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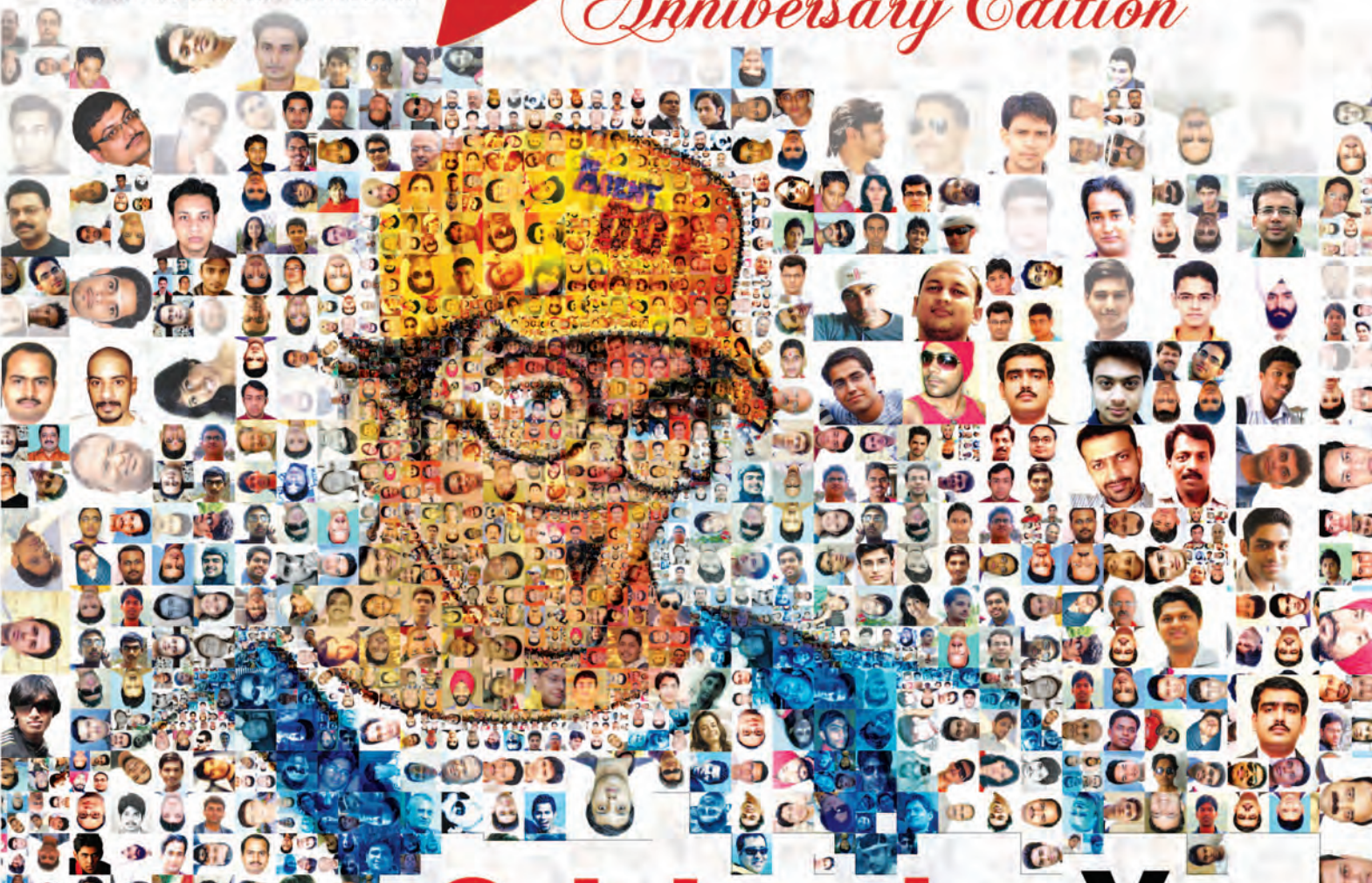
A 9.9 Media Publication

digit

YOUR TECHNOLOGY NAVIGATOR

A MUST FOR EVERY TECHNOLOGY ENTHUSIAST

9th Anniversary Edition



Celebrating You

THE PEOPLE WHO HAVE MADE US **INDIA'S #1**
FOR 9 CONSECUTIVE YEARS

An anniversary to remember



Robert Sovereign-Smith
Editor

For the past few months, we've been really pleased with the responses we've got on our I Think Green page (www.facebook.com/ithinkgreen). Although it's still early days, and we certainly hope even more of you will join us there, it was heartening to see so many thousands of people wanting to help reduce the impact we humans are having on the planet. In a poll we conducted, the majority felt that we should try and increase the green cover around us. This got us thinking, and we decided that now was the time for actions, not words and pledges that very few of us actually follow through on.

If the community wanted to plant more trees, then Digit was going to do everything it could to help you achieve that goal.

Each one of you has received a packet of seeds along with this anniversary issue, and all you need to do is plant the seeds, take a little bit of trouble to water them regularly for a few weeks until they grow into saplings, and you'll be on your way to giving back what you're taking from the planet.

"In a way, I suppose, there's a little Agent 001 in all of us"

We're happy to be enabling this change, and hope to see lakhs of trees planted and grown by the community. What's most promising about this initiative is that it was something that came from you, and will succeed, if you work towards it and dedicate just a few minutes a day to see it through.

That's what this anniversary issue is all about – you, the person reading this. You're a member of one of the most influential communities in the country. And I'm not exaggerating either. You are tech savvy, educated and generally a thought leader.

While reading through the hundreds of Digit Idol applications, we were ecstatic to see the sheer diversity of the applicants. From CEOs of companies to those just about to embark on a career, from the retired to children as young as five or six, and professionals from all walks of life – doctors, lawyers, salesmen, coders, financial analysts...

We even asked a few of you who have contacted us before via email, the forum or on Facebook, to send in videos and pictures of yourselves. Since you've already seen the cover, you now know what we did with the pictures. In the Community DVD you will find a video of what our cover would look like if it were interactive, with messages from some of you.

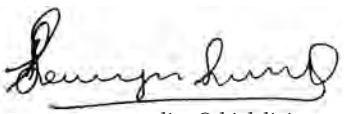
There's also a reason why all of your pictures make up Agent 001 on the cover. We felt that he was the perfect representation of our community. He never seems to age, because there's no age limit when it comes to tech enthusiasts. He's learning new things everyday, and may not know everything, but certainly has the enthusiasm to continue absorbing information. He often starts new trends, or points out easier ways to accomplish tasks. He's informed and opinionated, but never biased, and his peers approach him for tech advice. In a way, I suppose, there's a little Agent 001 in all of us, and that's what we wanted to depict on the cover.

Our DIY and Ethical Hacking Fast Tracks follow on the same lines, and were the most demanded of all Fast Track topics. The Community DVD has the software and applications that you demanded, and even features some that were created by you.

What I'm getting at is that we decided that our ninth anniversary was not just about Digit, or cause for celebration just for those who work here. There was no point blowing our own trumpet because it's you who we have to thank for our longevity. Although, every issue of Digit is made *for* you, we're hoping that this one will be more special because it's made *by* you. Or rather, by us, but based solely on your feedback of what it is you wanted.

In order to make this issue even more special, we're giving away Rs. 4 crore in gifts and prizes, and have made sure that each and every one of you is guaranteed to win something. And of course a few lucky ones will win even more... Then there's the much demanded Crack The Code II contest, which starts, quite fittingly, on the Community pages.

I hope you enjoy this issue as much as we've enjoyed putting it together for you. Enjoy!



editor@thinkdigit.com

digit 9th ANNIVERSARY



Don't miss the videos of extra-special dances by some of us, on the Community DVD

On cloud 9

Team Digit strikes a pose for the 9th Anniversary celebrations

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

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AMD Phenom II X6 1090T Black Edition
Asus Maximus III Extreme
Canon EOS 550D
Cooler Master NotePal U1
Dragon Naturally Speaking Preferred 10
Epson PictureMate PM310
Fujifilm FinePix Real 3D W1
Galaxy GeForce GT240
Gigabyte GA P55A UD7
HP Pavillion dm3 1005AX
Igloo 5710 Plus Silent (E)
Lian Li PC-A77F
Logitech G13
Logitech Performance Mouse M950
Razer Destructor
Razer Megalodon
Razer Orochi
Sparkle GeForce 210
TAG Z-626
WD My Passport Studio 640 GB
WD VelociRaptor 600 GB
Zebronics Invader
Zotac GeForce GTX 470

CELLPHONE COMPARISON TEST 84
Apple iPhone 3GS 32GB
Blackberry Bold 9000
Blackberry Bold 9700
Blackberry Curve 8520
Blackberry Curve 8900
Blackberry Tour 9630
Garmin ASUS Nuvifone M10
HTC Smart
LG BL40
LG GC900 Viewty Smart
LG GT505
LG GW550
Motorola Milestone
Nokia 5800
Nokia 6700
Nokia E72
Nokia N97 Mini
Samsung B7610 OmniaPro
Samsung GT-B5310 Corby Pro
Samsung GT-S5620 Monte
Samsung I8000 Omnia II
Sony Ericsson Aino
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Sony Ericsson Satio
Sony Ericsson Vivaz
Sony Ericsson W995
Sony Ericsson Yari
Sony Ericsson Xperia X10

HDTV TEST 78
Haier LB32R3
LG 42LH60YR
LG 47LH50YR
MoserBaer MBIK32HD
Onida 32 Diamond Kyrock
Sharp LC40L50M
Sony 40NX500
VU LC 46V69PIR

RICHARD MAY NOT **BE READY** BUT iBALL

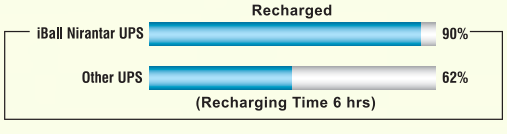
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Crack the code

Invert the page number you used to come to this page, round off to the nearest multiple of 5, divide the number by 10, and double it. Flip to that page for the next clue.

Digit Mini

Don't miss your last opportunity to secure this collector's booklet. Subscribe before June 30, 2010



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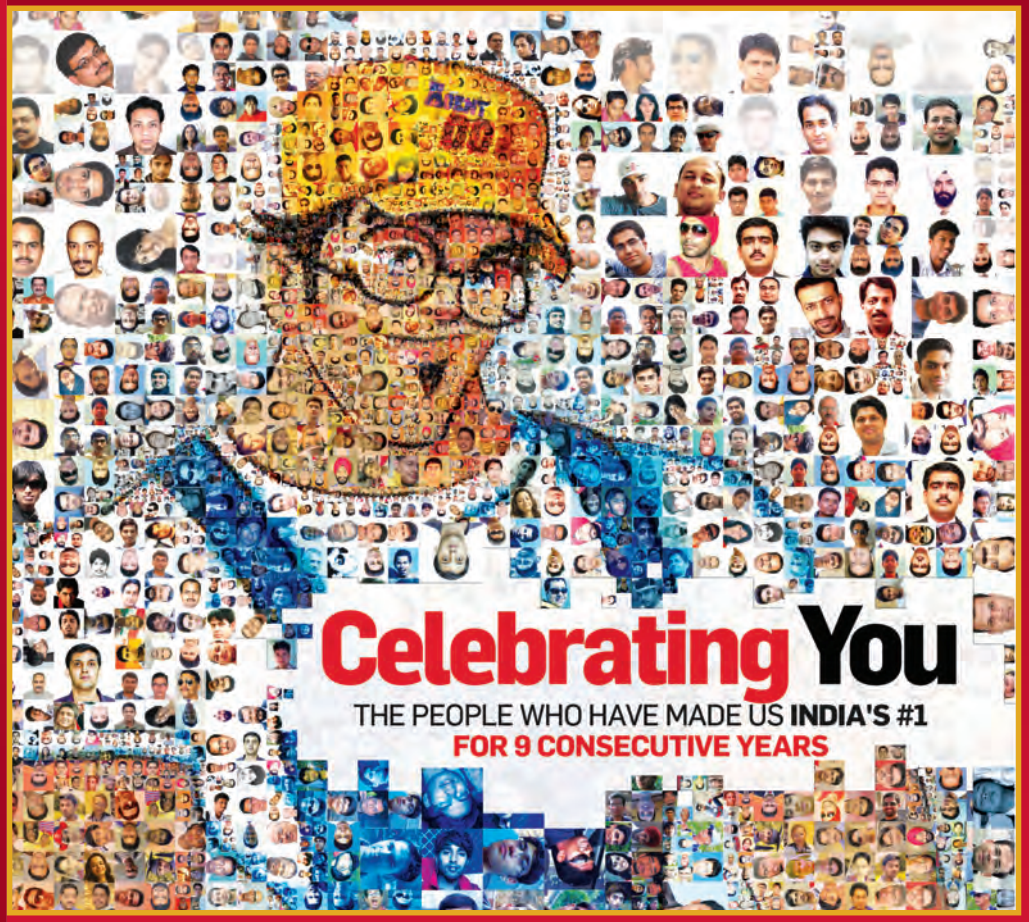
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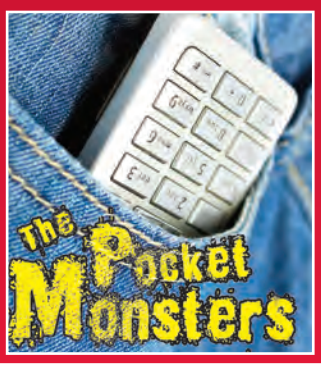
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ON THE DVD

Community

APPLICATIONS AND CONTENT CREATED BY MEMBERS OF THE DIGIT COMMUNITY

- Chrome Lock
- Digit Archive in AJAX
- Free PDF Reader
- iPad video review
- Motion Graphics Demo
- NeatDigit forum 2.69
- PDF OCR
- The Search Man
- TheAwsmPlayer
- TheCalcMan
- TheLetterEncrypter 2.0
- Think Digit Toolbar v1.07
- Win 7 Aero Blur Tweaker
- Win 7 Battery Bar
- Win 7 DreamScene Activator
- Win 7 Desktop Button Remover
- Win 7 Start Button Animator
- Win 7 Start Button Changer
- Win 7 Taskbar Thumbnail Customizer
- Windows Theme Installer

Hacking

- XULRunner 1.9.2
- Windows PowerShell 2.0
- Cygwin 1.7.5-1
- Sysinternals Suite
- BartPE
- UPX 3.05
- RainbowCrack
- FSCrack v1.0.1
- Galleta v1.0
- MilwOrm
- Fport v2.0
- Attacker v3.0
- FileWatch v1.0
- IPv4Trace v1.0
- BOPing v2.0

Virus Alert!

The Hacking section in the Playware DVD and the Developer section in the Community DVD have software that your Anti Virus software will warn you about (UPX, milOworm etc). Do not worry, these are not viruses. Choose the Ignore option if there is one, or report alert as a false positive if you are bothered by the false alert.

Linux Distros

A SELECTION OF DISTROS FOR DESKTOPS, OFFICES AND PENETRATION TESTING

- Ubuntu 10.04 LTS 32 Bit
- Ubuntu 10.04 LTS 64 Bit
- NimbleX 2010 Beta
- OPHcrack XP livecd 2.3.1
- OWASP Live CD
- Pentoo 2009.0
- Operator 3.3.20
- PC OS Linux 2010

By Demand

SOFTWARE DEMANDED BY MEMBERS OF THE DIGIT FORUMS

- SUPER © v2010.build.38
- Photoscape 3.4
- Clonespy 2.51
- Cuterank 2.61
- Autodesk 3D Studio Max 2011
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- Anime Studio Pro 6





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Drool over some of the coolest gadgets and gizmos

030 **Digit Idol**
Spotlight on the biggest and greatest Digit fans

033 **Digit Tree**
Go green by helping the environment with our Digit Tree initiative. Join the Digit community and plant some trees!





058 **50 top mobile apps**
Read about the 50 best apps for your mobile phone no matter what the platform

HDTV test
Some of the latest high-definition TV models in the market put to the test



073 **82 LIAN LI PC-A77F**
Lightweight Monster

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Is 3D photography really the future?

Sennheiser founder dies

Fritz Sennheiser, founder of Sennheiser Electronic passed away at the age of 98

CRACK THE CODE

4 The monicker of a famous iPhone cracker in plain English

✉ I am an avid reader of your magazine and it is awesome. Well, I really liked the May issue of yours and the Bazaar reviews. Nice to see the iPad review exclusively in your mag. I have a long awaited request and perhaps complaint. Why didn't you provide the PDFs of your Fast Track issues of 2009? No, I didn't recognised it late but I was just waiting for the right time to complain about it and its the right time. Now your anniversary issue is coming so please provide them in the DVDs and also provide some awesome game wallpapers. Yes, I know I am spamming your inbox with this request but you don't provide them at all and if you do you do that in very few amount. Keep it up and make the magazine better than best.

Abhishek Anand

d Yes, you guessed right, it is the perfect time to come up with this particular complaint. You will find all the 2009 Fast Tracks in the Community DVD. Keep writing in!

Aditya

✉ I am a B.Tech graduate in CSE. I have been reading your magazine for past six years but in the beginning I used to buy just 2 - 3 issues a year depending upon my needs. But now, I am a regular reader of Digit from the past year and I have not missed even a single issue from then. I am a big fan of your magazine because of the contents you provide to us. My greatest interest has been in the video tutorials/lectures, e-books and the various educational materials in the DVDs. I have bought this month's issue too and again found my interesting materials which I just mentioned. That's commendable. The contents in the magazine are good too. These were the positives I just mentioned. But, there are some improvements which I think you should consider. There's one more reason why I buy your magazine is because of the Fast Track you provide with each issue, but I have been looking for some months that these Fast Track issues don't contain interesting contents as it was a year before. Earlier, you gave a very nice issues like Tech Jargon, Registry, Web, Google, etc. and those were really awesome but I think now it (Fast Track) has started losing it's way it used to interest us. For example, this month you provided us with the iPhone Apps Fast Track, which may not be very much useful for the majority of people and may be interesting only for those who own the iPhone. So, I guess you should provide some interesting material in it too.

Also, one another change I want in your magazine which could be useful for every reader is that you should not provide user reviews about the magazine in the front pages unlike your past year issues. And the magazine should begin with the biggest news of the month in the beginning followed by the next in decreasing order of priority.

At last, I want to say that this magazine has the potential to attract the great masses if you keep on doing this good work with of course, some improvements with time.

Max Bhatia



d Thanks for writing in. You do not need to own an iPhone to develop applications for it. We hope to make our readers all-rounders through our Fast Tracks, and so cover a diverse range of topics. This month, we have included two popular Fast Track demands with the issue. The DIY Fast Track is full of projects you can take up in your spare time, and the Ethical Hacking Fast Track should get you familiar with what hacking is and how it is done. We value your suggestions, and do write in your feedback for this issue.

Nash

✉ You people have always done very good work. The reason your magazine has become No.1 is because of your hard work. I was very disappointed to see that an advertisement on page no 115 that states that you can spy on any using hacking tools that they provide. This is really bad since they are selling you the tools that are the work of viruses. Yes, selling malware may not be illegal but using it is illegal. How come your esteemed magazine came to advertise such a thing is beyond my knowledge. These people are selling us viruses and making money out of it. Also these people advertise about a book that teaches hacking. they say that they teach you to hack any e-mail address which is once again illegal. I myself have read Hacking Exposed, unofficial guide to ethical hacking etc, but none of them teach us anything illegal. You are the people who are supposed to educate us against these type of scams but you people have advertised about those things. Please do not advertise these things in your magazine.

Kaushik



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CRACK THE CODE
2 This platonic solid is also known as a regular hexahedron

CRACK THE CODE
6 Name the Indian mathematician who first described binary

d The best way to be safe from hackers is to be aware of the intricacies of how they work. The Ethical Hacking Fast Track in this issue should familiarise readers with the basic concepts involved. The Playware DVD will trigger an anti-virus positive, as the Hacking section has a few crackers, and mil0worm, which is a collection of over 9000 exploits. There are also other tools, and entire distributions dedicated to penetration testing. All of this should only help you be safer if you are on the right side of the law.

Siddharth

✉ Thanks for a great Fast Track on making iPhone apps. It was truly handy. But alas I don't have a Mac.
So I tried it on a Hackintosh with Snow Leopard, but XCode 3.2.2 Beta doesn't work. It just hangs upon making a new project. I have bandwidth constraints and so cannot download latest build. I would be highly grateful if you include a stable SDK (3.1.2 or 3.2 final) in the next month's DVD.

About the magazine, it is delightful as always but there are a lot of mistakes! It was unsual as I haven't seen such casualties at Digit. I guess you guys are overstressed over the June issue. So it's okay, but please do remember this in the future.

I would like to know the legal consequences of building a Hackintosh in India! It works fine with WiFi, sound, proper resolution etc. but it has no QE/CI, so no iLife or iWork. No video works except the MOV format and no games work either!

Last but not least, a Fast Track on Android would be really great! It is the next big thing after iPhone happened ages ago. And since it's from Google, it is the best one out there! I would love to make apps for Android.
Thanks and Best Wishes for a wonderful anniversary!

Aurojyoti

d Setting up Hackintosh isn't the best way. Apple does not permit the installation of Mac OS X on PCs other than the ones Apple developed themselves. Forcing it to run on incompatible hardware will only result in errors and non functioning software. Your suggestions for the Android Fast Track are taken.

Rossi

LETTER OF THE MONTH

✉ This is my first letter to you. I have been reading Digit for past 3-4 years (you would think why this guy is sending us mail so late). Well ,I was thinking Digit is a good magazine (this was in the year 2007), Digit is becoming good month by month (this was in the year 2008), Digit is the "best in class" (in the year 2009) and now, I stand up and say "How you guys can be so good?". I can't even imagine how much a product can change itself from being good to being the best. First of all hats off to you guys!!!! Well, I am not a subscriber of Digit, but I buy it from the market (I am the first one to reach their place, shop walla bhaiya says "bhaiya, apko isme kya pasand ata hai jo aap itni besabri se iska intazaar karte ho" (What do you like about this magazine so much that you are impatient for it every time?), I just say "aap nahi samjhoge" (you won't understand). I wish that someday he might also be able to read magazines and books. I am 16+ and my friends in class look up to me for any technology related matters, or even buying a product. I have no complaints, no queries but I just want you to put your next Fast Track based on "C++", as I am a student and presently being taught about it in computers, I hope you will fulfill a small wish of mine. Congrats in advance for your anniversary, and hope to get my "best in class" magazine in the very 1st week of June!

Sid

d Thanks for writing in to us. We have already come out with a Fast Track to C++, in November 2008. If you can hunt down a copy of the December 2008 issue, you will find the Fast Track in the DVD as well.

Rossi

✉ I have been ordering my Digit online for a couple of months at my hostel's address and I did so in April too. The reason for not subscribing is my uncertain address. Out of curiosity, I started bugging the warden from the 1st of May. Seeing the May issue at a local newsstand on 5th of the month, while my copy had not yet arrived made me really anxious. I had to vacate my hostel room and shift to a nearby PG (cannot not go home because of summer project) the next day. Before leaving, I requested the warden and made sure that he would receive my courier. Upon enquiring, when I got a negative response on 12th May, I lost my patience and dropped a mail to help@thinkdigit.com inquiring about the status. Same evening I received an SMS, from the courier company stating, that my courier was not delivered / accepted - including a number to call for further assistance . Since it was 7 pm (after office hours), I called the courier service first thing next morning. The information I got was horrifying, they asked me to collect it from their head-office (Mahipalpur, New Delhi) or they would send it back to Mumbai. I buckled up, stuffed April's issue of Digit (especially Digit Mini), which I had not been able to read completely because of the exams, a bottle of water and a packet of biscuits in my bag and set off for Mahipalpur.

Although I have been living in Noida for 2 yrs now, I am not familiar with most of Delhi. I took directions from the local guardian and Google Maps, and reached the courier office by foot.

At the courier office, I was informed, that after being unable make the delivery, the courier boy had called me up but my cellphone was unreachable and even I had tried desperately to call the number in that SMS. Perhaps, it happened so because I, a Digitan had to go on this 6 hour digi-venture using clean/green transportation modes, for Digit, with Digit and get a nice tale to write to you about, in my first-to-be-published letter.

Anuvrat Parashar

d Ok this got us a few laughs at work, but travelling green is a great idea. You should probably share your story on the iThinkGreen community of Digit, which revolves around like-minded people who are perpetually looking out for greener ways to do things.

Siddharth

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Meet some NORTON INNER CIRCLE members



Name:
Nutan Khimasiya
Age:
26
Profession:
Lecturer

Your views on NIC Program
Norton inner circle program is very informative as we really get to know all the features and upgrades done compared to the earlier version.
Also being a part of inner circle I like testing all your beta products.

Your views on NIC Events
NIC events are nicely organized and it's fun to attend these.

Why would you recommend NIC to others?
As Norton is cool, user friendly and gives you all the features that you expect from an antivirus. It's really trendy and fashionable. e.g. the flipping of the main screen to the performance screen and the activity map of Norton 2011.
Also, the support is very good.
As an NIC member, you can get your hands on the products early. It's good to know what's happening in the world of viruses.



Name:
Kusum Kumar Dey
Age:
27
Profession:
IT Marketing

Your views on NIC Program
I believe the NIC Program is really creative and is a wonderful idea. The community helps us understand the product and features in advance, and seeks our feedback and ideas.

Your views on NIC Events
This is a very good initiative, NIC events gave us an opportunity to meet the Norton development team directly who shared their ideas behind different product features.

Why would you recommend NIC to others?
Over the last 4 quarters, it has been a wonderful association where we've achieved our objectives. Through this community, I have access to real time updates on key features and upcoming products from the Norton team.
I must compliment Norton Inner Circle (NIC) for the excellent communication and association.



Name:
Pravin Salvi
Age:
29
Profession:
VP – Business Development

Your views on NIC Program
It's a unique program, where Symantec is trying to bring in people from different professions together, educate them on the need of IT security in their personal and professional life and share their practical experience and feedback on its products.

Your views on NIC Events
I feel lucky to be a part of such a professionally managed program. The best part is that we get to meet and interact with people behind the success of world-class security products.

Why would you recommend NIC to others?
Being a part of the NIC team means being updated with the latest security treats, not to forget the fun and excitement in the events.



Name:
Venkatasubramanian R
Age:
28
Profession:
Software Engineer

Your views on NIC Program
It's a very good initiative to bridge the gap between the corporate and the end user. It gives the hope to end users like us, that every single penny we pay is spent in a good way and there's always someone to help us when needed.

Your views on NIC Events
It's really great and a good chance to interact with different kinds of people in diverse fields. We get a clear picture about the product we are going to use.

Why would you recommend NIC to others?
When we get a Norton product it's an unwritten rule that we are free from threats. I never worry about any threats in my laptop because I know there is always a bunch of people working round the clock to let me enjoy peaceful sleep.



Name:
Noopur Julka
Age:
23
Profession:
Engineer,
Java Professional

Your views on NIC Program
A very good initiative by Norton to get all Norton followers under one roof for discussing and testing new developments

Your views on NIC Events
Amazing program and it's good to see the community now on facebook. Feels connected! As far as NIC events are concerned, it's very informative.
The Norton launch 2010 at Taj, Mumbai was nicely arranged and people such as David Hall and Gaurav Kanwal were really very helpful.
I like the amount of research Norton puts in to every launch.

Why would you recommend NIC to others?
As it's an extension of the Norton family.

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Subtract the page number of the previous clue from the page number of this clue. Then add the first two digits of the price of the AMD Phenon featured in the bazaar section. Add the number in the title of the last regular feature in the Digit magazine to this figure, subtract 1 and flip over to that page.

A Leopard, Fox and a Lynx?

It's the age of carnivores in the news

Steam comes to Mac OS

Gaming which has been the domain of Microsoft Windows for far too long, has got a huge boost with the launch of the Steam Client for Mac OS X.

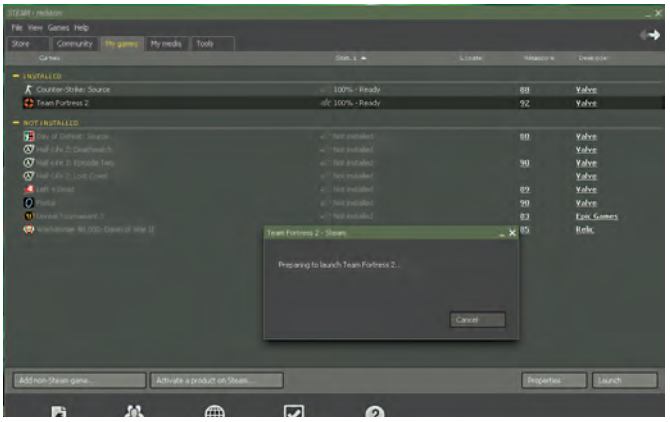
Steam, a product by Valve, the creators of the Half-Life series of games— is one of the most popular platforms of game distribution, and its availability on Mac OS is a good sign of the future of cross-platform gaming.

With the launch just a while back, already a large number of games are being made available for Mac OS including those based on Valve's Source engine which powers their Half-Life series of games. For Mac OS X, the Source engine uses Open GL instead of Direct X, and has made it possible for Mac Steam users to play games such as Left 4 Dead, Left 4 Dead 2, Counter-Strike: Source, and Half-Life series games. Many games such as Civilization IV and World of Goo are also available.

Portal, a brilliant first person puzzle game which has been met with wide critical acclaim, is was being offered for free till 24th of May 2010 in order to promote Steam for this new platform.

Since Steam is a digital distribution platform, a user who has once paid for a copy of a game for Windows, can simply install Steam on Mac OS and download the Mac version of the game.

People poking into the engine have found traces of evidence in the Steam application install and the website that the platform might be heading to Linux soon, although Valve has not commented on this.



Steam running on a Mac OS X 'Snow Leopard' system

It is highly likely considering that the OpenGL based Source engine and the similar Unixy core of Mac OS and Linux.

Mozilla shares its vision for Firefox 4

Firefox is one of the most heartening of success stories of open source, up there with MySQL and Apache. It has managed to break Internet Explorer's synonymy of Internet with Internet Explorer. So when Mozilla shares details of any new version, it is bound to be something exciting.

Of late, Firefox has fallen behind in speed with Chrome 4 (now 5.. no, wait 6!), Safari 4 and Opera 10.5 taking the lead. Being far ahead of IE 8 is no consolation, and with IE9 posting slightly better scores in JavaScript tests than Firefox 3.5, Mozilla has reason to worry. The good thing is that Mozilla is already working its way to the top.

While one many argue that increasing the speed of the browser beyond a point doesn't help, it is clearly the way the future lies. Mozilla knows this and is already working on a new JavaScript engine, Jager-Monkey which takes the best features of Firefox's Trace-Monkey and WebKit's Nitro engine to create an uberfast JavaScript engine.

Firefox 4 will also place an emphasis on reducing the chrome of the browser (the UI elements) slimming down the browser to a more Google Chrome-like look. Firefox 4 will have a completely new visual look, one which makes ample use of Windows Vista and 7's Aero effects.

Firefox 4 will also have some amazing new features such as application tabs (which will work like Chrome pinned tabs), a new addon manager, integrated developer tools and better HTML5 support.

Those waiting for 3.7, there is both good news and bad. While Firefox 3.7 will be dropped in favor Firefox 4, out-of-process plugins, one of the most awaited features of 3.7 will come with Firefox 3.6.4 due shortly. Out of process plugins stabilize the browser, ensuring that it doesn't crash even if a plugin crashes.

Diaspora brings social power to the people

Whether you comfortable with the recent changes in Facebook or not, one thing is for sure, social networks run on the basis of your personal data, yet, you are not the one in control of it. Building up a profile and connections in any social network takes time, and when you encounter such changes that you are not comfortable with, what do you do? On one hand, you are not comfortable



Firefox 4 for Windows Mockup

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Crack the code
There is a prominently outdated software in the Audio section of one of the DVDs. Subtract 90 from the version number after the decimal point. Add one to it, and flip to that page number

with operating there anymore, and on the other hand you have so much social context built up that you don't want to just abandon.

It is clear that a new system is needed, and Diaspora might be the answer. This new project aims to make the social web decentralized, giving control of information to the user instead of vesting it with a central authority.

While the project is currently in its funding stages, and is only expected to be released in September this year, it is a brilliant concept indeed. Diaspora is a web application that one would be able to install on their own server, and would allow the same kind of connectivity that one gets from Facebook.

Diaspora servers, called "seeds" — Diaspora means the movement of seeds — will be able to securely share your private photos, videos and other data; they will also allow you to do send the same kind of updates you send right now, all securely done using encryption. You will be able to pull in and recover your data from current social networking services, and consolidate in one place which is in your control. While Diaspora will be open source under the a GPL, the team behind Diaspora plans to provide Diaspora hosting much like the WordPress hosting service for the open source blogging platform.

The project which was aiming for a humble $10,000 in order to fund its progress has by now reached over 10 times its goal at near $180,000 last we checked. Clearly people are enthusiastic about the implications of controlling their own data.

Canonical Ubuntu 10.04 and beyond

Ubuntu's latest distribution has been released, and for the first time perhaps there is more discussion over the theme of the OS than the features themselves. Many distros based on Ubuntu are accusing it of being a bad parent, by neglecting long standing bugs, and focusing instead of the kind of changes no one would want.



Ubuntu's Software Center

Whatever they may say, Ubuntu is one of the few distributions which has actually managed to gain appeal as a desktop distribution, and managed to get itself preinstalled on laptops and netbooks. We had a conversation with Mr Prakash Advani, Asia Pacific Head, Ubuntu. He shared some of his thoughts about the latest release. We questioned him about some of the details of the new changes in 10.04 and Canonical's role in India.

Ubuntu must be given credit here, for sticking to its mission of being a simple and easy Linux version for everyone and Ubuntu 10.04 is no less. This new version released on 29th April 2010 and brought with it for the first time, a refreshing new look and feel. Not only Ubuntu, but Canonical itself has changed its paradigm. Even so, Ubuntu's first focus is on the user, and making things as simple for them as possible. While the change in theme was mostly welcome, some people were not so appreciative of the most jarring change in the new theme: the relocation of the window minimize, maximize and close buttons to the left of the window instead of the right, making it similar to the Mac rather than Windows.

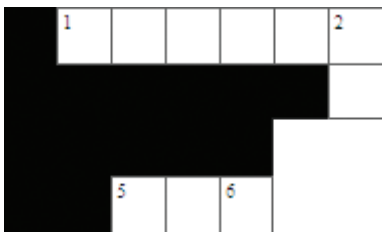
Of course, we asked Mr Advani about the new theme, and why Canonical was trying to emulate the Mac while trying to entice users from Windows, and why such a change was introduced in a Long Term Service release. Advani's response was clear, Canonical is not competing with Microsoft, they are simply trying to make the best and simplest OS out there.

Ubuntu One was a service introduced with Ubuntu 9.10 and improved in 10.04. Ubuntu One is a Canonical-operated service which is comparable to DropBox and other file syncing and storage services. It allows users to synchronize files from their desktop to the Ubuntu One server, which provides 2 GB free storage — with more available for a monthly fee — and was integrated with Ubuntu 9.10. New features in the service include the ability to synchronize your local contacts from Evolution or Thunderbird and notes in Tomboy. Synchronizing with mobile phones is also available in beta for paid accounts.

This service was criticized for not having an open source server. However, the client application is open source, and so is the specification for the syncing protocol, allowing anyone to write their own server. Advani pointed out that few people would be interested in setting up their own server, and if Ubuntu One didn' suit them they could always use third party services such as DropBox. We asked what Canonical was doing to spread Linux awareness in schools so students can be exposed and used to the new environment from the start.

He told us that the Assam government recently gave 28,000 Ubuntu based computers to students. He also claimed that there were more of such ventures, but the participants would reveal the information at their own discretion.

It is heartening to learn that Indian students are being exposed to the open source culture; of all countries, perhaps we have the most to gain from this. It seems Canonical has good things planned, we can't wait till the first beta of Ubuntu 10.10!



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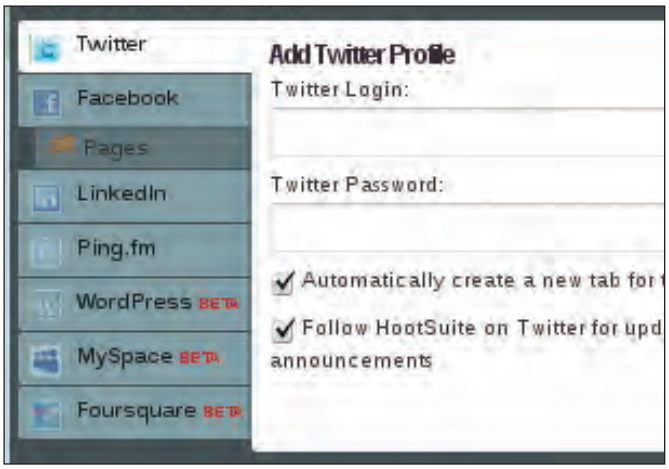
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HootSuite

For all the social networking junkies out there, the search for the most powerful social networking app is over - introducing the Hootsuite (www.hootsuite.com). We should probably be discussing the smaller list of what you can't do with this awesome web application!

HootSuite is an online service that integrates all your social networking accounts from Twitter, Facebook, LinkedIn, Ping.fm, MySpace, WordPress, and Foursquare. It can even connect to multiple accounts from each service. It is not uncommon to have multiple social networking accounts today; there are those who stick to Facebook or Twitter or Orkut, but chances are you have accounts on most of them. If you have your own blog or website, or you work for a company which has one, you probably have Twitter accounts / Facebook pages for those as well.



Connecting to social networks on HootSuite

HootSuite makes managing such accounts very easy. Not only can you add multiple accounts, but you can add multiple team members to your social networking accounts so they can post messages on your behalf. This kind of setup is perfect for organizations which want multiple people to post on their Twitter account, since Twitter as of now does not provide such functionality – although it is planned.

For a web application, HootSuite has a very rich interface, with TweetDeck-like columns, and mouse-over actions for messages. It also adds another dimension by adding tabs above columns, so you can have groups of columns arranged inside tabs. By default it creates a new tab for each social networking account you add, however you are free to mix and match.

Each tab can have its own refresh rate so more important active tabs can get greater attention. You can even set a tab to update manually if you want. Tabs, and columns can both be rearranged easily by simply dragging and dropping, and column widths can be changed so that you don't need to scroll horizontally. The UI is very flexible and you can often forget that you are using a web-application in a browser.

HootSuite offers many features you'll find in most desktop and web Twitter / social networking clients, such as shrinking Tweets, auto-shortening URLs, adding images to tweets, etc. Some of its best features of the app though are those not found in other Twitter cli-

Google TV: TV meets Web

Google has finally made its foray from the small screen to the big screen

Google TV is an effort to finally bring the Web to the TV set. It' certainly not a new idea, but till now web sites have never been designed with TV sets in mind, limiting the usefulness of such devices.

What Google wants to bring to the TV experience, is the power and flexibility of the web, but in a form factor that can really be enjoyed on TV screens. The aim is to make watching your TV a social experience, just like web videos. Nowadays we want to watch stuff which has a little more personal relevance, stuff that our friends like and post.

Google TV also brings the power of search to your TV set. With Google TV you can simply search for what you are looking for in the embedded browser, instead of changing channels.



Google TV will be based on the open-source Android OS with the Google Chrome browser. Google will soon release a TV SDK for developing Android applications designed for TV sets, and the Android Market shall host such applications. Google is encouraging developers to start considering TVs as possible web interfaces for websites as well.

Google is also embracing Adobe Flash in their Chrome browser for TVs and set-tops, which will feature Adobe Flash Player 10.1 with support for hardware accelerated playback of video content on the web.

To bring this to realisation, Google has tied up with Sony, which will be making TV sets and Blu-Ray players which include support for Google TV; and Logitech, which will release set-top boxes for use with current TVs.

Television needed more than just a push up in the resolution of the content, but also the quality and relevance. Google TV seems to be an effort which gives it just the right push.

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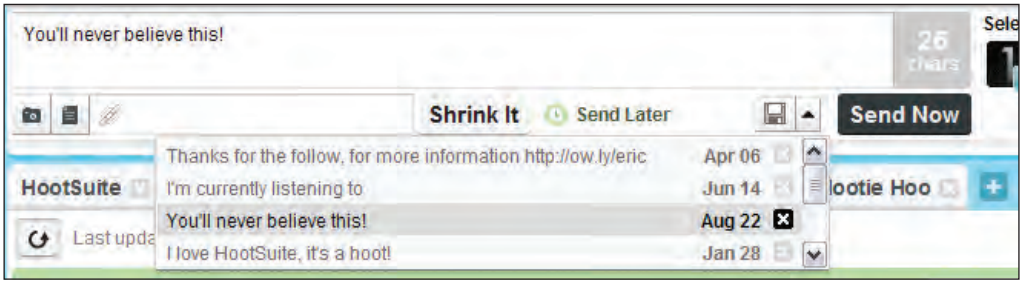
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HootSuite can store multiple draft messages for easy reuse.

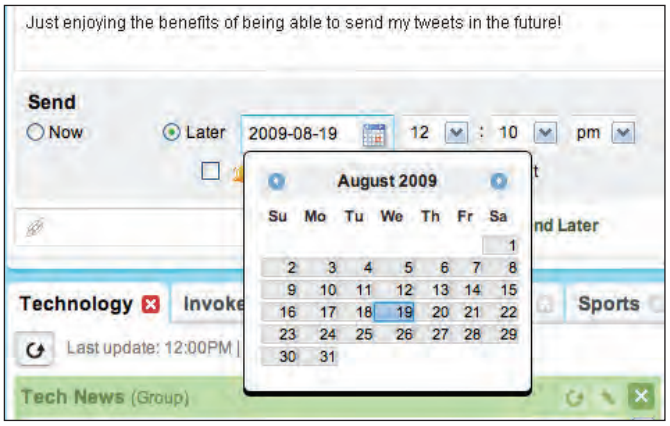
ents: delayed messages, drafts, statistics, RSS feeds, and collaboration. Most of these are features which are not very feasible with desktop clients.

Drafts, as their name suggests are messages which are saved in your account but not sent. You might question their utility considering that a Twitter message is as short as 140 characters. Who needs to keep a draft of 140 characters! However when you have fewer words to send, you need to pick them more wisely. Also, if you need to send similar tweets again and again, drafts can save you the trouble of retyping. Remember that other networks don't have a 140-character limit for drafts.

Delayed messages are another awesome feature. They let you queue up messages for your social networking services, to be sent at a scheduled time in the future. So if you are having a contest on a social networking site and need to post a question every hour, this can be of immense use. Of course you can also use this to schedule messages throughout 24 hours to make it seem like you never sleep!

HootSuite includes its own URL shortener, and if you use its shortening feature, it can collect statistics on clicks and show them to you.

The RSS feature in HootSuite is similar to the one you find in TwitterFeed: it's a service with the sole purpose of posting



You can schedule your social messages for any time, so you needn't be online when the message needs to be sent.

updates to supported social networking accounts, in sync with your RSS feed. The collaborative features of HootSuite, as we mentioned earlier, allow you to set up multiple team members for social networking accounts, allowing all of them to post messages to your social networking accounts without needing them to know its password – keeping you in control. HootSuite can also automatically prepend your initials to messages you send as a team member, so people know where the message is coming from. Finally, the assignments feature lets you assign tasks to team members in HootSuite; so you could assign specific people to respond to help messages on Twitter, or to respond to a complaint or query.

HootSuite is definitely one of the most powerful, and flexible social networking applications out there, and the fact that it is a browser application just means that it it accessible from anywhere. Unlike desktop applications, you are not lost when you are not on your own computer with the application of your choice installed. The only complaint we have with it is that the plethora of features can be intimidating for some users. However, for those who need the features it is a boon. For anyone using or handling multiple social networking accounts, HootSuite is a must-try.

Make books off Wikipedia

PediaPress (www.pediapress.com) is a Germany based WikiMedia partner site, enabling all the wiki users (yes, even the unregistered ones) to have print support for the Wikipedia articles. If you are doing some researches on Wikipedia – planing a tour, may be – and want the results later in your hand when you won't have internet access, or just prefer paper, then PediaPress is the way to go.

Wikipedia offers a book creation feature: look for `Create a book` in the left Print/Export pane. All you have to do is to add the articles of your choice as the chapter of the book; then after going though the book manager (adding title, adding subtitle, rearranging pages, etc.), you have the book ready. Now, choose `Order as a printed book` to get redirected to PediaPress website and there you can customize the cover page, cover images etc., or add your name as the author of the book.

The printed book will cost you approx $10 – or about Rs. 500, and you get a 21.6 x 14 cm printed book shipped to you in days. You will also be supporting the WikiMedia foundation, as 10 per cent of the profit goes directly to that organisation.

There are options to download a soft copy as PDF or ODF from Wikipedia itself; but as we said earlier, this is for the ones who prefer it old school, and are still in love with paper.

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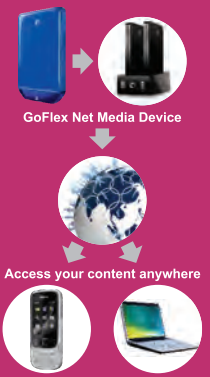
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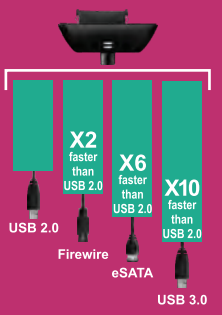
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HP acquires Palm

When there were rumours that Palm was looking for a buyer, Palm fans were worried about the future of their favourite mobile devices, and Palm's innovative webOS. Fortunately, HP has bought Palm for a whopping $1.2 billion. With HP buying Palm, their fears have been quenched, as not only is the future of webOS in good hands, but HP has already stated that they have big plans for webOS.

HP is expected to launch a webOS-based tablet device in the third quarter of this year. The new tablet called "Hurricane" is expected to serve as a replacement for the HP Slate PC that they had announced at CES 2010. The device was in fact introduced by Microsoft as a next generation multi-touch device featuring Windows 7, taking advantage of the new multi-touch features of the OS, and was met with underwhelming response. Recently however, rumours have been going around that the device was to have come out this June may have been cancelled or at least put on hold. What better to replace it than a webOS device?

HP has gained a valuable asset in webOS, and should use it to the best of its potential. Unfortunately, the potential of webOS is severely limited by the lack of applications for the OS. With under 2000 apps in the store, it's a long way ahead to catch up to iPhone OS or even Android. With the support of HP behind it though, they might just make it.

WHO declares research "inconclusive"

Worried that prolonged use of your Mobile phone may be giving you brain cancer? Or its long-term storage in your pocket might be the contributing factor to all your acid reflux?

Well, stop worrying! Or don't?

The 10-year long study with over 13,000 participants, has reached its conclusion, the WHO has declared that the study – that was the largest of its kind – has proved inconclusive of any link between brain cancer and mobile phone usage. The study itself was flawed, considering that the participants with a degenerative brain disorder were asked to recall from their faltering memory, instances of mobile phone use.

While the study has been criticised for being funded by mobile phone companies, there has been no biological framework explaining such a link in the first place. More affirming still is the fact that countries which have some of the highest rates of mobile phone usage do not have higher occurrences of brain cancer.

Instead of trying to disprove theories connecting brain cancer and mobile phone usage, which mostly only find support in chain email forwards, one might think that, people would move on and work on discovering a cure or spending money on AIDS research. Especially with this study behind us. Sadly, though, another study is already underway, with a bigger scope of 2,50,000 recruits, to be conducted over 30 years. Hopefully when humanity has finally moved onto its abode at planet Klyxgon 42, and has had mobile phones embedded in their brains, we would have an answer to this most curious of puzzles.





Whether you're on the road, in the air, or simply on-the-go, Buffalo Technology's MediaStation 8x Ultra-Slim Portable DVD Writer gives you the flexibility to add CD and DVD reading/writing capabilities to your ultra-slim laptop, netbook, or older laptop without an internal drive. With DVD burning speeds up to 8X, the MediaStation won't slow you down. And because it's USB 2.0 powered, it can go wherever you and your laptop go. The sky's the limit.

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Motorola's Shadow:
Motorola is bringing it's next phone "SHADOW" into the market, as the successor for it's DROID phone.

Samsung Wave
Samsung launches Wave, featuring an AMOLED screen and the open Bada OS



Android overtakes iPhone

Finally the prediction that one day the Android OS would overtake iPhone OS has come true!

Still, it is more of a testament to the appeal of the iPhone, that it has taken dozens of devices by featuring the same Android Operating System to overtake the iPhone OS – which is only offered on three smartphone devices, the iPhone 2G, the iPhone 3G, and the iPhone 3GS.

RIM still maintains its position though, and with a share of 36% it is clear ahead of both Android and iPhone OS. Android is now second in place with a share of 28%, while the iPhone OS lags at 21%.

While the news isn' unexpected – in fact it was always a matter of when rather than if – the fact that it has happened so fast is impressive. It has been less than 2 years since the release of the first version of Android, which was used on very few devices. It is only with the release of Android 1.5 that the OS started appearing on devices.

In this short history, Android has gone from a few HTC phones to over two dozen phones, from half a dozen manufacturers, and with tablet and even netbook devices on the way. There is no stopping Android now!

Aircel and ibibo introduce social gaming for mobiles

Aircel, which is a joint venture between Maxis Communications Berhad of Malaysia and Sindya Securities & Investments Private Limited and which is India' fifth largest GSM mobile service provider announced on 17th May that they will be bringing Social Gaming to Mobile Customers for the first time in India. This service will allow the young gaming enthusiasts in our country to play "reat Indian Parking wars"on ibibo.com gaming website through their WAP-enabled mobile phones.

Aircel and ibibo.com will soon be offering Great Indian Parking wars on Aircel' Pocket Internet service and are planning to launch more games in the future. The customers will be able to log on to these games via their Facebook ID or ibibo.com ID to gain access to play Great Indian Parking wars.

Mr. Gurdeep Singh, COO, Aircel said, "With first social gaming on your mobile phones, the intent is to drive innovation at the convergence of games and social platforms while you are on the move. It is our endeavour to offer our consumers exciting and engaging opportunities such as gaming and staying socially connected anytime, anywhere.

Great Indian Parking Wars will allow the users to add friends to their network, buy new cars, issue challans etc. to cars parked on their street, block parking areas on others'streets and lots of such interesting in-game activities which makes this game more interesting. The game does not require the user to download anything and are free-to-play. Users can play this game on their WAP-enabled handsets via accessing Aircel Pocket Internet from Aircel WAP-enabled mobile phones.

FroYo is here

Android 2.2 or FroYo (Frozen Yogurt) was unveiled by Google at their IO 2010, event with a focus on improving the core of the OS. Major updates in Android 2.2 improve the performance of applications. First of all, there is the new Dalvik JIT compiler for Android applications with which Google expects applications on Android 2.2 to get a boost of two to five times! Secondly, Google has ported their V8 engine to Android 2.2. This, according to Google, could improve the performance of JavaScript code in the browser by as much as two to three times. Android 2.2. also includes support for Flash 10.1 and only devices running Android 2.2 will be able to run full Flash content.

For enterprise customers, Android 2.2 has some exciting new features for Exchange. Now the OS has improved security, support for Exchange Calendars, auto-discovery of settings, auto-completing email addresses from the directory, and best of all, support for remote wipes in case the instrument is lost.

Tethering support is much improved as well, and an Android phone will be able to act as a Wi-Fi hotspot, giving up to eight other devices wireless internet access.

Android 2.2 features some new platform technologies as well, new APIs introduced in FroYo will enable applications to participate in the data backup and restore, so an application can be backed up from one device and restored to another; developers can include support for installing apps to an SD card, in which case a user could move it back and forth from the phone memory or the SD card.

Besides these, there have been some visual updates. The OS now features a new camera and gallery UI, and a revamped home screen.

Overall this release seems to have evolved the Android platform significantly despite being a simple point release.

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Parrot AR Drone

The Parrot AR booth was one of the spellbinding set ups at CES 2010. The iPhone controlled robotic drone displayed immaculate control, and was one of the more out of the box applications of technology. The drone has two cameras, and is on it's way to becoming a commercial product. You should be able to pick these drones up soon, at least order them on line, but there are no details on pricing available yet. There is however, a framework for developers to start coding in applications for the drone.



Vuzix iWear Wrap310

The Wrap310 is the latest in the line of video eyewear by Vuzix. The Wrap310 can display video in the 16:9 widescreen format, using a conventional iPhone, iPod, video camera, gaming console, or almost any other device as the video source. The glasses are 3D compliant, and can display both anaglyphic as well as side-by-side displays. The latter one would require you to cross eyes and look at a phantom image where your nose should be, but hey, it is a feature. The glasses are an equivalent of a 55-inch screen watched at the standard distance of 10 feet. Yours for only $350 (Rs. 15,534).

Gates Light and Motion Sunray 2000x

The Gates Light and Motion Sunray kit is a set of video lights for artificial illumination. These specialized gadgets are for photography enthusiasts or professionals, who work underwater. If you are going snorkelling, or diving and want to shine some light in the hard to reach shadows, these pair can put out 2000 lumens of light each. The kit is eco-friendly, as it uses LEDs as the light source. The kit does not come for cheap, at $3,800 (Rs. 1,68,660).





Hm Armed Forces Night Vision

This gadget is really a toy meant for young kids, but the fact that it uses real night vision technology, to enable viewing up to 15 metres in pitch darkness makes it very desirable. The two scopes are a little scary though, and the large red infrared camera on the top just makes the whole device look like it has come back in time from the next century. You can gift a kid one of these for Rs 4,444. The range of toys, along with other "spyware" for kids is available at www.toys2buy.co.uk.





iGo Anywhere laptop charger

This portable charger by iGo is meant for people on the move, and designed to easily power a laptop or a netbook. An aspect of the green design was to make sure that the laptop is not over-charged, so the charger delivers only as much electricity as necessary. Also, since the charger works independently of the grid, it can be used around the world, wherever the sun shines, without the need to carry additional plugs or voltage converters. There are no visible solar elements on the surface, which makes the design a little more attractive. The charger is a steal at $125 (Rs. 5,550).

Hexbug Nano

Hexbugs are small, cheap nanorobotic creatures. These hexbugs come in many shapes and colours. There are inchworms, crabs and ants available. These robotic bugs move around like real insects, react to light and sounds, and each other. They are simple, effective toys for adults, children, and even pets. Buyers can pick up a swarm, or just single hexbugs. If you feel like geeking out a bit, you can get into the code and change the behavior to suit your requirement. The hexbugs are available at www.hexbug.com, along with accessories such as batteries and habitats.



ASUS EeeKeyboard

ASUS threw out a bizarre new form factor for the personal computer, with an entire computer being embedded within the keyboard. There is an integrated vertical touchscreen at the side, used as a display. We feel it would have been better to locate the screen in the middle of the keyboard. The device runs Windows XP, and the UI looks like a custom shell. The keyboard can interface with Wi-Fi hotspots, as well as the ethernet, but it is unclear if the keyboard can connect to a regular PC. Pre-orders of the device are available from Amazon for a paltry $600 (Rs. 26,640).

Crack the code
1 A company that specialises in trickle wireless energy

The Famous Five!

We got an overwhelming response for the Digit Idol contest. Hundreds of readers got back to us, telling us why they thought they stood a chance of winning the coveted title of Digit Idol. What followed was the hurculean task of bringing down 400 contestants to one – we failed! However, we could shortlist the top 30 down to five and we couldn't narrow this further. Here it is then – the most idolising five...idolised!

Dr. Bhutani
Karnal



A 52 year old, Dr. Bhutani is a practicing Cardio-Respiratory Physician, and yet he can easily outsmart many of his "Tech Expert" friends. A Digit fan to the core, he says "All credit goes to Digit, it's been a true Technology Navigator for me, and has helped me master the basics of computing and technology. Digit played an integral role in transforming me from routine technology user, to technology geek." What's also amazing is that he's carefully preserved each and every copy of the magazine till date, from the very first issue, all the Fast Tracks, the DVDs and even the much older CDs.

"My Digit DVD collection has always been a software repertoire for my friends and myself. I also access the ThinkDigit Forum regularly to keep myself updated." When we called up the jovial doctor, he informed us that he has several computers. On one system he still runs Windows 3.11 on which he enjoys playing his collection of old DOS games! "My old Digit CD collection comes in handy if I want to install some really old app", he said to us.

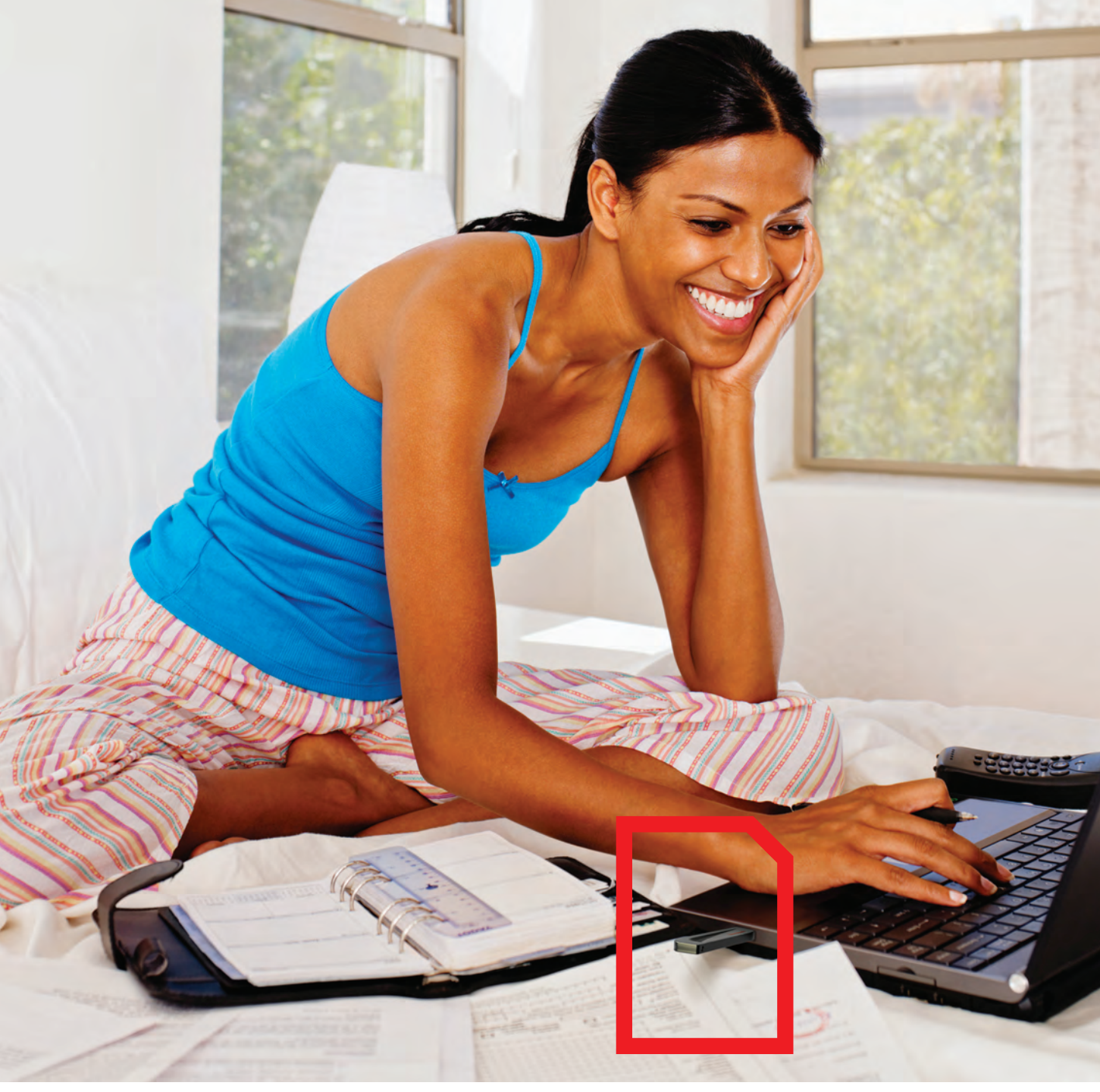
"Furthermore, I have always subscribed to Digit so that I don't miss even a single copy. I buy no gadget or technology related product without first referring to the tests and reviews conducted by Digit. Thanks to Digit for making my tech-life easier, simpler, and happier!"

Well, it was our pleasure Dr. Bhutani. Glad to have you on board as a Digit Idol.

Abhineet Mittal
Moradabad



Abhineet Mittal has done a lot and it's all thanks to digit he says. "I was among the thousands of tech enthusiasts who surf the web to know and learn things. The problem I used to face was what do I look for? But the day I got my hands on Digit, it was not the same anymore. My life changed from that day. Digit made learning new things very easy for me. And no doubt, like every Digit reader, I soon got the geek status among almost everyone I know." What's more amazing is, on reading Digit, he got into web designing as a hobby and even as a student started a designing firm on the side. Using his knowledge he installed a closed group social networking website for his college. Inspired by Digit he started a print newsletter in his college which he plans to expand to his city. Looks like we're in for some competition!



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Crack the code

The prototype build of Space Invaders had what creatures instead of the invaders?

Abhishek has been reading Digit magazine since October 2005. He was deeply influenced by our green tech issue and the consecutive iThinkGreen initiative on Facebook, so much so that he's even changed his facebook profile picture to the ithinkgreen logo. "I am planning to organize few competitions in my school during festival season where I am looking to create awareness among students about importance of going Green" If anything, Abhishek can be our Green Idol. He posts regularly at Facebook.com/ithinkgreen and has even created some logos for the page. To conclude he says "I support the Open Source and I am against Piracy. I share the Open Source Software with my friends. Some of them have stopped using pirated software. It feels great to be the part of Digit Community."



Ankit Srivastava
Indore



Coming from a small town in UP called Basti, Ankit was always a shy individual. That was until he found Digit. "Digit answered my questions before I even asked and so I answered them for my friends. My life was prone to ups and downs and I was always an average performer until I found what I am good at. I always had interest in computers but never knew it would turn into my strength and finally a career, until I stumbled on to Digit." he says. Ankit is now the quintessential techie. He's been reading Digit for the last several years. When we called him, he was at work and came across as a confident individual who knows what he's talking about. He helped his company in a bulk purchase decision involving laptops. His advice was sought and he rightly opined that for a constant price point they should rather go in for more RAM than minor increments in clock speed.

Devrath N D
Harihar



A lot of our Digit readers can identify with our next idol. Devrath says he has been a subscriber right from the first issue, when he was in the 3rd standard! "The Tech geek status that I enjoy within my family and friends, goes completely to Digit magazine and the Fast Track. Only because of Digit I could be two times state finalist of TCS Rural IT Quiz. I have my blog (http://devrathnd.blogspot.com/), web site, and I am a very enthusiastic and power PC user. Thank you Digit"





The Jacaranda with its characteristic flowers

The Digit Tree Project

Calculating and offsetting your personal carbon footprint can be a daunting task. We demystify the calculations for you, and give you a simple solution as well

Aditya Madanapalle
aditya.madanapalle@thinkdigit.com

The green fever isn't a new phenomenon. Everyone from the Hollywood stars to popular politicians want to be part of it. India in comparison hasn't jumped on that bandwagon just yet – mostly because we are a pretty environmentally friendly country to begin with. Technology, even the basics such as telephonic connectivity and electricity are still to reach some rural areas. Apart from gases emitted by wheat and rice farms, as well as animals such as cows, the carbon footprint of India is lower than the more developed countries. However, that does not mean that we can absolve ourselves of all responsibility towards the environment. Whether we like it or not, we are stuck with technology that is harmful to the environment, and the simplest way to offset the damage is to plant trees. A lot of information has been collected on the processes that go into making technology, and the patterns of the usage of this technology. However, a lot of confusion in measuring or calculating the extent of the damage technology use causes to the environment remains. Measuring the methods used to offset this damage is also problematic. This is our attempt to distill the wealth of information, into something that is clear and simple.



Carbon footprint

Resources

These sites were used for the calculations
www.begreennow.com
www.carbonfootprint.com
www.erasecarbonfootprint.com
www.michaelbluejay.com
www.sourcemap.org

How is environmental damage calculated?

The major concern of environmentalists is a phenomenon known as global warming. Global warming is a by product of the emission of greenhouse gases into the atmosphere. The major culprit here is carbon dioxide (CO_2). CO_2 traps excess heat in the atmosphere, by not allowing heat to bounce off the surface of the earth and escape into space. There are scientists who claim that global warming is not happening at all, or is a natural part of longer cycles of the weather, that we have not yet fully understood. Additonally, there is plenty of evidence that suggests that greenhouse gases are actually good for plant life (that's why it is called a greenhouse gas in the first place). However, our industrial-technological society is harming or at least changing the environment (at least around the urban areas) and CO_2 is a convenient unit to measure this impact. CO_2 emissions are easy to calculate, and it is also possible to reduce all activity to the amount of CO_2 released into the atmosphere. CO_2 emissions are a global unit used to calculate greenhouse gas emissions. This unit is called a "carbon credit". A single carbon credit is one ton of CO_2 in the atmosphere, or equivalent greenhouse gases or any other process used in an environmentally damaging activity. The monetary value of a carbon credit changes depending on the location. Basically, it is the amount of money needed to set up something that can absorb one carbon credit. About the only effective absorber of CO_2 from the atmosphere is a tree, which is why we are

Green Ahmedabad
A spanking new 16,000 sq m oxygen park is opening up in Ahmedabad to make the city greener

Are Dams green?
India and China remain the only countries to continue to build Dams. This is because old engineering tech is still reaching Asia

giving away seeds of trees with our issue. There are agencies that work exclusively with carbon offsetting, which is a process by which you can pay a company to plant the requisite amount of trees to offset the amount of damage you have done to the environment. These are often taken up on a large scale, where thousands of trees are planted at once. We can contribute by personally offsetting the damage that our usage does. To do this, we must know exactly how much damage we inflict.

How much damage do gadgets inflict?

For every purchase we make, there is a lot of garbage, electricity consumption and greenhouse gas emission upstream. This means that when we pick up a package from a store, we are purchasing something that has already damaged the environment a lot, before it has even been used. The mining of aluminum and tin that is used in our gadgets leaves behind a large carbon footprint. Acrylonitrile butadiene styrene (ABS) is a type of thermoplastic commonly used in gadgets, which is also pretty damaging. Small amounts of cadmium, copper, steel and other materials used in a gadget come from large industries that pollute the earth in many ways. These raw materials are transported around the world, often across countries, to be converted into components of devices. The components are often shipped elsewhere for assembly. After the assembly, the devices are packaged, then shipped to stores around the world. This process does not include the environmental harm in designing the components, and all the materials used for promotion and advertising purposes.

The companies that commission or handle all these processes, are acutely aware of the carbon footprint that they are leaving behind. If as a user, you are calculating the environmental karma of each and every gadget you own, the processes responsible for bringing the device to you should ideally not be a burden on you. Companies often offset their carbon footprints by purchasing credits that allow them to pollute up to a certain level. Although the process of getting the gadget to you is disruptive, the damage has already been paid for. This cost is a part of the cost of the device itself, so when you try to offset the carbon footprint, you are responsible only for offsetting the disruptive effects of just the usage of a device.

As you will see on the next page, the materials for a single laptop come from about twenty countries around the world.

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Nokia encourages mobile phone users to recycle their old handsets and accessories, **regardless of the brand** and promises to plant a tree for every phone dropped-in during the campaign period in the specified cities.

Nokia has already collected over 3 tons of old phones and accessories a mere **45 days** after the campaign started, and from just **4 cities!**

Do your bit, help save our planet by joining **Planet Ke Rakhwale** Community at **www.planetkerakhwaale.com,** and start recycling today.

CRACK THE CODE

al vlr exsb texq fq qxhbp ql drbpp qeb zlkqbkqp lc qefp ylu rpfkd grpq qeb cobnrbkzv lc ibqqbop fk qeb qbuq? lo tfii vlr exsb ql illh lrq clo hbojfb qeb cold pmv bkzlabo xka rpb qeb qlm pbzobq zlab krjybo ql abzovmq qeb mxpptloa – "gxzhxi" – rpfkd qeb krjybop. You need a frog that's good with numbers, and when you meet it, feed it the number 127.

What goes into making a gadget?



Step 1: Mining
The raw materials required for a device are mined



Step 2: Transport
The mined materials are transported to manufacturing unit



Step 3: Component manufacture
Items like keys, buttons, trackpads etc are made from the raw materials



Step 4: Device assembly
The device is put together in a plant



Step 5: Distribution
The device is distributed to shops

Environmentally sound gadget use

If you are using 500 kWh a month in a four person household in India, your carbon footprint for a month is about 0.42 tons of CO_2 every month. However, lifestyle choices for what you use for cooking, heating and fueling your transportation all affect your over all carbon footprint. When it comes to technology, effective usage of your devices can go a considerable way in reducing your footprint. The basic approaches for effective usage are:



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*For assistance on Nokia products and services, call Nokia Care. Add STD code when dialling from a GSM connection.

5276.2010

Digital Distribution
Digital Distribution is green as it does away with all the packaging. We are not condoning piracy though

Carbon Credit Fraud
Criminals have jumped on to the green bandwagon, the latest exploits of a group in the UK was to sell phantom credits to companies

- Make your devices last long: Future-proofing your purchases, and making them last as long as possible, goes a long way in reducing your carbon footprint. Unfortunately, devices are not made with longevity in mind, and many are manufactured with planned obsolence as a guideline, so that the devices have to be replaced. Many of the higher-end brands, although excruciatingly expensive, often last much longer, and can be used over larger spans of time. High-end speaker systems, mice and keyboards are just some of the devices that can last much longer than the usual life span of two to three years. Ideally, to offset the environmental damage of production and distribution of say a mobile phone, you should be making mobile phone purchases that your grandchildren can use. Since this is not possible, at least buy a mobile phone that you can use for five years.
- Keep your devices disconnected: external hard drives, routers, speakers all consume electricity when they are connected to a power socket, but not used. Taking that trouble of actually switching off the power source will go a long way in making your devices last longer, and reducing the power consumption of all the devices. The biggest "holes" where electricity just gets consumed and wasted are set top boxes, water heaters, and air conditioners.

How laptops are built?

Here is a list of everything that goes into making a typical laptop:

China: ABS, PMMA, Epoxy, PVC, Polyoxymethylene, PP, SBR elastomer, PET, Magnesium, Germanium, Terbium
Russia: Steel, Ferrite, Ruthenium
Chile: Copper
South Korea: Glass, Cadmium
Australia: Nickel, Titanium
Canada: Aluminum, Uranium
South Africa: Cadmium, Chromium, Platinum
Japan: Stainless Steel, Selenium
Brazil: Silicon, Tantalum
Zimbabwe: Lithium
India: Barium
South Africa: Manganese
Congo: Cobalt
Tajikistan: Antimony
Mexico: Bismuth
Khaidarkhan: Mercury
Peru: Indium

Source : souremaps.org



- Take care of your equipment: Hardware gets damaged when used excessively, or devices perform less efficiently after a period of time. For example, if your computer is not fast and responsive, take the time to clean it and get rid of apps you don't need, so that you can make it work without a struggle. Install only the software you want to use, and uninstall ones you are done using. Find ways to effectively use a limited amount of storage (hard disk space), instead of hoarding more and more data. If you have a laptop, use it by connecting it to a power supply and removing the battery – which increases the battery life. Alternatively, you can follow a charge – discharge cycle instead of keeping the laptop plugged in.
- Reduce the usage: plan the amount of time you spend on a computer or the television, and what you are going to do when you are actually using it, instead of wasting time with the equipment turned on. If you are spending too much time with technology, think of ways to spend the same amount of time in activities that do not depend on anything that consumes electricity. Instead of spending time on Facebook, arrange for friends to meet up, or go play a game in a park instead of playing video games for insane amounts of time. If you ever find yourself in front of a terminal, and don't know what to do, turn it off, and think of something else to do – reading a book, or Digit springs to mind.
- Get rid of old technology: reduce the personal use of paper as much as possible. Don't print unless you need to. Reduce the use of wires as much as possible as well. CRT monitors are a big electricity hole, and if you are still using one, it is better to trash it and pick up an LCD monitor instead.

CRACK THE CODE

Spot the Odd Man Out, from this list: Carbon, Magnesium, Sulfur, Iron, Copper, Zinc, Arsenic, Silver, Tin, Antimony, Gold, Mercury, Lead and Bismuth.

[Xe] 4f14 5d10 6s2 6p3

Hint: You will know you have the right answer, if you co-relate the key to MDCCLV.

Your carbon footprint

Depending on your usage, and the gadgets you own, there is still a carbon footprint, that is not offset by anyone. The responsibility for absorbing the emission equivalent of individual usage, will have to be done on a household basis. One person can take steps to offset the usage of the entire family. A carbon footprint of a single household is calculated based on a number of lifestyle choices

This includes the fuel that is used for cooking, the fuel used for the family vehicle, and the energy source



The fast growing Cassia Siamea

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58%
That's the amount by which India's emissions have increased in the last 10 years

used for appliances such as water heaters. As far as technology is concerned, the easiest way to calculate the carbon footprint is to measure the amount of electricity being consumed per month. This can be done by consulting the electricity bill, to calculate the amount of KiloWatt-hours (kWh) used every month. A typical four family household uses between 300 to 500 kWh every month. This can be converted into CO_2 emissions based on the methods used to generate the electricity that is consumed.

Here is a simple table based on different usage scenarios:

Device	Monthly usage	CO_2 over 5 yrs	Number of trees
PC (CRT)	50 kWh	1.2 Tonnes	40/20 – 8/4 hours a day
PC (LCD)	37 kWh	0.6 Tonnes	20/10 – 8/4 hours a day
Laptop	12 kWh	0.3 Tonnes	10/5 – 8/4 hours a day
Netbook	8 kWh	0.2 Tonnes	8/4 – 8/4 hours a day
Mid sized Plasma TV	33 kWh	0.6 Tonnes	20/10 – 5/2.5 hours a day
Mid sized LCD TV	42 kWh	0.6 Tonnes	20/10 – 5/2.5 hours a day
Set top box	7 kWh	0.2 Tonnes	8/4 – 5/2.5 hours a day
PS3	30 kWh	0.5 Tonnes	20/10 – 5/2.5 hours a day
XBOX	29 kWh	0.5 Tonnes	20/10 – 5/2.5 hours a day
Wii	2.8 kWh	0.01 Tonnes	1/0 – 5/2.5 hours a day

- 100 kWh/month : 0.04 carbon credits
- 200 kWh/month : 0.08 carbon credits
- 300 kWh/month : 0.13 carbon credits
- 500 kWh/month : 0.21 carbon credits
- 600 kWh/month : 0.25 carbon credits
- 800 kWh/month : 0.34 carbon credits
- 1000 kWh/month : 0.42 carbon credits
- 1200 kWh/month : 0.50 carbon credits
- 1500 kWh/month : 0.63 carbon credits
- 2000 kWh/month : 0.84 carbon credits

There are many ways to offset this carbon footprint. You can buy carbon credits directly using web services, or you can pay agencies to plant trees for you. A direct approach would be to use the seeds we have provided in this issue, and plant them. As part of our plan of making our surroundings greener, we've bundled a few seeds of the Jacaranda and Cassia Siamea trees in our packaging.

These trees are pretty fast growing, and can grow in many kinds of soil conditions. They are ideal trees for eating up CO_2 from the atmosphere. However, you would need five of these trees to grow for twenty five years before a tonne of CO_2 can be consumed. Initially, the capacity for CO_2 consumption is very low, but this increases over time and the growth of the tree. If the tree lasts for fifty years or more, it can eat up tonnes of CO_2. At the top-right of this page is a ready reckoner for common gadgets, how much electricity they consume per month, and how many trees you need to plant to offset the use for a span of five years.



The Digit Trees

The Digit Trees are among the few trees that grow into full-sized trees from small seeds. There are two kinds of seeds included in the packaging, they are the Jacaranda and the Cassia Siamea. The pretty Jacaranda tree is best known for its bluish purplish flowers, while the Cassia Siamea is known for it's fast growth, and the height, as these trees can easily grow to 30 feet in height. Both trees are easy to plant, and will take root in almost any kind of soil.

Remember the basics

Technology is inherently at odds with nature, in it's current form. It does not need to be like that though, and experts around the world are working on new and innovative ways to create sustainable, cheap and useful technology that can easily reach the entire population of the planet. Despite all the pro-active steps that you might take, there are some elementary principles that still apply to making technology use greener. The 3Rs, Recycle, Re-use and Reduce is a good cornerstone for making sure that you have an essentially green lifestyle. With short shelf lives for most products, and short life cycles as well, most technology products are outdated in a few years. Even if there is a better version of a gadget out there, you do not need to lust after it. There is no shame in using an outdated PMP or an older camera model. At the end of the day, technology is just a tool, a means for achieving a particular end, it is best not to be caught up and mesmerized by the latest developments. Instead, it's just simply greener, and 1337er to boot, to find out new, creative ways to use the older gadgets. Spread the word, use every approach you can, and you can really make a difference.

How to plant the Digit Tree

1 Take a cup measuring about 2-inches in depth and 4 inches in diameter.
2 Put some soft soil in it, but avoid sand.
3 Plant a few seeds about 1 cm below the surface.
4 Water the seeds once daily for a week. Pour sufficient water to keep the soil damp.
5 Keep the cup next to a window sill with decent amount of sunlight. Avoid keeping it under the sun all day.
6 The saplings should sprout in a week or two.
7 Transplant the saplings to a garden and continue watering.

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The Beagleboard
The Beagleboard is a fanless single board computer using ARM processors that has all the capabilities of a modern desktop. More info at beagleboard.org



Arduino
The Arduino is a very popular prototyping platform for making small devices that interface with computers, and is the most modded pieces of open source hardware

The Folks behind FOSS

The Free and Open Source Software (FOSS) movement proposes a drastically different licensing approach for software, and how they are used. For a lay person, there might not be much difference between using a FOSS software, or a commercial alternative, as long as the software gets the work done. One of the fundamental features of the FOSS movement is the people who drive it. FOSS is driven by the contribution and the collaboration of the likes of the individuals featured here

Aditya Madanapalle
aditya.madanapalle@thinkdigit.com



Raghavendra S

Raghavendra S is actively involved with the Free Software Movement-Karnataka (FSMK, http://fsmk.org/), where a group of volunteers reach out mainly to students, trying to increase their awareness about FOSS and its benefits, by conducting talks and workshops pertaining to FOSS. FSMK also conducts workshops for school teachers and promotes regional use of GNU/Linux by involving themselves in localising a Debian release to the regional languge, Kannada, released as Namma Debian, which means "Our Debian" in Kannada. Raghavendra S contributes to this movement by volunteering for most of the events organized by FSMK on a regular basis. He chronicles the activities of FSMK at his blog, which is hosted at http://ideasareimmortal.blogspot.com.

We asked him how interested people could help out. His answer shows that you do not need to code or actually make software to be actively involved in FOSS. "The Internet with it's enormous and amicable FOSS community is the way to go for a newbie. Another approachable avenue is forums like FSMK, where we involve newbies in various FOSS related events continuously. In this process they learn all the essentials of being a FOSS enthusiast. (I am one such student turned FOSS activist from FSMK). There are many organizations like FSMK in almost all states in India to seek mentoring from." We also asked him why the FOSS movement was important to him; his answer has some valuable insights on why the FOSS movement is so important, especially in India. "Free and Open Source Software is important to me at two levels - at a personal level and at a national level as well. Personally because, FOSS is more humane, by which I point to it's fundamental attribute of 'sharing and growing together'- the essence of human beings. At a national level, it gains a substantial economic dimension as well: In developing countries, we cannot afford to buy proprietary software to run the country, shelling out huge amounts of money to few monopolies. FOSS offers almost free solution to all our computing needs, with the freedom of owning the software as well, rather than licensing it intermittently. Another important aspect is the scope for small scale entrepreneurial opportunities FOSS provides to bubbling techies." Raghavendra S has also identified an area where young people can contribute meaningfully, "I coordinate the Debian localisation project and we have the aim of taking the benefits of free software technology to the last man and woman in the villages. This requires a lot of volunteer based man power for the tasks of translating the user interface to Kannada, training students and teachers in using these tools, helping out in educational projects involving under-privileged kids."

Akshay Bajaj

Akshay Bajaj is the founder and CEO of Net4uonline.com. He is one of the many people who has built a business around the FOSS movement. Net4Uonline is building India's first hand held touchscreen wikipedia reader - a pocket sized device that contains the entire wikipedia encylopedia in it.

We asked Akshay Bajaj what is perhaps the most important questions about FOSS, how a viable commercial revenue model can be built around the FOSS movement, and he does not think it is too hard. "The same as other service oriented businesses! Since the software (and its code) is free and open, most business models are built around offering services to enable end users (clients) to efficiently implement an open source solution. The FOSS landscape can be especially daunting to most companies (and end users) owing to the vast number of options available for any kind of solution. A quick look at sourceforge.net will indicate the vastness and complexity of the FOSS landscape. This complexity combined with the unstructured (and sometimes slightly chaotic) development lifecycles and broken support of open source projects, provides an excellent business opportunity to open source businesses. A point worth remembering, is that source code on its own has very little value, instead the required technological expertise, ability to mantain and enhance it that carries the most value and thus brings commercial viability to the open source business model."

Akshay, like other FOSS enthusiasts, advocates it because "if you can think it, you can do it!"



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Summer of Code
A Summer of Code is an event where students get compensated for coding for Open Source applications. Google and Ruby host SoC events, among others

The GNU license
Why do Open Source software require a license at all? This is because they don't want someone to come along and claim legal rights for the code, the license still protects the makers from theft, but in a different way



Rakshat Hooja

Rakshat Hooja is the Director of IDA Systems Pvt Ltd (www.idasystems.net), a company that specializes in selling Open Source Hardware in India. The company is the only authorized distributors of the Beagleboard and the Hawkboard in India. Some of his current projects include promoting the SHR mobile software, and open source alternative firmware for Smartphones, and on the fully open hardware Ben Nanonote mini computer. He firmly believes that users should have complete control of their hardware and software, and have the freedom to modify these for individual purposes. We asked him why the FOSS movement was so important. "I hate arbitrary limitations and designed obsolescence. Phones are a good example; why should I need to buy a new handset to get a feature the existing hardware is capable of, and supposed to have, but doesn't because of botched firmware the manufacturer has decided not to fix? Why is this simple software feature only available on the 'pro' model at 3 times the price, or not available at all?

Finally I find the faults somehow less irritating when I know I could fix them if I could be bothered." There is a powerful and thoroughly commercial justification for FOSS as well, according to Rakshat "custom software on an existing open platform can make small market niches commercially viable when they wouldn't be otherwise."

One of the items listed on IDA Systems that really caught our eye was Pandora, an open source hardware platform for portable gaming, which will start selling in India before August 2010. Its ready and undergoing final assembly right now.

Jack Low

Jack Low is currently working on a bunch of FOSS projects. Jack is responsible for packaging OpenOffice for FreeBSD, so users don't have to spend ages compiling OpenOffice from source. He also works on the Audacity port for FreeBSD. He has worked on a lot of IRC related projects in the past, most of them for his own convenience, but like most FOSS tools, others benefitted from it. Jack L also runs a radio station called Punk Rock Demonstration at http://www.punk-rockdemo.com which is also 100% free.

We asked Jack how newbies can sign up and get involved, "Newbies can easily participate by finding a project they are interested in. If you're interested enough and have an urge to make it better, then you're set. It might be a little hard to get some of the concepts, but it's a very good learning experience. Even the best programmers were newbies once." He



has been a part of the FOSS movement for a long time now, and we asked him why the FOSS movement was important. "The FOSS movement is very important to me because I wouldn't have anything to use if it wasn't for FOSS. I use an open source operating system "FreeBSD" and all my software is free or open source. I don't think software made by people that get paid are of the best quality work and software that cost an arm and a leg are not fair for the people who can't afford it. It also doesn't allow room for improvement or technological advancements when software is in a binary form only." Like many FOSS enthusiasts, a "software" according to Jack does not stop at the executable, but includes the source code and good documentation as well.



Vikram Vincent

Vikram Vincent is primarily involved in promoting the application of FOSS based educational technology to the Indian education system. He also contributes to Debian-GNOME l10n. Vikram is involved in localising Debian distros for the Indian environment. Vikram is full of ideas on how individuals can contribute to FOSS, "There are different ways to participate in the FOSS movement" he says "One can write code, translate free software to the mother tongue, evangalise about free software among schools-college students, conduct FOSS workshops-seminars, teach some under-privileged kids to use various educational tools and start free software user groups in your place of study or work." He also mentions FSMK when asked about how students can contribute on a more active level. "A community like the Free Software Movement Karnataka(FSMK) follows the approach of reaching out to the student and teacher communities and extends support to them in the form of workshops, project mentorships, networking, etc. The latest Google Summer of Code has shown that Indian students are the second highest participants. So it may be inferred that the entry barrier is being lowered by the students' awareness and efforts of FOSS groups all over India. The activities mentioned in the previous point are normally the starting points." Vikram, like many FOSS enthusiasts, strongly believes that users should have more control of technology, or freedom in other words. "The FOSS movement has the germs of creative thinking and problem solving to issues of the ordinary human being. The most important ideas are those of intellectual, socio-economic and cultural freedoms that it promotes."

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The Community DVD has a few application development frameworks to get you started with coding your first app.



Applications developed by the Digit Community

On the Digit forum, there are loads of active members who post scripts, add-ons, and programs. The Editor's inbox gets a steady stream of download links to software made by readers. We feature some of the active developers from our community

Aditya Madanapalle

aditya.madanapalle@thinkdigit.com

CRACK THE CODE

x	a	t	l	m	u	r	d
j	o	e	o	k	r	o	m
u	a	b	c	l	n	p	x
n	y	a	w	h	g	i	h
k	t	h	a	b	o	d	a
a	j	p	u	j	u	k	y
a	c	l	o	c	k	a	j
x	g	a	m	e	h	a	l

Kishan Bagaria

Kishan Bagaria is a class 7 student, who likes to code desktop enhancement applications in his spare time. He is the webmaster of www.door2windows.com, which lists a number of Windows 7 tweaks



Kishan Bagaria

that make the UI better. You will find the software made by him in the Community DVD. His applications include utilities to customise the taskbar icons of loaded software, and to change the default start menu button. These software have some advanced functions, such as the ability to adjust the size of the taskbar icons. Kishan plans to become a software developer, and he is well on his way.

We asked Kishan how he started out with coding. "I started my Tech Journey at a very tender age. I got a lot of encouragement and support from my parents. Initially I started with playing games and gradually turned out to be more interested towards other things in computers. I would also like to mention that I have been a regular reader of Digit and learnt a lot from it. In fact when I got the Visual Studio 2010 Beta 2 DVD in the January 2010 edition of Digit, I thought of making my own applications. The most interesting part is that I never attended any computer class or learnt any kind of programming language from anybody before I made these applications. I have recently joined NIIT for learning JAVA and other languages. I would say to all the young readers of Digit that there is a vast scope in the computer world and they can seriously consider this as a career option. Still there are lots and lots of children in the world who have the talent but need support from all sides."

Prankur Rusia

Prankur Rusia, is an 18 year old developer, who has been coding applications for two years now. He makes lightweight, alternative tools for Windows.



Prankur Rusia

TheCalcMan for example, is an alternative to the default Windows calculator that allows you to calculate entire strings of expressions, instead of inputting individual operations using a keyboard or a mouse. The SearchMan is a small, file indexing software that was downloaded over 10,000 times in two months, with a four star rating on Softpedia as well. Applications coded by Prankur can be found in the Community DVD.

We asked Prankur how Digit helped him over the years. "I have been reading Digit for about 4 years, since I was in 9th class. Its because of Digit (due to which my interest in computers rose) that I opted for computers in class 11 and topped in the school! If I hadn't started reading Digit then I wouldn't have taken to computers. It's all thanks to Digit

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The Story of Mel
Lookup the Story of Mel to get a dose of what "real programming" is all about - writing applications without SDKs or IDEs and interfacing directly with the hardware

Code Monkey
"Code Monkey" is a pejorative term for a person who churns out coding without any vision for the software he is making.

that I am consulted about computer and mobile phones in my locality."

Gaurav Tarey

Gaurav Tarey is one of the more active members on the forums, who has coded a Firefox extension to make the experience on the ThinkDigit Forums better. This add-on has been enthusiastically received by the forum members. Gaurav checks his pm on the forum more often than his inbox. He is known by the username Tarey_g on the forums.

We asked him why he came up with the Firefox extension. "Someone once told me that things need not to be complex and big to be useful, I realised it when I started making small applications and one of them was the 'NeatDigit' extension for the forum. It was a very simple 20 lines of code I made myself to enhance the Digit forum browsing experience; I shared it on the forum and was overwhelmed that many members



Gaurav Tarey

found it useful. Now the extension has gone through many iterations with even more useful and fun additions, all because of the active inputs from Digit members. When you develop something for yourself or a close community like 'ThinkDigit', there is too much to learn and it never gets boring. I think everyone belonging to developer community should try and make practical applications which interest them. This is the best way to learn, because nothing beats the enthusiasm to see your app working, eagerness to learn more and to make it better. I have learned many new things over the course of last 2 years since I first shared the 'NeatDigit' extension, and now when I look back in my code I see many things that were entirely wrong (stupid) or could have been done in a better way.

This is a win, because when you think what you have done can be improved means you have become more proficient. I am currently rewriting the 'NeatDigit' forum extension and lines of code have dropped down to half, same applies to my few other applications.

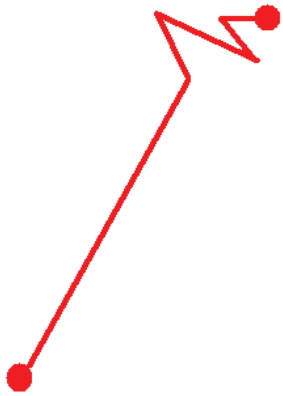
Digit readers do amazing stuff, and with internet getting social day by day it's very easy to share. You can make the website you always wanted or an app for your smartphone. Create and share and the best place to start is sharing it with your Digit family."

Lomash Gupta

Lomash Gupta goes by the username Aspire on the Digit Forums, and he has programmed an application that adds a number of features to Chrome. He enjoys developing applications, and he explains why he spends his free time coding: "It helps you think about how everyday processes work - there is nothing like building your own applications to make you think logically about how people behave online, and the hidden sophistication of seemingly simple systems like cash machines or website subscription services. Coding is also good for your attention to detail and organisational skills – you can be sloppy about how you capitalise words or use punctuation in the real world, but the world of code makes you a more organised, consistent person. Coding lets you translate ideas into prototypes, talk is cheap, but if you can turn it into a prototype, you're already a step ahead – and you can refine your thinking as you build it and get feedback on something tangible, rather than just a brainwave. Coding opens up a new world of lifehacks you can build for yourself, whether it's a way to backup your Twitter account or a to-do list application that actually reflects how you work, being able to write bits of code to save yourself time is neat. It's creative and relaxing, I don't actually get paid to code, so for me there's something relaxing and challenging in sitting down to make a new tool or improve something. It's good from a career perspective, even a small amount of coding ability would give you a plus point on your CV."

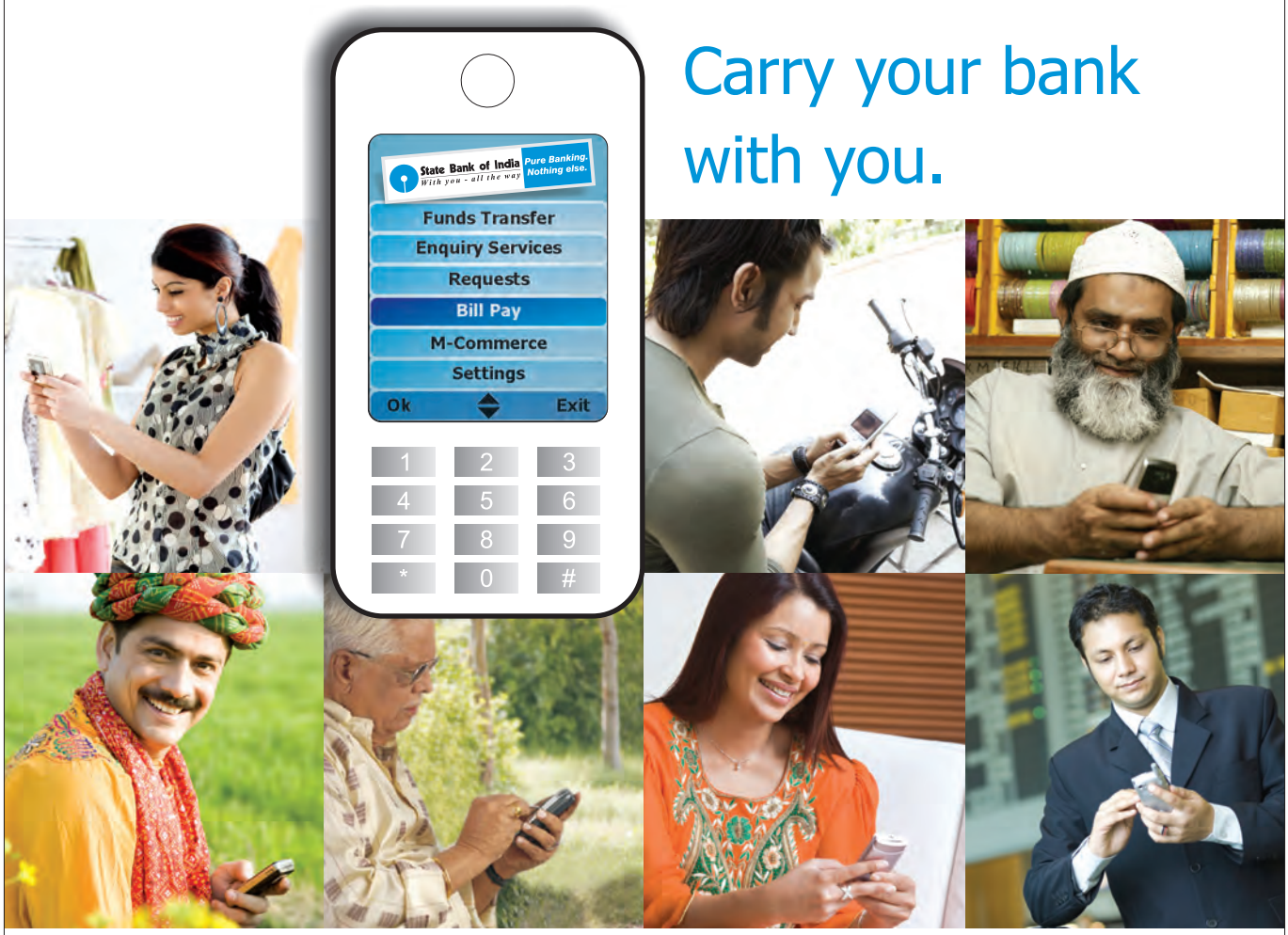
There are many more members of the Digit community who actively develop applications that are not featured here. We are reserving some space on our DVDs for content created by our readers and members of the Digit community. In the Community DVD, there are other applications and content sent to us by readers such as yourself. Inside, you will find a version of the Digit Software Archive using Ajax instead of the .NET framework was created by Manas Kumar, a reader. There is also a video review of the iPad, mailed to us by Ankush Das, another reader. Ramvijay Belkonikar has mailed in a demo he created using After Effects. Also included is a Digit Toolbar extension for Firefox, created by ThinkDigit Forum member, gopi_vboy. The developer's section of the forum is a great place to start learning to code. If you want to share an application, demo, video, music, or any other original content, mail in download links or attached files to DVD@thinkdigit.com.

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Hybrid HDDs
Seagate has released hybrid HDDs with consisting of HDD platters for storage, 32MB DRAM cache and 4 GB single layer NAND flash cache



Evolution Of The Senses

Michael Browne
michael.browne@thinkdigit.com

HDTVs have become something of a common sight, all you need to do is pop into a large electronics mall and you're sure to see some of these beauties on display. Larger panels are gaining popularity thanks to falling prices, as manufacturers adopt better technologies and reap the benefits of larger scale production. Despite this, some vendors continue to push smaller 19, 22, and 26-inch displays shamelessly, but the prices of larger panels have fallen to ridiculous levels. For example, some 42-inch HDTVs are now costing less than their 32-inch siblings did around 18 months back.

The larger a screen gets, the more immersive your experience gets, and this is why people still flock to cinema theatres to watch movies – the super huge display. However, with 47 and 52-inch displays becoming available for well under a lakh, the place for cinema-like immersion may well be your living room. Add a third dimension to the mix, and things can only get better. Imagine watching compatible movies on a 3D screen – the action will seem to jump out at you. At the moment, 3D displays are a very new, and remember that while it's infinitely cool to own one at the moment, there will also be inevitable hiccups associated with any new technology. Many manufacturers have already jumped on to the 3D bandwagon, and this includes big players like Panasonic, Sony, LG, Samsung and Mitsubishi. Also 3D is not a technology that will be exclusive to LCD panels. Plasmas and even the newer LED-backlit displays will also get 3D love. Initially we should see displays starting from 40-inches in size, and this should go all the way up to the larger 70-inch plasma panels.

How does it work?

All 3D displays work on the principle of stereoscopy. Remember that this is essentially a 3D image on a 2D display. This means to say that objects in a 3D scene (that is being viewed) will not change with respect to a viewer's perspective. In other words this is not like a 3D hologram, (except for intentional holographic displays), where a person with a difference perspective would see something different – this technology is still several years away from commercial use. Stereoscopy can very simply be defined as creating the illusion of 3D in a 2D image. The principle is called Stereopsis. It was first explained by the English scientist, Sir Charles Wheatstone as, "the mind perceives an object of three-dimensions by means of the two dissimilar pictures projected by it on the two retina". This is possible by tricking your mind and your eyes, by showing each eye a marginally different image. This different image per eye, tricks and forces your mind to merge these two images, thereby perceiving depth. This was illustrated by creating an illusion of a 3D image from 2D images that differed slightly in their point of view. The difference in the point-of-view is called horizontal disparity.

There are different technologies used to achieve a 3D effect. Broadly speaking these can be divided into two categories. The first category consists of those technologies where some sort of 3D glasses, are required to be worn. The other category consists of a developing technology that does without these glasses, and such displays are called auto-stereoscopic displays.

3D displays with glasses: Windows to the 3D world

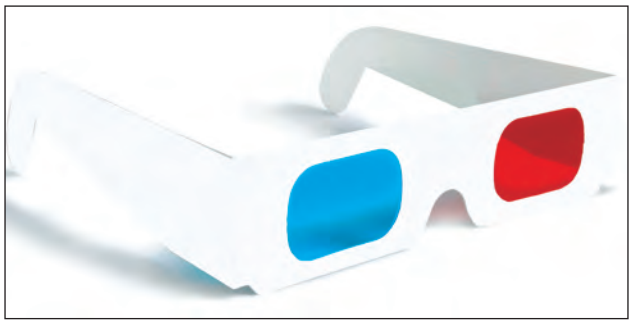
3D glasses are of two types based on the type of lens used – active and passive lens. Passive lens are obviously cheaper, an example of a passive lens would be the simple glasses made of cardboard and feature two of different colours – one for each eye. Such glasses with lens

Ballmer speak
Steve Ballmer goes ballistic and states that "Vista was not implemented well" and "there's nothing free about Android" in two separate comments

of different colours are called anaglyph lens, the term owing its origins to the Greek term anáglyphos that refers to an object that protrudes only very slightly from a background.

Anaglyph (Passive) glasses

Anaglyph glasses are pretty cheap and typically consist of one red lens and one blue one. These glasses work in conjunction with a display that, when viewed without the glasses will draw two images that are slightly offset from the other; one with a bluish tinge and the other with a reddish tinge. If you look at such a screen with the naked eye, you'll notice two sets of images, one with a bluish tinge and the other with a reddish tinge. Using the glasses, you should see a singular, cohesive image. What happens is each lens blocks out its colour, i.e. red lens will filter out red from all images and so on.



Therefore, the eye behind the blue lens will only see red images and vice versa. Although both eyes are essentially seeing different images, the nature of our brain being such, it interprets these as a single image. Therefore both your eyes are forced to converge on a point that's different from the focal point that is the screen. This difference in focal length is what gives the illusion of depth. Anaglyph glasses are cheap, but the obvious minus point is that they distort colours in any image, and therefore don't provide as good a viewing experience. As with any optical illusion, the user can also develop eyestrain using these glasses for extended periods of time.

Polarised (Passive) glasses

Polarised glasses are used to create an illusion of 3D. Two images are superimposed on one screen using different polarising filters. The glasses also have different polarising filters, one for each lens. These polarising filters are designed to filter out light projected at certain angles, allowing only a certain pattern of light to be visible per eye. Therefore when the glasses are worn, the user sees a single image on the screen. This technique is used in film theatres, but not in home entertainment systems due to the costs and inconvenience involved with adding a polarised coating to the display. This technology an also be seen in sunglasses, where the polarised coating is used to filter out certain harmful spectrum of solar rays.

Active glasses

Active glasses are much costlier than passive glasses, and there are actually an active electronic component in a display setup. They do not have any sort of filters or coloured lenses. They also do not compromise on image quality as much as the passive glasses. Each lens is actually a LCD screen, and this LCD display will turn on and off at a high speed, allowing or blocking the view of the display. When you are wearing them without connecting them to a display your surroundings will look slightly dimmer, as if you are wearing mild sunglasses. These glasses connect to compatible 3D-ready displays using a syncing cable or wirelessly using Infrared. The best example that we've seen would be NVIDIA's own 3D Stereo Vision.


Panasonic LCD 3D glasses

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Android 2.2 unveiled

Google has unveiled Android 2.2 with full flash support, even as daily sales for Android devices cross the 1,00,000 mark

Corsair's new SSD

Corsair's Force family of SSDs now has a maximum capacity of 240 GB

When a 3D image is displayed on screen, each lens will display a slightly different perspective; that is each image is slightly offset from the other. In this regard these glasses work similarly to passive 3D glasses. But this is where the similarity ends – both images aren't displayed at the same time on the screen. The display turns each image on and off at very high speeds, therefore with the naked eye it would appear as if there are two slightly offset, identical images on the screen. The LCD glasses alternate between being transparent and opaque in sync with the alternating image on the screen. When the image meant for the right eye appears on screen, the left lens on the LCD glasses will switch off blacking out the view to the screen for the left eye and vice versa. This blacking out of the LCD glasses happens very fast, fast enough to fool your mind into believing its not happening, since your eyes cannot spot up the difference. This process is synchronised perfectly with the screen, therefore each eye sees only one set of the two offset images. Obviously this sort of fast image refreshing requires a TV with a higher refresh rate than the de facto 60-Hertz. 3D TVs have a refresh rate of at least 120-Hertz to be able to utilise this technology. But that is not the only prerequisite. So HDTVs today that support up to 200 Hertz refresh rates may not be 3D ready – the high refresh rate is merely being advertised as a means to control the action in really fast scenes and to allow for less distortion in the image when using either NTSC TV (30 fps) or cinema/movies (24 fps) standards.



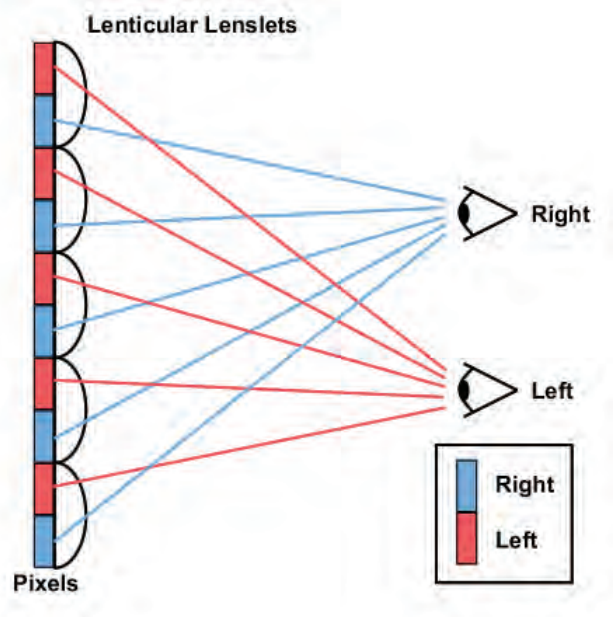
In India, active 3D glasses is where all the action is promising to hot up – a lot of brands are promising such 3D HDTVs, but there are very few models available. Samsung already has an entire 3D range and are to be commended for making it to the market first. Their 7000/8000 series LED-backlit HDTVs and certain other LCD and plasma displays support 3D. They've also announced plans to create an ecosystem of 3D Blu-ray players, obviously to speed up market adoption of 3D products. Major players in India like LG and Sony 3D displays very soon. In fact LG has such products in the US market, but the cost associated with buying such displays along with the cost of accompaniments like 3D glasses, a 3D-ready Blu-ray player and such will surely be deterrents in a price sensitive market. LG has an upcoming Infinia LED Series, that feature full 3D support. All of these displays from Samsung, and upcoming ones from LG and Sony will need active 3D glasses.

One very interesting option being pursued by Mitsubishi is the use of a DLP rear projection-based setup for a 3D HDTV. One of the benefits of this DLP-projection based technology that has been licensed from Texas Instruments is that it is cheaper than current LCD panel technology. It therefore allows larger panels, to the tune of 65-inches to be available at the same price as 47-inch LCD panels. However, although the technology going into the display is different, the same 3D glasses are required for viewing 3D content properly. They also have a 65-inch Laser TV – where laser light is used to project 3D images on the screen.

Auto-stereoscopic displays: the way it's meant to be

We have used NVIDIA's 3D Stereo Vision for gaming, so we've sampled what 3D has to offer and it is most impressive, but not a technology that has fully arrived, meaning that in it's current state, we feel there's a lot of work to be done. For one, who likes to wear nerdy glasses? 3D glasses can be restrictive, not to mention there are some inhibitions about bolting on a pair of LCD screens to your eyes and the long term effects on a persons general ocular-health. Also, such glasses are expensive, the NVIDIA Stereo Vision costs around Rs. 11,000. What happens if a family of five needs to watch a 3D movie? Also such displays require tremendous amounts of video bandwidth to be fed to them, since they are drawing two identical images on screen. While watching 1080p content in 3D, for example, it is necessary for the display to support a resolution of at least 2160p. The higher the resolution, the clearer the image and the more realistic the 3D view.

Such displays have been around for a while, but there is nothing regularly available in the consumer space because of the number of conditions required for getting a proper 3D view without glasses. For example, the audience needs to be in a fixed location or area and any movement will spoil the 3D effect. Another problem is bandwidth – some researchers estimate the bandwidth required could be as high as 200 gigabits per second – this is not possible today. The resolution required would also be very high, something not possible on today's LCD and plasma displays.



Rise of the "Intelligent & Connected" Embedded Devices

By **Sanat Rao**
Marketing Director (Emerging Mkts), Embedded Computing Division, Intel Corporation

Imagine if your "intelligent car" could get information about traffic jams & road accidents, and suggest you an alternate route! Imagine when you go shopping for groceries in the near future, your "intelligent" shopping cart could check the refrigerator in your house, realize that you are out of milk, and recommend that you take a trip into the milk aisle! How about an energy device at home that monitors all your household appliances & makes recommendations to you about your energy usage?

All of this will soon be possible with a new class of "Embedded" devices which are connected to the internet.

What are Embedded devices?

Simply put, an Embedded device is a computer which is dedicated to a specific task. i.e. it is a computer which does not behave like a computer! For example, a microwave oven contains a computer chip, but its end function is to heat up food. Similarly, a camcorder is a computing device which is meant for creating videos. Everything from watches to cars to cameras to traffic lights to home security systems fall into this category of "Embedded" devices.

Embedded devices touch almost all aspects of our daily lives. According to studies, the average person in the US interacts with more than 25 embedded devices in a day. Did you know that many ATM machines actually have an Intel Core2Duo chip inside (the same one that's in your laptop) & run a version of the Windows operating system? Did you know that when you get an X-ray or an ultrasound done at a hospital, you are probably using a device with an Intel Pentium4 chip inside? Most people are not aware of the "intelligence" inside these devices.... As the late Marc Weiser, CTO of Xerox PARC, once observed: "The most profound technologies are those that seem to disappear as they weave themselves into the fabric of our everyday lives".

The future is "connected"

The internet is bringing transformative changes to the embedded world. The era of intelligent connectivity for everyday objects has started & will pick up pace rapidly. According to a recent IDC study, there will be 15 billion devices connected to the internet by 2015, most of which will be embedded devices such as cars, home media phones, digital signs and shopping carts, medical devices, factory robots, intelligent wind turbines, etc.

We know from history that once devices get connected to the internet, a whole host of new usages & functions begin to appear. For example, today a refrigerator or a washing machine is a single function device with specific hard-coded functions. The moment you connect it to the internet, your refrigerator can now be remotely accessed from your workplace & you could set it up to tell you when you have run out of eggs!

Some game-changing embedded products coming in the near future

In Vehicle Infotainment (IVI): Imagine if you could download your favorite movie, access the internet, figure out the fastest route to your destination based on current traffic conditions, have your children play video games - all while you are driving in the car. This will soon be possible with an IVI system in your car powered by Intel's Atom processor. Some of the interesting apps are location based services, state-of-the-art navigation systems, vehicle-to-vehicle communication, multimedia content, etc. Obviously, this is in very early stages in India but we are pretty excited about the long term prospects.

Portable Embedded Devices for Financial Inclusion: A large part of India resides in rural areas, which are not well served by bank branches. In order to allow rural India to participate in the banking system, we will see an explosion of portable embedded banking devices. These are usually ruggedized portable devices with a biometric scanner & integrated printer/card reader, and run the same apps which are run on a PC. A bank employee goes into the village with this device, meets villagers, enrolls them with a bank account & handles transactions. The transactions are synchronized with the bank servers over GPRS.

Retail: Imagine walking around a retail store and coming across a kiosk, which suddenly springs into life with your image! The system goes on to show you various items for you to choose, based on your previous shopping history & the current store inventory. You may be able to "try on" different clothing and match items with each other. This next generation shopping experience is actually possible today on the Intel "proof-of-concept" built on an Intel® Core™ i7 processor and using multi-user, multi-touch holographic display technology.

Intel's role in driving the future of Embedded

All these new "connected" devices will require chips with high-performance to be able to support an operating system & run all these new applications. Driven by breakthroughs in microarchitecture and process technology, the same Intel® architecture that is at the heart of the majority of today's PCs can now deliver intelligence and connectivity to billions of these new intelligent, connected devices.

Intel offers a scalable roadmap of high performance processors ranging from the Xeon processor for high performance embedded devices, all the way down to our new embedded Atom family of processors for low-power devices. In addition, Intel's Embedded Alliance is one of the world's most recognized and trusted ecosystems with a host of partners who provide leading edge embedded devices based on Intel Architecture.

In summary, a new era of connected embedded devices is dawning, and will have a profound effect on the way we live & work. We live in exciting times ! ■

Advertorial

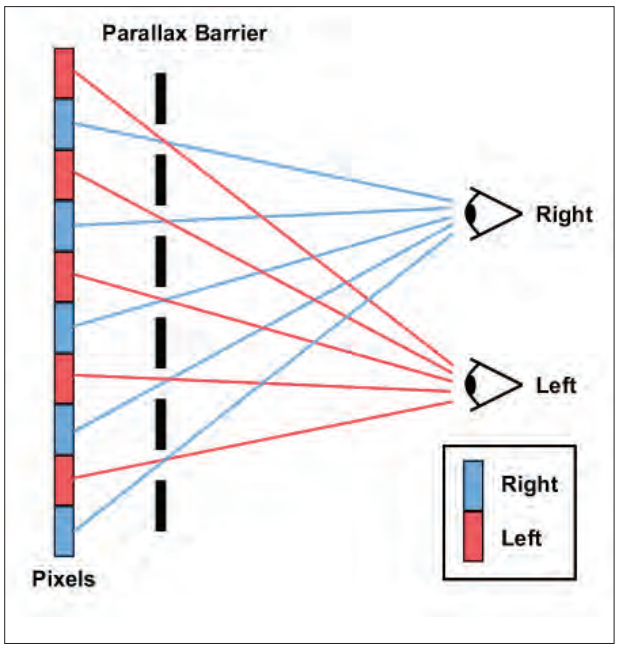
Foxconn's in a soup

OEM for Apple's iPhone is facing flak for workers committing suicide. Could the hot selling iPhone be driving overworked labourers to kill themselves?

There are two main technologies for auto-stereoscopic displays – parallax barrier and lenticular lens.

Lenticular lens

Lenticular lens displays are very costly, and large in size, so are not suitable for home usage. Lenticules are tiny lenses that are fused on to the rear side of a special film. This film coating is put on the display's surface. Two sets of the same image are displayed on screen, and the lenses work to direct light to each eye such that each eye only sees one of the images. These lenses are cylindrical in shape, and each lens directs light from alternate pixel segments to the same spot. There are two such spots (obviously!), one for each eye. Your brain interprets this as a single 3D image. One of the disadvantages of such displays is that content needs to created and optimised for this kind of display. Another problem is that, since light rays and lenses are involved, there is a sweet spot to get the most of the 3D effect. If you move out of this zone, the picture would start to get blurry. The obvious solution would be to include some sort of camera that would track movement and adjust accordingly. One problem would be a scenario where five people are watching one 3D screen where the camera needs to track all of their movements and calculate each sweet spot – this seems a little elaborate to be of practical use at the moment.



Parallax barrier

The term parallax signifies the apparent difference in position of an object when it is viewed from different lines of sight, in this case, both your eyes. Nearby objects have a larger parallax than further ones, hence parallax can also be used to determine distance i.e. convey depth. Here the parallax barrier itself that consists of a thin layer of material with a series of slits cut into it. These slits are cut with great precision allowing each eye to see a different set of pixels, thereby creating a sense of depth. Once again, the problem of user positioning is crops up. It is important to have a well-defined spot where the user will be else the 3D effect is lost.

Philips is one of the only companies that had an auto-stereoscopic display range on the market, called WOWvx that allows 2D and 3D viewing. Although this series was mainly for commercial purposes and intended for advertising and marketing purposes, Philips themselves claim to have withdrawn it from the market sometime last year, in order to prevent another round of format wars. Their offering supported a resolution of 2160p – double of 1080p. 3D Auto-stereoscopic displays are still largely a work-in-progress, but there have been several prototypes, although there is nothing available in retail as the technology still needs a lot of work before it becomes market ready.

Holographic displays: the future

The concept has been around for a while. Anyone who has associated with the Star Wars series of movies and games will be familiar with the concept. Holography, in the realm of 3D displays, is based on the concept of "motion parallax" where the perspective of the viewer can be variable and the image changes and moves continuously in keeping with the viewers' perspective. It is possible to view the object on screen from different directions, and each time new facets are visible, while some disappear – similarly to what happens in real life, when you walk around a solid body. The picture is not restricted to the screen itself – objects can appear to be both behind and in front of the screen. This is completely natural, and there is no motion tracking technology applied, like in lenticular lenses.

Such displays are made up of pixels, but these are referred to as voxels – or simply volumetric pixels, since instead of being represented by two coordinates on-screen, they are referred to by three coordinates i.e. a grid in 3 dimensional space. The concept of a voxel originated with holographic 3D displays. A voxel is, however, a lot more relative than a pixel, because it's location is relative to the other voxels in a scene, since we're talking about a complex volumetric image that differ in composition as viewing orientation changes.

Holographic displays exist, but they are very application specific. The most obvious uses are medical and engineering applications, certain research also benefits from being able to view objects in 3D space. When it comes to home entertainment, holography is still a reasonable distance away – after all movies would need to be shot so as to have multiple orientation points – bandwidth requirements would be astronomical, as would the cost. Holographic images also persist for a while, making them unsuitable for any sort of rapid moving scenes – definitely not what you're looking for, for any sort of video watching. The technology ecosystem for such displays is also not proven, at least outside of a research lab – multimedia is a living, breathing medium and holographic displays are still too raw a technology to seem feasible. There have been breakthroughs in recent years – enough to lighten up prediction gurus' eyes, to the point where they believe we could see a 3D holographic display become feasible in the next 20 years. Wait and watch...

Killzone 3 released
After Killzone 2, it's sequel Killzone 3 is set to release with 3D support; PS3 will be the exclusive console

Samsung Konect Plus monitor
Samsung launches 23-inch Konect Plus LCD Monitor with HDMI in and digital audio out ports and a remote control



Photos.com

Tech Care

Healthcare segment has encompass many disciplines, the results of which have revolutionized the segment. Digit takes a look at some cutting edge researches which will see the light of the day soon.

Nimish Sawant
nimish.sawant@thinkdigit.com

Healthcare segment is not just about diseases, medicines and their cures. Research in this segment is encompassing various disciplines like electronics, mechanics, robotics, nanotechnology among others. Due to the symbiosis between the various spheres, the time frame required for the detection and diagnosis of diseases has come down drastically. We decided to peep into the labs across the world to get an idea of future innovations in the healthcare segment.

From the Indian shores

Philips Electronics India announced their entry into the Indian home healthcare market last year with a product which claims to treat obstructive sleep apnea(OSA), a condition characterized by repeated cessation of breathing during sleep. Speaking on the future trends in medical technology segment, Dr. Wido Menhardt, ----- Philips Healthcare, said, "It can take decades before a new technology becomes household name. But some changes that we will see over the next five years in India is widespread adoption of technology related to telemedicine. Costs are coming down, infrastructure availability has gone up and there is an acute shortage of healthcare specialists that all contribute to the faster adoption of such technology." He elucidated on the various forms telemedicine will take up like telediagnostics, teleradiology etc. When prodded to tell us about the research happening at the Philips Healthcare labs in India, Dr Menhardt said he could not comment on the on-going research.

Portable Health Monitoring

Another area that is quickly catching up in India is the sphere of portable health monitoring systems. They have become very specific and portable, thanks to our busy lifestyles which hardly gives us any time to honour our doctor's appointment. In a country like ours', where there isn't a single hospital for miles, portability can actually be a life-saving factor as it enables one to move around freely, while at the same time, keeping a track of one's health.

Keeping this aspect in mind, GE Healthcare has come out with a portable ultrasound scanner called Vscan, which, on first glance, looks like a flip mobile phone. On connecting the probe to the device, the Vscan becomes a visualization tool which works on ultra-sound technology of reflected



Vscan



GAMING IS NO CHILD'S PLAY

››› ROLES OF A GAME DESIGNER

A game designer is at the beginning of the creation process of a game, at the middle of the process for "building" it and at the end to ensure the quality of this entertaining experience we call a video game - all at the same time. We game designers, have different roles depending on the phase in which the game we are working on is at.

››› CONCEPTUALIZATION PHASE

We the designers, create what we call the "Game Concept Document", a small document that explains briefly what the game is about, who is the target (age & sex of the player) and why this game is worth investing millions in. This document is used to sell the future game to possible investors as to the team that will create it. Once a deal is secured, the game starts its next phase.

››› THE PRE-PRODUCTION PHASE

During this phase, the game designers write the Game Design Document that describes everything, right from the way the player will start the game to the most complicated rule to be coded by the programmers. From the text that will be displayed on the buttons in the menu pages to the dialogues between characters, and the epic story the character will experience to the tedious list of items the player will be able to buy in a shop (with price/ stats/ description etc.).

Everything needs to be thought of, discussed with whoever has input on it (it can be another designer, a programmer or an artist depending of the topic) and written down in that bible document - the game design document (which is usually a list of smaller documents where it's easier to seek the relevant information you are looking for than a 5000 pages unreadable document). That's the biggest job of the game designers. From this document, all other departments (art/sound/programming) will extract their own specific bible (Technical design document for the programmers, Sound design document for the sound designers and Artistic Design document for the artists).When the pre-production phase is over we start with the production.

››› THE PRODUCTION PHASE

That's where the thinking time is over and the time to act starts. During this part, some game designers change their role to Level Designers. A game designer thinks and does things at a Macro level in a game (i.e. : "what happen when the character's health reaches 0") while a level designer is in charge of creating the game by creating its levels and is needed to answer more ground based questions (i.e.: "I need to ambush the player, where can I hide my monsters ?"). Not only does the Level designer follow the rules and the guidelines written in the Game Design Document but he also writes his own document : the Level Design Document, having very few specifications where things related only to his level will be explained.

Usually the level designer also needs to create the rough level in 3D using cubes or already made assets in order to script the events, place enemies and challenges and play it to make sure the level he is creating is fun. The Level designer works closely with the artists that will create the set of his level. He also needs to work with the gameplay programmers to make sure the gameplays designed by him work well, as designed.

During this production phase the Game Designers still work on the design to adapt and do the needed compromises between unexpected technically undoable features and gameplay.

››› FINE TUNING / POLISHING

During this phase, everyone in the team (programmers /designers /artists / sound designers etc.) fixes the bugs found by the quality assurance department.

››› WHAT'S TAUGHT AT DSK SUPINFOGAME?

The name of the curriculum is 'Game Design & Production Management'.

The students don't have any choice. They all have the same course in both management and design in order to become either a game designer or a project manager. By game designer we mean either game or level designer.

Because both - a game designer and a project manager or producer need strong communication skills we train them in all forms of communication (writing, video report, power point presentations, etc.) and also in the usage of common tools used for communication - ranging from the most basic steps like using outlook to send an email to the most complex ones like creating a video using Adobe Premiere or Microsoft PowerPoint / Word / Excel etc.

Because you don't need a specific profile in order to become a game designer, beside a strong motivation and a little bit of creativity, we also train our students in using the other departments' tools. That means, we train them in programming and modeling in 3D. Here, we are not forming programmers or animators, but the more they know those tools, the easier it is for them to be able to talk on the same level with the other people in the team.

Game designers often act as universal translators between programmers and artists. They also need to explain correctly to the artists what they want. Same is with the programmers. The more they understand other people's work; the easier it is for them to make themselves understood.

Also, the small skill they get from 3D modeling and programming will be useful for them when they'll be level designers, using a level editor to roughly build the 3D layout of their level or using the script language logic to code an interactive event in the same level.

We also train them a lot in basic things like what games are - not only video games, but all kind of games. Gaming is a very old hobby for man, and by having a strong knowledge in the structures that all games share, they will improve their skill at creating games appealing to more players.

We also train them in analyzing other arts like photography, movies and even video games. Inspiration comes from your past experiences, your knowledge, the books you read, the movies you watch, the games you play etc. But you need to be able to get the relevant information from those media in order to be able to adapt, modify and use it for your game.

We also train them to get self-trained. I mean, the curriculum is 4 years long and to be honest, we can't say what technology will be used in 4 years. So instead of having them to blindly learn how to use a specific tool, we train the students to understand how all similar tools work. Like that they do not feel lost while using a new world builder for the first time since all of them roughly share the same logic.

Despite this, we train them with the latest technology used by our friends in the video game studios and we make sure that we stay up to date with the industry by going to major industry events and talking to people. We believe in keeping strong connections with the industry as a key for a successful professional curriculum. We keep tuning the teaching content on par with the industry needs.

During 4 years here, the students will create a board game prototype, will write an adventure book, will shoot a video report, create a Machinima movie, create a real full game and countless small one week projects etc. The students also have to do a minimum of 2 internships in video games studios.

When exiting the school, the students will have true work experiences in every aspect of the job of a game designer.

By Alexis Madinier
Video Game Design Trainer at DSK Supinfogame, Pune

SUPINFOGAME's curriculum is drawn up by an educational team consisting largely of working professionals from the world over:

- Knowledge and expertise passed on by qualified professionals.
- Lectures followed up by practical exercises (over 1000 hours a year).
- Conferences and talks by stars from the video game industry.
- Learning about commonly used software packages.
- Intensive project work.
- Continuous assessment and quarterly exams.
- Insistence on quality: a minimum overall score of 12/20 is required to qualify for the next level of the course.
- Public presentation of end–of–course project / work in front of a panel comprising industry professionals.
- Compulsory placements during the higher education course (initial work experience).
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Hack for MS zune HD released

The first hack ever for Microsoft Zune HD was released. Named Open ZDK, it allows full access to the Zune hardware features

Camera RAW 6.1 released

Adobe releases RC version of its Camera RAW 6.1 raw processing software with lens correction feature with profile-based corrections

waves. The human anatomy is shown in black and white whereas the blood flow is colour-coded. This hand-held device is great for a fast inspection of the urinary bladder, heart and abdominal organs. And it does all this in real time..So no more waiting at the doctor's clinic with a bursting bladder before the ultrasound scanning.

Let the brain do the communication

Moving from portable health monitoring to portable wearable brain signal mapper. A team, led by University of Maryland's (UM) associate professor of kinesiology, Dr. Jose Contreras - Vidal, have successfully reconstructed 3D hand motion from the brain signals. What's so great about it one may think, but theres a catch. The brain signals have been captured in a non invasive manner. Using a process called electroencephalography (EEG), which measures brain signals with the help of electrodes attached to the scalp.

The UM team placed an array of 34 sensors on the scalps of five volunteers to record their brain's electrical activity. The volunteers were asked to reach from a centre button to eight other buttons randomly around 10 times and the hand motions and brain signals were recorded. EEG recordings were analysed and correlated with the readings from motion sensors attached to the volunteers hands to create a 3D model of the hand movements. This has proved the maxim, that EEG signals are not strong enough to lead to any movement of limbs, wrong.

According to Dr. Contreras-Vidal, the research is aimed at understanding, how the multiple models of interaction between the brain and the body are developed and how these models are affected by diseases.

"We are currently applying our decoding methods to bipedal locomotion. We believe it is possible to use noninvasive brain signal (derived from EEG) to control lower limb exoskeleton to restore gait," said Dr. Vidal.

This research is a boon for patients who have lost the use of their limbs due to accident, they can control their prosthetics and equipments such as wheelchair with this. If imagination is streched a wee bit more, this headset can also be used to give input commands to a computer in a handsfree manner just by thinking.

As for the availability of the product in the market, Trent Bradberry, a research student working in Dr Vidal's team said, "There are three main steps that need to be done before our research enters the mainstream healthcare segment. First of all we need to create a near real-time implementation of our decoder within a brain-computer interface system, which is nearly complete. Secondly, test our system with persons that have an amputation or a spinal cord injury. Finally, transform our laboratory prototype to a polished product that is easy to use in the home." Dr. Vidal expects this technology to be translated in some portions of the healthcare world within the next five years.

Genome Sequencing in $100?

Researchers at the BioNanomatrix, Pennsylvania under the leadership of Mr. Han Cao are working on a nanofluidic chip which claims to bring down the Genome sequencing cost to just $100. A working prototype is ready and the technology has just been patented in March 2010. The nanoanalyser set up comprises three parts viz : the nanoanalyser chip, the software to read the data and an imaging device to capture it on a CCD sensor. Since BioNanomatrix only unravels the DNA, its working in collaboration with Complete



Genomics, a Silicon Valley based company, which handles the sequencing aspect.

It works like this - a large coiled chromosomal DNA strand is inserted in the fluid. The whole area is divided into patterned bio chips that help the coils to untangle such that when the strands reach the final nanochannel array, they are separated from each other and each array (100 nm wide) can only house a single strand. These gaps are at the micrometer level in the beginning and gradually reach the nanometer level. The fluid guides the strands.

Unlike other genome sequencing processes in which the strands are cut and then re stitched to be analysed, the nanoanalyser does not break the strand at any point. "Human genome has recently been discovered to have highly complex genomic sequence structural variations. The location, the orientation of specific genes or blocks of genes are different among individuals. These Structural Variations (SVs) have been linked to many complex trait diseases such as autoimunne, autism, cancer etc. Fragmented small reads leads to loss of information and their reassembly is expensive," said Dr. Cao stressing on the need to analyse strands without breaking them.



"The method we have implemented, enables one to keep the medically relevant contextual structural imformation intact by preserving the direct imaging long strands of DNA at a single molecule level without any amplification." Mr Han Cao, Founder and Chief Scientific Officer, BioNanomatrix

The initial applications of this research involve DNA sample integrity, DNA damage profiling and analysing the structural variations in the genome. "More accurate information with less cost enabled by this kind of new generation technology will make genomic analysis a routine method in clinical genetic diagnosis, prognosis and therapeutic development. It will also make personalised medicine finally possible," said Mr Cao. This research is funded by a five year $8.9 million NIST - Advanced Technology Program (ATP) grant. As Complete Genomics Inc. (CGI) is already delivering low cost genome sequencing, BioNanomatrix expects the price to come down the the $100 range in the next five years.

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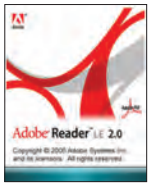
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Skyfire to bring Flash to iPads
Skyfire converts Flash content to HTML5 content on it's servers to deliver Flash content to iPads

Mobile GPUs
NVidia is coming out with Mobile GPUs with the Mobile NVIDIA GeForce GTX 480M scheduled to release this year

Top 50 Mobile Applications

Mobile applications have come a long way in recent times, and developers have shown some stunning implementations of accelerometer and touch use. Some of the applications for the more limited platforms such as Java and Symbian, add incredible functionality to older phones, allowing them to interface with various parts of the web. It is possible to view YouTube videos without audio on a low end phone, if you know which app to pick. Here is a list of the very best mobile applications around, in alphabetical order. Many of them are available for various platforms.



#01 Adobe Reader LE

Platforms: Windows Mobile, Symbian, Blackberry, Palm, Android
Website: www.adobe.com

Adobe Reader LE allows users to read PDF documents on the go. The application supports zooming and panning, as well as a feature that makes the fonts more legible in relation to how zoomed in the document is. There is a handy search feature, that let's you directly reach the portion of the document that you want. The reader can handle encrypted documents, but does not support filling up forms. The app is pretty lightweight, although opening large files is not advisable.

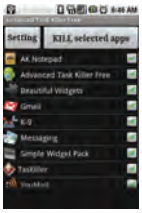


#02 Crypto Wallet

Platforms: Windows Mobile
Website: www.cryptowallet.com

Crypto Wallet is a robust and feature rich personal information vault that can be used to save notes, passwords, pin codes, and other personal securely on your phone. Being pre-configured, it is easy to get organised once you start using Crypto Wallet. Some of the fields encourage you to store data that you would otherwise not save, such as library card information, separate folders for personal and work passwords. The data sets in Crypto Wallet are called Smart Cards, and some of them can be configured to access web pages, or send e-mails, when necessary.

#03 Advanced Task Killer



Platforms: Android
Website: www.androidtapp.com

The Android platform can multitask very well, but can get trapped with too many processes running in the background. Advanced Task Killer is an application that lists these processes and allows the user to close multiple background processes at once. By default, all the processes are checked, so ending all the running processes on an Android device is two taps away, because of the large and satisfying "KILL selected apps" button. The app also has an ignore list, to hide necessary processes.

#04 Cube



Platforms: iPhone
Website: cubeengine.com

FOSS enthusiasts have heard of Cube, one of the few free, open source game engines that allows FPS gaming on Linux. The good folks working on Cube have managed to port the engine to the iPhone platform, which is no mean feat considering the physics and graphic capabilities of the engine. The game brings the exhilaration of playing an FPS to the iPhone platform, with some great green dinosaurs, and brown ogres to mutilate. The graphics are not great, but the engine itself is promising.



#05 Evernote

Platforms: Windows Mobile, Java, Blackberry, iPhone, Palm, Android
Website: www.evernote.com

Evernote is essentially a universal notepad, with two appealing strong points. The notes can be in almost any format, audio, video or image, as long as your device supports it, Evernote does as well. Notes can be tagged and made favorites. The other strong point is that all the notes taken in Evernote (upto 40 MB for free users) can be stored on their online service. This means that you can access your files from any platform, anywhere.

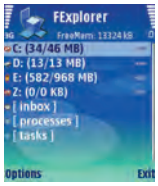


#06 Facebook

Platforms: Windows Mobile, Java, Blackberry, iPhone
Website: www.facebook.com

The official Facebook app is very different on each platform. It shines as a competent software across all the platforms, and the strong point of this software is how it uses the unique traits of each platform. The invitations and events on Facebook can be added to the calender in the Blackberry implementation, for example. The Windows Mobile version allows you to update albums or videos from the phone library, or just by recording live from the microphone or camera.

#07 FExplorer



Platforms: Symbian
Website: www.gosymbian.com

FExplorer is an alternative file manager for Symbian that is faster than the default one and offers a number of extra features that come in handy. Users can navigate to any file and transfer it directly over Bluetooth or MMS, using a simple context menu. Renaming files, making directories and organizing data becomes easy with FExplorer. The app can also dig into the firmware to throw up the IMEI number and other specs, as well as use any image in the system as the operator logo.

#08 Fring



Platforms: Windows Mobile, Java, Symbian, iPhone, Android
Website: www.fring.com

Fring is a multi-purpose application with a focus on social communication. Fring is a messenger client that can interface with all major IM networks. Additionally, Fring allows updates on Facebook and Twitter. A new feature on Fring includes last.fm functionality. Fring has an easy to view layout, and is very intuitive to navigate. Fring is primarily for those who want to stay connected on multiple networks, and use just one application to do so.



#09 FxCamera

Platforms: Android
Website: www.androidfreeware.net

FxCamera is an app for Android that adds a number of great visual effects to the camera. The two best filters are the Toy Cam and the Polandroid features. This turns an Android phone into a lo-mo camera, and brings out very convincing colours and textures from any image. The Fisheye and Warhol filters are fun too, and you can upload the photos directly to Facebook. By taking out image editing software from the loop, FxCamera brings photo related fun to Android handsets.



#10 Gmote

Platforms: Android
Website: www.gmote.org

Gmote is an application to turn an Android phone into a remote for an HTPC. Gmote comes in two parts, one part is the application for Android, the other part is a Gmote server, installed on the HTPC. A Gmote can be used to connect to multiple servers, and these are not directly linked. The standard rewind, forward, pause and play functions are supported, along with a functionality to browse media files using an integrated browser on the Gmote server.



Google Earth #11

Platforms: Symbian, Blackberry, Java, iPhone, Android
Website: m.google.com/earth

Although available for many platforms, this app shines on the iPhone and Android platforms. One touch, and the current location of the device can be pinpointed. The voice interface allows users to verbally search for locations. Layers of related information can be drawn, with the mobile version offering as much functionality as the desktop version. A very handy application for travellers.



Google Goggles #12

Platforms: Android
Website: www.google.com/mobile/goggles

Developed specifically for the Android platform, the Google Goggles application is something that feels like it has come back in time from the future. The application allows users to search using an image as the input. Books, landmarks, logos and visiting cards are just some of the supported objects that can be photographed. The Google Goggles app is constantly updated with new features and fixes, with more functionality being packed in every now and then.

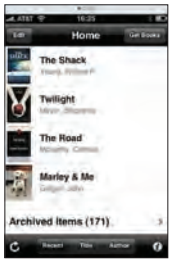
#13 Google Maps



Platforms: Symbian, Windows Mobile, Blackberry, Java, iPhone, Android
Website: www.google.com/mobile/maps

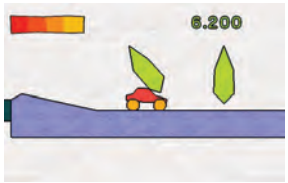
The difference between Google Earth and Google Maps is the ability to look at 3D terrains, and voice search. Google Maps focuses more on cities, and has a bunch of features suitable for commuting. Traffic, directions, reviews of business houses, and listings are provided by Google Maps on all platforms. The Symbian and Windows Mobile versions don't have navigation and Google Labs enabled. The most crippled version is the iPhone version, which misses out on important features such as voice search, latitude, all the layers, favorite locations and My Maps.

#14 Kindle



Platforms: iPhone
Website: itunes.apple.com

The Kindle for the iPhone is an ebook reader app that allows iPhone users to access their Kindle accounts, or use Amazon's store for purchasing books, or download books already purchased. The iPhone version has one major limitation, being the inability to read newspaper or magazine subscriptions from Kindle. Apart from that, the app reads very well, is well organized, and has a very basic interface that just gets the job done. The Kindle is by no means the best ebook reader for the iPhone, it's one of the best sources for accessing books easily, when you want them. A useful little feature allows you to bookmark pages.



JellyCar #15

Platforms: iPhone
Website: itunes.apple.com

JellyCar is one of the highest rated iPhone games around, despite being free. JellyCar gives you a car made of jelly, and a sidescrolling-platforming puzzle environment as a single level. Each level is refreshingly unique. The car is not rigid, and can change size, stretch, or crunch up a bit according to the situation. All these abilities are used to navigate through a series of obstacles that are made up of simple jelly shapes. You will have to come up with some interesting uses of the accelerometer to play this game successfully. A very addictive game, but the iTunes page has a complaint by a concerned parent about the leaderboards screen being full of offensive names.



Knights Onrush #16

Platforms: iPhone
Website: itunes.apple.com

Knights Onrush is a fun little game where you have to defend a castle against hordes of crazed, caricatured knights. The defense takes place in many forms, with each level bringing in a bunch of new tricks. You can throw knights around, crush them under boulders, fling them into fiery pits, or have a dragon scare the living daylights out of them. A typical game involves 30 virtual days of defense against an onrush of knights. The Endless Siege mode amps it up a bit by letting you play for as long as you can, and the Madness mode throws more knights at you than you can handle. The game is perfect for the platform, and has some stunning art too.

#17 Last.fm



Platforms: iPhone, Windows Mobile
Website: www.last.fm

Last.fm killed off third party mobile applications such as Mobbler that could stream music from Last.fm, and replaced it with their own version. Unfortunately, the app is not available on all platforms. The application is pretty well thought of, and offers all the regular features of Last.fm available on the site. This ranges from loving tracks, to scrobbling, to streaming radio stations directly to the phone. The actual services available varies from region to region, according to the platform, and depends on whether or not the user has a Last.fm subscription. Last.fm is one of the most highly rated webware apps for the iPhone.

#18 Magic Button



Platforms: Windows Mobile
Website: www.trancreative.com

Magic Button is a software that plugs a few shortcomings of the Windows Mobile platform. It discreetly adds running application icons in the task bar, without disturbing any of the other screen elements. This allows users to switch tasks easily using their stylus. The close button in applications actually closes the app instead of making it invisible. There are a bunch of other touches, to greatly improve the Windows Mobile experience. The most notable of these is the ability to hide the task bar from view when not needed. This frees up a few precious pixels, for say, web browsing.



NetQin Mobile Antivirus #19

Platforms: Symbian, Windows Mobile
Website: www.netqin.com

NetQin Mobile Antivirus is the most widely used mobile antivirus application. The software is available for the two mobile platforms most susceptible to malware, spyware or virus attacks. The application has a real time scanning module, and performs regular updates. You can scan the contents of your phone at a click of a button, and First Aid rescues the phone in the case of an emergency. There is also a feature thrown in that let's you speed up your boot process, which works well on Windows Mobile phones. There are a bunch of other optimisation tools in system management.



Nimbuzz! #20

Platforms: Windows Mobile, Blackberry, Java, Symbian, iPhone
Website: www.nimbuzz.com

Nimbuzz is one of those applications that are designed in a way to excite you the second you start it up. Nimbuzz is an all in one platform for communicating, using a number of approaches. Social networking, instant messaging, along with Web 2.0 services such as Hyves and Twitter. There is a global contact list, that constantly monitors your friends on all these sites, and allows you to send messages, chat over skype, or beam photos. The application plugs into a wide range of services, is great at managing large contact lists, and works smoothly on all platforms.

Airtel gives Delhi free music

The MyTunes service launched for Airtel users in Delhi allows users to stream music of choice from a large database for free

Hate Opera?

If you don't like Opera for any reason, the options available for mobile platforms include Bolt and Skyfire



Oneweb #21

Platforms: X
Website: oneweb.net

Oneweb is half an app, and half a service. The app is not exactly paid, but is not freely available either. Oneweb is basically a service that re-interprets web pages on the web and delivers it to mobile platforms, in a manner that is suitable to that particular platform. This approach will basically remove restrictions of say, low end phones, from accessing Web 2.0 content and services. At heart, Oneweb is a mobile browser similar to Bolt or Opera, but is designed with all the sensibilities of a brand new post Web 2.0 mobile browser.



Opera Mini #22

Platforms: Windows Mobile, Blackberry, Java, iPhone, Android
Website: www.opera.com

The Opera Mini web browser for mobile phones is particularly popular in India. One of the biggest contributing factors is Opera's compression methods. The websites are routed through Opera's servers, only the content to be displayed is relayed to the mobile phone, allowing for a significant reduction in bandwidth costs. There are other appealing features as well, the ability to store web pages for later viewing, and the speed dial.

#23 Opera Mobile



Platforms: Symbian, Windows Mobile
Website: www.opera.com

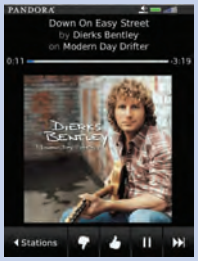
The Opera Mobile version is meant for more basic phones, but is still packed with all the features. The Small Screen Rendering mode optimizes content for smaller screens by arranging all the text and images in a single, vertical column. Opera Mobile also uses the Turbo technology for routing web pages through Opera's proxy servers, which decreases the load times when compared to other mobile browsers. Opera Mobile meets standard HTML specifications very closely, with almost full compatibility. Web 2.0 apps run well on Opera Mobile.

#24 Palringo



Platforms: Windows Mobile, Symbian, Blackberry, iPhone, Android, Java
Website: www.palringo.com

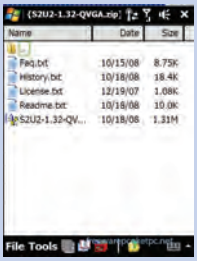
Palringo is the ultimate messenger application for mobile platforms. While it does not chalk up to Fring or Nimbuzz! when it comes to interfacing with social networking and Web 2.0 sites, when it comes to simple IM, Palringo does excel with some unique features. It supports some unconventional networks, such as Jabber and AIM. It can plug into Facebook chat only, so it does not allow you to post status updates. However, chat rooms are supported, which is one great plus point. Palringo is a looker, and is pretty functional as well.



Pandora Radio #25

Platforms: Windows Mobile, Blackberry, iPhone, Android, Palm,
Website: www.pandora.com

Pandora is a radio streaming service with some interesting technology on it's servers. Pandora uses the databases of the Music Genome Project, an effort to map every song in over 400 attributes, which is then placed in a universal map of all music. Basically, you get to listen to songs that you like, streamed to your mobile device. The service is only available in some countries though, because of licensing agreements. However, subscribers are extremely pleased with the experience, preferring Pandora to Last.fm, a similar service.



PocketRar #26

Platforms: Windows Mobile
Website: ww.win-rar.com

Typical scenario: you download an attachment on your mobile, it is a .zip file, and you cannot open it. PocketRar can come in handy in such situations. PocketRar comes from the same people who made WinRar, and is a freeware app without a nag screen. You can compress files, uncompress files, and choose which files to uncompress from an archive. Unfortunately, only .zip and .rar extensions are supported at the moment. The "Good" and "Best" compression modes require at least 6 MB of memory though, and a few older devices might not have as much.

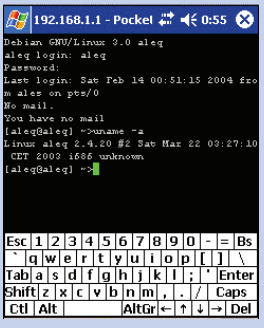
#27 Psiloc remote control



Platforms: Symbian
Website: irremote.psiloc.com

Psiloc's remote control is a pretty amazing app that converts your Symbian mobile into a universal remote. There is an exhaustive list of presets, that let you choose the device you need to interface with. Your mobile phone should have an IR port for this software to work, something that can only be found in the older models now. The device has a lot of novelty value, as you get to instantly control devices no matter where you are. Some of us have had fun changing the channels on displays in railway stations. If a particular set of devices are not supported, you can code in the necessary buttons by using the composing wizard on the app.

#28 PuTTY



Platforms: Symbian
Website: s2putty.sourceforge.net

PuTTY is a very popular Secure Shell (SSH) client, for desktops. Since the software is Open Source, there are a number of ports, including multiple attempts for the same platform. Follow the link to get to the featured app. PuTTY uses the SSH protocol to interface with networked boxes. PuTTY is highly configurable, and pretty convenient if you need to pocket an SSH connection to your server.



Quake #29

Platforms: Symbian
Website: www.idsoftware.com

This is a port of the ancient Quake game to the Symbian platform. Mobile phones are a great platform for reviving the more outdated games, and this is a perfect example. One of the artifacts of porting the game to the platform is that the gamescreen is vertical. This does not hamper the gameplay one bit, and it does not take much time to get used to this format. If only ID could port Quake 3 and add a multiplayer functionality... we can wish, can't we?



Racing Live #30

Platforms: iPhone
Website: itunes.apple.com

Racing Live is the best Massive Multiplayer Online (MMO) racing game for the iPhone, even counting the paid applications. Users have to buy and upgrade cars, while racing against a database of over three million players online. Apart from the racing itself, the game has a bunch of MMO elements, like the ability to purchase property, and getting your friends together to form teams of players then race as a team. When you are not racing, you can use the app for social networking with the other players who use the app.

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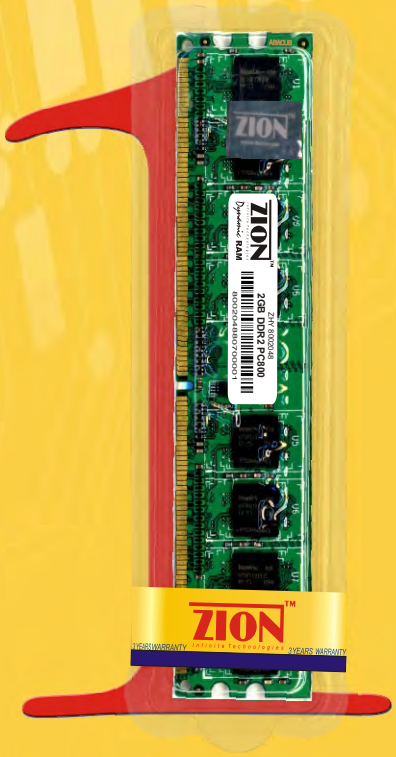
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India to ban Chinese Phones

India's Department of Telecommunications (DOT) has suggested banning all Chinese imports, but that would mean almost all the phones in the market

HP Bags Palm

In a move that could have far reaching implications on the mobile sector, HP purchased Palm



#31 Ringdroid

Platforms: Android
Website: code.google.com/p/ringdroid/

Ringdroid is a basic audio editor for the Android platform that is meant to allow users to create their own ringtones using snippets of song. The app can load a song from the phone memory, and displays a waveform, out of which a selection can be made and cut. This cut section can be saved as a ringtone, or set directly as a ringtone. The entire interface is optimised for touch, and some functions such as zooming in and out, positioning the start and end sliders, are all a pleasure. Perhaps the best feature of the app is the ability to set custom ringtones for every entry in the contact list.



#32 Rolando

Platforms: iPhone
Website: www.rolandogame.com

Rolando is a platform puzzle game for the iPhone that has some of the best implementations of the input functions on the device for any app. The gameworld is called Rolandoland, and you have to rescue a bunch of rolandos from different predicaments using physics. There are a number of devices, including trabuchets, time bombs, see-saws, and even the other Rolandos (the beings of Rolandoland). What makes the game particularly addictive is how refreshing each new level is, and the rush of successfully solving a puzzle. The game gets drastically difficult with each new level.

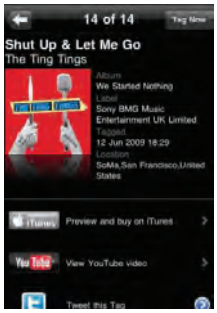
#33 ScreenShareS60



Platforms: Symbian
Website: www.terramobilis.com

ScreenShareS60 is an amazing app that let's you screencast whatever is going on on your Symbian phone, to another Symbian phone over Bluetooth. There are two modes available, the first mode let's you broadcast your screen as it is, which can be used for demoing software, or for troubleshooting. The other mode available is the camera mode, which lets users screencast whatever the cameras on their phones can see. Advanced options include a quality slider, which allows the user to reduce or increase the quality of the video being screencasted.

#34 Shazam



Platforms: Symbian, Windows Mobile, Blackberry, iPhone, Android
Website: www.shazam.com

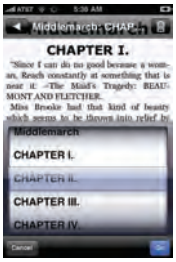
Shazam is one of the most handy applications for music lovers. If a song is playing at a restaurant, or on the radio, or basically any source, Shazam can analyse the music using the microphone of the device, send the data to Shazam's servers, and identify the song. Additionally, Shazam allows users to purchase the song, or the entire album. The Shazam Red edition for the iPhone is a charity version with 20% of all charity proceeds going to the AIDS problem in Africa.



#35 Skype

Platforms: Symbian, iPhone, PSP, WiFi Phones, Skype Phones
Website: www.skype.com

Skype is the best application for free calls to your friends or family. If your phone has a camera, Skype also supports voice conferencing, as long as you have enough bandwidth on your mobile device. Skype works by routing voice data over the internet, a service it provides for free, and as an alternative to using the traditional phone lines. When not being used for making calls, Skype mobile can be used for instant messaging with your Skype contacts. This helps you stay in touch even if you are not engaged with them at the moment.



#36 Stanza

Platforms: iPhone
Website: itunes.apple.com

Stanza makes browsing through and reading ebooks a pleasure on the iPhone. The stored ebooks are displayed in a carousel view, and allows users to flip through them is a similar fashion as flipping through music albums. There are thousands of free ebooks available via Stanza, and the best bit is the sheer amount of text customization options available. Stanza beats Kindle for the iPhone easily when it comes to improving the readability of the text, if only because of the cool page flip animation. There are a bunch of options for changing the font attributes, how the fonts are rendered, and even night mode.

#37 SugarSync Mobile



Platforms: Windows Mobile, Blackberry, iPhone, Android
Website: www.sugarsync.com

SugarSync is the solution for synchronizing files across platforms and employees. SugarSync clients are available for almost all major mobile and desktop platforms, allowing users to save versions of their documents in the cloud. Images and songs can also be saved. These files can be accessed from any device, as long as it has a connection. Collaboration is also a feature, and the owner has some pretty advanced control options for managing the files across many collaborators. Sugersync also automatically backs up the five latest versions of a particular software.

#38 Super Mario Planet



Platforms: Java
Website: super-mario-planet.en.softonic.com

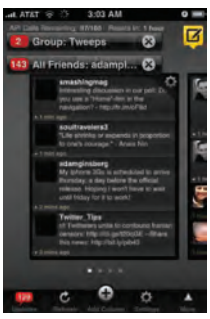
Super Mario Planet is a fan made platformer that puts Mario in an urban environment with loads of live wires. The game itself is pretty standard platformer fare, but it brings a load of Mario goodness to the mobile platform for fans. There are a bunch of unexpected power-ups that you can pick up on the way, and Yoshi makes an appearance when Mario needs a ride. This is one of those games that are well crafted works of art, as much as they are well designed games. An enjoyable game for a platform with too few good applications.



#39 Tap Tap Revenge 3

Platforms: iPhone
Website: itunes.apple.com

Tap Tap Revenge 3 is the latest in the series of very popular games. Tap Tap revenge is a game that requires players to tap on orbs as they stream down towards the bottom of the phone. The premise is simple, but the music included in the game actually makes you groove. You can even download your favorite tunes and use it within the game. There are four streams of orbs, and these are visualized based on the music. The best bit is the multiplayer mode, which requires two players to tap along the edges of the device.



#40 TweetDeck

Platforms: iPhone
Website: www.tweetdeck.com

This is one of those apps that we wish were available on more platforms. TweetDeck is a client for Twitter, that was initially made as a desktop app. With the mobile version, you have all the features of the desktop app, as well as the ability to sync the two versions. There is a lot of Facebook functionality despite being a Twitter centric app, you can post a status update or even upload a video to Facebook if you feel like it. Featatures include sending tweets as emails as well, and using a non default URL shortener.

Reliance Teams up with GetJar

Reliance has teamed up with GetJar, the biggest java software provider to allow it's users to access the 65000 app database of getjar

Symbian for WebDevs

Symbian's Web Runtime Tools will allow web developers to easily code in apps for the Symbian platform



TwitterBerry/ OpenBeak #41

Platforms: Blackberry

Website: www.orangatame.com

While TwitterBerry is still available on various sites, OpenBeak is a change in the name of a newer version of the same application. OpenBeak is a powerful Twitter client, that has some pretty obscure features. With a click of a button, you can use the camera of the Blackberry device to post images on image hosting sites that are integrated with Twitter, including Twitgoo, TwitPic and Posterous. The app is optimised for performance in a number of thoughtful ways, including caching of all avatars for faster loading and reduced network load.



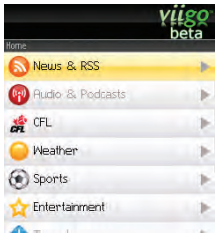
UltraMP3 #42

Platforms: Symbian

Website: www.lonelycatgames.com

UltraMP3 is a savior for users of Symbian phones, as these do not come with a good MP3 player pre-installed. The interface is miniaturized, allowing for a lot of information to be displayed on screen at any time. Navigating through songs and using the playlist is easy, and the player can play songs from anywhere in the phone, including the bluetooth inbox, or the message inbox. The best bit is perhaps the customization options available for the phone, there are literally thousands of skins available online, and you can easily make your own using any image. The player is pretty advanced for a Symbian application.

#43 Viigo



Platforms: Blackberry, Windows Mobile

Website: www.viigo.com

Viigo is an RSS reader that was recently purchased by Research in Motion (RIM), but a Windows Mobile version is still available on their site. The reader works by adding sets of feeds known as "modules" to your data stream. Sports, Weather, Travel, Local interests are just some of the modules available. Each feed is organized into directories, and it is easy to find real time information, and to monitor developments. You can configure in your own feeds to monitor as well. If you feel like sharing any of the updates you come across, you can update Facebook or Twitter, send an e-mail, or post to del.ico.us at a click of a button. The entire article can be launched in a browser, or read in plaintext

#44 Vlingo



Platforms: iPhone

Website: www.vlingo.com

Vlingo is an app that let's you tell your phone what to do. Does not seem like much does it? The "tell" means actually speaking into the phone. With a click of a button, you can send an email, post a facebook or twitter update, or send a message by just talking and allowing the app to convert the speech to text. You will have to speak the punctuation aloud, which makes using the app a little goofy. You can even tell the phone whom to message from the phone book, or the email address of a recipient, Vlingo converts these verbal instructions to actions. A very handy app for operating some aspects of your iPhone with voice commands.

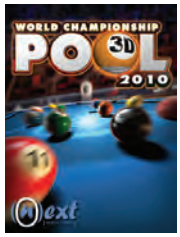


WeFi #45

Platforms: Symbian, Windows Mobile, Android

Website: www.wefi.com

WeFi is essentially one of those WiFi network sniffing applications that let's you hunt around for a free WiFi access point. What makes WeFi stand out is that the WiFi hotspots are by WeFi users, with an aim of creating a global WiFi network where everyone has free connectivity. This means that you do not have to pay for mobile network charges when using WeFi to hunt around for a free WiFi access point to use. There are over 55,000,000 users listed, and WeFi has a large directory of active, free WiFi hotspots.



World Championship Pool 2010 #46

Platforms: Java

Website: www.mobile9.com

Pool is an all time classic casual game, and World Championship Pool 2010 is the best implementation of the game for platforms that support Java. The 3D animation looks just amazing even on mediocre phones, and playing the game is a snap with easy to use controls. The game itself is pretty simple, but very effective. There are three modes to choose from, and a multiplayer option where you can have a face off with another player. The UI implementation is a combination of user control and preset animation, which blends very smoothly for a great gameplay experience.

#47 WorldMate Live

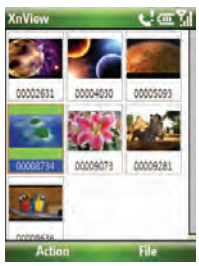


Platforms: Windows Mobile, Blackberry, iPhone, Symbian

Website: www.worldmate.com

Worldect companion for the frequent of track of the travel schedules, meetings and other engagements. Flight tickets, hotel bookings and vehicle rentals are all stored in a central timeline, that can be synced across devices as well as the web site. There are a bunch of thoughtful features thrown on top of this basic service, including a currency converter, a hotel directory, weather forecast, and LinkedIn connectivity.

#48 XnView



Platforms:

Website: www.xnviewpocket.org

XnView is an alternative photo browser for the mobile platform, that has won a number of awards for it's superior performance. It can view more than 500 graphic files, view animated graphic files, and allows you some advanced functionality for working with a number of files at once. Even on the Pocket PC, XnView can be used to crop out a section of an image, resize the image, or change the quality for MMS optimization. XnView is one of the most powerful image viewers available for this platform.

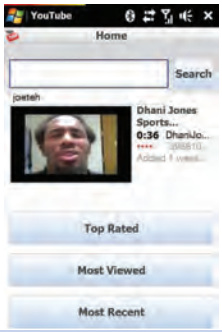


Yelp #49

Platforms: Blackberry, Symbian, iPhone, Android, Palm

Website: www.yelp.com

Yelp is a great service for sharing information about shops, locations, deals and any other thing worth talking about in your city. Unfortunately, the service is available only in the US, and is taking off in the UK and Canada. The users of Yelp are extremely pleased with the ease at which Yelp allows users to share reviews and personal opinions on a number of local places. Everything from places to eat to supermarkets are tagged with short and to the point reviews, which is a large database of users to dig into. There are a number of views available, including a list view and a map view.



YouTube #50

Platforms: Windows Mobile, Symbian

Website: www.youtube.com/yt_mobile_app

Although browsers such as Opera Mini do a good job of rendering YouTube pages and videos on most phones, the official YouTube app does a better job at compressing videos for faster connections. The app itself can access YouTube over a WiFi hotspot, and the app claims to render video in a better quality than using a browser. The most striking and noticeable difference is the lack of lag during playback, and the much better sound quality.

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GnuCash

For those who find Quicken expensive and Tally too tough, there's GnuCash – a simple, no-frills, multi-purpose budgeting



Open Source accounting

and accounting software that's open-source, free and can be used for both – home and small business purposes. Here's a quick guide to the basics.

Get started

Soon as you start GnuCash, you'll need to set up accounts. At start up, it asks you whether you want to start a new account, import a QIF file or use the tutorial. Choose the first option and the 'OK' button. This should open the New Hierarchy Account Setup Druid (another word for 'Wizard'). You could do this through the File menu above (`File > New > New Account Hierarchy`). The Druid helps you setup the hierarchy of accounts you need. The hierarchy in GnuCash must be understood in the sequence of `Files > Accounts > Transactions` – Files contain Accounts which contain Transactions.



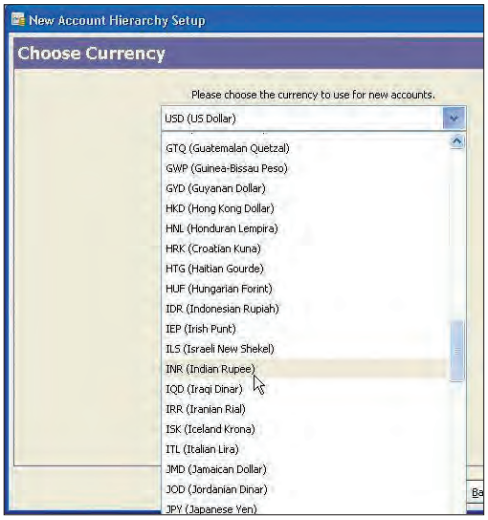
Create your first account

Change the currency, which is set by default to US Dollar, to INR by either choosing it from the drop-down list or by simply typing `INR` into the currency tab (unless you're in another location) and go 'Forward'. This will take you to the 'Choose Accounts to Create' window. You can create different accounts tailor made to your needs.

There are five categories of accounts you could set up: Assets (stuff you own), Liabilities (what you owe), Equity (Assets minus Liabilities), Income (earning) and Expenses (expenditure). The last two accounts are familiar to Quicken users as 'Categories'. Check the boxes for the kinds of accounts you want to set up. For all domestic purposes and monthly accounting, the default 'Common Accounts' should suffice. Choosing a category on the left will display the subcategories to the right. So if you check the 'Investment Accounts' box, you'll see account subcategories for everything associated with your investments such as dividends, mutual funds and stocks.



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WriteMonkey.....44
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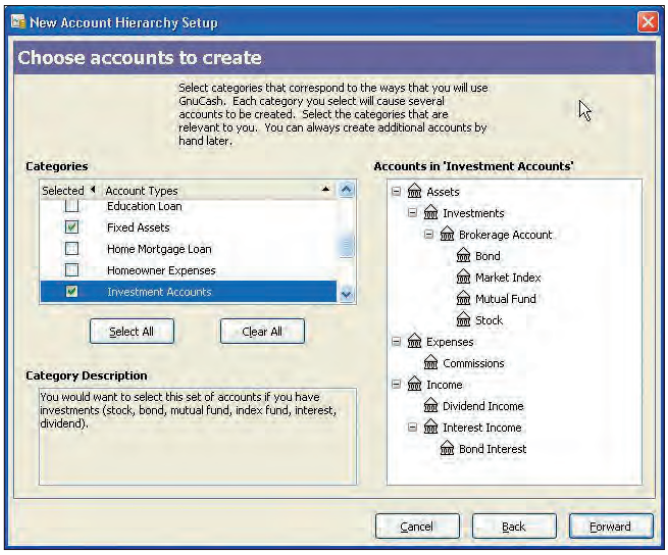


Pick from dozens of international currency options

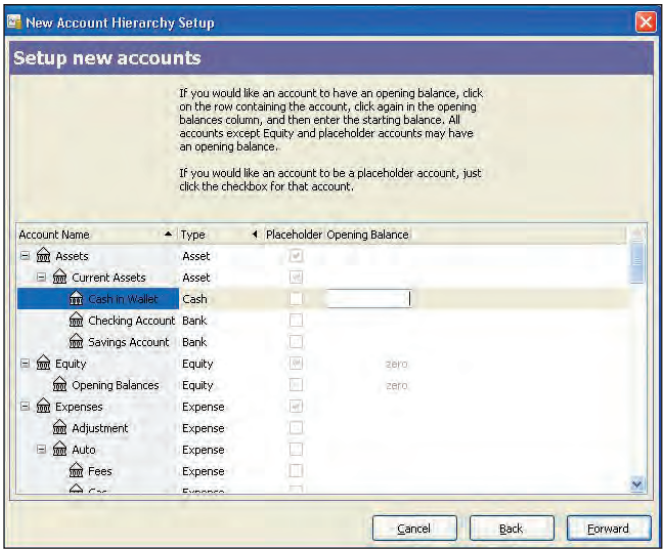
Opening balance

As you go ahead, you'll need to fill in the opening balance under individual headings, except for Equity and Placeholder. Under the 'Current Assets' heading, for example, the 'Checking Account' is the one you usually pull out money from for your general expense, possibly a bank account with a debit card. Similarly, you may have a Savings Bank Account and some money on your person. Assets, Equity and Expense are set to 'Placeholder' status by default. You can fill in the Opening Balances in the sub-categories. Select any of these (e.g. 'Cash in Wallet') and click under the 'Opening Balance'. A tab with a cursor appears for you to fill in the relevant amount.

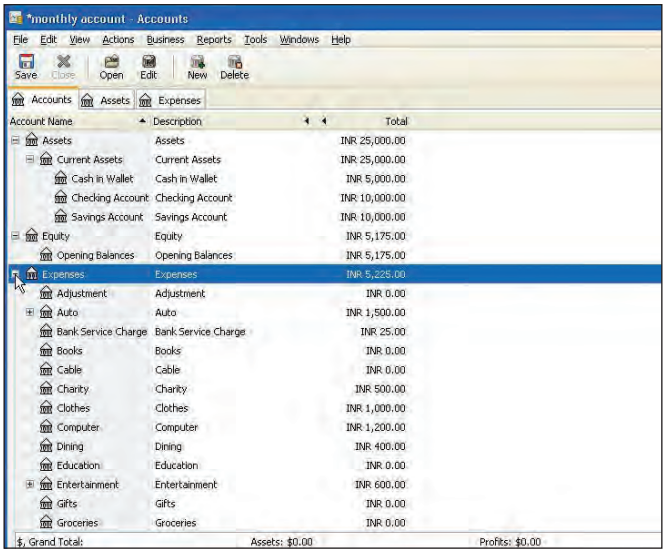
Click on 'Forward' and 'Apply'. To save the account you'll need to give it a name first. Go to File>Save or File>Save As to open the Save dialog box and fill in the name (e.g. 'Home Accounts') and



Sub-accounts within accounts make it simpler



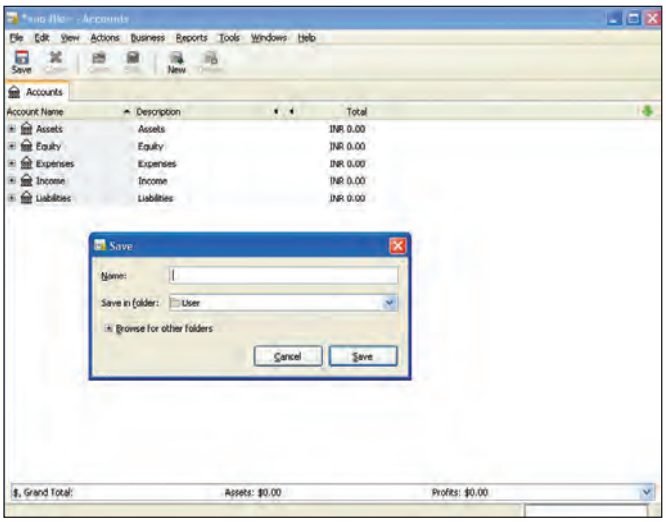
Enter the relevant opening amounts in the tab



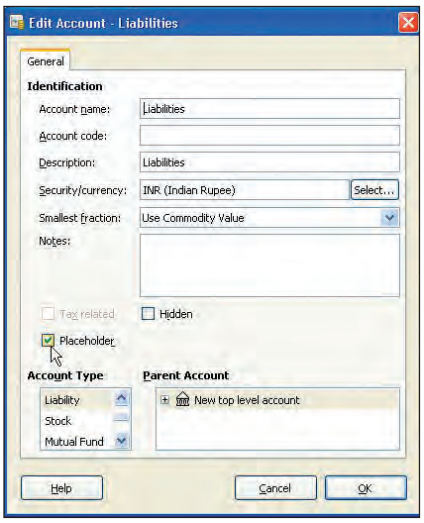
Click '+' for additional subcategories

click on 'Save'. GnuCash now offers to autosave over short durations, a feature that was missing earlier.

Once an Account is saved, GnuCash automatically opens it when you start the next time. By default, the details in the register are read-only. To open them for editing, Click on any of the accounts and click on `Edit > Edit Account` (or use the shortcut `[Ctrl] + [E]`) and uncheck the 'Placeholder' box close to the bottom of the window.



Give each account a specific name



Uncheck 'Placeholder' for editing

Every time you want to see the whole list of assets and liabilities according to the opening balance you have entered, click on the + sign on the left of each account title in the main GnuCash window.

Enter a transaction

Use the Account Register window to enter a transaction. In the main window of your saved account, double-click on the sub-account you want to enter a transaction into: for example, double-click on the 'Checking' account under the 'Asset' top-level account. The Account Register window will now display a row of options starting with the date. Choose the date of transaction from the drop-down calendar that appears when you click on the date.

Press `[Tab]` to move to the next tab. Fill in a number for the transaction (presumably, the first one so you could type `[1]`). Press `[Tab]` again. This moves you to the description tab which is a slot for you to type in whatever head you wish to put the transaction under (e.g. 'Groceries').

Date	Num	Description
05/04/2010		Opening Balance
05/03/2010	2	Groceries

Put a label to your transaction



Keep a date-wise record of all your transactions

GnuCash is an automatic double-entry system which means that each time you enter a transaction, you must specify another account from which the money comes or to which the money goes, depending on the kind of transaction. Under the 'Transfer' column, click on the drop-down menu and choose 'Expenses: Groceries'. Use the mouse to click or press the 'Tab' button twice and, under the 'Withdrawal' head, fill in the amount spent from your checking account on

groceries (e.g. 112.50). Press the 'Tab' button again (please do not hit 'Enter') and GnuCash instantly logs the entry in and shows you new opening balance to work with.

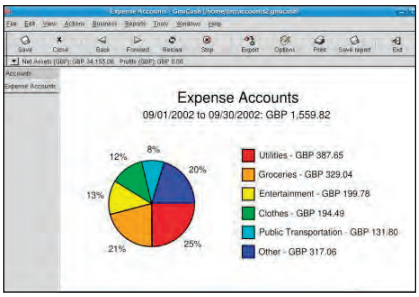
Generate Reports

Once you've filled in your



Hit 'Tab' to record each entry.

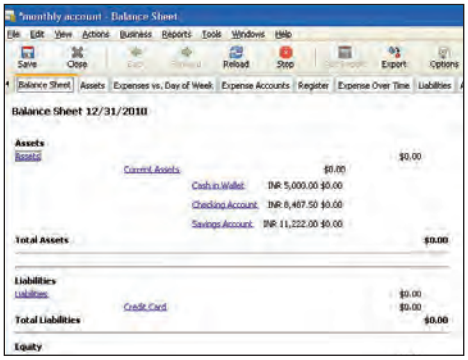
transactions, you could get GnuCash to generate summary reports and balance sheets of the income and expense, assets and liabilities etc. that you may have incurred over a period of



Easy as a pie

time. Go to `Reports > Income & Expense > Expense Pie-chart` (for example) to see a graphic summary of your transactions.

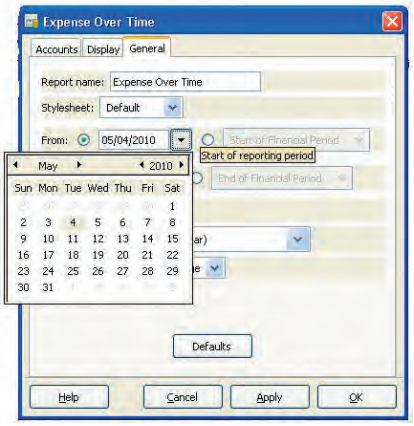
If you don't want the visual candy, you could also generate more conventional balance sheets, register reports or detailed transaction reports in a similar fashion. Go to the Reports menu above and click on 'Account Summary',



Sheets to keep your balance

'Transaction Report' or 'Balance Sheet' (in the 'Assets and Liabilities' menu) for an instant report.

You can change the duration of time you wish your report to cover by using the 'Options' button and choosing the dates in the 'From' and 'To' tabs given there.

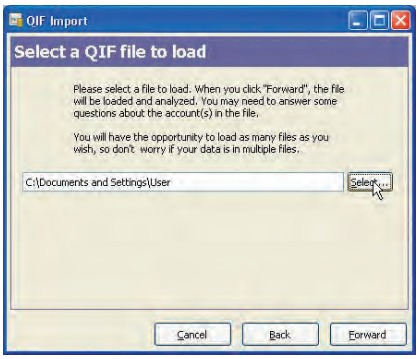


Get a time-bound overview of your transactions

Import a QIF file

Most banks, mutual fund houses, etc. provide e-statements and the like in QIF or OFX formats. You can import these easily by going to `File > Import > Import QIF` or `File > Import > Import OFX/QFX` as the case may be.

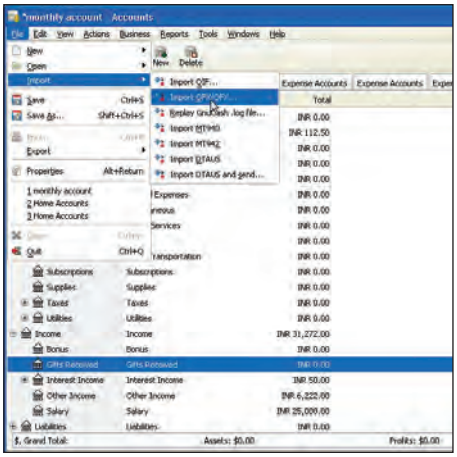
This opens the 'QIF' import druid. Click forward and 'Select' in the next window to browse your compu-



Use the import druid to browse

ter's memory and choose the file you want to import. Note that the QIF file must already be downloaded and existing in one of your drives for you to locate it.

Click to select and then on the 'Import' button. You will now be able to view the statement as a GnuCash file. Remember that GnuCash does not add an extension like `.xml`, but automatically compresses and saves your files with the filename exactly as you typed it when you saved the file. Besides this, it saves several back up files which could be found with the same filename but a suffix such as `.xac` added to it.



Merge your bank statements

Ultimate Boot CD

Ultimate Boot CD is a system-fixer with a whole lot of apps and diagnostic tools to bail you out when your



Boot from your CD

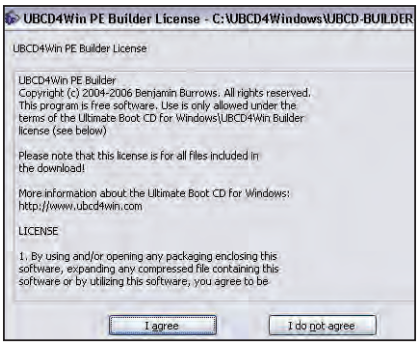
hard disk gets badly infected, you're facing inexplicable reboots and sluggish response times, or unable to load programs altogether.

Getting started

Go to http://www.ultimate-bootcd.com/ and download UBCD4WIN from any of the many site links provided there and their mirrors.You could download an ISO file directly or the zipped EXE file. This will take a while because it's a heavy file so you would perhaps find it easier to use it directly from the CD provided with this issue. Do not extract the files into a folder with blank spaces in the name.

Setting up

Insert the XP (with SP1 or SP2) CD into your drive to burn the single ISO file to it. Remember to copy XP into a separate folder in your hard disk itself to quicken the UBCD build process. For this, you could create a new folder 'XPCD' in one of your hard drives, go to `Tools > Folder Options`



From here on it's like any regular installation

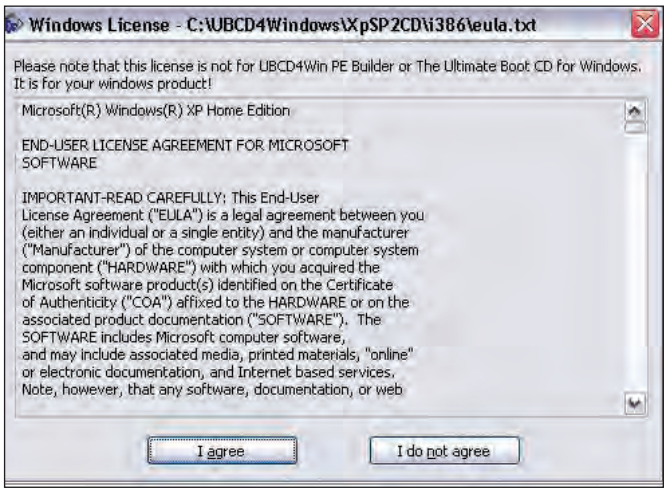
> View Tab in Windows Explorer, allow hidden files and folders to be viewed and uncheck the `Hide protected operating system files` box. Copy all your XP files into this folder.

When you run the UBCD4Win.exe file, follow the prompts and accept the license agreements,Choose not to 'Search for Windows installation files' because that could take a really long time and you've got more important bugs to fix.

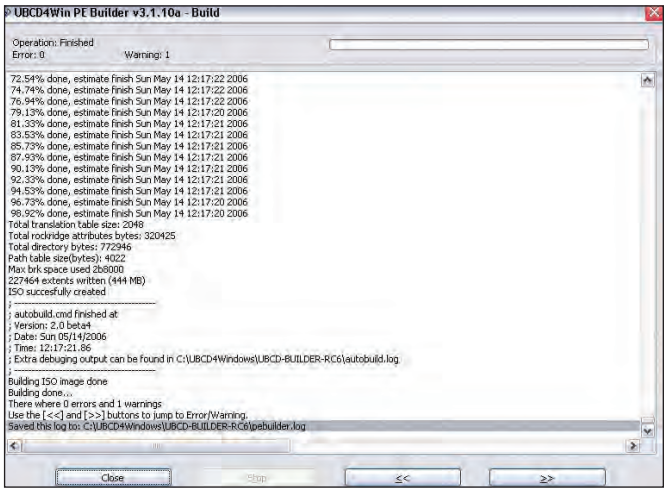
Configuring

When the main window opens, you'll need to provide a path for UBCD to access XP. This is either the folder that you just created for XP in your hard disk or the CD drive in which you already had XP in the first place.Ensure that the 'Create ISO image' box is ticked and there's a filename with '.iso' as extension in the box.Otherwise, the ISO file will not be created.If you don't provide a path, UBCD creates one for itself.All other settings are best left at default at this point.

Put a blank CD in the drive and 'Burn to CD".You could do this using general CD-burning software like Nero or try specialised software like Free ISO Burner, IMGBurn, BurnCDCC or Active@ ISO Burner most of which are free to download from the web.



Windows EULA

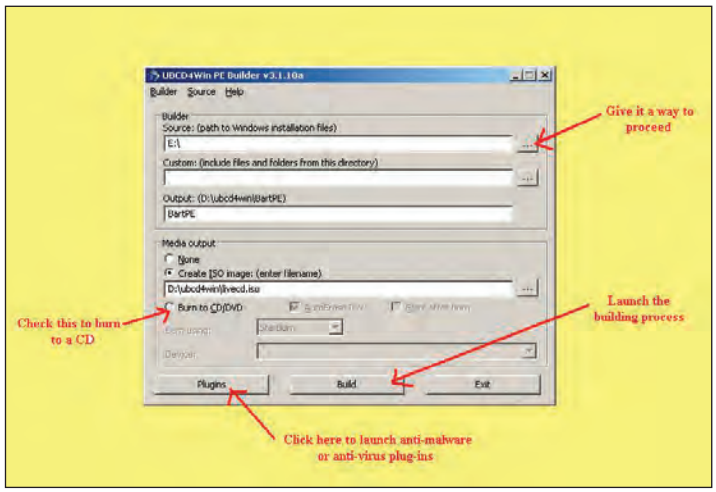


UBCD built

Starting up

Depending on what you need to do (check for malware, remove viruses, simply reboot, etc.) you might prefer to click on the 'plug-ins' button and choose to customize your tools. Click 'close' and then 'build', allow it to proceed through its steps. The first time you build you'll first see the Windows End User Agreement window. Once the process is over, click on `Close` and `Exit`. Don't forget to burn the ISO file to your CD.

If you want to boot from a flash drive, plug it into the USB port, right-click on the icon of the drivein My Computer and click on `format` to reformat the entire drive. Double-click on `fixubcd2.bat` in the UBCD folder you've created and click on the USB drive letter (e.g. 'F').You will have to either, first burn the ISO file to a CD (or extract it in your hard disk) and then run `tools\ubcd2usb\ubcd2usb.bat` to write UBCD to the USB drive.Now your boot CD or Flash Drive is ready.



The main window

Testing

If the computer you're working on needs to be tested or fixed, restart the computer with the CD in the drive. Otherwise, shift the CD into the drive of the computer that's giving you trouble and restart. Access the computer's BIOS (usually by pressing `[F11]` or `[Del]` at start up). Enable booting from the CD (or USB, as the case may be) so that the computer by-passes your hard disk and boots directly from the external drive.

Checking your RAM

UBCD allows you to check your RAM too by using tools like MemTest -86 v3.5 among others. You could even test your monitor or CDROM using the `Peripheral Tools` option from the `Mainboard tool` menu.The `SysInfo` option analyses your entire system and provides the information in a nutshell, including the motherboard, memory and BIOS. You can even run a virus check using several different anti virus tools such as Avira and McAfee Stinger.

WriteMonkey

Made by a company in Slovenia, WriteMonkey is a text editor that turns your entire screen into a monochrome text file with a black background, getting rid of clutter and distractions and letting you focus entirely on the words rather than the formatting and grammar. At the same time, it has a whole lot of essential features and shortcuts that are easy to use and make you start wondering why we needed all those toolbars in the first place. The download is free and the portability of the software ensures minimum intrusion on your hard disk.

Setting up

Download the latest stable version of WriteMonkey for from http://writemonkey.com/download.php#latest. It's portable and needs no installation; just extract and double click on the 'm' icon in the WriteMonkey folder that is created to start writing.



Better than Dark Room or LightRoom for Mac

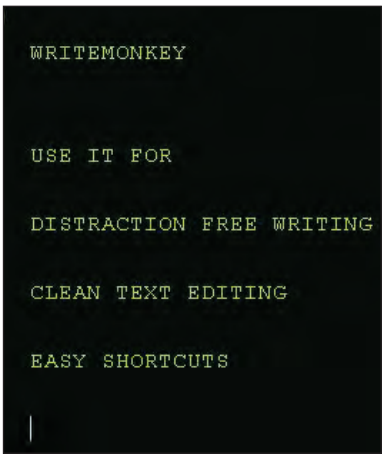
Using the keyboard

Most apps give you tips on start up. WriteMonkey does it differently by displaying a little green window with the heading 'monkey says' and a some part-clever, part-funny quote you'd typically see on t-shirts.

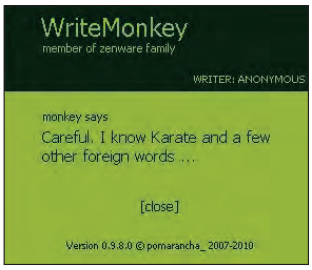
If you find this irritating, you can go to `Edit > Preferences` (or press `[F10]`) and uncheck the box which says 'Show 'Monkey says' at launch' – but we suspect the quotes will keep you hooked – and click on `OK`. The next time you access WriteMonkey, you'll go straight to the text editor.

Progress report

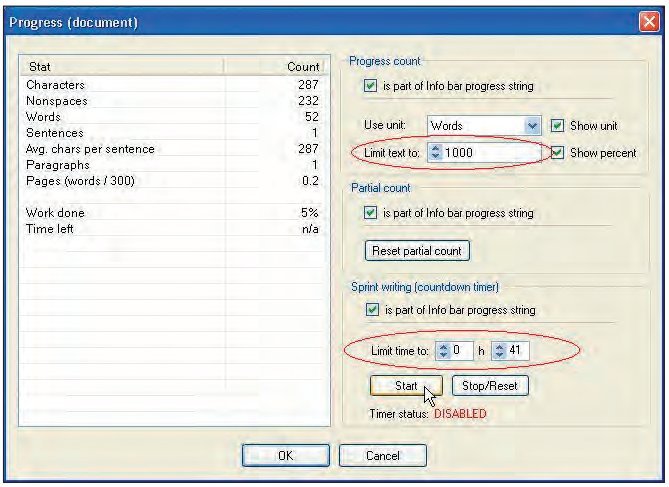
Another terrific thing about this text editor is that it gives you live statistics about the text you've been typing. After you've typed for a bit, just hit `[F12]` or go to `View > Progress` from the drop down menu above. WriteMonkey gives you an easily understandable list of statistics ranging from the number of words, characters and paragraphs you've typed to the average number of letters you type per sentence. It gets even better when you find you can set time limits and word limits for each document. If you're sure there should be a fixed number of words in the document (every journalist's constraint), simply click in the 'Limit text to' tab and fill in the word limit. You could even restrict the time taken to type the document by enabling the stop watch facility. Click on the 'Start' button above the line of text which says `Timer status:DISABLED` after you've filled in the time limit in the tabs above it. Instantly, the `Disabled` status will turn to `RUNNING` which means the timer has begun the countdown. Don't forget to click on `OK` to save your settings.



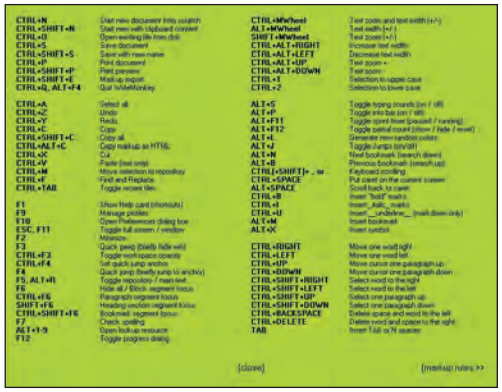
Like a big blackboard



Quips instead of tips



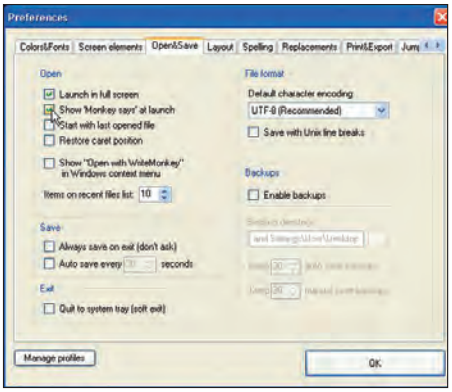
Set progress controls



Press F1 for instant assistance

Lookups

The Lookup feature lets you check up the meaning, synonyms and pronunciation of a word directly from WriteMonkey. Simply select a word and right-click on it to open the really long list of options in the context menu. Click on 'Lookups' and choose the site you want information from. WriteMonkey gives you direct access to key sites like Wikipedia, Answers.com, Reference.com, and Thesaurus.com among others. You can even skip the mouse entirely. Just select the word and use shortcuts for direct access to these sites through your default internet browser (`[Alt]+[1]` for Answers.com and `[Alt]+[2]` for Reference.com). You could also go to `View > Lookups` for the same purpose.



Get rid of the smart one-liners

Changing colours

Over a period of time the monochrome look of WriteMonkey may get tedious. A great feature that can assist you here is the 'Generate new random colors' option. Simply press `[Alt]+[L]` and watch the screen change into different background and font colour combinations.

Jumps

WriteMonkey lets you jump straight to headings or paragraphs of your choice with the cool 'Jump' feature. You can toggle this feature on or off with the shortcut `[Alt]+[J]` or go to `View > Jumps` from the menu above. Like the sidebar in MS Office 2010, once you click on a particular heading or paragraph, it's immediately selected in the document for you to edit.

Export snippets

You can even export small portions of text as separate text files into MS Word or your web browser. Simply

select the text you want, right click and click on `Mark up Export` in the context menu. Choose where you want to export the text and click on the `Export` button. This will create a new temporary file which contains the selected text only.



Direct links to key dictionary websites are a big help

Toggle full screen

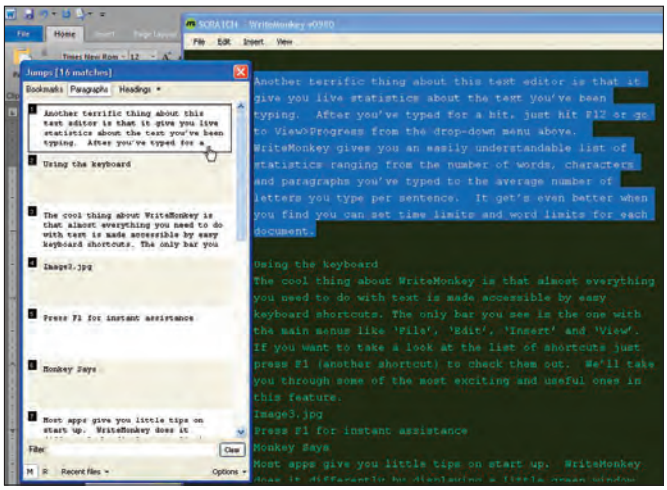
It doesn't have to be all black on your screen. You can toggle it to a smaller-sized window by hitting the Escape button or hit `[F11]` for the same effects.

Fences

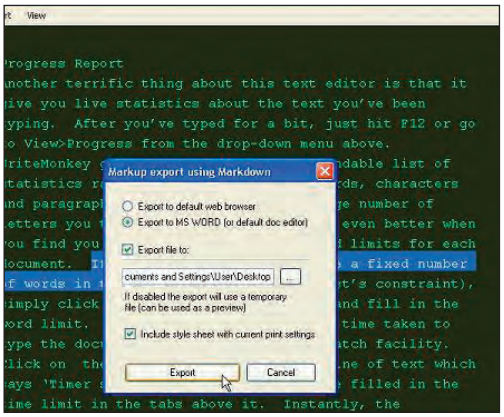
There are lots of applications out there that promise to take care of your desktop icon clutter. But none comes close to the eye candy and organisation ability of this little app.

Getting started

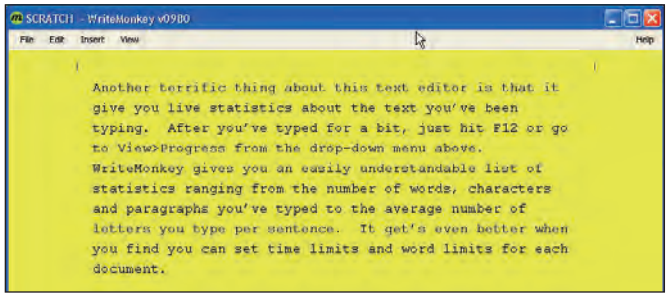
Download the application from http://www.stardock.com/products/fences/downloads.asp and install. After you reboot your PC, Fences will launch automatically and give you two options at start-up. You can either choose to create your own Fences (for advanced users) or Start using Fences directly, in which case it'll create a few Fences automatically to help you get started. We recommend you choose the latter and click on "Sort out my icons". A good feature here is that your current icon positions will be backed up just in case you feel like reverting back. But we think once you've given Fences a go, you'll wonder how you could ever do without it or why Windows 7 didn't include this feature natively.



Hop to relevant sections of the document



Move portions to other document editors



Bring colour back to the screen

Create a Fence

If you choose the 'sort out my icons' option most of your required Fences like recent, programs, quick links are already created. However you may need some more of your own. To create new Fences simply hold down the right click button, mark out an area on the desktop and click 'create new Fence here'.

Change the look

The application allows you to customise a number of things with respect to the look and feel of the Fences you create. In the application interface, click on the Customize tab. Here you fill find sliders to adjust the Transparency, Brightness, Hue, and Saturation. The Hue slider will allow you to change the colour of the Fences. You can choose a colour that complements your wallpaper well.

Rename, resize, move

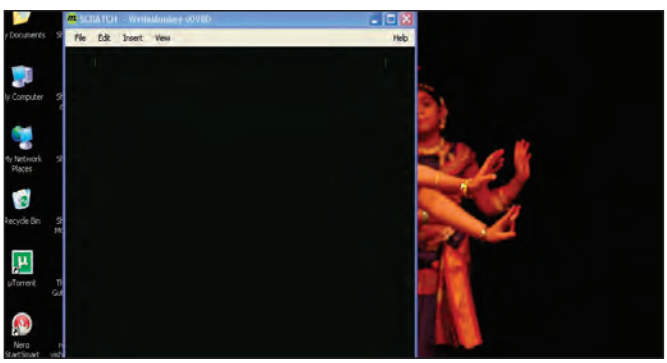
At times you may not like the default names of the Fences. Fear not you can easily change the labels to your liking. Simply right-click on a Fence and click Rename Fence. To resize a Fence, click and drag the edge of the Fence. If the Fence size is smaller than what is required to fit the icons it contains, you will get a scroll bar once you hover over it. To move a Fence click and drag its label or top area.

Quick hide options

One of the most amazing features of this little app is the ability to hide your desktop icons simply by double clicking a blank space. But what if you want to exclude a few icons from this quick hide feature? To do this right-click on any icon and check 'Exclude this icon from quick-hide'. This can be done for a particular Fence too. Right-click on a Fence, go to view and check 'Exclude this Fence from quick-hide'

Chance text colour

Sometimes changing the text colour of labels to match the wallpaper is the one thing that



Size matters

makes a difference between a nice looking desktop and a 'wow' desktop. To change text colour, go into the customise tab and click Change label text colour. A standard palette will open allowing you to change colour according to your liking.

Fences layouts

There are a few default layouts available within Fences. Such as the "Left & Right" or "All bottom" layout etc. To view layout options go to the Fences tab in the application interface and select the appropriate layout from the drop down list. Once you select one you can take a peek at the desktop and see how it looks. The option to revert to previous layout is available right there.

Fences pro

The pro version of this software which is available for $10 has a host of added features.

- Auto organise icons by file type
- Create rules for auto organising into Fences like recent, most used, etc.
- Further Fence customisation

Change icon size

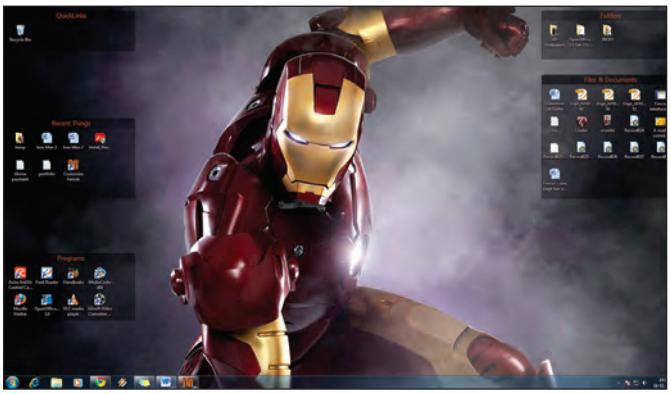
Some people prefer huge chunky icons while others prefer to maintain the look of their desktop and want icons to be barely visible. Fences allows you to change icon size too. Right click on any Fence and hover your cursor over View. Here you'll find three sizes to choose from Large Medium and Classic. The latter being the smallest size.



A neatly sorted desktop

Autodesk Homestyler

The Autodesk Homestyler (formerly Project Dragonfly) is an online home design software that is easy and intuitive and likely steal away a lot of Google SketchUp fans. You can make quick designs to preview plans for your own home or your client within minutes, save them online and access them from anywhere with just an internet connection.



The Left and Right layout applied by Fences

Getting started

You can get started with your designs immediately, but to save them you'll need an account. Fill in your details but make sure that the email id is valid. Don't forget to check the 'Terms of use' agreement box before you click on `Create Account & Sign in` button.

If you wish to avoid the hassle of remembering another password, Homestyler lets you register with any of the most popular email and social networking accounts like Gmail, Yahoo, Windows Live and Facebook. Just click on any of the large buttons below and fill in your account details. This is really useful for designers because Homestyler syncs your account with this one and allows you to share designs with any of the buddies in your list with just a few clicks. I advise a little caution, though, because my browser just told me that the Facebook link is spurious and seems to connect to a phishing site instead.

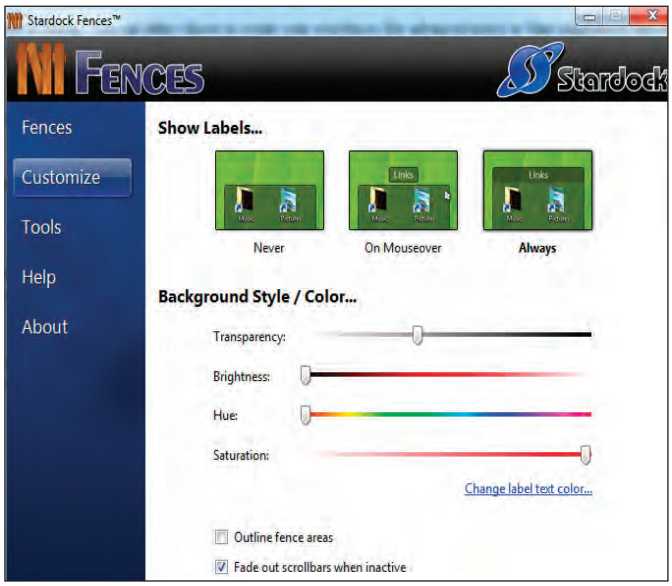
Arranging

All of Homestyler's controls are on the right. The vertical menu on the right is the catalogue which allows you to (a) build the basic floor plan with square or 'L' shaped rooms, (b) Arrange items like furniture etc. in the rooms you've made (c) Stretch surfaces as landscapes and (d) even incorporate branded stuff into your design like Kohler kitchen sinks, Merillat kitchen cabinets, etc.

Just left of the vertical menu are the controls that allow you to toggle between 2D and 3D, zoom in and out, view your design full screen, etc. Now that you're in and figured out the basics, let's get designing.

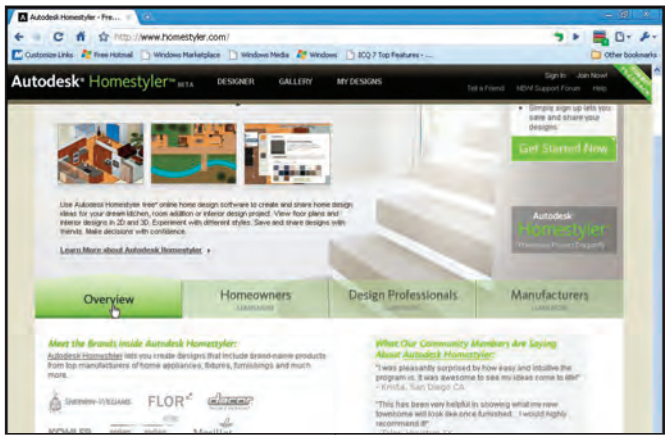
Creating new designs

Click on the 'New' button in the set of tools above to begin a new design. You could create a new design from scratch or start off with one of the templates already provided. Ideally one should create a room, add furniture and finishing touches and then switch to 3D to take a more realistic look at the design.



Fences interface showing various customisation options

Start making a floor plan with the 'Get Started Now' button. You could start off by using the mouse to click and drag a room into the central plan area. Once that's done, Homestyler offers you more stuff to do like setting up walls, wall-openings, internal areas, closets, etc. Choose the ones you want and fit them in by a simple drag-and-drop action. In a short while you should be able to set up a design quite easily.



A simple tool for your complicated designs

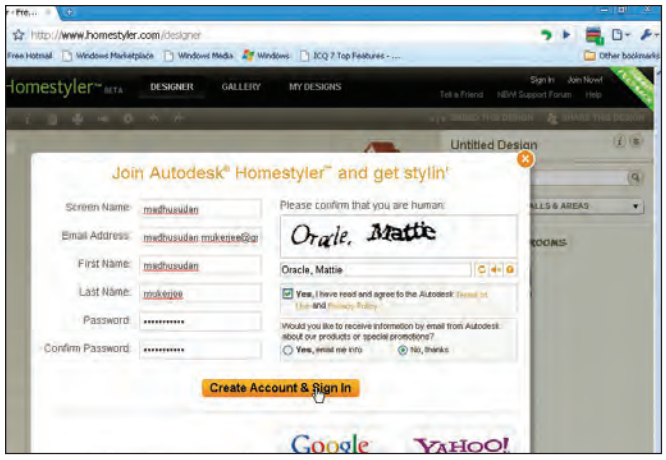
Modifying rooms

Once you've created a room, you may want to make an opening somewhere. Click on any of the walls and then click on the split option. Split the wall at the two edges of the door you want to create. Click on the split segment and click on 'Demolish wall'.

Alterations

Add walls within the room to segment it into smaller rooms. Click on the 'Wall' option in the 'Drag and Drop into rooms' section, hold down the mouse button and drop the wall at the point you wish to partition the room. You can even click on the outer-edge walls and drag them around to stretch the rooms into larger ones.

Add furniture into the rooms by clicking on the 'Furnish and Decorate' button to reveal a whole lot of items. For example, you'll need to put doors into a wall you just made. Choose 'Doors and Windows' from the drop-down 'All Products' menu. You can now choose from whole variety of French doors, interior doors, etc. Click on the one you want, drag it into the wall opening drop it there. Windows can be added into walls in a similar fashion.



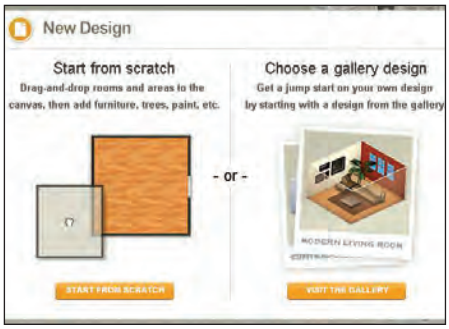
Get an id



Basic controls

Decoration

You can decorate the entire room with sofas, seats, television sets, computers, and cupboards – everything you could possibly see in typical home. For everything related to rooms choose the 'Rooms' option instead of 'Products'. You can now find all items related to particular kinds of rooms (bedrooms, bathrooms, etc.) together and quickly fill up the house with stuff.



You can use preset designs to build on

The cool thing about Homestyler is that if the item you drop in a particular area doesn't fit, it automatically moves into a position in which it does – or informs you that there's not enough space.

Once you've added in a piece of furniture, for example, you might feel that there should be more than one of these around the house. Instead of going through the motions of dragging and dropping them from the inventory on the right, simply use the duplicate button that becomes visible when you've just added something in. So, for instance, if you'd like the same kind of potted plant in different spots around the house, just click on 'Duplicate', click on the copy that appears and drag and drop it to the appropriate place.

The right thing to do once you're done with your design is switch to 3D for a better view. The 3D view is terrific because the walls turn transparent and you can see the entire design in one go. Use the 'Rotate Clockwise' and 'Rotate Counterclockwise' buttons to turn the design around and zoom in for a better look.

Save your designs

Save your design either by clicking on the little 'i' button on the top right of your screen or by opting to save when you exit. Give it a suitable title. You can opt to make this public if you wish or, if you're too embarrassed like I was, check the option which says 'No, keep private'. Once it's save, you can share it. Homestyler flashes a dialog box saying you 've saved it successfully and asking whether you'd like to share the design you've made.

Click on the 'Share this design' button on the top right of the window if you've missed the 'Share' option when you saved the design. Click on the appropriate option, go through the motions of adding tag words or descriptions to your design and launch it into the World Wide Web.

HIT PRINT
INTELLIGENTLY

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



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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.*

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BBDO INDIA/HP/IPG/465/10

HIT PRINT INTELLIGENTLY

Grow Your BUSINESS PROFITS with HP's INDUSTRY-FIRST TECHONOLOGY

A PRINTER THAT PAYS FOR ITSELF?

The Mono HP LaserJet AiO pays for itself in 2 months. After that, it pays your business.

While printers are a necessity in every office, it's printer consumables that cost the most. We're talking of paper, toner cartridges and electricity. HP's new LaserJet Pro printers are more energy efficient and give better bang for your buck than ever before. In a small and medium business setup, printers should be all about being efficient, looking at the statistics, it's easy to notice that competing products don't come close to the efficiency of the new HP LaserJet Pro range of printers. When you buy an HP LaserJet Pro, you can be rest assured that you will get your money's worth within 2 months. That's right! The printer will pretty much pay back its own cost.

Two such devices are the HP LaserJet Pro M1136 and M1213nf MFP.

Save energy: Consolidation is an effective cost- cutting measure across industry verticals. It improves cash flow and helps generate resources to invest in expanding the business. In an office environment, this can be achieved by reducing the number of devices that use power. Try using a multi-function printer to perform four essential office functions-print, copy, scan and fax. Interestingly, a study done by HP on developing markets showed that small and medium-sized businesses are more inclined to use multiple single-function devices to perform these tasks. This translates into energy inefficiencies. That's why one should invest in products like HP's All-in-One LaserJet Pro series. Its industry-first HP Auto-On/Auto-Off system ensures that the device consumes three times lesser energy in its power-saving mode than conventional sleep mode by automatically powering down after a period of inactivity. HP's Instant-on technology also ensures that the device requires no warm-up time while coming out of the power-saving mode. This results in the first page printed in about 8.5 seconds. Since an LED light source is used for copying, instead of the conventional fluorescent tubes, the energy used is four times lesser in the idle mode and 1.4 times in the copy mode. These multi-function printers also use an energy-saving toner, which increases both print speed and quality. Not surprisingly, this HP series also has the support of Energy Star.

DID YOU KNOW?
You could reduce your power consumption by up to 44% just by turning all your print devices off at the end of the day*

Improve faxing and increase productivity: As most offices have a centralised fax room where documents need to be physically delivered, that creates a disturbance in work flow and loss of work hours. And hiring a person for the task leads to additional expenditure. Also, the cost of paper and toner to print every incoming or outgoing fax gets added. A less expensive more productive option is to invest in an HP LaserJet AiO which has built-in network card and PC fax send/receive capabilities. These features let you send and receive faxes from your desktop. The bottom line? Total confidentiaity, greater convenience, and most importantly, cost savings. Also, with Industry-first HP Smart Install Technology you can begin printing in as little as two minutes by connecting your PC, netbook or notebook to the printer with a USB cable and install automatically. There is no need for an installation CD.

DID YOU KNOW?
Smart Install lets you install the printer to any notebook, netbook or PC in less than two minutes without the hassles of installing with a CD**

Maintenance Free: The larger the number of devices installed, the higher is the maintenance. In fact, a Gartner Group study found that the mismanagement of output fleets, such as copiers, printers, and fax machines can cost a company between 1% and 3% of its annual revenue. This percentage can do wonders to your company's bottom line. Separate devices to print, scan, copy and fax, mean separate annual maintenance contracts. This also leads to using more storage space for supplies. In such a case, it makes sense to buy a device, like HP LaserJet All-in-One printer, which uses a single cartridge for all functions offered. This takes care of your maintenance costs and guarantees consistency in the quality of documents you generate. The integrated network capability of this product also ensures that your employees have minimal intervention with the device adding to the longevity of the machine while cutting down maintenance costs arising from mishandling the device.

Better management of space: The better you manage your space, the better your chances are at trimming the costs. Installing the right equipment, like a multi-function printer consolidates all important office features into one box saving you considerable space and allowing you to work from a smaller office. Saving digital versions of documents, instead of hard copies, offers multiple advantages. It does away with the need to procure and maintain expensive filing cabinets; reduces costs on duplicating, sharing and distributing documents; and speeds up the process of retrieving documents by enabling better indexing.



Leasing costs: Copiers are now essential office equipment. Having a copier handy in the office ensures that important documents stay confidential. It also improves work productivity as employees don't need to step out of office. However, buying an individual copier increases operational and maintenance costs. The upfront costs of buying or leasing a copier often exceed the requirement of the business. This means you pay for what you do not need. A wiser option would be to acquire an HP LaserJet All-in-One printer that will print, scan, fax and copy while saving time, space and money.



HP LaserJet Pro M1213nf MFP.

*Power calculations are estimates provided by the HP Carbon Footprint Calculator (www.hp.com/go/carbonfootprint <http://www.hp.com/go/carbonfootprint>) ** For Windows only.

BBDO INDIA/HP/IPG/465/10

Cooler PS3
Sony rumoured to have move to 45nm RSX chips on their new Playstation 3 console

Kins @ 600MHz
600MHz NVIDIA Tegras to power the two Microsoft's Kin mobile phones

Unstable CPUs, cards, and connections

We give you the keys to all your PC problems

Q I have been going through this mental trauma and that's the reason I seek your help. I've been using a system which is just six months old and its configuration is as follows -

- AMD Phenom 9950 Quad-processor
- Gigabyte GA-MA78GM-US2H board
- Seagate ST3500418AS 500GB HDD
- ADATA 2 GB DDR2 RAM

The system is experiencing sudden lockups with the internet connection turned on and at times, without the internet connection. Generally, I go for an abrupt power shutdown and the next time it boots it shows me error popup windows and makes a log file. Gradually, my PC started showing blue screens which I believe happen due to the abrupt shutdown. The hard disc has created bad sectors. Now I thought an option like increasing the amount of memory.

Sourin Saha

A The problem you are facing could be due some corrupt drivers. Quite simply, a format and clean installation of Windows should fix it. Before that, a solution to try out would be reinstalling the network adapter drivers. Head over to Realtek's site and download the latest drivers for it.

Q Poor data connection

I have an Idea SIM card, and I stay in the remote areas of Goa, so my signal strength is only a single bar. I also have a Tata Indicom walky with a signal receiving antenna connected from my window sill. I disconnected that antenna, and connected the normal small antenna, and found that when I put the phone in a certain spot in the air, I would get at least two bars of signal. So I thought that I would get the same for Tata Docomo, but since I bought it, I discovered that the signal strength is null. So, my mother was furious with me for wasting money on it. What should I do? Should I throw the SIM out? Is there any way to get signal?

Kiran

A Unfortunately, if there's absolutely no signal, there's not a lot that can be done. Try checking from other rooms in your house to see if you a better connection. Before going in for a new connection, ask people in your area for suggestions on the best service.

Q Drivers installed, yet missing

Hi, I have following system configuration.

- AMD Athlon X2 7750 BE
- 3 GB RAM
- 320 GB HDD
- Jetway PA74m5

The motherboard has Radeon 2100 onboard graphics. It shows that display adapter drivers are there but shows an error in video controller. I've also attached an image of my problem

Aakash Malhotra

A The drivers might have got corrupted somehow. Try uninstalling the drivers and reinstalling the latest version from www.amd.com.

Q New phone's screen goes blank

I just bought a Sony Ericsson W705 and today, its screen has gone blank! What's the problem with it?

Ren

A Try recharging the battery before you power the cell phone on. Sometimes, just keeping the phone connected to the mains helps. It could be a case of a poor battery as well. If the phone keeps doing it even after trying all these things, take it back to the shop or service centre for a replacement or repair.

Q Flashing display in games

I have some queries about my computer. My system's configuration is as follows -

- Gigabyte 945GCM-S2L motherboard
- Intel Core 2 Duo E7300 @ 2.66 GHz
- 1 GB DDR2 RAM
- 160 GB HDD
- HCL 15-inch CRT monitor
- Samsung Octo Edge DVD RW
- MSI 9500GT DDR2 video card

I have just purchased EA FIFA 2009 but when I try to run the game, my monitor goes blank and it began to flash. I don't know why it's happening.

I also want to know whether i can connect my pc to my Sony Bravia KLV-26S400A LCD TV. Can I play games like FIFA 2010 at minimum resolution please clear my doubts

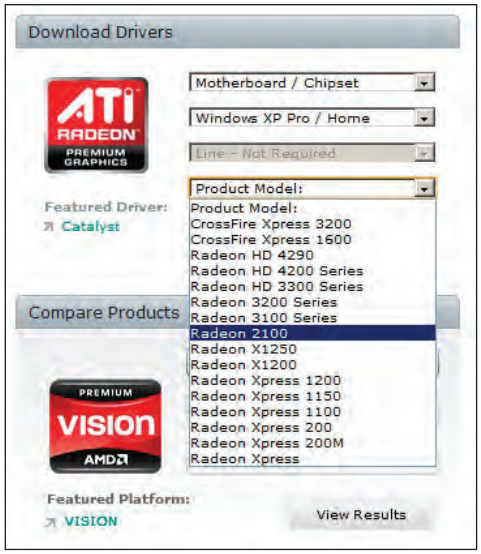
Sanjay

A Try reinstalling your graphics card drivers and see if it helps. If your graphics card and TV both have HDMI ports, it should work without any problems.

Q CPU running too hot?

The temperature of my processor goes up to 55C even at night. My room is very well ventilated. The configuration of my computer is as follows:

- AMD Phenom X3 8450
- ASUS M2N68-AM motherboard
- 2 GB OF RAM
- VIP SMPS
- 250 GB Seagate HDD



The official site www.amd.com has the links for downloading ATI Catalyst drivers

Happy Birthday Hubble
NASA celebrated the 20th anniversary of the Hubble Space Telescope on 24th April

Big Bang DX11
MSI adds DirectX 11 support to the SLI-CrossFire supporting Big Bang Fuzion motherboard

I have enabled the Q-fan and its speed remains around 3600 rpm when the temperature of the CPU is at 52C. Is my processor running too hot and need to install the chassis fan in cabinet?

Vijay Rawat

A The temperature of 55C isn't extremely hot, so there's nothing to be worried about. Adding a chassis fan will help a little bit.

Q Overclocked, failed, now system won't boot

My system configuration is Intel Core 2 Duo E7500, Asus P5KPL-AM motherboard, NVIDIA GeForce 9800GT, 4 GB RAM, 450W PSU and UMAX cabinet. I'm going crazy since my computer crashed due to the overclocking. I do not know what i did. I'm not a computer expert. I changed the voltage of memory and increased the DRAM speed. When I press the power button monitor does not show anything but the CPU fan works.

Athar Muneeb

A Messing around with memory timings and voltages, or any other components for that matter, has risks. Overclockers usually buy hardware that has been designed to be overclocked to some extent. Most value products will fail or get damaged in the overclocking process.

In your case, try resetting the CMOS settings using the jumper on the motherboard or using a CMOS clear button if one is available. Once that's done, set the jumper back to the original position. Then, try powering on the system. If nothing works, there's most likely some damage to the RAM or board. Try using one stick of RAM at a time. The next step would be use a completely different stick of RAM. If neither of the sticks works, you need new RAM. Before that, make sure your motherboard is still functioning by using another stick of memory.

Q 1 GB sufficient for Windows 7?

I am a regular reader of Digit. My system configuration is an Intel Pentium 4 2.66GHz, Intel D101GGC motherboard, 60 GB HDD, 446 MB RAM (it has come down from 512 MB). I will be buying another 512Mb of RAM. I use Windows XP. Is the system good enough to run Windows 7?

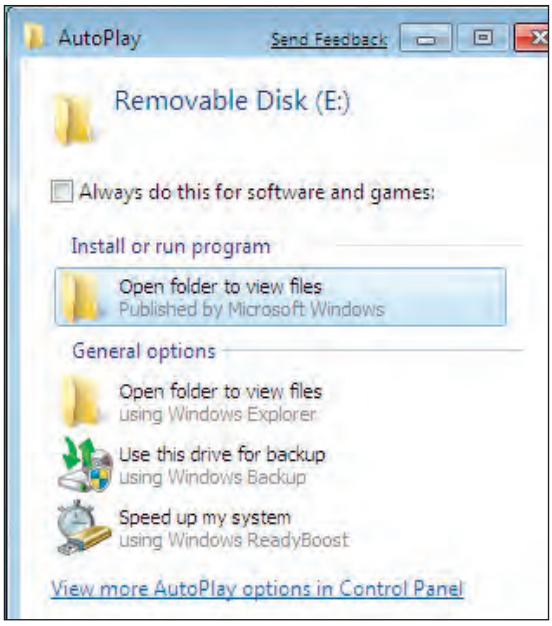
Pranav Kumar

A The 1 GB of RAM will allow you to just about run Windows, although it's not recommended if you use lots of system heavy software.

Q Flash drive always being accessed

Whenever I try to format the pen drive, an error message appears "This drive is in use. Please try quitting any drive utility and then try". What should I do? I don't install any antivirus because they make my computer slow? Please reply.

Arpit Jain



The Autorun window is one of the easiest ways of triggering a virus from a flash drive

A There must be a worm or virus on the PC itself which keeps accessing the flash drive. Try formatting the flash drive on a different PC to see if it helps. Make sure you don't click the Autorun window buttons while plugging in the drive. Instead, go to Windows Explorer and choose to Explore the drive using the right-click menu.

Q Overclocking an AMD X4 945

I have a new processor and motherboard and am looking forward to overclock it.

My system configuration is:

- CPU: AMD Phenon 2 X4 945
- Motherboard: Gigabyte MA790GP-UD4H
- Memory: 3 GB DDR2 800MHz
- HDD(s): WD 500 GB Green, WD 250 GB Blue
- Graphics card(s): MSI 9600GT 512MB DDR3
- Power Supply: CM Extreme Power Plus 500W

Cool PC Guy Ken from ThinkDigit Forum

A If you don't know what you're doing, don't go around overclocking unless you have plans to upgrade real soon. Don't directly jump straight into fooling around with voltages. With default voltages, the FSB will get you a decent overclock. See what kind of stability and temperatures you get. I hope you're using a good cooler; anything under 60C under load is fine.

Q Display flickering problem

I'm an avid reader of your magazine. When I switch on my PC, it starts smoothly but when it displays the Windows XP desktop, the screen starts flicking on and off frequently. The screen display squeezes. Whenever I reinsert the memory into the slot, it works fine for one or two restarts but after that, the problem continues. My system configuration is as follows - Intel Pentium 4 1.4 GHz, 512 MB RAM, 160 GB hard disk.

I have MS Encarta Student Premium 2007. When I insert the CD in the drive, it autoruns and starts the software setup but after some steps, it shows that the .NET Framework 2.0 file is corrupted or missing or low memory space. I downloaded the same file from the net but after that, it installed properly but as soon as I start the software, it displays half of the screen. After that, an error appears asking me to report the error to Microsoft. I tried the software on my laptop but the software installed properly but it did not run perfectly.

Manali Khatri

A The screen problems might be to do with the monitor itself. If it's a 15 or 17-inch CRT, try setting the display resolution to 1024x768 or so.

For the Encarta problem, try uninstalling the .NET framework and reinstall it. Make sure your C: partition has enough space (2GB or more). If you think the system memory might be to blame, run Memtest86+ on your system to check for RAM errors.

Q Sparking screen

I have a Zenith laptop with a Core 2 Duo processor 2.00 GHz, 2 GB RAM and 320 GB HDD. I have a strange problem. A green line is sparking horizontally over the task bar of my desktop. I have consulted with the company as it was under warranty and they have changed the LCD. At first the problem went away, but after three days, the same line again started to spark at the bottom of my desktop. I have also formatted my hard disk and used Windows Vista Business but it hasn't fixed the problem. The line started to spark constantly when I played videos from my HDD, but otherwise, it sparks after a couple of minutes. Any solutions?

Ranjit Borah

A If there are actual sparks on the screen for whatever reason, then you need to take the laptop to the service centre again. If not, try booting into the BIOS screen and see if that flashing line still shows up. Then, you can rule out any software issues with Windows if at all.

Q Green dots everywhere

When I run a game, the game intro video plays but when I start to play the game, my system hangs. I re-installed my graphics drivers. My CPU heatsink isn't clogged with dust and every thing seems to be good. ,My Intel desktop manager shows good status on my components. I also removed and refit my card into the system.

Still, when I run a game, my system hangs with small green dots and inverted triangles on the screen. My problem seems to be different and difficult to resolve!

My configuration is as follows:

- Intel Core 2 Quad 6600
- Intel G33fb
- 4 GB DDR2 RAM
- 600W SMPS
- 500GB HDD
- NVIDIA GeForce 8800GT 512MB

Pranav Swaroop

A That memory hub controller temperature looks high. Green dots or any kind of grainy display is indicative of heating memory or graphics card. Shut the PC off, and quickly but very carefully, try touching the northbridge heatsink and then the graphics card heatsink. You'll know immediately if they're extremely hot. If the card is faulty or if the fan is running slow, then you need to have it repaired.



Canon EOS 550D

The D5000 has company



Specifications

18 MP sensor, 18-55 mm lens kit, **sensor size:** 22.3 x 14.9 mm, **shutter speed:** 1/4000th – 30 sec, **sensor sensitivity:** 100 – 6400 ISO, 3-inch LCD **Dimensions:** 128.8 x 97.5 x 75.3 mm, weight: 475 g (body)

Contact

Canon India Private Limited
Phone: 1800-345-33-66
E-mail: info@canon.co.in
Web site: www.canon.co.in
Price: Rs 51,995

7/10

Build Quality	7.5
Features	8
Performance	7
Value for money	6.5

Enthusiasts, photographers and specifically Canon fans would have been excited and awaiting the release of the EOS 550D or the snazzy Rebel T2i as its better known as in other regions of the world. The upper mid-range DSLRs segment seems to be dominated by the Nikon D90 and the entry-mid range by the recent D5000. The Canon EOS 500D has been around and the 550D was expected and it's finally here.

The 18-megapixel sensor works out to a resolution of 5184 x 3456. The lens kit we received with our 550D was the common 18-55 mm (3x optical zoom equivalent). The Nikon D90 normally comes with a 18-105 mm zoom lens but let's not forget it costs a bit more than the 550D. Liveview looks like a growing trend now. This camera has it too.

The camera body is sturdy and it feels slightly more bulky and larger than the EOS 1000D, and similarly placed models from Nikon. The right hand grip is very good although the other half of the camera has the very silky smooth plastic feel to it which we aren't particularly fond of.

The placement of buttons and controls are similar to the Nikon DSLRs for the most part. The ISO button is placed somewhat weirdly on top near the jog dial. The jog dial on a fresh 550D is a little more resistant to movement than the Nikon. While the Nikons operate by holding down the control button and rotating the jog dial, the EOS 550D does the same for all the controls except for the ISO. Here, you are expected to click the ISO button and change the setting for it. This just seems a little weird. Two dials dedicated for two controls would have been a nice thing to have.

The camera focuses quickly and uses multiple bursts of flash whenever necessary. Manual focussing is made simple as well in a couple of ways. For one, if you choose a spot focus mode, you can use the focus ring while holding down the shutter release, and the camera will beep to alert you that the object is in focus. Another feature is the zoom feature while focussing. Normally, the button would be used to zoom into captured images. While shooting, you can now zoom in Liveview and get accurate control over the focus. With that little extra time, you can now get flawless images. The large 3-inch LCD screen comes handy.

Video recording is supported and it can do upto 1080p at 30 fps. This takes it a step over the D5000 and even the D90. Canon claims to do 12 minutes of 1080p on a 4GB memory card. A 45 second video took around 240MB at 1080p.

The camera captures detail well but there is visible colour fringing along bright colours. ISO performance is good. There is little noise up to 800 and 1600 range. 3200 and 6400 are available and offer good performance in low light areas. Colours are pretty natural and the camera does try and balance lighting even if you set to manual modes. The lens on the wide range gives a somewhat warped image. If you're buying a camera, we suggest going in for a more capable lens. Macro shots are easy to take and portrait shots come out pretty well under natural light. The flash isn't very powerful.

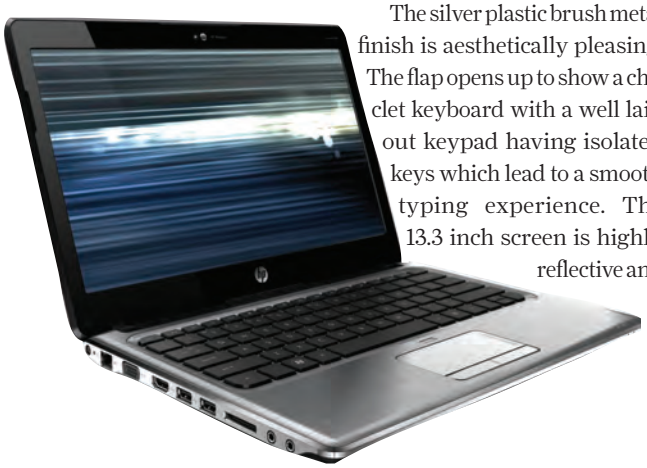
Canon has also made upgrades to its interface. Things are made simpler; the interface has the cosmetic blur effect while switching between menus. If you're tired of the black and white control screen, you even have the option to switch to other colour presets.

The Canon EOS 550D isn't an upgrade going from say an old EOS 400D or even a 500D. If you're a point and shoot camera user, the 550D makes sense but it's difficult to advice people to go in for it. The good 'ol Nikon D90 is always an option, which is a step up on the EOS 550D and even the D5000. At Rs. 51,995, it doesn't fall into everyone's budget.

HP Pavillion dm3 1005AX

An ultrasleek notebook with decent performance

The HP Pavillion dm3 1005AX notebook is an ultra sleek 13.3 inch notebook which houses the AMD Turion Neo X2 processor. The processor has a speed of 1.6 GHz which is generally seen in netbooks, but this one is a dual core processor. An ultrasleek form factor means that this notebook does not come with an optical drive. The idea behind ultra sleek notebooks is to give higher computing and hardware options than a typical netbook. It comes bundled with Windows 7 Home premium along with 4 GB of DDR2 RAM.



The silver plastic brush metal finish is aesthetically pleasing. The flap opens up to show a chiclet keyboard with a well laid out keypad having isolated keys which lead to a smooth typing experience. The 13.3 inch screen is highly reflective and there is a 1.3 MP web camera on top of the screen. The reflective trackpad has poor response and the palm rests tend to get hot after prolonged usage.

A power notch is present on the right hand side, above which is the Wi-Fi button. The speaker is located just under the palm rest on the rear side. It supports HD content and has an HDMI out on the left hand edge.

Performance wise, it is much better than most netbooks. It gave an overall 3D Mark 06 score of 2637 and overall PC Mark 05 score of 3655. Even real life tests like WinRAR compression / decompression stands at 648 KB/s. File transfers took 137 seconds (4 GB sequential) and 160 seconds (4 GB assorted).

At Rs.44,990 we feel that this product is a bit overpriced.

Specifications

Processor : AMD Turion Neo X2 Dual core; **Graphics solution :** ATI Radeon HD 4330; **Audio solution :** ATI Radeon 4500; **OS :** Windows 7 Home Premium; **Weight :** 1.91 kg; **Screen Resolution :** 1366 x 768; Bluetooth; WiFi

Contact

Nitish Singal
Phone: 1800 425 4999
Email: nitish.singal@hp.com
Web site: www.hp.com
Price: Rs. 44,990

6.5/10

Build Quality	7
Features	7
Performance	6
Value for money	6

WD My Passport Studio 640 GB

Stylish storage companion for PCs as well as Macs

Specifications

Dimensions (LxWxH) (mm): 124 x 83 x 18.5; **Weight :** 180 gm; **Interface:** USB 2.0; FireWire 400 /800; **Cache buffer :** 8 MB;

Contact

Anil Kukreja
Email: anil.kukreja@wdc.com
Web site: www. wdc.com
Price: Rs. 10,750

6.5/10

Build Quality	6.5
Features	7.5
Performance	7
Value for Money	4

With USB 2.0 as well as FireWire 800 connectivity, this drive is targetted at Mac users. The e-label is a persistent display, similar to the one seen on the desktop WD hard drives. It displays the type of data you are storing on the drive.

The electronic label can be changed with the help of Smart Ware and it also allows you to add security and backup to your hard drive. Below the label, one gets to see an indicator showing used and free space. The WD SmartWare also allows one to back up data based on categories like Documents, Photos, Videos etc.

We tested this drive on both the PC as well as an iMac. HD Tach gave an average read/write score of 30.8 and 16.8 Mbps respectively. Whereas SiSoft Sandra gave a drive index read and write of 30.4 and 24.3 MBps respectively. On the PC it took 189 seconds to write a 4 GB assorted file with the USB interface whereas 133 seconds using the FireWire Port. FireWire 800 showed an improvement in all scores, compared to the PC speeds.

At a price of Rs. 10,750 we feel its overpriced. Considering many USB 3.0 drives are selling



at that price point it's ridiculous to shell out that kind of money. It's way too overpriced. Considering many USB 3.0 drives are selling at that price point it ridiculous to shell out that kind of money for a USB 2.0 and FireWire port.

iPad-look alike
The Chinese brand ActFind, which is known to sell replicas of the Apple iPhone and iPods has started selling iPad replicas

New iPad's app
There's an app available for 1$ for Apple iPad which allows you to resize, split or rotate the iPad's keyboard

Igloo 5710 Plus Silent (E)

Weak build, great performer



Specifications

Dimensions (LxWxH) in mm : 75 x 99 x 139; **Weight:** 425 gm; **Fan dimension (LxWxH) in mm :** 100x100x25; Noise 19 dBA

Contact

GlacialTech
Phone: +886 2 2244 1227
Email:pr@glacialtech.com
Web site: www.GlacialTech.com
Price: Rs. 1,400

6/10

Build Quality..... 6
Features.....5
Performance..... 7.5
Value for money..... 6

The Igloo 5710 Plus Silent is a CPU cooler platform which is is compatible with both Intel and AMD sockets. It supports Intel LGA1366, LGA775 and AMD AM2 and AM2+ sockets. The cooler design is quite ordinary with the flat aluminium fin tower. Three copper heat pipes run through the fins on either side of the cooler, thus helping dissipate the heat from the processor faster. A 100 mm fan comes attached to the cooler and spins at 1300 rpm.

We tested the cooler on an X58 motherboard running an Intel Core i7 965 processor. The cooler comes with all the necessary attachments for both Intel and AMD boards. We used the standard Intel clip on the cooler. We found that the fan section is present just above the clips and it takes quite some time to get a fix on the board. It gets very difficult to slip your finger into the miniscule gap between the fan section and the clip head.

Performance wise though this cooler delivers the goods. It keeps the temperature at a moderate 42 degrees Celcius in the Idle state and reaches a maximum of 75 degrees Celcius. The Intel stock cooler gave an idle temperature of 57 degrees and the load temperature shots to 100 degrees Celcius. The fan of the Igloo cooler makes very little noise which is an added advantage.

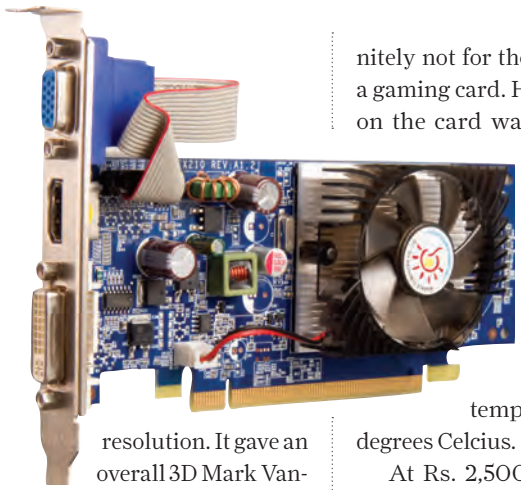
At Rs. 1,400 this is a bit overpriced but nevertheless it's a good buy considering it can be used on a range of motherboards and it dosent allow the temperatures to shoot beyond 80 degrees Celcius.

Sparkle GeForce 210

Ideal HTPC setup

This card is based on a 40nm process and has support for Microsoft DirectX 10.1. Being a 40nm die, this GPU is extremely low power consuming and will not heat up to high temperatures when in use. The GPU is surrounded by a heatsink with a small fan on top. It has 16 stream processors running at a core clock frequency of 589 MHz and a processor clock frequency of 1402MHz with a total GPU memory of 512MB. As is evident, this graphics card is not meant for heavy gaming.

GeForce 210 is a card meant for setting up an HTPC and can play very basic games at lower resolution. It gave an overall 3D Mark Vantage score of 2280 and an overall 3D Mark06 score of 2282, which does not boast of a very good graphics processor. Also the real life gaming benchmarks gave poor scores, which means this card is definitely not for those looking at a gaming card. HD experience on the card was quite good. Operational temperature is under 50 degrees. There was a mere 5 degree variation from the idle temperature of 37 degrees Celcius.



At Rs. 2,500 we feel this card is ideal if looked at as a purely HTPC enabling card, or for someone who isn't looking to do a lot of gaming. It's a half-height card too – this makes it suitable for use in smaller, cramped cabinets.

Specifications

Display Output : HDMI / VGA / DVI; **Chipset :** GT210; Supports Direct Compute and OpenCL computing

Contact

Abacus Peripherals Pvt. Ltd.
Phone: +91-22-4091 4603
Email: enquiry@abacusperipherals.com
Price: Rs. 2,500

5.5/10

Build Quality.....6.5
Features.....5
Performance.....4.5
Value for money.....7

WD VelociRaptor 600 GB

A fast drive with SATA 3.0 compatibility



Featuring SATA 3.0 and boosted capacities, we present the newest Velociraptor. The 2.5-inch form factor remains unchanged, as does the integrated heatsink to keep things cool.

Areal density of the drive has gone up too, and this time round, the new Velociraptor has 200 GB per platter, and the three platters take the total up to 600 GB. There is a 450 GB variant as well. For those who don't know – Velociraptors are supposed to be enterprise-class drives, but enthusiasts love the fact that they get a 10,000 rpm drive with high read/write rates as compared to 7,200 rpm drives.

We tested this drive on an Intel X58 motherboard, with Corsair 2GB DDR3 RAM. Also, we used the SATA 2.0 interface to compare the results with the 300GB Velociraptor to get an idea of the improvement. The synthetic benchmarks like HD Tach gave an average read of 132 MBps which was 25 MBps more than the 300 GB drive. SiSoft Sandra also gave drive index scores of around 120 MBps, which was again 20 MBps higher than the 300 GB version.

It comes with a hefty price tag of Rs. 17,599 which we feel is quite competitive.

Specifications

Buffer Size : 32 MB; **Interface :** SATA 2.0 / SATA 3.0; **Dimensions (LxWxH in mm) :** 147 x 101.6 x 26.1; **Weight :** 489 gm;

Contact

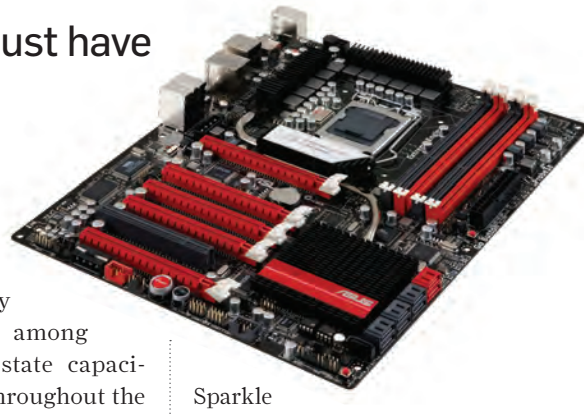
Amarjeet Singh
Phone: +91-22-6709 0828
Email: amarjeet.singh@wdc.com
Web site: www.wdc.com
Price: Rs. 17,599

7/10

Features	7.5
Performance	8
Build Quality	7.5
Value for money	6

Asus Maximus III Extreme

Every gaming enthusiast's must have



Specifications

Intel P55 express chipset; ATX form factor; six SATA 6 GB/s ports; five PCI Express x16 slots; one PCI slot; two USB 3.0 ports; seven USB 2.0 ports, one eSATA port, one FireWire port

Contact

ASUS Technology Pvt. Ltd.
Phone: +91-22-6766 8800
Email: media_india@asus.com
Web site: www.asus.in
Price: Rs. 29,000

7/10

Features	8.5
Build Quality	7
Performance	7.5
Value for money	6

A very feature rich, and well built board – just a glance will tell you that. And it's thoughtfully laid out too. A unique feature is integrated Bluetooth module that allows connectivity with a cellphone for remote overclocking.

Based on the Intel P55 chipset, one special feature is the dual PCIe x16 mode – a first for P55 boards, and made possible by an additional nForce 200 chipset. The board has native support for USB 3.0 thanks to the NEC controller located behind the blue coloured USB slots on the back I/O panel. The bundled accessories with the board are mind boggling including a small Bluetooth RC board, as many as eight SATA cables, 2-way SLI and CrossFireX connectors, a 3-way SLI connector among others. Solid state capacitors are used throughout the board. Also the SATA ports are pointing sideways rather than upwards, such that there is no conflict with the graphic cards. Another interesting addition is the large Start and Reset buttons, so you no longer have to short pins or move jumpers which is quite thoughtful.

We tested this board using an Intel Core i7 870 processor, Corsair 4 GB DDR3 RAM, a 300 GB WD Velociraptor and a Sparkle GeForce GTX 285 graphics card. It gave an overall PC Mark Vantage score of 7888 and a 3D Mark overall score of 18,553 which is quite good for a gaming system. Also real life gaming benchmarks gave great FPS counts.

Rs.29,000 is the amount you will have to shell out to own this monster. Though expensive, its features and performance command that price.

Google WebM
Google brings in WebM; it's a community effort to provide a common media format that will work across all recent WebM complaint browsers

Google TV
Google introduces Google TV which will be based on the Google Android OS; Intel and Logitech working along with Google on it

Zotac GeForce GTX 470

Great performer but tends to get very hot

Specifications

40nm fabrication; Supports SLI; Memory Interface : 320-bit; Memory type : GDDR5; Memory clock : 3348 MHZ; Connects : 2 x DVi and 1 x HDMI

Contact

Aditya Infotech Ltd.
Phone: +91 11 4666 5666
Email: sales@adityagroup.com
Website : www.zotac.com
Price: Rs. 22,999

7/10

Features.....6.5
Performance.....7
Build Quality.....7
Value for money.....6.5

The Zotac GTX 470 has 448 stream processors which is almost double the number found in a GTX 285. It has a core clock frequency of 607 MHz and a shader frequency of 1215 MHz. The card comes with a 1280 MB GDDR5 memory.



We used an Intel Core i7 965 Extreme processor, Corsair 4GB DDR3 RAM, Cooler Master UCP 1100 W power supply and Windows Vista (32-bit) operating system. The scores we got were slightly less than the Nvidia reference GTX 470 we tested recently. 3D Mark vantage gave an overall score of 16615 along with a GPU score of 13557. Stalker Clear Sky gave decent scores of 62 fps for 1680x1050 whereas it dropped to 48 fps at 1920 x 1200. The graphs comparing Zotax GTX 470 and Nvidia GTX 470 are show alongside.

One thing we did not like about the card was its heating. With no visible heat pipes on the card, it solely depends on the fan and heatsink to dissipate the heat, which does not seem enough. It rose to a temperature of 81 degrees Celcius during benchmarks which was quite high from its idle temperature of 40 degrees.

At Rs.22,999 it's priced slightly lower than the Radeon HD 5870 and offers slightly slower performance. Although NVIDIA claims it will outpace its competitors when Tessellation becomes the norm. Its an ideal buy for hardcore gamers.

Gigabyte GA P55A UD7

Exceptional looks, good performance

The first thing that grabs your attention is the waterblock atop the heatsink and the blue and white decal style design on the heatsink housing the P55 PCH segment.

There is a nice big power button located just beside the 24-pin power connector and two tiny reset and CMOS clear buttons beside the battery. A thoughtful addition is the number codes which correspond to particular errors which makes troubleshooting easier.

We tested this motherboard using an Intel Core i7 870 processor alongwith Corsair 4 GB DDR3 RAM and a Sparkle GTX 285 graphics card. It gave a PC Mark Vantage overall score of 7,814 and a 3D Mark 06 overall score of 18,481 which was marginally less than the Asus Maximus III Extreme board. Real life tests like video encoding took a mere 23 seconds for a 100 MB file, 4 GB file transfers took under 90 seconds. The gaming scores were also great with S.T.A.L.K.E.R Clear Sky giving 89 fps at 1280 x 1024 and Crysis maxing out at 54 fps as the same resolution.



The heatsink around the PCH tends to get very hot during load time.

This board belongs to the enthusiast category which explains the hefty price tag of Rs. 19,000. We felt it was a bit overpriced, but one will have to shell out this price for the features provided as its performance is quite good.

Specifications

ATX form factor; Intel Express P55 chipset; 4 DIMM slots; Realtek ALC889 Audio; Two SATA 6 Gbps ports; Two USB 3.0 ports

Contact

Gigabyte Technology
Phone: +91-22-4063 3222
Email: sales@gigabyte.in
Web site: www.giga-byte.co.in
Price: Rs. 19,000

7/10

Features.....7.5
Performance.....7
Build Quality.....7
Value for money.....5.5

Zebronics Invader

Now invading the higher market

Specifications

Mid tower chassis, drive bays : 5 x 3.5-inch, 5 x 5.25-inch, 7 expansion slots, **Fans:** 6 fans **Dimensions:** 516 x 210 x 450 mm, **weight:** 12.5 kg

Contact

Top Notch Infotronix India Pvt Ltd
Phone: +91-44-4393 6000
Email: enquiry@zebronics.info
Web site: www.zebronics.net
Price: Rs. 6,400

6.5/10

Features.....7
Performance.....6
Build Quality.....5.5
Value for money.....7.5

Zebronics makes a somewhat unexpected entry into the mid-ranged - high-end cabinet market. The Invader is a mid-tower that's encased in a glossy plastic body with a meshed metal frame underlying it.

With the chassis opened up, you find features that you'd normally find on cabinets priced at over Rs. 10,000 from the more enthusiast chassis brands. For example, two fans are mounted on a foldable panel in the region where the graphics cards would go. The drive bays are of a tool-less design. Plastic quality isn't great but the cabinet is certainly easy to setup. The clips on the expansion slots are like those on the Cooler Master 690.



The thickness of the metal used for the doors and panels is good. The same can't be said about all the other components. The buttons aren't great. There isn't enough depth to them and they're made of cheap plastic. Airflow is taken care by the six fans.

The build quality isn't anywhere close to the Lian Li's or the Cooler Masters. Those looking at something in the Rs. 6,000 – Rs. 7,000 price range, but with many features, this is one of the best options in the market at just Rs. 6,400.

Cooler Master NotePal U1

Cover those hotspots

Specifications

Aluminium frame, rubber padding, support 7-inch to 14-inch laptops, 80mm fan Dimensions: 269 x 210 x 53 mm, weight: 355 g

Contact

Avinash Singh
Phone: +91-93105 80680
Email: avinash_s@coolermaster.com
Web site: www.coolermaster.com
Price: Rs. 1,400

6/10

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

The Cooler Master U1 fan edition is a somewhat smaller laptop cooler that can be used for netbooks as well.

The cooler is made of an aluminum perforated metal. There is a fan at the back of the cooler with a protected grill which ensures you don't touch the fan. There are rubber pads at the base of the cooler which stops the cooler from sliding around the table. One of the key features is the movable fan at the bottom of the pad. This is useful in cooling down hotspots at the bottom of the laptop more effectively.



This cooler should ideally be placed on a table. The design doesn't lend itself to placing it on your lap with folded legs for example. There are quite a few things missing as well. There is no fan controller or USB hub built into the cooler. The USB connector that is used to power the fan has an extender to connect an additional USB device. The cooler does a decent job at cooling the laptop.

There are a few shortcomings with the Cooler Master U1. The price of the cooler is Rs. 1,400. It's a little expensive for what is just a pad with a fan connected to it. The inclination adjusting feature would have been a nice thing to have. People using their laptops only on desks should buy this.

Acer's Tablet PC
Acer launches the Aspire Timeline 1825PT which is a mix of a laptop, photo frame, and a notepad

Android 2.2(Froyo)
Android 2.2 (Froyo) officially announced with support for the Flash player 10.1

Razer Megalodon

Mega-not-real-surround



Specifications

40mm neodymium drivers, frequency response – 20Hz – 20kHz, 32 Ohm impedance, 3.3m cable

Contact

Razer
Web site: www.razerzone.com
Price: Rs. 8,999

5/10

Features.....5.5
Performance.....6
Build Quality.....5.5
Value for money.....3

The design of the headphones is exactly the same as the older Carcharias headset. This one comes with an additional processing unit which connects to the PC using USB.

The headset is pretty comfortable to wear. Cables are well sheathed and thick. The sound processing unit has the controls for the volume, bass, enabling the surround sound effect and also the volume and sensitivity for the built-in microphone.

Audio quality is decent. The surround sound feature is mostly a gimmick without really giving you true surround-sound. With the standard stereo mode, the audio quality is good for music. It's pretty clear and produces very little distortion at higher volume. There is a decent amount of bass and treble which makes most genres of music enjoyable. Games and movies don't particularly sound better. The surround effect gives a very hollow, empty feel to the sound which makes it sound very artificial.

The Megalodon is priced at Rs. 8,999. It's way more expensive than the Carcharias and in the same price range as some high-quality audiophile headphones. In comparison, the Megalodon is very hard to recommend to anyone.

Lian Li PC-A77F

Towering, yet humble monster



A beautiful beast and one that's built entirely of aluminium! The insides and externals have thumbscrews which makes installation and setting up simple. Noise and vibrations from the power supply are isolated with the dampening pads at the bottom of the case. The power supply can only be setup at the bottom of the case. The expansion slot panels are of the highest grade and the release mechanism is made of metal and is of top-notch build quality.

The gaps for the top fans are cut out with great precision and the rear fan has a metal grill that ensures your fingers don't get close to it. The forward 3.5-inch drive bays have fans as well that help in maintaining low drive temperatures. Fan control is available and USB 3.0 is supported at the front panel using a USB cable and adapter for the motherboard connects.

The price of the A77F is Rs. 26,500 which makes it really expensive. It's not particularly fancy looking or doesn't do anything very impressive. Sturdier, heavier duty cabinets are available for cheap. The Lian-Li name carries more weight for some; and for those users this would be one of the top models to buy no matter what the price.

Specifications

Full tower chassis, drive bays : 6 x 3.5-inch, 8 expansion slots, Fans: 4 x 120mm, 1 x 140mm Dimensions: 220 x 572 x 590 mm

Contact

XTREME GRAFIX
Phone: +91-22-2770 1140
Email: sudhirsmani@gmail.com
Web site: www.lian-li.com
Price: Rs. 26,500

6/10

Features.....7
Performance.....7
Build Quality.....7
Value for money.....3

TAG Z-626

Good looks, poor performance



The TAG-626 headphones appear like a custom made set of headphones from BMW car company thanks to the tacky imitation of the BMW logo on the outer end of the ear cups. It is a supra-aural headphone, which means that the headphone will rest on your ear rather than cover it. The blue/white colour scheme continues on the head band as well which provides a good grip, such that it wont fall off if you are jogging with these headphones on.

Earcup covering is made up of poor quality plastic. The foam padding is decent, but not very comfortable as it tends to press onto the earlobes. Theres a small volume controller on the left hand side. A microphone is connected to the lefthand earcup with the help of a flexible wire. The wire provided is long enough.

Performance wise TAG-626 is disappointing. Low frequency response is quite bad as there is hardly any bass effect. The sound output is quite flat. The headphone not very successful at distinguishing sounds with minute details like rain drops, coins clinging as well as low intensity sounds. The headphone has a tendency to mix up these sounds. The mids and higher frequencies sound satisfactory. Sound separation was good though.

It's priced at a very economical Rs. 499 so go for it, if you are not looking at sound quality.

Specifications

Sensitivity : -106 dB+/- 3 dB; Impedance : 32 Ohms; 3.5 mm audio jack; Cord Length : less than 2.5 mtrs

Contact

Technology and Gadgets
Phone: 91 22 2382 3331/32 or 91 22 2385 2040/50
Email: sales@technologyandgadgets.com
Web site: www.technologyandgadgets.com
Price: Rs. 499

5/10

Build Quality	4
Features	5
Performance	5
Value for money	5

AMD Phenom II X6 1090T Black Edition

Hexa-core!



Specifications

Clock frequency : 3.2 GHz; **TDP :** 125 W; 45 nm process technology; 938 micro Pin Grid Array; **Socket :** AM3 and AM2+

Contact

AMD
Phone: 1800 425 6664
Email: fusion.india@amd.com
Web site: www.amd.com
Price: Rs. 15,999

7/10

Build Quality	7
Features	6
Performance	6.5
Value for Money	7.5

Thuban marks AMDs entry to the six core market. It features Turbo Core technology that, when activated, boosts the clock speed of three cores upto 3.6 GHz while running a workload that would leave some cores idle. The 1090T is based on a 45-nm silicon on insulator technology and has the same 6 MB shared L3 cache as the X4 965.

We tested this board on an Asus Crosshair IV Formula motherboard which houses AMD's latest 890FX chipset having an AM3 socket. The X6 1090T is compatible with AM2+ and AM3 sockets. We used a Sparkle GTX 285 card, Corsair 4 GB DDR3 RAM @ 1333 MHz and an 1100W Cooler Master power supply. Performance wise it's nowhere close to Intel's Gulftown hexa core processor. It gave a Cinebench Multithreaded score of 14,457 which was much less than the 21,000 plus score we got on an Intel Core i7 980X. Unlike the 980X, the 1090T does not support hyper threading. The overall 3D Mark Vantage score was 44,664. It took 31 seconds for a 100 MB video encoding. Gaming scores were quite good also with Crysis (Crytek Island, 1024 x 768,low quality) giving 116 frames per second, Company of Heroes : Tales of Valor (1280x1024, low quality) giving 85 fps.

Priced at Rs. 15,999, this processor is ideal for enthusiast users who want a great performance without having to pay through the nose. Compared to i7 980X, the 1090T gives two thirds of the performance but at a price point so economical, it is a great buy for anyone looking at purchasing a 6-core processor.

Chrome OS coming
Acer to launch the first Chrome OS products at Computex in Taiwan

A costly affair
The new 35mm f1.4 lens from Leica costs around $5000, which is way more than some cars!

Razer Destructor

The fine art of aiding destruction



Specifications

Fractal texture; 350 mm (Length) x 280 (Width) x 2.3 mm (Height), non-slip rubber base

Contact

Razer
Web site: www.razerzone.com
Price: Rs. 2,599

8/10

Features.....8
Performance.....8.5
Build.....8.5
Value.....6.5

Razer is known for making gamers happy, and the Destructor seems like a worthy attempt. It's a deviation from the soft, cloth-based, foam-backed surfaces we're used to seeing. Instead the Destructor has a hard surface that has just enough texture to be termed as "unsmooth". In fact the texture is similar to very fine sandpaper – although it's not abrasive to your fingertips. There is a thin layer of soft rubber on the rear side of the hard surface, and this provides excellent grip – the mat will not slide on the table, no matter how hard you try. The mat ships in a fancy, rigid zipper case that should easily protect it from most wear and tear.

While testing we couldn't help but notice how wide this mat is – great for gaming, where mouse movements are erratic and sudden and the travel distance is a lot. Tracking is very, very accurate, and this is not something limited to Razer mice. We found even Logitech's MX 518 and G500 gaming mice tracked wonderfully on this surface, although coming from a cloth-weave-based gaming mat you'll need to adjust to the relatively higher acceleration and slightly lower initial resistance that the surface provides. Accuracy is not sacrificed over speed making the Destructor a truly killer prospect for the competition. The surface is easier to clean than cloth weaves – a nice plus. It's well suited to FPS games and RPGs alike.

Logitech G13

The gamers handful!



The name initially struck as being weird – all other Logitech G series keyboards are full size – the G13 is what they call a "game board". Immediately, the impeccable build strikes you – the bold moniker on the rear is metallic, and the plastic used is of the highest quality. The black/silver/grey build suits its audience well. The palm/wrist rest is pretty luxurious. Though it's not soft there is a soft rubber finish that is comfortable. This material doesn't get slick with sweat and provides sufficient grip as well as takes stress off the wrist. 25 programmable macro keys have been provided and the rather ergonomic small joystick that is operated using your thumb also supports macro functionality.

The wave-like design of the G13 and the key positioning is perfectly ergonomic and we could find no complaint. When using it with games, you will need to use the inbuilt driver to profile each game you have installed, and map keys properly before the G13 shows its mettle. Even then, the learning curve for migrating to this game board isn't easy, initially we found our Warcraft 3 skills lagging, as it takes several hours to get used to the non-conventional layout. Once you do get used to it, the G13 grows on you, and besides being a stylish addition to your desktop, is a great boon for gamers. The backlighting and LCD HUD adds a lot of style. It's not cheap though, at Rs. 4,245, it's certainly not for everyone.

Specifications

Macro keys: 25 keys; LCD display; joystick with mouse buttons, backlit keys and display.

Contact

Logitech
Phone: +91-22 2657 1160
Email: kavita_nath@logitech.com
Web site: www.logitech.com
Price: Rs. 4,245

7/10

Build Quality.....8
Features.....8
Performance.....8.5
Value for money.....5

Galaxy GeForce GT240

Runs cool, performs great



The Galaxy GT240 is a mid-range graphic card. The heatsink above the GPU is surrounded by a fan which is held in place by a sliver grey metal structure, which is open on all sides. This packaging ensures that the card does not heat up. We found the load temperature to be as low as 42 degrees Celcius, a mere five degree rise from its idle state. It has a three out ports viz : DVI, VGA and HDMI. A common aspect with the GT220 is support for DirectX 10.1 and shader model 4.1.

Since it is a mid range gaming card, we expected it to perform well and it did not disappoint. The synthetic benchmark 3D Mark Vantage gave an overall score of 4706. Gaming benchmarks like Crysis Warhead gave a frame rate of 40 (1024x768, medium) and 68 (1280x1024, low); Stalker Clear Sky gave 45.7 fps (Day, 1280x1024, low) whereas Company of Heroes : Tales of Valor zoomed to 71.2 fps (1024x768,Ultra) and 280.1 fps (1280x1024,low). We also tried increasing the resolution to 1680x1050, Anti Aliasing at 4x, Ultra / High settings and got scores like : Crysis Warhead (12 fps), STALKER Clear Sky (12 fps), FarCry2 (30 fps) and Company of Heroes : Tales of Valor (32 fps). So clearly, this card is not meant to be used at the highest possible settings but it gives a great frame rate at low to medium settings.

For its worth, this card is quite decently priced and it makes sense for people looking for hardware to play somewhat older games. High-definition display users might have to look a little further up the chain.

Specifications

Stream Processors : 96;
Memory : 512 MB DDR5;
Memory Interface : 128-bit;
Shader Clock : 550 MHz;
Memory Clock : 1700 MHz

Contact

Galaxy
Phone: +91-22-2382 3331
Web site: www.galaxy.com
Price: Rs. 5,500

6.5/10

Build Quality	6.5
Features	6
Performance	7
Value for money	7



Dragon NaturallySpeaking Preferred 10

Taking voice recognition to the next level

Requirements

Minimum Processor : 1 GHz;
Operating system : Windows 2000, XP, Server 2003, Vista, 7 ; Support transcription

Contact

Manish Goenka
Phone: +91-22-2635 1063
Web site: www.icons.net.in
Price: Rs. 11,995

6.5/10

Features	8
Performance	5.5
Value for money	6

Installation is quite simple and it has a variety of accents to choose from like Australian, Indian, American, British among others. You can also set the vocabulary level according to your need. Training the software takes around 10 minutes which involves reading text off the screen. This is the initial training which on completion generates some user files which will adapt to your voice.

After the training when it comes to actually using the software, you will notice that it is not as smooth to use. There are many mistakes and you will have to speak very slowly initially to get the software used to your voice. We encountered a lot of errors while the first couple of runs, but the software gets better with subsequent practice. Sometimes shouting out commands can actually type them out, so one has to be very patient.

The other great aspect of the software is that you can use voice recognition to open folders, search items on Google.com or look up videos on YouTube. This is one aspect that sets it apart from other voice recognition software. It can be used with Microsoft Word and emails as well. You can use commands and menus from Ms Word for formatting text, selecting menus etc. Also it can transcribe text from an .mp3 or .wav file.

Dragon Pad opens up a word file where in you can start dictating your text. There is an option to transcribe text from an audio file via the Sound menu.

At Rs. 11,995 this software may seem a bit expensive but it's quite competitively priced. It's highly recomended for students, lawyers and doctors who deal with a lot of text material and typing out long documents.

Square cell-phones!
Handset manufacturers including Nokia and Motorola plan on building square cellphones

Solar powered headset
I-Tech launches solar-charging Bluetooth headset in India

Epson PictureMate PM310

Portable printing companion

Epson PictureMate PM310 is a portable inkjet photo printer that prints 4x6 inch photographs. Due to its compact size and light weight the PM310 can be easily carried around and you don't need a computer to get it working.

Coming in a white sturdy plastic body, the printer has a 7-inch TFT LCD screen on its front which can tilt outwards. On the right hand side we have a range of memory card slots like CF, SD, MSPro, xD and even a PictBridge slot for printing off cameras directly. A handle is present on the top allows one to carry the printer easily. When not used as a printer, PM310 can act as a digital photo frame. The slide-show menu will activate the slide-show of images with a range of transitions. Layout allows you to crop or trim image or add a border to the photograph.



Printing speeds are slow, but colour quality is brilliant. It took around 10 minutes to print 5 (two under 1 MB, two around 6 MB and one around 10 MB) photographs. Similarly a single photo of 5 MB took 56 secs whereas an 800KB picture took 40 seconds.

At Rs. 14,999 this printer is expensive and advisable only for those who spend a lot of money on printing digital photographs. The Epson photo cartridge claims to print 150 photos of 4x6 inches, but do not expect more than 100 great quality prints.

Specifications

Resolution : 5760 dpi; Ink **Cartridge Model :** T5852; **Maximum Paper Size :** 4x6 inch (4R); **Card slots :** SD/MS Pro/xD/CF/PictBridge

Contact

Epson
Phone: +91-22-2382 3331
Email: sales@technologyandgadgets.com
Web site: www.technologyandgadgets.com
Price: Rs. 14,999

6/10

Build Quality	7
Features	6.5
Performance	6.5
Value for money	5

Razer Orochi

Susanoo's nemesis returns



The Orochi has been designed to straddle an interesting divide – notebook users and gamers. After using it as both a gaming mouse and a notebook mouse we feel it's equally suited to both roles, although the fact that it doesn't go all the way in either direction is ultimately its biggest hurdle. It's reasonably well built and suitably compact for notebook purposes. It does get heavy with the two AA batteries, but most will not mind, since this gives some much-needed stability. The body of the mouse slopes forward and from a raised rear. This is good because the raised portion fits your palm giving a slightly more substantial in-hand feeling. The mouse can be used wirelessly or with the bundled USB cable.

Even though it's small, the mouse fits even medium-large hands well owing to its width and the raised rear. Being a Bluetooth mouse, you save a USB port. The wheel has a nice positive click, as do the buttons. A pity Razer didn't add a tilt feature for the wheel that is invaluable for most users. Scrolling is very accurate, gamers will not complain. The feet provide the right balance between slip and traction on good surfaces. There are four additional buttons on the mouse – two on the left, two on the right. The ones on the left are useful; the ones on the right are not.

Overall hardcore gamers will look at bigger mice for better control, while notebook users might want something with more features, making the Orochi an expensive option straddling two non-overlapping usage patterns.

Specifications

Sensor: Laser, 4,000 dpi; Bluetooth 2.0 support; **power:** 2 x AA batteries; 4 programmable buttons

Contact

Razer
Web site: www.razerzone.com
Price: Rs. 4,999

6.5/10

Features	7
Performance	7
Build quality	6.5
Value for money	7

Logitech Performance Mouse M950

Productivity in all her glory

The M950 is ergonomically designed and the contours that may appear severe at first, are, in fact extremely comfortable. The deep recess on the left, for example, perfectly fits ones thumb, while the slight indent on the right perfectly coincides with the third and last fingers. The mouse is also pretty high – great de-stressing for your wrist – since you can rest your palm on the mouse.

The Nano receiver that communicates with your computer is tiny enough to plug it in and forget above removal. The nonintrusive battery indicator monitors the juice level of the single AA battery. Logitech's "Darkfield" sensor works as advertised, and will even track on cloth and glass with impeccable accuracy. The wheel can scroll freely – useful for browsing long web pages, or can be set to ratchet i.e. scroll accurately. The tilt mechanism is uber-useful for spreadsheet users. The four programmable buttons around the thumb region are pretty usable. A MicroUSB connect makes it a wired mouse, and also charges the battery.



It's got everything – heck it can be used for gaming, although hardcore gamers will want wired mice and higher dpi sensors. Rs. 7,595 is also mighty expensive, but this is no ordinary rodent – it's a rare pedigree, that will speed up productivity and every feature is very usable.

Specifications

Sensor: Laser; Programmable buttons: 8; tilt wheel; AA battery

Contact

Logitech
Phone: +91-22-2382 3331
Email: kavita_nath@logitech.com
Web site: www.logitech.com
Price: Rs. 7,595

7.5/10

Features	9
Performance	8.5
Build	7.5
Value	5

Fujifilm FinePix Real 3D W1

10 MP stereoscopic 3D camera

The first of its kind - 3D is achieved with two stereoscopic lenses. It lets users shoot both 2D and 3D images/videos and view them on the 2.8-inch LCD screen without the use of 3D goggles.

It has an appealing look with metallic black and silver colour schemes, bright-blue illuminated controls and a sliding door acting as lens cover.

There is a manual mode also available for the enthusiast to tinker and adjust the 3D image settings. We observed that 2D images were average in terms of overall quality while the 3D images with 3D goggles on, really looked blurred and out of focus. It was evident that the camera lacked depth of field and focal length while shooting 3D images. 2D image quality is decent although noise at ISO 800 and above is a lot.



It's priced at a rather high Rs. 39,999. If price were not to be a constraint, the camera appeals as an average 2D camera for casual use. To get the feel of 3D, one has to wear the 3D goggles which aren't supplied with the camera. Those are priced around Rs. 300 to Rs. 600.

Specifications

10 MP, 1/2.3-inch sensor (x2), 3x optical lens, shutter speed range: 3 – 1/1500s, burst speed: 2 fps battery rating: 1500 mAh

Contact

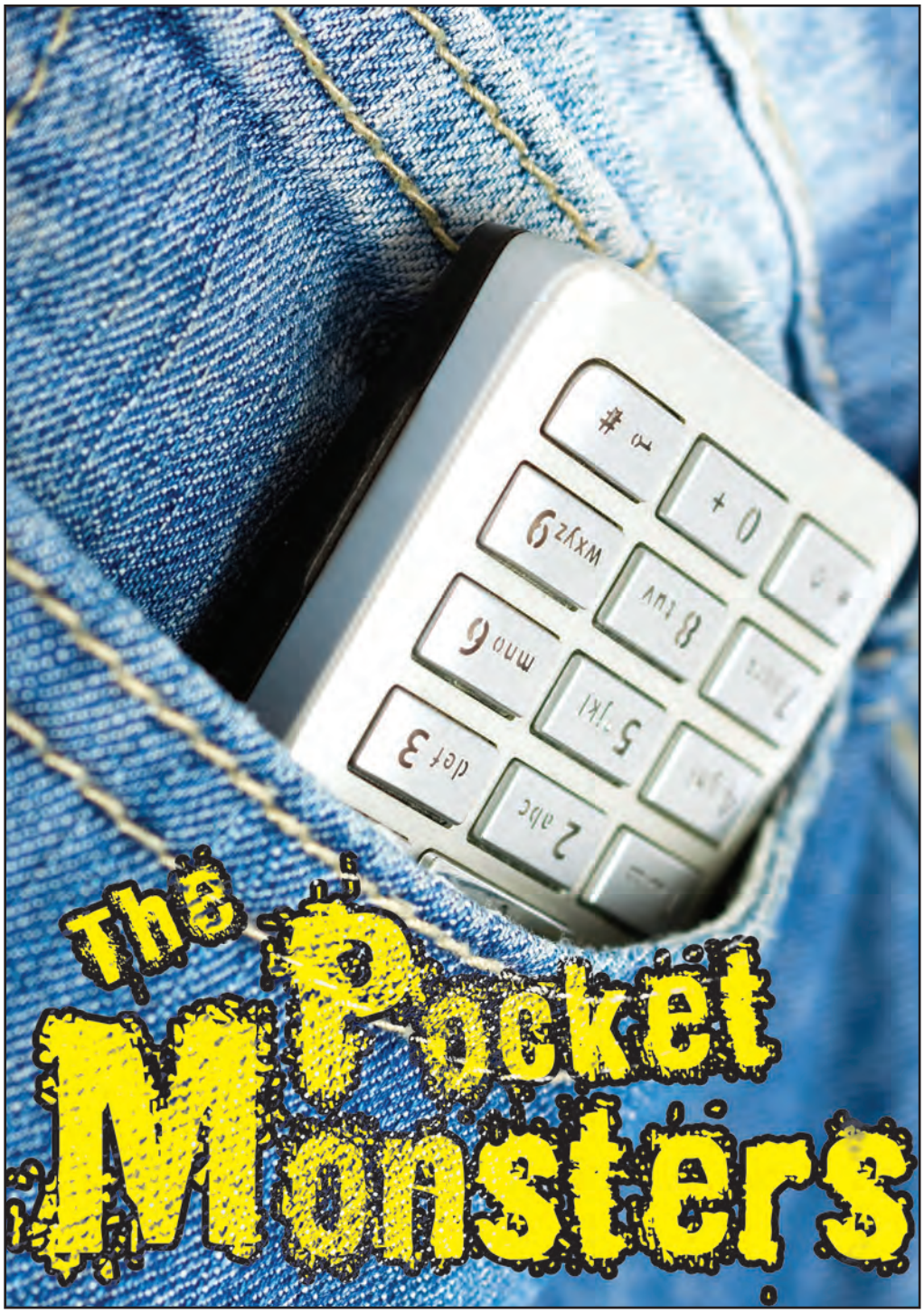
Fujifilm India Pvt Ltd
Phone: +91-124-4325500
Email: contact@fujifilmindia.com
Web site: www.fujifilm.in
Price: Rs. 39,999

6/10

Features	7
Performance	6
Build Quality	5
Value for Money	6

Mobile launch
Wynn telecom Ltd has launched budget mobile handsets priced between Rs. 1,500 and Rs. 5,000 with a wide variety of choice in utility, multimedia and QWERTY phones

3G auctions
Airtel, Reliance Communications and Aircel have won bids in 13 circles in the recently conducted 3G spectrum auction.



We test 28 of the smartest phones in the Indian market ranging from Rs. 8,000 to more than Rs. 40,000. These monsters offered everything from touchscreens to QWERTY keypads, and 12.1MP HD-ready cameras to voice-guided GPS navigation.

We caught 'em all: 28 monster phones rampaging in the Indian market. The captured specimens included offerings from the stables of Nokia, BlackBerry, HTC, Samsung, LG, Sony Ericsson, Apple, Motorola, and Garmin-ASUS; and ranged in price from Rs. 8,500 to Rs. 41,500. What these phones have in common is features that are geared towards the always-connected life, whether it is through Wi-Fi or 3G connectivity, location-based features or social networking. These features, along with the rapidly growing prevalence of touchscreen and camera phones, gives us an interesting perspective on the current state of the Indian market, where we find intense competition between some of the most advanced cellular devices in the world. These phones also herald a change in the way we communicate with the world around us.

Our experiences in testing these current-gen devices were varied and ranged from unbridled awe, to morose disappointment. Read on to find out more!

Entry-level multimedia phones (8,000 to 12,000)

Two phones fell into this price category: HTC Smart and Sony Ericsson Naite.

Sony Ericsson Naite: J105i

The Sony Ericsson Naite (J105i) is labelled as the 'Green Heart', since it is designed to be very eco-friendly with recyclable plastics and reduced packaging to help cut down on wastage of raw-materials. In addition,



Sony Ericsson Naite J105i

eco friendliness is further emphasised with the introduction of green applications like: Ecomate which is a carbon footprint calculator and Green calculator.

The J105i is well designed and fits the bill as the sleekest model among the lot that we tested. With a hard plastic encasing and a glossy metallic finish on the keypad, it truly appeals to the user as a trendy candy-bar phone. The keypad keys are well laid out and the spacing between the keys is convenient. The keys are soft to the touch and produce consistent tactile feedback and input response. The battery cover is rather flimsy but clings on well to the frame of the battery compartment.

The J105i has a combined power and headphone port and a hot-swappable slot for microSD card inside the battery compartment.

The Verdict:

It took the top honours along with Sony Ericsson Aino in the keypad design category. However, it performed the worst in the video capture test in its category and did modestly in the photo capture test. It did a decent job in the call clarity and signal reception test. Overall, it yielded satisfactory results considering it to be a low-end smartphone available for a sub Rs. 8,500 budget.

HTC Smart

A compact resistive touchscreen candy-bar phone, the HTC Smart at Rs. 9,500 is the company's most inexpensive touch device, meant to cater to an audience that is looking a touchscreen at an affordable price, with a touch interface. It features HTC's custom OS, Brew Mobile.

The phone has a good camera with a flash, which churns out some good images, but sadly, it has a fixed focus, lacks digital zoom, and offers almost



HTC Smart

no camera setting options. The HTC Smart also serves reasonably well as a multimedia device, with good audio and video format support (notably excluding DivX). Audio and video playback quality is good.

The phone's interface is intuitive but the front panel layout will take some getting used to, with a 'back' button that also serves as the 'menu' button, a 'call disconnect' button that also locks the device, and a small button for in-screen menus. Though there is no multi-touch support, the Sense UI makes up for this feature by offering smart zooming in the browser, which simply requires a double tap on the screen.

For social networking, HTC Smart has a native Facebook client, along with a unified inbox called Friend Stream. You can also personalise your menu with your favourite applications, and put photos for all your contacts, and set favourites. The phone also offers Push Email support, and thread-type messaging.

Verdict

If you are looking for a value-for-money yet feature-rich phone, HTC Smart is for you. However, if you intend to browse the Internet via Wi-Fi, look elsewhere. The phone does not have GPS support either, and its custom OS lacks a wide range of applications that can be found on Windows Mobile or Android.

Mid-range Smartphones (12,001 to 18,000)

A range of medium-end smartphones, these devices are the ultimate combination of features and affordability, and offer their users and impressive functionality at incredible prices. The seven devices in this category were made by various companies, and included two each from Nokia, Samsung and LG, and one from Sony Ericsson.

Sony Ericsson Yari U100i

It is built with hard plastic, reinforced with a solid steel metallic border around the screen, making for a comfortable grip. It has a glossy black finish to the front panel control buttons, with a hint of white coated navigation controls and 'option selection' buttons, adding to the design aesthetics of the mobile.



Sony Ericsson Yari U100i

The volume controls are conveniently placed on one side of the mobile while the power/headphone port on the other. The U100i has a sliding keypad and an accelerometer sensor for auto-

Brand	Phone	Email	Website
Garmin-Asus	1-800-209 0365		www.garminasus.co.in/
Apple	1-800-425 4646	indiasales@mac.com	www.apple.com/in/iphone/
Sony Ericsson	1-800-111 800 (MTNL/BSNL); 3901 1111 (others)	Consumers can mail the queries from the website	www.sonyericsson.com
HTC	+91-11-4660 4660	v_vinodkumar@htc.com	www.htc.com/in
LG	+91-120-260 900/40	krishnendubanerjee@lgindia.com	www.lgmobiles.com
Nokia	+91 (City Code) – 3030 3838		www.nokia.co.in/
Samsung	+91-11-3030 8282	sarfaraz.b@samsung.com	in.samsungmobile.com
Motorola	1-800-111 211	info.in@motorola.com	www.motorola.com/in
Blackberry	1-800-425 3720	jagan.g@redington.co.in	in.blackberry.com/support

Android performance boosts
Android 2.2 claims to be 450 per cent improvement over the older 2.1

W7 Mobile RC1
Screenshots of the nearly finalised version appear online

rotation of screen. However, we found that these accelerometer sensors aren't very accurate and sometimes rotate the display without user input. It has two dedicated gaming keys above the screen. The keypad keys require the user to press along the dotted markings on the keypad. Any slight deviation from the dotted markings while pressing the keys will not register the input provided by the user. The keypad layout lacks beveling as well as optimal spacing, hindering the finger movements while typing. But, this model lost out by a huge margin in ergonomics.

The Verdict:

The Yari lives upto its tag of multimedia and gaming phone. It also impressed us with the abundant manual camera settings it offers to tinker with. However, its performance in the photo/video capture test was too ordinary. It performed moderately in the call clarity and signal reception test. Overall, it failed to impress in any of the key tests.

Nokia 5800 XpressMusic

It has a well sculpted body frame, encased in hard plastic with a hint of glossy brown finish. The body contours are well rounded, although a little on the thicker side, the phone grips well owing to its matte-finished back.

The volume/zoom controls, keylock and camera buttons are conveniently placed on one side and the access to the SIM card slot is strangely and inconveniently concealed below the battery compartment. The Nokia 5800 XpressMusic lost out on user-friendliness and also on the ergonomics as a whole, due to lack of hardware keypad as



Nokia 5800 XpressMusic

was the case with Sony Ericsson's Vivaz. The touchscreen is decent, considering the fact that it is resistive. Navigating around the phone is not a problem due to the large finger friendly interface of the phone but for finer usage, like handwriting or click small links, the stylus is provided to do the job.

The Verdict:

Nokia XpressMusic 5800 is and excellent music phone and more, due to its Symbian roots and wide application base. It truly stole the limelight with its sublime performance in the loudspeaker audio clarity and bundled earphones quality test scoring 9 on 10 in each category. It delivered excellent phone earpiece volume and handsfree clarity in the signal reception and call clarity test. It clearly outperformed its nearest rivals: Sony Ericsson Yari, LG GW550, Samsung Monte S5620, Samsung Corby Pro B5310 and LG GT505 running close on the heels of Nokia 6700 in the overall rating for the category. So, considering the price to features and price to performance ratio, it is a good multimedia phone for an estimated price tag of about Rs. 15,600.

Nokia 6700 Classic

The Nokia 6700 Classic is targeted as a basic mid-level mobile phone with multimedia features. It has a solid all metal steel body with a thin black hard plastic lining running across the contours of the body frame and highlighting the frame of the camera lens for a stylish look.

The volume control and camera buttons are blended into the plastic lining. The microUSB port and the charging point are placed at the bottom of the phone, like most 'Classic' series phones. The front panel button layout, including a metallic D-Pad, left and right 'Selection' buttons and 'Call control' buttons, has a glossy black finish. The battery cover has a conventional slide and lock mechanism and is built out of solid shiny steel which completes the flashy look of the phone. The keypad buttons are hard to press owing to the lack of bevelling and key markers but have a consistent tactile feedback. However, the user interface is well organized and exudes a very user-friendly experience.



Nokia 6700 Classic

The Verdict

The Nokia 6700 is good looking, well laid out, no-nonsense phone, but it's too shiny for our liking. It scored well in the build quality, ergonomics and keypad design test with a solid metallic build and intuitive user interface. It had a modest outing in the Bluetooth test. However, it did extremely well in the hands-free clarity and speaker volume (on call) test sharing top honours with its cousin the Nokia 5800 and Samsung Corby Pro, racking up a score of 9 on 10 in both the tests. A good buy –if you're looking for a sleek numberpad phone.

Samsung B5310 CorbyPro

The front panel has a glossy black finish incorporating the 'select', 'call answer' and 'call disconnect' buttons. The contours of the body are well rounded to enable a comfortable grip while holding the mobile in your palm. The battery cover is coated in snow-white and contrasts well with the black coating on the front and sides. The QWERTY keypad layout is neat with bevelled key markers. The number keys, navigation keys and special keys are marked in choco-brown colour for ease of identification and also to enhance the appealing aesthetics of the keypad.



Samsung B5310 CorbyPro

In addition the TouchWiz interface incorporates the widget feature, with built-in mini applications, that can be activated with a swipe or gesture of a finger. It also allows users to drag widgets from the left panel of the screen and drop them anywhere on the home screen.

The touchscreen interface provides vibrational feedback when an icon is selected or when a message or number is typed on the screen using the touchscreen keypad. This phone is crash-happy, freezing intermittently and randomly, sometimes all on its own. The hardware QWERTY keypad is well laid-out. The onscreen keyboard has convenient spacing and offers a fair bit of accuracy. We found it quite ideal for typing lengthy messages and dialing phone numbers with ease. Another impressive aspect involves an auto-fill feature that stores previously dialed numbers in phone's memory, even if the user forgets to add them into his contacts list.



Samsung S5620 Monte

The Verdict:

Samsung Corby could have come across as a decent social networking phone because of the hardware keyboard, had it been more stable. It fared well in the build quality and ergonomics test with well designed body contours, user friendly menu interface and consistent touch response. It had a good outing in the call clarity test, except for the loudspeaker test where it delivered rough voice overtones at higher volumes and also produced poor voice clarity. Although, it took a downward slide in the captured photo and video quality test with poor performance. It offers a good feature set at a decent price.

Samsung S5620 Monte

The Samsung S5620 Monte is basically targeted at the budget conscious, social networking segment. It has a glossy black finish on the front panel with the 'select', 'call answer' and 'call disconnect' buttons placed at the bottom. Its aerodynamic design and well rounded golden-orange side panels add to the stylish design and glamour quotient of the mobile. The volume controls are conveniently placed on one side panel and the microSD slot, 'camera' and 'lock' button on the other.

It has a touchscreen design similar to the B5310 CorbyPro. However, it lacks the hardware keypad which is a major drawback. The touchscreen employs a user friendly interface with well organized menu icons. However, the touchscreen is not responsive and often lags during phone navigation. It has a widget feature similar to the B5310 CorbyPro, with a sidebar containing useful widgets which can also be dragged and dropped onto the home screen.

The Verdict:

It is a fairly average performer in the captured photo and video quality test. It does not impress in the loudspeaker test with a score of 8 on 10. It had consistent results throughout the signal reception and call clarity test. Hence, it fancies its chances as a good mid-end phone with a decent camera and good music player, at an affordable price.

LG GT505

The LG GT505 is a mid-level touchscreen social networking phone. It has a hard plastic body with a grey brushed metallic finish on 'select' and 'call control' buttons and back panel. The contours of the body are well rounded for a comfortable grip. It ships with a scratch-proof LCD screen sticker, bundled earphones/hands-free set and battery charger. The battery cover is well built with a slide and click mechanism. The side panels feature the volume control buttons, USB/power slot, lockbutton and the camera button on one side and microSD slot on the other.


LG GT505

The front buttons and side panel buttons produce good tactile feedback. These buttons are well placed for ease of access to the user. The touchscreen interface incorporates a home screen with widget like menu system including call access, personal profile, messaging and communication as sub-categories. The touchscreen is quite sluggish and does not register the input on several occasions, especially while typing.

The Verdict:

LG GT505 had a consistent outing in the signal reception and call clarity test. However, it lost out in the captured photo and captured video test with an ordinary score. It did a fair job in the bundled earphones test with a score of 8 on 10. It does not impress as a good multimedia phone due to a poorly built loudspeaker and lack of good bass in the audio output. Also, the lack of quality camera lens makes it a poor choice for video recording. Hence, at Rs. 17,000, it leaves a lot to be desired as a mid-range phone.

LG GW550

A full QWERTY candy-bar phone priced at Rs. 17,500, the GW550 looks similar to the Nokia E72, with near identical keypad layouts. It is meant to be a business/messaging phone, and is a 3G enabled device, loaded with Windows Mobile 6.5 Standard. The phone does not have a 3.5mm audio jack, and you will have to use the proprietary USB headset, though it



LG GW550

Seagate 3TB
Seagate plans to release the 3TB hard disk drive sometime this year

Isadora!
Linux Mint 9, codenamed Isadora was launched this month

has A2DP support for Bluetooth headsets. It uses Internet Explorer 6 for browsing, that has copy-paste functionality and is nearly sufficient, but importantly lacks tab support.

On the whole, with the smallish and low colour screen, the phone is not very beautiful to look at, a fact made worse by the boring Windows Mobile interface. The main menu is also badly designed, with only six pixelated icons fitting per screen, making you scroll interminably to locate what you are looking for at the bottom of the menu. While the 3.2MP camera is decent enough for point-and-shoot purposes, its limited 1.6x digital zoom and lack of flash is apparent. On the whole the full email and Push Email support is adequate, though Exchange support would have been welcome.

The phone on the whole has decent build quality, but the keys require some hard pressing, and the 62 millimetre breadth puts it at the limit of easy fitting on a palm. With regards to call clarity, the LG GW550 doesn't score too well on the earpiece or loudspeaker's volume, but it has pretty exceptional hands-free volume and clarity. The loudspeaker and back panel is supposedly enhanced to deal with ambient noise, but it's not too effective. The dual speakers are pretty good for listening to music though.

Verdict

If you are looking for good quality, full-QWERTY phone with 3G and Wi-Fi support, and good productivity tools like Office Mobile and Push Email, as well as instant messaging support, all at a price point lower than a Nokia E72 or E71, then the LG GW550 is for you. However, the dated OS and interface, small screen, and flash-less camera are trade-offs you'll have to take into account. Whatever its drawbacks though, the device is certainly a decent buy.

High-end smartphones

(18,001 to 25,000)

While this price category is nearly as competitive as the last, we decided to pick some of the most exceptional phones in the segment, based on their popularity, stunning looks, productivity options, and all-rounder functionalities. Brands included here are Blackberry, Garmin Asus, LG, and Nokia.

Garmin Asus Nuvifone M10

The Garmin-Asus Nuvifone M10 is priced at Rs. 19,990, and is a beautifully built navigator phone which runs on Windows Mobile 6.5.3 Professional. At first glance, what is immediately apparent is the stunning clarity and brightness of the Nuvifone M10's 3.5-inch OLED WVGA resistive touchscreen.

The 3D Desktop Manager is quite useful, allowing you to close any programs that are running in the background by holding the Windows key.



Garmin Asus Nuvifone M10

The 5MP camera takes some decent images, but the lack of flash is felt in low-light. Video recording is of average quality. The 4GB built-in memory is particularly useful here. The phone is quite fast, with a 600MHz CPU along with adequate memory: 512MB ROM and RAM. The call clarity was superb, though the loudspeaker had some problems with low volume output. Music playback was excellent, both on loudspeaker and good quality bundled earphones. As for video playback quality, the phone played mp4 files without a hitch, though its 65K colour limitation (because of Windows Mobile 6.5.3, not the screen) did cause some colour banding.

While the OLED touchscreen is beautiful, it is not very responsive, requiring some hard taps and repetition at times. It is manageable once you become used to the pressure required, though neither the stylus nor finger seem perfectly supported. As for text-input, the on-screen keyboard is sensitive enough, but the keys are rather small and close together unless you use a stylus - even in landscape mode. The auto-rotate function of the device is bit buggy, with near random UI rotations or none at all.



LG BL40 Chocolate

Verdict

It performed well in all our tests, from call clarity to GPS accuracy, and its NAVTEQ Maps were very detailed. Location based services were useful, and the interface is easily customisable. It calls All in all, if you are looking for a GPS-focussed feature-rich 3G smartphone, the Nuvifone M10 will fit your bill. The bright screen and great GPS functions are the phone's advantages, while the buggy auto-rotate, the flash-less camera, and the erratic touchscreen are the phone's biggest failings, all of which are not expected at the Rs. 19,990 price point. However, if you are simply looking for a large touchscreen navigator phone, go for the Nokia 5800 Xpress Music instead.

LG BL40 Chocolate

Definitely a one-of-a-kind phone, the LG BL40 Chocolate and its slim, extra long candy-bar body will attract attention. Running on LG's proprietary S-Class UI, the Chocolate has a 4.01-inch "panoramic display" screen with a cinematic 21:9 aspect ratio. The phone has a super-bright screen, support for the DivX/XviD video format, and features like Dolby mobile sound, and TV-out. The HD LCD screen's 345 x 800 resolution is rated as Real WVGA by LG, and offers surprisingly good legibility in sunlight.

The build quality of the BL40 Chocolate is certainly top-notch, though its solid glossy black plastic body and large screen does pick up some scratches and smudges. Buttons are well placed and responsive, and the phone, even with its long form factor, does fit in the average sized pocket. The microUSB has got

a good latch-type cover as well, and the microSD card slot is near the battery but remains hot-swappable.

As for the interface, the Chocolate's capacitive touchscreen is erratic, not responsive and requiring repeated presses at times. The UI auto-rotate is a nightmare of sensitivity, flipping over with the slightest of angle changes, and sometimes not flipping for more than five seconds. The screen will not flip in certain menus, including the home screens. The phone has four home screens: Widget, Browser, Contact, and Shortcut, each of which are customisable, but only from the Screen Settings menu, and not on the home screen itself.

On screen, the phone has two dedicated buttons, which are the task switcher/manager, and the cube/home view. This certainly takes some getting used to, and a physical back button would have certainly been useful. The Status bar on top slides down usefully when tapped, giving you Bluetooth and Wi-Fi connection options, and access to alarm clock, music player, events, and profiles. The on-screen keyboard is alphanumeric in portrait mode, and QWERTY in landscape, both of which are well sized and easy to use.

Email is very easy to set-up, and a Dual-Screen interface is available to allow simultaneous views of the subject as well as content. Maximum attachment size, at 2.2MB, is still paltry, and while ZIP and RAR files cannot be opened, they can be saved. Importantly, the Web browser has no Flash support, and does not support video streaming over Wi-Fi, only over EDGE and UMTS. The browser does have pinch-to-zoom and kinetic scrolling, and is quite easy to use, and there is a save for offline viewing option.

Wrapping up, the 5MP camera is good, and offers some great quality images, but the interface takes some getting used to, with a jog dial for the settings. Video recording quality is not too great though. Seven motion-based games are also pre-loaded, but nothing to write home about, except the Asphalt 4: Elite Racing game.

HOW WE TESTED

We divided the phones into five categories based on their price and functions:

a. Low-end Smartphones
b. Mid-range Smartphones
c. High-end Smartphones d. Multimedia Phones e. Lifestyle Phones.

We ran a gamut of tests and evaluations on each phone, gauging a variety of aspects: build, feel, functions, ergonomics and operation. All phones, no matter if they were called camera-phones or smartphones or multimedia phones, underwent the same tests and evaluation. Each phone was graded on its overall build quality, ergonomics, keypad design, and software intuitiveness, before its features were tested.

Looking into everything from Bluetooth transfer speeds to video playback quality, loudspeaker clarity to captured photo crispness, GPS to voice clarity, barely a stone was left unturned when evaluating these phones. Accessories such as handsfree devices and docks were also taken into account, and were tested for their performance.

Verdict

A good-looking phone, the Chocolate will make you



Opera comes to Maemo
Developers were working on Opera Mini for the Nokia Maemo platform in their free time

Corsair sells SSDs
Corsair to launch Force line of SSDs; read speeds of 285MB/s and write speeds of 275MB/s expected

stand out in a crowd, and its widescreen and playback quality will give you a great video viewing experience. Call clarity is quite good, though the loudspeaker volume could be higher. Sound quality is surprisingly good, though the bass is lacking, which can be expected with just one small speaker located with the earpiece. Also to be noted is the voice recording, which with two microphones delivers excellent audio clarity in recorded video as well. Head-to-head with the Omnia II, the biggest difference you'll notice will be the Chocolate's better video playback quality, which doesn't show the dithering/banding of the Windows Mobile phone and its 65K colour limitation.

Multimedia phones (25,001 to 32,000)

This category features some of the best known phones in the market, and consists of some flagship devices. Ranging from Nokia to Samsung and LG to Sony Ericsson, the competition is intense here. Most of the phones feature large screens: many are touchscreens, and some, like the Sony Ericsson Aino and W995, are keypad based.

Nokia N97 Mini

How does the N97 Mini differ from the N97? It's smaller (display, dimensions, battery) and lighter (weight, internal memory), features a metallic battery cover, and does not feature a D-pad, lens cover, or FM transmitter. Despite all this, the N97 Mini remains virtually identical to its bigger brother in terms of interface and functions. Anybody who is used to a S60 touch-enabled device will be at home with this phone.

The phone's interface is easy to use and the resistive touchscreen is responsive (supporting both stylus and gloves), featuring adjustable haptic feedback. The call/terminate keys are also touch-sensitive, and kinetic scrolling is available. The proximity sensor takes care of locking the screen and keys during a call, while the accelerometer also silences a call when the phone is flipped. The screen also has great contrast in sunlight. The sliding three-row QWERTY keyboard snaps open readily, and the quality of the buttons and feedback is great. It's easy to use, and numbers can be easily accessed with the modifier key. An on-screen alphanumeric keyboard is also available in portrait mode. The handwriting recognition works very well, with even my not so good handwriting being translated. It comes with a training option to teach the handset your unique handwriting.



Nokia N97 Mini

While it only has a 434MHz CPU and 128 MB of RAM, it manages not to be slow in routine tasks. Call clarity is good all around, though the loudspeaker and handset could do with some boosts in volume though.

Verdict

Feature rich, fast, and capable, the N97 Mini is the top performer in the category. And being a top-end phone from Nokia, you cannot expect to find much wrong with the device. It is perfect for those who want to enjoy a large touchscreen screen along with a full QWERTY keyboard on the Symbian platform. The lack of DivX playback should be mentioned however, as well as the lack of free office document editing, The much cheaper Nokia 5800 Xpress Music is also an option, sporting a similar Series 60 interface, only without a QWERTY keyboard.

LG GC900 Viewty Smart

The Viewty Smart is definitely a cameraphone, and earns its 'smart' moniker with intelligent camera options such as smart multiple face detection, sensor for scene analysis and image optimisation, and multiple shot modes.

Not much separates this phone from the LG BL40 Chocolate, featuring the same S-Class UI (the first Viewty with it) that's arranged in pretty much the same way, and the same power/lock button. The main differences are in the physical back button, the 8MP camera, the 720p video recording, and unfortunately, in the build quality, where the Viewty racks up as clunky compared to the very solid build of the BL40 Chocolate, mainly because of its flimsy back button, however useful it might be. The screen is not as bright as the Chocolate either, and has serious legibility issues in sunlight. Also missing is the 3.5mm jack, and the standard microUSB port, replaced with a proprietary one.

Ergonomically, the phone fits well onto the palm, and fits easily into the pocket, with the side buttons (cube view/task manager on the left, volume and camera on the right) within easy finger reach. The camera button requires to be held for about 5 seconds before switching you to camera mode, and this is quite an annoying delay. The capacitive touchscreen shares the same faults as the Chocolate, owing to the common S-Class UI, and is not as responsive as desired in most scenarios, except at scrolling and in Cube view. The accelerometer is not as scarily sensitive, though it does take its own sweet time to auto-rotate.



LG GC900 Viewty Smart

The S-Class interface here offers four homescreens and a cube view, just like the Chocolate, but here, the four are: Widget, Multimedia, Contacts, and Shortcuts; with Multi-

media replacing the Browser screen. The display looks beautiful in landscape mode, will all the icons sprawled to completely fill the screen.

The camera is the main feature of the phone, and one has to say that the image quality is excellent, racking up next to the Xperia X10 and the Vivaz, with their similar 8.1-megapixel cameras, though the flash is not too bright. However, all that 'intelligence' described earlier doesn't do too much visibly, nor the multiple face detection. The video recording quality is also excellent, with near no blurring even with quick pans.

The audio playback quality is good as well, offering Dolby Mobile sound when earphones are connected. The loudspeaker, located in the earpiece again like the Chocolate, is powerful, but lacking bass.

Verdict:

The phone didn't perform very well under call clarity tests, with the earpiece working well enough, but the bundled earphones were not too good, and the loudspeaker, while loud, was not very clear. This problem is fixable though, as even though the headphone jack is proprietary, any 3.5mm headphone can be connected to the handsfree. Overall, the Vivaz's superior build quality, battery life, and 3G speeds put it ahead of the Viewty Smart.

Samsung B7610 OmniaPro and I8000 Omnia II

There is not much difference between the Samsung B7610 OmniaPro and I8000 Omnia II. They are basically the same phone, with almost all the same specifications, from the Windows Mobile 6.1 Professional, the Samsung S3C6410 800MHz processor, to 256MB RAM, and a 5-megapixel camera.

The differences, or the places where the OmniaPro lags behind the Omnia II, are: HSDPA rating of 7.2Mbps versus 3.6Mbps, HSUPA network, 3.7-inch AMOLED screen versus 3.5-inch, proximity sensor, WMV support, WMDRM and OMA DRM support, no Flash support, and greater weight.

Where the Omnia II lags behind the OmniaPro is a full QWERTY keyboard, 3GP support, WAV support, shorter



Samsung I8000 Omnia

standby battery life, and no choice of Work and Life user modes.

The first thing you notice about the phones are there stunning AMOLED display, and their brightness, vividness and clarity will take your breath away, even with the 65K effective colour limitation due to the dated operating system. With their 800 MHz processor and dedicated graphics accelerator, the phones do not lack in performance, with breezy multitasking. The phone can be upgraded to run on Win-



Blu-ray sales double
Blu-ray sales have been seen an increase in doubling ever year

GPU-powered Office 2010
Microsoft's Office 2010 suite to be accelerated by AMD's GPUs including those integrated on motherboards

dows Mobile 6.5, but it is not shipping in that condition yet.

The interface is easy to use, and a task switcher/manager can be called up by holding the menu button. The Samsung TouchWiz UI is up to the task, and lets you interact with the devices well, with good haptic feedback, onscreen keyboards (alphanumeric and QWERTY), kinetic scrolling, and responsiveness for a resistive screen. The dedicated lock button is useful and well-placed, but, you are required to hold to unlock an onscreen icon for too long, resulting in some wasted time.

The 5MP cameras are okay, producing images that have relatively little noise and good crispness. The flash works well, and settings are plentiful enough to satisfy the amateur photographer. The phone's 480p (640x480) video recording was good in our tests, but did have some pixellation happening. Call clarity was good across the board, but we unfortunately did not get to test the bundled earphones because our test unit arrived without them. Using the good Nuvifone M10 earphones made for good audio quality, while the loudspeaker was excellent, offering a rich sound both in voice calls and audio/video playback. Video playback was unfortunately marginally hampered by the 65K colour limitation of the OS, with gradients dithering a bit. It played everything without any stuttering however. Battery life is also excellent for a phone with such a large and bright screen, with it lasting more than two days on single charge, with frequent calls, video playback, and Bluetooth/Wi-Fi usage.

The B7610 OmniaPro has the 'pro' moniker because of its horizontal-sliding QWERTY keyboard form factor. Unfortunately, this makes the OmniaPro quite bulky, with a 16.2mm width. However, the phone does fit well enough in your hand, though your pocket will be a bit strained. Its build quality is excellent, with its buttons offering great tactile response, the QWERTY keyboard included. The horizontal sliding keyboard has no lock, which makes for some slight movement in your hands at all times, whether closed or open. The four-row keyboard is easy to use though, and the buttons are well-placed.



Samsung B7610 OmniaPro

The biggest disadvantages we've seen are their unexpectedly poor sunlight legibility, and the OmniaPros's lack of Flash support.

Samsung B7610 OmniaPro Verdict:

There is not much wrong with the device, and with its good battery life and media support, beautiful AMOLED screen, speedy interface and decent camera, you'd be hard-pressed to find a better horizontal sliding QWERTY phone that's priced much lower. Compared to the N97 Mini, the phone only lags behind in a few places: video quality, tilted screen (when keyboard is slid-out), free turn-by-turn voice navigation, and 16 million colours.

Samsung I8000 Omnia II Verdict:

The I8000 Omnia II manages to offer the same great functionalities of the OmniaPro, even without a QWERTY keyboard. Heads up against the Xperia X10 though, the phone lags behind. With a more responsive capacitive touchscreen and a fresher interface, the Xperia X10 is limited to 65K colours because of its Android 1.6 OS, just like the Omnia II's Windows Mobile 6.1 OS. Both the phones' video playback and image display quality are hampered, with some visible dithering/banding. Android Marketplace also comes straight out of the box with the Xperia X10, but you'll have to make do with Java apps on the Omnia II unless you upgrade to Windows Mobile 6.5. One also has to remember the Xperia X10's better 8.1MP camera.

Sony Ericsson W995

It has a typical 'Walkman series' design: well laid out body contours with metallic Walkman control buttons on either side of the mobile and basic function buttons on the front panel. The phone has an elegant way to open the battery cover. Pull the media-stand (useful feature!), push up the lock button and the cover comes off - nice and easy.

The Walkman control buttons and the basic function buttons have a soft spring-like mechanism and produce true tactile feedback and input response when pressed. All the control buttons and keypad keys are conveniently spaced for comfortable finger movements and inputs. The keypad design is well laid-out with adequate spacing, and scores decent marks in the keypad test. The other notable thing is



Sony Ericsson W995

a speaker-dock that's bundled with this handset. It comes handy for listening to music in your leisure time without the use of a headset. However, the dock lacks good bass and treble response, yielding rough voice overtones and harsh beats at higher volumes, but we are not complaining. Among all the phones we tested, W995 stood out for its good music abilities and looks, complemented by the dazziling red-lit Walkman controls, that come in handy.

The Verdict:

The W995 is a mean music machine, reaffirming the status of 'Walkman series' as the best when it comes to music. The W995 stands out in the speaker volume test by beating the other mobiles quite easily in this test. However, it had a modest outing in most of the tests including call clarity and signal reception test and the photo/video capture test. It stood out as the Best Music Phone to be tested with excellent mids as well lows through its comfortable earplugs. It did not show up any instance sound distortion or rough overtones, even at maximum volume, in the music playback test. Hence, it justifies the cause as a deserving winner of Best Music Phone award. Although, at Rs. 26,786, it is definitely on the expensive side.

Sony Ericsson Vivaz

The Sony Ericsson Vivaz is targeted towards multimedia fanatics and truly holds an edge with an 8.1MP camera lens and a wide 3.2-inch screen. It can record 720p with continuous autofocus.

The phone is sleek and easy on the eye and the unique rounded rectangular body fits the contour of the hand, and follows Sony Ericsson's Human Curvature design philosophy. The back panel has a plasticky feel but is not flimsy. The power button on the top (that doubles as screen-lock toggle), the three function buttons (select, call answer and call cancel) placed below the screen, and the volume rocker on the side, are all thin but easy on the fingers and tactile. We also like the two dedicated buttons on the side, for Video and Photo mode. The screen is a sharp 640 x 360 with high dpi of 229 which also plays 720p HD video.

The screen, although crisp and sharp, should have been spared the horrible touch it's been provided with. Surely, a better interface or even better, a capacitive touch screen wouldn't have hurt. A stylus is bundled though, a saving grace for the screen.



The Vivaz runs a Symbian™ S60 5th edition. Navigating across the phone can be confusing at first, due to the presence of widgets on the homescreen. But the ease of operation of the Symbian soon takes over. The bundled apps are nice as with most SE phones. These include Twitter

3M India
MCX
SEBI
HSBC
NSE
Barclays
Stumpp Scheule
GE Money
Religare Realty
ITC Maurya
Hyatt Regency
Taj Lands End
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Partial List

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(with a homescreen widget) YouTube, Rally Master (simple accelerometer-based car-racing game), SSX 3 (accelerometer-based snowboarding game), WorldMate (travel planner), GTalk, Google Maps (without multitouch, of course), TrackID (song identifier) and Facebook. But we detest the point and click interface of the OS, where you accomplish tasks through two presses, one to highlight and other to select.

The saving grace is probably that compatible Symbian software can be downloaded from the net. The browsing experience is poor owing to the resistive screen and occasional crashing of the browser due to low memory, restricting operation to lowly WAP sites. Equally pathetic are the bundled headphones, which had miserable audio output, and didn't even come with foam!

The Verdict:

We agree that the Vivaz truly holds its own in the photo/video capture segment rendering high-definition video at consistent frame rates with an enviable colour clarity and crispness. It is to be noted that it has been advertised for its capabilities as a HD movie playback and recording phone, and it unnervingly lives up to these expectations. We fail to understand how a device that boasts of hardware specs similar to the Apple iPhone 3GS or the same processor as the Motorola Milestone have such bad performance and low features. We wouldn't have mind it at all if the gimmick of touchscreen was avoided and the phone released with a keypad. We would have appreciated it just as a thin snapper that makes calls. The Xperia X10, another full touchscreen and 8MP camera bearing mobile from Sony Ericsson, is also a comparable product, marginally more expensive, but providing a snazzier Timescape-inspired Android 1.6 OS.

Sony Ericsson Aino

The Sony Ericsson Aino introduces Remote Play that enables the phone to playback the Media content on your PlayStation 3 console. The sleek and stylish Aino comes with a bluemoon silver metal lining decorating the smooth contours of the body, with an elegant sculpted matte finish on the front and back panel. It has a hard plastic battery cover that clings on neatly to the body frame.

The volume/camera zoom control and camera buttons ablend into the metallic lining across the contours of the body frame. In addition, it has a sliding keypad with protruding, well spaced keys. A special notable accessory is the docking station that allows the user to slate the mobile horizontally, suitable for movies.

The Verdict:

The Sony Ericsson Aino stands out for Camera and Multimedia abilities, but its USP is Remote Play and you could give it good thought if you own a PS3. It holds the pole position in the phone earpiece volume and bundled earphones test, scoring 10 on 10 in each category with exemplary performance in terms of producing consistent voice clarity and balanced sound output without rough overtones, even at maximum volume.

It had a consistent outing in all the other tests. It also ran very close on the heels of Vivaz in the video playback quality test while not doing so well in the captured video quality test. With the final results tipping the scales in favor of Aino, it remains one of the top performer considering the overall score across all the tests. It has an estimated price tag of Rs. 28,950 and hence about Rs. 3,300 dearer than the Vivaz model. Aino is the among the best phones tested, finishing with an overall score of 8.5.

Conclusion

The innumerable other functions we have come to expect of high-end phones nowadays should not be counted out, and this is where the device which offers the most under will be the winner: the Nokia N97 Mini, a 3.2-inch, horizontal sliding QWERTY phone with blazing connectivity speeds and superb battery life and media playback quality, our Best Buy.

Sony Ericsson Aino



Lifestyle phones (32,001 and above)

The final word in the mobile space, these devices are much, much more than just phones. Offering unbelievable multi-functionality, these phones are near PC-replacement devices, with a very wide range of applications to choose from, and running on advanced operating systems and some seriously capable hardware. Bringing augmented reality a step closer to the real world, the Sony Ericsson Xperia X10, Apple iPhone 3GS, and Motorola Milestone are the flagship devices of their companies, and it is hard to find fault in any of them.

Sony Ericsson Xperia X10

A phone that was painstakingly developed at Sony Ericsson, the Xperia X10 at Rs. 35,795 is the current flagship device from the company, featuring a heavily customised Android OS, and lots of top-end features.

The phone is certainly fun to use, with a responsive capacitive touchscreen, a rather uniquely customized OS, signature Timescape and Mediascape applications, and access to the Android marketplace. Call clarity is good, with an exceptional loudspeaker and earpiece. The handsfree however provides pretty muted sound to the person you are talking to.

The screen is exceptionally bright in sunlight, and has a scratch-resistant surface. The Xperia X10 has a not-so unique keypad layout, with a Menu key, Home, and a Back key. The notification area is also easy to use, sliding down to not interrupt your work. The phone also makes full use of its 1GHz processor with its task switcher, which can be called up if you hold the Home key.

However, with all its major advantages and speedy operation, the phone has some serious flaws as well, such



Sony Ericsson Xperia X10

as a 65K colour screen under Android 1.6, a single touch interface, a limited application storage space of 512MB, no Adobe Flash support in the browser, no DivX video playback, no FM radio, no video-calling, and no GPS navigation solution that does not entail data charges.

Verdict

At its incredible price, the phone has too many lacking features that will be missed by regular smartphone users. However, if you can live without them, there is no denying that the Xperia X10 has some truly great aspects, both in terms of hardware and software, from the capable camera to the snazzy Timescape UI. If you are simply looking for a good touchscreen phone, consider the much cheaper Nokia 5800 XpressMusic, or for a comparably priced touchscreen experience along with a full QWERTY keyboard, try out the N97 Mini.

Motorola Milestone

The first thing we noticed as we got this baby in our hands was how solidly this beauty in black was built. Once out of the box, we were pleased by its large 3.7 inch capacitive touchscreen with four capacitive keys under it for back, menu, home and search. Unlike other sliders, where spring systems snap open the phone at a light push, Milestone requires you to push the upper part all the way till it settles with a reassuring click, with about one-thirds of the screen still overlapping the keyboard panel.

The device we recieved was updated with the latest Android 2.1 and it really fulfills most of our tech-appetite. A significant upgrade over v1.6, Android 2.1 now has support for multi-touch which complements the excellent touch capabilities of Milestone. It also has a better email experience, improved camera controls, a revamped on screen keyboard, smart dictionary (it actually includes your contact names, Neat!!), Bluetooth 2.1 and HTML5 support. The operation is smooth and there is no lag whatsoever. The functions are largely intuitive with most actions possible either by long pressing the screen or tapping the menu button. The Android has really started to mature beautifully with most things now falling in place, and the right place, with the latest version. Multi-tasking is smooth and efficient and would be a benchmark for the upcoming Apple OS 4.0. Although there was no option be seen to close the apps, this did not induce any lag.



Motorola Milestone

The on screen keyboard is excellent, especially with the haptic feedback enabled. The hardware keyboard is ergonomically designed with the keys slightly protruded and better spaced. The D-Pad might seem like a gimmick, but we found it extremely useful when fingertips get too big for selecting small links or accurate cursor positions. But what takes the device home is the high-dpi capacitive touchscreen. Although the brightness and richness of the colors is slightly inferior to the iPhone screen, the sensitivity of the touch is second to none and atleast at par with that of the iPhone. Also, the text is smoother and more readable on the Milestone due to its superior DPI.

The bundled apps are fairly usable with the Email app one of the neatest we have seen on a smartphone. It automatically detects the incoming and outgoing servers for the typed email address and configures everything without a hitch. Numerous accounts can be created. The accounts can be checked separately, or in a combined inbox which collects mails from all the accounts. Media player is excellent, where individual tracks or albums

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BEST PERFORMER digit JUNE 2010

BEST BUY digit JUNE 2010

	Entry-level multimedia phones		Multimedia/Smartphones (Rs. 12,001 to Rs. 18,000)					
Brand	**Sony Ericsson**	**HTC**	**Samsung**	**Samsung**	**Nokia**	**Nokia**	**Sony Ericsson**	**LG**
Model	**Naite**	**Smart**	**GT-S5620 Monte**	**GT-B5310 Corby Pro**	**5800 Xpress-Music**	**6700**	**Yari**	**GT505**
Price (Rs)	8,450	9,500	12,390	13,900	15,649	15,649	16,950	17,000
Plus (+)	good battery life, good call clarity	good touch-screen, battery life	good call clarity, A/V playback	good QWERTY keypad and call clarity	free voice naviga-tion/maps, large screen	good call clarity, good video playback	Preloaded games	good battery life and voice clarity
Minus (-)	no WiFi, 256K colours	no WiFi, 256K colours	poor camera, unresponsive touchscreen	average touch-screen, bad loudspeaker clarity	low camera quality,	no WiFi con-nectivity, dated interface design	poor camera, no WiFi	low camera quality, average touchscreen
Grand Totals (Out of 100)	67.58	60.65	64.31	65.99	68.17	67.05	62.10	62.95
Features (Out of 45)	25.56	23.58	27.76	30.29	30.33	28.66	28.17	28.08
Performance (Out of 55)	42.02	37.07	36.54	35.70	37.84	38.39	33.93	34.87
Features								
Physical Specs								
Form Factor	Candy Bar	Candy bar	Candy bar	Side slider	Candy bar	Candy bar	Candy bar	Candy bar
Screen Resolution (pixels)	240 x 320	240 x 320	240 x 400	240 x 320	360 x 640	240 x 320	240 x 320	240 x 400
Screen Size	2.2 inches	2.8 inches	3.0 inches	2.8 inches	3.2 inches	2.2 inches	2.4 inches	3.0 inches
Screen colours	256K colors	256K colors	256K colors	16M colors	16M colors	16M colors	16M colors	256K colors
Touchscreen / Dual Screen	N/N	Y (capacitive)/N	Y (capacitive)/N	Y (resistive)/N	Y (resistive)/N	N/N	N/N	Y (capacitive)/N
Battery Rating*	950 mAh	1100 mAh	960 mAh	960 mAh	1320 mAh	970 mAh	1000 mAh	1000 mAh
Other Features								
Operating System	Proprietary	BREW	Proprietary	Proprietary	Symbian S60	Proprietary	Proprietary	Proprietary
Address Book Capacity	1000	1000	1000	1000	Unlimited	2000	1000	-
Standby Time*	583 hrs	600 hrs	454 hrs	560 hrs	406 hrs	300 hrs	450 hrs	420 hrs
Talk Time*	4 hrs 30 min	6 hrs 10 min	4 hrs 58 min	8 hrs	5 hrs	4 hrs	4 hrs 30 min	7 hrs
Inbuilt GPS / A-GPS support	N	N	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y
Connectivity								
GPRS/HSCSD/EDGE/3G	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 / Y	Y / N / Y / Y
Wi-Fi/Bluetooth/IR/USB	N/ Y / N / Y	N/ Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	N/ Y / N / Y	N/ Y / N / Y	Y / Y / N / Y
Bluetooth/A2DP support (Y/N)	V2.0/Yes	v2.0/Yes	v2.1/Yes	v2.1/Yes	v2.0/Yes	v2.1/Yes	v2.0/Yes	v2.0/Yes
Accessories								
Overall Build Quality (So 10)	8	7	8	9	8	8	9	7
Overall Ergonomics (So 10)	9	7	9	9	7	7	9	7
Keypad Design (So 10)	9	NA	NA	7	NA	7	7	NA
Camera Specs								
Dual / Auto Focus / Flash (Y/N)	N/N/N	N/N/Y	N/N/N	N/N/N	N/Y/Y	N/Y/Y	N/Y/Y	N/Y/Y
Camera Settings (So 10)	7	5	8	7	7	7	9	7
Multimedia								
Music Formats	MP3/eAAC+/ WMA	MP3/eAAC+/ WAV/WMA9	MP3/WMA/ eAAC	MP3/AAC/WMA	MP3/WAV/AAC+/ WMA	MP3/WAV/ eAAC+/WMA	MP3/eAAC+/WAV	MP3/MP4
Video formats	MP4/WMV/H.263	MP4/ H.263/H.264/ WMV9	MP4/ H.263/H.264	DivX	MP4/ H.263/H.264/ WMV	MP4/H.263	MP4/H.264	MP4/3GP
FM Radio (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y
Performance								
Signal Reception, Voice Clarity (So 10)								
Zones 1 / 2 / 3	8 / 7 / 9	9 / 8 / 8	8 / 7 / 9	9 / 8 / 7	8 / 7 / 8	8 / 7 / 9	7 / 7 / 8	9 / 7 / 8
Earpiece Volume	8	8	9	9	9	8	8	8
Loudspeaker clarity	7	8	7	7	7	8	7	7
Handsfree Clarity	8	9	8	9	9	9	6	9
Speaker Volume (on call)	8	7	8	8	9	9	7	8
Bluetooth Transfer (MBps)	0.16	0.1	0.11	0.1	0.16	0.14	0.16	0.1
Captured Photo Colour / Crispness / Quality	7 / 7 / 5	8 / 7 / 7	6 / 6 / 6	6 / 6 / 5	6 / 4 / 5	7 / 5 / 6	5 / 5 / 5	6 / 5 / 4
Loudspeaker / Bundled Earphones Quality	7 / 9	8 / 7	6 / 6	6 / 6	9 / 9	8 / 9	6 / 8	6 / 8
Video Playback Quality (So 10)	6	6	8	7	8	8	6	6

* manufacturer rated

BEST BUY digit JUNE 2010

	Smartphones (Rs. 18,001 and Rs. 25,000)			Multimedia/smartphones (Rs. 25,001 to Rs. 30,000)				
	LG	Garmin ASUS	LG	Sony Ericsson	Sony Ericsson	LG	Sony Ericsson	Samsung
	GW550	Nuvifone M10	BL40	Vivaz	W995	GC900 Viewty Smart	Aino	I8000 Omnia II
	17,500	19,000	20,000	25,695	26,786	27,500	28,950	28,990
	good QWERTY keypad and call clarity	great GPS, 4GB internal storage	vivid screen, good video/audio playback	excellent image/ video capture quality	excellent audio/ video playback quality	excellent video capture/playback quality	good call clarity and camera quality	bright screen, good customizability
	dated interface design, low camera quality	65K colours, average touchscreen	low camera quality, erratic touchscreen/ accelerometer	average touch-screen, low build quality	low value for money and camera quality	average touch-screen, low call clarity	low video capture quality	65k colours, poor sunlight legibility
	62.37	62.53	60.25	71.48	69.42	59.13	73.13	66.53
	29.43	27.63	28.35	32.63	30.92	26.96	32.90	29.79
	32.94	34.90	31.90	38.86	38.50	32.18	40.23	36.74
	Candy bar	Candy Bar	Candy bar	Candy bar	Vertical Slider	Candy bar	Vertical Slider	Candy bar
	320 x 240 p	480x800	345 x 800	360 x 640	240 x 320	800x480	240 x 432	480x800
	2.4 inches	3.5-inches	4.01 inches	3.2 inches	2.6 inches	3.0-inches	3.0 inches	3.7 inches
	65K colors	65k	16M colors	16M colors	256K colors	16M colours	16M colors	16M (65K effective)
	N/N	Y (resistive)/N	Y (capacitive)/N	Y (resistive)/N	N/N	Y (capacitive)/N	Y (capacitive)/N	Y (resistive)/N
	1300 mAh	1500 mAh	1000 mAh	1200 mAh	930 mAh	1000 mAh	1000 mAh	1500 mAh
	WM 6.5	WM 6.5	Proprietary	Symbian S60	Proprietary	Proprietary	Proprietary	WM 6.1
	Unlimited	Unlimited	1000	Unlimited	1000	1000	1000	Unlimited
	450 hrs	600 hrs	370 hrs	440 hrs	360 hrs	350 hrs	367 hrs	430 hrs
	8.7 hrs	8 hrs	5 hrs	5 hrs 20 min	4 hrs	4 hrs 40 min	4 hrs 30 min	8 hrs
	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 / Y	Y / N / 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	Y / Y / N / Y
	v2.0/Yes	v2.0/Yes	v2.1/Yes	V2.1/Yes	V2.0/Yes	v2.1, Yes	V2.1/Yes	v2.0, Yes
	7	9	8	9	8	7	9	9
	7	8	6	9	8	8	8	8
	7	NA	NA	NA	8	NA	9	NA
	Y/N/N	N/Y/N	N/Y/Y	N/Y/Y	N/Y/Y	N/Y/Y	N/Y/Y	N/Y/Y
	7	7	7	8	8	7	8	7
	MP3/MP4/AAC/ AAC+/EAAC+/WMA	MP3/eAAC+/WAV/ WMA	MP3/WAV/eAAC+	MP3/WMA/WAV/ RA/AAC/M4A	MP3/AAC	MP3/AAC/AAC+/ WMA	MP3/AAC	MP3/eAAC+/WMA/ WMDRM/OMA DRM 2.1
	MP4/3GP	MP4/H.264/H.263/ WMV	MP4/DivX/ XviD/H.263	WMV/RV/MP4/3GP	MP4	DivX/XviD/MP4	MP4	DivX/XviD/MP4/ H.263/H.264/WMV
	Y	N	Y	Y	Y	Y	Y	Y
	8 / 7 / 7	8 / 8 / 6	8 / 7 / 7	8 / 7 / 9	8 / 7 / 8	8 / 7 / 7	8 / 7 / 9	8 / 8 / 7
	7	9	6	9	9	6	10	8
	8	7	6	8	7	6	7	8
	8	8	7	9	8	6	8	7
	7	6	7	8	10	6	9	7
	0.06	0.07	0.07	0.09	0.15	0.08	0.15	0.08
	6 / 6 / 5	8 / 7 / 6	6 / 6.5 / 5	9 / 9 / 9	5 / 5 / 7	6 / 7 / 9	9 / 8 / 6	8 / 8 / 7
	6 / 7	8 / 8	6 / 7	6 / 7	9 / 9	6 / 7	8 / 10	9 / 8
	6	7	8	9	7.5	8	8	7

can be added to make playlists. Audio effects work fairly with the comfortable bundled headphones. Google maps works smoothly and MotoNav's extensive location database is a help in locating hotels or restaurants.

But it's not the bundled apps that Android is about. Enter the Android Market and let the shopping begin! They are downloaded and installed much quicker than what Apple app store does. Although people point out that the lack of restrictions is the reason that Android market is thriving. But it's more about the customizability that Android offers. Everything from the on screen keyboard to the dialer can be changed. File explorers and media players get uninhibited access to file system. Android developers are breaking free whereas the Apple developers are encountering walls.

Verdict

Let's admit it. Apple's iPhone is still the phone to beat. But for all those who are looking for something different (or something for the future, as we put it), Milestone is by far the best option. A year back, the AppStore was termed as the 'fab thing that will keep iPhone up there', but now it's the flabby, slow moving thing that may eventually pull Apple's mighty phone down. The restriction free Android market was touted to be the USP of Google's free-for-all operating system, and it has lived up to its reputation. The Milestone was one last throw of dice for Motorola, and what a throw it has been!

Apple iPhone 3GS

Having kept an Apple iPhone 3G and 3GS side by side, it was impossible to tell the difference between the two. Such is the physical resemblance between the two versions.

The technical sheet says the processor has been upgraded from 412 MHz to 600 Mhz. The RAM has been doubled from 128 MB to 256 MB and 3GS has HSPDA running at 7.2 Mbps compared to 3.6 in the 3G. The camera is 3.0MP with autofocus, which actually works well! The battery life is said to be improved but in real tests, we found a significant difference only in 2G operation. The screen has the same resolution (480x320) but has a new oleophobic coating which is a relief, compared to the old smudge-loving iPhone screen. Although newer phones like Google Nexus One have faster processors, the operation of iPhone 3GS is slick and smooth with no jitters even after we loaded five homescreens' worth of apps.

The OS 3.0 has a number of new tricks as well. The copy-paste feature for instance allows you to copy anything, like text and pictures, from anywhere and paste it wherever the holy blinking cursor exists. You can pick up text and images from web pages and paste them in your email or pick up the content of your email and SMS it to someone. The process is smooth with two end pointers that can be dragged to include the selections.

Video recording finally comes to iPhone as its 3MP camera records VGA quality videos at 30fps. But again Apple has topped this late cake with a cherry. You can edit the videos on the phone itself. However, the process of editing is destructive, i.e. you either keep the original or the cropped, once edited, the old copy is lost. Although VGA might be considered ancient compared to the near HD quality recording most phones are offering today, the camcorder of iPhone 3GS does its job fairly well.

Although iPhone 3GS allows push notifications (applications can send pop-ups or other alerts), its nowhere close to real multitasking, something that 3GS is well capable of (and would be doing this summer onwards!). Voice Control allows you to control



Apple iPhone 3GS

your music, make calls and do other little stuff like asking, "What track is playing?". A2DP comes to the rescue of those holding onto their Bluetooth music headphones for long and it works smoothly.

Verdict

Though the Android 2.1 OS might have pushed the 3GS down the pecking order, it is still debatable whether the release of Apple OS 4.0 will see it fighting back or withering down. Still, for its awesome app collection in AppStore, its excellent display, and its unbelievable touchscreen, the iPhone 3GS is a top-top phone.

Sony Ericsson Satio

SE Satio is Sony Ericsson's mighty knight in the battle of megapixels. It's 12.1MP is one of the best cameras in the market and the only camera we tested with a Xenon flash, that does a good job in low-light conditions. It has an OS and feature set very similar to Vivaz. The single LED flash, as compared to Vivaz's double, is also a turn off. But strangely, the operation of Satio is smoother than the Vivaz as the Symbian S60 5th Edition does a better job in Satio, and we like most of it, except the part where you need to click twice on menu options, once to highlight, then to open. But, Satio does not have the Apps bundled with the Vivaz.

Satio has an elegant Piano black body, with rounded upper and lower ends, and straight metallic sides housing a plethora of buttons including a dedicated camera button, 'camera-camcorder mode toggle' button, volume rocker that doubles up as 'zoom' control, and a 'Media Gallery' button on the right panel. While the left side-panel houses the charging port, microSD card slot, and a 'key-lock' button. However the form factor is on the larger side, with the body getting particularly thick in the upper part housing the mega-camera lens and the huge lens cover.

The camera does a good job. We might have liked warmer tones, but it is still the best camera as far as still pictures are considered. However, the video recording is average. The video playback was nearly as good as the Vivaz, and running close on heels of the winner of "Best Video Playback" award is



Sony Ericsson Satio

no mean feat.

The Verdict:

Go for the Satio if you need a good camera phone that can do a good job in low-light conditions. It did fairly well in all the tests, with good bundled headphones. However, it is still overpriced, Vivaz is another option, which is also much cheaper.

Conclusion

We were sure that when comparing phones of such caliber, we'd be hard-pressed to declare a clear winner. We weren't too wrong. While the Xperia X10 was almost immediately counted out because of its dated OS and incumbent lack of applications, the battle between the iPhone 3GS and Motorola Milestone was awesome to behold. Even though the Milestone couldn't compare with the iPhone's now legendary touch-sensitivity, it was stunning in nearly every other respect, and at the end of our testing, came out the not-so-clear winner. For this reason, the iPhone 3GS got our Editor's Pick award, losing out to the Milestone only in a few of our signal reception and the camera tests.

The road ahead

The future is almost here, and we're all eagerly awaiting it. India will get 3G connectivity by September (hopefully), the Windows Phone 7 OS will be out by the end of the year, 4G connectivity has already started being offered (read the HTC EVO 4G on Sprint), and the iPhone 4 OS will be here - along with its carrier device the iPhone 4G - by mid-July. That these events will herald a revolution in mobile telephony is unarguable, and as devices get smarter and more functional, the once far-fetched vision of augmented reality is now right at our doorstep. With the convergence of devices accelerating, there are exciting times ahead, when you can expect your handheld to do everything from social networking to shopping, browsing to gaming, and productivity to displaying and recording 3D.

Entry-level Business phones

Blackberry Curve 8520

The Curve 8520 is Blackberry's answer to the masses that clamoured for a more affordable morsel. Unfortunately, it's price, or rather, lack of it, shows. The Curve 8520 cannot hold a candle to the other Blackberry phones in terms of materials used in construction or build quality. It's not shoddy by any means, but the partially translucent material used on the front body isn't the most appealing. The battery cover is decent and while it's not as sturdy as some of the other Blackberry devices (that aren't know for well built battery covers), it should suffice, as long as you're not too rough on it. There's no chrome bezel too – while this might be a good thing for longevity, for the pesky things are known for fall off after a couple of years of daily wear and tear, but this is fond goodbye to some much needed eye-candy as well.

The keypad on the Curve 8520 is identical to the one on the Curve 8900 – these keypads actually feel better than the ones on the costlier models, thanks to the slight segregation of the keys, although after awhile of using both, we seemed to get similar speeds.

The Curve 8520 offers good signal reception, but it's not as good as the other Blackberry handsets, and way behind our benchmark Nokia handsets – we noticed slight distortion in zone 2. The loudspeaker is plain mediocre – distortion even at lower volumes is not very acceptable and it's only mildly worse than the other Blackberry handsets. The handsfree kit offers decent clarity. Music quality on the handsfree kit is good, but not up to the mark compared to some multimedia phones.

Verdict

Its main plus point is the price – at Rs. 15,000, the Curve 8520 is a dream come true for



Blackberry Curve 8520



Banks respond
Banks have agreed to give 'clean' loans to telcos after the heavy bidding for 3G spectrum allocation. This means there will be no specific security required

Fusion coming soon
There have been rumours that AMD's Fusion will be out before the years end instead of the expected 2011 release

those wanting the goodness of a sweet QWERTY keypad and Blackberry Messenger and their famous pop mail service, but not willing to pay above Rs. 20,000 for such a device. Sure, the body isn't typical Blackberry in terms of look and build, but it's a good chunk of dough less and not a bad deal for it. Although, we figure the likes of the Nokia E71/E72 will have something to say about that.

Blackberry Curve 8900

This is a very neat looking phone with a chrome bezel that runs around the phone with a wider accent towards the bottom. The phone's battery cover has a brushed aluminium finish but is plastic. The keypad is slightly different from the higher end Blackberry Bold devices and similar to the Curve 8520. There is a slight gap between each key making each of the keys slightly smaller. However, there's no difference in the finger-to-key contact area since all Blackberry handsets have keys with a raised strip in the middle and the rest of the key tapers inwards either side. In fact this segregated keypad feels just as good, and first impressions actually rate it's keypad as more usable than the Bold 9700.

The trackball can get a touch unresponsive as the device wears with daily use. A 3.5mm jack has been provided on the right side, the volume rocker button works well and is intuitively designed. The Micro USB port also sits on the right, below a pretty decent camera button. The SIM is a pain to remove, unless you have long nails. Compared to this, the Bold 9700 has a flawless SIM tray.

In-call quality is very good, the Curve 8900 has a really sweet antenna – no dropped calls. The loudspeaker is pretty loud at maximum volume, but distorts, even at lower volumes. Vocals are understandable, but music isn't much fun. The headset offers good quality and good volumes. Camera quality is mediocre – decent colour, but sharpness is ordinary.

Verdict

Recent price slashes have kept the Curve 8900 competitive – it's a good handset for the price, although at Rs. 20,000 odd, you could also pick up Nokia's lovely E72 that will match the Blackberry for nearly all features and add a couple to the table.



Blackberry Curve 8900

Business phones above Rs. 20,000

Nokia E72

The E72 joins above the E71 near the top of the line. The phone offers great performance and usability across its many means of communication, from video calls to IM, email to SMS, MMS to VoIP, and of course, voice calls.

The E72 is available in seven different colours, offers 3G support (HSDPA 10.2Mbps and HSUPA 2Mbps), and has a 2.4-inch QVGA (320x240) screen. Running on the Symbian Series 60 v3.2 OS, the phone's UI on its widescreen is not very pleasing to the eye, but then again, as a business phone, it is functional but not cluttered, which is what matters. The phone has a business size battery as well, at 1500mAh. Our test phone lasted over two days on a single charge, even when using GPS and WiFi, and making calls.

The optical track pad is bounded by the D-pad, which seriously limits the easy flick-to-use navigation and scrolling that is possible on the optical track pads of comparable BlackBerry phones. While the still camera is good, the video resolution of VGA@15fps is quite low. DivX support is not free. No UI auto-rotate when in camera mode and no dedicated camera key.

On the whole, the phone offers some great call clarity through the earpiece, loudspeaker and handsfree, and we experienced no call dropping in our testing. The keypad is well designed, with easy to press buttons that are spaced well-apart in an acceptable trade-off with a large form factor. The dedicated mail, home, contacts, and calendar keys are very useful, and well-placed. The flashlight is also nice touch, unexpected on a business phone.

Verdict

The phone definitely serves its business messaging function well. Apart from a small screen size and video recording resolution, there is not much we can fault the E72 for. Though it offers pretty good value for money when you take into account its great features, it still can't be

BEST BUY digit JUNE 2010



Nokia E72

compared to the much cheaper full-QWERTY, LG GW550, but it is definitely a much better buy if you have the money. In terms of free Ovi Maps and turn-by-turn voice navigation, it compares well against the similarly priced Garmin-Asus Nuvifone M10, with accuracy levels and directions that are at par the navigator phone. The Nuvifone M10 goes one step ahead though, with its more detailed NAVTEQ Maps, as well as its much larger screen making for easier visual navigation.

Blackberry Bold 9000

The biggest of the Blackberry devices in test, it is quite a handful – literally. The Bold 9000 is boldly large, and none the worse for it. The device is well build, and the entire rear (that is dominated by a huge battery cover) is leather – very neat and novel looking (and feeling!). We also think the larger dimensions mean a better keypad as it gets a touch more spacing – typing is the proverbial piece of cake – getting emails written is a snap. There is a downside too – the Bold 9000 might be too large for some hands, and makes

quite an unseemly bulge in ones pocket as well. The trackball is decent, but pales in comparison to the new trackpads. Another thing we noticed is the new Bold 9700 is slightly faster – this is especially noticeable in the multimedia folder, when the Bold 9000 takes noticeably longer to display thumbnails and previews of content. This is also visible in the menu structure, when selecting certain sub options, the newcomer is slightly faster in virtually all aspects.

Even the menu button is a bit larger and wider, ditto the call buttons. At first glance the display looks pretty sharp, but when you compare it to the new Bold 9700, one can make out a difference in sharpness, for the newcomer has a marginally higher resolution and a slightly smaller display.

Call quality and in-call clarity of the earpiece is good – we had no disconnected calls, and no issue with signal reception. The loudspeaker plays spoilsport – it distorts, and makes a mockery out of vocals when listening to music, especially at high volume levels. It is loud however, a small saving grace, the Bold 9700 offers slightly better audio quality.

Verdict

The Bold 9000, like the Curve 8900 is significantly



cheaper than it was last year, but we wonder if that alone will be enough to warrant recommendation. Its size is a deterrent, but those who get hooked to the large QWERTY keypad will probably not mind.

Blackberry Bold 9700

Where the Blackberry Bold 9000 was really wide to accommodate a slightly bigger keypad, the Bold 9700 goes slim, probably based on feedback from users who found the Bold 9000 too large. The leather now extends to nearly the entire battery cover and imparts a quality, upmarket feel. The "Bold" moniker embossed in the plastic on the rear above the battery cover looks a little tacky though. The chrome trim still runs around the sides and the bottom though now it's only visible on the bottom of the device, it doesn't intrude on the very slim bezel – clearly screen area was of utmost importance, and the Bold 9700 marginally narrower than the Curve 8900. Although the device is well built, we noticed the battery cover developing slight play after just ten SIM card removals.

The trackpad on the 9700 is very sensitive, and works well. It's better than the trackball, and can be said to be an improvement. The voice command key, volume rocker button and camera button that are on the sides have a nice rubberised finish and aren't chromed, giving the 9700 a subtly classy look. The display has nice, sharp fonts – even fine print is very readable, and dark te xt is rendered on a white background beautifully.

Call clarity is good – the Bold 9700 has a slightly better loudspeaker than the Curve 8900 – calls are clearer, and even music sounds better. Thanks to the good earspeaker and antenna, calls are very clear and rarely is a call dropped – we encountered no breaks in call clarity during our tests. The camera is basic – decent colours but basic clarity. Camera settings are basic too.

Verdict

For those who just have to have a good Blackberry handset – the Bold 9700 offers a quality handset with a very nice keypad and loads of features. It's stylish too – definitely for the upward business class; it doesn't come cheap though – Rs. 29,990 is a fair bit for a phone, especially with the



Blackberry Bold 9700

craze of large, high resolution screens that is going around, the Bold 9700 isn't too hot for non-business class consumers.

Blackberry Tour 9630

A solidly built device and one that features a sturdily constructed battery cover – solid plastic has been used. It's noticeably bigger than the Curve 8900 and Bold 9700, but smaller than the mighty



BEST BUY digit JUNE 2010

	Lifestyle/High-end Multimedia Smartphones					Entry-level Business phones
Brand	**Nokia**	**Motorola**	**Sony Ericsson**	**Sony Ericsson**	**Apple**	**Blackberry**
Model	N97 Mini	Milestone	Xperia X10	Satio	iPhone 3GS 32GB	Curve 8520
Price (Rs)	30,989	32,990	35,795	35,950	41,500	14,990
Plus (+)	large screen, good keypad	great touchscreen, loudspeaker	great camera quality and battery life	good image quality, good battery life	great touchscreen and app availability	Affordable
Minus (-)	no DivX playback, no D-pad	no task manager (ender)	65k colours	low call clarity and loudspeaker quality	Bluetooth limitations	Shoddy build
Grand Totals (Out of 100)	68.96	69.55	64.58	64.24	60.66	55.01
Features (Out of 45)	31.50	30.55	28.31	30.83	27.27	26.02
Performance (Out of 55)	37.46	39.00	36.27	33.41	33.39	28.99
Features						
Physical Specs						
Form Factor	Horizontal slider	Horizontal sliding	Candy bar	Candy bar	Candy bar	Candy bar
Screen Resolution (pixels)	360x640	480x854	480 x 854	360 x 640	320 x 480	320 x 240 pixels
Screen Size	3.2 inches	3.7 inches	4.0 inches	3.5 inches	3.5 inches	2.46 inches
Screen colours	16M	16M colors	16M (65K effective)	16M colors	16M colors	65000
Touchscreen / Dual Screen (Y/N)	Y (resistive)/N	Y (capacitive)/N	Y (capacitive)/N	Y (resistive)/N	Y (capacitive)/N	N / N
Battery Rating*	1200 mAh	1400 mAh	1500 mAh	1000 mAh	1219 mAh	1150 mAh
Other Features						
Operating System	Symbian S60	Android 2.1	Android 1.6	Symbian S60	Apple OS	Blackberry OS
Address Book Capacity	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Standby Time*	310 hrs	350 hrs	425 hrs	340 hrs	300 hrs	408 hrs
Talk Time*	6 hrs	6 hrs 30 min	8 hrs	4 hrs 50 min	5 hrs	4 hrs 30 min
Inbuilt GPS / A-GPS support (Y / N)	Y/Y	Y/Y	Y/Y	Y/Y	Y/Y	N
Connectivity						
Browsing (GPRS/HSCSD/ EDGE/3G)	Y / N / Y / Y	Y / N / Y / Y	Y / N / Y / Y	Y / N / Y / Y	Y / N / Y / Y	Y / N / Y / N
Connectivity (Wi-Fi/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
Bluetooth/A2DP support (Y/N)	v2.0/Yes	v2.1/Yes	v2.1/Yes	v2.0/Yes	v2.1, Yes	2.0 / Y
Accessories						
Overall Build Quality (So 10)	8	9	8	8	9	6.75
Overall Ergonomics (So 10)	8	8	8	7	8	7.5
Keypad Design (So 10)	8	8	NA	NA	NA	8
Camera Specs						
Dual Cameras / Auto Focus / Flash (Y/N)	N/Y/Y	N/Y/Y	N/Y/Y	N/Y/Y (Xenon)	N/Y/N	N / N / Y
Camera Settings (So 10)	9	8	8	8	5	5
Multimedia						
Music Formats supported	MP3/WMA/WAV/ eAAC+	MP3/eAAC+/WAV/ WMA9	MP3/eAAC+/WMA/ WAV	MP3/WAV/WMA/ eAAC+	AAC/HE-AAC/MP3/ ALAC	MP3, WMA, AAC+
Video formats supported	WMV/RealVideo/ MP4	MP4/H.263/H.264/ WMV9	MP4/H.263/H.264/ WMV	MP4/H.264/H.263/ WMV	H.264/MP4/MOV	DivX, WMV, XviD, 3gp
FM Radio (Y/N)	Y	N	N	Y	N	N
Performance						
Signal Reception, Voice Clarity (So 10)						
Zones 1 / 2 / 3	9 / 8 / 7	8 / 8 / 8	9 / 8 / 6	6 / 7 / 7	8 / 7 / 5	7.25 / 6 / 5.5
Device Earpiece Volume	8	8	8	8	8	6
Device Loudspeaker clarity	8	8	7	7	7	5.75
Handsfree Clarity	7	8	8	7	8	6.5
Speaker Volume (on call)	7	8	8	6	7	6
Bluetooth Transfer Speed (MBps)	0.08	0.14	0.11	0.09	0	0.15
Captured Photo Quality (So 10)						
Captured Photo Colour / Crispness / Quality	8 / 8 / 9	7 / 7 / 8	9 / 9 / 6	7 / 8 / 7	7 / 7 / 7	6.5 / 5.5 / 6
Loudspeaker / Bundled Earphones Quality	8 / 8	9 / 9	7 / 8	6 / 8	7 / 9	4.5 / 6.25
Video Playback Quality (So 10)	8	9	7	8	9	6.25

* manufacturer rated

Bold 9000. This is a dual SIM phone that features GSM and CDMA network connectivity. The battery cover opens neatly to reveal two SIM slots, slightly offset from each other. The GSM SIM slot is more of a pain to access than the CDMA slot.

We got a Reliance locked device, so our testing on the default Vodafone network was not possible. In terms of key locations – the buttons on the side are identical to the Curve 8900. The keypad is more like the Bold 9700 – which is to say it's very usable – within the first 15 minutes your typing speed will start to pick up. The trackball should have been ditched for the new trackpads that offer greater intuitiveness and accuracy, but this is a slightly older model.

In-call clarity was pretty good, the only possible gripe is the loudspeaker clarity is not good. When compared to phone's like Nokia's N95 8 GB – a benchmark in this regard – the speaker on the Tour 9630 and other Blackberry

	Business phones above Rs. 20,000				
Blackberry	Nokia	Blackberry	Samsung	Blackberry	Blackberry
Curve 8900	E72	Bold 9000	B7610 OmniaPro	Tour 9630	Bold 9700
18,990	22,989	23,900	26,500	27,990	29,990
Compact, great keypad	excellent call clarity	Great keypad, voice clarity	good QWERTY keypad	Solid build, dual SIM	Beautiful and powerful
loudspeaker quality	low camera quality, small screen	Fit and finish	65k colours, poor sunlight legibility	Expensive	Mediocre loudspeaker
59.85	68.09	60.68	67.58	59.43	62.16
28.16	31.32	28.29	31.86	28.26	28.83
31.69	36.77	32.38	35.72	31.17	33.33
Candy bar	Candy bar	Candy bar	Horizontal slider	Candy bar	Candy bar
480 x 360 pixels	320x240	480 x 320 pixels	480x800	480 x 360 pixels	480 x 360 pixels
2.4 inches	2.36 inches	2.6 inches	3.5 inches	2.4 inches	2.44 inches
65000	16M	65000	16M (65K effective)	65000	65000
N / N	N/N	N / N	Y (resistive)/N	N / N	N / N
1400 mAh	1500 mAh	1500 mAh	1500 mAh	1380 mAh	1500 mAh
Blackberry OS	Symbian S60	Blackberry OS	WM 6.1	Blackberry OS	Blackberry OS
Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
356 hrs	576 hrs	310 hrs	480 hrs	336 hrs	408 hrs
5 hrs 30 min	6 hrs	5 hrs	6 hrs 48 min	5 hrs	6 hrs
Y / Y	Y/Y	Y / Y	Y/Y	Y/Y	Y / Y
Y / N / Y / N	Y / N / Y / Y	Y / N / Y / Y	Y / N / Y / Y	Y / N / Y / N	Y / N / Y / Y
Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	Y / Y / N / Y	N / Y / N / Y	Y / Y / N / Y
2.0 / Y	v2.0/Yes	2.0 / Y	v2.0, Yes	2.0 / Y	2.1 / Y
7.25	8	7.25	8	7.5	7.5
7.5	7	7.5	7	7.5	7.75
8	8	8.25	8	8	8
N / Y / Y	N/Y/Y	N / N / Y	N/Y/Y	N / N / Y	N / N / Y
4	9	5	7	5	5
MP3, WMA, AAC+	MP3/WMA/WAV/RA/AAC/ M4A	MP3, WMA, AAC+	MP3/WAV/e-AAC+/WMA/ AMR	MP3, WMA, AAC+	MP3, WMA, AAC+
DivX, WMV, XviD, 3gp	WMV/RV/MP4/3GP	DivX, WMV, XviD, 3gp	DivX/XviD/MP4/3gp/ H.263/H.264	DivX, WMV, XviD, 3gp	DivX, WMV, XviD, 3gp
N	Y	N	Y	N	N
8 / 6.75 / 6.25	9 / 8 / 8	8 / 7 / 7	8 / 7 / 7	7.5 / 6.5 / 6.5	8 / 7.25 / 7
7.25	9	7.25	8	6.25	7.25
6.25	8	6.5	8	6.5	6.75
7.25	9	7.25	7	6.5	7.25
6.5	7	6.25	6	6.25	6.75
0.14	0.15	0.15	0.09	0.15	0.17
6.5 / 6 / 5.5	6 / 5 / 5	6.5 / 6 / 5.5	8 / 8 / 7	6.5 / 5.5 / 6	6.5 / 5 / 5.5
4.5 / 6.5	5 / 9	4 / 6.5	9 / 8	4.5 / 6.5	4.75 / 6.5
6.25	7	6.25	7	6.25	6.5

handsets seems archaic and an afterthought. However, the loudspeaker is better than the one on the Apple iPhone – so we won't complain much. The camera is strictly mediocre, but it's presence on a business device is welcome.

Blackberry Tour 9630



Verdict

The Tour 9630 makes interesting deviation from most Blackberry devices by offering dual SIM slots – we don't think too much of dual SIM phones, and CDMA is not too popular with carriers around the world. That being said, if you've got two SIM cards and have been looking for a good dual SIM phone, this is a nice, quality option that's not short on business-oriented features.

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Games drive 3D
Analysts claim that 3D games will drive the demand for 3D displays and glasses. Evidently they feel that 3D movies are not a sufficient motivator

Galaxy's single slot GTX 470
Galaxy has just done the impossible – they've built a GTX 470 graphic card with a single slot cooler – no mean feat considering Fermi's heat generation

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Redefined Realism

HDTVs are getting bigger, better and cheaper by the month. There are many models and brands to choose from. We test a few of the more value-for-money offerings available.





The HDTV market is at a most interesting juncture right now. As with any in-demand consumer product, manufacturers are constantly upping the ante by churning out more and more products to meet the ever burgeoning demand. Sadly, along with popularity comes the deceit, the subterfuge and the pertinent omissions. It's often a matter of quantity over quality. We see the market flooded with options, in the hope that one or the other will hook you. For this reason, we see several parallel product lines, often with little difference in the underlying technology save for a few tweaks, and a few tertiary features. This is a tried and tested formula: add a different shape and stand, add a few lights and slightly larger speaker enclosures, and voila – a new, costlier product line is born. Increments to performance, if any, are mostly minimal. That's not to say there are no improvements in HDTV and allied technology – quite the contrary – there is a lot of research going on, even as you're reading this! It's just that you need to wade through hype a mile wide and decide between reality and purple prose – not the easiest thing to do.

Amidst all this, there's one thing we unanimously agree on – HDTV's are both the present and the future. As higher resolution, (read high-definition), content slowly gains popularity, whether it is cable TV or Blu-Ray content, the applications for a large flat screen are many. Connect it to your Blu-Ray player, your XBox 360 or PS3 and even your PC. The sheer realism of watching movies on a large screen that dominates most of your field of view is something that simply cannot be replicated by smaller displays, and it has to be experienced to be believed. So plonk into your couch, grab a bowl of popcorn and fire up that gigantic beauty while we dim the lights. Wait! – Before we get ahead of ourselves, we're only dimming the lights for our calibration purposes; you need to buy an HDTV first. Choose from amongst these beauties...

LG 47LH50YR

Large and lovely

A very handsome looking display, although it doesn't have the fancy stand and sleekness of its LED-backlit siblings, it's built of pretty sturdy materials and a piano-black finish that although common, is also hard to goof up. High quality plastic is used everywhere, and the rear is also pretty thick. The thick neck of the stand suits its bulk, and at 47-inches it's pretty large, noticeably larger than a 42-inch display. The swivel action on the stand is slick. The power indicator is sweet, and unobtrusive, yet catchy. A red LED is placed behind a wide contoured transparent strip of fibre to give a nice glow effect. This turns to blue when powered on. The menu



LG 47LH50YR

system is excellent – great colour schemes used and very intuitive and simple, yet with a good many options – absolutely no complaints.

While using default settings, the display has a warm colour tone that looks slightly over saturated, but the contrast ratio and blackness level is better. The display gives the best blackness level at factory settings, although it looks slightly dim. Fiddling with contrast and brightness is a fine line – overstep either way and you'll end up with either washed out colours or grey-looking blacks. Very few displays can manage to give pure blacks and great brightness and legibility at the same time, and this isn't one of them. The Spyder does a fair job of calibrating once factory settings are reverted to. In the DisplayMate greyscale intensity check, the display does well, displaying up to square number four, numbers three and downwards are not visible.

Backlight bleeding is not intrusive, but it is noticeable. During movies there is very good colour, highlights are good but not overdone. Colours appear natural, with good detail and while the blackness level is good, it isn't outstanding. It is, however, made up for, by a good variation in intensity of grey (good greyscale depth). Movies look very nice and realistic, and there is good highlighting as well as good detail in darker scenes.

When gaming, there is noticeable input lag – something we didn't see much of in the smaller 42-inch LG display. This is a minus point to be sure, the good news is – it's better than the displays we saw last year, meaning manufacturers are finally pulling up their socks with respect to input lag. But in fps games, accuracy suffers, especially when zooming on an enemy to shoot, there is noticeable lag that causes either over or under tracking and it's tough to aim accurately. Text is sharp and crisp – no issues with readability – this makes it a great accompaniment for your computer. The USB connect is useful if you want to play DivX movies and view JPG/JPEG files. Quality of DivX over USB is good, in fact there is little difference in quality when playing off a computer. The speakers are pretty good – voices sound loud and natural, raising the volume doesn't distort anything.

Priced at Rs. 75,500 (MRP), the 47LH50YR has a lot of features on offer, great connectivity, and with impressive performance across the board it's very suitable for someone looking for a great display to go with a high-end home theatre set up. With very sharp text, it's equally suitable for a computer, though input lag is the only sore spot for gamers. The fact that the street price will be a lot lower is the cherry on the proverbial cake – a highly recommended buy.

Samsung UA40C6900VRMXL

When black isn't sinful

The Samsung UA40C6900 belongs to their 6 series of affordable LED-backlit displays. And a stunner it is – a nice brushed-metal finish to the bezel, surrounded by transparent fibre – pretty classy, and the overall effect is nice. If you thought the bezel thin, wait till you walk around the side of the display – it's super slim, and constructed very well – the rear is metal – there's no outer plastic body to add bulk and weight. All connects are flush fit into the body, the cable TV connect even has an L adapter, so you needn't worry if the thicker cable wire looks like a squeeze against the body. And the stand is also unconventional, having four legs – similar to some Dell monitors. The chrome on the upper part of the stand may look loud to some. The first thing that strikes you is the total lack of backlight bleed when starting Windows – LED-backlit displays just appear to have much deeper black levels. The remote unit is nice, built well and with large, illuminated buttons, but the lack of segregation between the directional keys and centre button is not intuitive, especially with the large keys – our thumbs kept constantly pressing the arrow keys when we wanted to press the key in the centre.

Just decreasing brightness from 60 to 50 led to the blackness level coming to a respectable 0.29 from 0.76 – rather weird that a marginally higher brightness should cause such a loss in blackness levels. The contrast ratio was oddly not as good as we'd expected – with all embellishments turned off, it was just above 400:1 – not what we expected. Turn on dynamic contrast and it jumps to 622:1. Despite this rather mediocre setting, we noticed great separation in blacks and darker colours. In movies, the blacks look pretty black, although there seems to be slight graininess to the image and the backlight response isn't perfect. But plenty of detail is visible in dark scenes – in foliage, where you can see shadows on vegetation, and


Samsung UA40C6900VRMXL

Tesla in HPC servers
IBM installs NVIDIA's Tesla T20-series computing processors inside their new System X iDataPlex dx360 M3 high performance servers

No more BFG graphics
BFG, an NVIDIA-only vendor, has quit the graphics card business, evidently to concentrate more on building gaming systems

the darker green of the leaves themselves. However, this is at slightly lower brightness settings. If one raises the brightness a bit, the detail in darker scenes will be lost. Input lag is noticeable, but it's not as bad as the LED displays we tested last year. Brightness levels definitely need to be slightly higher, but not at the expense of blacks. Samsung's Internet@TV is supported – a LAN port is provided for this, allowing access to certain sites like Yahoo and Flickr. The widget-based interface is decent to use, and you can add and delete widgets accordingly.

As with anything new and shiny, prices are always a little insane. The UA40C6900 retails for Rs. 1,05,000 – a fair bit of cash that can buy you a very decent 50-inch plasma display, with a better blackness level. That being said, LED-backlighting is quite the rage now, and most consumers who crave sex appeal from their TV sets have certainly come to the right place. If you've got deep pockets, and looks are more important to you than ultimate visual quality, the UA40C6900 is right up your alley.

Sony Bravia 40NX500

Black lover

This display dismayed us with its ultra wide bezel that makes it look somewhat a fossil in this age of stiletto-like bezels; where looks are sometimes all that matters. The stand has a half brushed aluminium, half piano black finish and is quite large, and very plain looking. The remote control unit is pretty nice and the entire base slides out to access the batteries – build quality of everything is top class. The buttons on the display are really good – located on the side, but have great feedback and are intuitive. The menu system is simple, but requires more button presses than LG's menu, to get things done. The "Favourite" menu is a nice addition where you can add commonly changed settings for quick access. Sony's remote has a peculiarity where it's easy to press the channel change keys when using the directional keys, because both these keys are designed as concentric rings – this is particularly annoying when one tries to move around the menus as we had to keep looking at the remote to avoid hitting the wrong key.

Testing confirmed highly deficient reds; we could not get the reds to the point we wanted, even though we tried to increase the red bias and reduce the blue bias. We ended up with a warm, orange hue to the picture. Keeping colours neutral, red is deficient. Once decently calibrated, we saw a very good blackness level and the Spyder agreed with us by throwing up a minimum luminance of 0.14 – this is excellent, although the colours were not absolutely neutral, and the picture had a slightly but noticeable reddish hue. The screen is very reflective – not good unless you're prepared to keep all the lights off while viewing it. It does an excellent job of native 1080p movies – great blackness level, great colours, (with the slight reddish tinge), and superb contrast, but it doesn't do as well with non-native content, including 720p content – the upscaling was noticeable. DVD videos also gave us a similar problem.



Sony Bravia 40NX500

Our DivX movie did not play as advertised when we used the USB ports, although images worked fine. We tried another DivX file to the same effect – the other displays that supported DivX through USB didn't give this problem. Priced at Rs. 68,900, the 40NX500 is a good TV, but it could do with a slight price reduction – there are bigger displays available for close to the same price. However, that doesn't change the fact that the 40NX500 has a very sweet contrast ratio and good overall quality – this was our overall Best Performer. It's brilliant contrast, great performance in the gaming arena and native 1080p content ensured it earned this spot.

Sharp Aquos LC40L50M

Hey there sharp lookin!

This display exudes build quality. It's well designed, the rear body has great quality plastics – the remote control is also very well built. The bezel is a little wide, but no wider than LGs displays that look smaller owing to the outer bezel being made of transparent fibre. The menus are decent, but laid out with a weird colour scheme such that any background colour interferes with readability. This limits its usability and to a certain extent the intuitiveness. There is a quirk in the interface – input ports are listed with numbers i.e. input port 1, input port 2 and so on, no differentiation is made on the basis of type of connect. Also the type of connect used will remain as an indicator on



Sharp Aquos LC40L50M

screen till a toggle key called "display" is used – you decide whether this feature is useful or intrusive.

Reds are slightly deficient and higher intensities of red blend to the point of being indiscernible. Greens are well produced and natural, while blue is slightly saturated. There is very little backlight bleeding, and this helps with the blackness level. Measured blackness level is not very good. If one lowers the brightness level, to improve blacks, then detail is lost. 1080p videos look good, but there is some missing detail in darker scenes, and white and dark regions are divided by some banding with halos. There is also chroma noise in darker scenes. DivX and DVD videos have the usual issues with sharpness, but colour and brightness levels are good, once again the lack of a blackness level means you need to turn the brightness down, thereby sacrificing on some detail for better blacks. Gaming was fun – input lag is not very noticeable and the colours were pretty good. However, environments didn't have as much of a vibrant feel to them as the LG, Samsung and Sony displays.

Volume level of the speakers is quite high, but clarity is not top notch – it is however, more than acceptable for regular viewing. All in all, the Aquos LC40L50M is a solid offering that would be even better if the panel had a better contrast ratio. It's price of Rs. 64,900 (MRP) is expensive, and there are better options around for a little more.

LG 42LH60YR

Jazz theatre

The Jazz Theatre is LGs top product line in their range of CCFL-backlit . This display has a very nice stand, the surface of which is glossy black and has some shiny blue pieces embedded in it, giving it a rather chic look. It's well built, though we found the bezel a little too wide. This is evidently to conceal the large speakers mounted in the sides. The speakers are powerful enough to justify the excessive advertising focus LG has done on them, but they're nowhere near a replacement for a speaker system, nor do they provide an engaging enough sound to be called "surround speakers".



LG 42LH60YR



Dynamic contrast ratio
This much-hyped term is maligned in our labs and for good reason – it takes into account backlight adjustment and variable brightness

Torchlight makes it big
The dungeon crawler Torchlight has just sold 5,00,000 copies. The publisher buys a stake in the developer studios for 8.4 million US dollars

The twin lights on the sides of the TV are a distraction when watching anything, unless you're gaming, in which case you're close enough to the display to ignore them. LGs menu system is very good – brilliant in fact – simple, yet detailed and requires less button presses than Sony's menu.

The colour produced is really nice – the 42LH60YR is as good as the 47LH50YR in this regard. Colours have a natural and very realistic tone. The contrast, typical for an IPS panel wasn't up to the mark and is this display's only weakness. The blackness level wasn't up to the 47-inch LG 47LH50YR and this becomes noticeable when watching movies with a lot of dim scenes. Still, it's not a major deterrent in regular viewing, unless you're really discerning.

When calibrating the Jazz Theatre, we found we could get a better black level, but at the expense of the picture becoming relatively dimmer than what is acceptable for viewing purposes. When kept at good brightness levels, the blackness level is mediocre. Regardless, at normal brightness and contrast levels, blacks appear washed out – not a very good thing. When gaming, what was very nice was the nearly total absence of input lag. That, combined with some great colour and adequate contrast, made for a highly satisfying gaming experience. The speakers do their job nicely, although they're not very different from the 47LH50YR's speakers – which is a compliment to the larger sibling.

An MRP of Rs. 70,900 might seem a lot for a 42-inch display these days, but with LG street prices should be much lower – close to Rs. 60,000 – this makes it a good buy, although you could just as easily go with the 42-inch version of the LH50 series and not miss anything.

Moser Baer MBIK32HD

Highly affordable surprise package

MoserBaer isn't a huge name in HDTV circles, but their MBIK32HD impressed us with good build quality that was much better than the Onida 32-inch Diamond Kyrock. Even the stand is more rigid – something the Onida sorely lacked. Bright reds have a distinctly pink hue. This is immediately noticeable, and quite annoying. Manually tuning the display mitigates this to some extent. Note that this is not a full-HD display – 1366 x 768 is the native resolution. The remote unit is decent, mediocre build quality but buttons work well and are well spaced, it also works well from close to the display. DivX through USB is supported.



Moser Baer MBIK32HD

Post calibration, we noticed finer texture on the skin. The contrast is much better than the Onida Diamond Kyrock, which one would normally pit against this display, both being in the same size class. Pixel sharpness is good, and even though this isn't a full HD screen you will not notice any problem viewing 1080p videos. Good greys and blacks along with a good contrast ratio mean a better all round experience. There is very good highlighting in movies – sun on a persons face, sweat beads etc. The colours are vibrant, but not over rich. The slight lack of tonal accuracy and neutrality spoils things, especially in scenes with a lot red, where pinkish hue is noticeable.

Gaming is fun – a lack of input lag makes first person games easy to play because aiming is mostly spot on. Surprisingly, highlighting is not as good in games – but this is probably because of the lower native resolution that it is not as noticeable. The obvious solution would be to move farther away from a lower resolution display, to make up for the pixel count, but this intrudes on the immersive feeling of being closer to the view.

Overall, the MBIK32HD impressed us with a very good picture quality and will definitely satisfy someone looking for an affordable display with good performance to boot. A retail price of Rs. 29,990 is pretty low, even for 32-inch displays – if the market price is any lower, the MBIK32HD is a steal of a deal, although, we haven't come across many MoserBaer displays in electronic malls. It's a brilliant value buy – our Best Buy, an award shared with the Haier LB32R3.

Onida 32 Diamond Kyrock

Doesn't rock hard enough!

The Diamond Kyrock underwhelmed us from the beginning. To start with, its build quality is iffy – while the panel is encased in thick plastic, the stand has a fair bit of play and the TV can actually vibrate on account of this, if you touch it. The stand is one of the most important parts of the body of a TV, especially since



Onida 32 Diamond Kyrock

many people are averse to wall mounting smaller displays, and having a wobbly stand is a glaring minus. The menu buttons are on the top of the TV – this makes them easy to use if the TV is on a table, as long as it's not too high. But not so if it's wall mounted – all the more ammunition against Onida for the shaky stand. The remote has very nice, soft buttons that are a joy to use and although the menus are laid out well and are pretty simple, some advanced

options are missing, much to the chagrin of advanced users who will want to tweak settings. The remote needs to be pointed at the sensor before it works properly, not good if using from close. From about 8 feet away it's less finicky.

This panel features full HD support, although at its native resolution, text wasn't sharp. The blackness level is very poor, and owing to this even the lower grey shades are indistinguishable from each other. The first twelve squares were missing in DisplayMate – a poor start since the best displays will miss only the first two squares, and even the LG 47LH50YR, that didn't have a very good blackness level only missed the first four squares. Dark grey shades blend with black. Moiré was also present, rearing its ugly head in our pattern tests. Higher intensities of red will also blend as the gamut for red isn't wide and you will notice banding. Dark shades of almost any colour will blend. When watching non-native resolution movies the black band on the top has a noticeable backlight bleed. DVD content has a lot of noise in the darker intensities. When watching native content movies, the quality is OK, but with 720p content, there is a lack of sharpness noticed.

The speakers are very loud, but there is noticeable distortion and background noise is pretty intrusive on the overall experience. There is a lot of sibilance to the vocals. At Rs. 35,900, the Diamond Kyrock is expensive for the performance it offers, as a full 1080p display we expected it to cost more than the other 32-inch 720p displays, but the flagging performance was the last nail in its coffin.

Brand	Phone	Email	Website
Haier	1860-180-3333	info@haierindia.com	www.haierindia.com
LG	91-120-2560900	rohitpandit@lgindia.com	www.lgindia.com
Moserbaer	+91-11-4059 4560	Shilpi.kapoor@moserbaer.in	http://shop.moserbaer.in
Onida	+91-22-66975667	response@onida.com	www.onida.com
Samsung	+91-124-4881234	susmita.nag@samsung.com	www.samsung.com/in
Sharp	1860-233-4001	customer.care@sharpindialimited.com	www.sharpindialimited.com
Sony	1800-103-7799	sonyindia.care@ap.sony.com	www.sony.co.in
Videocon	+91-124-4215400	marketing@vgmail.in	www.videocond2h.com
VU	+91-22-2837 7300	info@technologies.vu	www.technologies.vu

BEST BUY digit JUNE 2010



Haier LB32R3

Haier LB32R3

A higher living?

This TV looks decent, while the remote is the real novelty – it's white and looks busy with a lot of function buttons, but the labelling could be better. For example, the key labelled "source", does nothing, and it took us 5 minutes to figure out that the function "source" was assigned to the button below that.



Macbooks better now
The new Macbooks get a better CPU, faster GPU and a new battery that is good for ten hours – a win-win situation? But rumours of overheating rears its ugly head

No pron?
Steve Jobs got into a flame war with Ryan Tate, a Gawker blogger via email. Among other topics, Jobs was against porn and promised "a world free from porn". Hmmm...

VU LTV-46I



A solidly built display with a nice stand, the entire body features a glossy black finish. Initially we wondered about the extra thickness, then we noticed this display houses a small netbook-grade computer in its shell, which is why VU Technologies used the suffix "i", signifying intelligent. The display is quite heavy and the body made of solid plastics. For such a large screen it's a shame that the stand does not swivel. The remote needs to be pointed very accurately at the IR sensor, else will not work, this makes close operation problematic. There is an Intel Atom processor, 1 GB of RAM and a 160 GB hard drive built in, meaning you actually have a ready HTPC, albeit with the barest of hardware configurations. If this set up included the ION platform, we'd swallow it, since the Atom processor struggles with HD content. It coughs and chokes on 720p content, let alone full 1080 videos. We'd also have liked a Blu-Ray optical drive – this would be a killer, but sadly wishes aren't horses.

While the blackness level is mediocre at best, it will do for the most part, although you will notice the deficiency. What is not good is the lack of variation in intensity in grey. In movies this is noticeable in darker scenes and even in certain well-lit scenes. One example was of a cobbled sidewalk that was grey in colour with a lot of variation as part of it was sunlit and part in the shade. It was interesting to note the blending of some grey here – the display evidently struggles to resolve detail present in grey.

When running *Crysis Warhead*, the display refused to display the game at a resolution of 1080p and you see a blank blue screen (not to be mistaken with a BSOD). We needed to reset the game resolution lower than 1080p for this to work, surprisingly *S.T.A.L.K.E.R* worked fine at 1080p.

It's a feature rich display rich, but the MRP of Rs. 95,000 is hard to swallow. If it were a great performing panel with an ION-based computer built into it, we'd have considered it, but the fact that you can buy an LG 47LH50YR and a PS3 for that price is reason enough to avoid recommending it. It is a novel solution however, and kudos to VU for coming out with something of the sort.

The display comes with some nifty built in games, accessible via the remote control unit; a plus, though given sufficient addiction, the longevity of the remote could suffer. This TV comes with a memory card slot and 3.5mm headphone out jack.

The display has a decent blackness level. Colours are pleasing, though we'd like a little bit of a natural look to some colours. In some scenes with a darker background with the foreground having lighter highlights detailing is visible. Skin tones are spot on – a strong plus. The pixel response seems to be on the lower side. In fast moving scenes, some sort of tearing appears. Gaming was a fun experience, except that we found the pixel response to be a problem when playing fast action first person shooter games. The speakers are pretty basic, vocals have a slight distortion to them.

Priced at Rs. 31,990 the LB32R3 is a good buy, although it's also slightly pricier than the MoserBaer MBIK32HD that has a better quality panel. You couldn't go wrong between either of these displays – it shares the Best Buy with the excellent value-for-money MoserBaer MBIK32HD.


Samsung LA32C650L1RLXL

Samsung LA-32C650L1RLXL

32" of Joy

The LA32C650 bespeaks quality from the time it's unpacked – thick plastic meets solid glass and metal here. The stand for starters, is pure glass, except the neck that, we suspect is transparent fibre. The rear is metal, unlike the other displays that use plastic. The remote is identical to the Samsung LED UA40C6900.

While calibrating we noticed mediocre blackness levels – but then, there were many displays that fared worse. The colour is generally good and tonally accurate – the colour levels aren't as splendid as it's LED sibling. There is good colour in movies, with a decent amount of detail in grey – we were able to make out the detail and texturing of the mane of a black horse in one of the scenes where there was quite a bit of dark grey (clouds and shadows) and dark green (foliage). Only offerings from LG, Sony, and Samsung's own LED display could outdo this display.

One needs to keep the brightness really low to get a good black level, but the display does well with grey-scale intensity. It has an RJ45 port, Samsung@TV is supported.

The price was a little high, even for a high-end 32-inch, full-HD panel – Rs. 54,900 isn't as affordable as we'd have liked, but it's a fine full HD panel.

Videocon 3205HD

Get, set, go!

This display is well built, except for the stand that isn't stable.

Brand	MoserBaer	Haier	Onida	Videocon	Samsung	Sharp	Sony	LG	LG	VU	Samsung
Model No	MBIK32HD	LB32R3	32 Diamond Kyrock	3205HD	LA32C650L1RLXL	LC40L50M	40NX500	42LH60YR	47LH50YR	LTV-46i	UA40C6900
Price (Rs)	29,900	31,990	35,900	35,990	54,900	64,990	68,900	70,900	75,500	95,000	1,05,000
Grand Totals (Out of 100)	57.2	60.02	49.36	55.98	69.65	66.71	73.63	70.04	72.39	55.83	66.39
Features (Out of 35)	16.91	18.73	16.63	17.75	25.57	23.50	23.68	23.45	23.28	12.15	21.86
Performance (Out of 65)	40.29	41.29	32.73	38.23	44.08	43.21	49.95	46.59	49.11	43.68	44.53
Plus(+)	Decent performance, affordable	Decent build, good performer	Nice remote	Built in DTH	Good performer	Built well, looks good	Great performer	Built well, great sound and video quality	Great colours, large size	Built well, in-built PC	Amazingly slim, great blacks
Minus(-)	Not full-HD	Single HDMI port	Poor quality, basic build	Mediocre performance	Expensive	Slightly expensive	Large base, pricey	Pricey	Deficient blacks, input lag	Very expensive	Mediocre brightness, pricey
Features											
Screen Size (Diagonal, in inches)	32	32	32	32	32	40	40	42	47	46	40
Resolution	1366 x 768	1366 x 768	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
Connectivity											
Number of HDMI ports	2	1	2	2	2	3	4	3	3	2	4
Number of Component ports	2 (w audio)	2 (w audio)	2 (w audio)	1 (w audio)	2 (w audio)	2	1	2 (w audio)	2 (w audio)	2 (w audio)	1
Number of Composite ports	3 (w audio)	3 (w audio)	2 (w audio)	3 (w audio)	1 (w audio)	3 (w audio)	2	3 (w audio)	3 (w audio)	3 (w audio)	1
Number of S-Video ports	2	-	1	1	-	1	-	-	-	1	-
Number of USB ports	1	1	1	-	-	-	1	1	1	2	2
Number of Display ports	-	-	-	-	-	-	-	-	-	-	-
Number of D-Sub ports	1	1	1	1	1	1	1	1	1	1	1
Number of DVI ports	-	-	-	-	-	-	-	-	-	-	-
Digital Audio Out (Y / N)	N	N	N	N	Y	Y	N	N	N	N	Y
Usability And Ergonomics											
Placement of buttons on the display (So 10)	6.25	6.25	7	5.5	6.75	7.25	6.5	6	6	6.5	-
Menu Intuitiveness (So 10)	7.5	7	7.5	6	8	7.25	7.5	8.5	8.5	5.5	8
Options Available (So 10)	5	6	6.5	4	8	7.75	9	9	9	4.5	8
Remote Control Unit (So 10)	6.25	5	7	3	7	8	8	7.5	7.5	5.25	7
Wall Mounting (Y / N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Stability of Stand (So 10)	6.5	5.75	4	6.5	8.75	8	8.25	8.5	8	7.25	8.75
Swivel Base	N	Y	N	Y	Y	Y	Y	Y	Y	N	Y
Performance											
Inbuilt Speakers (So 10)	3.5	4.5	2	4.75	6.5	6.75	7.75	8.5	7.25	5.5	6.25
Spyder 3 Elite Scores											
Maximum Brightness (in cd/m^2)	510.9	419.6	362.3	444.9	428.6	473.4	436.3	426.7	330.4	409.1	449.4
Nominal Brightness (in cd/m^2)	445.4	398.4	265	300.4	111.1	142.7	128.3	143.2	125.1	307.5	122.1
Contrast Ratio (X:1)	595 : 1	625 : 1	299 : 1	596 : 1	275 : 1	388 : 1	731 : 1	280 : 1	503 : 1	687 : 1	402 : 1
Luminance (Black) #	0.7	0.52	0.78	0.29	0.34	0.35	0.14	0.49	0.23	0.37	0.29
Luminance (White)	416.7	325.1	233.8	173	93.7	135.8	102.4	137.3	115.8	254.3	111.6
Display Mate Tests (So 10)											
Backlight Bleeding	7.5	7	7.5	6.75	6.75	8	8.25	5.75	7	6.5	6
Colour Accuracy	4.75	6	5.75	5.5	7.75	7	7	7.5	7.5	6.5	7.75
Intensity Ramp (16 intensity)	5.5	5.25	5.75	5	7	6	6.5	7.5	7.5	5	7.5
Grey Scale Check	6.75	7	3	3.5	7	5.75	7	7.25	7.5	6	7.25
Moire	2	3.25	3.5	4.25	7	5.5	6	7	6.5	4.5	6.25
Reverse Text	4	5	6	6	7	7.75	5.5	7.5	7.25	6.25	7
Video / Gaming / Real World tests (So 10)											
1080p Blu-Ray Clip	7	7.25	6.75	6.25	7.5	7.25	8.75	8	8.5	7.5	7.75
720p Blu-Ray Clip	7	7.25	5.75	5.75	7.5	6.75	7.5	7.5	8.25	7.25	7.75
DVD Movie	6.25	7	5	5.5	7.5	7	6	8	8	7	6.75
Text / Presentation Sharpness Test (So 10)	5.25	5	4.5	4	7.5	7.5	8.5	8.5	8.5	6.25	8.5
Gaming Colour / Sharpness	7	6.25	6.75	7.5	7.5	6.75	8	8.25	8	7	8
Gaming Input Lag	7	7	7	7.75	7.5	7.25	8.25	8	5.25	7.5	5.5
Gaming Contrast/HDR	5	5	4.75	7	7.5	6.75	8	7	7.5	5.5	7.5
# Lower is better											



GM and Google team up
This team up is evidently for developing an application for Android that will give important information about Chevrolet's upcoming car "Volt" on the driver's cell phone

Android's leaking juice!
Everybody knows Android phones are hard on batteries. Some Google employees have taken to blaming application developers for this particular flaw

For some reason the remote didn't work and we had to use the buttons on the side of the unit itself, these buttons are small and hard, and thus, hurt ones fingertips.

Another bug - 1080p, for which there is native support would appear with two black vertical strips on each side, and there was no way to remedy this. Text wasn't sharp, despite fiddling with the settings. Reducing the contrast doesn't do much – in fact the difference between contrast being set at 100 and 70 is barely noticeable.

We could see slight backlight bleed in the centre of the display. In the shade ramp test, the three most intense hues of red and green blend. This is pretty poor. In reverse text tests yellow and white on green backgrounds were quite poor, as was yellow text on a white background.

There is no separation between black and grey – this makes certain darker scenes with subtle variations in grey blend. Bright halos aren't done very well – there seems to be an orange hue to them and highlights aren't as spectacular as they're meant to be. Additionally, there is banding visible in blue-sky scenes.

There is slightly perceptible input lag in games, but it doesn't affect gameplay, unless you're playing lightning fast, twitch-based first person shooters. Good colour and sharpness in *Crysis Warhead*, but this refused to run in full screen mode. *S.T.A.L.K.E.R* ran fine in full screen mode, no issues with input lag and colours and contrast were pretty good, except that darker scenes look a little less detailed.

This display comes with DTH built in that only needs an antenna to work. At Rs. 35,990 the 3205HD isn't a bad deal – it's slightly better than Onida's Diamond Kyrock with a couple of extra features thrown in for the same price tag. But it cannot compete with the superior quality of the MoserBaer MBIK32HD and Haier LB32R3 – which are cheaper.

HOW WE TESTED

We divided the displays primarily on the their sizes and then on the price. For this test we connected these displays to a computer and all testing was done via HDMI connectivity, which is, the most common connect used. The PC used consisted of a Core 2 Duo E6700 CPU, ASUS EAH5850 graphic card, 4 GB Corsair DDR3 RAM, ASUS P5Q3 Deluxe motherboard and 500 GB Western Digital HDD. The graphics card has a dedicated HDMI port, so no converter was used. Windows 7 Ultimate 32-bit was our OS of choice. For media playback we used Windows Media Player with the relevant codecs.

First of all, we used the Spyder3Elite to calibrate each display, and in the bargain got values for black and white levels and brightness. Maximum brightness is arrived at by setting brightness, contrast and backlighting to their maximum values, and is a look at how bright the display can get. What was interesting that our brightness differed from manufacturers rating. For nominal brightness we set brightness, contrast and backlight intensity to comfortable, normalised levels. We refrained from using a set value of 50, 50, 50 for each parameter, as different displays are relatively brighter at even the same settings. The luminance level of white and black was tested at nominal brightness levels. Before calibration we set brightness, contrast and backlighting to levels that were pleasing and uniform to the eye. The following settings were done on the TVs: Colour tones were set to neutral, or medium where applicable. Sharpening was turned off, or kept down. Colour tone was neutral. Zero bias was used for RGB values. Noise reduction was turned off, as was any dynamic contrast and backlight settings. If a display was capable of more than 60 Hz, this was also turned off. Some displays have a cinema mode (24 frames per second), also called the 2-3 pulldown, this was also turned off. Since calibrating using the Spyder got us such diverse results, we decided to finely tune each TV to what appeared to be a better image. There is no fixed formula for calibration – some displays look too vibrant, some too washed out, some have a very low default black level, while others do not have sufficient brightness.

After calibration and logging of the values that were thrown up, we ran DisplayMate Video Edition to check the contrast, blackness level and grey-scale intensity ourselves. The grey-scale intensity is an important test, for while a display might be able to produce good blacks and intense whites, many flounder to accurately produce a wide gamut of grey – some intensities of grey tend to blend, and as the intensity comes closer to black, we see a lot of problems to display shades very close to black, but not quite black. This is of great essence with any sort of multimedia including both movies and games. If a display is measured to have poor greyscale intensity, you will not see detail in shadows and dimly lit scenes – either such areas will look washed out, or everything will appear black. DisplayMate was also used to fine-tune the calibration given by the Spyder3Elite.

The videos (1080p, 720p and DVD) we used consisted of full length videos and action clips from the following movies: Iron Man 2, Resident Evil: Afterlife, The Human Centipede, Kingdom Of Heaven, Australia, Laws Of Attraction. The HD videos were all uncompressed Blu-Ray-format files. The DVD videos were .VOB files. For the DIVX playback via USB, we used two DIVX files, one transcoded from a .VOB file, and the other from a 720p video.

We used 1080p and 720p videos in addition to DVD videos to see how these displays handled not only native content but also non-native content, where some sort of downscaling is required. These clips were a mix of dark scenes, lots of complex colours, fast action scenes and bright daylight. For our games tests we used *S.TA.L.K.E.R Call Of Pripyat* and *Crysis Warhead*. Games were run at their native resolution. We checked for colour, contrast, brightness and HDR of the displays, as well as pixel and backlight response. Additionally we looked at the occurrence of input lag, characterised by a lazy mouse with some delay in response – all displays have it, we rated how severe it was.

For features, we noted the presence of connectivity options, as well as the menu options available. We judged the quality and usability of buttons on the displays and their remote units, and the intuitiveness of the menu system. Scores were awarded on a scale of 1 to 10 for subjective opinions, whereas measurable values were taken for objective tests. We didn't assign weights to luminance and contrast ratio values given by the Spyder3Elite simply because a slight change in any setting impacts the scores.



Videocon 3205HD

Faster Chrome
Google releases new Chrome build which improves performance even more and integrates Flash without a plugin

3TB drives soon
Rumours about Seagate being the first to release a 3 Terabyte drive floating

Getting the **real picture**

Gaudier, brighter and sharper isn't always better...

Rossi Fernandes
rossi.fernandes@thinkdigit.com

When you buy your new LCD or Plasma TV, you need to get an HTPC running first. TVs can be decent LCD monitors and at the same time, they are ideal for playing back high-definition content. When that's done, calibration is the next most important thing. Calibration is necessary to get the display running at its best. Now, you can go buy a hardware calibrator like the Spyder 3 Elite, which we use in the test centre for all our TV and monitor tests. They are great but no one really wants to spend another Rs. 15,000 on a device they'll probably only use once very few months.

Let's look at the best we can do without depending on such a calibrator. All you need to do is get your TV hooked up to an HTPC preferably using HDMI or Component, so that you get the TV running at its native resolution. Avoid D-Sub at all costs.

Aspect ratio and input resolution

A lot of people want to use absolutely the entire screen area no matter what they're watching. When you're watching cable TV or DTH, and forcing the TV to run the 16:9 aspect ratio resolutions of 1920x1080 or 1366 x 768 (in case of a non-full HD TV), your image is going to appear stretched. To fix this, always use the input resolution. In most TVs, you should the find an option called Just Scan under the TV setup menu. On the computer end, set the display resolution to the native resolution. In certain drivers and displays, you might have to adjust the Overscan setting so that the image fully occupies the entire screen.

Colours tweaking

The colours are some of the most important parameters that need tweaking on a TV or LCD monitor. Now, most TVs come with controls for the colours but if yours doesn't have it, then you can make changes to the colour settings in your display driver's colour profile.

Take a printout of a reference image – preferably with a mix of many colours. This printout should be ideally taken on a good calibrated printer which will print neutral colours. Here is one sample reference image - http://assets1.colormailer.com/web/calibration.jpg.

Use this printed image as a reference and display the image as a full screen image using an image viewer on your PC. Start adjusting the colours by holding the printout next to the TV. Start with the red, move on to the blue and then the green. Keep in mind that changing the value of one colour affects other colour levels. This is a very subjective way of looking at things, so compare closely with the reference image.

Brightness and Contrast settings

The brightness and contrast are equally important. The chart on the following page is useful for setting up the brightness and contrast levels for your display - www.lagom.nl/lcd-test/black.php#blacktest.png. Set your brightness first to the maximum and contrast at round 50 per cent. Now, adjust the brightness in a way such that the black band at the extreme appears the darkest. Now increase the contrast such that all the blocks go darker gradually. Adjust till the white block is the brightest and all the adjoining blocks go darker in a very uniform manner.

Turning off enhancements

There are a few features advertised by TV manufacturers which apparently improve image quality. However, it isn't the case will all of these features. The noise reduction feature for example is useful for reducing pixilation while playing low resolution videos on a large screen. With high-definition content, it's not necessary. Keeping the feature on will only make the image look softer and lose some detail.

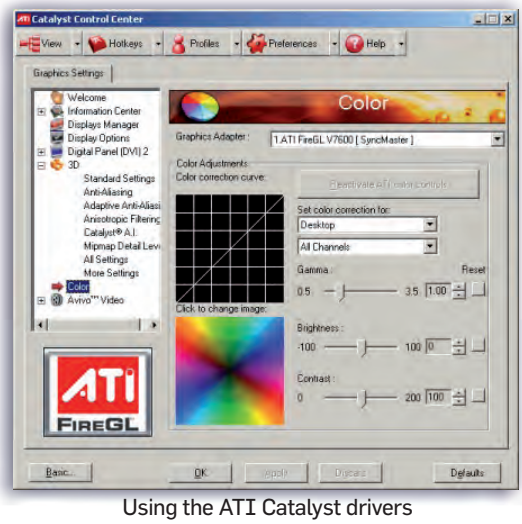
The sharpness feature is also best left at the minimum. Adding sharpness adds an edge-like feel to everything on the screen. Although, a little bit of sharpness helps HD movies look a little better, for displaying fonts on a PC display, it are really bad.

Contrast and colour enhancements features should also be left untouched. All the calibration that you do goes down the drain when you use this. Remember, we want colours to appear natural.

One of the new trends is the refresh rate of displays. With the TVs running at high refresh rates, movie frame rates go haywire. A 23.97fps movie being synchronized to run at 120Hz for example can give the impression of being smooth but there are some speeding and slowing down and problems audio syncing that take place. Preferably, turn this off as well.

Lighting setup

Lighting around your TV is equally important. If you calibrate your TV and then, have lots of sunlight coming in through the windows, you are going to see a drop in colour accuracy. Brightness and contrast settings also go out the window. When you set up your TV, make sure it isn't facing a window and there shouldn't be any bright objects or lights behind you. If it has to, make sure you have thick curtains covering them.



Using the ATI Catalyst drivers to change colour levels



Music on the move

So many MP3 players and PMPs in the market. How do you choose?

Recently, someone in the Digit team lost the ability to play music on the go, when the audio jack on his Nokia 3500c stopped functioning. Yes you heard that right, he still owns that ancient relic of a phone the Nokia3500c! Now you know why I'm not revealing this person's name. Let's save the poor bloke some embarrassment right?

First up I decided to go to my favourite haunt for tech products - Lamington road. Here I was sure to find not only branded players from the likes of Sony, Philips, and Creative, but also hoards of those Chinese unbranded devices. The reason I'm curious about these is because every now and then you do find a gem even in the unbranded space.

The prospective budget 'Mr. Ancient Phone' gave me was a generous Rs. 6,000. This opened up my choices by a considerable margin. There were little shuffle-like mp3 players with no screen, players with 3 to 4 line LCD/LED screens, and then finally colour display PMPs with screen sizes of one inch and above.

The MuVo T200 4 GB was available for Rs. 2,800. Now the shop keeper was quick to point out the sticker on the box that said upto 2000 songs. "This does the work of 8 GB" he said. Now before I could wonder whether the player used some highly advanced compression technique on the flash memory itself, I found out that there was a caveat - *Approx. 4mins per song at 64kbps WMA. "Ah no wonder", I thought. And here the shopkeeper was trying to give me a load of hogwash. The 2GB version was available for Rs. 2,400. I wasn't too impressed with this player though.

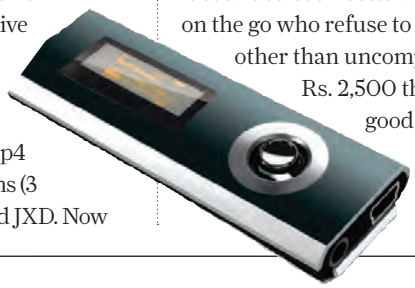
The next shop I went to showed me an interesting player. It was an almost exact replica of the Apple Nano, but with a price tag of Rs. 3,600 for 8 GB. The player was from a company called Gemini. I looked at it with a fair amount of disdain and struck up a conversation with the shop owner about cheap ass Chinese rip offs and how they stop functioning the moment you walk out of the store. Much to my surprise he said "The player comes with a one year warranty, so it's not strictly a nameless Chinese product. There's nothing technically wrong with the device, just don't drop it and it'll last you well". Hmm easier said than done. But apart from that it was commendable how perfectly it nailed the Apple design, right from the interface to the touch sensitive scroll wheel.

While browsing though some shops I also got a chance to operate a couple of mp4 players with rather large screens (3 inches +) from a company called JXD. Now these things also had a 2.0 MP Camera. The interface was rather crappy with both Chinese (or Japanese I couldn't tell) and English menus. The build quality of these devices – all in the range of Rs. 2,600 to Rs. 2,900 - was abysmal. It felt like you could literally crush the device by accident if you held it too tight.

This was a problem I faced with most players. But as buyers what you can do is look at a couple of aspects. Bass level - is it too boomy? Check the output level - is it loud enough? And lastly check whether it distorts.

In the course of the shopping session I saw several players. There was a Sansa 8 GB for Rs. 5,500. A Sony Walkwan Eseries (NWZ-E443) for Rs. 4,500 which had FM, a 2 inch display and a capacity of 4GB – not a bad price point considering it's a player from Sony. A Samsung 8 GB player that caught my eye was the YP-Q1. It had touch sensitive keys, 2.4 inch screen and a very lively interface for Rs. 5200. In this range the Philips Aria 4GB was good too with a 2 inch screen and video capability. Note however that most of these players require you to transcode video using the bundled software. Speaking of Philips, I found the whole Vibe series to be pretty useless with a 1.5 inch screen and with buttons that feel really cheap. What's the point of such a small screen? You can't really enjoy video on it.

So now it's decision time. For my friend with a budget of Rs.6000 I'd recommend the easy to use Philips Aria which is available for Rs. 5000 and comes with noise cancellation earbuds. For those of you who want to take a chance with the Nano replica, the Gemini one is not a bad option for Rs. 3,600 considering there's a warranty on it. For a basic MP3 player with an LCD screen I think the Moserbear MP565 2GB for Rs. 1,500 is a good value option. It's got FM and a decent interface. In terms of sound it was loud enough and when better earphones were plugged in, it sounded even better. For audiophiles on the go who refuse to listen to anything other than uncompressed audio, for Rs. 2,500 the iAudio E2 is a good option as it plays a wide variety of file formats including FLAC.



Portable video

Most PMPs play video in a format called Streaming Mobile Video with the file extension .smv

AVCHD camcoder by Sony

Sony announces an AVCHD camcoder to be launched in 3rd quater of 2010. Built around the new E-mount system, it will be compatible with existing alpha lenses

Q I am looking for a graphics card for my desktop. I play high end games but I don't need eye-candy features turned on. My desktop configuration is Pentium dual core 2.8 GHz, 1 GB Ram, 256 MB onboard ATi video solution, 500 GB HDD. My budget is Rs. 5,000.

Anand

A You haven't mentioned which motherboard you are on, but I assume you have a PCI Express slot. In case you don't, I recommend upgrading your PC itself, because an older AGP card will cost you a bomb without giving any performance benefits. But for the most suitable graphic card for Rs. 5,000, I recommend looking at AMDs ATi Radeon HD 5670 GPU. Cards based on this GPU should be priced around the 5,000-rupee mark, though prices may be on the higher side of 5K. If you want something a little cheaper, look at the NVIDIA GeForce 9600GT. Cards based on this GPU should cost you no more than Rs. 5,000.

Q I have been using Creative EP 630 for two years now and was satisfied by their quality. Now I am looking for an upgrade and change of earphones. My budget is preferably under 1,000 Rs. My requirements are in-ear earplug, 1.2 m cord (shorter cords are irritating), normal Y cord and no punchy bass. I have short-listed two earphones namely Creative EP 830 and Sony MDR EX33LP. Are either of them any better than EP630? Please recommend any other brands that you find suited to my needs.

Mihir Pendse

A The Creative EP630 is actually the best value that can be had for Rs. 1,000. The EP830 is slightly costlier, depending on where you shop for it, as online stores will offer it for Rs. 1,000, but local shops will charge as much as Rs. 1,600. At some places, the EP630 sells for more than Rs. 1,000. If you want something dramatically better, you need to up your budget to at least Rs. 3,000. Else, any difference will not be noticeable. The EP830 is better built than the EP630, but there is hardly any difference in performance.

Q I am thinking of buying a PC for multimedia purposes only here is the configuration and the prices from http://www.lynx-india.com and its not meant for gaming.

- Gigabyte GA-EG41MF-US2H Rs. 3,885
- Intel Core 2 Duo E7500 Rs. 5,408
- Thermaltake Strike MX Rs. 3,675
- WDC 640 GB SATA 3.5" Rs. 2,657
- Sapphire Radeon HD 4550
- Coolermaster eXtreme Power Plus 500W Rs. 2,893
- Coolermaster Hyper TX3 Rs. 1,173
- RAM 4GB Corsair Rs. 4,000
- Sennheiser HD201 Rs. 1,335
- BenQ G2220HD Rs. 9,200
- Logitech Classik Keyboard K100 Rs. 350

Abhishek Joshi

A The configuration is good for multimedia, but the price of the CPU seems to be a little high. Since you are not gaming, the graphics card is a good choice. I do not think there is a need to purchase a CPU cooler, unless you are planning to overclock, because the E7500 is a very cool CPU. Make sure to double-check the terms of delivery, because you are getting a rather big package shipped and preferably it should be insured.

Q Please suggest me a good CPU + motherboard + RAM combo. My preferred configuration is:

Intel Core 2 Duo E7500 / E8400 / Q8400 (Rs. 8,000/-). Motherboard preferred brands - Gigabyte, ASUS (Rs. 8,000/-) with a good onboard graphic and sound card. I also need a cabinet with 450W good SMPS.

Vinod Agarwal

A I would go with a Core 2 Quad Q8400 along with a Gigabyte G41 motherboard. 2 GB DDR2 800 MHz RAM would cost you Rs. 2,500, I would recommend going for 4 GB. Look at Kingston. Go with a CM Elite 330 chassis and a VIP 450 watt power supply.

Q My 5-year old PC with following configuration:

- Processor: Intel P4 CPU 2.4GHz
- motherboard: ASUS P4GE-MX
- RAM: 768 MB DDR
- SMPS: 250W
- HDD: 80GB IDE HDDs
- Graphics card: NVIDIA FX5500 256MB AGP
- Samsung DVD writer

I need such PC that will be used in software development. Dot net latest (3.5), Database server like MSSQL 2005, Oracle.

Amit Naik

A I would recommend an AMD Athlon II X2 240 (Rs. 2,900) and a Gigabyte MA78GM-US2H (Rs. 4,200). Buy 4 GB of DDR2 800 Kingston RAM, this will cost you around Rs. 5,100. Make sure you get two sticks of 2 GB each. The motherboard I have suggested has a 780G Northbridge, that features a Radeon HD 3200 integrated graphics solution – much better than the GeForce FX5500. I recommend a 400-watt power supply from VIP for the same.

Q Please help me to choose between budget touch phones like LG Cookie Pep, Samsung Corby & Nokia 5233.

Arindam Bagchi

A I have assumed you are talking about the Samsung Corby Pro (B5310). I recommend the Corby Pro, simply because it also has a decent hardware QWERTY keypad, whereas the other phones mentioned here do not. We tested this phone and found it to be a decent buy, if you must have a budget touchscreen phone.

Q I am planning to buy a new digital camera for shooting documentaries for my school day. Can you recommend me a digital camera with high picture and video clarity within the range of Rs. 15,000 to Rs. 25,000.

P. Sai Sandeep

A That is a good budget range and there are many options available. You haven't mentioned if you want a compact point-n-shoot, or a pseudo dSLR. I am going to give you both options. For a point-n-shoot, look at Panasonic's Lumix DMC TZ7 – this is a really compact, yet powerful option with a 12x optical zoom and a 12.7-megapixel sensor. Expect to pay around Rs. 18,000 for this camera, and Panasonic also provides a nice three year warranty. If you want a pseudo-dSLR look at Panasonic's FZ35 – priced at Rs. 21,000.

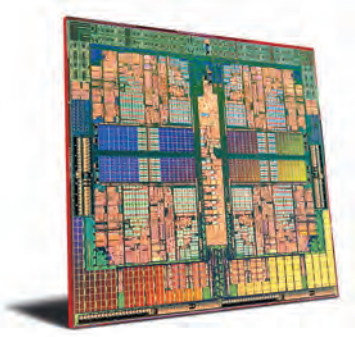
digit

- Basic rig = Rs. 21,500
- Multimedia cum gaming rig = Rs. 30,850
- High-end Multimedia / Gaming rig = Rs. 48,900
- High-end gaming PC = Rs. 65,650
- Ultra high-end PC / Gaming rig = Rs. 1,73,700

KILLER RIGS

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PRIMARY COMPONENTS



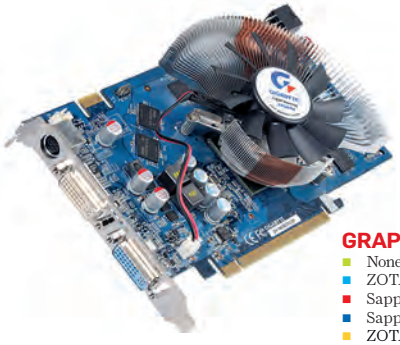
PROCESSOR

- AMD Athlon II X2 240 / Rs. 2,900
- AMD Athlon II X4 630 / Rs. 5,050
- Phenom X4 945 / Rs. 7,600
- Intel Core i5 750 / Rs. 10,000
- Intel Core i7 960 / Rs. 31,100



HARD DRIVE

- Seagate 500 GB 7200.11 / Rs. 2800
- Seagate 500 GB 7200.11 / Rs. 2,800
- Seagate 1 TB 7200.12 / Rs. 3,950
- Seagate 1 TB 7200.12 / Rs. 3,950
- WD Black Edition 1 TB x2 / Rs. 11,500



GRAPHICS CARD

- None
- ZOTAC GeForce 9600GT / Rs. 4,750
- Sapphire Radeon HD 4850 / Rs. 6,900
- Sapphire Radeon HD 5850 / Rs. 17,500
- ZOTAC GeForce GTX 470 x 2 (SLI) / Rs. 46,000



MOTHERBOARD

- ASUS NVIDIA 7025 M2N68-AM / Rs. 2,250
- Gigabyte MA78GM-US2H / Rs. 4,200
- ASUS M4A78-PRO / Rs. 5,850
- Biostar Tpower P55 / Rs. 8,500
- ASUS P6T Deluxe V2 / Rs. 20,100



RAM

- 2 x 1 GB DDR2 800 MHz (Kingston) / Rs. 2,000
- 2 x 1 GB DDR2 800 MHz (Kingston) / Rs. 2,000
- 2 x 2 GB DDR2 800 MHz (Corsair) / Rs. 4,000
- 2 x 2 GB DDR3 1333 MHz (Kingston) / Rs. 5,100
- 3 x 2 GB Kingston HyperX T1 2,000 MHz / Rs. 17,500



CABINET

- Zebronics Antibiotic / Rs. 2,100
- Zebronics Antibiotic / Rs. 2,100
- CoolerMaster 690 / Rs. 4,400
- CoolerMaster 690 / Rs. 4,400
- Antec 900 / Rs. 6,500

SOUND CARD

- None
- None
- None
- None
- ASUS Xonar DX / Rs. 3,700



MONITOR

- ViewSonic VA1928wm / Rs. 7,900
- AOC 2236Vw / Rs. 8,400
- AOC 2236Vw / Rs. 8,400
- AOC 2236Vw / Rs. 8,400
- BenQ G2420HD / Rs. 12,500

SECONDARY COMPONENTS



POWER SUPPLY
- VIP 350 Watts / Rs. 850
- VIP 400W Gold / Rs. 850
- Corsair VX450 / Rs. 3,800
- Corsair VX450 / Rs. 3,800
- Corsair HX850W / Rs. 10,100



MOUSE
- Logitech 3 button scroll / Rs. 300
- Logitech 3 button scroll / Rs. 300
- Logitech MX518 / Rs. 1,300
- Logitech MX518 / Rs. 1,300
- Logitech G500 / Rs. 3,700



SPEAKER
- None
- None
- Altec Lansing VS2421 / Rs. 2,200
- Altec Lansing VS2421 / Rs. 2,200
- Altec Lansing MX 5021 / Rs. 6,500



OPTICAL DRIVE
- LG H55N / Rs. 1,100
- LG H55N / Rs. 1,100
- LG H55N / Rs. 1,100
- LG H55N / Rs. 1,100
- ASUS BC-1205PT / Rs. 11,010



KEYBOARD
- Logitech Multimedia / Rs. 400
- Logitech Multimedia / Rs. 400
- Logitech Multimedia / Rs. 500
- Logitech G15 / Rs. 4,400

MISCELLANEOUS



TABLET
- None
- iBall Design Tablet PF1209 / Rs. 8,900
- Wacom Intuos4 Medium (PTK-640) Rs. 21,280



PRINTING SOLUTIONS
- Canon PIXMA iP1980 / Rs. 2,695
- Canon iP3680 / Rs. 5,595
- Epson B-500DN / Rs. 22,999



MOUSEPAD
- None
- Razer Goliathus Speed (Oversized) / Rs. 1,400
- Everglide Titan / Rs. 1,650
- Steel Series QCK Heavy / Rs. 2,000
- Razer Destructor / Rs. 2,050



POWER PROTECTION
- None
- APC 550W / Rs. 2,400
- Numeric 1 KVA / Rs. 4,200
- APC 1500VA / Rs. 7,500



GAMING CONTROLLERS
- MS Xbox 360 Controller / Rs. 1,450
- Logitech Momo / Rs. 5,500
- Logitech G25 / Rs. 17,500



HEADPHONES
- None
- Sennheiser HD 201 / Rs. 1,500
- Sennheiser HD 280 Pro / Rs. 5,500

3D Technology Awards
With a slew of 3D movies hitting theatres, the International 3D Society has come up with an award ceremony for the same

SPEND SMART

The latest peripheral prices updated every month. Go ahead, plan your configuration today



Processors

Model	Brand	Market Price	Socket/Interface	Brief Specs	Tested in
Sempron 140	AMD	Rs. 1,810	AM3	2.7 GHz / single core	September 2009
Athlon II X2 240	AMD	Rs. 3,000	AM3	2.8 GHz / dual core	September 2009
Athlon II X2 245	AMD	Rs. 3,175	AM3	2.9 GHz/ dual core	-
Phenom II 550	AMD	Rs. 4,830	AM3	3.1 GHz/ dual core	September 2009
Phenom II 555 BE	AMD	Rs. 5,250	AM3	3.2 GHz/ dual core	-
Athlon II X3 425	AMD	Rs. 3,700	AM3	2.7 GHz / 3 cores	-
Athlon II X3 440	AMD	Rs. 4,600	AM3	3 GHz / 3 cores	-
Athlon II X4 630	AMD	Rs. 5,250	AM3	2.8 GHz / 4 cores	-
Phenom II X3 720 BE	AMD	Rs. 6,450	AM3	2.8 GHz / 3 cores	September 2009
Phenom II X4 945	AMD	Rs. 7,750	AM3	3 GHz / 4 cores	September 2009
Phenom II X4 955 BE	AMD	Rs. 8,400	AM3	3.2 GHz / 4 cores	September 2009
Phenom II X4 965 BE	AMD	Rs. 9,430	AM3	3.4 GHz / 4 cores	September 2009
Phenom II X6 1090T	AMD	Rs. 15,999	AMD	3.2 GHz / 6 cores	June 2010
Celeron 430	Intel	Rs. 1,890	LGA 775	1.8 GHz / single core	-
Pentium Dual Core E5400	Intel	Rs. 2,900	LGA 775	2.6 GHz / dual core	September 2009
Core 2 Duo E7500	Intel	Rs. 5,150	LGA 775	2.93 GHz / dual core	-
Core 2 Quad Q8400	Intel	Rs. 8,100	LGA 775	2.66 GHz / 4 cores	September 2009
Core i7 920	Intel	Rs. 14,100	LGA 1366	2.66 GHz / 4 cores	September 2009
Core i7 930	Intel	Rs. 14,800	LGA 1366	2.8 GHz / 4 cores	-
Core i7 980 Extreme	Intel	Rs. 58,000	LGA 1366	3.33 GHz / 6 cores	April 2010
Core i3 530	Intel	Rs. 5,850	LGA 1156	2.93 GHz / dual core	-
Core i5 661	Intel	Rs. 13,500	LGA 1156	3.33 GHz / dual core	May 2010
Core i5 750	Intel	Rs. 10,400	LGA 1156	2.66 GHz / 4 cores	-
Core i7 860	Intel	Rs. 14,500	LGA 1156	2.8 GHz / 4 cores	-
Core i7 870	Intel	Rs. 27,400	LGA 1156	2.93 GHz / 4 cores	-



Motherboards

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Model	Market Price	Socket/Interface	Brief Specs	Tested in
ASUS P6T Deluxe	Rs. 20,450	LGA 1366	2x PCIe x16, 8-channel audio, 8 x SATA ports	September 2009
ASUS Rampage 2 Extreme	Rs. 24,500	LGA 1366	2x PCIe x16, 8-channel audio, 8 x SATA ports	September 2009
ASUS Rampage 2 Gene	Rs. 16,400	LGA 1366	2 x PCIe x8, 8 channel audio, 6x SATA ports	-
Gigabyte X58 Extreme	Rs. 21,200	LGA 1366	2 x PCIe x16, 8 channel audio, 6x SATA ports	September 2009
Gigabyte X58 UD5	Rs. 17,100	LGA 1366	2 x PCIe x16, 8 channel audio, 6x SATA ports	September 2009
MSI X58 Pro-E	Rs. 11,300	LGA 1366	2 x PCIe x8, 8 channel audio, 6x SATA ports	September 2009
Gigabyte P55 UD6	Rs. 17,100	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 8x SATA ports	October 2009
ASUS P5P55-D	Rs. 9,750	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	October 2009
Gigabyte P55 UD7	Rs. 19,400	LGA 1156	1x PCIe x16, 3x PCIe x8, 8 channel audio, 8x SATA ports	June 2010
MSI P55 GD65	Rs. 9,100	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	October 2009
ECS P55-HA Black	Rs. 8,900	LGA 1156	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	April 2010
MSI P45 Platinum	Rs. 9,100	LGA 775	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	September 2009
ASUS P5Q	Rs. 8,500	LGA 775	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	
ASUS P5Q3 Deluxe	Rs. 13,500	LGA 775	1x PCIe x16, 1 x PCIe x8, 8 channel audio, 6x SATA ports	September 2009
ECS AB 890GXM-A	Rs. 7,100	AM3	2 x PCIe x16, 8-channel audio, 6x SATA ports	April 2010
Gigabyte 890GPA-UD3H	Rs. 7,900	AM3	2 x PCIe x16, 8-channel audio, 8x SATA ports	April 2010
ASUS M4A78STD-V-EVO	Rs. 6,500	AM3	1 x PCIe x16, 8-channel audio, 6x SATA ports	-
ASUS M4A78T-E	Rs. 8,800	AM3	2 x PCIe x16, 8-channel audio, 6x SATA ports	-
ASUS M4A79T-DELUX	Rs. 13,100	AM3	2 x PCIe x16, 8-channel audio, 8x SATA ports	September 2009
Gigabyte MA78GMT-USB3	Rs. 5,950	AM3	1 x PCIe x16, 8-channel audio, 6x SATA ports	-

High Gains

The markets have opened up, and tech companies including Yahoo!, Apple and HCL are posting promising first quarter earnings, IBM is an exception with a drop in profits

Bionic Man is here

Russians doctors have successfully managed to implant a completely artificial heart into an old woman



Power supplies

Model	Price	Tested in	Capacity	Modular
Cooler Master Real Power Pro 460W	Rs. 3,705	-	460W	N
Cooler Master eXtreme Power 650W	Rs. 4,200	-	650W	N
Cooler Master GX 550W	Rs. 4,500	March 2010	550W	N
Cooler Master GX 650W	Rs. 5,500	-	650W	N
Cooler Master GX 750W	Rs. 6,500	-	750W	N
Corsair HX 750	Rs. 8,800	-	750W	Y
Corsair HX 850	Rs. 10,100	January 2010	850W	Y
Corsair HX 1000	Rs. 13,500	-	1000W	Y
Corsair CX400W	Rs. 3,200	September 2009	400W	N
Cooler Master UCP 1100W	Rs. 15,650	-	1100W	N
Corsair HX620W	Rs. 7,650	-	620W	Y
Corsair TX650W	Rs. 6,700	-	650W	N
Corsair VX450W	Rs. 3,950	-	450W	N
Corsair VX550W	Rs. 5,700	-	550W	N
FSP Blue Storm Pro 500	Rs. 3,650	-	500W	N
Seasonic PS S12II-430	Rs. 3,850	-	430W	N
Silverstone 400W	Rs. 3,100	-	400W	N
VIP 600W	Rs. 2,900	-	600W	N
Zebronics Pro 600W	Rs. 4,000	-	600W	N



Cabinets

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Model	Price	Tested in	5.25-inch bays	3.5-inch bays	Bundled fans	Expansion slots
Antec Nine Hundred	Rs. 7,100		6	3	4	7
Antec NSK4400	Rs. 1,700	May 2008	3	5	1	7
Antec Three Hundred	Rs. 3,900	October 2008	3	6	2	7
Cooler Master 690 (with sidepanel)	Rs. 5,000	-	5	5	3	7
Cooler Master ATCS 840	Rs. 16,100	November 2009	6	7	4	7
Cooler Master Cosmos	Rs. 15,000	-	5	6	1	7
Cooler Master Elite 100	Rs. 3,100	-	1	1	0	0
Cooler Master Elite 310	Rs. 1,600	-	4	7	1	7
Cooler Master HAF 932	Rs. 10,000		6	6	4	7
iBall Baby 306	Rs. 2,000	-	1	3	2	0
Thermaltake Armor+	Rs. 13,700	-	7	7	3	10
Thermaltake Armor+MX	Rs. 7,800	-	5	5	3	7
Thermaltake M9	Rs. 4,800	-	6	3	2	7



Cell Phones

Model	Price	Tested in	Screen size	Camera resolution	Platform
HTC Hero	Rs. 26,500	February 2010	3.2-inch	5 MP	Android 1.5
HTC Touch HD 2	Rs. 35,000	-	4.3-inch	5 MP	Windows Mobile 6.5
LG KP500	Rs. 7,300	June 2009	3.0-inch	3.15 MP	-
Nokia E55	Rs. 17,000	-	2.4-inch	3.2 MP	Symbian S60
Nokia E63	Rs. 9,700	November 2009	2.36-inch	2 MP	Symbian S60
Apple iPhone 3G 16 GB	Rs. 35,500	June 2009	3.5-inch	2.0 MP	iPhone OS
Nokia E72	Rs. 19,500	-	2.36-inch	5 MP	Symbian S60
Nokia N97	Rs. 31,000	August 2009	3.5-inch	5 MP	Symbian S60
Nokia XpressMusic 5330	Rs. 9,000	-	2.4-inch	3.15 MP	-
Nokia XpressMusic 5800	Rs. 13,500		3.2-inch	3.15 MP	-
Samsung Omnia HD i8910	Rs. 29,500	December 2009	3.7-inch	8 MP	Symbian S60
Sony Ericsson Satio	Rs. 30,000	March 2010	3.5-inch	12 MP	Symbian S60
Sony Ericsson Yari	Rs. 12,800	February 2010	2.4-inch	5 MP	-
Blackberry Bold 9000	Rs. 26,500	June 2009	2.4-inch	2 MP	Blackberry OS

LCD Writing tablet
Boogie Board LCD writing tablet is a tree-friendly alternative to paper notepads. A push of a button erases the written stuff

Wii2HDMI
Wii2HDMI claims to convert the Nintendo Wii's output to an HDMI connection in a compact adapter

An alert consumer is a 'king' consumer

Shauvik Kumar
readersletters@thinkdigit.com

Kautilya was one of the earliest to discuss in his famous book "Arthashastra" about the call for consumer consciousness and safeguards. Although in Kautilya's Arthashastra, stringent rules were placed for the trade and industry and punishments for exploitation were set out. But, there was no organized and systematic mechanism safeguarding the interests of the consumers in India until the Consumer Act was enacted to ease out the tensions of the consumer. Consumer is said to be the king but really speaking it's only the smart and informed consumer who is king". With the growth of private sector, changing business ethics and marketing strategies there is a greater need for a consumer to be informed to invoke his rights.

It's been more that two decade since the Consumer Act has been enacted but still it has not been able to make the desired impact. The big companies make mockery of it time and again taking advantage of ill informed consumer and ill equipped legal system. Not only the sound functioning of product but consumer must be aware of the price, sale and purchase conditions of goods and the health and security aspects also. There are many goods which are sold in the market without much information about their quality, quantity, storage conditions and safety features. Manufacturers or producers and retailers seldom follow the safety regulations in the products like, lamps, batteries, footwear, electrical equipments, wires, cement, LPG cylinders, stoves, switches, plugs, sockets etc. leading to many fatal accidents or health implications.

The Consumer Protection Act, which has been defined as "the Magna Carta of Consumers", spells out six consumer rights: Right to Safety, Right to Information, Right to Choice, Right to Representation, Right to Redress, and Right to Consumer Education. India has the biggest consumer movement today due to the efforts of consumer organizations and the establishment of consumer courts. In the age of internet it's not very difficult to be informed. And yes, to be informed means not only when duped but before purchasing the product for which you are spending your hard earned money.

Consumers have the societal accountability of exposing the manufacture, supplier or the service provider for resorting to illegal trade malpractices. Unethical notings like "Goods once sold will never be taken back" are in sharp contrast to the practice in some of the developed countries, where the sellers declare, "In case you are not fully satisfied with our product, you can bring the same to us within a month for either replacement or return of your money." Why the buyer be beware and why not the seller? This is the result of consumer consciousness. Consumers have to appreciate their role and significance. The consumer movements can be winner movements only with our active participation by knowing our rights and enforcing them. It requires a voluntary effort involving the participation of one and all. If consumers remain passive, they will keep on to be exploited. It is necessary that consumers take action with unity to get a fair deal and timely redressal. An alert consumer is a 'king' consumer.

Expert buying advice

Visit Consumermate.com for expert buying advice and comprehensive information on Laptops, Mobiles, TVs, Cameras and Camcorders

COMPLAINTS RECEIVED

Case File #67

Acer Aspire 4736Z Touch Pad not working

I have purchased an Acer Aspire 4736Z computer in Januray 2010. Once earlier the laptop was sent to them with subject complaint in February 2010. The laptop is again giving same problem. Can I ask for the replacement of the laptop. Is it legally covered that product giving such recurrent problem may get replacement. Please guide me. Thanks.Pijush Kanti

Answer by Consumermate:

Dear Piyush,

In the first instance, you cannot insist for the replacement of your laptop itself, but definitely for the specific part causing the problem. However, if the problem persists, you can ask for a replacement. We would suggest you to keep a written track record of all your complaints, services done and parts replaced.

Case File #74

Acer laptops-Poor Service

Question:

I had purchased an Acer laptop 3 years back. After 6 months, I was unable to see the screen properly. The screen used to be white and I had to restart the PC. Recently, I had given it to Reliable Computers in Vile Parle, Mumbai. They said there was a problem with the IC, and charged me Rs. 5,500 for replacing the IC with a new one. It was fine for about three days, after which the problem resumed. I spoke to them over the phone. They wanted to take my laptop again, but I refused as I don't trust them anymore. I wanted them to repair in front of me which they refused. I need a resolution for this as I feel they have cheated me. I want strict action to be taken against them. Please help.

Nancy Samuel

Free WiFi in NYC

AT&T has announced the launch of its outdoor WiFi for subscribers in New York City

This content is brought to you by consumer mate Expert Buying Advice

If you're facing a problem with your purchase, write to us at help@consumermate.com

Answer by Consumermate:

Dear Nancy,

You have not made clear whether you have a bill for their services. If yes, you can take them to the Consumer Forum. If not, get it repaired at the authorised company service centre, get a service report and procure parts replaced if any, thereafter if the service report reiterates the problem due to same component you got changed from the earlier center, then you can go ahead with your complaint in the Consumer Forum with a strong stand.

Case File #103

Faulty Charger Mobile Micromax model X114

Question:

Mobile Micromax model X114, i purchsed it when i was travelling to bangalore. after reaching chennai I found battery is not charging as the connector is loose. i could not find the service network in Chennai / Tamilnadu, all the tel nos and address given are not traceable. kindly help me.
S. Periyandavar

Answer by Consumermate:

You can try contacting RT Outsourcing Services Limited, 403, B– Block, Shivalaya Building, Commander-in-chief Road, Chennai, Tel. +91-44-4558 2582 / 83. Alternatively, if you still can't access the concerned people, please drop an email using their contact us form at http://www.micromaxinfo.com/contact_us.html. Please approach the manufacturer for the rectification of the defect as per warranty terms of the handset. Any failure of the manufacturer to provide you warranty support as per the warranty terms may be challenged by approaching the appropriate district consumer forum. If it still doesnt work, mail back, and we will help you.

Case File #117

GSM SIM not working in Spice D 6666

I purchased a Spice D 6666 dual SIM moble on 22/11/2009. On 09/04/2010, I found it doesn't detect one GSM SIM. I approached service centre for this. However, the fault has not been rectified.Now they have given me a replacement which is defective. I want a new replacement.
Tapan Chandra Sahu

Answer by Consumermate:

You need to ensure you have an IMEI no. which is indicated on your bill. You should ask for a certificate from the centre if they are giving you a mobile with different IMEI. Secondly, write a registered letter to the company referring to all your earlier letters and call upon them to rectify all the problems in your handset, failing which you can file a consumer complaint in the district forum.

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90% on Electricity



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Create

Industry representatives speak to us on the future, technology and their concern for the environment



Bruce Klafter, Senior. Director, Environmental, Health and Safety (EHS) for Applied Materials, Inc. in Santa Clara, California

What's your company's stand on going green? How high on your agenda is it?
We're committed to complying with or exceeding all relevant regulatory requirements, to preventing pollution and to continuously improving the environmental, health and safety performance of our operations, processes and products.

Does your company use renewable power?
We use renewable power. In 2008, we completed the installation of a 2 MW SPV tracker and rooftop system at our Maydan Technology Centre in Sunnyvale, California. This was one of the largest operating solar arrays at a corporate campus and the largest in Northern California.

What are the most significant changes your company has made over the past year to go green? What are your future plans in the same direction?
Applied Materials is committed to reduce its carbon footprint by 50,000 tons by 2012. Green IT is embedded in those plans and that led the company's global information services division (GIS) to launch GreenIS or Operation Green. This program is designed to reduce its carbon footprint by 10,000 tons (or 20 per cent of the corporate goal). GIS' team at Applied estimates it has saved 8876 tonnes of CO2 since Q4 '07

Do you comply to green certifications such as ISO14000?
We have well developed environmental and safety management systems that are employed company-wide. We have registered that system at a number of key locations, primarily manufacturing locations where our customers have benefited from the rigour of certification.

What were your 2009-2010 spends towards this, and is the allocated 2010-2011 budget higher or lower?
During the global economic meltdown IT at Applied Materials shifted from a spending mode to a sustenance mode. We are delivering new projects, new capabilities and new processes. As far as 2010-2011 is concerned our investments are likely to grow again.

Do you have any special drives to encourage your customers to go green and recycle your products?
Capital equipment is expensive to begin with, so there is a robust secondary market for used equipment in the markets we serve and there is no waste problem equivalent to the one confronted by consumer product companies. Applied Materials' Global Services group has its own refurbishment business.

What changes have you made in your products as part of your green initiative?
Our eco-efficient products – crystalline silicon, thin film, and flexible photovoltaic (PV) solar solutions – serve to promote energy sustainability and reduce pollution. In India, we donated equipment to the Indian Institute of Technology to promote better understanding of nanofabrication methods.

Innovate

Excerpts of our interaction with Kensaku Konishi, President & CEO Canon India

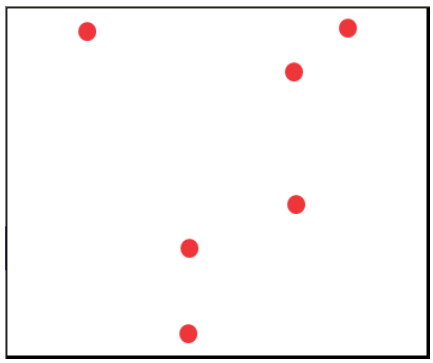
What's your company's stand on going green? How high on your agenda is it?
In order to adopt green printing, companies are designing solutions which

Crack the code

Count the number of Trivia pages in Skoar! Mini. Subtract the page number of the previous clue from this figure to get a number, let's call it x. You will also need to solve the crossword at this point, and find out the answer to 10 across, let's call that y. Then, go to www.thinkdigit.com/ctcII/xy, on June 7th for the next leg of CTC II.

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CRACK THE CODE





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Green AMD
To read more on green initiatives by AMD and other IT companies, read the April 2010 issue of Digit

Thinner Solar Panels
Oregon State University have unveiled nanostructure solar films, that will considerably reduce material waste and cost of solar panels

can identify whether a user needs a color printer. The solution allots printers accordingly. They are also adopting duplex printing in a big way. Duplex printing move has results in savings of tones of paper per year and also in monetary terms per annum.

Does your company use renewable power?
Yes, Canon contributes to minimizing environmental burden through the effective application of environmental technologies. We encourage inverse manufacturing (IM), in which used products collected from customers are disassembled and sorted and their parts reused. The manufacturing process for toner used in copying machines and printers can generate toner with non-standard particle sizes which, depending on the type of toner, does not permit its reuse as toner, resulting in waste toner.

What are the most significant changes your company has made over the past year to go green? What are your future plans in the same direction?
Canon significantly focused on newer technology which was on the lines of green initiatives in 2009. Canon develops environmental-friendly products at all stages in the product lifecycle.

Canon printers come bundled with added features that reduce the OPEX. We have recently launched fresh range of printers that incurs less operational expenses and guarantees quick ROI. Laser printers from Canon in India offer a feature that ensures instant warm up time. This helps the printer to print directly from stand-by mode, thereby saving a good amount of energy every time one prints from stand-by mode.

Do you comply with green certifications such as ISO14000?
Canon takes pride in not only bringing quality products to the market; but also contributes to minimizing environmental burden through effective application of environmental technologies. Canon has ensured compliance with all environmental standards from time to time. Canon is certified with ISO 9001, to ISO 14001 and OHSAS 18001. In 2006, the company was certified for its "Strong commitment to excel" at the CII-EXIM Business Excellence Award. Over the last 12 years of its India growth story, Canon's comprehensive range of the latest digital imaging products supported by a trained sales force across the country has emerged as its key differentiator.

CRACK THE CODE

A	O	G	O	G
J	A	C	L	O
U	Y	W	N	X
N	T	A	V	H
K	X	U	M	D
A	C	Z	S	O
A	V	R	H	Q
E	J	Y	A	L

Is it cheaper or more expensive (in the long run) for a company of your size to go green?
At Canon, our focus is not just to reduce the cost of production, while we support renewable power resources, Canon ensures that we adhere to our principles and practice the purchase of environmentally conscious parts and materials that make Canon's products friendly to the environment. It also means to improve the environmental awareness of all the employees and enlarge the green products market by purchasing office supplies based on the green certification system. The cost of setting up such machines is definitely high, but later it helps in reducing the OPEX

Do you have any special drives to encourage your customers to go green and recycle your products?
At Canon adopting green practices has become a business imperative and is not a passing trend. Green printing offers printing service that does not harm our planet. Green printing in itself is a revolution which has grown with technology and has now become the best solution. The consumers are also getting conscious of the environmental threat which has lead to increasing consumption of green products. However with printers this trend is catching up slowly. Our printers are bundled with the following features which make our printers green and our drives are also designed to generate awareness about these features:

The use of green inks makes an easier and healthier method of disposing the inks without harming the environment.

Since all the printing facilities require power to run, the green printing facilities considers the environment when searching for a power source. This allows others to invest in renewable energy methods reducing impact on the environment.

What changes have you made in your products as part of your green initiative?
Almost all Canon products have Generation Green characteristics like: The four in one, two in one printing technology which allows users to place multiple pages on 1 page, saving up to 75% of your paper supply. Ink Saver Mode - This feature allows you to use less ink when printing in order to make your ink supply last longer and reduce the number of wasted ink cartridges. Then there are Energy Star qualified products that are 25% more efficient than conventional models. These products not only use less energy but also reduce greenhouse gas emissions and saves energy as well as money. Another technology is RoHS Compliance which is a directive from the European Union that restricts the use of hazardous materials found in electronic products. This restricts the use of cadmium, mercury, lead, hexavalent chromium, Polybrominated Biphenyls (PBB) and Polybrominated Diphenyl Ethers (PBDE). And we also use recycled plastics that are used in the power supply casing. Apart from this, many printers come with 'zero warm-up software, which helps in saving the power consumption.

Grow

Rohit Sharma, CEO, Zapak Digital Entertainment on their acquisition of Codemasters

What does this acquisition mean for Zapak and its future?
If you look at the Western markets, by and the large, the console market is the bigger space. So this (acquisition) helps us get a global footprint, in partnership with one of the largest gaming companies, which has development and distribution capabilities all across the world.

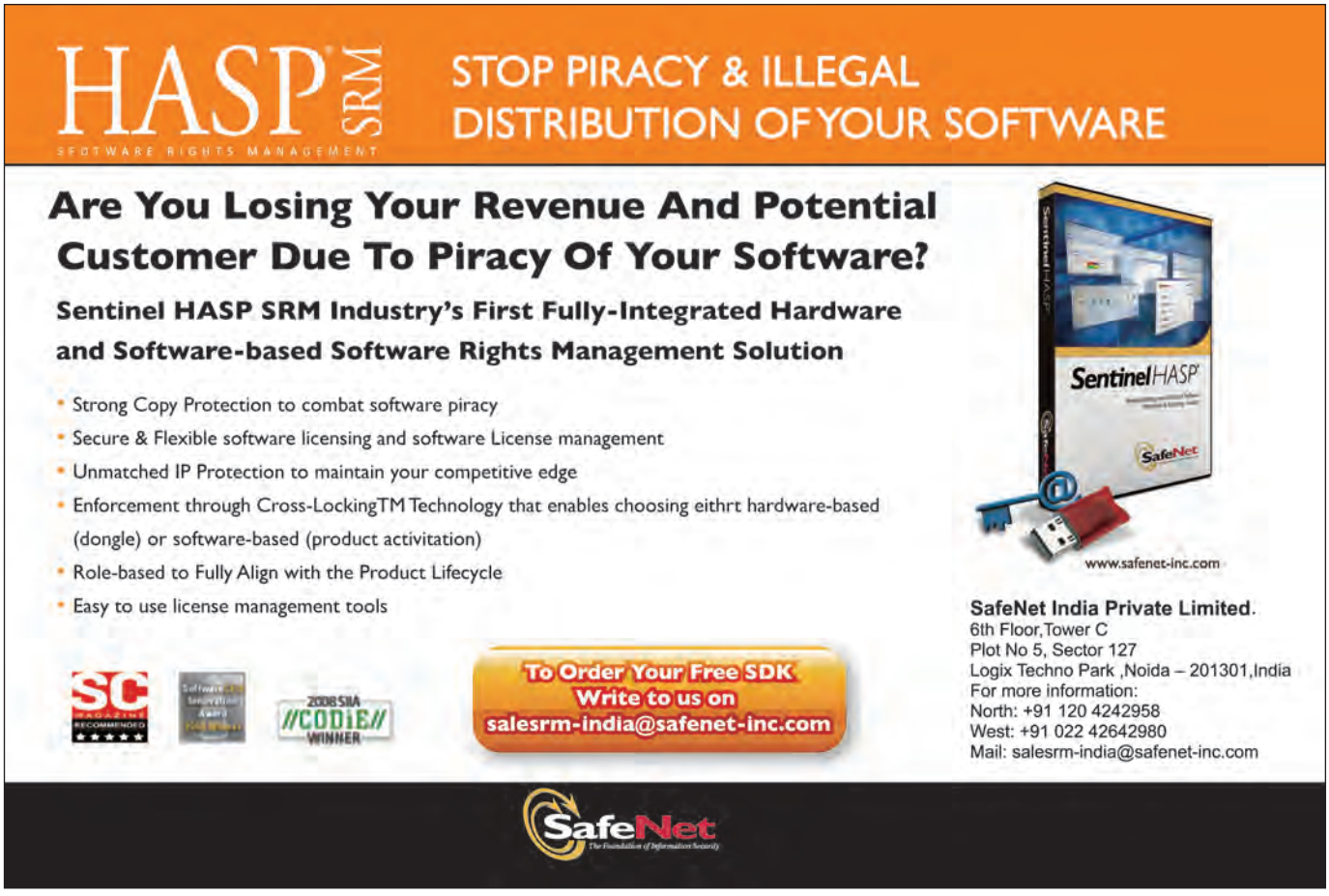
Why Codemasters specifically?
One reason is they have very strong capabilities in cricket games, which is something we can take online and to the mobile space, globally. They also have a very strong IP in racing, as well as the Formula 1 franchise, which is a great franchise to have. They are strong company, with revenues of $150 million, and are growing well. They also have the right DMA [Designated Market Area] and a good development team. All these factors helped us take the call.

So, are there lots of cricket games in the pipeline? Anything IPL related?
As for IPL-related games, I cannot comment, but yes, definitely lots of cricket games.

Does Zapak now have any plans to make console games as well?
Sooner or later, we will use Codemasters' development skills to bring online games to India, creating a lot of browser based games and so on. Codemasters will continue to make console games for the European and American markets, and if we get the right IP and the right idea, we will also make them for the Indian market. Right now we will use their skills and IPs for the Indian market in whatever form they are.

Any plans to create an Indian MMOG?
Yes, why not? They have a very strong online team, and we have been wanting to create intellectual property in the MMOG field, because we think that is where the value will be these days.

Is this acquisition a two-way street in terms of technology? Will Codemasters also benefit from Zapak's expertise?
Yes, it is. Codemasters have a strong IP which they have not leveraged in the mobile space, and with our company called Jump Games, we are very strong in that area. So we can use their IP to develop and distribute mobile games globally. And again with our core understanding of the online business, I think there is tremendous opportunity to work together in creating online games.



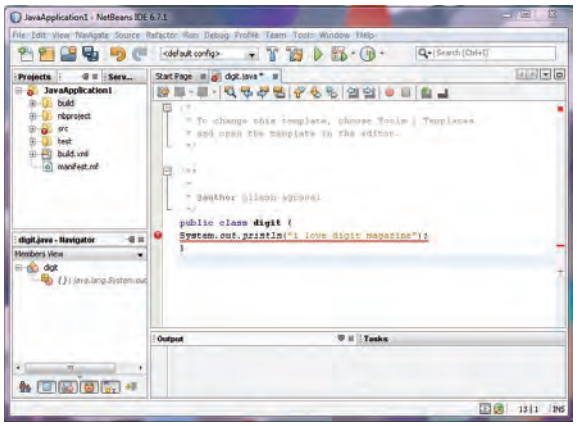
NetBeans IDE
The NetBeans IDE can be found in the May 2010 Playware DVD

Java on phone?
If you want to access Java based content through a mobile browser, user Bolt, which handles Java slightly better than Opera

NETBEANS

You can't ignore NetBeans as a web development platform, especially with the profound rise of Java as the preferred medium

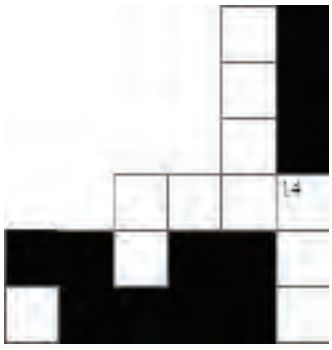
One major characteristic that sets NetBeans apart from other IDEs is its modular structure, each and every of its function has a different module allotted to it, for example CVS versioning system has a module for its own and SVN has a different module for itself. Modularity makes NetBeans extremely scalable, you can add or remove modules for different functionality very easily thereby making the IDE very versatile, like additional modules can be installed for support for languages that are not included in basic installation. You can use pre-existing modules, thereby giving you a head start in your work.



The NetBeans IDE interface

Editor

NetBean's editor is much powerful than the basic text editors. It matches words and brackets, indents lines and highlights code semantically and syntactically. It parses code as you type. This enables it to instantly identify errors and highlight occurrences. Editor glyphs and tooltips unobtrusively display quick fixes, warnings, compiler hints and language documentation. It allows you to restructure code without breaking it. For example, if you move a class to another package or rename a variable, IDE automatically identifies it and updates all occurrences immediately. It also has the smart code completion feature (pretty common in today's editors) which provides automatic code completion for several languages including Java, C/C++, Ruby, PHP, XML, Groovy, HTML, JSP, RHTML, JavaScript and Javadoc. It lists possible completions, on the fly, while you type, with most obvious choices at the top. Typing the first letters of a CamelCase word triggers code completion. You can also navigate to any file, type, or symbol with one quick keyboard shortcut, and jump directly to a declaration with a single click. In the Go To dialogs you can type in file or type names using camel case and wild cards, and do a case sensitive search over all open projects. The editor also generates common code snippets for you in Java or other languages. A dialog is provided to give you complete control over which methods are created and which class attributes they access. The IDE assists you when overriding methods and generating dynamic code blocks

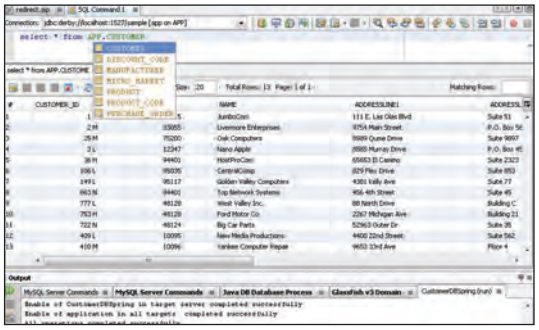


such as loops, try-catch-blocks, Javadoc comments, and accessors. You can even remove trailing whitespace from lines automatically. Editor also has a navigator tool to navigate within files fast. The error stripe gives you an immediate overview of all highlighted lines in a file: With a single click, you jump to errors, hints, annotations, or search results. You can also inspect the members and hierarchy of any Java class in a convenient popup window that displays base classes, derived classes, and interfaces, the information detail for which can be set using filters. The editor's interface is also fully configurable: each window can be individually positioned and slit vertically or horizontally. You can set custom keyboard shortcuts or click configurable toolbar icons for almost all the tools available. Finally editor enables you to view a file's local history: to view recent modifications and revert changes, even if the files is not handles by a version control system.

Database Support

The basic installation of NetBeans includes drivers for the MySQL and PostgreSQL database servers. It can also register with any other JDBC driver, so you can hook up just about any other database that provides JDBC drivers. With MySQL, NetBeans makes it extremely simple. It auto-detects existing MySQL databases. You can register a MySQL Server and start/stop local servers directly from the IDE. You can use the Database Explorer to connect to, browse, create, edit or delete databases. You can also register external administration tools like phpMyAdmin and invoke them directly from the IDE. NetBeans also incorporates a SQL editor whose code completion feature lets you insert schema, table and column names more quickly. It also lets you browse the history of all SQL statements, filter by search terms and/or by connection URLs, and then insert the selected statement. You can sort query results in the SQL Editor and load large returned data sets page by page. You can directly change values of returned results and insert or delete rows. Using the Visual

JSF web framework, you can drag database tables from the Database Explorer directly onto components in the design view of your application, and the component is automatically bound to the table. This significantly improves productivity for building database-oriented web applications. When creating a Java Swing project or JSF-based CRUD (Create-Read-Update-Delete) web applications, you can jump-start your work by using the database application wizard, which lets you select tables from a connection in the Database Explorer and then automatically generate a basic CRUD application for those tables. You can also quickly generate JPA entity classes from existing databases. From these entity classes you can generate JSF pages, RESTful web services, and other useful code artifacts that integrate data into your applications.



Database view

Build Tools

You can take control of code right where it is by the following tools:

Standards-Based Project System

The NetBeans IDE uses industry-standards build technologies, this means you can build and run your projects outside the IDE exactly the same as inside the IDE. You can import Eclipse and JBuilder projects. Imported Eclipse projects stay synchronised with their original when you modify them in Eclipse.

Java projects use the non-proprietary Apache Ant 1.7.1 by default, and can be configured to use Maven. C and C++ projects use make, and Ruby projects use rake.

Hudson Continuous Build Server

The NetBeans IDE supports Hudson continuous build servers for Maven and (Ant-based) Java SE project types; the project files can be versioned using Subversion or Mercurial. You can use the Services window to add a Hudson server; in a Maven project, configure your pom.xml file to point to the Hudson server and NetBeans connects automatically. Right-click a Hudson Builder node in the Services window, or create a new job using the Team menu, to start continuous build jobs.

Hudson Status Reports

You can browse your hosted jobs, builds, workspaces, and artifacts, and inspect the build console in the IDE's output window. You get notificied immediately in the IDE's status bar, every time a build fails. To find out why a job failed, right-click a build node and inspect stack traces for all failed tests. You can also view the changelog and browse file diffs in a user-friendly way, right inside the IDE.

Apache Maven Projects

The NetBeans IDE supports Apache Maven, a software project tool to manage a project's dependencies, build, reporting and documentation. You can open, build, run, profile and deploy existing Maven projects, or create new ones based on Maven Archetypes. You can use the context menu to quickly update the POMs of projects hosted on Kenai.com. Use the Maven integration for Java SE, web applications, Groovy and Scala projects, Java EE 6 and EJB projects, including full support for JAX-WS Web Services. It's now easier to register an application server for Java EE projects, and select web frameworks such as Spring or Struts. You can configure with which JDK the Maven build will be executed. Use the Maven Checkstyle plugin to bootstrap code formatting rules in the Project properties. The editor supports Compile On Save / Deploy on Save and includes a new Quick Fix hint that helps you identify artifacts in repositories that contain unknown classes or interfaces.

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Apache Maven POM Editor:

When running, testing, or debugging, the IDE executes Maven goals from your pom.xml file, or you can remap custom Maven goals to IDE actions. Benefit from code completion, code templates, documentation popups, code generators, and hyperlinking, when modifying your pom.xml, settings.xml, or profiles.xml files in the XML editor.

Apache Maven Library Dependency Management:

View library dependencies, runtime dependencies, and test library dependencies: The listing distinguishes transitive versus direct dependencies, and marks the local availability of javadoc and sources. The Maven Repository Browser displays the contents of the central, the local, and the NetBeans repository. You can add your own repositories, search for artifacts, and add artifacts as dependencies to projects. Use the menu actions to download all library sources; install artifacts, sources or javadocs; remove direct dependencies, and exclude transitive dependencies. If meta-info is available, you can navigate to the library home page.

Apache Maven Library Dependency Graph:

NetBeans IDE contains the Artifact Details Viewer which shows artifact info, artifact project info, a list of direct dependencies, and a graph of transitive dependencies. The Library Dependency Graph is a great tool that identifies and

James Gosling
James Gosling came up with Java, while working for Sun, which was brought over by Oracle. He still develops the NetBeans IDE

jMonkeyEngine
Looking for a Java environment with advanced graphics support? jMoney is your answer

fixes version conflicts. You can add proper dependency exclusions to the project pom.xml using the Exclude context-menu on an artifact.

Swing GUI Builder

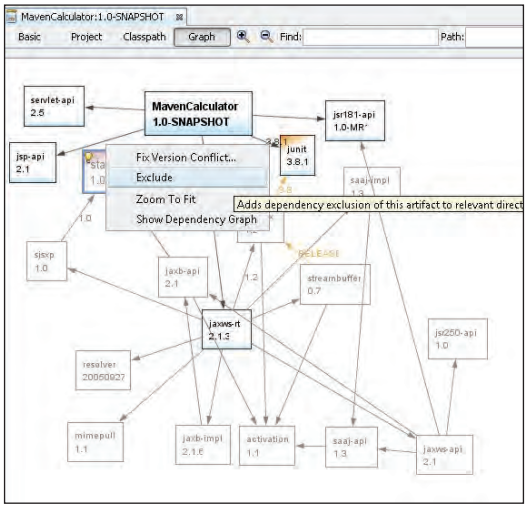
You can create professional looking GUIs by dragging and positioning GUI components from a palate onto a canvas. The builder automatically takes care of the correct spacing and alignment. Click into JLabels, JTrees, JTextFields, JButtons, ComboBoxes, ButtonGroups to edit their properties directly in place. This is much easier than the tedious process of creating your own visual Java editor from scratch.

With NetBeans you can choose whether the GUI code should be generated with fully qualified or simple class names. The helpbar displays context-sensitive hints about what can be done with the selected component and suggests shortcuts that can speeds up your work considerably. The NetBeans IDE also comes with built-in support for GUI localization and accessibility.

Profiler

A profiler's job is to assist in optimization and tweaking of your application for increased efficiency, and NetBean's Profiler does that, and does it right. You can have task based profiling where you can select from several common profiling tasks, such as standard memory or CPU profiling, or simple monitoring. The options have been preset to default values but you can customize settings for a specific application. You precisely control the amount of overhead the profiler imposes, and therefore analyse the application while it runs at almost full speed. You can store analysis data for offline processing: Save and export snapshots of collected results as CSV, HTML, or XML files.

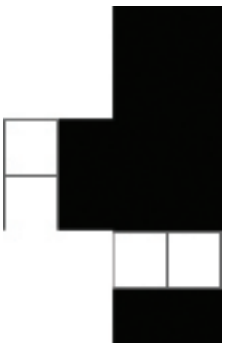
You can use NetBean's Heap Walker to evaluate Java heap contents and to identify unnecessary references that cause memory leaks. You can browse classes and instances of classes on the heap, fields of each instance or class, and references to each instance. You can also use jHat compatible OQL queries to analyse the contents of a heapdump.



Database view

For more precise control of the collection of profiling results, you can place profiling points in your source code (works similar to debugger breakpoints). You can then use these points to automatically trigger actions when certain conditions are met, such as execution of a line of code, time elapsed, or memory used. Profiling points can trigger heap dumps, the resetting of results collected, the running of a load generator script, and the taking of a results snapshot.

The NetBeans profiler can be set up to report only on particular methods or the entire application. A graph categorizes where CPU time has been spent. Clicking on the graph sections drills down from high-level categories to more detailed profiling information. You can profile an entire application, or a subset, under a realistic workload. This way you can identify the CPU bottlenecks in your application.



Profiler's Thread Timeline displays the current and past status of all threads in an application. Thread Details give you detailed information about one or more selected threads, including a list of all state changes in the thread life.

NetBean's Profiler also supports remote profiling, where the profiler can profile an application that is running on a different system than your NetBeans IDE. The profiler's remote pack can be installed on a remote system, allowing you to profile an application that is started on that system.

Debugger

The modular structure of NetBeans enables easy plugin development, and sure enough there are hundreds of plugins available online. I am listing here some of the plugins which increased by work efficiency and general made my life easier.

iReport: is a visual report designer for JasperReports. You can manage charts, images, sub reports and crosstabs. Data can be retrieved using JDBC, Table Models, JavaBeans, XML, Hibernate, CSV...It supports PDF,RTF,XML,XLS,CSV,HTM.

JVi: is a vi/vim editor clone. A must for vim lovers. Increases efficiency considerable if you have used vim before.

Visual Web Page Layouts: It installs sets of predefined Page Layouts based on Project Woodstock Components and their resources. Page authors can create initial pages for their Visual Web JSF Application using these page layouts. Currently NetBeans Visual Web application lack any page layout presets.

OpenSwing: is an open-source suite of advanced graphics components based on Swing toolkit that can be manipulated directly inside the UI designer of NetBeans. It is also a framework that provides data binding mechanism between components and data model, based on the MVC paradigm. Data model is based on Java Beans (POJOs) and it is supported in all OpenSwing components, such as Grid control or components container.

JDateChooser: DateChooser is a JavaBeans library for date selection. It contains 3 datepicker components: the panel, combo editor and a dialog window. You can use then directly in your GUI to select a single or a range of dates.

All of these plugins can be downloaded from http://plugins.netbeans.org. As a thumb rule most of them work with NetBeans V6 or higher and the latest java SDK.

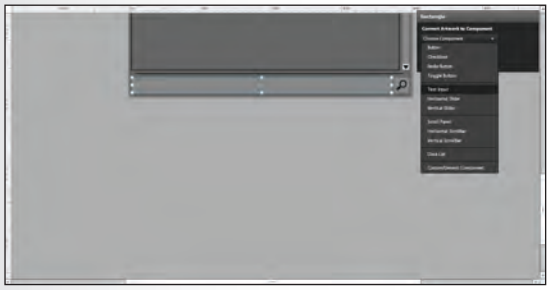
Adobe CORNER

CREATING A TWITTER SEARCH WIDGET WITH CATALYST

WHAT ARE FLEX AND CATALYST?

Most of you will certainly be aware of Flash, and must have certainly viewed a Flash-based website at some point; however you might be less aware of Flex. The Flex SDK allows those familiar with ActionScript – the scripting language used in Flash – to write applications which run on the web or on the desktop using AIR. Flash Catalyst allows you to create interfaces for Adobe Flex applications. In this short tutorial, we look at one of the steps to create a Twitter widget using Flash Catalyst. First, design the interface using Adobe Photoshop or Illustrator.





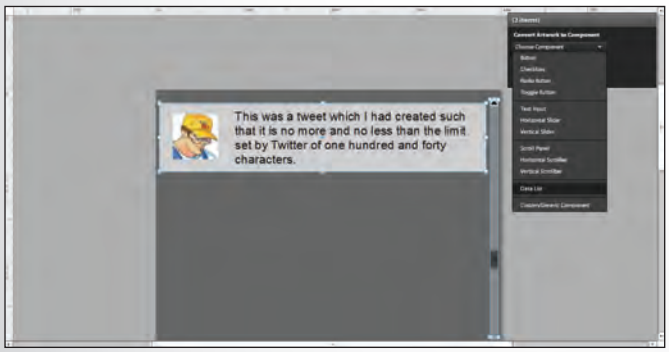


Using Flash Catalyst CS5

Launch Flash Catalyst CS5 and load the design you just created. You will see that Catalyst retains all the details. Now one by one, you will have to tell Catalyst what is the function of each part of your application. In our example, we have a search box at the bottom, and search button next to it. So we select the area we want to designate as a search box and in the floating dialog with "Convert Artwork to Component", we click on "Choose Component" and select "Text Input". What we use this text input for and how we use it is something we will define later in our application in Flash Builder.

Now we select the search button and in dialog with "Convert Artwork to Component" we set this one to "Button". If you want, you can now double click the button to further





define how the button will behave on hover and selection. We went ahead and added a blue glow to the magnifying glass in the hover state.

Now we must do something about our scrollbar. We select all the components of the scrollbar and convert it to a "Vertical Scrollbar" component. Now the vertical scrollbar is a complicated component, with multiple sub-components. So we will need to click on "Edit Parts" and define each element of the scrollbar. The scrollbar needs at least two parts to work: the scroll track, which is the long vertical area along which the scrolling takes place, and the thumb, which is the part of the scrollbar which moves. If you want, you can also specify an up button and a down button, as we have done. You need now worry about the implementation details, all of which will be handled automatically.

Next we come to the list of tweets. Select the vertical scrollbar, the border around the tweets and the single design of the tween and convert them to a "Data List" component. Now, the data list component only needs one part defined in it, which is a sample item that will make up the list. We select our tweet and set it as a "Repeated Item". We again have the opportunity to select what this list item looks like.

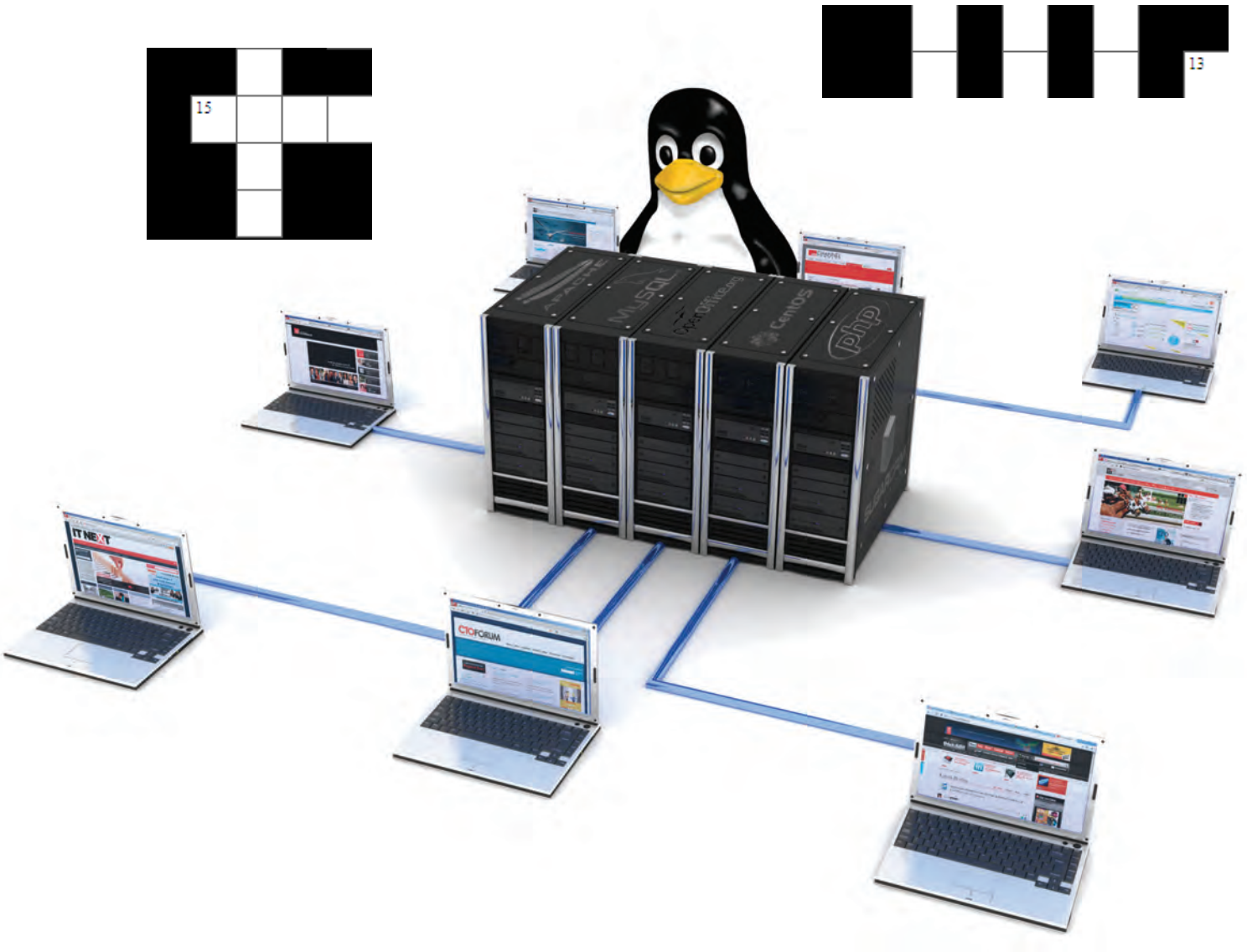
To learn more on coding the interface on Flash Builder 4, visit

www.thinkdigit.com/d/adobefc

Crack the code
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On a roll with openware

A do-it-yourself open source framework from an IT manager who's been there, done that — successfully

Md. Jawed Ahmed
readersletters@thinkdigit.com

One has seen that the use of Open Source applications in large enterprises has been increasing over the years. But there is a marked divide on the kind of organisations that venture into open source area. Mostly, the adopters are the educational institutes and the R&D organisations. Commercial enterprises still give open source a wide berth. And the reasons are clear: enterprises still continue to face challenges in using open source applications.

- **Lack of support:** No commitments are possible since support is usually on a best-effort basis, and that too by a set of invisible virtual people.
- **Lack of a single point of responsibility:** Since it's not purchased, there is no commercial contract or a transfer of risk to the vendor.
- **Lack of continuity:** Open source initiatives are usually driven by innovative individuals in the IT department. When they leave, they take their expertise with them leaving the organisations at a disadvantage.

However, despite these factors, it's still possible to use Open Source applications successfully if enterprises

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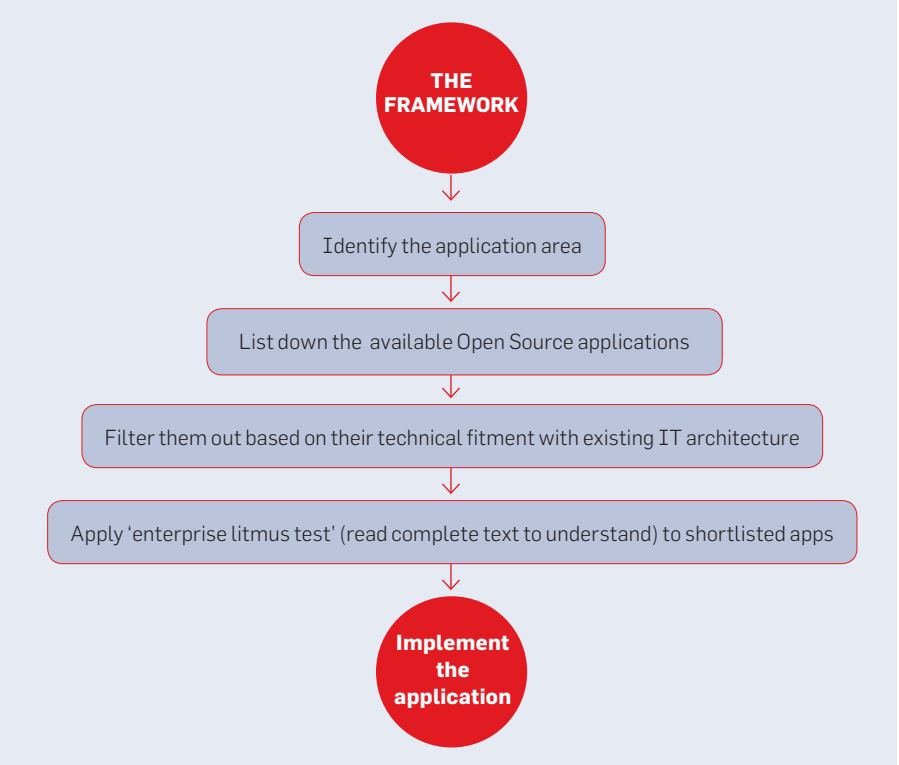
and IT managers use a framework approach to select applications.

We, at Sterlite, have been using Open Source applications quite extensively for the past three years. At present, our file servers, Internet acceleration servers, security firewalls, mail servers, document management systems, project management systems, storage servers, and desktop-level backup applications run on open source. Here, we are not talking of a single location, but multiple, large manufacturing locations on multiple servers.

And, we are not running them because they are free. That's a misconception that many people have. The TCO might be less but it's certainly not free. The kind of uptime and performance that we get is, if not better, definitely as good as provided by the commercial applications.

When you run a search, for any single requirement, one will come up with many applications. Logically, as the next step we test them out in a development environment and check out the different features and their technical fitment with the existing architecture. And then in the end, we subject the application to the 'enterprise litmus test for open source.' This is the clincher that helps us take the final "go" or "no-go" decision, particularly because unlike commercial applications one doesn't have a support agreement to seek help from the vendor. So it makes sense to check that the application ecosystem is sound before you commit your enterprise to it.

- **Development activity:** As part of this criterion, one needs to check how frequently updates have been coming and what the open bugs or feature requests are. Very frequent updates or very few updates are both problematic. Frequent updates point to an unstable system that requires frequent tweaking whereas delayed updates point to a dead or dying development cycle. The sweet spot, from our experience, is around two to three updates every year.
- **Development roadmap:** Try to find out the roadmap as envisaged by the developers. There should be a plan for at least 18 months ahead. Lack of a clearly defined roadmap normally points to an impulsive application lifecycle. For some applications which are not very critical and are small this can do. But generally when you are planning to deploy an application in an enterprise, there has to be a clear enough roadmap.



- **Forum activity:** This is one place where you can get lot of information about the application. First, check the activity on the forum. There has to be a sizable number of members and daily updates with people asking questions and getting answers. Second, check that answers should be provided by more than one person. It should not be that only one person is providing the answers to all the questions raised by members. Third, look at the kind of questions being raised by members. Is there any pattern? Is there any feature that everyone's asking for? Or is there some feature that is not working for lots of people? You can go ahead and ask questions yourself and see what kind of responses you get.
- **Developer background:** You need to check the background under which the application development got started. How many people are involved? Are they from a common place or whether the organisations are spread out? It's better if they are spread out.
- **Availability of commercial support:** First, you have to check if there are organisations which provide paid support. How is it structured? Is it incident-based? Can it be done remotely? It's better if there is a mechanism for commercial support.

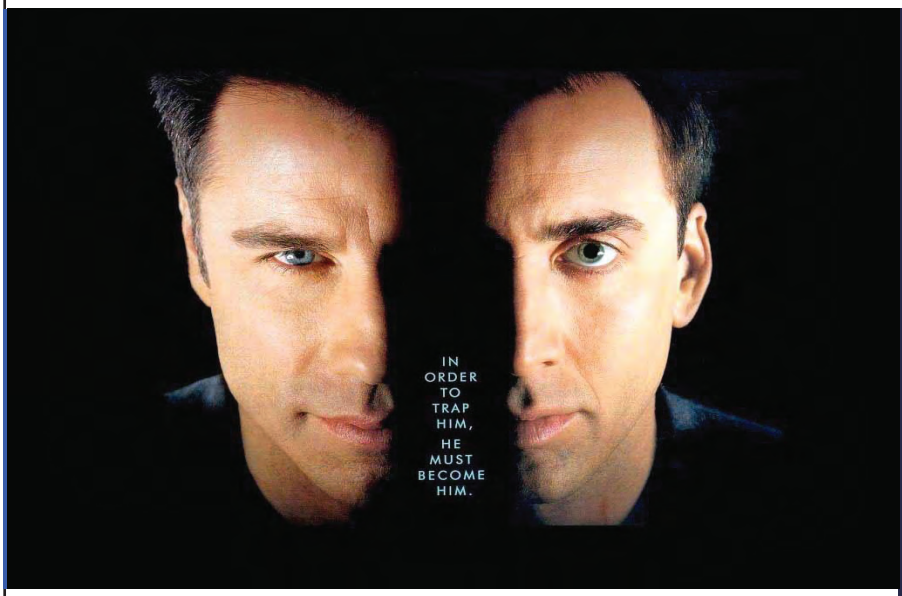
And while all this information can be conveniently sourced from the developers' site, do not forget to share it with the entire eco-system of your organisation. We have developed this framework based on our experience and have shared it with other organisations as well. Empirical evidence from them also supports the framework.

By using the above mentioned criteria, IT personnel can take informed decision regarding the fitment of the particular application to an enterprise's requirements. If it does not have a good fit, one can still use the application, but in that case there will be an impact on TCO. This is because one needs to either take external help or the IT department will have to devote additional time to the issues arising from the use of the application.

Content courtesy: ITNEXT

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Crack the code
10 Solve the two part puzzle in pages 44 and 126 of the magazine

Crack the code
13 In 1972, which spacecraft used the Intel 4004?

Crack the code
15 By what name was Wikipedia started?

Programming Principles

When coding an application, there are a number of approaches that a programmer can take. Some of the more popular guidelines help making simpler, faster, easy to use programs.

POGE: stands for "Principle of Good Enough" - it basically means that if even a basic, bareboned approach get's the job done, it's better than a feature rich application. That is, once the software starts doing what it is supposed to do, stop developing it and adding in more functionality and options.

DRY: stands for "Don't repeat yourself", which is pretty difficult to comprehend for non-programmers. It means that you do not use redundant code and approaches.

KISS: Keep It Simple, Stupid is pretty self explanatory. However, software developers often argue that the principle is erroneously named, and the "stupid" should be kicked to make the principle just "KIS", for the sake of simplicity.

RAD: Rapid Application Development is a philosophy used by coders who just want to start coding, and let the application evolve over time to whatever it turns out to be without planning what it needs to do too much in advance. RAD encourages frenzied coding, which is what many programmers do best.

BDD: Behavior Driven Development is a modern philosophy, emerging to bridge the divide between software creation and it's use. The developers often create applications based on an understanding of how they would like to use the software, instead of the people who actually buy and use the software. BDD seeks extensive feedback from the users during the release cycle.

BDUF: the Big Design Up Front approach goes against many coding philosophies, including POGE and KISS. BDUF calls for developers to plan for complex and large projects well in advance, instead of letting a bareboned version evolve over time.

XP: eXtereme programming is an approach that allows software to rapidly evolve. All the normal procedures of software development are pushed to their extreme limits, with a lot of feedback from users, continuous releases, and constant bug fixing, patching and other changes.

Flash Games: Vector Runner



"Vector Runner" is one of those games that you cannot stop playing even if your boss is looking over your shoulder and piling work on your desk. The game uses basic shapes, a cube as a block, smaller cubes as power-ups, and a steady stream of pyramids and rhombuses to dodge. The game is addictive because of the three challenges, of how far you can go without hitting something. This is one of those games that you can play for short bursts whenever you feel like a break. Despite how simple the game looks, the gameplay is pretty complex, and the game is by no means easy.

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digit DIARY

The seeds that you recieved in this month's issue are a culmination of almost four months of planning. The idea was initially pitched by Siddharth, and then everyone in the company went around hunting for seeds that could be distributed easily and yet grow into full grown seeds. The problem was that trees were usually planted as saplings, but nature itself came to our rescue. The seeds of the trees packaged with Digit, are tall, and take up a lot of room, which meant their seeds had to move far away from the trees before being able to germinate, which meant the seeds had to be small and light.

Which is why we could give the seeds along with our Magazine. We planted the trees in many locations, to check out how well they grew. Aditya managed to pick absolutely the worst location possible, by planting a seed in a divider. Additionally, this was the very divider where another office would empty buckets of dirty Air-Conditioner refuse water.

The plants that were growing on the divider itself became stunted over time. These are trees people, not plants, so don't waste the seeds in flower pots. Rossi went around Vashi planting the trees in different locations, then discovered the starting in a cup trick. This actually bore a small plant, which we are proud to say is well on it's way to treehood now.



Spiderman
Energy Usage: 3 kWh/year
CO2: 1.2 Metric Tons
Largest Impact: Batteries on his camera



Superman
Energy Usage: 2 kWh/year
CO2: 0.8 Metric Tons
Largest Impact: Flying

Carbon footprint of Superheroes

We have a look at what the common superheroes are up to, and how their activities impact the environment



BATMAN

Energy Usage: 500,000,000 kWh/year
CO2: 480,000 Metric Tons
Largest Impact: Wayne Industries mining in Africa

Batman is rich, and a business magnate as well, which automatically makes him one of the most environmentally disruptive superheroes around. Iron Man is on the list too, which is why we'll need to calculate. The Bat Cave is packed with gadgetry that is sure to require it's own power plant. The upper limit for Batman's needs would be the equivalent of 5 Blue Gene computers. Fortunately, these supercomputers don't suck up too much power, and can be safely ignored when compared to the environmental impact of Wayne Industries. We got our hands on the annual report of Wayne Industries, and they are actively involved in everything from Biotech, to Fuels, to Steel. Wayne Industries seems to be at the epicenter of modern Industry, with Activities in more domains than Stark Industries. Batman is easily the least eco-friendly superhero, but there is hope for fans. Wayne Chemicals has developed a way to generate power from Algae, and is researching alternate fuel sources.



POISON IVY

Energy Usage: 0 kWh/year
CO2: 0 Metric Tons
Largest Impact: None

Ok, so Poison Ivy is not a superhero, but a supervillian. We picked her for this list because she is one of the most eco-friendly superhumans around. She is the world's best bio-hacker, and the most aggressive campaigner for environmentalism. She wouldn't be happier if all the people in the world were replaced with trees, plants and other botonical wonders. She's also the world's premiere eco-terrorist, with in depth knowledge of all kinds of plant based toxins and venoms. And unlike Captain Planet, she does not get affected by carbon monoxide or other greenhouse gasses. In fact, she digs greenhouse gases, as they are great for plant life.



IRON MAN

Energy Usage: 300,000,000 kWh/year
CO2: 290,000 Metric Tons
Largest Impact: The use of Fusion power

There are a number of subsidary companies, that are involved in the manufacturing and supply of munitions across a number of countries. Additionally, Stark Industries manufacturers a lot of special equipment for SHIELD, as well as the Ultimate Avengers. The testing, and designing of these products is sure to consume a lot of resources. Moreover, the interfaces and operating systems that Iron Man uses is definitely processor intensive, and is sure to be a hog when it comes to electricity and bandwidth. The back-ends for all these systems probably run in servers that must be massive energy holes. However, the use of fusion power in at least some of the facilities dramatically decreases the environmental impact of Iron Man. If it were not for the Arc Reactor used to power at least one facility, Iron Man's footprint would have been larger than Batman's.



WOLVERINE

Energy Usage: 500 kWh/year
CO2: 20 Metric Tons
Largest Impact: Fuel for his rides

Wolverine likes large, fuel guzzling rides, and that is the biggest impact he has on the environment. When on his 1963 Harley Davidson DuoGlide or the Yamaha Yfm350fx, Wolverine rides like a maniac. This is apart from all the tertiary damage that he does to his environment, especially in one of his fits of rage. Wolverine is destructive, and often leaves spectacular debris in his wake wherever he goes. Statues, Dams, top secret military facilities, whatever it is, becomes dust once Wolverine is through, adding significant amounts of trash to the dumps.

Acer Lumiread
Acer launches it's first 6-inch e-reader device-LumiRead expected hit markets by Q3 2010

Facebook gets private
Facebook announces enhanced privacy features that lets users manage their private information more efficiently

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The 9 digit unique code can be found on the back cover of Fast Track to DIY

Digit Seeds

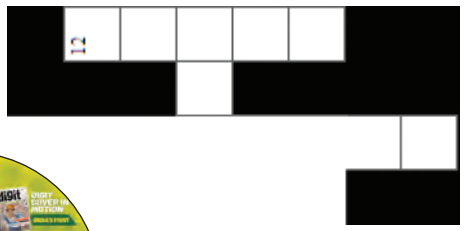
Reversing the environmental damage we cause is the only way to ensure a sustainable future for humanity. All the electronics we use, all the cars we drive take a tool on the environment. Do your bit. Go and plant a Digit Tree!

The Digit Trees are among the few trees that grow into full-sized trees from small seeds. There are two kinds of seeds included in the packaging, they are the Jacaranda and the Cassia Siamea. The pretty Jacaranda tree is best known for its bluish purplish flowers, while the Cassia Siamea is known for it's fast growth, and the height, as these trees can easily reach 30 feet in height. To plant the trees follow these simple steps:

- Take a small container which is roughly 2-inch in radius and 2-inch in depth. (a typical dahi/curd container will do just fine)
- Put some soft soil in it. Avoid sand.
- Plant a few seeds at a depth of about 1cm under the surface.
- Water the seeds once a day for a week. Put enough water to keep the soil damp.
- Keep the cup next to a window sill with decent amount of sunlight. Avoid keeping it under the sun all day.
- The saplings should sprout in a week or two.
- Transplant the saplings to a garden and continue watering.
- Over time they will flourish and grow into glorious life-giving giants. They will naturally propagate, and in the process decreasing your carbon footprint further, over time. This is a community effort. Let's all do our bit and add to our planet's green cover.

Crack the code
14 Which computer was used to design the first H-Bomb?

Crack the code
12 Name the company that came up with the first GUI

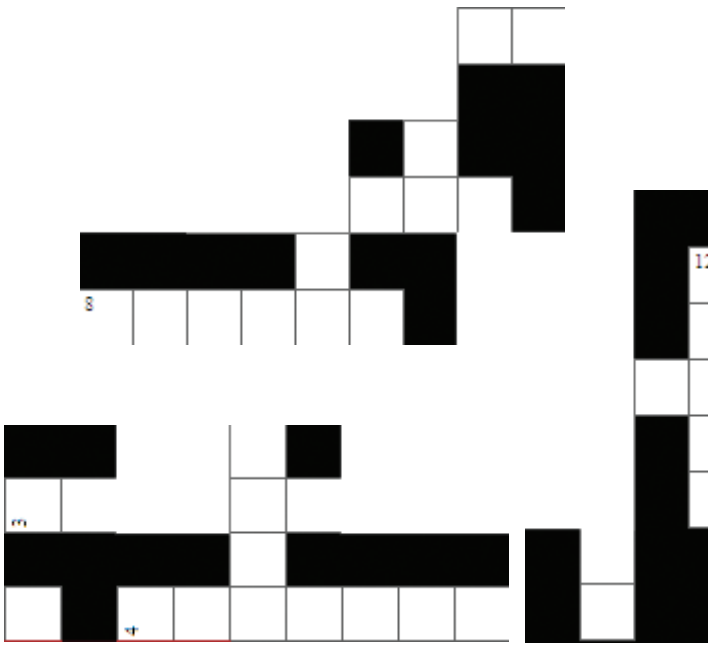




Community DVD

Over the past few months, the Digit Community has become more actively involved in the production process of the magazine. An entire section on the Community DVD is full of content created by Digit Forum members or readers who have mailed in. These range from video reviews of spanking new hardware (no less than the iPad), to plug-ins and add-ons specifically coded for the Digit Forums. The By Demand section has content from the thread of the same name on the Digit Forums. This thread is hosted every month, and readers discuss the contents of the Magazine, the Fast Track and the DVDs as they are done.

Other than these, this month, we decided to feature the people behind Digit in a rather funny light - check out the awesomely funny videos also in the DVD. Don't miss the video cover, which has video snippets of readers on how important Digit is in their lives. We encourage you to get involved. Mail in your demos, short films, applications and other forms of content to DVD@thinkdigit.com, and we'll put them in the DVDs.



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Crack the code
7 What is the first Open Source gaming console called?

Crack the code
10 Solve the two part puzzle in pages 44 and 126 of the magazine

Crack the code
9 The element representated with it's electron configuration somewhere in the Digit Tree Project article

Interesting user reviews on the Thinkdigit Forum www.thinkdigit.com/forum

13-05-2010, 03:08 PM #1

The Sorcerer
Alpha Geek

Join Date: May 2008
Posts: 830

Gigabyte 890GPA-UD3H Review



We'll be seeing a lot of new boards from different manufacturers with different form factors and features since AMD have introduced new northbridge and Southbridge.

This board comes with HT 3.0 support and the new AMD 890GX/SB850 chipset with an on-board HD 4290 (RV620 core) 700MHz core clock that can run hybrid crossfire with ATi 5450. Just like the 880g, 890GX supports UVD2, DVD upscaling and out-of-the-box X 6 support. The chipset can accommodate D-SUB, DVI, HDMI and Display Port, but no dual display option. The Northbridge can run pcie x16 2.0 with a single card and pcie x8 on a crossfire setup.

Coming towards the Southbridge, the SB850 supports upto 6 sata 6 GB/s, upto 14 USB 2.0, gigabit Ethernet, HD Audio and it holds on to support FDD/IDE as well.

The board I will be reviewing is a mainstream model- Gigabyte 890GPA-UD3H. This is aimed to be a mainstream model to target hardware enthusiasts, gamers and overclockers (or all of above), fulfilling what Matx boards couldn't and filling the "void" between a low end and a high end/expensive motherboard.

My Desktop Contest

These are some of the coolest desktop entries we received for our My Desktop contest. Upload yours to www.facebook.com/thinkdigit. Exciting prizes to be won!



Himanshu Rao's desktop - Using Stackdocks docklet in RocketDock, Rainmeter, Circle Dock, and custom icons and Start button



Nesar Alam Ansari's desktop - Using AveDesk, WindowBlinds and Yahoo! Widgets

CTC II

Crack the code

CTC II is here, And we have made it bigger, Better, And much more difficult this time around. To start off, You need to assemble the crossword that is strewn about the magazine. Do not cut the magazine under any circumstances, You never know what part might be required later on. Trace the blocks, Solve the puzzle, Then answer the crossword. Hint: If you refer to the board game, You will find it easier to solve the crossword. You will need to keep the entire crossword ready when the online segment of CTC II opens up on June 7th. You will need to figure out the url to which you have to go to on the 7th. The trail for this url starts here: count the number of Android applications featured in the top 50 mobile applications fe ature, add one to that number, and flip to that page.



Radha Krishnan's desktop - Using Windows 7, Rainmeter, Windows gadgets and Windows Media Player

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The essential Gaming Glossary

Gamers generally abuse really hard, lol whenever possible, and use a large number of terms that are unique to a game. For example, a decal can mean a different thing in a racing game and a MMORPG. Here are a list of commonly used terms across all of gaming.

Gaming Lingo

- **nOOb:** someone who is new at gaming, or a particular game, a newbie.

- **pwn:** pwn is "own" and pronounced in many ways, including "own", "pwun" and even "pwnnn". Pwnage or ownage means total defeat, or complete victory by a wide margin. The p is there just because it's next to the o on the keyboard.

- **!!!11!!!1112:** emphasis or explanation. Any series of ones, exclamation marks, and the odd 2 will do. If you need to chat while gaming, you need to be quick, hence the high acceptance of typos

- **nerd rage:** pretty self explanatory, the state of mind of a noob when he gets pwnd. Also occors when facing a camper in a sniper map, or when there is a lag

- **gib:** making an enemy break into flesh, bone and a puff of blood

- **frag:** killing someone in a game is known as a frag

- **camp:** standing one one place, waiting to make a kill, something frowned upon by everyone, and is the other main reason for nerd rage, apart from being pwnd

- **lag:** a situation where the gameplay on the screen is behind the gameplay on the server, or the output is not keeping pace with the inputs

- **twitch:** a twitch is an almost sub-conscious reaction, as in jerking the mouse for a fast frag. Guns that kill instantly



(instagib !!!11!) require Twitch reflexes, a common example being the railgun in Quake 3, shown here.

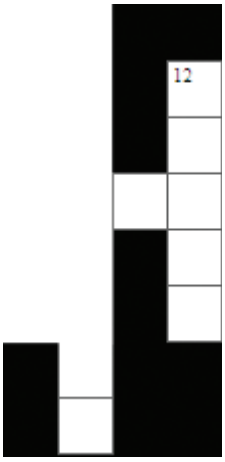
- **spray:** just firing in the general direction of an enemy, instead of aiming precisely, the typical behavior of camping noobs

Gaming Technology

- **Engine:** The engine is the virtual environment within the game, which displays the elements of the game, contains the physics engine, all the models, the way the weapons behave, and the maps, or rooms where the gameplay occurs. The Cryengine 3 is one of the most advanced gaming engines in development.

- **Releases:** There are many versions of a game, and many releases. The Alpha release is an early testing release, the Beta version is typically for a closed community of testers. A demo is a limited version of the game so buyers can try the game out. A mod is a third party modification of the game, or built over a game engine. Crysis, GTA, Quake, and Half Life have many mods, Counter Strike being the most famous, a mod of Half Life. Patches are incremental releases to fix bugs and improve gameplay. A port allows a game to be played on a console or platform it was not specifically designed for.

- **Console:** The console is the device used to play the game. The PC, XBOX, PlayStation, and Wii are the common consoles. Handheld consoles include the Nintendo DS, the Sony PSP, devices such as the iPad or the iPhone and various mobile phones.



Consume media on the move

Muxic and videos are not the only things that you can consume during transit or travelling long distances. Podcasts, audiobooks and e-books can be an educational as well as a fun way to pass the time. Most PMPs have native support for PDF readers and audiobooks. There are software available that let's you consume these media on mobile phones as well. This guide covers audiobooks, ebooks and podcasts. For using videos, transcode using Aneesoft HD Video Converter, a licensed version of which is on the Community DVD.

1 Using Podcasts

Podcasts are audio feeds of content, typically recorded in a format similar to a radio broadcast.

Step 1: Copy the Podcasts into your PMP. It is best to segregate podcasts into respective folders.

Step 2: Look for the podcast option in your PMP menu, if it is not there, play the file as any other audio file

Step 3: Make sure that the PMP mode is not set to random or shuffle, to make sure the series is not interrupted

2 Using Audiobooks

Audiobooks are readings of literary works, that are recorded and distributed in a digital format. Most modern PMPs have an option in the menu for Audiobooks. Phones do not support the large sizes.

Step 1: There are a few audiobooks in the Mindware DVD. Extract these to a folder on your system, then copy to your PMP.

Step 3: Play back the files sequentially to listen to the audiobook. Some PMPs have a bookmark feature, or simply use pause.

3 Using eBooks

All the eBooks in the Mindware DVD are in .pdf format. Adobe Reader LE, which is in the Community DVD, is the ideal software to use to read PDF files on mobile platforms. A few PMPs support PDFs.

Step 1: Identify the files you want to read, and copy these to your device.

Step 2: Install Adobe Reader LE if it is a mobile platform. There are PDF readers available for obscure platforms as well.

Step 3: Change the display settings till you have a comfortable font size

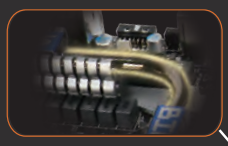
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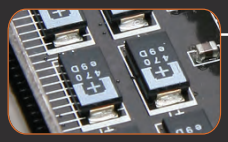
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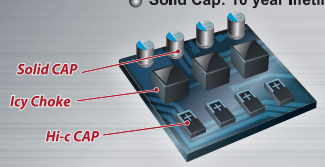
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* *The Embedded Internet: Methodology and Findings, John Gantz,* IDC, January 2009.

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