadgets including the box (obviously), your TV and a DVD player (or any on the device you want to control). There was a quick start guide in the package, but nothing on how to train the universal remote, and ended up having to search online to find a PDF of a full user manual from Reliance.

All features worked correctly, but the interface speed is painfully slow at times. No one wants to stare at an "Application Loading" screen for 10 seconds when all you want to do is see what movies are currently playing. There's no dedicated favourite button on the remote either, and although the favourite implementation is well done in the interface, getting to it is a pain.

Picture quality is good, though there are only 2 HD channels on offer here – Nat Geo HD and iConcerts HD. There's a channel called Star Plus HD that is just upscaled and you can't tell the difference between SD and HD. Non-regular HD channels include ESPN's and Star Sports' HD channels that offer the ICC World Cup in HD – we'll never be able to watch cricket in SD again; the quality was that good.

Recording works as expected, and you can add folders to separate your recordings. However, there are two huge drawbacks we found: no series-link feature, and you can only record one program at a time! This means that you cannot even record the channel you are currently viewing if something else is currently recording.

The box is priced at ₹3,990, and there's a ₹500 discount to existing Reliance Digital subscribers. Although the "HD" experience is unsatisfactory with *all DTH providers* today, the fact that you can't record two programs at once is unforgivable for a DVR solution in our opinion.

Contact

Reliance Digital TV
Price: ₹3,990 / ₹3,490 for existing subscribers
Phone: 1860 200 6666 / 1800 200 9001 (toll-free)
Email: customercare@reliancedigitaltv.com
Web site: www.reliancedigitaltv.com
Warranty: 1 year

Boston GP 1120 Server

A green powerhouse



FIRST LOOK

The GP 1120-T is a single-rack server that runs two AMD Opteron 6174 CPUs. That's a total of 24 cores (12 per CPU) available for some mighty powerful number crunching. The unit we received had 32 GB of DDR3 memory (8 x 4 GB sticks). The GP1120 actually supports a max 256 GB of RAM (16 x 16 GB), which "ought to be enough for anybody". It's part of Boston's Green Power series (thus the GP in the name).

Storage is taken care of by 4 x 500 GB WD RE3 (RAID Edition 3) drives. The RAID controller is from Adaptec, and supports RAID versions 0, 1 and 10. The 4 drives bays are accessible from the front, and will allow you to hot-swap easily.

There's redundancy built into the power unit as well with two PSUs. A DVD drive (laptop form factor) is fitted into the body. The front bezel has a Power switch and a nicely recessed Reset button to avoid any mistaken reboots.

Getting a peek at the innards is easy enough thanks to the simple locking mechanism for the top lid. The CPUs cooling looks passive, but actually there are enough twin-rotor fans in the cabinet to kick up a storm. Fan noise is acceptable during regular operation, but spin at max speed to clear any dust at boot-time, and sound like a jet engine – we loved it! Overall a good enterprise product, and a lot of fun for us to play with and learn from. Thanks Boston!

Contact

Boston IT Solutions India
Price: ₹2,99,000
Phone: : +91 22 39537425
Email: sales@bostonindia.in
Web site: www.bostonindia.in
Warranty: 1 year return to manufacturer

BlackBerry 2.0 Beta gets Facebook
Research In Motion (RIM) released Facebook for BlackBerry smartphones 2.0 Beta

HTTPS is more Seure
In HTTPS the "S" in the URL stands for Secure, making much harder for anyone to track what you are doing

Canon SX30IS

High quality ultra zoom



The SX30IS is Canon's latest ultra zoom, taking over from the SX20IS, and offering a massive 35x optical zoom. The SX30IS feels well built, with quality plastics, and has a nice grip, which, while not substantial is adequate. The mode dial on the top has a nice positive feel, while the buttons on the rear are well spaced out. The rear dial cycles through onscreen options and has smooth operation. The articulated LCD is quite clear, and the optical viewfinder is really a carbon copy of what you see on your LCD, and not really an optical unit, but as far as non-dSLRs go, it is pretty much the norm. When zooming, the lens feels better built than the SX20IS.

As is the norm with such tiny, densely packed sensors, the SX30IS was expected to produce noise in anything more than base ISOs, and in this regard it doesn't disappoint. Even at ISO 400, noise is visible, and this is not film-like grain, but digital artifacts, with off-coloured pixels. This is acceptable for small sized photos, which is mostly what people who buy such a camera will click.

Outdoors, at base ISO 100, there is much less noise, and this is more like film grain. The SX30IS produces decent detail, and good highlighting, but clipping is noticeable in many shots. Colours are neutral, but the dynamic range is slightly limited. The 35x zoom is a winner. Even at the long end, image stabilisation works pretty well. Video capture at 720p offers good quality, though there will be some visible noise, especially when shooting indoors or under dim lighting.

For ₹25,000, the SX30IS is a good offering for those needing a long zoom and offers very acceptable quality for most shutterbugs. However, if you are a discerning sort in terms of image quality, there is some noise at lower ISOs too – the demerits of having a tiny 14-megapixel sensor.

Michael Browne

Specifications

Sensor 14-megapixel; zoom: 24-840mm (35x); battery: 1050 mAh; weight: 601 grams (including battery)

Contact

Canon India Pvt. Ltd.
Phone: 1800-345-33-66
Email: info@canon.co.in
Web site: www.canon.co.in
Price: ₹28,995

6.5/10

Features	7.0
Performance	7.0
Build	6.0
Value for money	6.0

Sennheiser HD 800

For the serious headphone-audiophile only

The HD 800 has a brand new design – compared to the HD 650 – new earcups, a much improved OFC cable, new ring radiator drivers especially designed to do away with the congested soundstage that headphones are known for. They look space age too – and very well built, with a lot of metal in the design. They're a comfortable, secure fit, and while the padding on the earcup looks thin, it's adequate.

These headphones need serious amping. We used a Woo Audio 6SE to power it. If you listen to the HD 800 straight out of your soundcard, you'll wonder what the fuss is about. When amped, the mid-range clears up, and there is more space between each performer. While not as good as speakers at imaging, the soundstage is expansive – in fact, this would be one of the standout features. Bass is tight, impactful and pleasant, not boomy. The mid-range is wide and open, clear, and rather neutral. The highs are equally well represented – no hint of sibilance, but the HD 800 extends all the way to the top. If anything, the HD 800 has a bit more energy in the upper frequency range, but for all practical purposes, the HD 800 is far more neutral than the HD 650 was.

The price tag of ₹74,995 will make most people faint, but these aren't regular cans. However, cosidering that you'll need to double this amount for a good amplifier and a DAC... they're overpriced – as any headphone over ₹40,000 is; but if you seek sonic bliss, this will get you close.

Michael Browne



Specifications

Frequency response: 14-44000 Hz; impedance: 300 ohms; max sound pressure level: 102 dB; weight (without cable): 330 grams

Contact

Sennheiser Electronics India
Phone: +91 (0124) 4187800
Email: info@sennheiserindia.com
Web site: www.sennheiserindia.com
Price: ₹74,995

7.25/10

Features	8.0
Performance	8.5
Build	7.5
Value for money	5.0

Iomega Screenplay MX

1 TB storage, but no networking

Despite holding a 1 TB storage drive in it, the MX has a very sleek form factor, and a distinct brushed aluminium finish. The front panel has a USB input port, while the side panels are completely clean. The rear panel has all AV ports.

The MX comes with 1 TB of its own storage. Users can transfer media files from USB drives on to the internal hard drive, or access media from all 3 simultaneously. The remote is extremely comfortable to use.

What is a glaring omission in the MX media player are the LAN connectivity options. Without these, users are unable to access the media on network connected drives, transfer files from the PC to the media player or even use streaming software like the PS3 Media Server.



The video upscale quality offered by the MX media player is extremely good. Standard Definition videos were upscaled to the Full HD resolution of 1920x1080 pixels with extreme ease. The post upscale treatment ensured that the colours remain vivid, the sharpness is not lost and extra artefacts weren't introduced. All video formats we threw at it were played back without any problems. The interface of the MX is a bit of a downer. The home screen has huge icons just laid out across the screen in a seemingly haphazard fashion.

At a price of ₹8,000, the Iomega MX HD Media player disappoints us with lack of network connectivity.

Vishal Mathur

Specifications

High Definition media player; HDMI, Composite and Component video out; Full HD (1920X1080 resolution) for videos; 1TB hard drive preinstalled; 2 USB inputs

Contact

Iomega India
Phone: 000800 440 1158
Web site: www.go.iomega.com/home
Price: ₹7,999

6.5/10

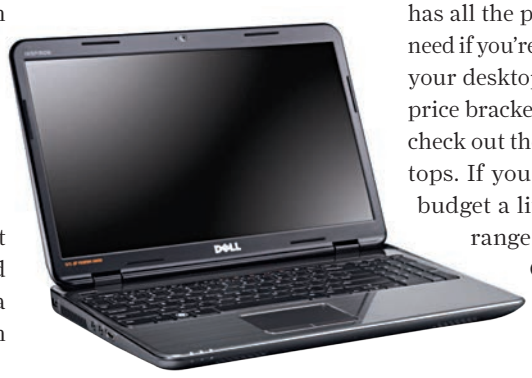
Features	6.0
Performance	7.0
Build	7.0
Value for money	6.5

Dell Inspiron M501R

Quad-Core power on a budget

The Inspiron's shiny body is what will catch your attention. The lid, which can be customized in many colours, has a shine to it, despite the finish not actually being glossy. The 15.6 inch screen has well proportioned contrast to brightness levels, and images retain their sharpness. The keyboard is neither chiclet or floating, but it is extremely comfortable to use, and the big screen size allows for a dedicated number pad. What the laptop misses out on is a bunch of dedicated access buttons for media playback, Wi-Fi, Bluetooth and touchpad off.

For a machine powered by the AMD Phenom II N930 Quad Core processor (2 GHz) and 4 GB of system RAM, performance was never going to be a problem. All the benchmarks we ran on the machine indicated a very powerful setup. A lot of people will use this machine for multimedia viewing, and the case is helped by a big screen which is quite good and inbuilt speakers that offer better than expected performance. Even at volume levels of about 70 per cent, the audio was clear, with no jarring. The battery life was disappointing (1 hour), but this was at the max performance setting.



The Dell Inspiron M510R has all the performance you'll need if you're looking to replace your desktop. In the ₹40,000 price bracket, you should also check out the HP G-series laptops. If you can extend your budget a little, the HP DV-6 range of models or the Gateway ID59C laptop might be better choices.

- Vishal Mathur

Specifications

AMD Phenom II Quad Core N930 processor @ 2.00GHz; 4GB RAM; 15.6 inch screen; 1366x768 HD screen resolution; ATI Mobility Radeon HD 550c graphics; 1GB dedicated graphics memory; 500GB hard drive; 3 USB ports; 1 E-Sata port; HDMI out, Windows 7 Home Premium (64-bit)

Contact

Dell India
Phone: 1800 425 4026
Web site: http://www.dell.co.in
Price: ₹39,990

5.5/10

Features	7.0
Performance	6.0
Build	6.0
Value for money	5.0

Gen 9 tablets
Archos to come up with Gen 9 tablets this summer which will compete against the iPad 2

Flash Player 10.2 for Android
Adobe released Flash Player 10.2 for Android, which is the first major update in a while

Creative ZiiSound D5

Wireless freedom but average sound

There are dime-a-dozen iPod docks in the market, but Creative's ZiiSound D5 has taken this product category a notch higher. Apart from being an iPod dock, the D5 can play music wirelessly as long as its coming out of a stereo bluetooth device like your phone or your MP3 player. For iPods and iPhones, Creative bundles in a bluetooth transmitter which when attached to the iPod charging slot, transmits music wirelessly to the D5. The transmitter can also be docked in the D5 and the iPod charges as it plays. It consists of the apt-X codec which compresses the audio stream as there is a limit on the maximum A2DP bandwidth. You will require



a dongle which houses the encoder for the apt-X codec. It is present in the bluetooth transmitter for the iPod.

The ZiiSound D5 has a very sturdy build quality and comes in an all black body. There's plastic panel which runs along the centre. This plastic panel has volume controls on the top portion and a connectivity indicator in the front. On the rear you have a power connector and an Aux-In.

The D5 is quite loud and doesn't vibrate at maximum volume levels, something we found quite prevalent in other iPod docks. Mid frequency was the most responsive, giving crystal clear sound. Bass heavy songs tended to skip some beats and sounded muffled. At higher frequencies too the sound separation was found to be lacking. Distortion was noted in some bass heavy songs at maximum volume. The USP of the D5 is wireless music playback over Bluetooth, without a remote.

At ₹17,999 it is quite expensive, innovative but not audiophile.

Nimish Sawant

Specifications

Frequency: 2.4GHz; Operating Range: 10m; Dimensions: 425 x 110 x 90 mm; Weight: 3.8 kg

Contact

Creative Technology
Phone: +91 92231 01322
Email: vinayendra.singh@compuageindia.com
Web site: www.in.creative.com
Price: ₹17,999

6.0/10

Features	6.5
Performance	5.5
Build	7.5
Value for money	4.0

D-Link My Pocket Router

Surf anywhere with this 3G pocket router

D-link DIR 457 My Pocket ROuter is a compact, portable router which uses your 3G SIM card to connect to the internet. In essence it acts as an access point allowing you to share your 3G card's internet connection. As it's portable, it can be used anywhere as long as you are getting a 3G signal.

It comes in a thin plastic body with a glossy top and a matter bottom. There is a switch which allows you to use the DIR 457 as a Modem or a Router. As soon as you connect the router to your system via the mini USB port, it will install a D-Link connection manager which allows you to set security passwords, check balance, import contacts among other things.

The performance impressed us with its reach despite being an 802.11g router. You will get the best speeds only if you are in the same room as the router, but we were not disappointed with speeds in adjoining room as well. Setup can be problematic as the menus are completely different from that of a normal router, so it does involve a learning curve. It also has a microSD card slot, the data on which can be shared between different Wi-Fi enabled devices that are connected to this one.



At ₹8,300 the DIR 457 is even more pricy than some of the 802.11n routers in the market. But if portability is what you are looking for, this is the right product. It is great for those who are always on the move and extensively use 3G.

Nimish Sawant

Specifications

Standards support: 802.11b/g; Network support: GSM Quad band, UMTS/HSDPA; Wireless Security: 64/128-bit WEP, WPA-PSK, WPA2-PSK, Built in firewall; Weight: 103gms

Contact

D-Link (India) Ltd.
Phone: +91 22 2921 5700
Email: divya.shetty@dlink.co.in
Web site: www.dlink.co.in
Price: ₹8300

6.0/10

Features	6.5
Performance	7.0
Build	5.5
Value for money	6.0

WD Scorpio Black WD7500BPKT

Black Beauty that doesn't cost an arm and a leg

We expect a lot from WD's Black Editions, because these drives command a hefty premium over other Blue and Green edition drives. The PCB is tightly integrated into the body - a flush fit – necessary to avoid damage due to external surfaces.

With an areal density of 375 GB per platter, WD7500BPKT follows the same two-platter design as the Scorpio Blue WD7500BPVT. With a 7200 RPM the WD7500BPKT is in a league of its own as far as notebook drives go.

In terms of speed, we were surprised to see it edging out most regular 3.5-inch drives in all tests, but even the WD Black Edition 2 TB (WD 2001FASS) in sequential read and write tests. It writes sequential data at an astounding 168.42 megabytes per second – which is faster than quite a few SSDs, and even faster than a 10,000 rpm Velociraptor.



In fact, it took just 41.7 seconds to display a 1 GB image file in our PhotoShop test, just two seconds longer than the WD 2 TB Black Edition. This is impressive for a hard drive, but SSDs are better – the S599 managed to complete this test in a mere 13.71 seconds. Performance was excellent for a notebook drive, and if you want something faster, you'll probably have cough up for an SSD. The minus was the heat produced; with two platters spinning at 7,200 rpm the WD7500BPKT gets quite hot – temperatures can touch 60 degrees Centigrade.

The price is a jaw dropping ₹5,275, and we confirmed it at least three times! At this price, or near-abouts, it is a killer deal, since it's essentially cheaper than the Scorpio Blue WD7500BPVT, which is a much slower drive.

Michael Browne

Specifications

Capacity: 750 GB; Speed: 7,200 rpm; Cache: 16 MB; form factor: 2.5-inches; weight: 155 grams

Contact

Western Digital Corporation
Phone: 9880293193
Email: Srinivas.Sampangi@wdc.com
Web site: www.wdc.com
Price: ₹5,275

7.5/10

Features	7.5
Performance	7.5
Build	8.0
Value for money	8.0

ADATA S599

Lightning fast performance at a premium

Specifications

Capacity : 128 GB; Interface : SATA 2; Form Factor : 2.5-inch; SSD Controller : SandForce SF-1222

Contact

ADATA Technology
Phone: +886 2 82280886
Email: cheryl_chu@adata.com.tw
Web site: www.adata-group.com
Price: ₹14,140

6.5/10

Features	6.5
Performance	7.0
Build	8.0
Value for money	5.0

Even as breakthroughs in magnetic recording push HDD storage outwards, it is a sad fact that hard drive speeds have failed to scale as much as their capacities. We reviewed a 128GB version of ADATA's SSD S599 drive, which for an SSD is still at the higher end of the spectrum.

Being an SSD, the ADATA S599 is noiseless, and consumes less energy than your usual hard disk drive. Additionally, it's lighter than a conventional hard drive– a mere 68 grams, and shockproof to a much greater degree as well. All this combined with the fact that it comes in a 2.5-inch form factor makes it quite a boon for laptop users. Desktop users aren't left behind either as the S599 comes with a convenient 2.5- to 3.5-inch bracket.

During our tests the ADATA S599 performed quite well, with write speeds as high as 180 MBps, but averaging out to around 110 MBps. Read speeds were even more impressive – averaging around 180Mbps and peaking at over 200 MBps.

With Windows 7 installed on the SSD, we installed a number of common applications, and here are some results: WinRAR 4.00 Beta: Installed before we could see any progress bar, application launches instantly; LibreOffice 3.3: Under 2 minutes ; Microsoft Office 2010 Professional Plus: Full install in under 5 minutes, most applications launch in under a second; Firefox 3.6: Installs with only a short glimpse at the progress bar launched in under a second; Windows 7 itself took a mere 21 seconds to reach till the desktop from the boot menu.



This SSD is priced at ₹14,140, the ADATA S599 SSD is surely for early adopters. The performance benefits of SSD technology are currently more in access and seek times than in actual copying speeds.

Kshitij Sobti

Smart Covers for the iPad 2
Apple's new smart cover protects the iPad 2, gives it first mover advantage for accessories, and no one dares cry foul

Phoenix 40-A
A mini UAV Phoenix 40 A works on six rotors and can detect motion and breathing when searching for hidden people

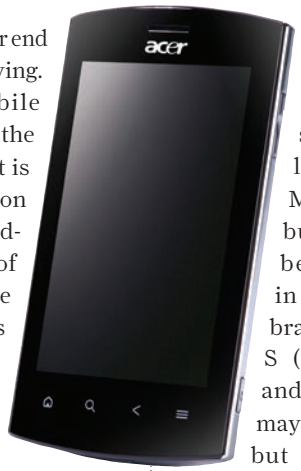
Acer Liquid Metal

Another Liquid that doesn't quite flow right

The build quality of the Acer Liquid Metal is very good, and the combination of plastic and stainless steel works well to give it a classy look.

The Android 2.2 OS is skinned with Acer's custom Breeze UI. The phone is powered by an 800MHz Scorpion processor, which runs out of power if multiple apps are opened. The on-screen keyboard is a bit of a pain to use in portrait mode.

The call quality is quite good, and the earpiece does well when it comes to audio volume and clarity. Even in a noisy environment, there was no problem hearing what the person on the other end of the line was saying.



Dolby Mobile sound enhances the audio quality, but is more enjoyable on a good set of headphones instead of the speaker. The 5MP camera does a pretty good job recording videos at 720p HD resolutions, with no motion blur or jerky frames. Pretty good for a camera phone, we must say.

Battery life has never been Android's strong point, but the Liquid Metal lasts over a day under normal usage conditions.

The Liquid Metal will appeal to those who want some fashion and like the Breeze UI. More discerning buyers will find better options in the same price bracke. The Galaxy S (S-LCD version) and the HTC Desire may be older phones, but they'll give the Liquid Metal a run for its money. Other smartphones in the same price range that are outside the Android ecosystem that you could consider are the Samsung Wave-II and the Nokia C7.

Vishal Mathur

Specifications

Quad Band GSM networks; 3G capable; 4G capable; 800MHz Scorpion processor; 3.6 inch display; 480x800 pixels; 5MP camera; 720p HD video recording; MicroSD up to 32GB; Wi-Fi/Bluetooth; Android 2.2 preinstalled; Breeze UI; 1500mAh battery

Contact

Acer India
Phone: 1800 116 677
Web site: www.acer.co.in
Price: ₹20,990

6.5/10

Features	6.0
Performance	7.0
Build	8.0
Value for money	7.0

Samsung S8530 Wave-II

A bigger and better Wave

Specifications

Quad-band GSM smartphone; 3G capable; 1GHz processor; 2 GB memory (expandable to 32 GB); 3.7-inch touchscreen; Super Clear LCD type; 480x800 pixels resolution; 5 megapixel camera; bada OS 1.2; Touchwiz UI; 1500mAh battery

Contact

Samsung India
Phone: 1800 3000 8282, 18002668282
Web site: http://www.in.samsung.com
Price: ₹20,000

7.0/10

Features	7.0
Performance	7.0
Build	8.0
Value for money	7.0

Out of the box, the Wave II looks exactly like its predecessor. The screen is slightly bigger (3.7 inches now vs. 3.3 inches on the Wave), but the buttons and menus are almost identical. The phone is solidly built, and its slim body sits comfortably in your hand.



The richness of the S-LCD display and amazing black levels are unbeatable, even by AMOLED screens. The touchscreen works brilliantly.

The bada 1.2 update feels more polished now, and has Samsung's TouchWiz user interface. Call quality is absolutely superb, and most ambient disturbances are well filtered out. Battery life is miles ahead of Android-based smartphones. The 1500 mAh battery lasted us for 2 days of normal use. The 5MP camera is extremely good when it comes to taking shots during the day, or in brightly lit conditions. In low light conditions pixellation starts to show up. The 720p HD video recording is very smooth, even though we would have liked a bit more colour depth – colours seem a bit washed out.

For close to ₹20,000 (MRP), the Wave II feels like a costlier device, with a great touch experience and a very good display. However, in an increasingly competitive segment, with the likes of Samsung's own S-LCD Galaxy S and the Nokia C7, the Wave-II definitely has a tougher fight on its hands than its predecessor. The fact that bada is yet to garner love from app-developers doesn't help either.

Vishal Mathur

MSI GT 663R

Looks can be deceiving



The GT663R is heavy, weighing in at 3.5 kg. An Intel Core i7 740QM processor (1.73 GHz), a whopping 8 GB of memory and NVIDIA's GeForce GTX460M with 1.5 GB of graphics memory make this laptop a force to be reckoned with. It also sports 2 x 500 GB hard drives, and has a 15.6 -inch screen with a resolution of 1366 x 768. A full HD resolution screen of 1920x1080 would have been ideal to match the superb configuration. You can't really compute with this device on your lap, lest you singe your thighs.

The dedicated control options are well laid out – there are controls to start and stop the internal cooling fans, as well as controls for Wi-Fi, Bluetooth, Turbo mode and Eco mode. You'll have to use keyboard shortcuts to control volume and screen brightness though.

The MSI GT663R performs well, and looks good to boot, but it's not a laptop that feels as good as its price tag – the build quality is rough around the edges, and lacks finesse.

Vishal Mathur

Specifications

Intel Core i7-740QM @ 1.73GHz; 8GB RAM; 15.6 inch LED display (1366x768); Nvidia GeForce GTX460M; 1.5GB dedicated graphics memory; 1TB (500GB x 2); Wi-Fi/Bluetooth; Windows 7 Home Premium (64-bit)

Contact

MSI India
Phone: 18002000004
Email: technicalindia@msi-in.com
Web site: http://in.msi.com
Price: ₹1,49,999

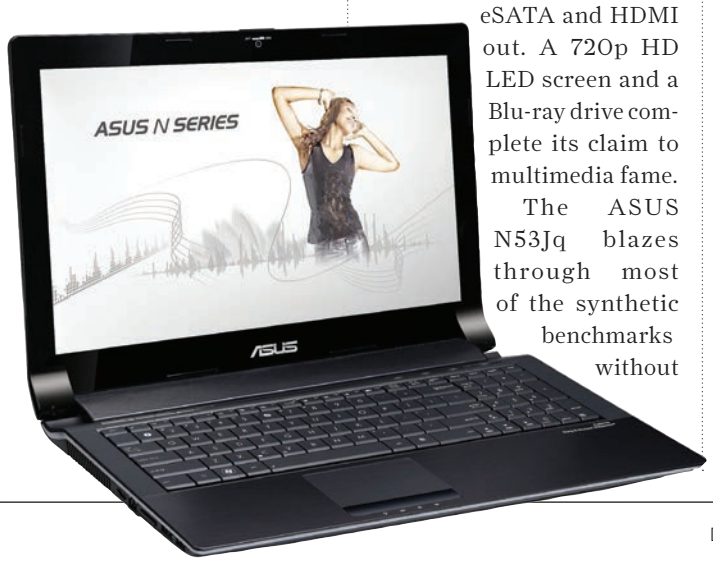
6.0/10

Features	7.0
Performance	7.0
Build	6.0
Value for money	5.0

ASUS N53Jq

Looks better than it sounds

The ASUS N53Jq has a textured silver finish and is built like a tank. The keyboard has flat keys that are bevelled at the bottom. The key-spacing is cramped, and slows down typing speeds and accuracy. The touchpad lacks precision and responsiveness. There are dedicated on/off switches for Wi-Fi and the integrated webcam. It also features a single USB 3.0 port, eSATA and HDMI out. A 720p HD LED screen and a Blu-ray drive complete its claim to multimedia fame.



The ASUS N53Jq blazes through most of the synthetic benchmarks without any complaints. The HD movie playback delivered crisp and vivid colours with excellent video reproduction. The sound reproduction, however, failed to live up to expectations – especially sounds of explosions. The laptop scored 54 fps in FarCry 2 and 197 fps in Doom 3. The visuals were vivid and impressive. Overall, the N53Jq is a decent multimedia laptop that you can play the occasional game on.

Battery-life is poor, but then that's expected of most higher-end laptops. Though the price tag of ₹68,999 sounds steep, you get what you're paying for with the N53Jq.

Vinod Yalburgi

Specifications

Intel Core i7 - 720QM; Memory: 10GB DDR3 1066MHz; Chipset: Intel HM55 Express; Graphics: NVIDIA GeForce GT 425M; Hard drive: 500GB; Display: 15.6-inch 720p HD LED, Screen resolution: 1366 x 768; Weight: 2.9 Kilograms;

Contact

ASUS Technology Pvt. Ltd.
Phone: 1800 209 0365
Email: helpline_west@asus.com
Web site: www.asus.in
Price: ₹68,999

7.0/10

Features	7.5
Performance	7.0
Build	7.0
Value for money	6.5

Bazaar mini

QUICK INSIGHTS FROM INDEPTH TESTS

The Digit Test Centre receives hundreds of products every month. Each of these products is put through a series of tests, and are finally given a verdict. 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

1.0 - 3.0 - Extremely poor product. Keep away!
3.5 - 5.0 - Strictly OK. Not recommended
5.5 - 6.5 - Decent product. Go for it, but there maybe better products.
7.0 - 8.5 - Very good product. Highly recommended.
9.0-10.0 - Ground-breaking product. We've never seen anything like it before. A definite must buy!



Samsung Galaxy Tab 8.9

Samsung introduced the 9 inch Galaxy Tab 8.9, which will run TouchWiz, Samsung's own skinned version of Android 3.0 Honeycomb.

COLOUR LASER MFD



Ricoh SP C232SF

Price: ₹56,000

SPECIFICATIONS

Resolution	600 x 600dpi
Network Support	Yes
Dimension (WxDxH)	420 x 493 x 476
Weight	30 kg

TEST CENTRE RATINGS (All Scores out of 10)

Features 6.0
It is a laser colour MFD which supports duplex printing, copying and scanning. There is a 2-line LCD display which is backlit.

Performance 6.5
It took 35 secs for a quality text print, 47 secs for quality mixed document print. Photo printing on a glossy paper gave many problems.

Build quality 8.0
It has an extremely sturdy build with responsive buttons.

Value for money 6.0
At ₹56,000 this MFD makes sense in a medium sized office.

WE SAY

6.5

Although we found the C232SF to be slow with quality printing, the output was quite good. Ricoh C232SF does its job well. Although we did find 35 secs and 47 secs to print quality text and mixed document a bit much, but the quality is flawless. Scanning and copying was snappy. It took over 30 secs to get working if it was in sleep mode. Operating the 2-line LCD display is not a very user friendly experience. Glossy paper kept getting jammed though which we found surprising. At ₹56,000 this MFD makes sense in a medium office setup.



Samsung CLX-3186FN

Price: ₹29,499

SPECIFICATIONS

Resolution	1200 x 1200 dpi
Network Support	Yes
PictBridge	Yes
Dimension (WxDxH)	416 x 378 x 344

TEST CENTRE RATINGS (All Scores out of 10)

Features 7.5
Samsung CLX-3186 is a colour laser MFD. It supports PictBridge and has an Eco button for one-touch print.

Performance 7.0
Quality mixed document print took 30 secs whereas a quality photo print took 51 secs. Photo quality was not as good as that of the mixed document.

Build quality 7.0
Build quality is quite good and it has a small footprint for an MFD.

Value for money 6.0
Pricing at ₹29,499 is quite decent for a laser printer.

WE SAY

7.0

Samsung CLX-3186FN is a fast laser MFD with a beautiful minimalist design and a splash of colour on the operational panel. It gave good quality prints except for the photograph. Operational panel is quite user friendly. With the laser toner cartridge priced at ₹8,000 giving 1500 prints, it works out a bit on the higher side as compared to HP 8500A inkjet printer. Due to the higher toner cost, the total operating cost is quite high for this MFD.

Hacker gets two years

A hacker from England who managed to break into the mainframe of Zynga and steal 400bn virtual gaming chips has been jailed for two years



Monirobo at work in Japan

Monirobo, a radiation monitoring robot, is working at the Fukushima Nuclear plant to monitor the radiation leaks

MONO LASER MFD



Canon imageCLASS MF4412

Price: ₹12,595

SPECIFICATIONS

Resolution ..... 600x600 dpi
Display ..... 5-line LCD BW display
Interface ..... USB 2.0
Weight (in kg) 10.3

TEST CENTRE RATINGS (All Scores out of 10)

Features 6.5
Canon MF4412 is a monochrome laser MFD offering color scanning upto 9600 dpi.

Performance 7.5
Printing was fast taking only 6.95 secs for a quality text print and 10.1 secs for a quality mixed document print. Copying quality could have been better.

Build quality 7.5
Built like a tank with a sturdy operational panel having a bright backlit screen.

Value for money 5.0
The price of ₹12,595 is expensive for a mono laser printer.

WE SAY

6.5

MF4412 does its job very well giving good quality prints, speedily. Scanning quality is also quite good. The toner is priced at ₹4,495 and can give a standard output of 2100 pages which works out to ₹2.14 per page. Economically, it works out a bit expensive than HP 8500A colour inkjet printer which is not desirable in a monochrome laser printer. Even the Samsung SCX 3200 gives better cost of operation. We would recommend this product around ₹10,000 for the cost per page on offer.



Samsung SCX 3200

Price: ₹8,999

SPECIFICATIONS

Resolution ..... 1200x1200 dpi
Display ..... 2-digit LED display
Interface ..... USB 2.0
Weight (in kg) 7.4

TEST CENTRE RATINGS (All Scores out of 10)

Features 7.0
Comes with a Print Screen button which allows you to print whats on your screen with just one touch.

Performance 7.0
It took 8.78 secs for a quality text print, 11.26 secs for a quality mixed document print and copying took 8.65 secs. It has an option to activate Eco printing from the control panel.

Build quality 7.5
SCX 3200 looks aesthetically pleasing and has a sturdy overall build.

Value for money 7.0
At ₹8,999 it makes for a very good buy.

WE SAY

7.0

Samsung SCX 3200 is a fast laser printer and gives decent quality copies and scans. Its form factor is also not very bulky and is ideal for a SoHo setup. Rounded edges on the sides and well cut out buttons makes operating the control panel a breeze. Its pricing of ₹8,999 with toner priced at ₹2,800 give a cost per page of ₹1.86 which is much lower than the MF4410. It is only marginally slower than the MF4410 but has the same quality.

PORTABLE SCANNER



Portronics Scanny2

Price : ₹6,999

SPECIFICATIONS

Resolutions supported ... 300dpi, 600dpi
Memory Supported ..... to 32 GB SD card
Light Source ..... LED
Interface ..... USB 2.0

TEST CENTRE RATINGS (All Scores out of 10)

Features 6.0
A small screen has options to choose between mono and colour scanning and resolutions.

Performance 6.5
Scanning A4 paper with text, mixed document and photo takes under 7 secs. We did notice bad quality photo scans initially, but after 50 scans the photos were of decent quality.

Build Quality 7.5
Sturdy built in spite of an all-plastic body. Rubber feet at the base prevent it from slipping

Value for money 6.0
At ₹6,999 it is expensive but ideal for quick scanning.

WE SAY

6.5

Scanny2 is great for those on the move, who constantly have to scan documents. It bundles in a PVC sheet which houses 4x6-inch photo prints to prevent them from being damaged by the scanner. It has a motor which takes in the paper, scans it and disperses it from the other end. The portability factor works in its favour and it scans quite fast even at 600 dpi resolution. The price may seem steep but for its speed and portability, it makes sense for professionals on them move.

GRAPHICS CARD



Palit GTX 560Ti Sonic

Price : ₹25,800

SPECIFICATIONS

Core Clock ..... 900 MHz
Memory 1024MB
Memory Bus 256-bit
Display Ports... 2xDVI, 1xVGA, 1xHDMI

TEST CENTRE RATINGS (All Scores out of 10)

Features 6.0
Based on the GF114 architechture, this card is overclocked out of the box to 900 MHz.

Performance 7.5
It performs better than the stock card. 3D Mark Vantage Overall : 22435; FarCry2 (1080p, 8xAA) : 86.43fps; STALKER : COP (1080p, 4xAA, DX11) : 81.9fps; Temperatures remain under 70 C.

Build Quality 6.0
It has a sturdy heatsink, but we felt that the plastic body was weak.

Value for money 4.0
At ₹25,800 this card is too expensive.

WE SAY

6.0

Barring Resident Evil 5, Palit card was faster in all other benchmarks as compared with the stock card. But, it is slower than ZOTAC GTX 560Ti AMP! Edition in all benchmarks. At ₹25,800 this card is way too expensive especially when you have the ZOTAC card which is priced a whopping ₹8,000 less and performs better.

ALSO SEE:
1) **ZOTAC GTX 560Ti AMP!**
March 2011
2) **NVIDIA GTX 560Ti**
March 2011

iMovie on iPad2
iMovie is an optimized Apple Software which comes along with iPad 2 for $4.99

iOS on a Mac
Chameleon is an open source project which helps in bringing iOS work over to Mac in a simpler way

BLUETOOTH SPEAKER



Platronics K100
Price: ₹4,699

SPECIFICATIONS

Standard: Bluetooth v2.1; Talk Time: 14 Hours; Standby Time: 15 days; Interface: MicroUSB

TEST CENTRE RATINGS (All Scores out of 10)

Features	8.0
Performance	7.0
Build Quality	7.5
Value for money	6.5

WE SAY

7.0

It does very well in terms of ease of setup, loudness and clarity on offer and the simplicity of operation. If you do have to speak on the phone while driving, this is the gadget to buy. It's not very economical, but that's the price you pay for road safety.

ROUTER



Linksys E1000
Price: ₹3,250

SPECIFICATIONS

Ethernet Ports: 4; Standard: 802.11 b/g/n; Frequency Band: 2.4 GHz; USB Port: None

TEST CENTRE RATINGS (All Scores out of 10)

Features	6.0
Performance	5.5
Build Quality	6.5
Value for money	6.5

WE SAY

6.0

It looks like a compact cousin of the higher end E3000. The E1000 is a wireless N router ideal for average users and it priced at an affordable ₹3,250. It gave transfer speeds under 7 MBps in Zone 1 and 2, whereas video streaming was best in Zone 1.

WIRELESS ADAPTER



Linksys WUSB600N
Price: ₹4,000

SPECIFICATIONS

Frequency Bands: 2.4GHz and 5 GHz; Standard: 802.11 b/g/n;

TEST CENTRE RATINGS (All Scores out of 10)

Features	6.5
Performance	7.0
Build Quality	7.0
Value for money	5.5

WE SAY

6.5

WUSB600N is an 802.11n USB adapter to connect your system to the internet. It gave great data transfer speeds. Zone 1 (Sequential / Assorted) : 8.88 / 4.02 MB/s and Zone 2: 6.87 / 1.41 MB/s. At ₹4,000 its pricing is still on the higher side.

PORTABLE HDD



Imation Defender H200 + Bio
Price: ₹19,500

SPECIFICATIONS

Capacity: 500GB; Finger Print scanning; Password Protection

TEST CENTRE RATINGS (All Scores out of 10)

Features	8.0
Performance	5.5
Build Quality	7.0
Value for money	5.5

WE SAY

6.5

It comes with a finger print scanner to protect the HDD data from un-authorised access. Data transfer speeds hovered around 20 MB/s. At ₹19,500 it's suited for those who carry extremely critical data. Build quality is top notch.

LAPTOP DRIVE



Samsung HM100UI 1TB
Price: ₹3,500

SPECIFICATIONS

Capacity: 1 TB; Cache Buffer: 8 MB; Interface: SATA 2

TEST CENTRE RATINGS (All Scores out of 10)

Features	6.0
Performance	6.0
Build Quality	7.5
Value for money	8.0

WE SAY

7.5

It supports the Advanced Format Technology (4K sector). It gave the following transfer speeds: Sequential / Assorted File Write: 90 / 54 MB/s; Sequential / Assorted File Read: 92 / 67 MB/s. Makes a great buy at ₹3,500.

LAPTOP DRIVE



WD Scorpio Blue 750 GB
Price: ₹8,215

SPECIFICATIONS

Capacity: 750 GB; Interface: SATA 2.0; Rotational Speed (RPM): 5400; Buffer Size: 8 MB

TEST CENTRE RATINGS (All Scores out of 10)

Features	7.0
Performance	6.5
Build Quality	7.0
Value for money	7.5

WE SAY

7.0

WD7500BVPT is a good performer. If you can wait, prices might fall further within six months. However, if you need the space, and can afford to shell out, you'll definitely not be disappointed. For a detailed review go **http://bit.ly/ibAiZS**

INTERNAL HDD



WD Caviar Blue 500GB
Price: ₹1,900

SPECIFICATIONS

Capacity: 500 GB; Interface: SATA 3; Cache Buffer: 16 MB

TEST CENTRE RATINGS (All Scores out of 10)

Features	6.0
Performance	5.5
Build Quality	7.5
Value for money	5.5

WE SAY

6.0

This has a SATA 3.0 interface but only 16 MB of cache buffer. Transfer speeds were hovering around 90 / 81 MB/s for Sequential / Assorted Write and 92 / 66 MB/s for Sequential / Assorted Read. At ₹1,900, we would advise you to wait till prices drop.

INTERNAL HDD



Samsung HD204UI 2 TB
Price: ₹4,500

SPECIFICATIONS

Capacity: 2 TB; Cache Buffer: 32MB; Interface: SATA 2

TEST CENTRE RATINGS (All Scores out of 10)

Features	6.0
Performance	6.5
Build Quality	7.5
Value for money	7.5

WE SAY

7.0

It has a SATA 2 interface. It gave following transfer speeds: Sequential / Assorted File Write: 85 / 81 MB/s; Sequential / Assorted File Read: 87 / 75 MB/s. These are good speeds for someone looking at affordable drives for everyday use.

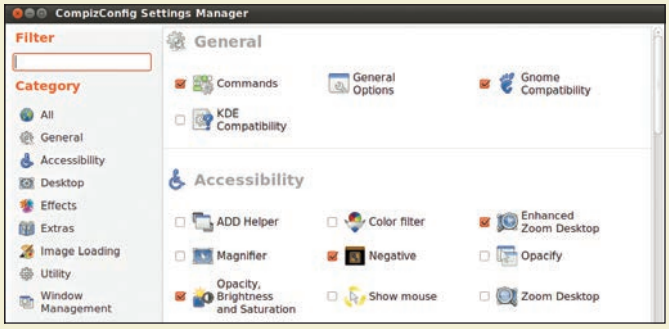
Ubuntu

For beginners, Ubuntu is now popularly synonymous with GNU/Linux. It is user-friendly, stable and has regular update schedule.

Visual effects

Although Ubuntu supports 3D effects by default (if your hardware supports it), they lack a way to configure significantly. To fix this simply install 'Compizconfig-settings-manager' either graphically from Synaptics or from Terminal by typing `$sudo apt-get install compizconfig-settings-manager.`

After installing you fill find it in `System > Preference`, open it and customise your visual effects as you like them.



Tweaks, Settings, Plugins and more

Super Clipboard

If you ever wanted to copy multiple items to your clipboard, you can use a small (650 kb) utility called Glipper. Once installed, you can add it as an applet in any of your panels (named as Clipboard Manager), and now whenever you copy anything, your previous copied item is stored in a stack. You can select it by clicking the applet icon, and paste it in the regular way.

Ubuntu One

If you work on multiple computers, then Ubuntu One can aid your productivity a lot. Ubuntu One is file syncronisation service already built into Ubuntu (think DropBox). Go to `System > Preference >Ubuntu One`. Create an account from there or Sign-in with an existing one. You can configure which folders to sync, you can also purchase/download music and software from your Ubuntu One account. One note, if you are accessing the internet via a proxy server, this might not work for you, even if you configured the proxy in the global settings.



Ubuntu.....25
Pidgin.....26
Maya.....27
Google Maps.....29
Reclaim the Forgotten Linux Empire.....29

Ubuntu Tweak

This is a remarkable utility that lets you customise with ease. Download a DEB package from http://ubuntu-tweak.com/ and double-click on it to install. Once installed, you can find it in `Applications > System Tools`.

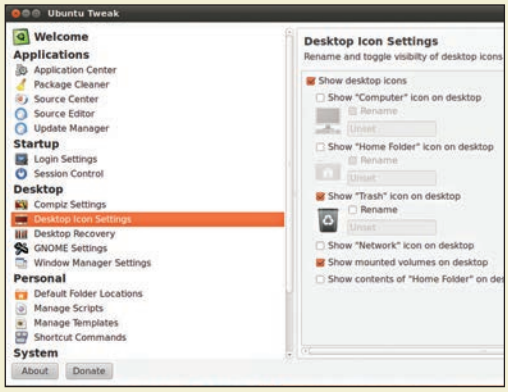
Go to Package Cleaner to clear cache / config / kernels to make your machine leaner and faster along with freeing up some disk space. You can go to 'Login Settings' to change the background image or the login logo. You can choose the Icons (such as Trash or Home Folder) you want to display on Desktop via 'Desktop Icon Settings'.

Manage via Terminal

You probably already know that you can install a package (software) by typing `$ sudo apt-get install <package_name>.` You can also search for a package by typing `$ sudo apt-cache search <Package_Name>` (It will also present matches from the description), so a sample search can be `sudo apt-cache search webserver`.

`$ sudo apt-cache show <package_name>` will show basic information about the package. (`apt-cache showpkg` will give detailed info).

`$ sudo apt-get remove <package_name>` will uninstall a package, and `$ sudo apt-get purge <package_name>` will completely remove saved setting files and downloaded installer from your hard drive.



Easy Graphical way of customising obscure settings

Software Center

Synaptics is a great way to install software, but when you search for 'Text Editor' it will return a crowded list of files including terms as vague as libXYZ-dev and so on. If you get confused or irritated with that, use 'Ubuntu Software Center' under the Applications Menu. Here you can search for Full Applications only, and your search results won't be polluted with gibberish.

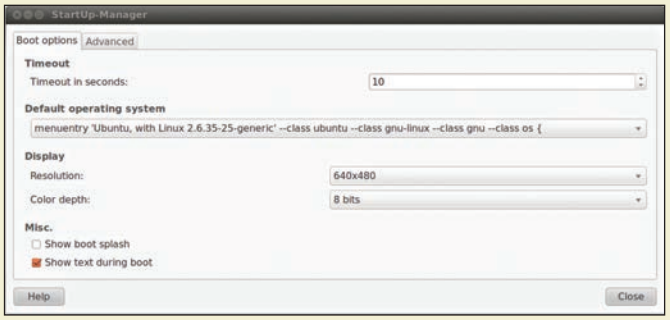
Faster PhotoViewer

If you think the default image viewer (Eye of Gnome or Gthumb) is a little too slow in displaying those high resolution images from your new digital camera. Give "Shotwell PhotoViewer" a try. It can use multiple cores of your CPU to pre-cache the image and the speed difference is very noticeable. The following steps should get you set for Ubuntu (or any Debian-based distro)

```
$ sudo add-apt-repository ppa:yorba/ppa
$ sudo apt-get update
$ sudo apt-get install shotwell
```

Enable Root

Ubuntu disables the root account by default, and instead provides certain user account



No more editing of obscure conf files

with `sudo` privileges. If you still want to enable the `root` account, follow this procedure. In the terminal, type `$ sudo passwd root.`

This will prompt you for a new root password (after you provide your password to get `sudo` access), and you can set it here. After this you can use `root` as the user-name and set the password to get root access. If you want to again disable it in future, you can lock it as follows

```
$sudo passwd -l root
```

Revert button locations

Latest editions of Ubuntu have moved the Close, Minimise and Maximise buttons to the left of the title bar. Launch `gconf-editor` by typing it in the 'Run Application' window. Browse to `Apps > metacity > general`, look for "button_layout" on the right panel. Change the value in the "button_layout" from close, minimize, maximize: to menu: minimize, maximize, close. A restart should bring your things back in order.

Reduce Wait time

After full installation, Ubuntu is set to be the default operating system to boot up if no key is pressed within 10 seconds on a multi-boot system (say with Windows). You can do that easily with a graphical application (No more messing with `/X11/boot/grub/menu.lst`). Install `startup-manger` either from synaptics or via terminal by typing `$ sudo apt-get install startupmanager`

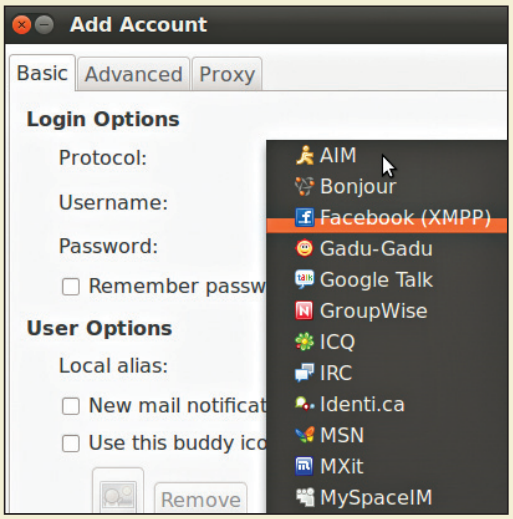
Once installed, it can be found at `System > Administration > Startup Manager`. Not only can you change the default operating system and Timeout, you can adjust resolution, colour depth and even create a rescue floppy in case you ever get stuck.



Selectively add functionality

Toggle icons on Desktop

By default an icon for every partition on your hard drive and every storage device attached to your system will be displayed on your desktop. If you don't prefer that and want to save that space, then open `gconf-editor` and go to `apps > nautilus > desktop.` Now uncheck `volumes_visible` and close the window.



Now chat on Facebook from a Desktop Client

Restore without Rebooting

Ubuntu separates the Graphical applications from the core system, and if you're stuck with a system that just hung on you, you can still revive it without a restart. Press `[Ctrl] + [Alt] + Backspace` to kill the Xserver, and get back to the login screen. This will kill all your graphical applications and command line applications specific to your username and bring you back to the login screen. This will leave the server running as root intact, and will be faster than a complete reboot. To enable this shortcut, navigate to `System > Preferences > Keyboard`. Choose the "Layouts" tab and click the "Options" button. Over there select "Key sequence to kill the X server" and enable "Control + Alt + Backspace".

Yakuake

If you find yourself frequenting the terminal, then Yakuake is the perfect solution for you. Yakuake stands for Yet Another Q(K)uake Style Terminal Emulator, it is small app, which at the press of a hotkey drops down a terminal window over your screen, exactly like Quake. You can customise the hotkey, transparency and a host of other options. The default is `[F12].` To install type `$ sudo apt-get install yakuake.`

Stop a hung application

If an application gets hung, and even the force quit option is not working, open a terminal and type `$ killall <appname>.`

If you don't know the application name, you can type in the first few letters, and press `[Tab]` a couple of times to auto complete. If the above still doesn't work try `$ ps – e | grep <appname>.`

This will display the app with its corresponding process id. Then type `$ kill -9 <Process Id>` and it will shutdown the application. You can also enter any subset of the application name, and it will find it for you.

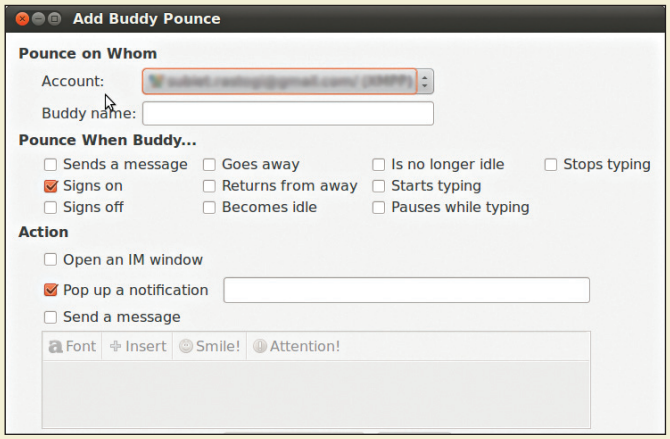
Pidgin

Pidgin is a multi-protocol chat client where you can log on to multiple IM services

such as MSN, Google Talk and Yahoo! at the same time from within the same program. It provides basic text exchange and even audio/video chat capabilities on some protocols. It works on the Linux, Mac and Windows.

Facebook Chat

Pidgin supports multiple IM services including Google Talk, MSN, Yahoo and even slighly obscure ones as MXit and QQ, but it surprisingly leaves Facebook out of the default set. To fix this simply go to tinyurl.com/pdgn-fb. On the right-hand side navigation menu, you will find a *.deb package and *.exe package for Linux and Windows users, respectively for a straight forward install. Once installed, Facebook will show as an additional service when adding an account.



Schedule your IM Needs

Audio/Video chat

Pidgin has added support for both Audio and Video. Just go to the 'Media' option for the buddy you want to initiate a chat with and select only 'Audio' or 'Audio and Video'. To further customise, you can enable the 'Voice/Video Settings' plugin from the `Tools > Plugins` dialog box and click on the 'Configure Button' to adjust your webcam and audio settings.

Text replacement

You can enable this by going to `Tools > Plugins > Text Replacements`. Not only does it automagically correct for mistakes/shorthands such as wroking to working, or any1 to anyone, you can also add your own entries by clicking on Configure Plugin. You can reduce your keystrokes by assigning shortcuts/acronyms for your commonly used phrases.

Turn off notifications

With typically 200+ people on your buddy list a loud bell alert for every time whenever someone logs in or out can be annoying. To set this right, go to `Tools > Preferences > Sounds` and either reduce the notification volume to a bare minimum, or untick everything from the "Sound Events" section. If you fancy the notifications, but want a different tone, you can set that as well.

Buddy Pounces

This is a unique and incredibly useful feature of pidgin. Buddy pounces are actions (Like sending them a message, playing a specific sound, or even executing a command) whenever a certain friend in any of your protocols changes his status (say comes online, goes offline, becomes idle). You can set them by going to Tools>Buddy Pounces.

One of the most common actions is to send a message whenever your buddy comes online, very useful in protocols which don't support offline messaging.

Keep it updated

On Ubuntu there is a version available in the repository but is typically not the most latest one, to fix this permanently simply go to http://pidgin.im/download/ubuntu/ and download their Pidgin PPA package and install it. Whenever you update your repositories, it will always show the latest version of Pidgin.

Windows users can manually grab the latest version from http://pidgin.im/download/windows/.

Offline Messaging

Since now Google Talk among a few others support Offline Messaging, a simple trick to ease that process from within Pidgin is to go to `Buddies > Show > Offline Buddies` and check it, followed by `Buddies > Sort Buddies > By Status`.

Current Playing Song in Status Message: If you want the song you're listening on your computer to appear as your status message, you can install this plugin from http://code.google.com/p/pidgin-musictracker/.

There is an executable package for Windows user available and source file for Linux users, but Linux users are advised to check their respective repository listing for an entry.

It supports a large number of music players including Winamp, Windows media player, Last.fm feed, Amarok, Banshee, Rhythmbox among many others so you can listen to music from the player of your choice without installing a separate add-on in each player.

Maya

Autodesk Maya 2011 is one of the most powerful 3D applications and is used in a lot of industries around the globe for various things from Game Design and development to Movie making.

Changing Maya UI

A handful of people don't like new look of Maya and aren't entirely sure on how to change the interface without breaking the software. A quick and easy way is to locate your Maya.exe file and create a shortcut on your desktop. Right-click on the icon and select Properties. You will see the Target Line which gives you the path to the maya.exe file. Insert a space after the quotes and type `-style platique`. Click on apply and see the UI change dramatically.

Once you have achieved that, you can play with different types of UI style codes: Plastique, cde, motif, cleanlooks, windows, monolith.

If you wish to go to the default UI, then simply delete `-style name`.

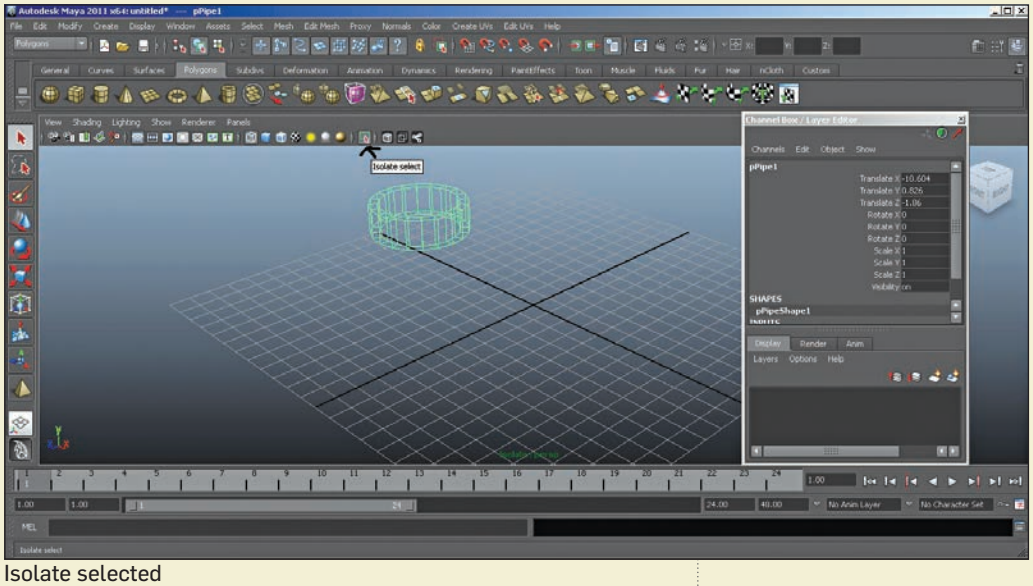
Handy shortcuts

`[F]` = Frame objects in selected view
`[Shift] + [F]` = Frame all objects in all views
`[G]` = Repeat Last
`[P]` = ParentING OBJECTS
`[S]` = Set a keyframe
`[Z]` = Undo
`[Shift] + [Z]` = Redo

Physical Sun and Sky

An easier way to get an interesting looking sun and sky for your objects is with the physical sun and sky.

To do this make sure your render settings are on Mental ray. If it isn't, then click on the slate board looking icon. In these settings you will see a Quality tab, change the quality preset to production. Next we go to the Indirect Lighting tab and click on the "Create" Button next to



Isolate selected

Physical Sun and Sky. This will create the sun in your Maya scene. Add a couple of objects, a NURBS plane and sphere. You will notice a sky and sun which you can add objects and manipulate the intensity to get a very nice looking atmospheric effect.

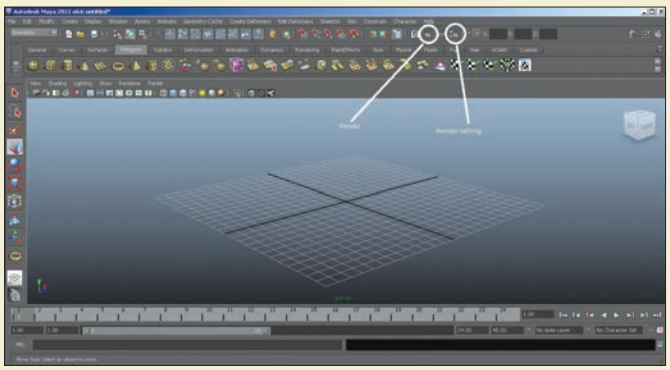
Blur Camera

A good Depth of field always makes a shot interesting. To do this, select the Camera you are rendering from, then go to the attribute editor (`[Ctrl] + [A]`). Scroll down to Depth Of Field or even Z Depth. To blur objects in front of the camera, change the Focus Distance and the F stop. Try these values: Focus Distance = `100` F Stop = `25`.

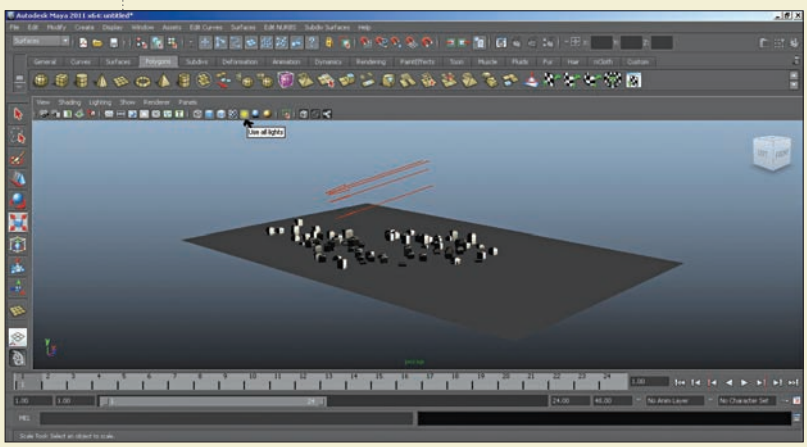
Isolate for easier work flow

One of the handy methods for a faster and easier workflow is to isolate objects and work on that bit and move to the next one. To do this, select the object, click the Isolate Select icon at the top of the viewport. The Isolate Select icon is a little select arrow with a green dotted line square that it's clicking.

Right above the viewport, it's the icon between the little gold ball and the grey 3Dbox with white lines Click this icon again to see everything else in the scene. Isolating objects this way will not make them invisible when you render. To do that, you will need to hide them in the Outliner.



Change the "Render Using" from Maya Software to "mental ray"



Lighting

More finite control over Scrubbing

If numbers or values change too fast while you're trying to modify them by scrubbing (dragging your mouse pointer over the timeline), hold `[J]` to make the tool work in a finer mode.

Lighting

A good and 'less processing speed' way for getting the lighting direction right is to turn the 'use selected light' button on.

Quicker render

Rendering a full resolution image can be quite time consuming on a machine if you want to have a quick look for how your file really looks like. Here is a trick to see the renders on half or a quarter res or even lower than that. Rendering > Render > Test Resolution.

These things always come in handy when you want to speed up your rendering capabilities.

- Remove unwanted objects in your scene.
- Try not to use Very High Resolution Textures for objects that are going to look really small in the shot. Same goes with Hi-res geometry.
- Keep proxy of Objects and textures
- Use instancing when necessary
- Use the Lights adequately. A number of lights can only make your shot quite heavy.
- Don't overlap your 3D objects, at times, it will take more time to render than you can imagine.

Resources

A really good resource for getting some amazing maya (mel and python) scripts is http://www.creativecrash.com most of them are free. One can find anything from creating random rocks scripts to getting your interface to work according to your likes. Also, a good forum to ask any questions - Artistic or technical can be asked here cgtalk.com or cgtantra.com

Bonus tools for Maya http://area.autodesk.com/bonus_tools

These are a good bunch of plug-ins for maya which are not readily available within the software but you can download and

install them. The user will get an additional drop-down menu for more interesting bit of controls and features.

Google Maps

Google Maps is a well designed, interactive and easy to use map service that allows you to find out where you are, get directions to any destination or find local hangouts and businesses, all there right in your hand while you are on the move. Here are a few tips on how to get the most out of this exiting and very useful feature on your phone:

Getting Directions

Google Maps does not give just directions, it actually allows you to choose your mode of traveling and then picks a route depending on whether you are in a vehicle or on foot. How brilliant does that sound! And in India, if you wish to use the Delhi Metro Rail, Kolkata Metro, Chennai MRTS or Bangalore Metropolitan Transport services, you can even choose the Public Transit option to get directions in surrounding areas to travel using the Metro too. Just go to Public Transit and put in your Start and End Point, and when you get directions for it, you'll see that it gives you details like the frequency of trains on



Mark your favourite place

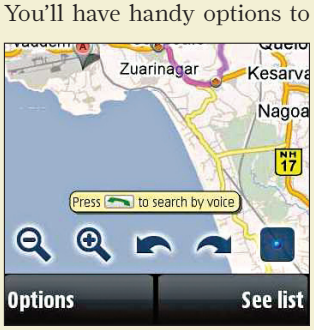


Now you can plan your trip on your cellphone

that route, where to change lines or tracks, expected time of travel, contact info for agencies and other useful information. The blue dot is where you are at present, the place-marker with the green symbol is your starting point and the one with a black and white checkered symbol is your destination.

Search

Google Maps also serves well as an exploration tool. Use the Search option to type in the name of the place you want to look up, say a restaurant, multiplex, museum etc or simply press the Call button on your phone to search by voice and apart from giving you its address, it also provides you with relevant details like ratings and reviews on the place, listing info, services available, timings of shows and more rich details. You'll have handy options to



Find your location even without GPS

directly call them up, visit their website or save the numbers as a contact on your phone. So next time before you are about to enter a new place to drink or dine, do a quick search on your phone and be better prepared for a good time.

Latitude

Stay connected at all times, click on Latitude in the Menu, sign into your account and activate this feature to see your friends on a map, find out who's nearby and meet up. It allows you share your location with whomever you choose till whatever level of detail you want. You can share, set or hide your location at any time and easily control which friends can track you.

Without GPS?

Even if your phone does not have GPS, you can still use Google Maps for Mobiles to tell your present location. The My Location feature is based on the BTS (Base Transceiver Station) of mobile operators with an accuracy of 1000 m approximately. Click on My Location in the Menu and a blue dot will slowly appear to mark your present location as accurately as possible but you'll need an active internet connection on the phone even if the data transfer is not very small, it is still a useful perk to have on your phone when travelling.

Make your own Maps

Click on `My Maps > Create New Map` and start making your own personal maps to which you can add text, images, drawings, and even videos and publish to anyone you'd like. Whether you are at home and giving directions to a friend or are a small business guiding people to your office, it's another fun feature you should explore on your phone. Depending on your location, you can create personalised, annotated and customised maps containing place-markers, lines, shapes and then add useful web links or embed photos to add value. From the menu itself choose to make your Map public or accessible only through a unique URL for private use.

Favourite places

You can add a Star on locations you often visit and bookmark them for easy access or even new places you liked and want to note for the future. Just click on the Start icon next to the address and then next time using Menu you can easily open these Starred items and have a list of your favourite locations right in front of you, saving time and effort. If you use Google Maps on the web, you can quickly sign into your account from here and synchronize the starred items on your phone and on the net. Simply click on the Star next to the name in Starred Items to remove it from your list.

Reclaim the Forgotten Linux Empire

How to access your Linux box if you have forgotten all passwords!

The joy of Linux rests in its freedom. You can share it with your friends, distribute it and use it for what you want and dieu merci there is no one coming after for copyright violation. But just like any piece of software, it too has its own strengths and weaknesses. We will try to have a sneak peek into one of the problems (and of course its solution) which many users often face, some face occasionally and some might face it if they are too careful. The problem we are talking about is: forgetting your password for Linux Operating System.

It would be a real nightmare if your iPhone 4 you bought last month (and I assume you love it too much) gets a scratch on its cheek and that was a dejection capable enough to make you

forget everything that happened to be important in the last week and that included your Linux passwords too.

Had you been on Windows and were resolute to make sure that you never have to be denied access to the system just because you changed the password the day before and have completely forgotten it now, most probably you'd have created a password repair disk. But although Windows provides a nice feature for letting you in when you forget your password, often people don't utilize it. It becomes much more difficult to access a Linux system in the same condition because usually, Linux distributions do not offer such functionality. But not to worry, the next time you happen to forget your Linux password, all you need is to follow this guide and you shall be the emperor of your lost Linux Empire 'once again'. But before we take off with the methods, let us imbibe a few things about Linux passwords which will help us understand the steps later.

Where does Linux store its user info?

Linux stores the user details in the /etc/passwd file. This file contains each user's details on one individual line. A standard line would look like this:

```
root:x:0:0:root:/root:/bin/bash
```

In this line, some information is stored. Each piece of information is separated by a colon (:). The first part is the username (root), the second (x) details that the password has been shadowed and is stored in the /etc/shadow file. The next two numbers are the user id (0) and group ID (0) of the user. Then we have the full name of the user (root). This field is actually a comment field and can be used for other purposes too. However, most distributions use it to store the real name of a user. After that we have the home directory of the user, which in this case is (/root). The last field speaks about the location of the executable which this user would use as its command line shell (or simply shell or console).

Yeah, so where is the password?

The interesting part for us in that line is the second field which says that the password is shadowed and stored in /etc/shadow file. In fact, the word shadow is used only to say that the actual password is stored in the /etc/shadow file. This file (/etc/shadow) is actually accessible only to the system administrator which is the 'root' user. So once you open this file, you shall see a similar structure with each line having some sensitive information about a user. Here we show you an example:

```
root:$1$fC214jQK$.fY88wY/w7J41CinaszNP1:14913:0:99999:7:::
```

In this line again, we have more than one piece of information separated by colon (:). The first field being the username, the second as the password value and third is the epoch since the password was changed. The next number tells the number of days until which the change is allowed. The following field (99999) defines the number of days after which the user is required to change his password. The next number (7) indicates the number of days before the password expiration when Linux shall display a notice to the user upon login. For example, if the password has to be changed before 28th March 2011 then Linux shall show a notice to the user and ask him to change the password 7 days before March 28, i.e. during 21st to 28th March. The next field is empty but would contain the number of days after which the account gets disabled if the password were not changed. Exemplarily, if this field contains the value '2' and the last date for changing the password is 28th March 2011 then, the account gets disabled at the end of 30th March 2011. The last field would determine the number of days since the epoch that the account will be disabled regardless of any other activity. If you are wondering what 'epoch' means, it is actually the date Jan-01-1970. The numbers of days mentioned in the shadow file are counted since this date.

What is in the password?

We are concerned about the password. Let us see how Linux makes sense of the password. Let us look at the password value once again:

```
$1$fC214jQK$.fY88wY/w7J41CinaszNP1
```

If you notice, you shall discover that in total there are three dollar signs. They are actually used to separate (once again) three different but related information contained in the password value. The first field is the text between the first and second dollar sign. In this case, it is '1'. This number is used to indicate which algorithm was used to create the hash. Here, it would be the well known MD5 algorithm because the number 1 at this position corresponds to MD5.

The second value is called 'salt' (reminds you of Angelina and some action, eh?) and is located between the second and third dollar signs. In this case it is ' fC214jQK' . Just like in real world, salt is used to change the taste of food; in this case, it is used to alter the output of the algorithm being used to create the password hash. The salt is random and is automatically generated by Linux whenever you create or change a password. The reason behind use of salt is quite interesting and we will talk about it shortly.

The third value in the password value field is the password hash which has been generated by the algorithm in accordance with the salt value and the password that the user inputs. This is the string between the third dollar sign and the next colon symbol on the line. It is this value which finally matters. The algorithm and the salt are used to engender the password hash.

Windows passwords vs. Linux passwords

If you look carefully, you shall see that the way Linux stores its password is both simple and intelligent. The files are locked with appropriate permission set and there is no mysticism involved. Simple hashes and salts; that's all! But in some ways it is more intelligent a method than what Microsoft uses in its Windows Operating System. There are two good features in the password storage technique used by Linux which makes it better than that of Windows.

The first of them is the possibility of using any algorithm you want to use. Linux has quite a few built-in algorithms for hashing the passwords and any of them can be used. So there is no way an attacker would be able to be sure of what hashing technique one might me using on the machine. The flexibility is that you can use one hashing technique (say MD5) for one user account and another technique (say Blowfish) for another.

The second is the use of a salt. Since salt is a random string, there is no way to predict it, unless you have already read it in the /etc/shadow file. The salt is used to change the way the hashing algorithm works to create the password hash. Same algorithm and same user input with different salt values will give birth to different hashes.

Now, there may be any number of salts which might be created and when you multiply that with the number of algorithms which can be used and then multiply it with the number of passwords that a user can input, the number is quite huge.

The biggest advantage of the salt is that you cannot create a file which contains a pre-computed set of hashes based on the user input. In case of Windows, it uses an algorithm which will embody the same hash when same passwords are entered. In such a condition, it is possible to produce a file which will contain the hashes which have been already calculated for every possible combination of characters in a password. Such a file is often called rainbow table. Linux defeats the possibility of 'rainbow table' with 'salt'.

Reset your forgotten password

Now let us come back to the point and have a look at the technique which allows you to reset your Linux user password. We will show you how to change the password of the 'root' user in this guide. Since Linux stores the password in a way that you can crack the password by using only the 'brute force' technique which is impractical due to its slow speed, we need to find a better way.

If you think carefully, it becomes obvious that the password can be changed if you can edit the password value field of a user in the /etc/shadow file. The problem is that you must be able to generate a proper password value with the right salt and hash. This can only be done when you already have a Linux distribution at hand! We will use the same technique to change the password of the Linux system:

1. Get your hands on a Live Linux distribution. It is recommended that you get Backtrack. The reason why we do not ask you to get an Ubuntu or Knoppix is that these may not allow you to have root access on the Live system, whereas undoubtedly Backtrack will, and by default. All further steps are written assuming that you boot into the live system as 'root'.
2. Boot the live media (USB or DVD) and wait until your desktop is ready. Remember that you need to select the graphical mode boot when booting into Backtrack. It is not mandatory but if you are using the command line mode, then you must follow the following steps carefully with corresponding actions.
3. It is time you open the password file of the installed Linux OS which is stored on the disk. You will later edit this file and store it back to reset the password. So first you'll have to locate the partition on which Linux root file system (/) is installed and then mount it.
   Mounting is typically done by using the mount command. So if your partition is /dev/sda2, then you should type this command on the shell:
   ```
   mkdir /tmpmnt; mount /tmpmnt /dev/sda2
   ```
   This will make the contents of the Linux partition available in the /tmpmnt directory.
   You should now open the /tmpmnt directory in a file browser such as Konqueror and go to the 'etc' directory and open the 'shadow' file. It will open in a text editor such as kwrite.
4. Now, you are ready to generate a new password. This is very simple. All you have to do is to open the terminal and type the command:
   ```
   passwd
   ```
   This will ask you to enter a password and ask again to confirm it. Enter it and make sure you remember what you enter. This will produce the password hash for the 'root' user on the live system. Since the system is live, nothing is saved on the disk and you need not worry!
5. Our next step is to reset the password of the installed Linux system. To do this, you've got to open the /etc/shadow file of the live system (do not open the same file you opened in step 3). In this file, search for the line beginning with the word 'root'. Once you have found it, copy the password value from this file and paste it at the corresponding place in the file which you opened in step 3; make sure that you have replaced the password value. If the line for the root user in the file on disk (which you opened in step 3) was
   ```
   root:$1$fC214jQK$.
   fY88wY/w7J41CinaszNP1:
   14820:0:99999:7:::
   ```
   and the line for the root user in the /etc/shadow file from the live system after changing the password (which you opened in this step) is
   ```
   root:$1$g63hQ92U$h2k
   s8c.6p1qq.10d.wwQFr:
   14913:0:99999:7:::
   ```
   Then, after this step, the line in the disk file should look like:
   ```
   root:$1$g63hQ92U$h2k
   s8c.6p1qq.10d.wwQFr:
   14820:0:99999:7:::
   ```
   You can use the same password value for other accounts too which you need to reset the password of. Remember that here we are resetting the password of the root user of the installed Linux system. If you wanted to change the password for some user other than root (on systems like Ubuntu, where root user is rarely used), then you need to replace the password value of that user.
6. Bingo! It's all done. Now you should save the file and reboot the system into the installed copy of Linux OS.
7. When the system asks for the password, you must enter the password which you had entered in step 4.

Now, you have unlocked your Linux system. Time to rejoice, isn't it? Yes, but once again, if it looks easy to you, it will look easy for an attacker too. Someone who can access your computer might try to use this technique to change or add a new user, change your password permanently or temporarily. It is indeed a great security risk and we are not even talking about networks. There is nothing much to worry, however. There are a few simple steps which you can take so that no one is able to use this technique to make things worse for you. Just follow the simple guidelines given below:

1. Disable booting from USB and DVDs from BIOS.
2. Lock down the computer using BIOS passwords. You might want to use an administrator password in BIOS so that no one can change the settings.
3. If you think the above methods cannot protect you because one can open the cabinet, remove the battery and reset the BIOS password, then the best defense would be to encrypt all the volumes (partitions) on Linux which contain sensitive data as well as the root partition itself (most Linux distributions support it, if you have a separate /boot partition).
4. If you are using GRUB to boot into Linux, it is a great idea to use a boot-loader password as well!

We hope that you will never worry about a forgotten Linux password now. Oh, will you?

Chrome 11 beta out
Chrome 11 Beta is out and apart from sporting a new logo, it has support for speech-to-text with HTML5 speech input API

M11x R3 specs leaked
Alienware's M11x is expected to sport Sandy Bridge processors such as Core i5-2537M, Core i7-2617M and Core i7-2657M

HDD S.M.A.R.T Error, Confused between RAMs, Phone slowing down

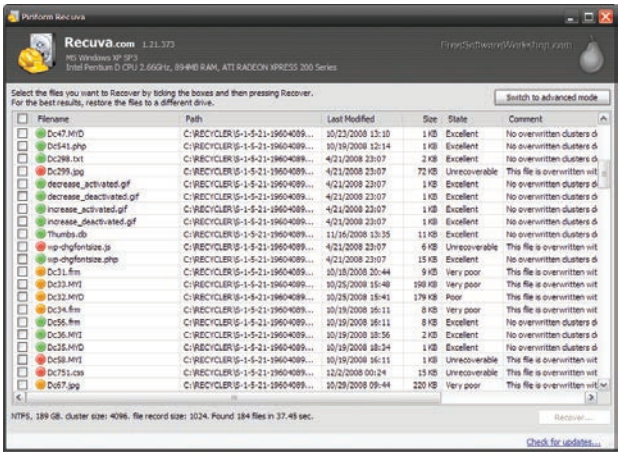
Digit Q&A answers these queries and more

Corrupted Media files

I use Tune Up utilities to restore deleted files. Sometimes the media files which are in good condition work properly when I restore them. But sometimes the player tells me that the files are corrupted or damaged. What software can I use to repair these files.

Nithin

Thanks for writing in. It's pretty unusual to use Tune Up Utilities to restore deleted files. You could try using another software such as Recuva (www.piriform.com/recuva) for recovering those files. It may work better than Tune Up utilities.



Recuva file recovery software

If the files in question are video files, a free software called DivFix++ (http://www.divfix.org/) should be able to help. Try using different players such as VLC, KMPlayer and Media Player Classic too.

HDD S.M.A.R.T error

I am currently facing this strange problem all of a sudden. I have a Seagate 320 GB HDD with loads of data on it. Yesterday, it started to display the following error during startup:

"SATA 1 HDD: S.M.A.R.T Bad, Backup & Replace."

I immediately powered it off. But when I connected this HDD as a slave with another XP containing HDD, it took a long time to boot and all the drives in the faulty HDD were displayed as RAW.

My PC configuration is as follows :

Processor: AMD Phenom X4

Motherboard: ASUS M2N68

RAM: 2 GB DDR2

HDD: 320 GB Seagate HDD (faulty), 160 GB Seagate HDD (XP installed)

Harpreet Singh

The S.M.A.R.T Bad error indicates that the HDD has gone bad or is going to go bad soon. It may be due to a mechanical hard drive failure which is caused due to motor failures or physical damage due to overwriting. After getting this error, you need to take a backup of your critical data, as it is a clear indication that the HDD will die out soon. Considering your faulty HDD is showing up as RAW when you connect it as a slave, you will need to do data recovery. You can use a Live Linux CD to access the data in the faulty drive and copy it over to the working drive or you can use softwares like Test Disk (http://www.cgsecurity.org/wiki/TestDisk) which can recover lost partition.

Cabinet ports faulty

I'm a frequent reader of your magazine. I wanted to ask you regarding a problem I am facing. My front USB ports don't work sometimes or they do, but have a very slow speed. My back USB ports are much better, but their speed is not good whe compared to a friend's computer using the same hardware. Aux-in jack in front panel dosen't work properly. What should I do? Should I change my cabinet or mother-board?

Naman

You don't need to change either, just yet. Get a new front-panel connector, and see if that works better.

Make sure the connections from your front panel are fixed properly on to the motherboard.

If your back panel connectors are "slow", we can't really pinpoint a reason for that unless you give us your motherboard model number, CPU, RAM and HDD specs. How fast or slow the PC is when reading from USB depends on a few things: do you have USB 1.1 or 2.0 ports, is your CPU slower than your friend's PC, do you have less RAM, or perhaps the HDD you're copying data to might be slow.

It also could be an early warning of failing hardware, but that's less likely.

Retaining GRUB

I am running Windows 7 and Linux Mint on my PC. My problem is that now I want to format the drive containing Windows 7, but I don't want to lose Mint. Formatting Windows 7 will delete the GRUB and I will not be able to use Mint. Please help me.

Himanshu Namdeo

After formatting, do you intend to reinstall Windows? If you do, then do the following:

Format the Windows drive and reinstall Windows.

Download EasyBCD, and use it to add a boot entry for your OS.

Otherwise, you can use any from a number of Linux-based recovery distros available. They will allow you to reconfigure and reinstall GRUB after a Windows reinstall. Linux Mint does not provide a recovery tool, however you can boot into the LiveCD environment, and then follow the instructions here: http://bit.ly/4yj0DD.

Since Windows has a habit of rewriting its own boot loader, using EasyBCD to have the Windows bootloader boot to Linux often works better in the long run if you have a dual-boot system.

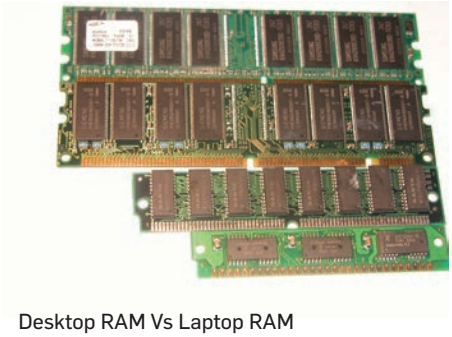
Laptop vs Desktop RAM

I would like to know if the RAM of a laptop and a desktop computer are interchangable if they both are DDR2?

Also, does the speed of RAM and the brand matter too much while upgrading?

Mrinal Dhar

You cannot interchange laptop and desktop RAM sticks as the laptop RAM has a smaller form factor which means there are fewer connector pins as compared the desktop RAM. Speed of the RAM does play an important role in better performance, but you should keep your motherboards' RAM speed rating in mind. It is always better to go for branded RAM sticks as the price difference is miniscule. But DDR2 RAM is comparitively more expensive than DDR3 RAM.



Desktop RAM Vs Laptop RAM

Nokia E72 slowing down

I had bought Nokia E72 nine months back and was amazed with its processing speed and looks. But lately, my phone's started slowing down and hanging, especially for simple things like opening messages or accessing the phonebook. I haven't installed many softwares except Google Maps and a couple of games. However, I use my phone to access internet quite often. Is this a memory related issue or a virus related issue? What can I do to increase the speed?

Aditya Ahuja

For the slowdown and hanging problems with E72, you need to follow these steps:

1. Install Nokia PC Suite/ Ovi suite on your PC.
2. Backup your contacts and SMS from the E72 to your PC using the PC Suite/ Ovi suite.
3. Unplug the E72 from the PC and format the device from the settings menu.
4. Once the format is complete, allow the device to restart.
5. Now, hook up the E72 to the PC and search for phone firmware update via PC Suite/ Ovi Suite.
6. If there is an update, allow the update to be downloaded and installed.
7. Now, copy the contacts and SMS back to the device.

This should ideally solve the problem. Nokia's E- series and N- series devices usually had this problem of slowing down after some months of use.

Ubuntu 10.10 or 10.04

I have a PC with the following configurations

Processor: Intel Core 2 Duo @1.8 GHz
Motherboard: Intel 965RY
RAM: 1 GB DDR2
HDD: 160 GB Seagate

I would like to install Ubuntu on this system. Which one should I select? I am actually confused with 10.10 and 10.04 LTS. Which version should I install? Also I would like to know whether Ubuntu is safe from virus attacks? I also read that Ubuntu with Windows dual boot Wubi does not update properly and causes damage to the bootloader. Please suggest some alternative Linux OS's which supports Windows 7 or XP dual boots?

Jatin Wani

The Ubuntu 10.04 LTS version stands to "Long Term Support". Linux usually has a faster release cycle than Windows. While this means you get features faster, for some people it is not convenient to upgrade every 6 months. Such people can use the LTS releases that come every 2 years.

You can opt for 10.10 without problems, as it has the latest features and applications, or wait a little while as 11.04 is around the corner. Linux is mostly safe, however it always pays to be careful.

Wubi is useful for testing Ubuntu without touching your partition structure.

Linux Mint (http://bit.ly/e5UQnb) is an alternative to Ubuntu and its oftern easier to use and more stable.

Mini in Size-Massive on Entertainment

ASUS
Inspiring Innovation • Persistent Perfection

O!PLAY MINI
HD MEDIA PLAYER

- The Most Powerful 1080p Decoder
- Impressive TrueHD 7.1 Channel Audio Enjoyment
- Easy Access 4-in-1 Multi Card Reader



ASUS - No.1 in Quality and Services - The Wall Street Journal Asia

www.asus.in | Toll Free No. 1800-2090-365
For Feedback Email reachus@asus.com | Log on to www.asusservice.com

Ubuntu Unity desktop
Canonical has another idea for the Gnome shell that they will use in Ubuntu 11.04 onwards. It is based on Ubuntu Netbook remix

Gnome apps revamped
Gnome 3 comes with revamped applications: Nautilus, Empathy, Evolution, all have received many updates.

A look at Gnome 3

Kshitij Sobti
kshitij.sobti@thinkdigit.com

So it's been nearly a decade since Gnome 2, and the desktop has done quite well for itself in the meantime. Thanks to being the default choice in popular distros such as Ubuntu and Linux Mint, it is perhaps now more widely known among new Linux users than KDE.

The latest release of Gnome takes a bold plunge into a completely new kind of desktop, breaking a lot of desktop conventions we are used to. There is no task-bar on screen, no maximise or minimise buttons, and no desktop to speak of. It will challenge your way of using a computer and you will either love it immediately, or love it after you've used it for a while. Unless, of course, you give up. But you won't will you?

Message tray

Here lie all the system tray icons you are used to. This panel is normally hidden, but is activated when the user approaches the bottom-right corner of the screen. The icons expand when clicked, to reveal the name of the application they are associated with. You can click (right / left) the icons to reveal their usual functions.

At the bottom centre of the screen, all your messages will appear. They do not need to be interacted with, they merely pop up for a short while and go away. If a notification is of importance to you, you can click it to launch the associated action. Simple notifications will just come and go, but messages requiring a response will be queued.

One can even reply to IMs straight from your notification.

Window Switcher

The good old `[Alt] + [Tab]` functionality has been revamped with Gnome 3. Windows are grouped by Application, such that you will only see application icons while alt-tabbing, however on selecting an application window with multiple windows they are previewed below the application icon, such that you can select them based on content rather than their icon. Additionally, all applications from all workspaces are shown here, with icons small light separator between applications on different workspaces.

Here you can interact with the window switcher using your mouse or keyboard. Keyboard controls isn't as straightforward as it used to be. You will either need to select an application window using the mouse, or use the arrow keys in addition to alt-tabbing to move the window you wish to switch to.

Window controls

The maximise and minimise buttons are gone! Hold off your lament, it is still possible to maximise or minimise windows, it is just that the buttons are gone. Gnome 3 supports the methods Windows 7 uses for managing windows (move to the right to maximise to the right, move to top to maximise, etc), and you can always double click to maximise.

Minimising is another matter, you can right-click on the title bar and click on minimize. It might seem too inconvenient, but trust us, the new mechanism of managing windows is such that minimising windows becomes an obsolete feature.

Only the close button is shown on windows, and that too is absent on windows that already have a close button on them.

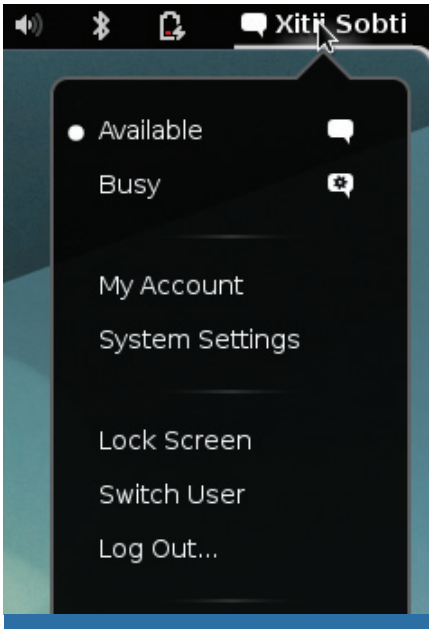
Activities view

The activities view shows an overview of your open windows, your workspaces, and favourite applications. It also lets you switch between two modes, Windows, and Applications.

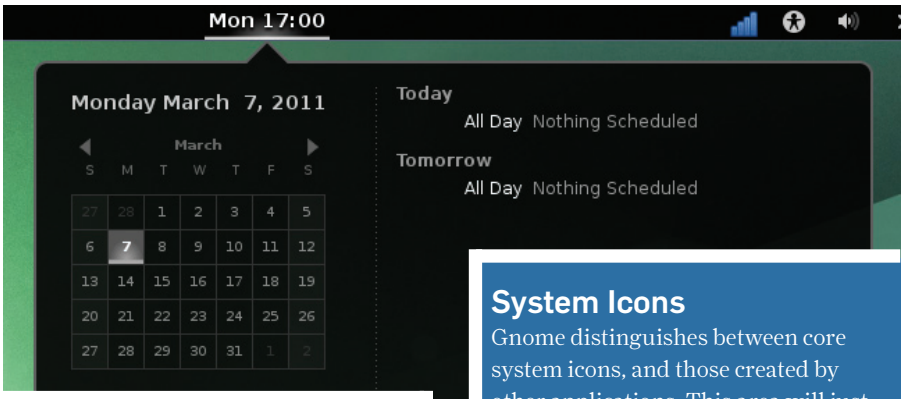
In the Windows view, you can see an overview of your open windows; you can click on a window to activate it. You can also move windows from the overview in the centre, and arrange them into your visual list of workspaces on the right. On the left-hand side is a dock that lists your running, and favourite applications. This works similar to the Windows 7 taskbar. You can mark applications as favourite and they will always appear here even when not running.

In the Applications view, you can see a list of all your installed applications, with categories on the right. There is no sub-categorisation of applications.

Activities view button
This button is to switch to your activities overview. The activities view is where you can see the running applications and launch new ones. You do not even need to click the button, as the top-left area of the screen is a hot-spot and will trigger the activities view if you move the mouse to that corner.



User menu
This button will reveal activities related to the current user account. From here one may access their preferences, set their social networking status, and log off / shut down etc.



Active application

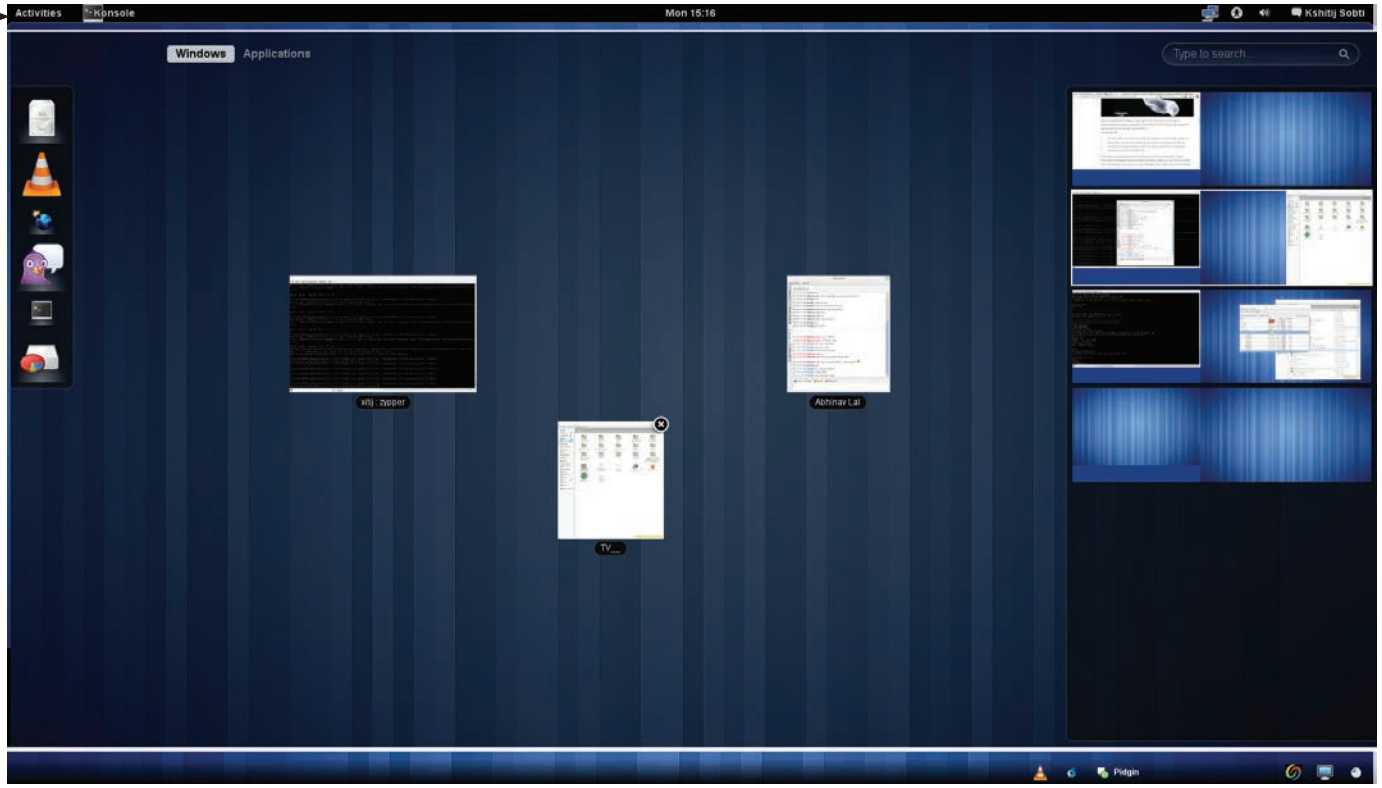
The Gnome menubar shows the currently active task with a zoomed in icon. This is to make it clear which application has focus. Clicking on it will reveal a menu of actions that apply to the entire application. Currently most of the applications we tried just showed "Quit". Unlike a taskbar, this only shows one task, the active one, and the actions apply to the entire application, not the current window. So if you Quit Firefox from here it will close the entire app, not just the active window.

Clock

Clicking on this will drop down a calendar that is integrated with Evolution — an open-source alternative to Microsoft Outlook — such that your calender entries will display here.

System Icons

Gnome distinguishes between core system icons, and those created by other applications. This area will just display system icons, such as bluetooth, WiFi / network connectivity, battery indicator, volume etc. All your other icons, such as those for applications you install will show up at the bottom-right corner.



When you launch the Activities view, you can straight-away start typing — without even switching to the applications view — to get matching applications.

The search mechanism leaves a lot to be desired. It is utterly unintelligent! For example, we searched for "terminal" in order to launch the Gnome Terminal, however the first entry we got was or a remote terminal app. Despite typing `terminal` and starting the Gnome Terminal a number of times, Gnome still lists the remote terminal application first.

Automatic workspaces

Gnome 3 features a brilliant workspace management feature called automatic workspaces. Traditionally, you'd have a fixed number of workspaces (or virtual desktops) that they could use to arrange windows. Moblin introduced a new concept where workspaces were created dynamically as one launches applications. This concept has been followed — with a few changes — in Gnome 3 as well. You start off with one workspace in which your applications launch. You can go into overview mode, and move application to a new workspace, such that there are never two empty workspaces.

Opera Dragonfly
Beta release of the Dragonfly debugger by Opera has been launched for open source web developers

Chrome patches Flash bug
Google is the first company to release a bug proof version of their browser which protects against a Flash bug found in Excel sheets

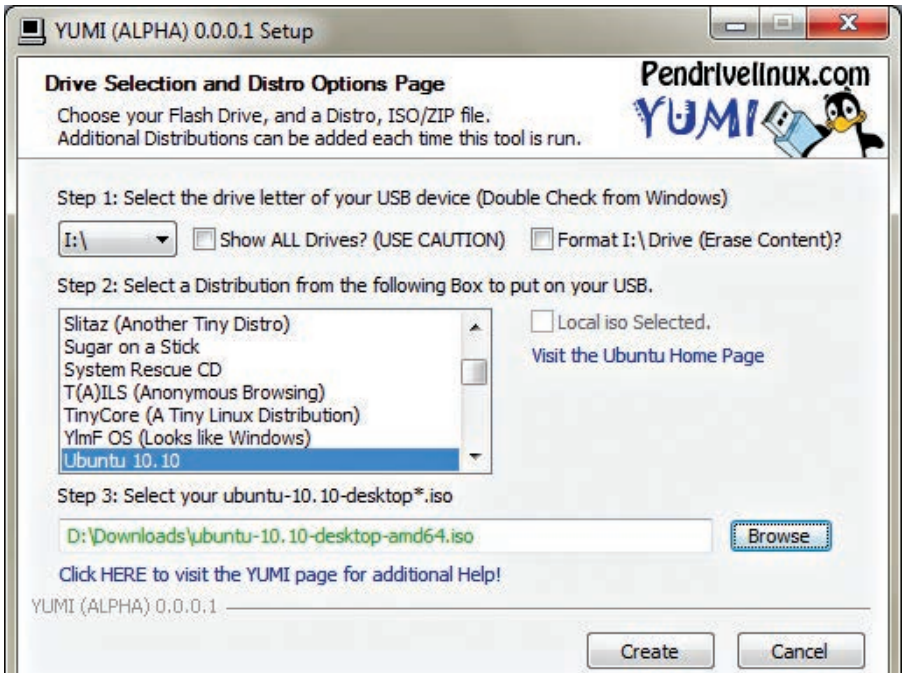
Make your own Linux Bootstick...

You don't need to burn discs to try out a new Linux distro. With a couple of tools and a dash of enthusiasm, you can create a bootable Linux USB stick

Vaibhav Kaushal
readersletters@thinkdigit.com

Linux has always been associated with freedom, and promoted by geeks trying to keep themselves busy by experimenting. More recently, Ubuntu has broken this stereotype by gaining the reputation of being the first Linux distribution that appealed to non-hardcore users.

The term "Live CD" literally became a common household term with the advent of Ubuntu. Today almost every other Linux distro has a Live CD as its default (and recommended) installation media. Since trying out different distributions needed more CDs to be trashed, booting Live Linux over a USB drive became the new drift. We'll show you how you can boot more than one Live Linux distribution using a single USB drive. Besides, you don't even need to burn a CD for this!



YUMI ready to work. Ubuntu 10.10 is selected here

The chisel and the hammer

To download the tool, you need to build your multiboot drive, go to http://www.tinyurl.com/digit-yumi and download YUMI multiboot USB creator. YUMI supports well-known distributions such as Ubuntu, Knoppix and PCLinuxOS.

Insert the USB drive into the USB port on your PC, and launch YUMI. In case the distro you plan to use isn't supported by YUMI (Fedora is one example), then you can use tools such as UNetBootin or Fedora's Live USB Creator. Similarly, some distros such as openSUSE cannot be used for multibooting due to the way their CD is structured. OpenSUSE can be single booted over USB using a tool created by the community specifically for this purpose.

What you need

- Live CD images of the distros you want
- YUMI Multiboot USB creator
- USB drive

Multibooting with YUMI

The program closely resembles an installer. On the first screen you'll have to accept a license agreement. Next, select the USB drive using its drive letter (for example, as F:\ drive). Double check the drive letter initially (from the "My Computer" window).

Click on the Browse button, and select the distribution you are using. If you haven't already downloaded the ISO files for the distributions, YUMI can do that for you! Once you have selected the ISO files, click on the 'Create' button, and you have your USB key ready with your first Live Linux.

Once done, YUMI asks you whether you want to add another Linux distribution from the list. You either say 'yes' or run the program again later.

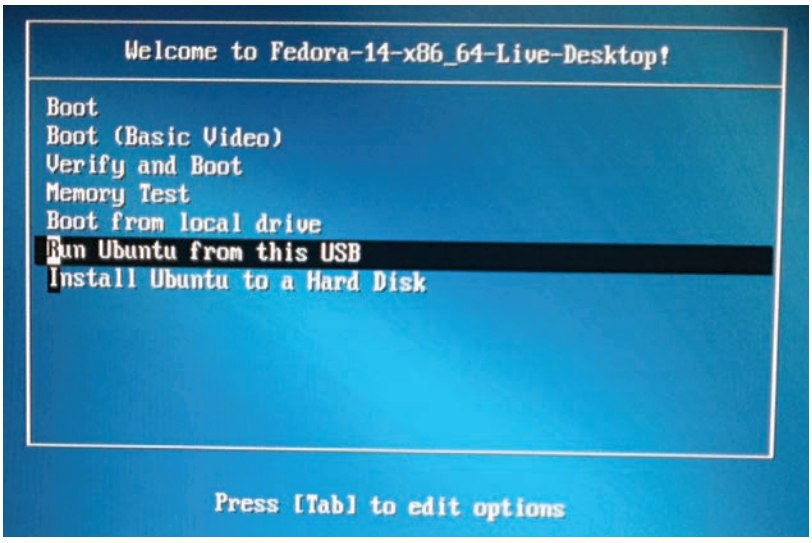
Multibooting Fedora with Ubuntu

First of all, make sure that you have downloaded and installed Fedora's Live USB Creator from tinyurl.com/digit-usbcreator and have YUMI on the system and then do the following:

1. Run YUMI and make the USB drive ready with Ubuntu. This creates all the necessary files on the USB drive that are used for booting Ubuntu.
2. Now, we will enable the USB to boot from Fedora. Launch Fedora's Live USB Creator. To do this, go to `Start > All Programs > LiveUSB Creator`.



Fedora Live USB Creator extracting a live image



Your multiboot menu giving you the option to run Ubuntu

3. Select the Fedora ISO image, choose the version and USB disk drive letter. Remember not to create a persistent storage. This option is acceptable for single booting, but might be a hassle for multibooting.
4. Click on the "Create Live USB" button. After the tool finishes running, your USB drive is ready to boot from Fedora.
5. Enter the USB drive, go to the `syslinux` folder and open the `syslinux.cfg` file. Use a text editor such as Notepad++ to view the contents.
6. Open the file `multiboot\menu\ubuntu1010.cfg`. In this file, you will see entries which appear on the boot menu. There would be a total of two sets of entries, each of four lines which start with the words label, menu label, kernel and append. Copy both sets of these lines and paste them at the end of the `syslinux.cfg` file which you opened earlier.
7. Save the file.
8. You are now ready to multi-boot using the USB!

Select which distro you want to enter, from the menu.

Using this procedure, you can multiboot into other Live Linux distributions that YUMI supports. The trick here is to first configure the USB to boot with distros supported by YUMI. Once you're done, configure the USB to boot with the specific live distros that are not supported by YUMI, using some distro specific tool or UNetBootin. However, you will only be able to use only one such distro. Ultimately, append the entries from the respective CFG files (except Linux.cfg) in the `multiboot\menu` folder into the `syslinux.cfg` file which was created later and you should have a USB ready with multiple Live Linux distros. Remember that if you want to edit the menu entries being displayed, you should edit the lines starting with menu label from the entries that you copy.

Gone are those days when you needed to cart a bulky CD bag full of CDs of different operating systems and reveal a new CD to install a new operating system. Time for such magic shows has warped off. Go ahead and try out all your favourite distros, and configure them on a USB stick. Show your marvellous creation to your friends and then teach them the secret!



CAN YOU READ & WRITE?

If you're interested in a career in technology media, send your CV to editor@thinkdigit.com.

We're looking for:
- Technology Writers
- Test Centre Reviewers
- Freelance Writers



LIFE-LIKE COLORS | LIFE-SIZE SCALE

ASUS Inspiring Innovation • Persistent Perfection

ProArt Series PA246Q • The Most User-Friendly Professional Monitor

7-in-1 Card Reader · USB Hub · Picture-in-Picture · IPS Ultra-Wide Viewing Angle · Adobe RGB · 178° / 178° Wide Viewing Angle · QuickFit Virtual Scale · 4-Way Ergonomic Stand · Color Accuracy ΔE<5

ASUS - No.1 in Quality and Services - The Wall Street Journal Asia

www.asus.in
Toll Free No. 1800-2090-365
For Feedback Email **reachus@asus.com** | Log on to **www.asusservice.com**

First Lucid Hydra board
MSI Big Bang Fuzion board was the first board to support the Lucid Hydra 200 chip

NVIDIA Optimus
NVIDIA Optimus is an optimization technology that switches off the GPU power when not in use and directs the graphics commands to integrated graphics

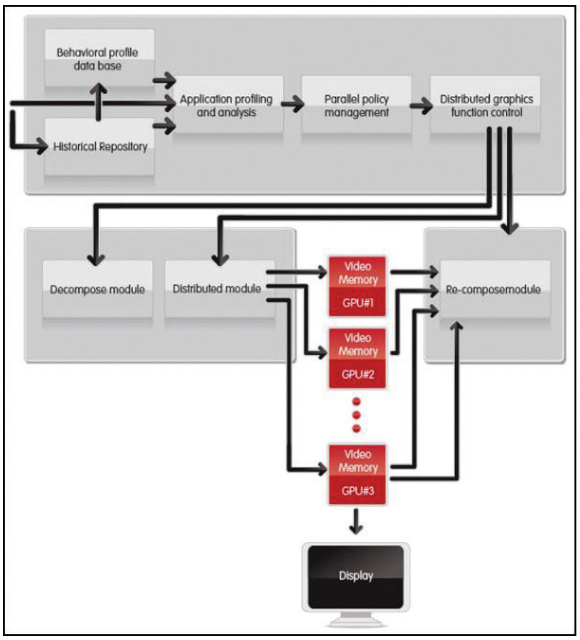
Green and Red Armies UNITE

We get behind the technology of the system that allows you to run an AMD as well as an NVIDIA card off the same motherboard

Nimish Sawant
nimish.sawant@thinkdigit.com

Gaming enthusiasts have always tried to crank up their game settings to get the most out of their games. Some of them even run a multi-GPU set up to see the scaling in frame rates. NVIDIA's Scalable Link Interface (SLI) and AMD's CrossfireX technology allows you to combine the power of two similarly specced cards, with Crossfire allowing you to use two different cards. The rivalry between these two companies has ensured that these technologies work on certain motherboards which support them. For instance, AMD chipsets do not support SLI out of the box, you have to find hacks to force SLI on motherboards with AMD chipsets. With such politics behind SLI and Crossfire setups, which essentially use their own GPUs, if someone told you that there is a company which allows you to run an AMD card and an NVIDIA card on the same motherboard, you will most likely be taken aback.

Lucid Logix is the name of the firm that first proposed a technology which allows a user to use multiple GPU set up in a variety of combinations including running an AMD and NVIDIA card alongside each other on the same board. Lucid is an Israeli company which first showcased its Hydra Engine technology in September 2008 at the Intel Developers Forum. Back then, they demonstrated SLI on two different NVIDIA cards. The product has evolved and the latest Lucid Hydra 200 chip found on motherboards today, can support AMD and NVIDIA cards on the same board.



Block diagram of the Lucid Hydra chip showing breaking up of tasks and assignment to different GPUs

How multi-GPU works?

Before jumping to how the Hydra technology works, a quick primer on the method in which SLI and Crossfire works.

Split Frame Rendering (SFR) : In this technique a frame is broken into two halves, with each GPU working on one half. In the end the two frames get combined to form one frame. In a Crossfire setup, dynamic load balancing is enabled in case of a set up involving two different cards (one faster, the other slower but from the same series). While load balancing, the faster card has to render a larger portion of the screen than the slower card, such that a frame is rendered at the same time irrespective of the speed of the card.

Alternate Frame Rendering (AFR): A more popular frame rendering technique used by both AMD and NVIDIA in which each GPU handles one complete frame. The catch being that one GPU works on the odd frame while the other works on the even frame.

Supertiling: This technique used in the Crossfire setup where in the entire frame is divided into 32x32 pixel blocks called Tiles, and each card handles a portion of the total available tiles. As Crossfire allows use of two cards from the same series, load balancing is used in this. Load balancing ensures that the card with a faster processor gets more tiles to render than the slower card.

FIVE MODES OF LUCID HYDRA

Mode	Exclusive to LucidLogix	Example config
N-mode (identical NVIDIA cards)	No	GeForce GTX 285 / GeForce GTX 285
N-mode (non identical NVIDIA cards)	Yes	GeForce GTX 285 / GeForce GTX 260
A-mode (identical AMD cards)	No	Radeon HD 5870 / Radeon HD 5870
A-mode (non identical AMD cards)	Yes	Radeon HD 4870 / Radeon HD 5870
X-mode (cards from different manufacturers)	Yes	GeForce GTX 285 / Radeon HD 5870

SLI Anti Aliasing or Super Anti Aliasing mode: This mode increases the image quality of the game rather than the performance. It can allow you to crank up your anti-aliasing modes all the way upto 32x.

You also need a bridge connector to combine two cards in SLI or Crossfire with the video coming out of one card, after it has used the processing power of both cards.

Lucid Hydra chip

The Lucid 200 series (comprising three chips) is an application specific integrated circuit (ASIC) built on a 65nm process and consumes under 10W of power thus requiring no heatsink. The ASIC connects to the NorthBridge or directly to the CPU (in case of Sandy Bridge processors) via one x16 upstream port. The downstream port which connects to the PCIe x16 lanes in three combinations – two x16 (for dual GPU), one x16 and two x8 (for triple GPU) and four x8 (for four GPUs). The Hydra chip comprises a 300MHz internal RISC processor having a 64KB instruction cache and 32KB data cache, a DMA engine and has high bandwidth switching capabilities.

Software and Hardware presence

The Hydra engine comes with a driver which rests between the OpenGL or DirectX architecture and the GPU vendor driver. It is compatible with DirectX 9, 10.1 and 11. This allows it to intercept calls from the game or application to DirectX before the information is passed onto the AMD or NVIDIA drivers. This allows the engine to break up the information into jobs called 'tasks'. The definition of task is not fixed and can change based on the information being sent. It can be anything like a special lighting effect, a 3D object, a specific object in the scene, etc. These tasks are sent over the PCI Express bus to the Hydra chip which quickly processes and splits the tasks between the installed GPUs.

Thus, on the chip level it is lodged on the motherboard between the CPU and the card and can communicate via the PCI Express bus and at the driver level it is placed between Windows direct driver interface and the vendor driver. So in a way, it does not communicate with the AMD or NVIDIA drivers at the software level or with the GPUs at the hardware level, thus making it driver and GPU agnostic.

After the assigned tasks to the GPUs are completed, they are returned to the interop layer. This layer composites the frames from the different GPUs and then sends it to the GPU which is attached to the display.

The Hydra engine intelligently divides the rendering workload by intercepting the DirectX calls from the game to the graphic cards unlike the present day multi GPU technology where the task is simply broken down based on the type of rendering ie. Alternate frame rendering or Split frame rendering.

As Hydra allows multiple GPU setup of cards having different processing powers, the load has to be divided smartly so that there is no micro-stuttering in the final output. Micro-stutter is a phenomenon that occurs in multi GPU set ups when there is a lag between the output of the two GPUs. It reduces the performance (ie. lesser frame rates). In a set up involving two cards having different core clocks, it is pointless to have both cards working on the same task, as the output of the card with a higher clock will be faster. This is where load balancing comes into play.

The Hydra driver tries to recognise the GPUs in the system and get a rough idea of its processing power. If a GPU takes longer than expected to complete a particular task, then the Hydra engine will send more tasks to the less loaded GPUs. This updation of the allotment of tasks happens as the game is running. It incorporates a feedback mechanism which determines the performance of the installed graphic cards and balances the loads between them accordingly.

GPU Virtualization using Lucid Virtu

Intel's Sandy Bridge processors left many of us impressed with its Quick Sync Video technology which allows you to transcode videos at unprecedented speed. But at the same time Intel's implementation of the QSV on the motherboards irked many enthusiasts. For starters, owners of P67 boards (which allows overclocking the K-series Sandy Bridge processors) had no access to the processor graphics whereas H67 board users could take advantage of the Intel HD graphics but could not overclock the processor. For those able to use QSV on an H67 board, there was another shortcoming - it will not work if you have discrete card on your motherboard. Although Intel has announced the Z68 chipset which will allow you to overclock your processor and use the Intel HD graphics, the moment you add in a graphics card, you cannot use Intel HD graphics.
Lucid's Virtu is a GPU Virtualization software that works quite similarly to the Lucid Hydra Chip. Virtu allows a user to use an H6x or Z68 chipset along with a discrete graphics card. The video out is taken from the motherboard and not from the graphics card. Just like Hydra, Virtu will intercept API calls and pass it to the GPU based on the application. While gaming, the output will be sent to the card, whereas while video transcoding the Intel HD graphics takes over. Since the tasks are pre-defined, the need to balance the load between Intel HD graphics and the discrete graphics solution does not arise.

LIMITATIONS OF LUCID HYDRA

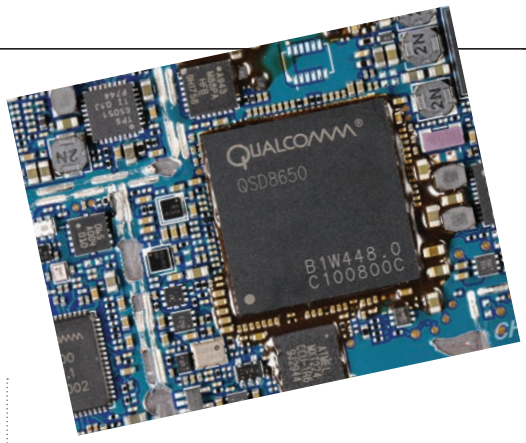
This technology does come with its set of limitations:

1. This will work only with Windows Vista and Windows 7. So XP users will have to upgrade their operating system. Also, if you plan to run AMD and NVIDIA cards then the OS will have to be Windows 7 as that is the only OS which supports multiple graphic drivers running concurrently.
2. Dual GPU products like the Radeon HD 5970 and GeForce GTX 295 are not supported as their internal PCIe switch is not compatible with Hydra 200 chip.
3. The Lucid Hydra technology supports a limited number of games as compared to vendor specific multi GPU set ups. This number varies depending upon the mode of operation of the Hydra chip.

Incredible S
HTC launches Incredible S an Android phone in India, which will soon receive a Gingerbread update

Chrome gets new face
Google chrome is getting a new icon which embodies the Chrome Spirit

Inside your phone



ARM and System-on-a-Chip (SoC) is where the action currently is. We take a look at the players and what they're offering, and the game itself...

Michael Browne
michael.browne@thinkdigit.com

This year promises to be a rich one for mobile processing. For while the 1 GHz barrier was crossed back in 2008, the future promises more cores, higher clock speeds, and best of all – at no loss to battery life. ARM is by far the most preferred platform till date.

The big players that are making waves in the SoC (System-on-a-Chip) arena are Qualcomm, Samsung, NVIDIA, Texas Instruments, Apple, ST-Ericsson. There are a few others as well such as Broadcom, Fujitsu, Infineon Technologies, Sharp, Cirrus Logic, to name a few, but we'll focus on the active ones.

Qualcomm: Snapdragon

One of the most widespread SoC *(plural: Systems-on-a-Chip)* is the "Snapdragon", which is Qualcomms codename for a family of SoC designs. These SoC are divided into generations in order to differentiate. Their Scorpion CPU is home grown, but based roughly on the ARM Cortex-A8. The Adreno GPU inside this SoC is made by Qualcomm, but courtesy Imageon, which was AMDs mobile graphics division, that Qualcoom bought off.

The second generation of Snapdragons are made on a 45nm process and have an improved graphics subsystem that is supposed to be three times more powerful than its predecessor, and this SoC is claimed to consume 33 per cent less power.

The third generation of Snapdragon SoCs feature the Adreno 220, a graphics part that is three times more powerful than the Adreno 205. Additionally, this SoC can be a dual core part, meaning two Scorpion cores. Evidently, dual core designs consume less power if applications are coded to take advantage of multiple threads.

The fourth generation of Qualcomm's Snapdragon SoC has just been announced and is built around a 28nm fab. Qualcomm is going with a new CPU called Krait, although details of the architecture are scarce. Out of order (OoO) execution is supported, and these SoC will be primarily dual core, although single and quad core variants are available too. The 3xx series of Adreno GPUs also warrant mention, for Qualcomm is claiming similar processing power as the XBOX 360 and PS3.

Qualcomm has ditched the QSD moniker for marketing reasons, and now cellphone SoC will be called MSM, while for tablets, the APQ designation will be used.

At the moment, Qualcomm is about the most preferred SoC vendor in the market, additionally, they are the only certified SoC manufacturer for Windows Phone 7, although this might change pretty soon.

NVIDIA: Tegra, Tegra 2

NVIDIA's SoC started off with their Tegra chip, which wasn't too hot, but it served as the precursor to Tegra 2, which is definitely creating waves.

Tegra was based around a single core ARM 11 design and wasn't scalable. As a result, it didn't do too well. At around the same time NVIDIA was taking a beating

Year	2008	2009				2010		
SoC name	Snapdragon (1st Gen)	Tegra	Snapdragon (2nd Gen)	Hummingbird	OMAP3	Tegra 2	OMAP4	
Company Name	Qualcomm	NVIDIA	Qualcomm	Samsung	Texas Instruments	NVIDIA	Texas Instruments	
Instruction set	ARMv7a	ARMv7A	ARMv7a	ARMv7a	ARMv7a	ARMv7A	ARMv7a	
CPU codename	Scorpion	ARM 11	Scorpion	Hummingbird	ARM Cortex-A8	Tegra 2	Cortex-A9	
CPU architecture	ARM Cortex-A8	ARM 11	ARM Cortex-A8	ARM Cortex-A8	ARM Cortex-A8	ARM Cortex-A9	Cortex-A9	
No. of Cores	1	2	1	1	1	1, 2	2	
CPU clock speeds	up to 1 GHz	600 MHz - 800 MHz	800 MHz - 1.3 GHz	1 GHz	600 MHz - 1.2 GHz	Up to 1.2 GHz	1 GHz - 1.5 GHz	
GPU	Adreno 200	GeForce ULP	Adreno 205	PowerVR SGX535/540	PowerVR SGX530	8 core GeForce ULP	PowerVR SGX540	
Common SoC model numbers	QSD8250, QSD8650	Tegra APX 2500 / 2600, Tegra 650/600	QSD 8250A / 8650A, MSM 7230 / 8255 / 8655	S5PC110, S5PC100	OMAP 3410/ 3430 / 3440 / 3630 / 3640	Tegra 250, Tegra 250 3D,	OMAP4430, OMAP4440	
Cellphones based on this SoC	Dell Venue Pro, Acer Liquid, HTC HD7, HTC Desire, Google Nexus One, Sony Ericsson X10i, HTC Evo 4G	Microsoft Zune	HTC Desire Z, HTC Evo Shift 4G, HTC Desire HD, Sony Ericsson XPERIA Duo, Sony Ericsson XPERIA Arc	Samsung Galaxy S, Samsung Wave, Google Nexus S, iPhone 4 (modified slightly)	Motorola Flipout, Charm, Milestone, XT720, Defy, Droid X, Nokia N900, Palm Pre, Samsung i8910, i9003	LG Optimus 2x, Motorola Atrix 4G	-	
Tablets based on this SoC	Dell Streak	Mobinova Elan	-	Apple iPad (modified A4 core)	Beagle Board, Touch Book, Pandora	Samsung Galaxy Tab 10.1, ASUS Slider, Notion Ink Adam Tablet	RIM Blackberry Playbook, PandaBoard, LG Optimus 3D	
Interesting facts	The first SoC that powered capacitive touch devices and made a name for itself, and it is one that continues to power devices even today	Tegra wasn't the hit NVIDIA wanted it to be, but it got them started on the SoC road, from where they haven't looked back	Better performance at no loss in battery life is the selling point here	Samsung's first SoC was a hit, unlike NVIDIA and some of the best selling Android phones, including the Galaxy S are based on it	The OMAP3 has the most number of SoC models within the family, with some 9 variants. It has seen extensive use with Motorola-based handsets	One of the more exciting SoC around, the Tegra 2 is all set to make a splash later in 2011 as more and more devices come in	Another powerful SoC that hasn't seen a lot of takers, but we're hoping that changes for with the A9 design, TI potentially has a winner on their hands	

in the desktop graphics arena from AMD who beat them to market with DX 11 parts. NVIDIA fought back with the GTX 460 and later, the 5xx series, at around the same time Tegra 2 happened. This SoC follows the nomenclature of Txx (xx being a number) for tablets, and APxx for phones.

NVIDIA's strength lies in the GPU domain, and while the Cortex-A9 is the architecture to beat at the moment, the GPU in the Tegra 250 is around 50-60 per cent faster than the Snapdragon Adreno 205. It is also a lot more powerful than the PowerVR SGX 540 GPU, which Samsung and Apple use.



The LG Optimus 2x running NVIDIA Tegra 2 hardware

At CES 2011, NVIDIA announced an SoC codenamed Kal-El (Superman's birth name). Kal-El will be built on TSMC's proven 40nm fabrication process. A 12-core GPU is also on the cards, which NVIDIA claims will be five times more powerful than the GeForce ULP on the Tegra 2. This SoC will be capable of Blu-Ray playback as well as native 1080p HD content, and resolution support is up to 2560 x 1600 pixels – overkill perhaps, but at no loss to battery life it will be fantastic.

A month later, at the MWC another SoC called "Wayne" was announced. This time on a 28nm fab process. The GPU is claimed to be 12 times more powerful than Tegra 2. Two other SoCs were announced, but other than their obvious superhero-inspired names (Logan and Stark), not much else is known, except that NVIDIA claims 75 times better performance from Stark, when compared to Tegra 2.

Samsung (and Apple): Hummingbird, A4, A5 and Orion

Samsung manufactures Apple's SoC, and the A4 and A5 chips are Samsung made. These are loosely based on Samsung's own SoC called Hummingbird. Samsung made these chips with the help of a small company called Intrinsity. The Hummingbird includes ARM's own SIMD engine, called ARM NEON.

This SoC contains the PowerVR SGX535, which is a powerful gaming platform, as seen in the iPhone 4. While the Adreno 205 is rumoured to be slightly more powerful, Apple definitely has a vast ecosystem of optimised games. The Hummingbird/A4 SoC does not contain RAM to keep its cost down. Additionally there is no baseband unit – Qualcomm integrates this component.

At the MWC Samsung launched their Galaxy S2, a smartphone based on an SoC called Exynos, which was earlier called Orion. ARM's NEON is once again part of the package, and this time GPS is integrated. The Mali 400 GPU in this SoC is an ARM design, and a product of ARM's fledgling graphics division, although it is an older GPU.



The much awaited Samsung Galaxy S2, featuring the new Samsung Exynos SoC, 1 GB of RAM, and ARM's Mali 400 GPU

Apple also recently launched the iPad 2, based on the A5 SoC, which is basically a slightly modified Exynos.

Samsung is also working with NVIDIA, obviously to strengthen the graphics portion of their SoC. These two might also team up for smartphones, a move Samsung is more keen on. Exynos with GeForce graphics (if it happens) should be a killer performance package.

Texas Instruments: OMAP

TI calls their SoC family OMAP, that stands for Open Multimedia Application Platform. There are three main families of SoC for smartphones - OMAP 3, OMAP

		2011				2012		
	U8500	Snapdragon (3rd Gen)	A9600/A9500/A9450	Exynos (formerly Orion)	Kal-El	4th Gen Snapdragon	OMAP 5	Wayne
	ST-Ericsson	Qualcomm	ST-Ericsson	Samsung	NVIDIA	Qualcomm	Texas Instruments	NVIDIA
	ARMv7a	ARMv7a	ARMv7a	ARMv7a	ARMv7a	ARMv7a	ARMv7a	ARMv7a
	Cortex-A9	Scorpion	-	Exynos	Cortex-A9	Krait	-	-
	Cortex-A9	ARM Cortex-A8	ARM Cortex-A9 / A15	ARM Cortex-A9	Cortex-A9	Unknown	ARM Cortex-A15 / M4	ARM Cortex-A15
	2	1, 2	2, 4	2	2, 4	1, 2, 4	4	4
	1.2 GHz	1.2 GHz - 1.5 GHz	1.2 GHz - 2.5 GHz	1 GHz and above	1.5 GHz and above	Up to 2.5 GHz (lower clock speeds unknown)	2 GHz	not known
	ARM MALI 400	Adreno 220	ARM Mali 400, PowerVR 6 series (codenamed "Rouge")	ARM MALI 400	12 core GeForce ULP	Adreno 305, 320	PowerVR SGX544MP	GeForce ULP (details unknown)
	U8500, U5500	MSM8260, MSM8660, APQ8060	A9600, A9500, A9450	Exynos 4210	not yet announced	APQ8064, MSM8960, MSM8930	OMAP 5430, 5432	-
	-		-	Samsung Galaxy S2	-	-	-	-
	-	HP Touchpad, ASUS Eee Pad MeMo	-	Apple iPad 2.0 (modified A5 core)	-	-	-	-
	This SoC would be the dark horse, for while it has no takers currently, we could see Nokia using it to build an army of WP7 devices	There hasn't been a lot of devices on this SoC as of now, probably because cellphones are yet to fully utilise dual cores	The A9600 is Cortex-A15 based, and should be seen in action on tablets. The A9500 is a product aimed at cellphones, while the A9450 might also go the tablet way, since it features dual core A9s clocked at a hefty 1.8 GHz	We were all awaiting the successor to the Galaxy S, and the S2 was announced using this SoC. Perhaps, that has helped generate more interest in the Exynos	Kal-El could be an iPad killer if eveything works out well for NVIDIA. The problem is going to be getting it into a highly developed device with a worthy interface, and Apple doesn't have much competition as of yet	This is where Qualcomm really starts for focus on graphics and processing power - not much else is known, but with the competition heating up, Qualcomm is expected to pull something special out of the bag	OMAPs entry into the tablet segment with quad cores. The only difference between both SoC is the DDR2 controller on the OMAP5430 and the DDR3 controller on the OMAP5432	Wayne will be the first SoC NVIDIA makes on a 28nm fabrication process, which means power and space savings

Scanners for your shoes
Now its shoe time. Its not a long way that your shoes will also be scanned at the airport for security.

A Mixed Bag
Motorola Atrix is a 4G Android phone which also posses a unique feature of a laptop-shaped dock

4 and the latest OMAP 5. ARM's NEON processor is the media-processing engine, and TI has their own programmable DSP with support for encoding/decoding and full HD playback. When it comes to DSP, TI has a distinct advantage over other SoC manufacturers with a lot of experience in this realm, particularly in terms of quality.

The OMAP 5 series is a lot more powerful, with support for goodies like 3D video recording, 8 GB of DDR3 memory, and up to 3 USB 2.0 ports and 1 SATA 2.0 controller. This SoC is also intended for tablets and low-power notebooks.

Experts feel that given TIs expertise with hardware decoding and DSP, OMAP4s should be better than other dual-core SoC on related tasks. The main disadvantage for TI is their design doesn't include a baseband modem, necessitating an additional chip. However, they use their own wireless solution, and this module contains FM transmitter, Bluetooth and Wi-Fi. The real question here is, how many vendors will TI garner?

ST-Ericsson

Besides manufacturing SoC, ST-Ericsson is a major player in the wireless platform arena and is the largest provider of baseband modems and other wireless components like Bluetooth and Wi-Fi chips to major handset providers, including Sony Ericsson and even Nokia.

The U8500 is their most prominent SoC, and is based on the Cortex-A9 design. As with other SoC designs – and unlike Snapdragon – baseband modem, Bluetooth, Wi-Fi and GPS functionality on the U8500 is not integrated. ST-Ericsson is currently working hard to ensure their SoC are optimised for Windows Phone 7, and ST-Ericsson has predicted a sudden surge in interest on what is a promising platform – certainly the best MS has come out with by far.

Nokia, (ST-Ericsson's biggest client), will make phones that run WP7, so we're going to see Nokia buying a lot of SoC parts. And here in lies the problem, for Qualcomm is the only SoC vendor who is MS-certified to build SoC for WP7, and they've already got products ready, therefore ST-Ericsson has some catching up to do.

At the MWC 2011 a new SoC called the Nova A9600 was announced, Admittedly, this SoC is for tablets. The GPU is very new, in fact it hasn't been announced yet, and is codenamed "Rouge".

The Nova A9500 is a mid-range SoC, based on a 45nm process. It supports full 1080p HD video decoding, and a camera of up to 20-megapixels. Combined with ST-Ericsson's own Thor M5730 baseband and modem, the combination of application processors and communications modem is being called the NovaThor U9500. Then there is the Nova A9540. This is a 32nm SoC, and boasts of a dual core ARM Cortex-A9 CPU clocked at up to 1.8 GHz. The graphics system is claimed to be four times more powerful than the U8500.

Parameters	ARM Cortex A8	ARM Cortex A9	ARM Cortex A15
Architecture	RISC-based	RISC-based	RISC-based
CPU Speeds	Up to 1.2 GHz	Up to 2 GHz (per core)	Up to 2.5 GHz (per core)
Multiprocessor support	N	Y	Y
Supported no. of CPU cores	1 core	up to 4 cores	up to 8 cores
Instruction set	ARMv7A	ARMv7A	ARMv7A
SoCs based on this architecture	Qualcomm Snapdragon QSD8x50, MSM7x30, MSM8255, TI OMAP 3xxx series, Apple A4, Samsung Hummingbird S5PC100, S5PC110	NVIDIA Tegra 2, TI OMAP44x0, ST-Ericsson U9500, U9450, U8500, U5500, Samsung Orion, Apple A5	Qualcomm Snapdragon MSM8270, MSM8960, Texas Instruments OMAP5, Samsung Eagle, ST Ericsson NOVA U9600, NVIDIA Wayne

Intel

While everyone is jumping on to the ARM bandwagon, Intel is choosing to stick with x86, and are using their Atom processor to combat the likes of the ARM Cortex-A9. Intel hopes to use Atom for smartphones and tablets in the near future. Their biggest advantage seems to be their fabrication process, which is probably the most advanced in the world.

Intel's Medfield platfrom will support Android. This is obvious, since Android is open source, and can easily be ported to x86. The uphill task here is garnering support from developers to build software for an x86 version of Android. Medfield will also have support for platforms such as Moblin (MeeGo) and Ubuntu Mobile. We already know Intel's Oak Trail is slated to appear in tablets, by March end this year. Again, Oak Trail is an SoC based on the Atom CPU, and Intel has been spending the last year or so tweaking performance and battery life for Windows 7. While details on Oak Trail's hardware are a bit sketchy, the Z670 Atom processor running at 1.5 GHz or 1.66 GHz could be the CPU, and this platform should handle full HD 1080p content well.

What's next?

ARM seems to be the future. Proof? In January this year, MS announced the next edition of Windows will support ARM as well as x86. Steven Sinofsky, president of the Windows and Windows Live division of MS, said this move "was meant to show the flexibility and resiliency of Windows, through the power of software, and a commitment to world class engineering".

From an inconspicuous component, to spearheading marketing strategy SoC has come a long way. However, fast hardware is no substitute for a good interface, or a usable keypad. Therefore, it's important to get the basics right. We're still performance junkies, of course, but the mobile platform demands more than just dual cores and 1080p HD videos on phones.

The future is visual and interactive computing, and increased convergence is the key. How about being able to download any sort of file on your phone and work on it, then sending to your computer and a speed of 100 MBps? What if, at some point, we could run the same software on all our devices where syncing and switching between devices would be a non-existent chore? Think code reusability.

Imagine your desktop unobtrusively encoding a video file present on your cellphone, while you're lying in bed with it, playing a game. Or your phone instantly translating foreign text on a billboard, captured by its camera, into your language – in real time.

Power deludes is a time-proven adage, and we're hoping marketing hype focuses on improving devices, and not just their underlying hardware. We want to be able to do more on our handhelds and tablets, but we don't want, or for that matter, need, another Gigahertz war.

worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

(MUST READS)

A BIG GOOGLE PROBLEM



Google's Android has 37 patent related disputes against it. That is the most number of law suits against any OS in such a short span of time. The latest one being from Microsoft. How would Google deal with it? Know more on
http://rww.to/eDL0jG



TITANIUM BACKUP FOR ANDROID

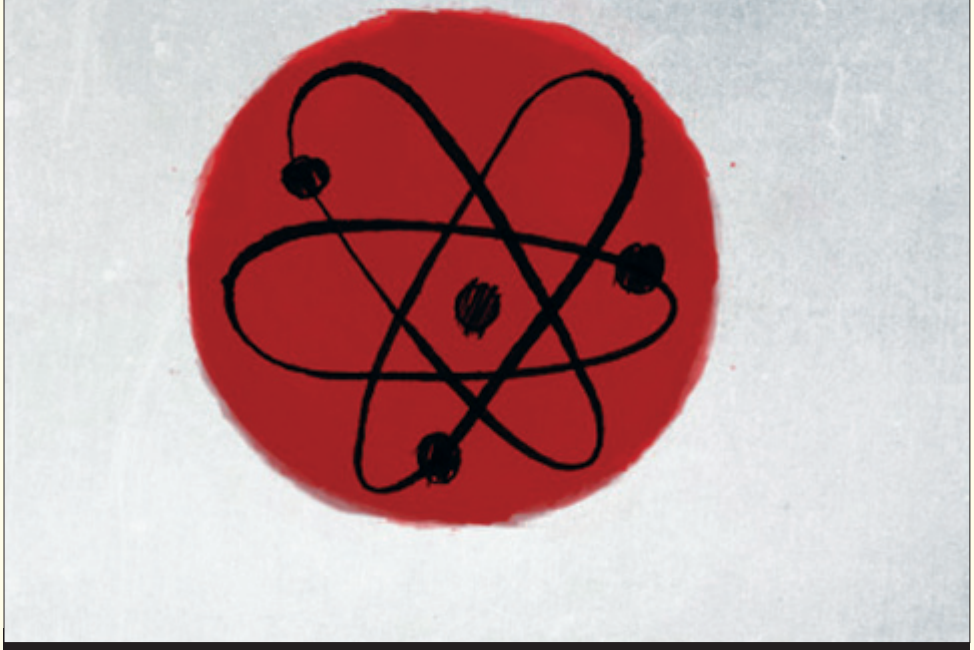
If you thought that saving your Android's settings and apps on the cloud is one hell of a task, then there is some good news for you. Lifehacker's in-depth tutorial would teach you how to create back up of your crucial data.
Learn more on
http://lifehac.kr/ftE38g

IPAD 2 VS MOTOROLA XOOM IN PICTURES

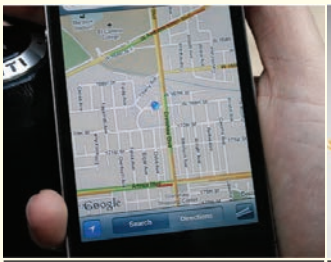
A nice picture comparison between the two tablets showing off specs and accessories in detail. One would emerge as the top tablet, which would it be? Check out
http://bit.ly/hBKJ7X

(ARS Technica Corner)

UNDERSTANDING JAPAN'S NUCLEAR CRISIS



Following the recent earthquake in Japan, controlling the nuclear reactors has been quite a challenge. ARS Technica gives you an in-depth view of the Fukushima Daiichi nuclear reactors.
http://bit.ly/dYxVzF



In-car computing, smartphones, and the future of cars
A good read on how tomorrows car and traffic system will behave. Driven by wireless networks and 4G driving future cars would be a safer and more fun experience. Read more on
http://bit.ly/fAL4DO



Why everyone needs to use HTTPS
An interesting premise on why every website needs to use HTTPS by default. The article lists a number of reasons why this hasn't happened so far and why is it required.
http://bit.ly/i5i5WC



The Linux graphics stack from X to Wayland
ittle did MIT computer scientist Bob Scheifler knew that the X windowing system principles he was about to lay down would create a revolution. Read more on
http://bit.ly/gBN7dn

SHORTS

EDGE RANK

Ever wondered what ticks the news feed feature on your Facebook page? The Edge Rank algorithm is the secret recipe behind it! Read here at http://tcrn.ch/9eSao8 to find more on how Edge Rank works.

FUTURE OF TECHNOLOGY



An interesting infographic on technologies of the future. These are mere predictions and could be slightly incorrect, still interesting though. Find it here http://bit.ly/eKisgs

THE AGE OF RELEVANCE

Tech enthusiasts might often debate about the next big thing after social networking. A shift in paradigm is already taking place where people are moving from social sharing to more personalised, but relevant content seeking. Read more on http://tcrn.ch/gWrTJL

RUSTOCK TAKEDOWN

Rustock, one of the world's most infamous botnet was taken down recently. Apparently the cyber crooks behind it were paying $10,000 per month to the command and control servers in the US before it was knocked out. Read more on. http://bit.ly/eK6lk4

Is There a Cure for Bad Apps?

- By Lance Ulanoff

Apple has pulled the "Gay Cure" app and may target others, but is that really the responsibility of companies running app store?

PCMAG DIGITAL NETWORK
Copyright © 2010 Ziff Davis Publishing Holdings Inc.

Apple, Google, Microsoft, RIM - and even Amazon - are all in the app business. Some much, much more than others. These virtual software stores are considered something of a retail revolution. You can find virtually any kind of software in each of these application repositories: They're like department stores full of products right on your smartphone. They don't sell towels, Tupperware, or toys, but applications are, as we know, incredibly versatile. They can do almost anything, and that's where the trouble begins.

Considering that this is all just software—how much trouble can you really get into with an app? I've heard of disgusting ones, like the Fart App, and products that feature truly objectionable or horrid ideas (one had something to do with shaking a baby). In that way, these app stores are like your local library, which features as many books as possible without much censorship, if any at all. There's great literature and high art and, one shelf over, graphic novels depicting—if you've ever read Watchmen - a stranded pirate using dead shipmates as bloated flotation devices. If you don't want to read this kind of story, then you can walk right by that shelf.

In an app store as large as Apple's (300,000 apps and counting), it's easy to miss most apps—people tend to see the Featured and Popular ones. A search, though, can help you discover apps for all sorts of topics. We learned this week, for example, that all the major app stores, Apple's, RIM's and Google's, feature apps that can help drunk drivers elude DUI checkpoints. U.S. Senators took exception to this and have now called for their removal from all the app stores. It's a noble cause. Drunk driving is a scourge on society. Over a quarter of a million people are injured in drunk-driving accidents each year and some 13,000 die. No one should be evading DUI checkpoints—they might want to avoid the liquor store, though—is there an app for that?

This isn't the first, nor will it be the last, questionable app category. Apple, which has both the largest and most popular app store, has been dealing with questionable apps for years. A booty shaking app was another notable winner of the headline "Most Offensive App Ever." There was the aforementioned Baby Shaker (since pulled) and just this week a Gay Cure App (also pulled). Not every app is so obviously outside the lines of good sense or taste. Earlier this year at CES, I saw a number of apps that turned your phones into speed trap detectors. Run any one of them and you could avoid ticket hot zones while going as fast as you want when the cops aren't looking. This would seem to encourage reckless behavior, yet I don't remember anyone getting particularly upset about their existence.

Sometimes it's not the content of the apps that's the problem, but what's lurking underneath the surface. Last month Google reached out and pulled Android apps not only from the store, but directly off Android users' phones to protect them from malware-carrying apps. Apparently these products would do one thing on the surface while trying to secretly steal your personal info, but only got fairly useless device identifying codes.

Consumers were not only shocked at what Google found, but the way in which it took action. As most people know, Apple's App Store is one of the most tightly controlled product markets around. Apple vets each and every one of the apps and the approval process can be arduous. Most assumed that the Android Market was a bit more like the wild west. There isn't really a vetting process. Google's Android Developers guide counsel much testing, but if you follow the guidelines, including obtaining a "suitable cryptographic key", you can publish the app and then offer it in the Android Market or even from your own Web servers. So it came as quite a surprise that Google could somehow identify and nuke specific apps right off anyone's phone. On the other hand, they were acting in consumers' best interests.

I am glad Google saved consumers from themselves by removing malware-infested apps, and I applaud Apple's decision to stop offering Shaken Baby and, more recently, Gay Cure. On the other hand, this is a very slippery slope. Many people already complain about Apple's often confusing, inconsistent, and seemingly cavalier attitude toward app approval, denial, and removal. Are we saying that this attitude is okay when we agree with the actions? Similarly, doesn't it concern people that Google can reach out and touch any phone running Android?

Microsoft regularly sends system updates

ALIENS EXIST!



According to Richard Hoover, an astrobiologist at NASA extraterrestrial life does exist! Even if you have to use a powerful microscope to view it. In a breakthrough discovery, Hoover studied a rare meteorite called CI1 to find signs of life. Learn more on http://tnw.co/hEHhwy

UBER FAST BATTERY CHARGER

Three Nanotech researchers from the University of Illinois claim to have devised a technique that allows cellphones and laptop batteries to be charged in under two minutes. Wouldn't you just wish to have a charger like that? Now that's what we call super speed! Read more on http://bit.ly/gvEmf0

JAPAN QUAKE INFOGRAPH



All the number and stats from the recent Japan earthquake compiled in an informative infograph. This would give you a clearer view on the amount of loss Japan's suffering because of the Tsunami caused by the quake. http://bit.ly/fu70Z7

to everyone running Windows, but we choose whether or not to install them and no one at Microsoft seems interested in removing products from our machines. If they did start removing client applications, we'd cry foul. But what if Microsoft pulled "scareware"? You know, the anti-malware apps you were tricked into downloading and that only have one real purpose—to harm you and your computer? Microsoft won't do that, but it is applying Apple-like control over the Windows Phone App development process.

Windows Phone developers submit their apps for certification. That process includes verifying "that the application is well-behaved, works for the languages and markets indicated, and does not adversely affect the overall health of the phone." That language is vague enough to give Microsoft a lot of latitude in what it lets through, blocks, or even decides to pull post-publish.

For better or worse, this is the new world of application creation, delivery, and access. Companies like Apple, Microsoft, Google, and RIM are now the gate keepers. They're not perfect, though, Apple has so many products flowing in that Baby Shakers and Gay Cures regularly slip through. Google doesn't have any real checks and balances, but I bet that won't last. Microsoft has just 10,000 Windows Phone apps right now and I suspect a somewhat more manageable flow of new applicants. That may mean they'll have fewer useless and offensive apps, but I bet that will change, too.

The point is, what do we want these companies to do? Provide the seemingly necessary checks and balances to protect our phones, tablets, and even sensibilities? Or do we want consumers to beware and stop downloading bad apps and application developers to build better, more useful and far less objectionable apps?

iPhone 5 will have edge-to-edge screen

Leslie Horn

Although we're probably months away from any type of iPhone 5 announcement, a Chinese site claims to have new pictures of the rumored product.

Engineering images obtained by iDealsChina show iPhone 5 to have a much larger, edge-to-edge screen that covers most of the front of the phone. However, besides the bigger screen, the device looks much like the iPhone 4.

"We just got what appears to be mold engineering drawings for iPhone 5," the site says. "These would be used by case designers to create plastic, TPU, aluminum, silicone, and leather cases. A while back we [heard] rumors that iPhone 5 would have a curved back but these images show iPhone 5 with the same form factor as iPhone 4 but with an edge-to-edge screen."

This statement could debunk the rumors that came out earlier this week that the back design of the next iPhone would be different. Sources said Apple would abandon the current glass back in favor of a metal back that would be similar to the original iPhone. Apple is reportedly nixing the glass back because of frequent scratching and difficulty painting that part of the phone.

Additionally, Apple could be rethinking the external frame that doubled as the iPhone 4's antenna. The external antenna led to a flood of bad press for Apple when it was revealed that holding the phone in a way that covers the antenna, dubbed the "death grip," could interfere with wireless signals. Apple would instead use the Apple logo on the back of the phone to transmit signals.

Whenever product rumors surface, there is always a question of whether or not they are real. But the newest images are in line with shots of an iPhone bezel that were posted on iDealsChina last month. However, MacRumors says that the authenticity of the previous images has been questioned.

There have also been rumors that Apple would unveil different sized iPhones. A Recent leaked image from a Chinese iPhone parts supplier show a slightly bigger, 4-inch screen. The iPhone 4 has a 3.5-inch display. There have also been reports that Apple would produce a smaller iPhone, but The New York Times refuted that claim, and said that the main focus is lowering the price on the phone.





Images from www.idealschina.com



The epic battle between Windows and Mac continues in this funny animated film. Steve Jobs and Bill Gates go head to head using their favourite weapons. Jobs uses an iPhone to defend his Mac empire where as Gates conjures up Masterchief from Halo to fight Apple's boss. To find out who emerges as the winner in the end, watch http://bit.ly/f3144M

DO YOU LIKE THE WORLD VIEW SECTION?

With our new World View section, we're trying to expose you to more international stories and culture. Instead of just a list, we hand-pick the stories we think you'd like. However, in order to ensure that we're doing a good enough job, we'd love to hear your feedback and comments.

IF YOU LIKE, HATE, SKIP OR ABSOLUTELY LOVE THIS SECTION, LET US KNOW.

Send in your feedback to editor@thinkdigit.com

(PRODUCT LAUNCHES)

IPAD 2



The much awaited iPad 2 is now shipping in more than 20 countries. Much thinner than the original one, iPad 2 boasts of enhanced battery life and hosts cool nascent apps like Garageband and Photobooth. Featuring a rear one megapixel and front VGA cameras it shoots videos in HD.

MOTOROLA ATRIX 4G



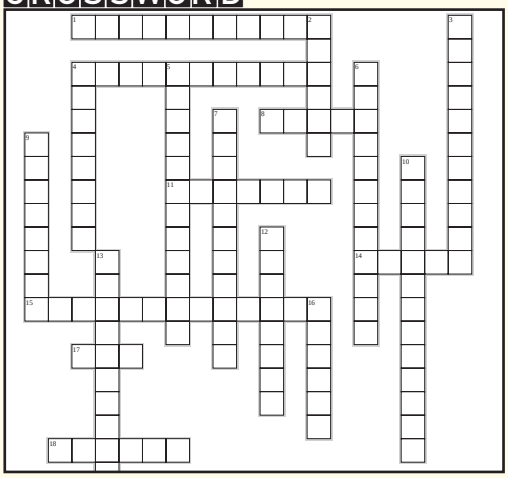
We couldn't help but cover the Motorola Atrix 4G which is due next month. Touted to be the most powerful smartphone when it releases. The Atrix will run Android 2.2, it'll be the first phone to have a 1 GHz NVIDIA Tegra 2 dual core processor.

DELL XPS 15



As the name suggests, Dell XPS 15 has a quad core Sandy Bridge processor. It features a NVIDIA GeForce GT 540M for that extra boost in graphics power, LED display, HDMI and back-lit keyboard. This laptop is pretty much jam-packed with features.

CROSSWORD



ACROSS

1. Famous Internet radio service
4. Run and AMD and NVIDIA off the same motherboard
8. New social networking question board service
11. American video service for on demand
14. Developers of Half Life
15. Yahoo's new search product
17. Code name for Sony's next PSP
18. Amazon's ebook reader

DOWN

2. I'm God of War
3. Razer's concept gaming device
4. Next big game by Rockstar studios
5. Second big game demo in this month's DVDs
6. Protect your iPad 2 with this
7. Main character in HALO
9. New range of 15 inch laptops featuring Sandy bridge processor
10. Motorola Droid uses this display
12. Window's in-built security app
13. Make music with this on the iPad 2
16. Get insights of search terms using this Google service

ABSOLUTE TIMEPASS

Top 3 YouTube Picks

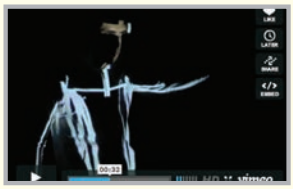
Make sure your boss doesn't catch you goofing off with one of these playing on your screen



http://bit.ly/hwGIRA
Duration: 5 min 33 s
Company behind the Gorilla glass 'Corning' has visualized a very 'glassy' vision for our future.



http://bit.ly/dUFZQ8
Duration: 2 m 41 s
In this funny video from Saturday Night Live, Andy Samberg randomly throws things on the ground! Watch to know why.



http://bit.ly/dLWNCh
Duration: 1 m 18 s
A super cool augmented reality video made by using the Xbox Kinect. You just have to see this one!

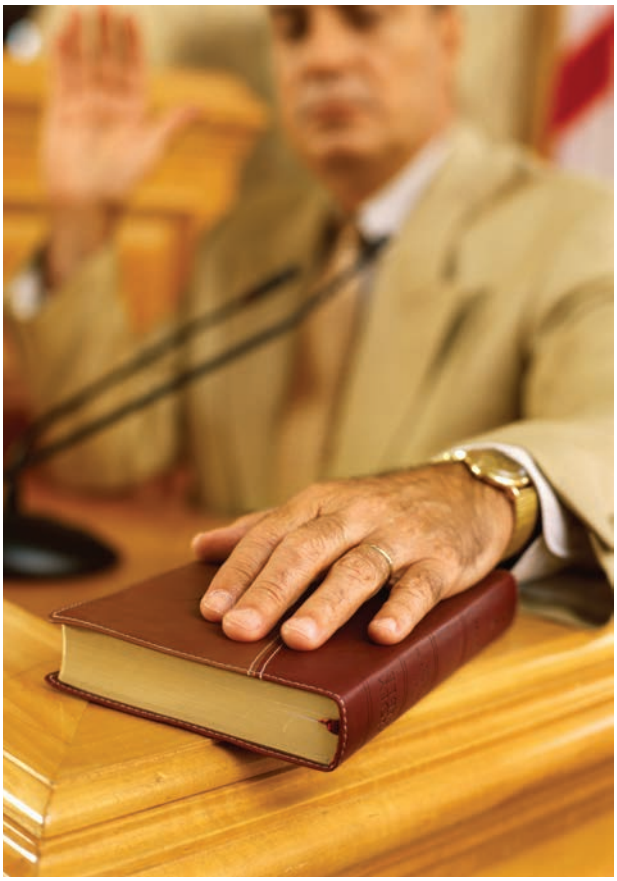
March 15
Consumers International (CI), a world federation of consumer groups has marked March 15 as World Consumer Rights Day

Consumer Connect
The Consumers Association of India (CAI) launched Consumer Connect, enabling consumers to file complaints via mobile phones

A dispute we promote

Pursuing the case for *your* rights as a consumer

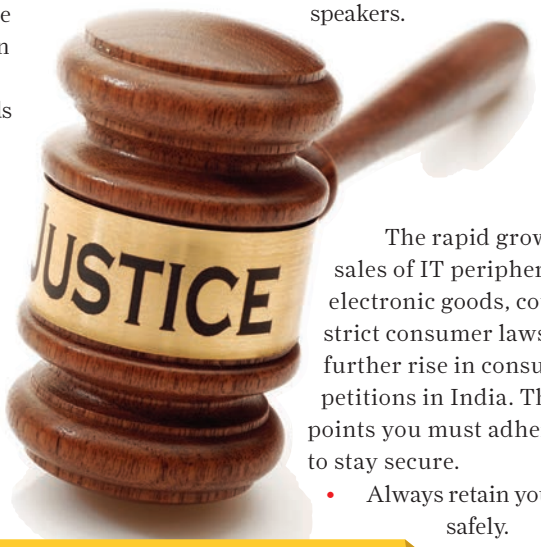
Samanvya Dhar Dwivedi
readersletters@thinkdigit.com



photos.com

It's quite unfortunate that in today's consumer-driven economy, most of us face problems. Be it as vague as mobile phone hanging for no reason, or as specific as delivery of wrong motherboards. It's commonplace for vendors to sell a different product to customers, falsely assuring them of similar performance.

In fact, it is found to be happening more often in product categories such as graphics cards where performance levels vary from one vendor to another despite the same chipset, or in some cases, even processors. It is very easy to misguide naïve customers and sell them a lower clock speed processor considering that processors available today come in several makes and models.



If a consumer has paid hard-earned money, then he/she has a right to get a good, defect-free product. The product must be properly functional. To sum it up, it should do what it is meant to do. It is also the duty of the companies (as well as the seller) to give true information about their products, because the consumer's decision is based on what the company and the seller states (or advertises) about the product. A good example is that of the speaker systems that rate their output in terms of PMPO, which is misleading. RMS ratings are a better indication of the audio level capabilities of speakers.

This content is brought to you by consumer mate BETA www.consumermate.com Expert Buying Advice

We can help!
If you're facing a problem with your purchase, write to us at help@consumermate.com

The rapid growth in the sales of IT peripherals and electronic goods, coupled with strict consumer laws has led to a further rise in consumer rights petitions in India. There are a few points you must adhere to, in order to stay secure.

- Always retain your receipt safely.
- If any warranty/guarantee card comes along, ask the seller to fill it properly.
- Keep monthly bills and receipts of all payments you make safely.
- Report all defects in the product to the manufacturer as well as the seller.
- A written letter should always be given to the company to replace or repair the defective product before filing a consumer complaint. Telephonic conversations or verbal assurances must be avoided.
- Never give original documents to anyone except the consumer forum or court.
- The case must be filed within two years of the occurrence of the problem.

A few reasons for failure in a consumer case include reluctance on the part of the consumer to maintain records or go to the consumer forum when the case was listed. The general defence maintained by companies in most cases are very limited: that the consumer never informed about the defect or the defect is because of product misuse. In fact, most of the disputes are settled by companies much before they go to consumer forum.

The path is finally looking bright in India. There seems to be a lot of changes already in place in terms of law. Consumer forums are meant to support consumers and will do everything to support them. All that is needed from a consumer is the will to stand up for basic rights endowed on them by law. The rest should be left to the consumer forum to decide.

(For details about consumer laws visit: http://www.ncdrc.nic.in/)

Kinect on PS3?
An Indian tech blogger is working on a project to integrate MS Kinect device with a Sony PS3 Console. Check out the video http://bit.ly/i2G3uk

Samsung's display plans
According to a Samsung projection, it will have tablets displays with 300 to 400 pixel-per-inch resolution by 2015

Graphics Card Dilemma



With vendors coming out with a new graphics card practically every week, Agent001 sets out to find out the card that will match your needs

Agent 001
agent001@thinkdigit.com

Graphics cards form part of a rapidly changing product category. Even though only AMD and NVIDIA come out with the main chipsets, there are numerous vendors who keep flooding the market with cards.

A trip to Lamington Road in Mumbai, is enough to overwhelm you with the different varieties of graphics card on offer. So to make matters simpler, I decided to go by the use-case scenarios. It is best to finalise on the chipset you will be needing and then based on the features offered, select the vendor brand. You will also come across cards that are overclocked out of the box.

To cover all the necessary categories in the limited space, with the pricing, I will not be getting into the technical specifications of the cards.

So let the proceedings begin.

HTPC enthusiast cards

Budget: Under ₹4,000

This category of cards is meant purely for providing the extra graphical boost to your system while viewing HD content or transcoding videos or using intensive applications like Photoshop or Maya. Do not fool yourself by expecting to game on these cards. You can get playable rates only if you keep the resolution under 1280x1024 pixels, with all the special effects disabled. Do not spend over ₹4,000 on this category of cards.

From the NVIDIA stable, you have the older generation GeForce 210 (around ₹2,100 to ₹3,000) or newer generation GeForce GT430 (which starts above ₹3,500). You also have AMD HD5450 (₹2,700 to ₹3,000) and the HD 4350 (₹2,000 to ₹3,000).

Mid Range cards

Budget: Between ₹5,000 to ₹10,000

This is where the majority of buying happens, according to my dealer friends at Lamington. Most buyers have a strict budget for gaming cards. And this category of cards offers you great playable rates are very economical pricing. You may not necessarily get a great performance if you crank up all your special effects, but it will allow you to game at a 1080p resolution with good playable frame rates.

The previous generation AMD HD 56xx (₹4,500 to ₹6,000) and 57xx (₹7,500 to ₹9,000) has a strong hold on this segment. NVIDIA has the GTS 450 (₹7,000 to ₹8,000). At the time of going to press NVIDIA had come out with GTX550Ti (pricing around ₹9,000 to ₹10,000). So do wait for its reviews before plunging in to buy a card in this category.



WHO IS AGENT 001?

Get that cloak and dagger ready and come meet Agent 001. Digit is looking for technology writers.

Send your CVs to
editor@thinkdigit.com

High end Cards

Budget: Between ₹10,000 to ₹20,000

In this price bracket, you should expect cards that will allow excellent gaming on cranking up the special effects like Anisotropic filtering or Anti-Aliasing. Chipsets to be considered from NVIDIA are GTX 460, GTX 465, GTX 470 whereas from AMD, HD6850, HD6870, HD5850 provide the most bang for the buck. But the GTX 470 and GTX 480 consume comparitively more power and generate more heat than the HD68xx cards, so you may need a good cooling solution if you are planning to get the GTX 4xx cards. Another interesting addition to this list has to be the GTX 560Ti which comes from ₹15,000 onwards.



Dual- GPU AMD Radeon HD 6990

Ultra High end Cards

Budget: Above ₹20,000

The fastest single GPU card right now is the NVIDIA GTX 580 followed closely by GTX 570. Both are based on the same architecture. AMD's HD6970 does not perform as well but sells around the same price as the GTX 570. The older generation HD58xx series card also fall in this segment. The dual-GPU solution from AMD - the HD 6990 was launched last month is claimed to be faster than its previous generation HD5970. But at the time of going to press, NVIDIA was about to take the lid off its flagship card, most probably the GTX 590, so the battle for the fastest dual-GPU card is still on.

Price wise, the reference GTX 580 retails around ₹30,000 and comes in a range of variants including the overclocked versions. The GTX 570 comes between ₹21,000 to ₹ 28,000. Radeon HD6970 sells for anywhere between ₹22,000 to ₹27,000 depending upon the configuration. The dual-GPU flagship card from AMD is priced around a whopping ₹50,000.

So next time you go graphic card shopping, do follow this method of pinning down your required graphics chipset and then going in for the kill – the vendor selling the card.

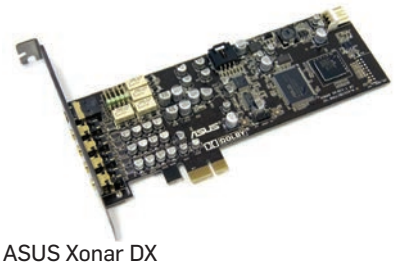
Sound card dilemma

I am looking forward to purchase a professional budget sound card for my multimedia usage.

I have set aside the following cards please help me decide:

ASUS Xonar D2X
ASUS Xonar DX
ASUS Essence STX
ASUS Essence ST

My budget is around ₹9,000. Kindly suggest me the best card for this budget.



ASUS Xonar DX

I am basically going to use this card for a SOHO studio setup and for gaming. I am presently using a Creative Sound Blaster 24-bit on Windows 7 Ultimate. The present setup is a 5.1 which can be upgraded later. At present, I am working on a project in Haridwar (Uttarakhand) but am originally from Mumbai. Please guide me as I have a pending job at hand which demands quality work. Thanks in advance

Prashant Patel

For your setup, the ASUS Xonar D2X or ASUS Xonar DX makes sense. But you might have to stretch your budget a little to accomodate the D2X. Basically the DX is a stripped down version of the D2X.The D2X has extra SPDIF ports, DTS sound, better DAC. So if you are going to exploit all the functionalities then go for the D2X, else if you want to keep it under your budget then go for the DX which is priced around ₹5,000

Sandy Bridge Rig

I want to upgrade just my processor, RAM, motherboard and graphics card. My requirements include gaming with moderate graphics and basically great performance from almost any latest application that I use. My budget is ₹35,000 and I can stretch it max up to ₹40,000. I'm an Intel and NVIDIA person, am particularly looking at the Core i7-2600K based on Digit's review. Motherboard should be of high quality and feature rich. I really liked ASUS P8P67 DELUXE. I want 6 - 8GB DDR3 RAM and Video card must be NVIDIA only with at least 1GB GDDR5 memory and 256-bit bus width. I hope it's not too much to ask given my budget! Please give the prices I should expect for each component. Also what rating PSU would i need?

Siddhant P Pardeshi

Considering you are looking at a Sandy Bridge gaming rig, you will have to stretch your budget. Since you are only looking at a processor, RAM, motherboard, graphics card and a PSU, we would suggest the following rig based on your usage :

Processor : Intel Core i7-2600K (around ₹16,000)
Motherboard : ASUS P8P67 Deluxe (around ₹12,000) / MSI P67A-GD65 (₹10,500)
RAM : 2 x 2GB DDR3 Corsair (1333MHz) (around ₹2,200) (₹4,400 for 8 GB)
Video Card : Sapphire HD 5670 (₹5,500) / Zotac GTS 450 (₹9,000)
PSU : Corsair VX550 : ₹4,800

Gaming Rig

I want to build a gaming rig from scratch. I want to play games like Crysis, Assasins Creed, The Witcher, Far Cry 2, Supreme Commander, etc. My budget is ₹20,000 to ₹25,000. Thanks in advance.

Akash Agarwal

You will have to stretch your budget to around 27k if you want a decent graphics card and a UPS in your rig. The rig specifications are as given below.

Processor : AMD Athlon II X3 440 - ₹3,250
Motherboard : Gigabyte GA-MA785GMT-US2H - ₹3,400
RAM : Corsair 2GB DDR3 1333 MHz - ₹1,125
HDD : 500GB Seagate 7200.12 - ₹1,700
Monitor : Dell 1920IN - ₹5,500
Graphics Card : Sapphire HD 5670- ₹5,500
Cabinet : CM Elite 310 - ₹1,500
PSU : VIP 350W ₹800
Mouse : Logitech M90 - ₹330
Optical Drive : Sony DVD Writer - ₹1,400
Keyboard : Logitech K100 - ₹265
UPS : APC BR600CI-IN - ₹2,165
Total will come to around ₹27,000

Android Phone under 13k

I am planing to buy Android phone around ₹13,000. I was thinking about Samsung Gio. Do suggest some good models. Brand is not a problem as long as it is LG, Sony Ericsson or Samsung. I am ready to wait for a good phone.

Siddhant P Pardeshi

For the budget you have specified, these are the phones available for you. Samsung Galaxy Fit at ₹10,250 is a recently launched phone. It has a 600MHz processor, 3.31 inch capacitive touchscreen, Android 2.2 version (Froyo), 3G and Wi-Fi and a 5 megapixel camera. LG Optimus One P500 at ₹12,000 is another alternative. The Optimus One P500 has a pretty loaded spec sheet- 600MHz processor, 3.2 inch touchscreen, 3 megapixel camera and Android 2.2 (Froyo) version. The LG App Advisor is pre-loaded, and is quite helpful, considering Android Market doesn't have the best interface around. Samsung Galaxy Ace at ₹14,500 is another new launch. It offers a 800MHz processor, 3.5 inch capacitive touchscreen, 5 megapixel camera and Android 2.2 (Froyo) wrapped with the Touchwiz



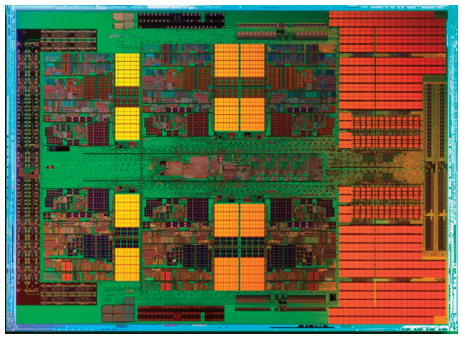
LG Optimus One P500

3.0 User Interface. Samsung has loaded this phone with the SWYPE feature, which lets users type out messages without having to lift the finger and touch every individual button.

digit KILLER RIGS

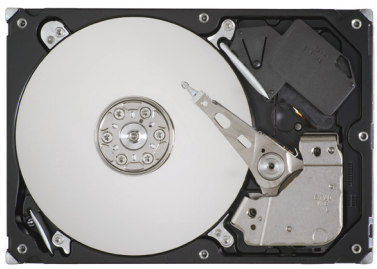
everything you will ever need to build your own PC. whatever your budget.

PRIMARY COMPONENTS



PROCESSOR

- AMD Athlon II X2 250 / ₹2,700
- AMD Athlon II X3 440 / ₹3,250
- AMD Phenom II X4 945 / ₹6,100
- Intel Core i5 760 / ₹10,400
- Intel Core i7 960 / ₹14,800



HARD DRIVE

- 500GB WD Caviar Blue / ₹1,700
- 500GB WD Caviar Blue / ₹1,700
- Seagate Barracuda 1 TB / ₹2,650
- Seagate Barracuda 1 TB / ₹2,650
- Seagate Barracuda 2 TB / ₹4,700

MOTHERBOARD

- ASUS M4A78LT-M LE / ₹2,600
- Gigabyte GA-MA785GMT-US2H / ₹3,400
- MSI 880GMA-E45 / ₹5,400
- MSI P55-GD65 / ₹7,900
- ASUS Sabertooth X58 / ₹12,400



GRAPHICS CARD

- None
- Sapphire HD 5670 / ₹5,500
- Sapphire Radeon HD 6850 / ₹9,850
- ZOTAC GTX 560Ti AMP Edition / ₹17,500
- ASUS GTX 580 / ₹30,000

MONITOR

- Dell 1920IN / ₹5,500
- BenQ G2220HD / ₹7,400
- BenQ G2220HD / ₹7,400
- BenQ G2220HD / ₹7,400
- Dell G2410HD LED / ₹13,500



RAM

- Transcend 2GB DDR3 1333 MHz / ₹1,350
- Corsair 2x2GB DDR3 1333 MHz / ₹2,850
- Corsair 2x2GB DDR3 1333 MHz / ₹2,850
- Corsair 2x2GB DDR3 1333 MHz / ₹2,850
- 3x2 GB Corsair Dominator 1600 MHz / ₹9,200





- **Basic rig = ₹17,440**
- **Multimedia cum gaming rig = ₹31,840**
- **High-end Multimedia / Gaming rig = ₹44,490**
- **High-end gaming PC = ₹65,155**
- **Ultra high-end PC / Gaming rig = ₹1,26,075**

SECONDARY COMPONENTS

CABINET

- Zebronics Bijili w/o SMPS / ₹1,100
- CM Elite 310 / ₹1,500
- CM Elite 430 / ₹2,475
- NZXT Lexa S Mid-Tower / ₹4,920
- Cooler Master HAF912 / ₹5,750



POWER SUPPLY

- VIP 350 Watts / ₹800
- Corsair CX400 / ₹2,800
- Corsair VX450 / ₹3,500
- Corsair VX550 / ₹4,785
- Corsair HX850W / ₹9,600



MOUSE

- Microsoft P58 / ₹375
- Microsoft P58 / ₹375
- Logitech MX518 / ₹1,200
- Logitech MX518 / ₹1,200
- Logitech G9x / ₹4,550





SPEAKER

- None
- Altec Lansing VS2621 / ₹1,750
- Altec Lansing VS2621 / ₹1,750
- Creative Inspire T6160 / ₹3,400
- Creative Inspire T6160 / ₹3,400



OPTICAL DRIVE

- Sony DVD Writer / ₹1,050
- Sony DVD Writer / ₹1,050
- Sony DVD Writer / ₹1,050
- Sony DVD Writer / ₹1,050
- LG 10x Blu ray RW / ₹9,400

SOUND CARD

- None
- None
- None
- None
- ASUS Xonar DX 7.1 / ₹4,775





KEYBOARD

- Logitech K100 / ₹265
- Logitech K100 / ₹265
- Logitech K100 / ₹265
- Microsoft Comfort Curve 2000 / ₹1,100
- Razer Blackwidow / ₹4,000

MISCELLANEOUS



HD MEDIA PLAYERS

- ASUS O!Play Mini / ₹4,400
- WD Live Hub TV / ₹11,775
- Xtreamer Pro / ₹13,000



GAMING HEADSETS

- PlantronicsGameCon 367 / ₹1,705
- Razer Orca 1 / ₹3,395
- Corsair HS1 / ₹4,999



PORTABLE DRIVES

- Transcend StoreJet Mobile 250GB / ₹2,550
- Seagate FreeAgent Go Flex 500GB / ₹3,150
- Iomega eGo 1TB USB 3.0 drive / ₹6,999



MOUSEPAD

- Razer Goliathus / ₹460
- Cooler Master Storm CS-M / ₹850
- Razer Goliathus Fragged Control Edition / ₹999



GAMING CONSOLES

- Sony PlayStation3 (320GB) with Move / ₹24,855
- Xbox 360 (250GB) with Kinect / ₹31,980
- Nintendo Wii Black / ₹18,990



POWER PROTECTION

- APC (BR600CI-IN) / ₹2,165
- Numeric SB1000 / ₹4,700
- APC (BR-1000IN) / ₹5,500

MeeGo on Smart TV
Linux Foundation has announced the formation of MeeGo Smart TV Working Group and has signatories like Nokia, Intel, Sigma Designs, among others

Powered by bitfang.com IT is better here

SPEND SMART

Updated prices of LCD Monitors, Cellphones and External HDDs

LCD Monitors

Brand	Model	Screen size	D-SUB | DVI | HDMI	Price
Acer	V203H	20 in.	Y | N | N	6265
Acer	P196HQL	18.5 in.	N | Y | N	6265
Acer	S191HQL	18.5 in.	Y | Y | N	6530
Acer	T231H	23 in.	N | Y | Y	17655
AOC	1619Sw	16 in.	Y | N | N	4630
AOC	F19S	18.5 in.	Y | Y | Y	5675
AOC	931SN	18.5 in.	Y | N | N	5725
AOC	e2043Fs	20 in.	Y | N | N	6955
AOC	2236Vw	22 in.	Y | Y | N	8080
AOC	V19+	19 in.	Y | N | Y	8350
AOC	V22+	22 in.	Y | N | Y	9740
AOC	V22t	22 in.	N | N | Y	11775
AOC	V24t	24 in.	N | N | Y	13880
Asus	VH162DE	15.6 in.	Y | N | N	4550
Asus	VB175D	17 in.	Y | N | N	6020
Asus	VH197D	18.5 in.	Y | N | N	6050
Asus	VH202D	20 in.	Y | N | N	6795
Asus	VW227D	21.5 in.	Y | N | N	7895
Asus	PW191BK	19 in.	Y | Y | N	8350
Asus	MS202D	20 in.	Y | N | N	9070
Asus	MS202N	20 in.	Y | Y | N	9070
Asus	MS246H	23.6 in.	Y | Y | Y	11345
Asus	MS238H	23 in.	Y | Y | Y	13510
Asus	VH242H	23.6 in.	Y | Y | Y	15680
Asus	VK266H	25.5 in.	Y | Y | Y	26190
Asus	VG236H	23 in.	N | Y | Y	29000
BenQ	G610HDA	15.6 in.	Y | N | N	4605
BenQ	G610HDAL	15.6 in.	Y | N | N	4710
BenQ	V920	18.5 in.	Y | Y | N	6955
BenQ	GL2030	20 in.	Y | Y | N	7065
BenQ	G2222HDL	21.5 in.	Y | Y | N	9310
BenQ	V2210	21.5 in.	Y | N | Y	10060
BenQ	G2420HD	24 in.	Y | Y | Y	12415
BenQ	V2410	24 in.	Y | N | Y	14985
BenQ	M2400	24 in.	Y | Y | Y	16695
BenQ	V2400 ECO	24 in.	Y | N | Y	18035
BenQ	V2420H	24 in.	Y | Y | Y	18035
BenQ	M2700HD	27 in.	Y | Y | Y	24720
BENQ	XL2410T	23.6 in.	Y | Y | Y	29535
DELL	U2311H	23 in.	N | Y | N	17655
DELL	U2711	27 in.	N | Y | Y	45475
LG	W1643C	16 in.	Y | N | N	4790
LG	W1943C	18.5 in	Y | Y | Y	6100
LG	W2043T	20 in.	Y | Y | N	6475
LG	E1940S	18.5 in.	Y | N | N	6585
LG	E2040T	20 in.	Y | Y | N	7120
LG	W2243T	21.5 in.	Y | Y | N	8565
LG	E2240T	21.5 in.	Y | Y | N	9740
LG	E2360V	23 in.	Y | Y | Y	13375
LG	M227WA	21.5 in.	Y | Y | Y	13485
Philips	192E2SB2	18.5 in.	N | Y | N	5620
Philips	191EL1SB	19 in.	N | Y | N	5915
Philips	202E1SB	20 in.	N | Y | N	6795
Philips	19S1SB	19 in.	N | Y | N	8240
Philips	241E1SB	24 in.	N | Y | N	11235
Samsung	B1930n	18.5 in.	Y | N | N	6345
Samsung	B2030N	20 in.	Y | Y | Y	6795
Samsung	BX1931N	18.5 in.	Y | N | N	7120
Samsung	B2230N	21.5 in.	Y | Y | Y	9205
Samsung	B2330H	23 in.	Y | Y | Y	11450
Samsung	P2370MS	23 in.	Y | Y | Y	14445
ViewSonic	VX2250WM	22 in.	Y | Y | N	9310
ViewSonic	VX2439wm	24 in.	Y | Y | Y	13805
ViewSonic	VX2268WM	22 in.	N | Y | N	24240
ViewSonic	VX2739wm	27 in.	Y | Y | Y	25040

Yahoo Search Direct

Search Direct is Yahoo's answer to Google Instant. Good for Yahoo, but isn't it too late now?

Powered by bitfang.com IT is better here

External HDD

Brand	Model	Capacity	Market Price
Buffalo	HD-PV320U2/BK	320 GB	2515
Buffalo	HD-PET320U2/B	320 GB	2675
Buffalo	HD-PET320U2/W	320 GB	2675
Buffalo	HD-PET320U2/R	320 GB	2675
Buffalo	HD-PET320U2/P	320 GB	2675
Buffalo	HD-PET320U2/L	320 GB	2675
Buffalo	HD-PV500U2/BK	500 GB	3160
Buffalo	HD-PXT320U2/B	320 GB	3160
Buffalo	HD-PXT320U2/W	320 GB	3160
Buffalo	HD-PXT320U2/R	320 GB	3160
Buffalo	HD-PXT500U2/B	500 GB	3960
Buffalo	HD-PXT500U2/W	500 GB	3960
Buffalo	HD-PXT500U2/R	500 GB	3960
Buffalo	HD-PXT1TU2/B	1 TB	5885
HITACHI	HDD-X250	250 GB	2410
HITACHI	HDD-X320	320 GB	2650
HITACHI	HDD-X500	500 GB	3320
Hitachi	0S02484	1 TB	3640
Hitachi	0S02485	2 TB	6210
Iomega	34670	320 GB	2945
Iomega	34625	320 GB	3055
Iomega	34709	500 GB	3535
Iomega	35108	500 GB	3585
Iomega	34304	500 GB	3865
Iomega	34708	320 GB	4015
Iomega	34920	1 TB	4070
Iomega	34629	500 GB	4175
Iomega	34928	2 TB	6425
Seagate	STAA320301	320 GB	2970
Seagate	ST902504EXM101-RK	250 GB	3320
Seagate	STAA500302	500 GB	3405
Seagate	STAA500301	500 GB	3480
Seagate	ST310005EXM101-RK	1 TB	3785
Seagate	STAC1000300	1 TB	3890
Seagate	ST905003FGM201-RK	500 GB	4070
Seagate	ST305005FJA105-RK	500 GB	5140
Seagate	STAA1000301	1 TB	5565
Seagate	STAC2000300	2 TB	6475
Seagate	STAA1500300	1.5 TB	9475
Toshiba	E05A032CAU2AK	320 GB	2785
Toshiba	E05A032CAU2AL	320 GB	2840
Toshiba	E05A032CAU2AR	320 GB	2840
Toshiba	E05A050CAU2AK	500 GB	3295
Toshiba	E05A100PBU2AR	1 TB	5245
Toshiba	E05A100PBU2AK	1 TB	5245
Transcend	TS500GSJ25M-R	500 GB	3425
Verbatim	53001	320 GB	2410
Verbatim	62873	500 GB	3235
Verbatim	47512	1 TB	4425
Verbatim	47514	2 TB	6015
Western Digital	WDBAAR2500ABK	250 GB	2465
Western Digital	WDBAAR3200ABK	320 GB	2865
Western Digital	WDBABV5000ABK	500 GB	3160
Western Digital	WDBAAF0010HBK	1 TB	4040
Western Digital	WDBAAF0020HBK	2 TB	5725
Western Digital	WDBAAE5000ASL	500 GB	5985
Western Digital	WDBAAF0015HBK	1.5 TB	6100
Western Digital	WDBAAJ0010HSL	1 TB	6905
Western Digital	WDBAAG0020HCH	2 TB	7455
Western Digital	WDH1NC10000N	1 TB	7875
Western Digital	WDBAAH0020HCH	2 TB	7875
Western Digital	WDH1NC20000	2 TB	9975
Western Digital	WDBAAJ0020HSL	2 TB	10915
Western Digital	WDH2Q20000	2 TB	11025
Western Digital	WDH2Q40000S	4 TB	27285
Western Digital	WDA4NC20000	2 TB	30230
Western Digital	WDA4NC40000	4 TB	41220
Sony	DSC H55	10x	14650
Sony	DSC WX1	5x	14650
Sony	DSC-TX1	4x	15535

Cellphones

Brand	Model	Camera (Primary)	SIM Slots	Price
Acer	liquid e	5.0 MP	Single SIM	17675
Acer	liquid e ferrari	5.0 MP	Single SIM	24750
BlackBerry	Curve 8520	2.0 MP	Single SIM	9990
BlackBerry	9105	3.2 MP	Single SIM	16400
Blackberry	9300 CURVE	2.0 MP	Single SIM	17320
Blackberry	9100 PEARL	3.2 MP	Single SIM	18695
BlackBerry	Bold2 9700	3.1 MP	Single SIM	25245
BlackBerry	Bold 9780	5.0 MP	Single SIM	26180
Blackberry	Torch 9800	5.0 MP	Single SIM	32775
HTC	Wild Fire	5.0 MP	Single SIM	13635
HTC	Desire	5.0 MP	Single SIM	25355
HTC	HD-7	5.0 MP	Single SIM	29190
LG	GM200	2.0 MP	Single SIM	3690
LG	GS290 cookie-fresh	2.0 MP	Single SIM	5810
LG	GD510	3.0 MP	Single SIM	6465
LG	GS500 cookie-plus	3.2 MP	Single SIM	6870
LG	KS660	5.0 MP	Dual SIM	9145
Micromax	X235	CMOS	Dual SIM	2075
Micromax	G4	2.0 MP	Single SIM	2475
Micromax	Q3+	1.3 MP	Dual SIM	3235
Micromax	X600	2.0 MP	Dual SIM	3890
Micromax	X510	2.0 MP	Single SIM	4045
Micromax	Q7	2.0 MP	Dual SIM	4120
Micromax	Q55 Bling	2.0 MP	Dual SIM	4700
Micromax	A60	3.2 MP	Single SIM	6745
Micromax	Modu T	5.0 MP	Single SIM	10105
Motorola	MB502	3.0 MP	Single SIM	13130
Motorola	Milestone	5.0 MP	Single SIM	21820
Nokia	X2	5.0 MP	Single SIM	4855
Nokia	C3	2.0 MP	Single SIM	5830
Nokia	X3	3.2 MP	Single SIM	6545
Nokia	C5	3.2 MP	Single SIM	7310
Nokia	E63	2.0 MP	Single SIM	7890
Nokia	X5	5.0 MP	Single SIM	9140
Nokia	E5	5.0 MP	Single SIM	10200
Nokia	E52	3.2 MP	Single SIM	10585
Nokia	E71	3.1 MP	Single SIM	12990
Nokia	C6	5.0 MP	Single SIM	13135
Nokia	X6 8GB	5.0 MP	Single SIM	13950
Nokia	X6 16GB	5.0 MP	Single SIM	15725
Nokia	E72	5.0 MP	Single SIM	16675
Nokia	C7	8.0 MP	Single SIM	18105
Nokia	N8	12.0 MP	Single SIM	23825
Olive	V-G200	Digital	Dual SIM	2930
Olive	V-G300	Digital	Dual SIM	3235
Olive	V-G400	2.0 MP	Dual SIM	3435
Olive	Wiz V-GC800	2.0 MP	Triple SIM	5205
Samsung	Chat 322	1.3 MP	Dual SIM	4350
Samsung	3653- Corby	2.0 MP	Single SIM	6205
Samsung	3410-plus	2.0 MP	Single SIM	7165
Samsung	Corby TV	2.0 MP	Single SIM	8085
Samsung	B5310	3.0 MP	Single SIM	10095
Samsung	B7320	3.0 MP	Single SIM	11615
Samsung	GT-I5801	3.0 MP	Single SIM	11970
Samsung	B7300	3.0 MP	Single SIM	12625
Samsung	I9000	5.0 MP	Single SIM	28990
Samsung	I8910	8.0 MP	Single SIM	31315
Sony Ericsson	Xperia X10 Mini	5.0 MP	Single SIM	11970
Sony Ericsson	X10 Mini	5.0 MP	Single SIM	12575
Sony Ericsson	Xperia X8	3.2 MP	Single SIM	13085
Sony Ericsson	Xperia X10 Mini Pro	5.0 MP	Single SIM	14095
Sony Ericsson	Vivaz Pro	5.1 MP	Single SIM	21060
Spice	M-67 3D	2.0 MP	Dual SIM	3085
Spice	M-6262	1.3 MP	Dual SIM	3565
Spice	QT-60	2.0 MP	Dual SIM	3790
Spice	M-7070	5.0 MP	Dual SIM	5230
Spice	S-7000	3.2 MP	Single SIM	5555
Spice	MI-300	5.0 MP	Single SIM	10380
Videocon	V1405	Digital	Dual SIM	2725
Videocon	V1425	VGA	Dual SIM	2830
Videocon	V1604-Upto 2GB	2.0 MP	Dual SIM	2930



IT CAREERS @ 9.9MEDIA

Bond with the Best

Top executives and managers, and lakhs of readers around the country trust 9.9 Media to deliver timely, relevant and comprehensive information.

We are seeking experienced software developers to help build and enhance our portfolio of community-focussed web sites (including thinkdigit.com) with the latest features and technologies. Interested? Send us your resume, or refer a friend.

The 9.9 Culture

- We inspire and encourage fresh and innovative ideas.
- We're quick to adopt new and proven technologies and solutions.
- We encourage employees to learn and stay abreast with technology changes
- Our rich and diverse portfolio will expose you to a variety of learning experiences – both B2B and B2C businesses.
- Our clients range from individual end-users of technology to the biggest corporate houses in the world

Vacancies

- Managers
- Web Testers
- Web Designers
- PHP Developers
- Tech Leads

Desired skills

- 4-8 years of relevant experience from a premier institute
- Excellent problem solving skills
- Excellent understanding of web technologies and mechanics
- Expert with the LAMP stack
- PHP, Shell Scripts, SQL
- Should be well-versed with server side design patterns
- Full software product life-cycle experience
- Comfortable with using configuration management tools (version control, continuous integration, etc.)
- System / database administration skills are an added advantage

Rush your CV to

hr@9dot9.in

Intel AppUp℠

As broadband penetration grows, more and more people have started downloading software. Application stores now provide software directly to mobile devices such as mobile phones, tablets, and netbooks.

Until recently, such an app store did not exist for netbooks – which have more in common with content consumption devices such as smartphones and tablets than they do with desktops and laptops. Now netbook users have their own store: the Intel AppUp℠ center, which allows users to browse an online catalog of netbook-optimized applications. Getting started is easy: simply download the store client (which is a small applet that lives on your netbook) and register online — you don't need to provide credit information unless you are downloading paid applications — after which you can search and obtain your netbook applications directly from the Intel AppUp center.

You'll find thousands of applications for just about any purpose – from games and entertainment to finances, and school help to home productivity assistance. Whether you want to work more or play more on your netbook, you can find an application for it on the Intel AppUp center. And more are being added every day!

The best things in life can be free. About 30% of the applications in the Intel AppUp center are free! And all applications are available for a trial period, during which you can download, install, and use any application. If you don't like it, cancel your purchase and you won't be charged for that application. Before adding it to the Intel AppUp center, each application is validated by Intel to work with the operating system of your netbook and is scanned by Intel for known malware, viruses, and spyware.

The Intel AppUp center is your one-stop hub for finding, choosing, downloading, and managing your netbook applications. No need to search the Web when you'll find many of the best applications inside the Intel AppUp center. The Intel AppUp center makes it quick and easy to find applications of interest to you. You can use the quick-sort filters to explore and quickly locate applications that interest you. Applications can be filtered by price, new releases, most popular downloads, Intel staff recommendations, customer ratings, featured lists or pre-defined categories (entertainment, education, lifestyle, photo & video, productivity, etc).

Adult-content rated apps are excluded from the Intel AppUp center. Each application is rated according to age-appropriateness, letting you quickly determine whether it is appropriate for members of your family. Read the customers reviews to be sure an application is right for you. You can purchase an application once and use it on up to five different netbooks for sharing with your friends and family members.

3 MUST HAVE APPS

Shufflr: A social video browser that aggregates videos on chosen topics and lets you share it with friends.

21 Days – habits: This app helps you get rid of old habits and build new ones based on a 21 day chain.

My little artist: A fun app that lets kids paint and create their masterpiece in seconds.

Today's netbooks are lightweight, portable computers targeted for your on-the-go lifestyle. With a display size of 10 inches at a resolution of 1024x600 pixels, and a Webcam and microphone mounted on the lid, netbooks provide both an offline computing experience and the full Web experience, including the viewing of high-definition videos, live chats, gaming, and learning. Wherever you use your new Intel® Atom™ based netbook and whether you use it online or offline—with the Intel AppUp center, you have what you need to play, learn, and be more productive.

Once installed on your netbook, Intel AppUp center knows your operating system and will only show you the applications validated by Intel to work optimally with your operating system and runtime environments. Supported operating systems include Windows* XP, Windows* 7, and MeeGo. Supported runtime environments include Adobe AIR*, Microsoft Silverlight*, and Java*.

The Intel AppUp center automatically notifies you when an update is available, for the center itself or any application installed on your netbook. Like your personal application assistant, the Intel AppUp center manages your personal application archive, automatically tracking which applications you have downloaded onto your netbook and making it easy to install them on up to four more netbooks for you or your family members. You don't need to record or remember any software authorization keys–the Intel AppUp center seamlessly manages your applications for you.

Because your applications are not locked to a specific netbook, if your netbook is lost, stolen, or da aged, you can easily re-install your complete set of applications onto your new netbook.

Intel AppUp center has a great collection of free and paid applications, including such notables as Angry Birds*, PAC_MAN*, Pinball HD*, TweetDeck, Nook for PC, Corel Write, and more. Intel AppUp center brings user centric features and smart management to your netbook. Find out more at www.appup.com. ■



Advertorial

MeeGo
CORNER

Building MeeGo apps with the Qt creator

Rahil Banthia
readersletters@thinkdigit.com

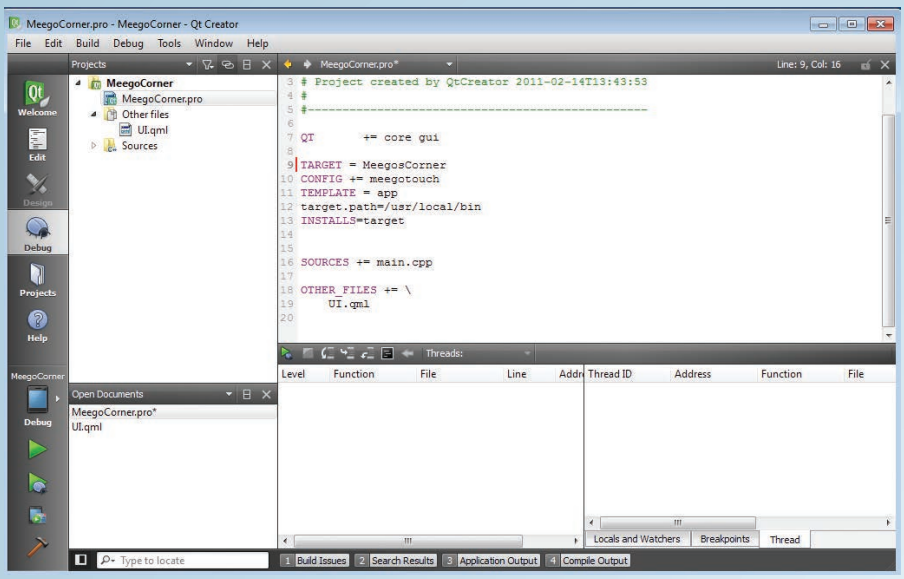
Qt Creator is an integrated development environment (IDE) that provides you with tools to design and develop applications for the Meego platform — from creating a project to deploying the application on the target device. In the last Meego corner, we covered installing and setting up Qt Creator to develop applications for Meego devices.

User Interface

When you start Qt Creator, it enters the Welcome mode, where you can:

- Open tutorials and example projects
- View tips and hints on using Qt Creator
- Create and open projects
- Send feedback to the development team
- Open recent sessions and projects

We will see the different modes of Qt Creator after opening the Hello World project we created in the March 2011 issue of Digit. You can use the mode selector in the left pane to change to another Qt Creator mode. This mode selector allows you to quickly switch between tasks such as editing project and source files, designing application UIs, configuring how projects are built and executed, and debugging your applications. You can use Qt Creator in the following modes:



The Debug mode.



Welcome Mode of Qt Creator

- Edit mode for editing project and source files.
- Design mode for designing and developing application user interfaces. This mode is available for UI files (UI or QML).
- Debug mode for inspecting the state of your program while debugging.
- Projects mode for configuring project building and execution. This mode is available when a project is open.
- Help mode for viewing Qt documentation.

The sidebar, available in the Edit and Debug modes lets you browse projects, files, and bookmarks, and view the class hierarchy.

You can select the content of the sidebar in the sidebar menu:

- Projects shows a list of projects open in the current session.
- Open Documents shows currently open files.
- Bookmarks shows all bookmarks for the current session.
- File System shows all files in the currently selected directory.
- Class View shows the class hierarchy

of the currently open projects.

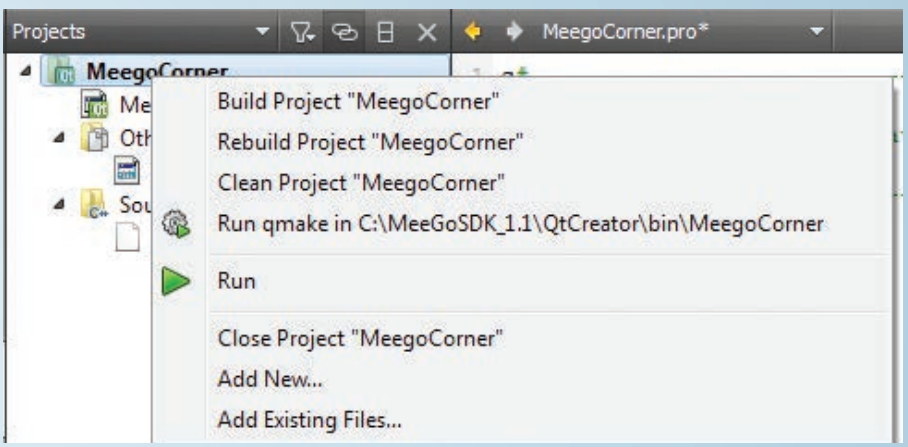
- Outline shows the symbol hierachy of a C++ file and the element hierarchy of a QML file.
- Type Hierarchy shows the base classes of a class.

You can even change the view of the sidebar in the following ways:

- To toggle the sidebar, press `[Alt] + [0]` or click on .
- Select new content to view from the split view. To do this, click on .
- Close the sidebar.

The project tree in the sidebar contains a list of all projects open in the current session. The files for each project are grouped according to their file type. To bring up a context menu containing the actions most commonly needed right-click an item in the project tree.

- Hide the categories and sort project files alphabetically and select Simplify Tree by clicking on .
- To hide source files which are automatically generated by the build system, during a build, click on and select Hide Generated Files.
- Keep the position in the project tree synchronized with the file currently opened in the editor to do this click on .
- To see the absolute path of a file, move the mouse pointer over the file name.
- Keep the position in the tree synchronized with the file opened in the editor. If you cannot see a file in the Projects view, switch to the File System view by clicking on the drop down menu at the top of the Sidebar and clicking on File System. Now you will able to see all the files in the file system to do this click on .



Through the menu of the project root directory you can, among other actions, build, re-build, clean and run the project.

Task Pane

The task pane in Qt Creator can display one of the following panes:

- Build Issues
- Search Results
- Application Output
- Compile Output
- General Messages
- Version Control

Output panes are available in all modes. Click the name of an output pane to open the pane. To maximize an open output pane, click the Maximize Output Pane button or press `Alt+9`.

To search within the Application Output and Compile Output panes, press `Ctrl+F` when the pane is active. Enter search criteria in the Find field and click the left and right arrows to search down and up in the pane.

To open the General Messages and Version Control panes, select `Window > Output Panes`.

The Build Issues pane provides a list of errors and warnings encountered during a build. The pane filters out irrelevant output from the build tools and presents the issues in an organized way. Right-clicking on a line brings up a context menu with options to copy the contents and to show a version control annotation view of the line that causes the error message.

To view task lists in the Build Issues pane, click on and select My Tasks. Entries from a task list file (.tasks) are imported to the pane. Press `[F6]` and `[Shift] + [F6]` to jump from one issue to the next.

The Search Results pane displays the results for global searches, for example, searching within a current document, files on disk, or all projects.

The Application Output pane displays the status of a program when it is executed, and the debug output.

The Compile Output pane provides all output from the compiler. The Compile Output is a more detailed version of information displayed in the Build Issues pane.

Keyboard Navigation in Qt Creator

A wide range of keyboard and navigation shortcuts are available in Qt Creator to help speed up the process of developing your application.

To view the default shortcuts or customize a keyboard shortcut: go to `Tools > Options... > Environment > Keyboard`. You can even import a keyboard shortcut mapping scheme, by clicking on Import and selecting the kms file containing keyboard shortcut mapping scheme you want to import. To export the current keyboard shortcut mapping scheme, click on Export and select the location where you want to save the exported kms file.

Developing Application UI

Qt Quick consists of a rich set of user interface elements, a declarative language for describing user interfaces, and a language runtime. A collection of C++ APIs is used to integrate these high level features with classic Qt applications. You can edit QML code in the code editor or in the integrated Qt Designer which lets you compose and customize your widgets or dialogs and test them using different styles and resolutions. We will show you how to design UI's for your QT applications in next month's Meego Corner.

WIN 8GB Pen Drives preloaded with MeeGo SDK

What is your opinion on SMS and Internet Message (IM) applications?

A They should be separate and independent.

B There should be a combined "Conversations" view which integrates your phone contacts with IM contacts.

C There should be a totally new concept.

SMS DIGIT MEEGO A/B/C to 99200 99200

Advertorial

Let them network...

You can be a successful computer networking professional if you have the right credentials and are prepared to work hard. The competition for high paying quality jobs is really high.

Anoop Verma
readersletters@thinkdigit.com

In addition to the Indian IT think tank NASSCOM, several global entities have expressed the point of view that computer networking is one of the best and "hottest" career fields available today. Many industry leaders believe there already exists a serious dearth of qualified personnel to fill the multitude of networking jobs available in the industry.

Need for networking

Operations in major industries such as banking, retail, manufacturing, biomedicine and defence is constantly changing and becoming more streamlined with the emergence of newer technologies for computer networking.



photos.com

Job description

The most common job titles are Network Administrator, Network (Systems) Engineer, Network (Service) Technician, Network Programmer/Analyst, Network Architect, and Network/Information Systems Manager. A post inviting applications from networking professionals at an IT job portal reads, "Candidate will be responsible for analysis, installation and configuration of company networks. Daily activities include monitoring network performance, troubleshooting problems and maintaining network security..."

Are certifications necessary?

Along with a formal education (preferably in computer sciences), students also need to embellish their resume with some networking-based certifications. These days, the certifications that are most commonly sought by different companies are Microsoft MCSE and Cisco CCNA. Others prefer Novell's CNE or Sun Microsystems' Sun Solaris Administrator. There are hundreds of certifications that a networking professional can go in for.

Even if you opt for the self-study route, you will have to pay the sitting fee, which can range from ₹5,000 to ₹15,000 to take an examination. In cases where the individual is already employed, the employer may reimburse the cost of the certification. However, it is not as is the certification is only thing that is needed to enhance anyone's career prospects, no one can deny the importance of a proper formal education. You also need to embellish your resume with details of actual work experience.

Training

Although a degree or diploma in computer science, electronics or telecommunications is preferred, even non-engineering personnel can enter the field; only thing is that they must possess a good knowledge of computer fundamentals. Many corporates prefer to hire individuals who have done a four-year degree course, and also have the right kind of global certification. Several coaching institutes in India train students popular certifications such as MCSE and CCNA.

Currently, CDAC (Centre for Development of Advanced Computing) Hyderabad offers a 22-week course called CNSS (Certificate course on Networking and System Security). The course is designed in such a way that working individuals can also participate. In order to be eligible for the course, you must have an Engineering Degree in Electronics / Electrical / Communications / Instrumentation / Computer Science / Information Technology. Those who have done M.Sc. Electronics / Computer Sciences or M.C.A. or Diploma / B.Sc. in Electronics / Computer Science with 2 years of experience in the relevant field are also eligible. Applicants have to take an entrance test before they can enrol into the CNSS course. The total course fee is ₹45,000. Other CDAC centres around the country offer other kinds of courses in computer networking.

Popular institutions such as NIIT, Aptech and others provide a range of options. Aptech has come up with a program going by the name of N-Power, which offers latest courses in hardware and networking. The curriculum is developed

on the basis of technological ideas from top global leaders such as Microsoft, Cisco and Red Hat, and is geared to preparing a student for qualifying in the MCSE, MCSA, RHCE and RHCT certification exams. After completing the two-year training period of N-Power, you can appear for these exams and get international certifications.

NIIT offers the Globalnet program that is proving to be quite popular with students looking forward to a career in computer networking industry. The curriculum is completely endorsed by the industry leaders, and at the end of the course, the students become qualified to appear in certification examinations conducted by internationally renowned vendors such as Microsoft, Cisco, Sun Microsystems and others. The entire program is divided into four semesters – in the first semester the most basic and introductory concepts of computers and networking are given. The three semesters that follow, dwell at teaching the more intricate aspects of computer networking. Once the training is over, NIIT helps you with placements. With the right qualifications and certifications, you can easily bag a job in a global companies such as IBM, HP, Dell, HCL, Infosys, Accenture, among others.

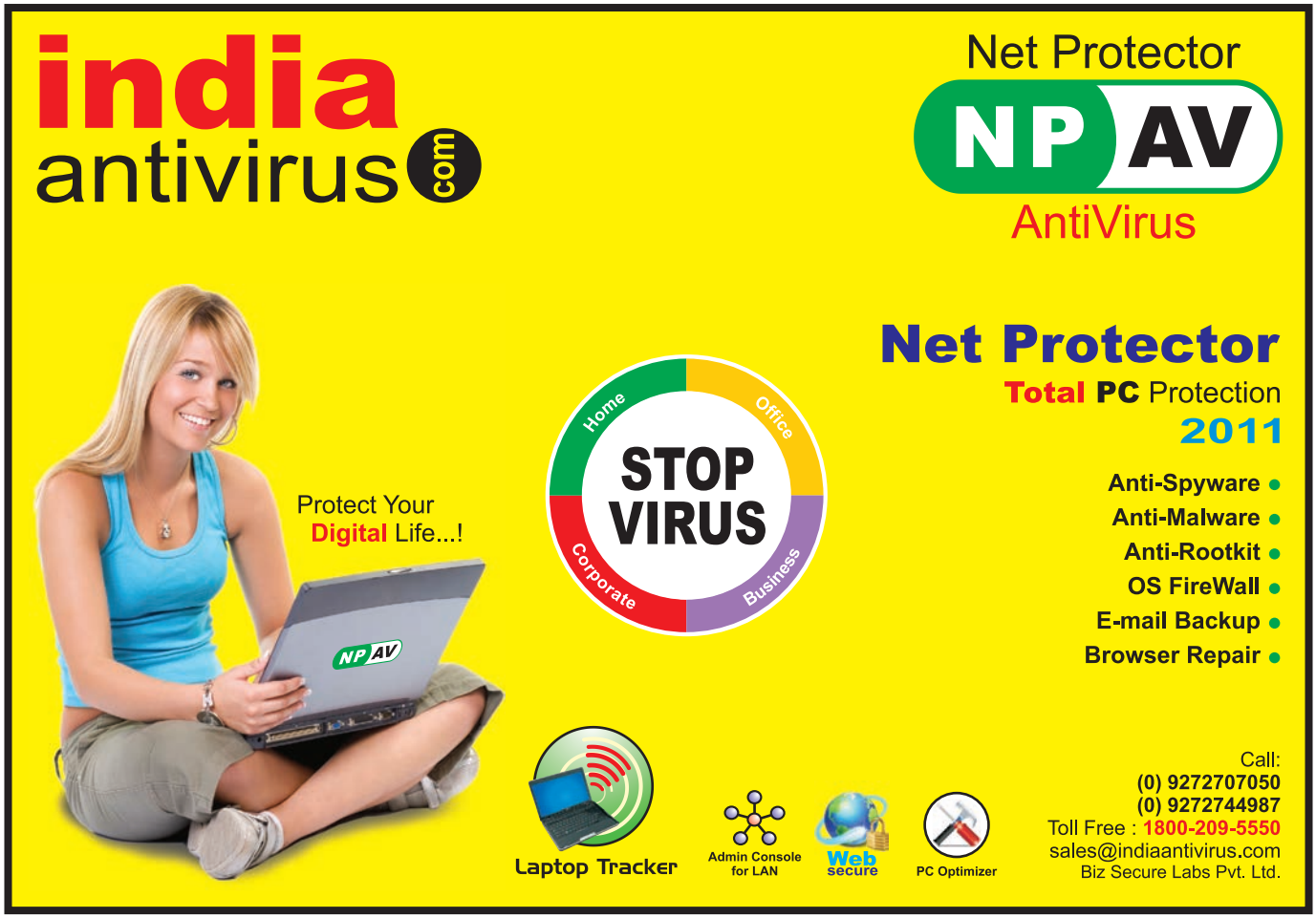
Future prospects

The field of computer networking is of such complexity and it involves such a wide range of technologies that there is enough scope for an ambitious new employee to go up the corporate hierarchy very fast. If you are good enough, you could attain a fairly senior post in a matter of five years. But for that you must have a degree, an up to date certification, and the will to work hard. Many firms view the four-year degrees as a sign of an individual's commitment to the field. As the technologies involved in computer networking are capable of changing very fast, employers prefer individuals who not only have good current knowledge, but also possess the ability to learn and adapt for the future. Basically you need to be a fast mover to progress rapidly in this filed. Once you have bagged a job in the company of your choice, you can also indulge in self-study to keep yourself up to date with latest ideas. This kind of attitude will certainly be conducive in further enhancing your prospects.

According to several surveys CCNA-certified personnel earn higher salaries than MCSE-certified ones, and are above the industry average, indicating that corporations are willing to pay more for competent networking professionals.

As the computer networking industry is highly globalised, we can expect a similar situation to exist in India. The NASSCOM report on the rise of infrastructure management industry in India predicts that computer networking is going to be next engine of growth in offshore services industry. The report says, "India, once again, has an opportunity to establish leadership in a large and strategic service line."

If you want to be a part of India's growth story in the field of IT, becoming a computer networking professional is your best bet. For a fresh student, it might prove to be difficult to find a good computer-networking job without having actual work experience; however, with a lot of persistence, patience and research anyone can dramatically improve their chances.



J for math
J is a powerful esoteric language that makes it very simple to perform complicated mathematical operations

Esolangs.org
Has an extensive list of esoteric languages with examples and links to compilers / interpreters and guides

Some of the strangest esoteric languages

Esoteric Oxford English Dictionary: intended for or likely to be understood by only a small number of people with a specialized knowledge or interest

Kshitij Sobti
kshitij.sobti@thinkdigit.com

Developers can be really fun when they want to be, they just have strange ways of showing it. Such as creating even more programming languages in their spare time, just for fun.

There are a number of esoteric languages, some created out of specialized needs, some for experimentation with a concept, and others purely for fun. We often encounter esoteric languages that boggle our minds and we always keep a note, so that one day we can share our mind-boggling experience with our readers. Well, here are some of the most mind-boggling languages that we ever came across!

CPL

http://c-p-l.sourceforge.net/

Brian A. Egge, developer of CPL: "CPL was created out of a need for advance commenting features, not found in any other existing programming language. I was fusterated[sic] with out dated rules, and limited ability to write comments into my existing code. What I needed was an environment where I could write details comments in my code."

CPL, or Comment Programming Language was designed out of a need for simplifying code documentation and allowing for a rich variety of commenting syntax. The developer took to this mission in a most astute manner by removing any and all non-comment syntax from the language. What's left behind is a lean, mean "programming" language that accepts comments in nearly all possibly syntax formats, whether it be those from Windows batch files, Visual Basic, C++ or SQL.

Example Program:

```
//NONE POSSIBLE!
```

Pro: This is possibly the easiest language in which you can document what exactly your lack of code is not doing

Cons: The only way to write a "Hello World" program is probably to exploit a bug in the compiler to cause a buffer overflow that causes the your code to be executed.

Whitespace

http://compsoc.dur.ac.uk/whitespace/

Do you use long words while typing? Feel like your spacebar key is underused? Learn Whitespace to balance it all out. This is a programming language that relies entirely on whitespace characters, such that a Whitespace program in notepad will look exactly like an empty file.

Whitespace uses only the space character, the tab character, and the linefeed character (Enter). Combinations of these characters form the basic keywords of this language. Whitespace can be used to code some rather complex programs, if you have the patience.

"Most modern programming languages do not consider white space characters (spaces, tabs and newlines) syntax, ignoring them, as if they weren't there. We consider this to be a gross injustice to these perfectly friendly members of the character set. Should they be ignored, just because they are invisible? Whitespace is a language that seeks to redress the balance. Any non whitespace characters are ignored; only spaces, tabs and newlines are considered syntax."

Example Program:

Oh wait, you can't read that can you? But we printed it! Honest.

Pro: 100% savings on toner when you print Whitespace programs

Cons: All your hard work reimplementing the Crysis engine in Whitespace will go unnoticed by your boss.

Shakespeare Programming Language

http://shakespearelang.sourceforge.net/

Alas that programmers type more than the average playwright, yet their words count less. What if, however, you could write an award-winning play, and best-selling software all in one go?

The Shakespeare Programming Language allows one to write code in the form of a properly formatted play. The programming language was devised We need add nothing more that what the developers have to say for themselves.

From the Shakespeare Programming Language project page:

"A programming language created with the design goal to make the source code resemble Shakespeare plays.

"The characters in the play are variables. If you want to assign a character, let's say Hamlet, a negative value, you put him and another character on the stage and let that character insult Hamlet.

"Input and output is done be having someone tell a character to listen their heart and speak their mind. The language contains conditionals, where characters ask each other questions, and jumps, where they decide to go to a specific act or scene. Characters are also stacks that can be pushed and popped."

Example Program (Hello world fragment):

```
Romeo, a young man with a remarkable patience.
Juliet, a likewise young woman of remarkable grace.
Ophelia, a remarkable woman much in dispute with Hamlet.
Hamlet, the flatterer of Andersen
```

Child's play!
Already know all this stuff? Digit is looking for developers to write articles and code for us. Send in CVs to ***editor@thinkdigit.com*** and also check out the other openings on Page 117 of this issue

```
Insulting A/S.
                    Act I: Ham-
let's insults and flattery.
                    Scene I: The
insulting of Romeo.
[Enter Hamlet and Romeo]
Hamlet:
 You lying stupid fatherless big
smelly half-witted coward!
 You are as stupid as the dif-
ference between a handsome rich
brave
 hero and thyself! Speak your
mind!
You are as brave as the sum of
your fat little stuffed misused
dusty
 old rotten codpiece and a beau-
tiful fair warm peaceful sunny
summer's
 day. You are as healthy as the
difference between the sum of the
 sweetest reddest rose and my
father and yourself! Speak your
mind!
You are as cowardly as the sum
of yourself and the difference
 between a big mighty proud
kingdom and a horse. Speak your
mind.
Speak your mind!
[Exit Romeo]
```

Pro: The plays you wrote in school might actually be valid programs.
Con: Open sourcing your best-selling software might result in a drop in sales of your award-winning play

LOLCODE

http://lolcode.com

LOLCODE borrows heavily from the lolcat meme, by using statements such as HAI, and CAN HAS STDIO? making even the most complex and efficient program code look like something even a cat wouldn't be associated with.

LOLCODE has inspired LOLPython, which uses the Python syntax, but replaces Python keywords with those inspired by LOLCODE. It works by converting LOLPython code to Python and running it on the normal interpreter.

We considered writing this introduction to LOLCODE in the kind of language used in "lolcat" texts, but it seemed a little overwhelming. We doubt we'll be able to code in it any better.

From the LOLCODE FAQs: *This is a love letter to very clever people who are slightly bored. I had no idea there were so many of us out there.*

Example Program (Opens file "LOLCATS.TXT" and prints it on screen) :

```
HAI
 CAN HAS STDIO?
 PLZ OPEN FILE "LOLCATS.TXT"?
     AWSUM THX
         VISIBLE FILE
     O NOES
         INVISIBLE "ERROR!"
 KTHXBYE
```

Pro: Programs fit well with images of kittehs
Con: SRSLY

Aargh!

http://www.sha-bang.de/

This language is named after the sound one makes when one reads the "Hello World" program — we're just guessing. Aargh! programs are written in 2D, with each instruction being one character and programs being a matrix of characters with the interpreter moving along in 2D. The characters h, j, k and l for example, change the execution direction to left, down, up and right respectively.

Example Program (Hello World):

```
  j       world
lpppppppPPPPPPsrfj
 hello,      *  j
              qPh
```

Pro: You can spend hours creating clever programs that execute in multiple directions
Con: You can spend hours creating clever programs that execute in multiple directions

Malbolge

http://www.lscheffer.com/malbolge.shtml

When a language is named after the eighth level of Hell, you're bound to take notice. Malbolge is designed to be the most difficult language to program in. Considering that the first Malbolge program appeared two years after the language was defined, and wasn't written by a human, but rather generated by another computer program, we think it's quite successful in its goal.

IRP (INTERNET RELAY PROGRAMMING)

Internet relay programming is a unique cooperative programming languages that uses the power and flexibility of the internet infrastructure, supports multi-processing, cloud-computing, and utilizes the power of the human brain. Furthermore the programs are written in plan english that is easy to understand and essentialy self-documented.

Internet relay programming requires the developer to join the #IRP channel on irc.freenode.net. Once there you merely need to state what your program is supposed to do.

A hello world program could be programmed as easily as typing:

```
<BuntyTheDeveloper> Kindly say
"Hello, World!"
<PappuTheInterpreter> Hello,
World!
```

Being impolite or asking for a the output of the lyrics of the 99 Bottles of Beer on the Wall song is likely to get you banned from access to this most wondrous programming innovation.

Malbolge discards such shallow conventions as binary, and instead uses trinary. For those unfamiliar, trinary is a number system with 3 digits insead of the two in binary and 10 in decimal. A trinary count of the first ten numbers would be:

0 1 2 10 11 12 20 21 22 100

You wont be seeing the Linux kernel ported to Malbolge anytime soon, but do check out the "Hello World" program for some inspiration.

Andrew Cooke (creator of the Hello World Malbolge program):

"this[linked] malbolge program generates:

```
HEllO WORld
```

it's not perfect - i ignored case to make the problem simpler (completion left as an exercise for the reader - it should be possible)."

Example Program (Hello World):

```
('&%:9]!~}|z2Vxwv- ,POqponl
$Hjig%eB@@>}=<M:9wv6WsU2T|nm-
,jcL(I&%$#"
 `CB]V?Tx<uVtT`Rpo3NlF.Jh++Fdb
CBA@?]!~|4XzyTT43Qsqq(Lnmkj"Fh
g${z@>
```

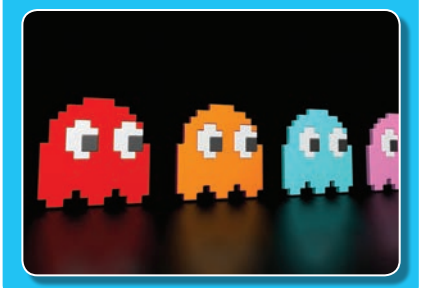
Pro: Writing a program to generate Fibonacci numbers in Malbolge could be the achievement of you life
Con: It would be a sad life.

Video game villains we love to hate!

Ever since the video game universe came into existence we have been hooked on to it like a junkie who can't get enough of his favourite poison. And as much as we love a game's hero we can't over look the fact that it's the badass who demands our love for the game as defeating him/it becomes our soul aim. Here's a look at some of the best bad guys video games have to offer.

Pinky, Blinky etc.

First up are the loveable ghosts from Pac-Man who are consistently behind him ruining his quest to finish the extravagant spread of dots. Always following, never shy these ghosts make Pac-Man's journey's a hell of a task.



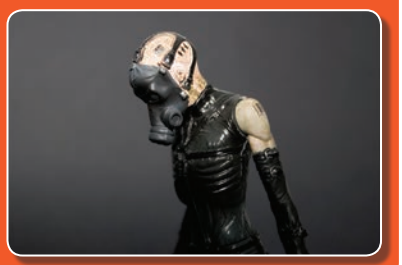


Mother Brain

A gargantuan brain with an evil eye controls a whole army of pirates ready to do it's/her bit. Mother Brain appears in the Metroid series and is capable of shooting high energy weapons and missiles.

Psycho Mantis

This skinny villain from Metal Gear Solid wears a gas mask to protect his identity. What's interesting about him is that he not only proves to be a menace for Snake but he also interacts with the player.



GlaDOS

This supercomputer from Portal is the driving force behind the game as it instructs you throughout gameplay and builds an emotional bond. However behind the helpful AI lies an evil villain and you're left with a feeling of betrayal and anguish.





Bowser

He made it impossible for Mario to rescue the princess only for the poor plumber to realise that she was in another castle! Also known as King Koopa Bowser commands an army of man-eating plants, and rabid turtles.

Sephiroth

Catapulting Final Fantasy to a cult status Sephiroth is one bad guy which does not meet his end easily. Fusion of human and alien Sephiroth has been loved by the game's fans as a hero and because he's so cool it was okay for him to kill Aerith.



Sites you're ought to check out!

Totally looks like

Ever seen a face which reminds you of somebody else? Well this site pokes some serious fun comparing faces of famous people with animals, weird objects among other things. **Visit http://chzb.gr/gfmFRF**



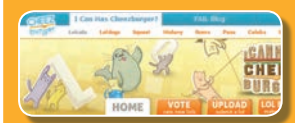
Fail Blog

Captured something you think is funny? Well then submit it on Fail Blog if people find it amusing enough it'll become a Win here and that my friend is a win! **Visit fail-blog.org**



I can has cheese burger

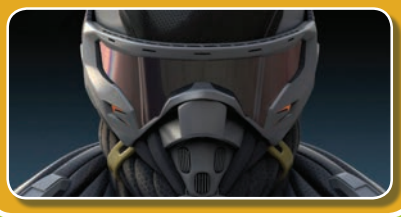
It's a known fact that the whole internet runs on pictures and videos of cats, well sir this is exactly what this site does give you more of that. Satiate you cat fetish at **http://chzb.gr/g0pjOR**



How we unwind

Crysis 2

We mashed our keyboards in Crysis 2 Multiplayer Demo and we have to admit – it was awesome! It took a while before we could beat the brown nanosuites controlled by players on European servers but once you've tasted blood it's super fun.



Ghost Writer



This politically charged drama left us with some brainstorming on conspiracy theories. What if the CIA and the British government are pulling unseen strings to get things done? Check this one out...

Blackfield



We decided to give a listen in to Porcupine Tree's Steven Wilson's side project - Blackfield - and came back mighty impressed. The album has been playing everyday post office hours in the TC, in our cellphones and (if we managed to squeeze in some leisure time) at home.

digit DIARY

March began with a bang with Nimish, Siddharth and Sambhav coming back after chilling out in Goa. However this issue took the best out of us (as is the case always) with Siddharth being away on leave. The good thing is that he'll come back to work with his batteries recharged while some of us will be resting our fatigue. Shweta is back from her month long hiatus (apparently she was on study leave, not confirmed though!) and has been nagging companies on the phone to send products ever since. Robert and Nash decided to engage in a long conversation in one of the most unlikeliest places of all, out on the busy street! (spotted by Kanchan and Shweta); however, the contents of this meeting remain unknown...

Software Monetization Solutions

The industry leading **software protection, licensing,** and **entitlement management** solutions for installed, embedded, and cloud applications

- Secure Revenue
- Protect Software/IP/Data



www.safenet-inc.com/SentinelHASP

Sentinel HASP™

OUT-OF-THE-BOX SOFTWARE AND DATA SECURITY SOLUTION

- Operate Efficiently
- Gain Insights



www.safenet-inc.com/EMS

Sentinel EMS

ENTERPRISE SOFTWARE LICENSING & ENTITLEMENT MANAGEMENT SOLUTION

- Evolve Instantly
- Stop Piracy



Sentinel
CLOUD SERVICES

PACKAGING, PROVISIONING, METERING, AND MANAGEMENT FOR SAAS

SafeNet

To Order Your Free SDK write to us on info.apac@safenet-inc.com

SafeNet India Pvt Ltd
6th Floor, Tower - C, Logix Technopark
Sector - 127, Noida - 201301, India
Phone No.: 0120 - 4020840
Email: info.apac@safenet-inc.com



Mortal Kombat

Kicking it old-school

Faiyaz Shaikh
readersletters@thinkdigit.com

As far as unfulfilled promises go, Mortal Kombat developers have been guilty on multiple counts ever since the series took the 3D root with its fourth installment. It was quite understandable given the context of those years when 3D graphics was a relatively new technology and almost all games were measured by its visual appeal. Throughout the years, the prevailing "wisdom" in the game's industry appeared to be that if a game does not sport 3D graphics, then it's not worth developing. Ed Boon and company struggled to find a balance between commercial pressures and the frustrated cries from fans of the original series. After multiple disappointments it seemed that the industry will perhaps never go back to the days of fast-paced 2D fighting games. This was until Capcom released Street Fighter IV and showed the community how to mix the best of both worlds into a game that can be commercially and critically successful. With a vision now firmly in their minds, Netherrealm studio have set out to deliver a game which it arguably owes to the community.

Most of us are already horny enough about the game after watching game-play videos that have been doing the rounds for quite some time now. Unexpectedly however, we were invited by the game's distributors for a hands-on experience at Warner Bros. office in south Mumbai. The build appeared to be a special press demo, which had a little more content than the game demo available to PSN+ subscribers. This demo had limited number of characters and only a couple of single-player modes available. Also, each of the characters had one fatality unlocked.

The training mode of the demo had a tutorial that walks the player through the basics of the game's combat system. The game's controls return to the classic scheme where each limb is mapped to the face-buttons. This makes moves like roundhouse kick, leg sweep and uppercut move identical for all fighters and it also leaves room to be creative with combos. Block has been mapped to a shoulder button, but running requires double-tap of the directional key. The 'Super' meter is another direct inspiration from Street Fighter series, but it is also an extension of 'Combo Breaker' system that is native to the series. The Super meter can be used to break combos, super-charge special moves or execute the 'X-ray' move. The 'X-Ray' move looks humiliating enough and takes about quarter of the victims health, but it is certainly not a game-changer— unless, if it can be chained together with combos.

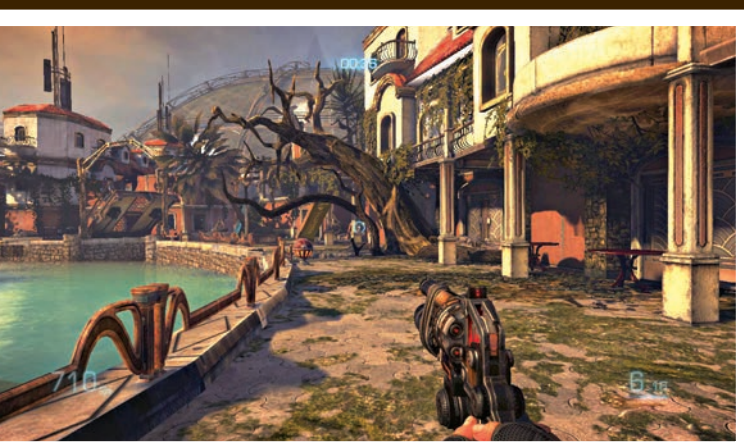
The controls are delightfully responsive even when using the analog stick on the Xbox 360 controller. This, combined with the overall combat scheme, makes chaining combos with special moves the heart of the game. The developers have made good use of the processing power they had to spare after restricting the combat to two dimensions. There is an impressive amount of detail on the character model and the animation is fluid and good to look at. The damage model, along with animated stage background makes for a pretty immersive experience. The overall art-style is a return to the dark and gruesome early days of the series. Also, we are happy to report that out of the few fatalities that we were able to pull-off during the demo, there was at least one that was cringe-inducing.

The new Mortal Kombat may or may not turn out to be the best fighting game ever; however, it is certainly shaping up to be the best game in the series after a long, long time.

Bulletstorm: FPS reinvented?

Abhinav Lal
abhinav.lal@thinkdigit.com

A lot has been said about the irreverent first person shooter, Bulletstorm, and frankly, it does not deserve the massive attention it has been getting, from critiques of the scatological language and over-the-top violence, to praise for having reinvented the genre and satirized the plethora of military shooters out there.



There are no awe-inspiring graphics showing off the latest Unreal Engine 3 improvements, it has an uninspired mockery of a storyline, the co-op and enemy AI is crude, and the single-player campaign is surprisingly short – clocking in at five to six hours or nineteen chapters in seven acts.

Bulletstorm doesn't set an archetype for future first person shooters to be inspired by, except by perhaps being the first FPS to effectively integrate a comprehensive and inventive 'Skillshot' or stylish points system.

Skillshot combinations are actually almost, kick a mine into the horde, shoot it, and then pick off heads one by one to get an Environmental+ Afterburner+Headshot combo. Missed the head? Here's your chance to try for a throat shot (Gag Reflex), or to put your unlucky foe out of his misery after shooting him in the groin (Mercy). There are more than a hundred types of Skillshots in the game, some weapon specific, other chapter specific, and some, general or environmental.

7.5/10

All that hard work in an otherwise simple point A to point B shooter, gifts you Skillpoints. Your character, Grayson Hunt, picks up a Leash few minutes into the game, which allows you to pull enemies (one at a time) through the air towards you, bringing them closer for more moves like a Bullet-Kick. You can also upgrade the Leash to add the Thumper feature, which sends multiple enemies into the air where they stand, allowing you to take your time to indulge in some Trap-Shooting, and more. It remains as the default left hand weapon throughout the game. Apart from the Leash, the kick and slide (both of which, like the Leash, also send opponents and objects flying, just away from you) Each weapon can also be upgraded with a limited number of charge shots, You can select a maximum of four weapons at a time, with two weapons of your choice apart from the Peacekeeper Carbine and the Leash. Switching to use different weapons on-the-fly during a Skillshot is usually well-rewarded.



Other than the Campaign, there are two other game modes in Bulletstorm – Echoes, and Anarchy. Echoes lets players try to get the best score in a single chapter/level run, where time, Skillshots, etc., are totaled to make the player's score for the level, and uploaded to global leaderboards. Anarchy mode is when a player and up to three of his/her friends or random people online face 20 waves of enemies, taking them out with regular Skillshots, and Team Skillshots.

As for the coarse language, we weren't offended at all, and nor did we flinch. It felt very much a part of the game Verdict: Overall, the joyous barrage of violence that is the Bulletstorm experience is worth a purchase, and neglecting the cliché and abrupt storyline, the addictive Echoes and Anarchy modes are the true selling points of the game, pitting your Skillshot creativity and precision against the hordes of frenzied gamers online. d

Pros
- Interesting gameplay mechanics
- Addictive leaderboard (Echoes) and multiplayer (Anarchy) modes
- Visually appealing environments

Cons
- No mind-blowing graphics
- Short single player campaign
- Some graphical glitches

Details
Genre: First Person Shooter, Arcade
Studio: People Can Fly, Epic Games
Publisher: Electronic Arts, Milestone Interactive
Platforms: PC (MS Windows), PlayStation 3, Xbox 360

URL Hunter
Developed by Carey Johnson URL Hunter is a game where the game screen is your URL bar.

Sega teams up with Three Rings
Sega and indie studio team up to create Spiral Knights, an upcoming free-to-play MMO based on sci-fi fantasy world.

Best iOS games for iPad

Michael Browne
michael.browne@thinkdigit.com

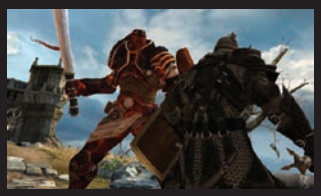
What follows is our pick of the top five iPad-based iOS games out there. Some of these are paid with free versions, some are free – all are highly addictive and a whole heap of fun.

1 Plants VS Zombies HD: Zombies are on the prowl, and they've zeroed in on your house, and your fresh brains to be more exact. After playing this game, you'll love your garden just a bit more. You have a variety of zombie-killing flora at your disposal and you'll



need to judiciously plant these to ward off undead attackers entering your home. Pea-shooting pods, daisies (that produce sunlight required to grow plants), water lilies, exploding cherry (bomb) plants, Venus Fly Traps (that gobble zombies) are only some of the weapons you have. Your opponents are varied too, zombies that pop up from graves, tougher rugby tackler zombies, and Elvis zombies that raise the dead (again!) Plants VS Zombies is such a novel concept, and so simple, yet it is an absolute gem of a game – very involving, with terrific, simplistic gameplay. The hours will spin by unnoticed.
Price: ₹6.99$

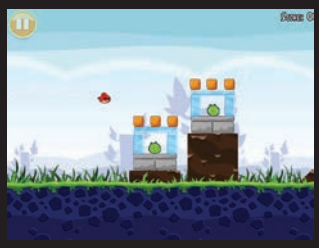
2 Infinity Blade: Developed by Epic Studios, need we say more? Infinity Blade plays you as a descendent of a line



of warriors who has to rid the world of the God King, a tyrant who rules with an iron fist. Your journey starts outside his dark citadel, and in order to challenge him, you must first defeat his titans – monstrous warriors consisting of fallen knights, beasts and metal constructs – colossus conglomerates of stone, bone, magic and steel. Great graphics, courtesy Unreal Engine 3 are a visual treat – lighting, shadows – the works, it just begs for a better display!

There is a great variety in weapons, armour and magical items that you can buy with the gold picked up from the environment and kills you make. Combat is simple, and involves dodging, blocking or parrying attacks, and counterattacking at the right time, along with some special powers such as as healing, fire and ice damage, courtesy of magical rings. Opponents have different strengths as well as different ways of attacking, which you must exploit. Will you save up just a bit more for that uber powerful sword, or buy a new helmet, and will you spend skill points on damage or defence? Such queries make Infinity Blade a very compelling game. A must try and a great look at what the platform is graphically capable of.
Price: ₹5.99$

3 Angry Birds HD: For all you omelette lovers, here's a look at life on the other side of the egg. What came out first – the chicken or the pig? The birds are furious – green pigs have stolen their eggs and throughout this game, you'll



try to get revenge, and for this purpose you have a variety of birds that you'll catapult in on the pigs' entrenched positions with kamikaze-style carnage in mind. Angry Birds is uncomplicated fun, not to mention surprisingly addictive, as you try to knock off the pigs in each level with minimal feathered casualties.
Price: Free

4 Hungry Shark Trilogy: This one is tilt-based. Saw the movie Jaws and thought the shark got the wrong end of the stick? Revenge is a dish best served raw, and as a shark, your sole objective is to gobble all the tasty treats swimming around. This maintains your constantly depleting health, and allows you to level



up i.e. grow larger. Some are easy targets - the bikini-clad beauties and reef fauna, while others like swordfish and puffer fish will defend themselves. You'll also need to deep dive to get at tastier and rare treats. As you get larger, stiffer challenges come in - submarines with bombs, hunters in boats, giant crabs and more. You'll also need to steer you way through under water mines, all the while trying to achieve some of the in-game challenges. Exploring different parts of the ocean depths is a lot of fun, and Hungry Shark is a very simple, yet engaging game. It relies on simplistic and absorbing gameplay rather than complicated challenges to keep you hooked.
Price: 2.99$

5 Paper Toss: Paper Toss is a free game, with no paid versions, and probably the simplest of the games here in terms of concept, although it might not be the easiest challenge. The sole objective of the game across a variety of colourful levels is to successfully chuck a ball of paper into a dustbin. However, this isn't the piece of cake it sounds like, for there is distance to be gauged, objects like fans will have you recalculating trajectories and such. A simple, yet challenging game without a complex plot of and one that will keep you hooked.
Price: Free



PS3 beats Xbox in France
PS3 surpassed three million sales in the country while Xbox 360 could do 2.3 million

AboutEveryone.com
A new site called "AboutEveryone.com" helps you to post your feelings about your Facebook friends anonymously

RIA Conference

The conference presents a unique opportunity to connect with the experts from Adobe, the leaders in Rich Internet Applications, and other practitioners like you who are responsible for building both core enterprise applications and ancillary applications.

Conference dates and venues
Chennai - 21st April 2011
Hyderabad - 29th April 2011

Registration fees will be waived off for first 100 qualified registrations to the conference. So register now to avail the early-bird offer. Limited seats only.

To register, visit **thinkdigit.com/RIA**

SSD*Now* challenge

Solid-state-drive (SSD) is the new buzz word in the storage market. SSDs are all-ready to replace HDDs, given the technology SSDs use. **Watch the SSDNow in Action in the Omega DVD and visit bit.ly/ssdaction to win exciting prizes like SSD*Now* drives.**

Visit: **bit.ly/ssdaction** to get your SSD Drive

Digit Facebook Pages

JOIN THE GROUP THAT SUITS YOUR NEED!

http://www.facebook.com/thinkdigit
Your favourite magazine on your favourite social network. Interact with thousands of Digit readers and have some geeky fun!



http://www.facebook.com/techkranti
Let's wake ourselves up and gather the tools of tech to change the future of our great nation. Join The Revolution!



http://www.facebook.com/IThinkGadgets
Community of People who love mobiles, laptops, cameras & other gadgets

http://www.facebook.com/consumermate
Expert buying advice and some awesome offers



http://www.facebook.com/gladtobeaprogrammer
Community of software programmers who enjoy writing code and want to grow their career in software development

The Digit Helpline



Creations by Digit community



Dan Mansukhani created a blog for Harry Potter fans, this is his first blog.



Eminem fan Manan Agarwal created a wallpaper dedicated to his favourite rap artist.

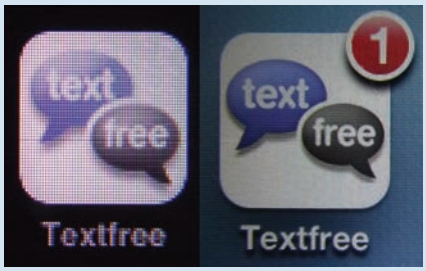
Great going folks! Keep them coming... If you too have created some inspiring artwork or a fan blog then post it on our Facebook page and it might featured in this space.

Smartphone displays of the world!



When Steve Jobs unveiled the iPhone 4, he said its display is unlike anything we have seen before. Thanks to Retina Display which gives it a 'magical' resolution it's something your eyes wouldn't catch. Okay we believe you Jobs, but what exactly is Retina Display? Is it just another marketing buzzword? Like Gorilla Glass or for that matter an IPS Panel? Are these really breakthrough technologies or just gimmick? Let's find out.

Retina Display – It's a screen and that's enough to it! Anyway at 326 dpi resolution it's one of the sharpest and slickest screens around. Human eye can distinguish dpi resolution only up to 300 when



Comparison between the screen resolutions of an iPhone 4 and iPhone 3

the device is held 10-12 inches away from it. The iPhone 4 screen provides 326 pixels (and that's our magical number) This is super high pixel resolution of 960x640 packed in a 3.5 inch screen. These pixels are squeezed between two glossy aluminosilicate glass which is used in helicopter and high speed train wind-shields.

Gorilla Glass – The much talked about Gorilla glass is a super strong, scratch resistant display which is used in more than 100 products across 19 brands (as boasted by Corning the company behind Gorilla glass) One would practically require Thor's hammer to break this thing! Well not actually though as we've all seen Droid's with a huge crack on their screens.



Retina Display better than Super AMOLED? We don't think so...

Super AMOLED – An enhanced version of the AMOLED display Super AMOLED gives you better colour reproduction and brighter, sharper images. This is possible because the touch sensors are built on the display itself where as on a capacitive screen these sensors are placed in a separate layer. This makes the Super AMOLED one of the thinnest displays around.

IPS Panel – Expensive than a regular TFT-display the IPS panel provides wider viewing angle and consumes much less battery. In-Plane-Switching is apt for playing games and watching HD videos and that is why a lot of the newer phone models opt for this display. Apple uses IPS panel for the iPhone 4.

Future of smartphone displays

Quantum Dot display – new opponent for the current crop of smartphone displays is on the rise.

This new display essentially uses semiconducting crystals which measure of a billionth of a metre across. This helps in emitting light at an ultra narrow wavelength. Although still under development, let's hope to see this technology in iPhone 5 or in other phone models running Android 4.

Features you should understand before buying a headphone



Noise Cancelling headphones – These type of headphones cancel the ambient noise and create antinoise at your ear. This helps in lowering down background dins coming from trains and buses. However they are not made to eliminate noise entirely.

Noise isolating headphones – Mostly used as recording monitors noise isolating headphones are effective in blocking out the background noise. They perform better than a noise cancelling headphone in secluding external sounds.

Surround headphones – Popular among gamers and home theatre fans this type of headphones create a bigger stereo sound experience by electronically enhancing the the surround effects. This gives the listener a feeling of more spacious sound than conventional headphones.

Demystifying common file extensions

FLAC – (Free lossless audio codec) This audio codec sounds better than an MP3 as it is lossless which means that every single bit of data can be recovered when the file is uncompressed, resulting in better quality audio experience.

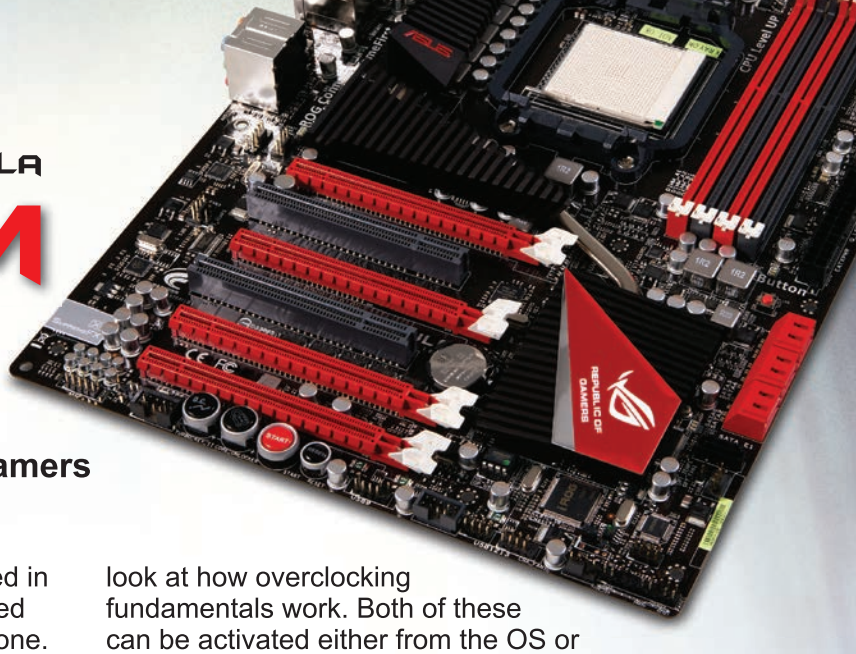
flac
free lossless audio codec

ODT – Open Document Format is increasingly getting popular these days. File extension ODT gets suffixed by Tif it's a text file, ODS for a spreadsheet and similarly ODP for presentation file.

OGG - This codec can be used for audio, video, texts (subtitles) files. As it's an open source format it's free from any software patents and can be manipulated to suit any multimedia needs.

ASUS ROG CROSSHAIR IV FORMULA

TRUE AIM



Those in search of a performance motherboard for the fresh-off-the-fab AMD 890FX chipset have a new icon to look up to - the ASUS Republic of Gamers (ROG) Crosshair IV Formula.

And a very apt name is it, because anyone interested in building a gaming platform based on the just-released AMD architecture should race to set their sights on one. The new Crosshair IV Formula (C4F) has enough features to turn it into an overclocking endurance king, making the most of 890FX advantages.

As per usual with Republic of Gamers gear, the first thing to grab you about the C4F is the nice design, using the trademark black and red color scheme and cool crystal-shaped heatsinks. This is just prelude, though, because we immediately turn to notice all the stuff that's packed onto the board. It's a cornucopia of assets making it a great choice for both seasoned tuners and those taking their first steps in the field of overclocking.

For one, C4F comes with ROG Connect, a hardware/software utility that opens up a very comprehensive overclocking interface capable of many settings and variables. The neat part about this one is remote overclocking by USB. Basically, users can mod their motherboard from a notebook, so the performance rig benchmarks while being tweaked. Less valuable resources are consumed, so scores go higher. ROG Connect doubles as a monitoring program, keeping tabs on the effects changes have on a setup and offering detailed stats.

Alongside ROG Connect lies Turbo Key II, an auto-tuning engine that's ideal for people still leaning about overclocking. It essentially runs through a series of tests, driving the hardware to its limits until it finds an optimal performance range. Everything's presented clearly on-screen, helping the uninitiated get an inside look at how overclocking fundamentals work. Both of these can be activated either from the OS or through pressing a single button on the board itself, in case your monster rig is still under construction.

The convenience of this is pretty significant, as is the wonder of ASUS' exclusive Core Unlocker technology. As the name suggests, it opens up deactivated cores on AMD CPUs, so if a user gets a dual-core to save costs, they may be able to go up to a quad, or at least manage an additional core. No prizes for guessing there's a Core Unlocker button on the board, so the whole process only takes minutes. While results may vary, they inevitably lead to more processing muscle, and therefore a higher overclocking threshold.

As you can see, Crosshair IV Formula has a thing for indulging PC users with features, most tailored for speed. That's why we like GameFirst, another innovation from ASUS, this one managing on-board networking to maximize bandwidth when online. The main benefit is faster multiplayer gaming, with less lag and lower latency. Users can manually prioritize bandwidth, so even while in the thick of the action, other stuff can still work in the background with no slow down.

And all this before we even mention USB 3.0, six SATA 6GB/s connectors and the excellent SupremeFX X-Fi EAX 4.0 surround sound chip.

For gamers, this board is a complete package and ready to go. Beyond that, it's also a master overclocker, so we see great value in the C4F and recommend it you check it out pronto.

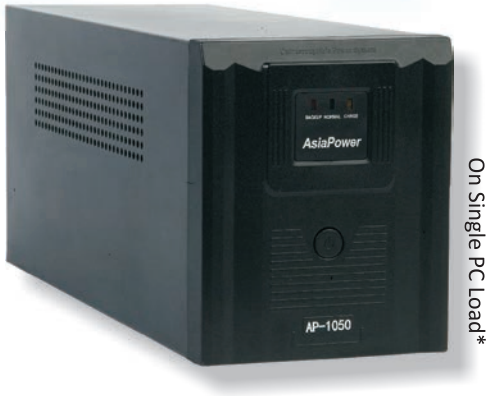
AsiaPower

WE OFFER TOTAL POWER SOLUTIONS



2 hours' backup*

AP 1080 UPS



On Single PC Load*

Backup can vary from PC to PC

Stay ahead of times with the timeless performance of long-backup UPS

- Line interactive design
- Fully digitized microprocessor controlled
- AVR input voltage range 145V- 275V
- Battery charging in UPS off mode
- Boost and buck Auto Voltage Regulation)
- Cold start function (DC power on)
- Short circuit and overload protection
- Advanced battery management (ABM technology)
- Automatically charging when UPS off

Pan India Sales & Service available

Asia Powercom Pvt. Ltd.

H.O. 7A/4, New Sion CHS, Sion (W), Mumbai 400022. Tel: 91-22-43332222.
Fax: 91-22-24012277. Email: sales@asiapowercom.com www.asiapowercom.com

FREEDOM FROM VIRUS ATTACKS

Global No.1 Antivirus Software* by AVcomparatives



NEW NST Nano Secure Technology

SWITCH TO K7 SECURITY PRODUCTS AND PROTECT YOUR PC WITH "NST – NANO SECURE TECHNOLOGY"

FASTER • SAFER • RELIABLE



* For overall speed & performance

K7 Computing

Leading International Security Software Certifications

www.k7computing.com

To order SMS <**VIRUS ND**> to **56767**

K7 Computing Pvt Ltd. 144/7, Old Mahabalipuram Road, Kottivakkam, Chennai – 600 041. Phone - +91 6611 7777

RNI REGN. No.MAH ENG/2001/3791

Over 30 crore people worldwide have chosen Kaspersky to stay protected from Internet threats



MERA CHOICE KASPERSKY • MERA CHOICE KASPERSKY • MERA CHOICE KASPERSKY •

Jackie Chan, International Superstar

HOWZZAT

Bat and spin. Or scratch and win!

Register online: http://www.sakri.in/howzatt

2011 Prizes to be won





Offer valid on Kaspersky Lab retail box products (Kaspersky PURE, Kaspersky Internet Security 2011 & Kaspersky Anti-Virus 2011) bought offline only. Limited period offer. Conditions apply.

KASPERSKY lab

World's leading anti-virus software

www.kaspersky.co.in

india.info@kaspersky-asia.com | +91 40 4033 9680

© 2011 Kaspersky Lab India. All rights reserved.

National Distributor (Retail):

Sakri IT Solutions Pvt. Ltd.

Sakri IT Solutions Pvt.Ltd.
sales@sakri.in
+91-020-32609551