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The obsession within...

The cover story this month turned out to be an eye opener of sorts for the entire team. It made us look inward and question our belief systems, analyse our individual biases, and even doubt what we took for granted – are we geeks or hipsters?

The cover story attempts to take on some of the biggest technology battles in geekdom. Our kind has been known to have perhaps the most polarised opinions out there, especially when it comes to the technology – that which we're obsessed about. For years these polarised opinions have been the cause of many a heated argument (at the very least); be it the platform wars, the OS wars, or even the slightly more rabid console wars. There's also this supreme zeal with which those opinions and ideologies are defended. This got me thinking about why rabid followings and such extreme opinions arise in the first place. It almost seems like there's a beast in every man, and it stirs when you put a gadget in his hand. The answer is obsession.

Think of each time you've defended iOS with the standard "everything just works" argument, or Android with the "it's open source" or "it's customisable" rant. Think of how much you love your Windows Phone or the way you look down on Mac users who'll use no more than their browser but ask you to "make the switch" at every given opportunity. Think of the amount of time spent reading articles, watching videos, absorbing stats, about the object of this obsession of yours. Over time you've gathered so much esoteric knowledge and invested so much time, you have no option but to take a stand.

The halo effect will make you go even a step further and almost worship the brands, too. Soon you seem to not look at say, Google, as the company behind the Nexus 5 or Apple as the maker of the iPhone 5S but rather as parties vying for your vote – which in the current state of affairs is ironic considering NaMo, AAP, RaGa, or maybe NOTA deserve your undivided attention. What happens with gadgets is instead of buying into products you end up buying into ideologies.

But what about me personally, or any of the writers here at Digit? We too have our preferences within the team sure, things that we've been passionate about for years. But we have no favourites. How do we, bonafide geeks, manage to remain unbiased when the technology world seems to be getting more and more polarised with every passing moment? And the difference dawned.

For us, the devices come and go. We get them for free, we get excited about them, we enjoy them for the time they're with us, we critique them to bits but thankfully we don't get rabid about them. Why? Maybe because we don't make a monetary investment in them. The only investment is our time. The obsession is still there: we all live and breathe technology day in and day out but the obsession is divided between both factions. This kind of a balanced obsession or passion leads us to dig deep into any subject. Other than the monetary investment, what makes most geeks violent supporters of a "cause" is the amount of time that they invest in one side. No one wants to be wrong, right? Say you've invested a lot of time solely on Google – you like their don't be evil policy, but suddenly one fine day they go ahead and do something horrible – bribe policy makers, throw privacy out the window, or end up monopolising the web – what do you do? Do you rationalise and continue supporting them or admit your misguided fanaticism? Most likely the former.

With us we invest time equally as well. So whether it's minute architectural differences between the latest NVIDIA and AMD's refresh or even unbiased facts (not opinions) on whether PhysX can or cannot be enabled irrespective of the card or whether it makes a difference in the first place, or how 3GB of RAM leverages itself on a multi-monitor setup – we present both sides.

Unbiased obsession enables this bi-partisan curiosity, it enables the mind to be open to a flood gate of knowledge, if you're lucky an obsession can even get you paid some day. But fanaticism? Not so much. As long as you're willing to step back and look inward a little every now and then, maybe obsession is good. Obsession clarifies.



Siddharth Parwatay
Assistant Editor
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"There's a beast in every man, and it stirs when you put a gadget in his hand."

Got feedback about this column? Drop me a line at:
siddharth.parwatay@thinkdigit.com

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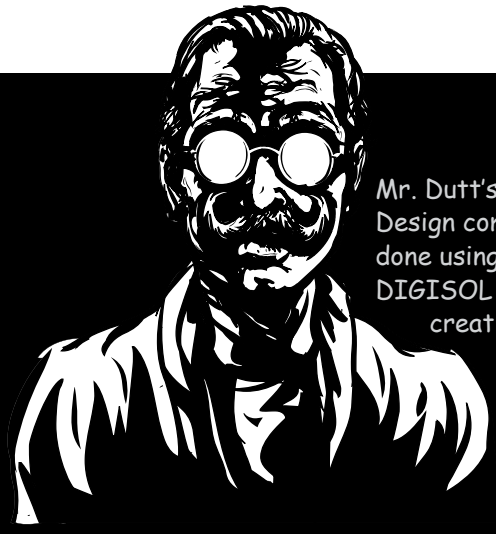
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Mr. Dutt's daughter-in- law, Sweta, wants to expand her Graphic Design company's operations in India. Since most of her work is done using the internet, Mr. Dutt advices her to use the DIGISOL DG-HR3400 router, which does more than merely creating a Wi-Fi network.

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Feedback for the January 2014 issue of Digit



✉ Hello to all the incredible people out there behind this awesome magazine! I'm writing to you for the first time. Firstly, how do you guys manage to do so much? There's the Digit magazine, DGT, Devworx, Skoar!, Fast Track, those DVDs and God knows what all! I've been reading your magazine since the past 2-3 years and I'm totally in love with it! Being a teen in Class 10, I'm mad about computers, programming and games, and I think Digit is the ultimate source for such stuff! Digit guides you towards buying new gadgets – be it smartphones, phablets, tablets or even anti-virus – after proper testing (well, I buy many products only after reading your suggestions such as my Quick Heal Total Security anti-virus) and giving all the details we need to see such as features and the most accurate prices. This magazine tells you what's new in the market and whether it's worth buying or not. Periodic booklets such as Encyclopedia Technica are superb! The previous month's Fast Track to Tech Careers was incredible! Your DVDs have more than a bunch of software, tutorials, game trailers, movie previews and TED videos, which is appreciated! Keeping in mind that advertisements are necessary to keep a magazine running, you have just the perfect number of advertisements in your magazine!

One thing I'm disappointed about is that one of the major updates of Windows 8 was released i.e. Windows 8.1 and you guys didn't cover it. Just one suggestion: why don't you purchase some great game (such as NFS or GTA) and give it away along with the usual free games in an annual DVD. Also, it would be great if you did a booklet on must-have apps next month. Your website is just amazing to everyone – whether they're a subscriber or not. Skoar! is also simply amazing as it helps in decide which game to buy. As for the movie trailers, please continue providing them and add more movies. Would love to re-subscribe to this magazine again and again. It took me some time to compile this, but I'm sure writing to you guys won't be a waste of time. What else can I say? Keep it up and give us more. You rock!

–Anant Shukla

Thanks for your warm words, Anant. Even us here working behind the scenes at Digit, trying to get all of you (our readers) your monthly tech dose, sometimes stop and wonder how it is that we manage to do what we do, month after month. It's people like you who keeps us going, knowing how we're positively affecting all of you. We did cover Windows 8.1 but there wasn't much to write about, it's much the same as Windows 8. Regarding the DVDs, we'd like to bundle games like GTA and NFS, we can't just buy one copy of the game and distribute it in the DVD. These game studios don't give us permission to distribute their games on our DVDs, and we've tried reaching out to them several times to strike a deal. Guess we just have to keep trying.

–Jayesh

✉ I'm among those fortunate readers who have access to your magazine from the days Digit was called Chip. I'm writing this mail only to let you guys know how I'm loving the way Digit is evolving with time. Your new ideas are always a welcome sight. I really liked how you guys have started inserting articles from other scientific fields rather than just covering computers and tablets. In the January 2014 issue, several articles such as 'Cold Fusion', 'Space Age' and 'Puppets to our own creation' were especially informative and a pleasure to read. Hope you guys will keep up the good work.

–Vikash Kandoi

At Digit, all of us are students and fans of the world of science at large, and technology is just a small part of it. We all like reading about science, space, and other non-consumer tech related topics, and that's part of the motivation behind sharing some of that knowledge and love of topics fond to us to the rest of our readers. Reading too much about consumer tech can be a bit boring, and we get that. As long as they're appreciated, rest assured, you'll always see such stories and features appearing in the magazine and on the website quite regularly.

–Jayesh

✉ This is my second letter to you guys and just as I did last time, this time too I want to start out by lauding you all for the praiseworthy hard work and efforts that go into making this illustrious magazine a reality month in and month out. You guys all deserve many a pat on the back for a job well done. Seriously. And a happy new year to the entire team.

As for the January issue, you guys owned it completely. The cover story was very refreshing and I'm sure it will serve as an encouragement to many budding minds to take a leap from a more or less parasitic relationship to more of a symbiotic rapport with technology and all that it has to offer. It is so inspiring

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LETTER OF THE MONTH

✉ Hi Digit! I may not be your biggest fan (only 13 years old), but I hope my voice reaches you.

Can you guess the number of Digit mags I have? No? Well, the answer is – five (along with some soft copies). So I'm trying to put together this letter with whatever little knowledge I have about Digit.

Well, for starters, I've written down some suggestions, queries, complaints, and of course, praises, both – regarding the January issue and in general.

The January issue:

- I'll start with the cover. One disyllabic word – awesome! But it could have been made livelier.
- The editorial was very good. What Siddharth has written is very true.
- I wanted to install some of the Steam games provided on the Skoar! DVD, but they require the Steam client. Is it the one marked 'Steam OS'? When I read the 'how to install' instructions, there was one line that said that all data on my PC would be lost on installing the Steam OS. Please help.
- The cover story was superb. I feel inspired by the likes of Angad and Karan.
- The Fast Track was very informative. I am thinking about mobile app development and game designing.
- I have only one complaint about DGT. In the Ferrari 458 Speciale page, an arrow in the photograph is pointing at the car's window or something, but there's no caption against the arrow's panel. Otherwise it's good.
- Could you please tell me where I could get the TiGr (the titanium lock system for bicycles)?

Overall, the January issue was superb! Keep up the style.

Things in general:

- After reading many readers' opinions about your website, I visited it myself. While it's not that bad, some improvements are required.
- You should do away with the Digit T-Shirt as a prize for Letter of the Month. Please don't take this as an insult (the T-Shirts are great Digit mementos), but you could give away something more interesting like a book or game.



- The following two questions are out of plain curiosity. Please excuse me if I offend you:
  1. Who is the 'Ant'?
  2. Did anyone in Team Digit read the mag before joining the...err, mag?

I end my letter here. Here's wishing Team Digit a very happy and eventful year ahead. Best of luck! Kudos to Digit and all its readers!

- Emon K. Baruah (Assam)

Thanks for your very detailed letter. We love getting letters from readers who go into specifics. I've already answered your Steam query via email so let me get to your other points:

- Ant is short for Siddh'ant', our star intern. Robert came up with the name to avoid confusion between me and him on lists and email conversations.
- Each and every one of us were readers before joining the team.
- We're all glad that you found the cover story inspiring.
- Regarding the prize for Letter of the Month we'll try to bring on board other sponsors like we had CoolerMaster for quite a few months. For now enjoy your t-shirt.

- Siddharth

to see that these youngsters are trying to use technology to solve the glaring problems of our country. It almost makes me quit my "cushy" IT job to make some contributions of my own. Almost. Such is the nature of these seasonal resolutions. Jokes apart, it's galvanising to see these visionaries make such headway in technology, using it to tackle problems that have plagued our nation since its inception. But as I kept reading, one nagging thought kept bugging me – brilliant though these schemes are, will there be a habitable planet 100 years from now where we can reap the fruits of these and many more 'light-bulbs' to come. Global warming is a gloomy reality, yet there's a strange disconnect among the studies, theories, statistics and the way we still live our lives. This denial of an almost certain doom is even scarier.

With the recent influx of widely accessible technology in the form of smartphone apps and its likes, it requires only a little bit of effort and consciousness on our part to make a difference. This 'love' for inaction is an epidemic that seems to be gnawing away at the bulk of our population, entrepreneurs and consumers alike. You have an extensive readership, a widespread network of intelligent, tech-savvy people who have made your magazine a part of their technology staple. I don't remember if you've done this before, but there needs to be a Digit issue about how we can use existing technology to live better. There are a multitude of apps such as Zimride, Fooducate, iRecycle and the likes that can help us make smarter, healthier and more sustainable choices in our everyday lives. I have faith that you guys have the power to coax thousands of technologically inclined youngsters to live more responsibly and make issues like reducing our carbon footprints and using up less energy more relevant to the general Indian psyche. There's a dire need for that as most people are simply unaware or worse, unmotivated by their awareness. It would be so great to learn how we can help disrupt this course the earth seems to be set out on with the help of technology that we already have and a bit of effort.

Good luck with this and with all other future endeavours that you take up. Looking forward to an endless line of improved Digit magazines with each passing month in 2014.

-Parthasarathi Mitra (Partho)

In its own way, even this seemingly innocuous letter will count towards making a difference. And yes we'll certainly do something around the idea you suggested.

–Siddharth

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CES Eye Candy
If you missed CES launches this past month, skim through our slideshow online:
http://dgit.in/ceseyec



JBL's Mountain
The SMART group launches JBL's Everest DD66000 audio system. Tagged at Rs. 99 lakh - 1 crore, audiophiles rejoice

CES 2014 hands out a reality check

Virtual reality, augmented reality and gaming unveil their next gen at CES 2014

Oculus Rift makes a breakthrough with New Motion Tracking

Virtual Reality has captured the attention of developers, consumers and corporates for decades. This year we saw Oculus Rift unveiling the latest prototype of their upcoming virtual reality headset code-named 'Crystal Cove'.

This latest prototype of the upcoming VR headset has made significant improvements to latency and blurring, with the addition of new positional tracking which was made possible with the addition of a new external camera to the Rift.

Compared to what we saw in previous iterations, the Rift was only able to track a player's head, eventually restricting movement to basic head movement. However, now Rift has positional tracking capabilities, thanks to an array of sensors mounted along the edges of the unit, monitored by an external camera. So, it's no longer just your head that controls movement, now you can move around and the virtual environment also moves in sync.

The Rift has a broad range of applications even beyond gaming. The company has sold developer kits to companies in various industries, from auto manufacturers to movie businesses. NASA has also used this technology to create virtual tours of Mars and the International Space Station.



The Occulus Rift

Oculus VP Nate Mitchell sums it up as a "new disruptive medium that can revolutionize the way we do a lot more than just games." Forbes is already calling it the Oculus Rift effect as companies are trying to capitalise on this technological breakthrough.

However, the biggest challenge here will be making the Rift accessible to consumers. The company has not mentioned anything about the release date, apart from Mitchell saying that 2014 is going to be a big year for Virtual Reality. Oculus has made a mark this year at CES bagging the award for the best of CES award for 2014.

Valve unveils 13 Steam Machines

It was quite strange of Valve to visit this year's annual Consumer Electronics Show, However this year marks Valve's attempts to send gamers into the world of Steam Machines and SteamOS.

Valve's Gabe Newell took centre stage at Valve's event and made them official, revealing specs for their gaming rigs including the likes of Alienware, CyberPower, Gigabyte, iBuyPower and more. In all, there are 13 machines in total, within a price bracket that varies from $500 to $6000 a piece. Each machine has the basic specs, and even the cheapest offering could take on the likes of PS4 and XBOX One. Here's a rundown of unveilings at Valve's press conference:

"The PC platform is successful because we all benefit from each other's accomplishments. "Today we're taking the next step. All of these partner developers are here and are interested in talking to you about your PC moving into the living room,"
– Gabe Newell, Valve.

Alienware (Price: TBA)

Dell revealed their Steam machine at Valve's event however did not let out a lot of information on what is under the machine's hood. We can see a basic trademarked black box, showing off Alienware and Steam logos illuminating along with a pair of front facing USB ports. Not much has been revealed as to what's inside, but the fact that Alienware has traditionally been a super-powered machine, its safe to say it will come super-loaded along with a lot of multiple options.

Alternate ($1339)

Alternate looks like a simple cubical box, but does pack a punch. Alternate's Steam Machine features an Intel Core i5 4570, an Nvidia GTX 760 GPU coupled with 16GB of RAM along with 1TB, via a hybrid solid state drive.

CyberPower PC (Price: TBA)

Cyber Power's Steam rig might remind you of the first generation of XBOX consoles. It packs a 3.9Ghz A6 CPU from AMD, a 2GB Radeon R9 270 GPU bundled with 8GB of RAM along with 500 GB of internal storage. For those of you who are not into AMD peripherals,



Alienware Steam machine

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Memory Lane
Here's a walk down memory lane for all the early Digital Immigrants out there. Life in the world of 2400bps: **http://dgit.in/digimmi**



Mount your Hero
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CyberPowerPC is also offering an Intel-based architecture with a 3.5Ghz Core i3 coupled with a GeForce GTX 760 instead along with lot of other configurations that a customer can opt for. The device will start shipping in the second half of the year.

Digital Storm Bolt II (Price: $2854)

Another Steam machine that made its debut at Valve's event. The Bolt II is powered by an Intel Core i7 4770K, a GTX 780 Ti processor coupled with over 16GB of RAM. It also includes a traditional one-two HDD/SDD combo – 1TB of storage on the traditional disc and 120GB on a Solid State Drive.

Gigabyte Brix Pro (Price: TBA)

This weird-looking box features an Intel Core i7 CPU. Sources indicate it as having integrated graphics. Specifically, the Intel Iris Pro 5200. It also sports 16GB RAM along with a 1TB SATA HDD.



Gigabyte "Brix" Pro

iBuyPower (Price: $499+)

Like so many other Steam machine developers, iBuyPower also offers customers customisable options, so the company did not mention any specific type of processor. CPU's from both Intel and AMD will be available, along with a graphics card from AMD. The box has an 8GB RAM and over 500GB storage. This machine looks pretty slick.

Falcon Northwest Tiki (Price: $1,799 - $6,000)

Falcon's northwest Tiki 's Steam version looks exactly similar to the currently available Tiki, except for the SteamOS and a Steam controller. In terms of specs, there are a lot of options. It can handle upto GTX Titan in terms of GPU, 6TB of storage coupled with up to 16GB of RAM.

Materiel.net (Price: $1,098)

Material is offering a box just like your next gen consoles but a tad more powerful than what the next gen consoles are offering. It features an Intel Core i5 CPU, an NVIDIA GTX 760 GPU, 8GB of RAM and 1TB of storage and large enough power upgrades at a very good price.

Origin PC "Chronos" (Price: TBD)

The Origin Steam Machine offers gigantic PC setup with an Intel Core i7, NVIDIA GTX Titan GPUs, 32GB of RAM and 14TB of storage (with swappable drives). We thing that is why the price has not been announced yet.

Next Spa (Price: TBA)

Next's Steam machine is more or less just like the PS4 and XBOX One. It comes with an Intel Core i5, an NVIDIA GT 760 GPU, 8GB of RAM and 1TB storage. There is no information regarding its price. However, going by the specs on offer, it seems it'll be priced just below $1000.

Scan NC10 (Price: $1,090)

This flat slab of a Steam Machine is a mixed bag with a high-end NVIDIA GTX 765M GPU and a lower end Intel Core i3 CPU. It comes with 8GB of RAM and 500GB of HDD storage space.

Webhallen (Price: $1,499)

This is high-end Steam Machine with an Intel Core i7 CPU, an NVIDIA GTX 780 GPU, 16GB of RAM, and a 1TB SSHD. It might have double the power than what the next gens offer, but the cost may make it hard to sell.



Trying out the iOptik Lenses

Zotac (Price: $599)

Zotac's got a tiny compact box, that features an unnamed Intel Core CPU, an NVIDIA GTX GPU. There is no information regarding the RAM either, however from the looks of it, it does look like a power packed rig that matches up with next gen consoles. The price is quite close to the price that they offer.

Innovega's iOptik lenses – augmented reality tech

Washington-based startup Innovega has unveiled a technology named iOptik - a natural eyewear based platform that can bring about a major transition in the way we share social media. The demo was showcased at the ongoing CES 2014 in Las Vegas.

This technology depends on customised contact lenses that acts as a filter for the human eye to focus on things near and far - using rings that directs light in different ways into the retina.

The eye lenses are integrated with a pair of special glasses fitted with tiny projectors that reroutes data forward onto the eyeglass lenses. "Whatever runs on your smartphone would run on your eyewear," said Stephen Willey, Innovega CEO. This platform provides users a sort of virtual canvas on which any kind of media or an application can be viewed.

"Our optics deliver games that are truly 'immersive', movies that mimic IMAX performance, a multi-tasking dashboard that incorporates five or more typical screens - all while simultaneously providing the wearer a safe and clear view of their environment," added Willey.

Smart eyewear such as Google Glass would look very similar like goggles, said a spokesperson. Integrating contacts with iOptik glasses, it would look like you are wearing your regular glasses. Users will also have an option of filling the contact lenses with a prescription.

"We're hoping technology like this will eventually replace your smartphone", said a spokesperson.

We know that CES is a place where companies show off the best gadgets they have to offer, but they also show off some of the quirkiest gadgets we have ever seen. And this year was certainly one of their best.

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18 **Web watch**
Facebook could lose 80% of users by 2017 and South Korea seems to be marching ahead with 5G

20 **App watch**
Read about our picks of the noteworthy apps on all three popular mobile platforms

The world awaits MWC 2014

Mobile manufacturers seem to be sweating it out to keep users interested in their respective brands. Read on to know about their latest endeavours

Google Nexus 5 Gadget of the Year, now in more colours

The Nexus 5 stood tall amidst some heavy competition from the iPhone 5S, Nokia Lumia 1020 and the iPad Air to emerge as your pick for the best gadget of 2013.

You can't really call this result surprising. The Nexus 5 was by far the most popular technology product when it came to discussions among our readers and as a result, it has been voted as the most popular tech product to have launched in 2013 with a sizable majority of votes.

Out of almost 7,000 readers who voted, nearly 50% of votes went towards the Nexus 5. The Nokia Lumia 1020 followed with about 25% of the votes. The iPhone 5S and the iPad Air came in at third and fourth position with about 20% and 8% of the votes, respectively.

The Nexus 5 has become one of the hottest Android smartphones in the market and just when you thought that the device couldn't get any better, the rumour mill dropped something new for us. A video showing the Google Play store has been released showing a new page for the Nexus 5. The new page now has eight colour options including Red, Orange, Yellow, Green, Blue and Purple other than the black and white.

While this does sound exciting, Google hasn't yet announced anything related to it. The video has been released by an unknown person and it could possibly be a fake.

Recently we heard a Google launch of some official Nexus accessories on the Google Play store website including a wireless charger, Nexus 5 Bumper Case, LG Quick Cover, Nexus 7 Folio and Nexus 7 Sleeve.

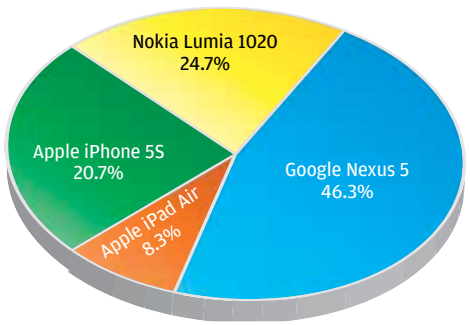
Galaxy S3, Note 2 to get KitKat updates by March-end

A Samsung insider claims that Samsung flagships, notably the Galaxy S3 and Note 2, should get the KitKat 4.4.2 update by the end of the first quarter.

The update is expected by the end of March and it will include performance tweaks and overhaul along with a few other software features. Also included will be the new transparent status bar, a print feature (from settings) and an immersive full screen mode. The update is expected to roll out in phases, implying that it could take as long as a full month since carrier branded variants release much later.

Earlier, Samsung had released the 4.3 update and it wasn't long before there were plenty of users complaining of issues. Common problems included freezing of the display, fast battery depletion and, in some extreme cases, the handsets were left completely bricked following the update.

Which of the following in your opinion should be crowned the gadget of the year (2013)?



Galaxy S3 Neo+ unveiled with 4.8-inch display, quad-core processor

Samsung has officially launched the Galaxy S3 Neo+ in China. The company has decided to launch the phone before Galaxy Note 3 Neo, whose pictures have already gone viral. Other than the dual-SIM functionality, the phone is almost identical to the Samsung Galaxy S3.

The Samsung Galaxy S3 Neo+ has a 4.8-inch Super AMOLED HD display with a resolution of 1280x720 pixels making it a 306ppi display. It runs Android 4.3 Jelly Bean out of the box, and is expected to get the Android KitKat update soon after release. At the time of writing, the smartphone is listed on Samsung's official China website without pricing details.

As far as the processing power goes, the phone features a 1.4GHz quad-core processor, though the manufacturer of the processor is not known yet. Rumours suggest that the processor could be either from the Exynos 4 or the Snapdragon 400 series. The smartphone has 1 GB of RAM.

The smartphone will be powered by a 2100mAh battery. The rear camera is an 8MP shooter capable of taking 1080p videos while the sec-

ondary camera is 1.9MP. The primary and secondary SIM card slots are WCDMA (850/900/1,900/2,100MHz) and GSM (850/900/1,800/1,900), respectively. The dimensions of the phone are 136.6 x 70.6 x 8.6 mm.

LG G Pro 2 to debut at MWC 2014, feature fingerprint scanner

LG will announce the next generation of its Optimus G Pro smartphone at Mobile World Congress scheduled to be held between 24-27th February 2014, according to Korea's ET news.

Last year, LG unveiled the Optimus G Pro as well as the Optimus F5 and F7 just before MWC. This year too, we can expect multiple devices to be unveiled just prior to MWC.

Sources claim that the LG G Pro 2 is surprisingly similar to the Samsung Galaxy Note 3. The flagship handset will reportedly run Android 4.4 and sport a 6-inch display. The device will most likely be powered by a Qualcomm Snapdragon 800 processor, with 3 GB of RAM and support for LTE and LTE-Advanced connectivity. Earlier reports suggest that LG plans to feature the fingerprint scanner on its upcoming flagship phones LG G Pro 2 and LG G3. LG may house it near the rear panel of both the phones. Though whatever be the case, you can count on us to attend the event in Barcelona to bring you all the latest from LG and more brands.

Samsung is also another major name that's focussing on the fingerprint scan technology. According to a recent report, the company will be adding the fingerprint scanner in its forthcoming flagship Galaxy S5.

LG's current flagship handset, G2 has struggled as the company has only sold sell 2.3 million units since four months after launch.

iPhone to feature 4.8-inch display?

iPhone 6 will reportedly feature a 4.8-inch display. The report comes from a note to investors by Wall Street analyst Timothy Arcuri of Cowen and Company.

After citing checks within the company's supply chain, Arcuri mentioned that the handset will feature a larger display, thus, matching the ongoing trend of larger smartphones elsewhere in the market.

In addition to the larger display, it will have support for Wi-Fi 802. 11ac standard along with major software upgrades expected in the next iOS release. Arcuri added that the release of the iPhone 5S was a mere 'set-up' for upcoming products.



Earlier rumours also claimed that Apple will launch a 5.7-inch iPhone with a higher resolution, however there's been no mention of a 5.7 inch phablet by analysts.

The production of the new iPhone is expected to start in May 2014. Arcuri expects Apple to follow its typical yearly release schedule and launch the next version of iPhone in September. Though some sources also indicate that a June launch for the next iteration of iPhone is "not out of the question."

A larger display would mean higher production values while creating the need for high capacity batteries. A larger screen size makes for a more expensive device. So far, rumours suggest that Apple could set the price for the next iPhone in the range of $450 to $600 which is quite high.

Dual-SIM Karbonn Titanium S5i online for Rs.7,999

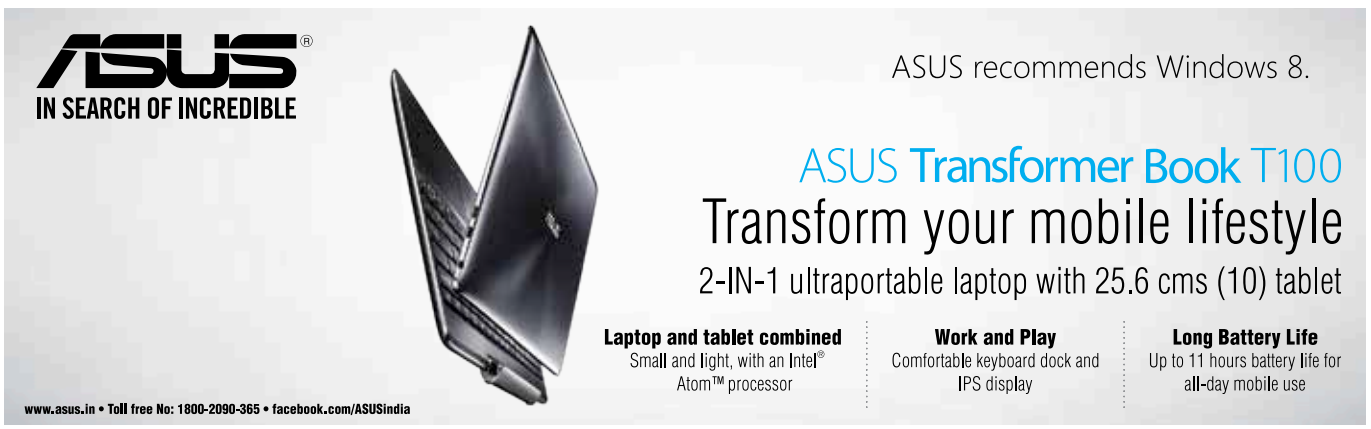
Karbonn's new Android smartphone, Titanium S5i is available online for ₹7,999. The new Karbonn smartphone supports dual-SIM, runs Android 4.2 Jelly Bean and is powered by a 1GHz dual-core processor along with 512MB of RAM.

The Titanium S5i has a 5-inch FWVGA TFT display. It features an 8MP rear camera and 0.3MP front camera. The smartphone supports additional storage up to 32GB via microSD. There's no information on the internal storage of the smartphone.

For connectivity, the smartphone supports 3G, W-Fi 802.11 b/g/n, with Hotspot and Bluetooth with A2DP. It is powered by a 2,000 mAh battery.

The Titanium S5i is another variant of the original Titanium S5 launched last year. Karbonn recently launched the Titanium S5 Plus, featuring dual-SIM, 5-inch IPS display, quad-core processor and 8MP rear camera. The smartphone is available online for ₹10,336.

Check out our Karbonn Titanium S5 Review at http://dgit.in/10CmFiB





Enter the Shadow
Monolith Productions takes gaming all-out with their Nemesis system in the upcoming 'Shadow of Mordor'. Take a look! **http://dgit.in/somordor**

Oldest multiplication table found
Constructed from bamboo, the oldest decimal multiplication table dating back to 350 BC has been found in China. **http://dgit.in/1ipePVc**

Web Watch - R.I.P FB

Read on to know how Facebook got its knickers in a twist over a study that predicted its obsolescence and other developments in the web arena

Facebook may lose 80% of users by 2017: Princeton Study

A recent study by researchers at Princeton University has revealed that Facebook is likely to lose 80 percent of its users between 2015 to 2017. Researchers arrived at the conclusion based on a study of charts produced by Google Trends which showed that Facebook searches peaked in December 2012, but have been declining ever since.

The study conducted by John Cannarella and Joshua Spechler was modelled after the mathematical adoption rates of communicable diseases, which typically peak before declining.

The researchers then compared the growth curve of other online social networks with Facebook. According to the report, Facebook which turns 10 in February has survived far longer than its rivals, MySpace and Bebo. It was observed that users begin to lose interest in any service after a few years.

The report added that there's been a decrease in the social network's daily users, driven by teenagers deserting the site. Teenagers are leaving Facebook in favour of messaging services such as Twitter and Snapchat.

Social media expert Michael McQueen called it the Levi's Effect. McQueen added that the site has been overtaken by people 30 years of age and above, as teenagers log off. Facebook's CFO David Ebersman also confirmed that the company "did see a decrease in daily users, specifically among younger teens." It is reported that the social network lost nearly $18 billion of its market value due to teenagers leaving the site.

Facebook mocks study predicting its extinction

In response to Princeton University's study, Facebook predicted the imminent demise of the social network, with its own satirical prediction that the University itself would be out of business by 2021.

Mike Develin, a data scientist at Facebook, wrote in a note: "Princeton will have only half its current enrolment by 2018, and by 2021 it will have no students at all." Devlin claimed he had analysed several data points that includes volume of queries on Google Scholar matching the query "Princeton".

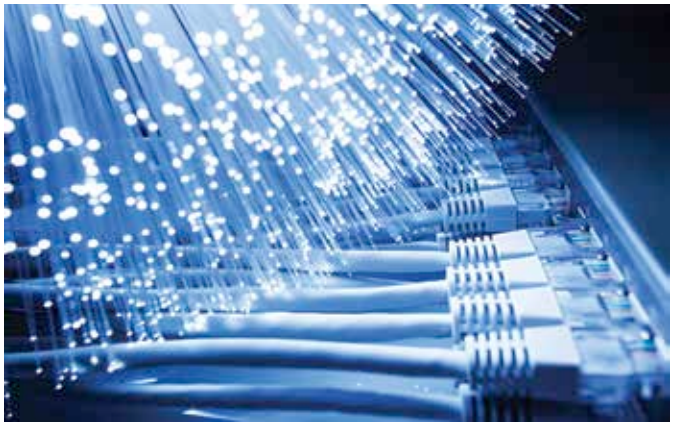
Devlin's analysis revealed that the percentage of these queries had dipped significantly since 2000.

"In keeping with the scientific principle 'correlation equals causation,' our research unequivocally demonstrated that Princeton may be in danger of disappearing entirely," Develin added.

Further ridiculing Princeton University's study, Devlin continued: "While we are concerned for Princeton University, we are even more concerned about the fate of the planet — Google Trends for "air" have also been declining steadily, and our projections show that by the year 2060 there will be no air left."

Fastest broadband speed of 1.4 Tbps recorded in London

Networking company Alcatel-Lucent and BT performed a data transfer test in which speeds of 1.4 terabits per second were reached. This can be translated into 44 uncompressed HD films in just one second. The test was done over a distance of 255 miles (410 kms approximately) between London's BT tower and BT's Adastral Park in Ipswich between October to November 2013. The data was transferred over existing fibre-optic cables that are already installed in major parts of the UK.



Alcatel-Lucent reached speeds of 1.4 terabits per second

A 'flexigrid' infrastructure was implemented for the test to create an 'alien super channel' which consists of seven channels, all of which transmit 200 gigabits per seconds, combining for a total capacity of 1.4 terabits of data per second. This is a huge achievement as it is a marked 42.5 percent increase in data transmission efficiency when compared to the current broadband networks available in the UK. This also proves that high speeds can be achieved on the current hardware of fibre-optics installed without the need to upgrade them.

Just to put the above number in context, according to last year's reports, India's average broadband speed is 1.3 Mbps. Chew on that.

South Korea ahead in 5G race

In January, South Korea's Science ministry announced a $1.5 billion plan to upgrade its network by 2020. Even Huawei and European Union had set the same deadline to upgrade to 5G but their budgets ($600 million and $950 million, respectively) sound meagre as compared to the one announced by South Korea. The country's ministry, in a statement, said,"Now it is time to take preemptive action to develop 5G."

Various countries around the world have been eying the next



generation wireless mobile technology. Recent reports pointed out that even India was looking forward to working with Israel over the future implementation of technology that is "100 times faster than 4G" .

Although it's still more than half a decade before we can see the results, the ministry has already received the support of the country's telecom companies as well as the mobile manufacturing companies of the country such as LG and Samsung.

Despite the reported initiative taken by the Indian government towards 5G, we can't expect the implementation here to be on par with that of countries like South Korea. The major reason being the difference in geographies of the two and the already existing standard in wireless and broadband technology. South Korea has been one of the most connected countries since the 1990s and it has always been ahead in implementing new internet-based technologies.

"Download a movie in a second" may seem more like a marketing gimmick than a reality, but it surely won't be easy to upgrade to 5G for any country. The major concern is the investment needed to upgrade wireless infrastructure. But still South Korea's upgrade plan sounds quite measured considering that its trial 5G network is due to release in 2017 followed by full rollout in 2020.

The growing number of mobile users in India will likely mean a great future for telecom companies and mobile phone manufacturers as there's a huge market available in India.

Watch TV channels wirelessly via Internet

NRI Chet Kanojia has built Aereo, a stamp sized antenna that can grab over-the-air broadcast signals and stream them to subscribers on the Internet regardless of the device they're viewing the content on. Users will be able to even record shows for later viewing with a cloud-based DVR for a few bucks.

The new device has led to a legal battle between the American Broadcasting Companies and Aereo that will come up in the Supreme Court in April. A case of copyright infringement has been filed by 17 broadcasting giants against the internet start-up. The TV giants have stated that the device is a threat to their business model and undermines the cable re-transmission fees. Broadcasters maintained that Aereo's transmissions constitute a "public performance" and that requires Aereo to pay for retransmitting them.

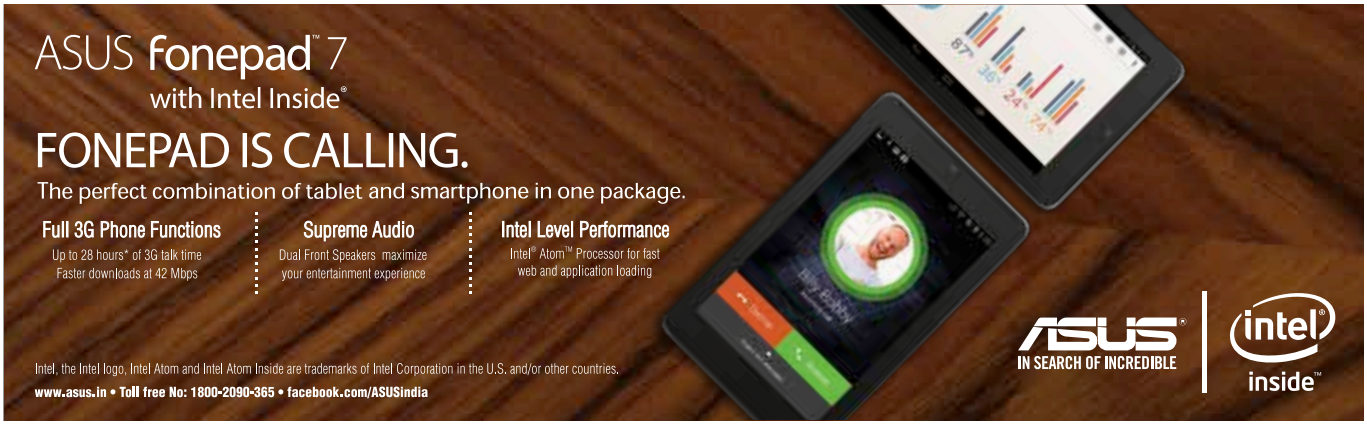
However, the federal appeals court has ruled that Aereo's streams to subscribers were not "public performances," and therefore does not constitute copyright infringement. This has shaken the TV giants and led them to file a petition in the Supreme court. Some of the channels are even considering taking themselves off the air and converting themselves to a cable-only channel.

Kanojia, who won the case in the lower courts, is confident that the Supreme Court will rule in his favor. "I can't imagine they won't be on the side of innovation," he says, "cloud-based innovation, in particular, because it is so consumer-friendly. This is the first battleground for the next 50 years of how copyright is going to extend or apply to the Internet and the cloud," he said in a recent interview.



The start-up's stamp sized antenna will let you watch TV on your tablet

Kanojia who has an engineering degree from the National Institute of Technology and a mechanical degree from Northeastern University, US holds patents in more than 14 fields ranging from Robotics to Data. He sold his first company, Navic Networks, to Microsoft in 2008 for a reported $250M.



Chrome 32 released
New data compression feature included to reduce network data usage upto 50%
http://dgit.in/Chrome320

Solar Energy Into Fuel
Wate will be re-lectrolysed to be used as fuel later in a clean fuel engine
http://dgit.in/H2OFuel

App Attack!

Six innovative apps for iOS, Android and Windows Phone that you probably haven't heard of before.

Team Digit
readersletters@thinkdigit.com

iOS

Demonstrate

Price: Free
Download link
http://dgit.in/1fUGobe

Demonstrate, an iOS app developed by Chennai based developer NFN Labs (that stands for Noef Fing Name- say that really fast), gives you a simple way to build a mock-up of an app and share it among friends and colleagues. It is particularly suited for those of you who have an app idea



planned out and know what it should look like and what it should do. At this stage, you can use Demonstrate to actually show off how the app will behave, without requiring any coding experience.

Demonstrate offers Dropbox support, so all you have to do is upload the renders of your app and open them in the app. The app then allows you to choose 'button' areas in a particular screen that is linked to another screen. You also get a list of iOS 7 transitions you can select, which will come into play when moving between different screens.

Once you're done with your project, simply swipe down on the main screen to export your project using Dropbox or iTunes in an editable format or just as a demo.

While Demonstrate is free, it limits you to only two projects, beyond which you'll have to pay $4.99 (₹310 approximately) per month if you want to create unlimited projects with unlimited screens. Also, the app only lets you program button taps but not gestures for different actions, which is a glaring omission.

Overall though, these are just minor gripes because in its current state, Demonstrate is definitely a very useful app if you are interested in developing for iOS.

Remote Mouse

Price: Free
Download link
http://dgit.in/1bKPzr5

Too lazy to get up from your bed or sofa when watching a movie on your desktop? Don't own a wireless mouse or a Windows Media Center remote? Then, Remote Mouse is the perfect app for you. The app gives you full control over your PC's mouse, including the left and right buttons, and full trackpad emulation, if you own a MacBook, which means



multi-touch gestures are also a go. And that's not all. Apart from just letting you control the mouse, you also get a task launcher and switcher that lets you launch an app on your PC from the comfort of your bed, and switch between ones that are already open. If some basic typing is your thing, then there is also an in-app keyboard to get that done.

The app is also heavily customizable, giving you control over things like mouse sensitivity/speed, background wallpapers and which multi-touch gestures to enable or disable.

Setting up the app is also quite easy. All you need to do is download the app on your iPhone/iPad and the corresponding server tool on your PC (from http://dgit.in/1aG3Nsu). Make sure both your iDevice and your PC are connected on the same wireless network or your PC is connected to the same router, click 'Start' on the app and voila!

You can also enable some other features such as a media player remote that you can use to control iTunes, Keynote, Hulu and FrontRow on the PC and function keys in the in-app keyboard, by paying $1.99 (Rs. 120 approximately).

Android

Aviate launcher (Beta)

Price: Free
Download link
http://dgit.in/LM7kNh
(invite only)



We have seen a number of Android launcher apps but this one is quite unique. Aviate brings in a fresh intelligent UI to your Android smartphone thanks to its innovative time and location based features. Just like Google Now, the Aviate launcher changes and automatically adjusts to your environment and your needs.

The launcher basically checks the time of day and your location and changes your home screen accordingly. It comes with different profiles which include Morning, Going Somewhere, Work and Restaurants which change automatically based on the time of day



and your location. So suppose you get up in the morning, Aviate will show your alarms, the weather and appointments. When you are at work, you can get your news feed, emails and other apps required for work.

Besides the suggested apps, Aviate organizes your apps into two sections. One, where all of your installed apps are stored in an old fashioned alphabetical order and the second one called Collections, which has all of your installed apps stacked in different categories, making it convenient for you to scroll through while looking for an app. You can pick and drop these apps to your main homescreen if it hasn't automatically appeared and there are some widgets that you can fiddle around with as well.

Aviate is a great homescreen alternative as it is one of the most intuitive launchers we have seen. The app is still in Beta phase but you can give it a test run as it is quite stable at the moment and is available at the Google Play store.

iCouchApp

Price: Free
Download link
http://dgit.in/1jszGr1

For social networking fans, the iCouch app on their Android phone or tablet brings the "social" experience to the simple activity of watching TV! Log in to the app, and you will get a series of shows on the home screen. Tap on your favourite show, and you can follow what is essentially a community - videos, gallery, gossip and updates regarding the show as well as the ability to chat with fellow users who are watching the same show.

You need to sign in with your mobile number. Once you get in touch with other users who watch the same show, you can end up discussing the plot as it unfolds on the screen. The interface needs to be a little more helpful in terms of navigation, because while it is visually appealing, there tends to be too many elements on the screen at times. The iCouchApp has partnered with Ancient Aliens on History TV18 and Splitsvilla on MTV, which means your chats may end up going Live on TV! Apart from these two partnerships, the iCouchApp



has a fairly wide range of shows available for the second screen experience. If you aren't already spellbound by another activity while watching TV, we would urge you to check this out. Perhaps, thanks to this app, the idea of a second screen experience will catch on.

Windows Phone

6Tag

Price: Free
Download link
http://dgit.in/1jsC3Kw

Instagram, everyone loves it and it is available on Windows Phone (finally!), but there's an app that does Instagram better than the official Instagram app itself. 6Tag allows users to shoot high resolution images for posting onto the Intagram network, something we love, as we can now print these images. The second thing to love about the app is the fact that along with offering all the standard Instagram filters, there are a few extra ones. The Blur filter has the option of applying circular and cylindrical blur effects and the app takes it up a notch by letting you "paint in" the blur. We love that. The other great thing about the app is that it will allow you to save images that you see in your Instagram feed on to the phone. The best thing about the app is the fact that it's totally free.

Tetris Blitz

Price: Free
Download link
http://dgit.in/KBnEyI

An absolute classic, EA brings the classic 90's game to the Windows Phone platform, free of cost. The game doesn't follow the classic model though, where the Tetriminos fall and the game goes on until you're unable to clear any more lines. In this version of Tetris,



everything remains the same, but EA spices it up with a few of its own twists. Firstly, everything is on a two minute timer. Along with that, there are Tetriminos with special powers that help you achieve better multiplier scores. Definitely worth a download if you happen to own a WIndows Phone handset or are a fan of the classic game.

Googl to acquire Nest
Search giant Google is finally acquiring a home automations startup Nest Labs for $3.2 billion **http://dgit.in/GoogleNestDeal**

Being cool with Android?
Do you own Android phone? Simply check out these cool things to do with it on Quora you may have not probably heard before. **http://dgit.in/androidtips**

Taking Guard

We take a look at the current security landscape and understand what the biggest names in the industry are doing

Kul Bhushan
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We've seen Twitter, Microsoft, Apple and many others adopting the two-factor verification procedure to prevent hackers from capturing control of their users' credentials. The addition of two-step verification is certainly a welcome move, but will it be enough to deal with the ever-growing cyber threats? Unlikely, according to Security Software maker Trend Micro.

"Two-factor authentication is not a cure all – while it can improve IT security, it also introduces new attack vectors that have to be considered and made secure as well. Mobile was the "next big thing" a few years ago. What about today's "next big thing", the Internet of Everything? Attackers and cybercriminals always go where the money and the users are. In the absence of a "killer app" that will get most users to welcome it with open arms, the Internet of Everything is probably not going to see much in the way of threats – for now", says Dhanya Thakkar - MD, Trend Micro for India & SAARC.

Trend Micro also predicts that mobile banking will be the target of malware. "2013 played host to major mobile threats, a trend which is expected to continue in 2014. This year is all about mobile banking. Unfortunately, we can also expect mobile threats like man-in-the-middle (MitM) attacks to increase in 2014. Android will remain the most dominant OS in the market. But this dominance will continue to be exploited, as we predict the volume of malicious and high-risk Android apps to reach 3 million by the end of 2014," adds Thakkar.



The tweet by the SEA using Skype's official handle

Thakkar added that businesses should look into multiple BYOD (Bring Your Own Device) solutions to prevent cyber attacks. He stated that enterprises should look at data security within multiple dimensions including internal firewalls, intrusion prevention systems, Wi-Fi security etc. He added that companies should re-look at their security architecture and rebuild it to fit BYOD needs.

Cybercriminals will increasingly use targeted-attack type methodologies such as Open Source research and highly customised spear phishing, along with multiple exploits. In the context of targeted attacks, we'll see more clickjacking and watering hole attacks, new exploits of choice and attacks via mobile devices.

We'll see one major data breach incident a month. Attacks leveraging vulnerabilities in widely used but unsupported software like Java 6 and Windows XP will intensify.

Microsoft's Twitter News account hacked by Syrian Electronic Army

Recently, Microsoft's Twitter News account was hacked by the Syrian Electronic Army (SEA), the same group responsible for hacking Xbox and Skype's Twitter and Facebook accounts on New Year's Eve. The message on Twitter was the same as on New Year's Day: "Don't use Microsoft emails (hotmail,outlook), They are monitoring your accounts and selling it to the governments. More details soon. #SEA."

After Microsoft's Twitter News account hack, the "Official Microsoft Blog" was also hacked. It displayed SEA messages and redirected to the hacking group's website for at least some users.

In response to the cyber attacks a Microsoft spokesperson stated, "Microsoft is aware of targeted cyber attacks that temporarily affected the Xbox Support and Microsoft News Twitter accounts. The accounts were quickly reset and we can confirm that no customer information was compromised."

India to set up cyber command service

Indian Army is gearing up to combat possible cyber threats with a tri-service cyber command. According to Army Chief General Bikram Singh, the Ministry of Defence already has a draft on the subject, which the cabinet committee on security, led by the prime minister, will take up for discussion in the near future.

The government officials reportedly acknowledge that India needs to have a strong cyber command, considering the cyber security infrastructure of the country is "weak".

"Cyber command would ensure both, offensive and defensive cyber security capabilities. Issues like cyber warfare, cyber terrorism and cyber espionage would be taken care of by a cyber command," a top defence ministry official is quoted as saying.

Lately, many a government website has been hacked. Recently, Defence Research and Development Organisation

Ampere to be redefined

Physicists have finally managed to track individual electrons, which may prompt a rational redefinition of the SI Unit of electric current. **http://dgit.in/AMPere**



General Bikram Singh

(DRDO) computer systems were breached and sensitive files were leaked.

DRDO, in coordination with Centre for Artificial Intelligence & Robotics (CAIR), is working on an internet spy system called "Netra". While the Home Ministry is currently giving Netra its finishing touches, once complete, the technology will be able to detect words such as bomb, attack, blast, kill etc. on blogs, mails and tweets, and will detect dubious voice content across messenger services such as Google Talk and Skype.

Yahoo! mail adds default HTTPS encryption

Yahoo finally enabled default HTTPS encryption for Yahoo! Mail users to protect them against government surveillance activities on the internet. Several tech giants adopted this strategy after NSA contractor Edward Snowden revealed NSA's collection of email data. The move to tighten email security follows similar steps by Google in November last year.

"Anytime you use Yahoo Mail – whether it's on the web, mobile web, mobile apps or via IMAP, POP or SMTP – it is 100% encrypted by default and protected with 2,048 bit certificates," wrote Yahoo's Senior Vice President of Communication Product Jeff Bonforte on Tuesday in a company blog post. "This encryption extends to your e-mails, attachments, contacts, as well as Calendar and Messenger in Mail."

SnapChat releases update after security breach

SnapChat has launched an update that allows users the option to opt out of its Find Friends feature, which suffered a spam problem in January. SnapChat was recently a victim of a massive hack that resulted in the exposure of more than 4.5 million usernames and phone numbers.

Version 6.1.1 of SnapChat improves the Find Friends functionality and offers users the option to opt out of linking their phone number to their username. You can opt out by navigating to `settings > Mobile #`

Those users who still want to use Find Friends are required to verify their phone numbers before it will work.

SnapChat has claimed that it is working on "improvements to the Snapchat service to prevent future attempts to abuse our API." And went on to say, "we are sorry for any problems this issue may have caused you and we really appreciate your patience and support."

Earlier, Snapchat had acknowledged in a blog post that "it was possible for an attacker to use the functionality of Find Friends to upload a large number of random phone numbers and match them with Snapchat usernames. On New Year's Eve, an attacker released a database of partially redacted phone numbers and usernames. No other information, including snaps, was leaked or accessed in these attacks."

Make a resolution to try something new this New Year.



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Check out this teardown of the Macintosh 128K and go 30 years back in time.
http://dgit.in/Mac128K



10 OC records broken
8 Pack, a pro overclocker from UK broke 10 different records in a single session.
http://dgit.in/OC10rec

Telecom set to transform in 2014

Many changes are on the horizon, but will it all pan out the way it should?

Kul Bhushan
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The year 2014 is going to be a very crucial year for the telecom space. This year will see the culmination of many goals important to players in the sector – this includes spectrum allocation, laying out of policies on license terms & conditions, M&A, security, green telecom targets and roadmap for future technologies. Operators will now fully focus on users.

This focus was evidently missing in the recent past. Higher data tariff rates, slow 3G penetration, lack of unique plans, back-and-forth between the government and operators on a range of issues had brought the industry to a standstill. However, 2014 will be a game changer. Not just for the industry, but for you, the user also.

4G to go mainstream?

3G growth has been slower than expected. This is mainly due to the higher tariff rates which, industry sources predict, won't ease up anytime soon in the near future. Cheaper 3G data plans by a few operators didn't help thrust 3G into the mainstream either. Many Internet users are still on 2G despite the slower network due to even lower tariff rates.



The telecom sector has high hopes for 4G

4G, however, is expected to provide the much-needed boost to this segment. Bharti Airtel has already launched its 4G services in select cities, while operators such as Aircel have begun preparations for the 4G network. Airtel will soon be expanding its 4G network in major circles such as Delhi, Mumbai, Haryana and Kerala.

Reliance Jio Infocomm is the star in the segment, holding pan-India spectrum for 4G services. The company claims that its 4G wireless broadband services will be about 10-12 times faster than the current 3G networks.

Rather than speed, however, pricing will play a key role in the growth of the 4G network; affordable 4G plans and 4G-based products will herald its imminent fame. With the launch of 4G smartphones, especially the budget ones, we can expect decent growth for 4G this year.

"Mobile technologies are improving and soon we will see 4G mobile networks increasingly being able to deliver rich internet access and mobile data traffic. 4G services are expected to be available in certain parts of country for sure, especially in the metros, but we don't see it going mainstream as 2G or 3G services are at present," says Cellular Operators Association of India (COAI), Director General, Rajan S Mathews.

Co-existence of 2G, 3G and... CDMA?

Let's say 4G services go on to dominate the telecom industry, what then? Will it spell the end of the older networks viz 3G, 2G and CDMA? Not really. Considering that a large number of customers are still on these networks, operators are unlikely to ignore them.

"2G services are still very much the core of telecom services being provided to Indian customers. Most of the internet and VAS services are currently accessed through 2G services only. We believe 2G services will continue to be the key component for serving the majority of the customer base in the country this year," adds Rajan S Mathews.



Telecom sector set to make a turnaround in 2014

Speaking about the possibilities of 3G tariff dropping, he further says, "Lowering of 3G services prices will depend upon availability and spectrum pricing and policy framework. So if all goes well, we will definitely see lower 3G pricing and increase in customer uptake of the same."

CDMA-exclusive operator, Sistema Shyam TeleServices Ltd (SSTL), also known as MTS India, last year launched next-generation EV-DO Rev. B Phase II technology, which claims to deliver



The launch of EV-DO Rev. B Phase II network, dubbed as 3GPLUS

data speeds of up to 9.8 Mbps. And now, the company is focusing its efforts on building its smartphone portfolio.

"Looking beyond regulatory issues, MTS also wants to fully leverage its 3GPLUS telecom network by further strengthening its Smartphone portfolio. We are already working with multiple handset partners and plan to bring out an exciting range of devices in 2014. In addition, our plans in the New Year include boosting our retail universe in order to get closer to our customers," says the company in its outlook for 2014.

All is not as it appears though, and CDMA operators will have to fight tooth and nail to remain relevant. SSTL points out the difficulties that operators like MTS are facing: "While some would say that the dust has settled and there is more clarity within the telecom landscape in India; things are not the same with MTS, India's only pure play CDMA operator. After having participated in the spectrum auctions in March 2013 and winning 3.75 MHz spectrum within the 800 Mhz band in 8 telecom circles, we were hopeful that things were finally looking up for us to implement our long-term strategies to drive data growth in the country. However, TRAI's recommendations (in October 2013) on the next round of spectrum auctions completely neglected auctions for spectrum in the 800 MHz band thereby overlooking a possible growth path for CDMA operators like MTS."

Pan-India Mobile Number Portability and free Roaming

Inter-circle mobile number portability and free roaming are among the key elements in the National Telecom Policy (NTP) 2012. Citing burden of huge costs, operators have been reluctant to roll out these services and they remain to be limited to the home circle.

However, last year we saw operators such as Bharti Airtel and Idea Cellular making roaming charges partially free. This year, we can expect roaming charges to be completely removed.

Inter-circle number portability, however, may take some time to materialise. Though it favours the pan-India number portability, COAI (Cellular Operators Association of India) describes it as a complex matter. "We support the objectives of NTP-2012 and are committed to working with the Regulator and Department of Telecom on implementing these in a customer and industry friendly manner. National MNP is part of the NTP-2012 objectives and we look forward to working with the Department of Telecom, if they accept the TRAI recommendations," Rajan S Mathews recently told Digit.

"National MNP is a very complex matter including over 10 operators, 2 MNP providers, several NLD (National Long Distance) and ILD (International Long Distance) players and 22 circles with over 900 million connections. Nowhere in the world has such a complex matter been done so far. So, all of the stakeholders are not ready as of now. We will need to commence the project design and implementation as soon as the Department of Telecom approves," he added.

Integrated Operator Billing, Mobile Money and more

It's really surprising that operators haven't fully tapped the Integrated Operator Billing model. 'Integrated operator billing', also called 'integrated carrier billing' are billing services integrated within a mobile phone that allow the user to charge the costs of digital goods such as apps, music and movies to their phone bills. Back in 2012, Nokia tied up with Airtel and Vodafone to offer integrated billing on the Nokia Ovi Store. Surprisingly, we didn't see other phone manufacturers follow suit.

Vodafone continued on its trailblazer path by recently launching 'Vodafone Developer Platform'. The platform allows app developers and content providers, local and international, to build and sell apps through operator billing.

Mobile Money is expected to witness growth this year after the segment met a setback in March 2012 when Nokia shelved its mobile wallet, 'Nokia Money'. However, Airtel has continued to push its 'Aircel ICICI Bank Mobile Money' service for mobile transactions. Another major operator, Vodafone launched its 'm-Pesa' service. Both, m-Pesa and Aircel ICICI Bank Mobile Money service will allow customers to make cash deposits, withdrawals and cash transfers to any mobile phone or bank account in India.



Vodafone has its own Mobile Money service called 'm-Pesa'

In 2014, telcos are likely to also focus on mobile banking given that many telcos have already initiated talks with various banks to provide m-banking services.

Data to drive the future

Data services, especially on the mobile platform, are expected to bring in plenty of business to the telecom space. For it to thrive, a higher mobile data services adoption rate is imperative. This will be made possible with the availability of compatible mobile devices, affordable data plans and rapidly rising Internet users in all circles.

In short, over the coming year, you can expect more bang for your buck with access to a range of content including high-end applications and services. Those in rural areas will have better Internet coverage and customised services such as m-healthcare, m-governance, m-banking, m-education, etc.

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Have a Geeky Valentine
This Valentine's Day bring out your partner's warm and fuzzy side by gifting them their favourite toys

64-bit octa-core chips
This Huawei chipset will feature a Cortex A-57 and Cortex A-53
http://dgit.in/Huawei64



TrackingPoint PGF

Introduced at last year's CES 2013, TrackingPoint's PGF (Precision Guided Firearm) is one of the smarter rifles around with the presence of a social networking system inside. PGF easily connects to an iPad that lets you to track, study and record your own hunting exploits on the device. The rifle wirelessly connects and streams images and videos from the networked tracking scope, featuring a 110m telephoto lens and a 14-megapixel image sensor. A processor inside the rifle combines the environmental details required to function itself. This includes temperature, barometric pressure, level of distance and magnetic fields from the sensors packed in this robust shooting machine. **Price:** ₹*12,49,600*

The quintessential homeowners arsenal

WowWee MiP

We were introduced to the MiP robot at CES 2014, which took place recently in Las Vegas. MiP is basically a very well balanced robot, with gesture sense technology and an app controlled environment. Like us humans, this robot from WowWee has been given a chirpy personality, offering endless fun i.e. gameplay, dancing, balancing acts etc. Developed at the University of California, MiP can be easily controlled using your Android or iOS device with the help of an application available on these platforms. In addition, you can control this robot using hand and object movements. **Price:** ₹*7,435*





Nest Protect

Nest Protect is a device that comes equipped with smoke and CO detection with voice alarms, LED lights, app notifications, wave feature, path light and more. These gems are all set to keep you away from the risk of fire. Even if the smoke hasn't reached the level of alarm, the sensors will give you early warnings to avoid a state of emergency. This is highly useful when you're cooking while watching your favorite YouTube videos and accidentally burn your food. Nevertheless, you should know: this fire alarm is not cheap. But here's a good reason to splurge on it. Search giant Google recently announced plans to acquire Nest Labs for $3.2 billion. **Price:** ₹*8,060*

S-Walker Board

Here's an amazingly built personal mobility device that will appeal to the skater or wannabe skater in you. Presenting: the S-Walker Board. Unlike a normal skating board, the board features a pair of small wheels mounted at the center of the deck. Equipped with a pair of 250W motors powering a rechargeable lead-acid battery, it requires a one-hour battery recharge to offer you a speed of upto 10 km/h. The S-Walker Board comes bundled with a gyroscope, which detects the forward or backward lean of the rider and changes the movement of the wheels accordingly. It carries you along for upto 20 kms, depending on the terrain and usage. **Price:** ₹*58,106*





Eva Solo Aquastar

Aren't we all used to the look of the good ol' watering can that's been around for ages now. Isn't it time for an upgrade? How about the Aquastar? Designed by Eva Solo, Aquastar is capable of taking care of your watering needs better than ever before. It has a sleek and futuristic look making it a gorgeous alternative. Eliminating the problems you might have faced with your regular water cans earlier, the long pointed spout on Aquastar can dispense two litres of H2O to be poured precisely where needed. Made of plastic and chrome plastic, this baby can also moonlight as a piece of decor in your home, given its artsy look.
Price: ₹*2,506*



Stray rover on Mars
Initially slated for a 90 day operation, NASA's 10 year-old Opportunity rover is still making new discoveries on Mars. **http://dgit.in/AweOppo**



Zbox Nano upgraded
Nano Series with 4th Generation Intel Core processors. Models ID68 and ID69 **http://dgit.in/ZboxHas**

Have a Geeky Valentine

Gift ideas for him and her

Even geeks have a warm and fuzzy side to them. This Valentine's, bring out the warmth and surprise them with some of their favourite toys

Dominica D'cruz
readersletters@thinkdigit.com

If binaries are your thing and digital hearts make your heart flutter, let this Valentine's Day truly bring out the geek in you. Skip the wine and chocolates, or simply add any of the below recommendations to them. Either way, hit just the right level of geekiness with your partner and Cupid will be just around the corner to make this day a very special one. Pick up that funky phone case she always wanted or that elusive dance game for his PS3. You'll have yet another excuse to dance the night away. These gifts will help you spell out 'LOv3' to the special person in your life.

Camera lens coffee mug

This camera lens mug is the perfect gift for any photographer, aspiring or professional.





Your simple gesture of love will remind him of you during his morning coffee and also convey the message that you understand and encourage his passion.

Camera lens mugs come with a lid that helps keep your coffee hot or cold, depending on your preference. You can be carefree about stains and odour too since they have a stainless steel interior.

Be informed, however, about whether your boyfriend/girlfriend is a Nikon or Canon fanboy. Getting the wrong brand could have a backlash. Of course, you could also make them happy with a real lens, assuming you're a rich partner and don't mind investing ₹12,000-1.5 lakh on a gift.

Caniam Thermos Lens Mug With Lid: http://dgit.in/1fZQMi5
Price: ₹1,499 (Differs from size to size)

Stereo speakers cum teddy bear

This iPod/iPhone dock in the form of a cuddly teddy bear is one of the cutest and most creative pieces of technology available out there. The jack cable is hidden inside the arms of the bear, while the speakers are located inside its feet. Besides, the dock runs on batteries, eliminating the need for messy wires.

Aside from the iPhone DJ Teddy is also compatible with other mobile phones that support MP3 and MP4 formats.

Tie a colour co-ordinated ribbon around its neck and include a few chocolates in its arms. DJ Teddy is bound to sweep her off their feet and give you the satisfaction of being the perfect valentine.

Satzuma DJ Teddy: http://dgit.in/1cUQp0p
Price: ₹2,250

USB-powered cup warmer

Geeks are often workaholics, or usually just engrossed in something fun and smart, tending to lose track of time. As their



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*Terms & Conditions Apply. This Contest is not applicable in the State of Tamil Nadu.

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3D printed Hersheys
3D Systems has partnered with Hersheys to come up with 3D printed confectionary. Yum!
http://dgit.in/3Dchoco



New cats in town
Roccat is set to release a slew of new gaming peripherals including Kone XTD Optical and Kone Pure Military **http://dgit.in/NewRoccS**

beloved, you naturally want to care for and nurture them.

You'll typically find a geek occupied with a laptop/PC/gaming console. Time is lost and the world is forgotten about, including that tepid cup of coffee. The portable USB cup warmer, once plugged into any of their devices will keep their coffee warm for them until the last drop. Most cup warmers come with additional USB ports that let you charge multiple devices, making it an instant winner.

So gift your sweetheart one of these, or buy a pair for the both of you. Pour cups of coffee and lose yourselves in long conversations or games or any activity that portrays you in a favourable light as the perfect valentine date.

Cup Warmer and USB Hub with Clock: http://dgit.in/1aKX5hP
Price: ₹534

High resolution e-book reader with built-in light

Is your significant other someone who just can't put his books down? Are they story addicts, who need to read everywhere they



go? Or is s/he a digital freak who'd only read a book if it was on a gadget?

This Valentine's Day get them a Kindle Paperwhite, which they can easily carry with them everywhere they go.

The Kindle Paperwhite will give them access to a wide and constantly growing selection of books and magazines. This e-book reader will ensure that your partner doesn't need a bunch of boxes for his entire collection of literary pleasure.

If you share your partner's love for books and want someone to discuss them with, the Kindle Paperwhite will pave the perfect path for long book discussions on many of your dates.

Kindle Paperwhite: http://dgit.in/LFG42l
Price: ₹9,999

Cable managers

If your techie sweetheart is not as mad about Valentine's Day as you are, get them something small, functional and inexpensive, but amazingly retro.

This cassette cable manager is the perfect gift for those who enjoy the convenience of modern day gadgets, but love the old school style. The added advantage of untangled earphones and easy access to them in a messy bag would definitely bring a smile on their faces. In fact, get a pair if you like and look like the classic retro couple that you are.

REW Mini Cassette Tape: http://dgit.in/1imVBST
Price: ₹219

Consoles

Are you always complaining to your boyfriend that he spends more time gaming with his friends, than with you? This Valentine's Day show him that you still love him, games and all.

Surprise your boyfriend with a PS4 and he'll fall in love with you all over again. Yes, it's a little too expensive, but then who said that love doesn't come with a huge price tag.

Today, console manufacturers are pushing the limits of enhancing the personal gaming experience. With a private gaming console at your disposal, make this experience a lot more fun by joining him in it. For all you know, you might enjoy it and the two of you will be planning gaming dates sooner than you know.

PS4: http://dgit.in/LTx2iT
Price: ₹39,990

Video Games

Are you a couple who enjoys gaming, but still can't enjoy it together due to different tastes in games? Buy yourselves some quality time together this year with fun games that the both of you can indulge in.

Games like Just Dance, that allow both of you to have a competitive swagger whilst dancing your shoes off on popular tunes), Guitar Hero, where love be damned in front of the gods of rock and SingStar, where you try to one-up each other in terms of being the better vocalist will keep you both occupied for hours on end!

Just Dance 2014 for PS3: http://dgit.in/1aqa5Pt
Price: ₹2,149 (Will vary from game to game)

HD video recording drone

Having date scheduling issues with your geek? Are they the kind who refuses to get out of his home and office or take a walk in the park? The Parrot AR 2.0 Drone can help make your day easier, if not solve this problem completely.



A quadricopter attached with a camera, which can shoot HD videos and be controlled by any device with an Android or iOS platform will definitely make him get off his lazy bum. The otherwise intuitive device has a slightly complex learning curve that's bound to keep him occupied for a long time outside and get some much needed sun!

Parrot AR Drone 2.0: http://dgit.in/1dOTRzL
Price: ₹30,490

Superhero USB flash drives

Seen Avengers more than 10 times? Check. Have the limited edition Blu-Ray collection? Check.Have all the possible merchandise associated with the film? Check.

What other possession would be worthy of fan geekdom while also being functional?

The answer is this collection of USB drives fashioned around Iron Man, Thor and The Hulk. Gift this to your sweetheart and they'll be like putty in your hands!

The Avengers USB 8GB Flash Drive (Set of 4): http://dgit.in/1dvt7hC
Price: $112.99

Customised iPhone 4S/4 covers

You may be one of those couples, who've been blessed with amazing photography skills – so much so that you're often the

designated paparazzo clicking pictures of friends and family, with absolutely no one to frame the two of you.

If that is the case, this Valentine's consider getting your geekheart a Diffcase for his iPhone, so that you have your own personal collection of couple pictures.

The Diffcase is not just any iPhone case. This rugged case has the ability to act as a tripod for your phone, allowing you to shoot pictures and videos on a steady base. The covers on the front and back of the case can act as sun shades, preventing a direct glare on the screen.

Besides all these amazing features, the iPhone case also does a great job of protecting your phone. So, go ahead and enjoy your couple time, while recording memories of it.

If the Director of 'Oldboy" can shoot a short film on the iPhone, why can't you!

DiffCase iPhone 4/4S Case with Tripod Mounts: http://dgit.in/1c2zqh5
Price: ₹1,999

Waterproof smartwatch with e-paper display

Some of us find solace in spending time with our loved ones, while some of us turn to our gadgets. If your valentine belongs to the latter category and their comfort blanket is their phone, the Pebble E-Paper Watch could be the perfect gift for them.



A concept out of the KickStarter project, the e-paper watch, unlike Galaxy Gear, can be used with both, iOS and Android devices. What earns it even more brownie points is its cost. It won't cost you a month's salary.

An extension to your preferred phone, the Pebble can be connected via bluetooth and display notifications, control your music, keep track of your distance covered and data via GPS.

And the best part is that it can display time too!

Pebble Smartwatch for iOS and Android: http://dgit.in/1dvtdG3
Price: ₹12,741

Protective computer glasses

When one terms himself or herself as a geek, it's a given that they spend long periods of time staring at digital screens for



work and pleasure. If this is your loved one's lifestyle, you have every right to be worried about the health of their eyes.

Go ahead and gift your loved ones a pair of Gunnar glasses, and be assured that they will thank you every day for it. Gunnar eyewear products not only understand the needs of your strained eyes, but also help you exude class and style.

This range of glasses reduces the glare of digital screens, while enhancing contrast and details. This is the perfect gift for gamers, coders, graphic designers, animators, ... well geeks overall.

Gunnar eyewear: http://dgit.in/1c2A2TQ
Price: Ranges as per model

Action figures

If you want to reach out and touch your valentine in the most emotional way possible,



take them back to a geeky memory of their childhood.

The technological potential and creative engineering offered by Lego Mindstorms will evoke your sheer amazement and adoration of the product.

Gift your valentine a box of this amazing product and spend a fun filled geeky valentine, bringing the creatures of your imagination to life.

Lego Mindstorms EV3: http://dgit.in/1f6kI9f
Price: ₹36,999 (Price varies from model to model)

Every geek has his own taste and style, but what makes planning surprises for them so appealing is the fact that they'll find it very difficult to reject anything geeky. If you're a geek yourself, you'll probably know what would work best for your partner. If not, don't fret. Go all out and surprise them with something from this list. The effort and your consideration will be completely worth it and well reciprocated.

Quick Heal Total Security

Give your PC India's No. 1 Security Solution and connect, surf, chat, tweet, play, download, work, communicate, and shop online without fear.

Amazing Quick Heal Support

TELEPHONIC SUPPORT | REMOTE ACCESS | CHAT | EMAIL | GROUND SUPPORT



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Quick Heal
Security Simplified

Complete Protection For



SMARTPHONES • COMPUTERS • TABLETS

36

Space Age
When it comes to the universe, infinity is just the beginning. Look at some of the largest things it has to offer.

Meet Angelina: An AI that thinks
A computer scientist's PhD involves developing an AI that can think creatively on its own and design games: **http://dgit.in/angelAI**

THE RISE OF BIONICS

"By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs."

Donna J. Haraway, Author

Sanket Chaukiyal
readersletters@thinkdigit.com

Although a few years late, Donna J. Haraway's statement couldn't have been more prophetic. We have moved more closer to an fusion of man and machine than one could have imagined all those years ago. Suddenly, Robocop and Bionic Woman don't seem so distant anymore.

Let us take a look at the world of artificial body parts and exoskeletons that exists out there.

Prosthetics

Prosthetics have come a long way from the pirate days of wooden leg stumps to thought-controlled, touch-sensitive, 3D-printed limbs of today. They are lighter, built with better material and come close to looking and feeling like the real thing. Some prosthetics enable a natural walk while some can even turn a person into a speedster. The real difference comes when the prosthesis gives the user exactly what they want. There are some innovations in prosthetics that come close to the real thing (till we figure out how to regenerate like reptiles without turning into a giant human-lizard hybrid with a superiority complex). People are developing a host of new technology for prosthetics like mind-controlled prosthetics, touch sensitive prosthetics and – believe it or not – app controlled prosthetics. Way to go, smartphone generation.

3D-printed prosthetics

Although light years behind the Star Trek replicator, the 3D printer is definitely a step closer. Very much in rage now, the 3D printer allows us to create (read: print) very much everything that we have the design for (remember the 3D printed larynx of a velociraptor in Jurassic Park 3?), the printing material isn't a limit either, as we will soon see.

Prosthetic hand

At a young age of 17, Easton LaChappelle developed a 3D-printed prosthetic arm that can be made for under $500 (a state-of-the-art prosthetic can cost around $80,000). This arm is so good that it got him a meeting with Barack Obama and then got him into NASA's Robonaut Project (a humanoid robot created to assist astronauts in space). The arm weighs around 10 pounds, uses an EEG headband for controlling its movements and is easy to put on and take off, unlike other prosthetics which are very heavy or require invasive neural surgery for user interface.

Prosthetic jaw

Prosthetics are not just limited to to hands and legs, it all depends on creativity and technology. An 83-year old lady got implanted with a titanium (thats right) lower jaw as her infected jaw was beyond healing. The prosthetic jaw implant was so successful that the lady could move the jaw within a day of the surgery, though the healing process took longer. Researchers and engineers from Belgium and the Netherlands printed the jaw using titanium powder and sprayed it with artificial bone. I's sad about her old jaw, but on the bright side: walnuts won't be a problem for the lady anymore. Neither will self-defence, actually.

Got music in your bones?

Being humans by nature, our thoughts often span out beyond the normal and this in turns churns out some unusual results. Although not benefiting in anyway by means of physical body enhancements or support, the musical prosthetics created by two Music PHD students from McGill University, Montreal are extraordinary. These 3D-printed and laser-cut prosthetics include spines, ribs, etc and play music when the person wearing them dances. They are embedded with sensors, power supply, wireless transmitters, etc. that allow the wearer to play music by touch and

movement. The signals produced by the movement is processed by an open-source p2p software (also developed by the university) to produce music in real time. Boney M would be proud.

Low-cost hand

Many ideas are born out of dire need; one such need for a robotic hand was felt by Richard Van of South Africa who lost four of his fingers in an accident. He collaborated with a Seattle-based prop designer to design prosthetics that could work like real hands and fingers but soon found out that it was unaffordable ($10,000 for every finger). MakerBot came to the rescue and donated their 3D printers for the project. This brought down the cost of the prosthetic to around $150.

Pimp up your limb

Face it, you know you were thinking about it and knew it was coming. Enter prosthetics add-ons. Why hide it when you can flaunt it? San Francisco-based Bespoke Innovations is taking 3D printing to an artistic level by designing customisable fairings for prosthetic legs. Their fairings are specialised coverings that surround an existing prosthetic leg and are customised to reflect the personality of the user. The fairings can be enhanced with graphics, patterns, tattoos and even different materials like leather, nylon fabric and chrome plating (thats right, chrome!).

It's alive!

Not exactly a Frankensteinian venture but around the world, prosthetics are being printed with living cells (thats right, living cells!).

The first, Super Ear was created by Researchers from Princeton and Johns Hopkins. They came together to 3D print an ear which was seeded with cartilage cells. Now the reason why we called it a Super Ear is that they have also included a microwave-sensitive antenna into it. Theoretically, with a few more additions, the ear would be able to pick up electromagnetic signals like radio, TV, Wi-Fi, etc. Ironically, the ear cannot be used for hearing because it does not have a microphone since a microphone cannot be printed. But we'll soon have fully-functioning ears in the market, too. Researchers in China have created a 3D printer called Regenovo. Unlike other 3D printers that use plastic and other material to print, the Regenovo prints using living tissue. The researchers also state that fully-functioning 3D-printed organs could soon be a reality. In a world where people perish due to lack of organ donors, this would definitely solve most of the problem.

Prosthetic realism

All prosthetics suffer from one common issue - aesthetics. No matter how good they look, when it comes to the real thing, they don't match up. Solving a part of this problem is a consultancy in England called Fripp Design. They use sophisticated techniques to collect the 3D data to create the prosthetic organ and customise it to make it look real it by adding wrinkles, pores, colour, etc to it, depending on the age of the person for whom it is being made. For 3D printing the organ, they use a custom formulated starch substrate mixed with medical-grade silicone to give the organ flexibility and robustness. The results are quite astounding and look very realistic.

Mind-Controlled Prosthetics

What good is a prosthetic if you can't make it move to your will? There are several researches that are working just to solve this problem. No more walking with a stiff joint. Long John Silver would have loved to hop around on one of these. There are innumerable researches going on around the world when it comes to mind-controlled prosthetics:

Nerve/Muscle Interface

Both military funded operations, the US has been developing bionic arms and legs



Prosthetic limbs advance further by the day



Mind-control on Prosthetics like a natural limb?

which use the nerve signals in the limbs to move the prosthetic instead of tapping into the brain for the signals. The first is DARPA's Reliable Neural-Interface Technology (RE-NET) programme which uses the signals that are already coming through the nerves and muscles to move the prosthetic arm. The second is the US army-funded research into a mind controlled bionic limb that enables a person to walk, climb stairs, wiggle the feet, etc. With just 1.8 per cent chance of error, the bionic leg dances to the wearer's tunes and moves when the wearer thinks it. The bionic leg is interfaced to the leg through nerves rewired to the hamstring and linked through sensors. Currently, this project has seen investments to the tune of $8 million.

I can feel again

This is something that every amputee wants, to feel the lost limb again. While it may not be possible currently to regrow a limb, researchers are directly tapping into the brain to send the sensation of touch to it from the limb.

Although the research is currently being conducted on rhesus macaques, it won't be long before the results are applied to developing advanced prosthetics that allow one to feel the sensation of touch. The research was carried out by inserting electrodes into the macaques' brains into regions that mimic the sensation of touch and also reflect the location of the sensation trigger. Through the electrodes they simulated the feeling of being touched and rewarded the macaques with treats for

Photo courtesy: Raytheon Company

Facebook will die... soon
By analyzing MySpace data, a Princeton researcher predicted the end of Facebook akin to a disease:
http://dgit.in/1f8m5nV

R.I.P scams up
Symantec claims on its blog that social media sites are witnessing an upsurge of Rest In Peace scams that fakely allege the death of popular celebs

identifying the location of the sensation. The next step for these researchers is to simulate signals that identify the shape, size and material of the object.

Computer-controlled prosthetics

Another issue with prosthetic limbs is that they can't exactly replicate the nimble and natural movements of a real one. Researchers at the Michigan Technological University are solving this problem by developing a microprocessor-controlled leg that has an ankle that can move from side to side to adjust to the terrain. The pressure sensors at the bottom of the prosthetic send relevant information to the microprocessor which then adjusts the angle of the foot via the ankle for a more natural-walking feel.

App-controlled hand

And yes, bionics have entered even the Apple ecosystem. Introducing Touch Bionics' i-limb – the app controlled prosthetic hand that can be configured for a variety of tasks via the tap on the app which is compatible with iPads and iPhones. While the hand is controlled via signals that come through electrode attached to the user's stump and picks up electric signals, the Quick Grip biosim app connects via bluetooth to the hand and can be used to apply 24 pre-programmed grip options like typing, using a mouse, holding paper, etc.

Prosthetics are not just limited to what you have read here. Around the world, people have been getting replacements for bones, skull plates etc but these are mostly non-moving parts.

Exoskeletons

Now a topic that would make any Iron Man fan stand up and take notice - Exoskeletons. Most of us can't wait to become Iron Men ourselves and are anxiously waiting for the day that technology enables us to do so. That being said, there are various developments around the world that also focus on developing exoskeletons that help people in walk again or assist in medical care. Here are a few of these exoskeletons which might become common in the near future.

Military

Although nowhere near the superhuman abilities of Iron Man, military exoskeletons match it in one area – super strength. The two major military exoskeletons in development are the XOS by Raytheon and the Human Universal Load Carrier (HULC by) Lockheed-Martin. While the HULC focuses on the legs and back, the XOS focuses on all, the arms, legs and back.


Exoskeletons – Elysium, much?

The HULC, which is made up of powered titanium legs, enables a soldier to carry up to 200 pounds of weight over any terrain. It is a flexible hydraulic-powered anthropomorphic exoskeleton that allows the solder to perform deep squats, crawls, and most other battlefield movements.

Like the HULC, the XOS exoskeleton is also capable of allowing the user to lift 200 pounds or weight. Wearing the exoskeleton, the user can run, walk and even rebalance if he/she stumbles. The XOS is a versatile exoskeleton and allows the wearer to perform a wide variety of nimble actions like climbing stairs, kicking a football or punching through wood (Heck yeah, this is what we want). Expected to join service in 2015, the XOS is powered by internal combustion hydraulics engine with electrical systems. Computer processors are present in every joint of the suit.

Multipurpose

Quite frankly, at the moment, exoskeletons are needed much more in civilian life than on battlefield (not saying that a kick-ass robosuit isn't important, but lets help humanity first). Exoskeletons can serve multiple purposes in civilian life like medical care, disaster-fighting, and areas where the strength provided by an exoskeleton is of maximum use.

For example: A mix of all the popular sci-fi movies, the Hybrid Assistive Limb or HAL: (yes, we all had the same 'Aha!' moment) built by Cyberdyne Inc (if they develop an AI, run, if you want to live) is robotic suit that enhances or extends the body's functions. It is also the first personal exoskeleton to receive a global certificate and was used in disaster fighting in the Fukushima nuclear plant disaster in 2011.

HAL is being used in hospitals across Japan where it is being used by people with muscle weakness and by people with disabilities due to spinal cord injuries, etc. HAL interprets the electrical signals around the skin where there is muscle damage and moves accordingly.

In conclusion, the field of advanced prosthetics is already vast, and growing. There are bionic eyes, livers, blood vessels, stem cells out there and who knows what other organ we might print/create someday. Things can only get better in the future (imagine nanobots that enable shape changing bionics that would move, feel and look like the real thing). Picture a time when we will have our own Elysium suits like Matt Damon.

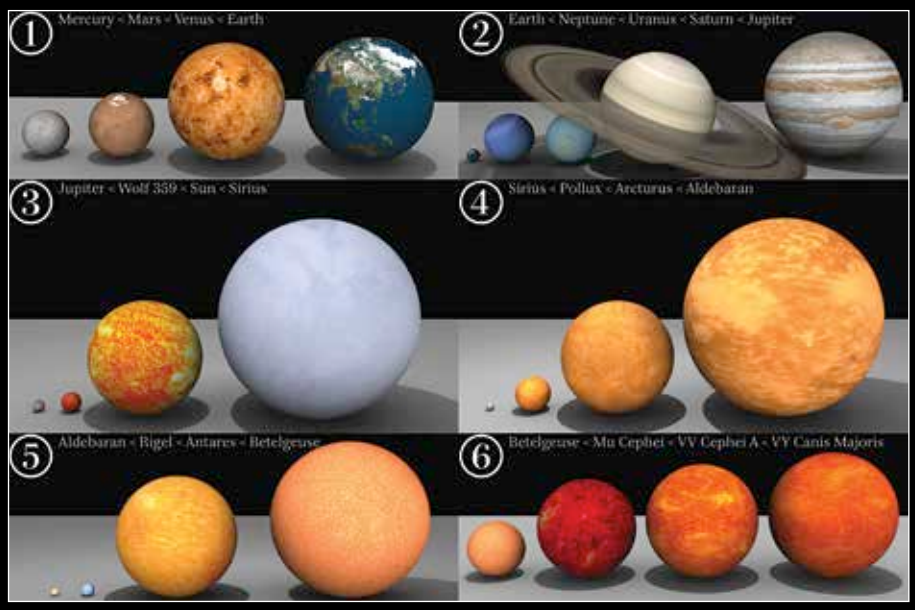
But to end this with a little food for thought: after this human/machine integration, will we be machines or humans when most of our parts get replaced/enhanced? Should we avoid being assimilated or is resistance truly futile?

The Extreme **Awesomeness** of the Universe

When it comes to the Universe - infinity is just the beginning. Here's a very broad look at the awesome scale of the universe

Samir Alam
readersletters@thinkdigit.com

"Modern science has been a voyage into the unknown, with a lesson in humility waiting at every stop. Many passengers would rather have stayed home."
– Carl Sagan



In the Universe, size is always a relative thing, never to be taken for granted.

As 2013 was coming to an end, astronomers interpreting 15 years worth of data documenting the distant state of the universe came to an astounding discovery. The trio of Istvan Horvath, Jon Hakkila, and Zsolt Bagoly saw something strange in the data that contradicted the very foundations of astrophysics - they called it the Hercules-Corona Borealis Great Wall.

This immense superstructure of galaxies held together by gravity is the largest structure in the observable universe. It measures more than 10 billion light years across and exists in violation of the cosmological principle. The principle is an axiom that dictates that when the universe is observed on a large enough scale then matter is found to be homogeneously distributed. But the dense superstructure of Hercules-Corona Borealis Great Wall flies in the face of that rule and has sent scientists scuttling back to the drawing board.

The hierarchy of astronomical structures most people are familiar with - moons, planets, stars, solar systems, galaxies and universe - is far more complex than ever imagined. Galaxies themselves are a generalisation of clusters, sheets, walls, filaments and voids that together are considered to be one unit. But as detailed research continues scientists have discovered amazing scale of structures just by observing the interconnectedness of the clusters and filaments.

In recognition of how easily the universe can turn decades of human scientific thought on its head we present a series of astronomical phenomenon that demonstrates the awesome scale of the universe.

The Cosmic Web

One of the oddest and definitely largest gravitationally interconnected super structures of the Universe – the Cosmic Web – was discovered in January of 2014 when the quasar UM287 illuminated a section of space revealing a vast network of filaments that spread out across the galaxies in a three dimensional web. Researchers at the University of California, Santa Cruz took the first image of this cosmic web with the 10-meter Keck 1 Telescope in Hawaii.

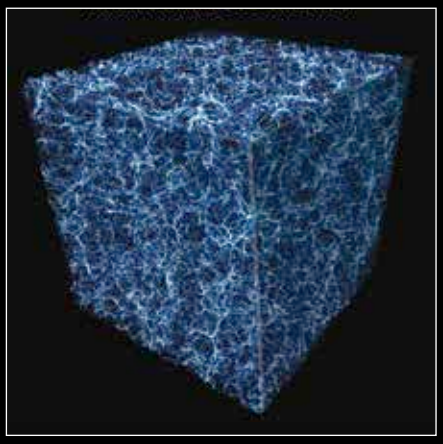
This new discovery of a far reaching nebula is twice the size of anything ever recorded before and the first to show how the filaments are organised together to create this web. Using computer simulations based on gathered large scale dark matter data that was illuminated when the



Your name in space
If you want your name to be left on an asteroid, send a mail to NASA now
http://dgit.in/AsterName



Spaceship on comet
Rosetta spacecraft is about ready to wake and prepare to land
http://dgit.in/CometLand



The zoomed in part of the image is only a small part of the cosmic web and measures 10 million light years across. It oddly looks like a Borg Cube. *shudder*

2 million light year-long nebula of gas was illuminated by the quasar. The 10 billion light year distance between the quasar and the Earth paints a remarkable picture of the cosmic past due to the time taken for the light to travel.

Star Power - The Hottest and The Largest

Currently the hottest star in the cold deadness of space is the white dwarf in the centre of NGC 6537 or as it is popularly known - the Red Spider Nebula. Here the surface temperature reach up to 300,000 degrees Celsius, which is 50 times hotter than the sun in our solar system. The Big Bang is estimated to have ignited at the unimaginable hellish Planck temperature 1.416E32 Kelvin and since then the Universe has only cooled down. The exception being when in July 2012 the scientists at CERN created a quark-gluon plasma that briefly existed at 5.5 trillion degrees Kelvin. Cool.

The largest star that's been found so far is NML Cygni purely based on its radius which is 1,650 times that of the Sun and is located 5,300 light years from Earth. Although it is the largest in size when compared to currently measured stars, it isn't the most massive. The NML Cygni star is only 25-40 times the mass of our sun, whereas R136a1 or the Wolf-Rayet star, is estimated to be 265 times the mass of our sun. Not only is the Wolf-Rayet star the most massive star known it is also the most luminous, shining 8.7 million times as much as the Sun. However, due to its 165,000 light year distance from Earth, it's shine is not that clearly visible. But perhaps if we squint we might catch something.

The Largest Galaxy

The Universe is nearly 84 per cent dark matter, with empty space that separates cosmological structures that are held together by gravity from each other. Galaxies are separated by nothingness and form a closed structure that can reach extraordinary scale. The IC 1101 is the largest of all these galaxies that has ever been discovered. Originally seen by William Herschel on 19 June 1790 in the constellation of Virgo, where this supergiant elliptical galaxy is the heart of the Abell 2029 galaxy cluster.

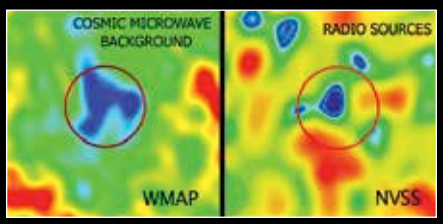
Scientist estimate that this super galaxy was formed over the eons as it merged with many more smaller galaxies that were part of its cluster. The IC 1101 super galaxy covers an expanse of 6 million light years in size which makes it 60 times larger than the size of the Milky Way galaxy in which our solar system exists.



Red Spider Nebula

Void To Parallel Dimensions

In the Universe, nothing happens small - even emptiness. The Boötes Void and the CMB Cold Spot are examples of how the Universe has an odd way of distributing itself in unpredictable ways. The Boötes Void is a near spherical region of space in the constellation Boötes, that is 250 million light years across but as the name suggests - empty, at least by universe standards. With only 60 galaxies it is the least populated area of observable space.



For some reason the bluey part in the middle of the greeny part makes scientist think of parallel universes. Psychedelic.

However, the CMB cold spot is a whole other kettle of fish altogether. Recorded by the Wilkinson Microwave Anisotropy Probe (WMAP). It was initially a simple statistical aberration that indicated an unexpected cold area in the Universe. Considered by many to be a supervoid it was unable to fit the cosmological models of that definition when further research was conducted. All applied and known research indicated that it could be 6 to 10 billion light years away and nearly one billion light years across in size. The sheer improbability of its existence forced scientists to consider many radical explanations.

The strangest and perhaps most fun explanation came from Laura Mersini-Houghton who claimed that the CMB cold spot pointed to the evidence of another universe that was visible due to quantum entanglement. And although the theory is stuck due to available data, if this theory proved true then it may not only prove the evidence of parallel universes but also support string theory.



Mondays must really suck in this neighborhood of the Universe.

The Largest Black Hole

As we know black holes are formed when stars collapse and begin to condense in size but not mass, forcing a concentrated area of highly compressed matter which exerts huge gravitational pull in the region, so much so that even light is said to be consumed by it, thus giving it the name black hole. The paradox of black holes is that the smaller they may be in size the greater they are in mass. As the most massive cosmic phenomenons, black holes impact not only their surrounding regions but also the balance of all things due to their immense gravity.

The largest supermassive black hole in the observable universe is the quasar OJ287 that is calculated to be 18 billion times the mass of our sun and is found in the centre of its galaxy in the constellation Cancer. To truly imagine its size a cosmic scale would be necessary, in the case of OJ287 it would be an object that is capable of eclipsing our very galaxy in term of size.

A possible successor to this blackhole is the yet unconfirmed supermassive black hole in the centre of the NGC1277 galaxy in the constellation Perseus. This blackhole is believed to be 17 billion times the mass of the sun and is composed of nearly 14 per cent of this galaxy's mass. In perspective, the event horizon of this blackhole is eleven times the distance of Neptune from the Sun or roughly 300 AU (diameter of the solar system is 61 AU).

Largest Man Made Structures in Space

In the face of the Universe's immense scale the largest space structure made by humanity seem like nothing but specks of dust. However their very ambition is a testament to the human potential – not only in their success but in their symbolism, which embraces unity of nations and scientific cooperation.

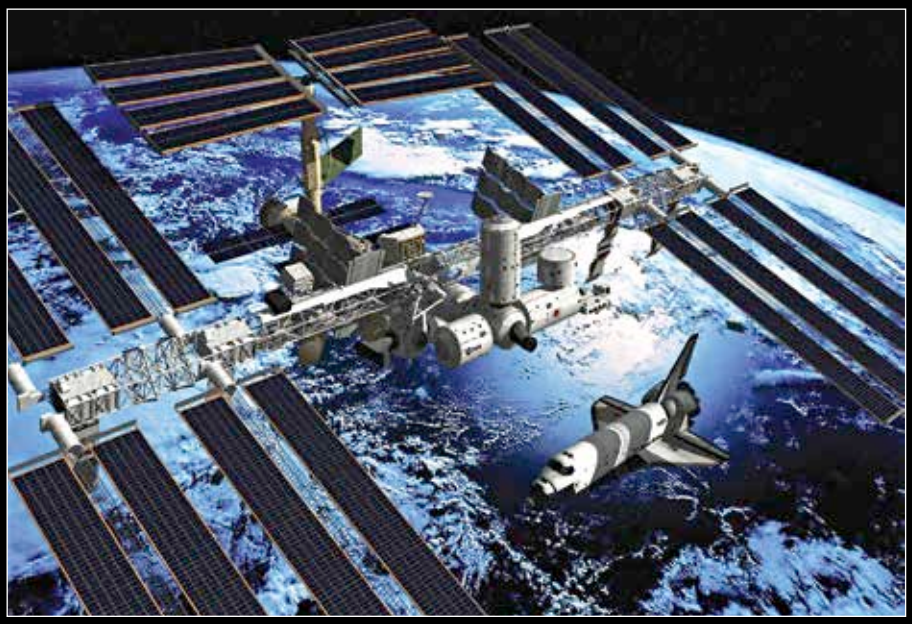
The International Space Station is the largest man made structure ever to be launched and can even be seen orbiting the Earth in the clear night sky. The ISS was assembled in modules with the first steps in November 1998. Since then over 150 components, 1,000 plus hours of spacewalks and a steady roster of dedicated astronauts, cosmonauts and scientists have kept building this structure despite setbacks. The total mass of the station is over 400,000 kilograms and is expected to reach 400 tonnes when it is finally completed by April 2014.

The ISS is an example of massive large scale cooperation between various nations that include the United States, Russia, Japan and those in Europe, who collectively embarked on this scientific and education mission. The 73 meter long station orbits the Earth 15.7 times per day with a steady rotating international crew from 15 different nation that has inhabited the station for over 13 years. By setting aside historic disagreements and overcoming international conflicts, the ISS stands as a symbol for the commitment of humanity towards its future that will surely involve adventures towards space.

Humanity Dreams Biggest

Carl Sagan said that the visions we offer future generations shape the future and dreams are the maps to discovering them. The many astounding undertakings by humanity such as the ISS show how at times even conflicted groups of nations can collaborate towards a common peaceful goal. This ability to set aside our differences for what truly matters is the true largeness of the human spirit - one that can't be contained by just one planet.

Its worthwhile to remember that as the Voyager 1 space probe was leaving the Solar System in 1990, after having finished its primary mission, Carl Sagan made a small request of NASA - that it be rotated so it could take and transmit an image of how the Earth looked from 6 billion kilometers away. This image came to known by its iconic name - the Pale Blue Dot - forever becoming a reminder of the unimaginable scale of the universe and evidence of humanity's humble existence in it. It is important that even in the face of that humbling realisation humanity has continued to follow its better angles and look upwards to the sky with awe.



The ISS has been occupied for over 4825 days and has orbited the Earth nearly 87,000 times, and will continue till 2020.



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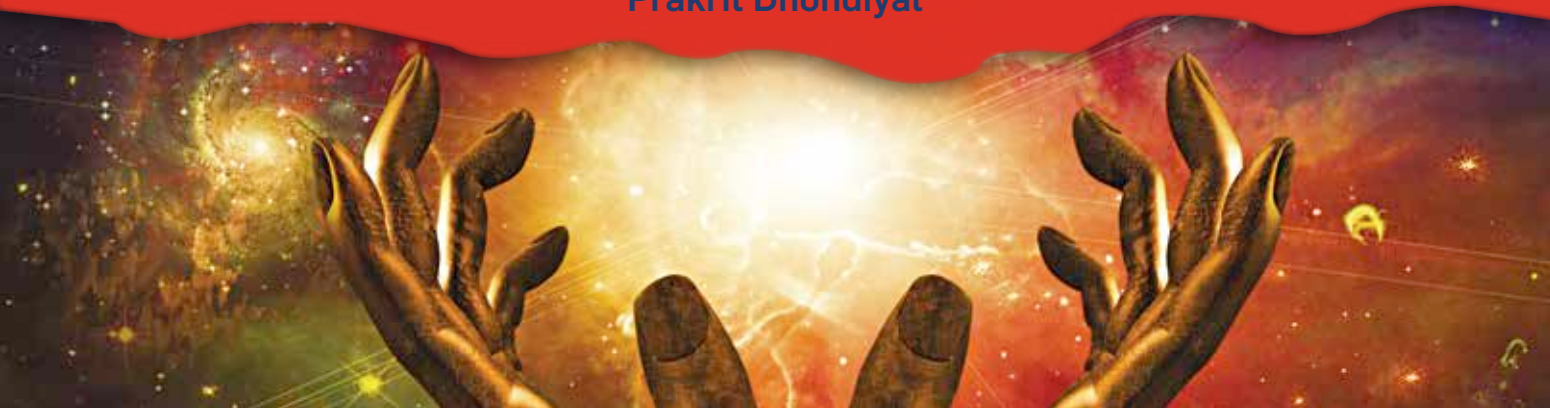


GOD Vs SCIENCE



You'd think Digit votes science right? Wrong! We're not choosing sides, we never do. We just examine the evidence

Prakrit Dhondiyal



Yes. That old question again. Why? Well, because it never really gets old. And while people keep talking about it, people like us shall oblige and print yet another article on the subject. So let us have a little chat about these two behemoths that have the world wrapped around their composite little fingers.

God's been around longer

Even if we take Darwin's theory of the origin of the species into account, saying that life on earth was a result of a confluence of favourable events (just the right conditions in the ocean at just the right time, creating the first single-celled organisms) a devout man would always argue with 'it was a higher power who set the ideal conditions'. And in the interest of giving credit where it is due, when mankind was walking around, fresh off the trees, club in hand, we didn't attribute lightning to an electrostatic discharge between the electrically charged regions within clouds or between a cloud and the surface of a planet. It was easier to blame superior, omniscient beings. Yes, back then it was more likely that that the gods of thunder, air, wind and sky were responsible. So in all due fairness, gods were the ones who set the worldly stage in our minds since time immemorial. They have helped human evolution at the spiritual level, taking the blame for anything that went wrong in the world, so that we could concentrate on evolutionary progress. Without the training wheel that was a supreme power, humanity's evolution may not have proceeded in the direction history shows us it did. So score one for the Lord!

Score: Science: 0 / God: 1

But Science is all around us

Science has a one-up over the powers of Godliness – it's tangible. As mysterious as your supreme power's ways are, science has had the added advantage of being based on quantifiable and observable fact. Science has its own laws, which may be occasionally malleable and bend to accommodate new discoveries, but refuse to break. The one reason why reason is so popular is because people have an obvious tendency to believe the physical over the metaphysical. It's a page out of Plato's Theory of Forms.



God – in sickness and health

While the idea of something is purer and more appreciated, one must make do with the physical embodiment of the idea, since it is more palpable and can be physically experienced as opposed to the spiritual. Considering a huge chunk of the life that we do know exists is in the realm of the physical, it's not a big surprise that scientific advancement has been on a rise since before the term 'scientific advancement' was actually coined. The all-time favourite goal of humanity has always been to achieve the impossible – a goal that seems more within our grasp by the decade. Majority of these achievements being through science. Science takes a point, here.

Score: Science: 1 / God: 1

Battle of the Publishers

Cutting down to the core of proof of the existence of an all-powerful being, most religious people hold open their religious texts as proof that God (or his proclaimed son/prophet) existed and passed on teachings through his human delegates. Well, if holy texts are proof of God's existence, Stephen Hawking and Leonard Mlodinow's book 'The Grand Design' is the counter-argument debunking the claim that the Universe was created by one or even many beings. The core statement of their 'Multiverse' argument is to explain "the fine tuning of physical law without the need for a benevolent creator who made the



A logical afterlife?

Universe for our benefit. Because there is a law like gravity, the Universe can and will create itself from nothing. Spontaneous creation is the reason there is something rather than nothing, why the Universe exists, why we exist." Drawing inspiration and comparing their argument to Darwin and Wallace's theory of evolution, Hawking and Mlodinow make some very valid deductions of reasoning.
Score: Science: 2 / God: 1

The Qualia of religious belief

First used by Clarence Irving Lewis, an early 20th Century American philosopher, 'qualia' is loosely used to refer to individual instances of subjective, conscious experience. The theory of Qualia states that the personal experience of any individual is impossible to replicate identically with another. Even with something as simple as the perception of colour. We all know what each colour is supposed to look like. We define it by giving it a name. For example, the colour green. While most of us can distinguish green from the other colours, our perception of the colour itself is unique to each of us. We have no way of proving that the other person sees 'green' the same way as we do. While each of us can point out the colour off a lineup of colours, actually perceiving it the way others do is beyond our capabilities. Similarly, each individual's experience with their belief in a higher power is unquantifiable. Which is where the gap in communication between the atheists and theists occurs. The lack of personal experience either way is one which is beyond anyone to bridge. Divine faith or any other kind of belief is meant to personal and tailored to each individual. At least until science advances to a level of telepathic communication.
Score: Science: 3 / God: 1

The logic behind wagering on the afterlife

Whoever said religion and religious belief was illogical? Sure, blind faith of any kind may seem to lack fundamental logic, but even logic can have a justification for the religious belief of life beyond death. Blaise Pascal was the man to look at the situation beyond bias of any kind. Religious beliefs of any kind have one major lifestyle choice in common – If you do good things, you shall be rewarded in the afterlife. The logic behind Pascal's theory renders the belief in that theory as a whole redundant to the outcome. Assuming you do believe in life after death, the outcomes are set out in front of you. But even if you don't believe, there are two possible outcomes – first, that there is life after death, at which point, doing good deeds may indeed be a good idea. Second, there isn't an afterlife. In which case, it doesn't matter anyway. Logically, being a good person doesn't really have a downside. Ergo: be a nice person. Period.

Of course, there is always the underlying counter-argument to the same. What if doing good deeds doesn't take you to heaven, and that the philosophy behind it is a massive ruse propagated by whichever evil ruler of the afterlife you believe in to ensure that you make your way to the dark side? Skidoosh. However, considering we're looking at a fair, just and balanced world, we can disregard that assumption and go with what we know people believe as a whole. So:
Score: Science: 3 / God: 2

Scientific theory beyond the intellectually elite

Scientific fact is not a subject comprehended by many, including several hundred thousands of people who accept scientific fact as dogma (yes, we see the irony). If someone tells you about the Higgs Boson and preaches the mathematical proof of its existence, it may not be comprehended by every interested person in all its glory. Yet, the existence of the God particle is accepted by the scientific community as large since it has been verified by experts in that particular field. When seen in this light, majority of people who believe in it do so at face value. Why then, should a person who has studied the path of the divine all their life not be taken seriously. Why is it so difficult to take something so metaphysical as a supreme power at face value? Is faith a matter of hypocrisy? Or are some people simply more conditioned to believe that scientists are more trustworthy than a person of God?
Score: Science: 3 / God: 3



God, give us the strength...

Why the stalemate?

Despite any arguments presented by people, Science and God have really done nothing to be butting heads. They are – like most ideals and beliefs – content in being exactly where they are, existing for the sake of existence. Their enmity is a fallacy that we, being mortal human beings propagate to feel good about ourselves. They are, in fact, the idiomatic philosophers who meet every weekend for a nice long talk over scotch and cigars, chuckling amongst themselves, sharing the joke mankind so retardedly strives to understand.



HIPSTERS Vs GEEKS



The 'hip' versus the rising stars of the 21st Century. Where do you think this one's going?

Prakrit Dhondiyal

Hipsters see the Hipster culture as multi-faceted and expansive with depth and limitless dimensions. That's essentially wrong for several reasons. Firstly, because very few Hipsters would actually be able to put those four images together for themselves. Secondly, because it would soon catch on, which would result in instant redefinition. Third, Hipsters never call themselves 'Hipsters'.

What is a Hipster?

The word 'Hipster' draws from the 1940s American 'hepcats'. Hepcats in the 40s were cognoscentes of Jazz, creating a subculture within the pre existing Jazz culture that was popular at the time. An elitism that went pseudo with today's Hipsters.

Over the past decade Hipsters made it a part of their culture to recognize the cultural capital in objects, indulging in them until the point when they become 'too popular' and then discarding them. If you prod a sleeping nerd, he'll curse in code. If you take a swipe at a fashionista, she'll glare with glamour. If you take a slash at geeks, they bleed in binary. But if you If you scratch the surface with any Hipster, you find nothing underneath.

Where it all begins for us

Coming to the battle between geeks and Hipsters, the superficial annoyance is quite simple. Subcultures like the geeks have to work for their credibility in their social groups to attain their own cultural capital within that group. Hipsters just cherry pick the stuff that they think is 'kind of cool'. This is seen by most people as devaluing cultural fashions. They cash in on their capital without really embodying the meaning. For example, in the case of geeks, wearing a Space Invaders T-Shirt inherently implies a certain affinity for old-school 8-bit games, or at least some kind of experience of the wearer in the same. A Hipster would wear it because 'aliens are awesome' or 'Oh, that's too cute! I must have it!'. All of this would generally be fine, if Hipsters identified themselves as being a parasitic culture they are. But one of the traits of Hipsters is the fact that they refuse to classify themselves as Hipsters. Too uncool.

Score: Hipsters: 0 / Geeks: 1

Enter: The Internet

Techies celebrate the internet as the portal into their own true potential. A place to virtually congregate with the world. A place where people and opinions matter. A place to plan the next big thing – and that's what got the Hipsters' ears cocked.

Hello, Twitter. What started off as an online news feed slowly expanded to becoming a place where people can broadcast their opinions for all their followers to hear. Opinions and followers. How could the Hipsters resist? The invasion began. Servers were razed to their final byte. When the garbage value cleared, the banner of Hipsterdom hung over the firewalls of Twitter.

However, in this Battle-not-War situation, they've rarely ventured past that corner of the net, so the score still rises in favour of the geeks.

Score: Hipsters: 0 / Geeks: 2

Who you gonna call?

An important fact you need to know about geeks and Hipsters. Imagine you have a boot sector virus, or a keylogger issue, or even if your computer's been through a gunfight recently. And you have two group of friends you can call



Did Top Cat set the template for Hipsters?

– geeks and Hipsters. Yes, it may seem like an unfair contest, but the Hipsters are quite knowledgeable about current technology. You have two approaches to consider. Do you want the PC fixed really really fast? Or in its own time with precision? If it's the latter, call in the geeks. They may take some time (did you try turning if off and on again?), but you'll have your computer back clean and clear. If it's the former, call in the Hipster. They'll strut in with their bellbottoms, bend over to examine the PC, turn to you and say "This is totally fixable." and take you to the nearest Apple Store.

Score: Hipsters: 0 / Geeks: 3

The tale of tails

There is one thing that the Hipsters have working for them. Their wayfarer vision seems to give them the unique power to interact with the opposite sex. So hey, Valentine's Day's coming up. Swallow your pride and get yourself a Hipster wingman. He'll tweet about you the second he gets off his unicycle. Maybe even send you a few iMessages, and everything. So go find yourself a Hipster to get you some...love!

Score: Hipsters: 1 / Geeks: 3

Final Tally:

w00t!



INTEL VS AMD



The good old battle of yore, which continues even today, though on a smaller scale and with less fervour

Mithun Mohandas

The endless bickering between Intel and AMD has been going on since time immemorial. We're going to be looking at a few more facets than just performance crowns, however.

Performance

Let's get this out of the way. When it comes to high-end PCs AMD doesn't even feature, be it gaming or pure workstation performance. While overclocking records are broken on a regular basis by AMD processors the winner in a performance showdown almost always happens to be an Intel processor.

Score: Intel 1 - AMD 0

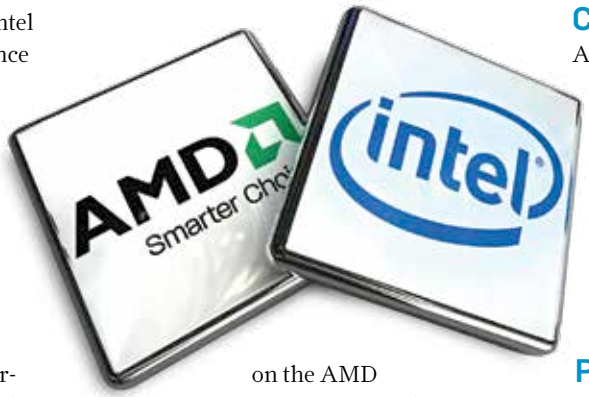
R&D

Intel was one of the top four big-spenders in R&D last year. They spent close to 19% of their revenue on R&D, and though AMD also put down 20% of their revenue for R&D, that works out to $10.1 billion for Intel and $1.2 billion for AMD in 2013. Since we don't award sympathy points for underdogs, this one goes Intel's way too.

Score: Intel 2 - AMD 0

On-die GPU

Intel doesn't even stand a chance in this arena, AMD bought out ATI and that gave them an edge over Intel that could've been easily matched had Intel and NVIDIA not had a falling out back in 2009. They had a cross-licensing agreement in place much earlier than AMD's acquisition of ATI. So even with plenty of time to build a good lead, things didn't quite fall in Intel's favour and we can now see the result with AMD's processors performing way better than Intel when it comes to on-die GPU performance. In Bioshock Infinite, the HD 8670D found



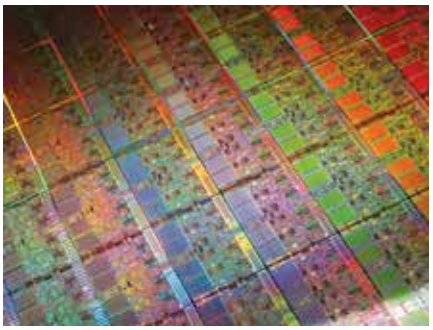
on the AMD A10-6800K provides playable frame rates at medium configuration while Intel's HD4600 on the i5-4430 can't even manage that.

Score: Intel 2 - AMD 1

Getting your money's worth

AMD's flagship processors might not perform as fast as Intel's, however for anything but the highest budgets, AMD CPUs offer better performance to price ratios. And this is not just with the processor in focus, AMD's on-die GPU scales well with AMD discrete GPUs which is something Intel hasn't been able to replicate mainly due to licensing issues. While Virtu was something Intel tried out with the Sandy Bridge / Ivy Bridge it hasn't quite caught on just yet.

Score: Intel 2 - AMD 2



Ah silicon, where would we be without you?

Console wars

Again, Intel is not even present here. The Xbox 360 had a AMD Xenos processor, the Wii featured an ATI (now AMD) Hollywood processor and the PS3 had an NVIDIA RSX processor handling graphics. Upcoming consoles also feature custom AMD APUs so... victory AMD.

Score: Intel 2 - AMD 3

Power efficiency

Intel's has had the upper hand in power efficiency and they've managed to maintain that edge over the years. And given the tick-tock release cycle they have, the processors get more and more efficient with each passing generation. Finally, the 3D transistor technology Intel adopted recently has even furthered this lead.

Score: Intel3 - AMD 3

Sockets

Over the past six years, Intel has come out with five new sockets while AMD had four. A blatant way of jumping sales (not just for processors but motherboards also)? There is a way to avoid this by having the chipset embedded on the processor itself. AMD's Kabini and Intel's Atom SoCs are doing just that except they will be limited to the laptop/tablet market.

Score: Intel 4 - AMD 4 (this one's a tie)

The scores are tied because of AMD's diversification and also because it was recently chosen for both the new consoles. However, it must be noted that AMD only recently started making a profit from the consoles, while Intel has rarely had a bad year. With sheer volume of sales in hand and better performing products overall, Intel seems to be the winner, tied score or not!

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XBOX ONE Vs PS4



Not just a debate but *the* debate around the hottest new gaming consoles on the block. What gives?

Jayesh Shinde

Ah, the great debate of our time. That which must not be named. It divides families, where ties that bind don't matter. A destroyer of friendships. This is what makes boys out of men. It doesn't get any better than this, does it?

Hardware

Based on AMD Jaguar APUs, there's a very thin dividing line between the graphical quality of games. However, there's no doubt that on paper the PS4 has a slightly better GPU than the Xbox One's. So...

Score: Xbox One 0-1 PS4

Controllers

PlayStation fans like their parallel analog sticks just the way it is, while the Xbox controller's diagonally distant analog sticks work as well, if not better. Nothing to distinguish here; each to their own. Tie.

Score: Xbox One 1-2 PS4

Motion controllers

Nothing to debate here. Microsoft's Kinect wipes the floor with PlayStation's Move / Eye motion controllers. When Microsoft released Kinect (codenamed Project Natal), it ended up surprising itself and selling over 8 million units in the first 60 days of its release. It still holds the Guinness Book record for the fastest selling consumer electronics device.

Score: Xbox One 2-2 PS4

Exclusive game titles

It's still early days in the lives of these spiffy new "next-gen" consoles, but the Xbox One has clearly stolen a march on the PS4, in terms of exclusive game titles on offer for their respective fans and what's due to come in the next few months. While Sony's failed to announce any new exclusive game for the PS4, Xbox One fans are eagerly awaiting *Titanfall* – an exclusive that's giving gamers all over a wet dream. For now, the Xbox One's ahead.

Score: Xbox One 3-2 PS4

Backwards compatibility

Due to the 7-8 year long wait before Sony and Microsoft decided to refresh their respective consoles, gamers on either side of the chasm are facing the prospect of having their beloved games collection being reduced to nothing but dead plastic. Totally outrageous, of course! But try telling that to Xbox fans – which is what Microsoft did, in a way, by declaring that the Xbox One won't be compatible with X360 games, despite promises of a cloud feature to enable the same. Same with Sony and the PS4. Real bummer, that. Minus 1 point each just for that!

Score: Xbox One 2-1 PS4

Remote play

This is one feature that both Xbox One and PS4 deploy, but where SmartGlass only works as a companion app – similar to PlayStation's app for smartphones and tablets – the PS4 has the added bonus of beaming a live game onto a PS Vita. This is a cool differentiator, and hence:

Score: Xbox One 2-2 PS4

Online network

Purely concentrating on gaming content, the Xbox LIVE online service had an early advantage over Sony's PSN (which left many early users scratching their heads in confusion). But Sony's ramped up PSN with PlayStation Plus subscription with a ton of games on offer – for free. PSN offers game trials, automatic demo downloads, including exclusive downloadable content, store discounts and early access to PSN games. What more do you need? Therefore...

Score: Xbox One 3-4 PS4

VERDICT: The new PS4 is our pick, take it or leave it. Sony's PS4 is slightly better centered around gamers than the Xbox One, but then again with Microsoft's console you get the potential of more than just a games console, but an entertainment hub. The choice, as always, is yours.



The battle of the consoles seems to be a two-way war between Sony and Microsoft

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ONLINE VS OFFLINE



In the midst of the biggest brushfire event in human history 'til date – Have we succumbed?

Prakrit Dhondiyal

Every new era in human development has had a certain pattern with respect to the reaction of the people to change. Compared to historical events like the Crusades, the Restoration era, the Renaissance and (to be very honest about it) the rebel ages of Rock music, the acceptance of the Digital Era has been a brushfire event in human history. The part of technology that has had the widest impact is the internet and all that it brought in tow. However, is totally digital and online really better?

Face vs Facebook

Chances are it's Facebook, but Google+ or whatever your choice of online social networking also works here. Where does one draw the line between social convenience and near OCD-ish obsession? As a tool, cyber networking can be very useful. When utility crosses the line into a reliant necessity, maybe it's time to worry. On a positive note, LinkedIn is one website that has refrained from straying too far from its original goal as a professional networking website. But a silver lining does not a nailless coffin make. The bottom line? Ask anyone, and they'll tell you that they'd still rather meet in person.

Score: Online: 0 - Offline: 1

http://onlineshoppingforjunkyoudontneed.com

An addiction in itself, online shopping is fast taking over from physical shopping. It's cheaper... the convenience of ordering what you want from the comfort of your home is impossible to compete with. No long lines to pay, no sweaty and rude crowds at discount stores. No pushing, no shoving... Wondering why shops exist at all anymore? There is the small matter of touch and feel. No matter how digitised



Is the future of data in the clouds?

some of us are, there are still many more who just love the experience of being out doors, bargaining, inhaling smog on a roadside and when coupled with actual friends, can be an unbeatable experience. We're a stingy bunch though, so Online had us at "cheaper"...

Score: Online: 1 - Offline: 1

Games vs sports

Not all of us are blessed with hand-eye co-ordination. Heck, for some of us, digital games are the only way to compete with others without getting a nosebleed. To each his own, and we certainly don't endorse indoor-only gamers. A little sunshine did no one any harm. Since this is dependent more on varying physical and mental attributes of our diverse human race, it's a tie.

Score: Online: 2 / Offline: 2

Cloud storage vs hard drives

This one depends on the type of data actually. Your contacts and email? Cloud obviously. Does anyone actually POP3 their mails to Outlook anymore? Music preferences, streaming media, even documents and presentations, cloud obviously again. However, for your pirated movie collection and C:\Users\<username>\Downloads\Innocent\Folder\Name\to\store\innocently\named\files\that\you\do_not\want_others\to_see\videos.rar you might want a local hard drive. The problem is one of filesize, and also how often you need to access the file, from where, etc. Cloud loses on two points: its needs an internet connection and cannot be used for large files. Since we've seen out lives change drastically in the digital age, and the need to access our data from anywhere is growing, as are internet speeds even in India, cloud wins here.

Score: Online: 3 / Offline: 2

e-Learning vs Traditional Education

With the raise in the internet bar comes the opportunity to change educational trends. e-Learning has picked up. The popularity of the Khan Academy is proof of the same. Sure, traditional learning methods have the advantage of the experience, But unfortunately for traditional education, The advantage of reach and the support of tech advancement that e-Learning holds is hard to be denied. Especially with virtual reality becoming more of a reality, Imagine attending interactive lectures by sitting on a chair at home and popping on the Oculus Rift. Attending lectures at prime universities around the world as a member of a virtual classroom, interacting with the greatest scholars in the world at ease. A step towards global literacy.

Score: Online: 4 / Offline: 2

And the winner is...

Well, clearly the scoreboard speaks for itself. Online tech shall prevail, in all its glory. The future is almost here.



WINDOWS PHONE Vs iOS Vs ANDROID



The battle of the mobile OSes still rages on, however we predict a winner already

Kunal Khullar

There was a time when Nokia ruled the smartphone world with its Symbian operating system. But today the platform is nowhere to be seen and it has been replaced by far more superior mobile ecosystems. With improvements and advancements in the hardware world, we have seen massive strides when it comes to mobile operating systems.

Apple really shook up the smartphone world with the iPhone but in recent years, Android has raised the bar and is now the most used mobile platform in the world. For that matter, even Microsoft's Windows Phone has pulled up its game and has started giving Google and Apple some stiff competition to deal with. But we come down to the ultimate question, which one is the best?

In our opinion, numbers and statistics could suggest an early winner, but frankly, it's a subjective choice, depending on how you use your smartphone to how much tinkering you like to do.



The battle for your pocket, with billions upon billions of Dollars at stake

App support

Although iOS has a huge number of apps, it has fewer free apps as compared to Android. Whats good about Apple purchases is that after you buy it you can install it on any Apple device you log into. Because Apple is pretty strict, there is a consistency to the quality of apps on the App store. It's also the store that gets a new app or game first (as it is the highest priority for most app developers).

Android has the largest amount of apps available in the market today and also has the largest number of free apps. In terms of quality, the apps offer an excellent user experience, almost at par with iOS. The only drawback is inconsistency in terms of performance (and at times, even availability), as there is a huge variety of Android devices with different versions of the operating system and different hardware.

The Windows Phone platform had a slow start in the apps department, although in recent months, we have seen some improvement. The quality of apps has been inconsistent, but with the gaining popularity of Nokia's Lumia handsets, developers have produced some good looking apps with decent user experiences. WP is still way behind the leading two though. And of the two, iOS edges ahead thanks to Apple's strict performance rules.

Score: iOS 1 - Android 0 - WP 0

Availability / Accessibility

iOS devices dont come cheap. This rules them out for the average Indian on a budget. When you consider that the cheapest current generation iOS device available today is the iPad mini for about ₹22,000, you understand what we mean.

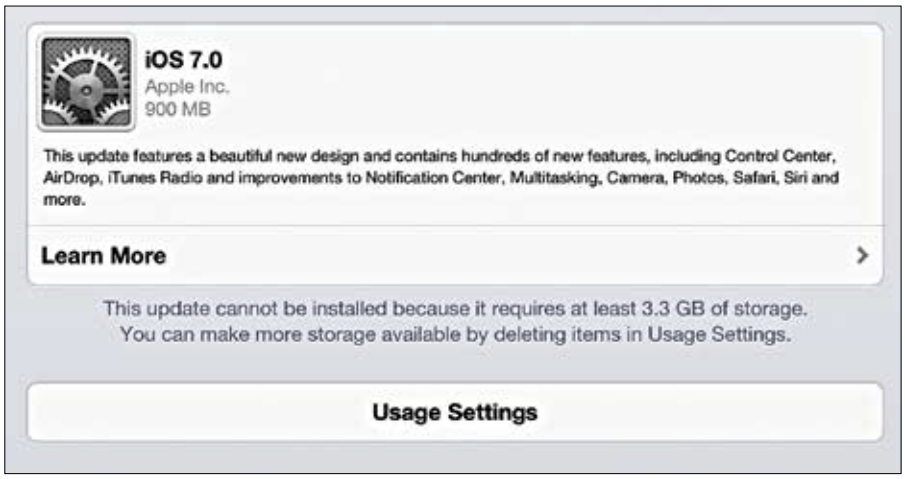
Android is the only one of the three that's available in all price brackets, starting from the budget ₹3,000 devices all the way up to premium gizmos closer to ₹50,000.

Windows Phone is almost exclusively Nokia, which means the range of Lumia handsets. The cheapest WP device you can buy today is the Lumia 520 for ₹8000.

Score: iOS 1 - Android 1 - WP 0

Updates

Apple is very thorough when it comes to updates. A new update is seeded to all the supported devices at the same time, globally. The only drawback is that every new update almost necessarily excludes the oldest devices. Devices which are more than two years old usually cease to get official updates.



iOS wins the update battle with regular updates across all devices

Android seems to be slower with updates, as most of major handset manufacturers customise the Android experience and thus rollout updates only much after an official update is available. Google Nexus devices which run the recommended stock versions of Android are the first to get new updates. Although one can root and update a manufacturer locked device with Google's official update, there is a risk of bricking the device.

Windows Phone is pretty good with updates, and new updates are seeded globally in phases. Almost all devices get new updates, with only a few exceptions taking into account hardware support.

Score: iOS 2 - Android 1 - WP 0

UI Customisation

iOS falls short when it comes to UI customisation. The OS itself doesn't offer any themes or widgets and one can only change wallpapers and a few colour schemes. The latest iOS 7 also has received its share of criticisms for its overall aesthetic value.

Android is the clear leader in customisation as it offers a variety of widgets, downloadable themes, wallpapers and much more.

Windows Phone has a very static UI hence customisation is limited. You can play around with tiles that act as widgets, you can change the colour scheme of the interface and also the lockscreen wallpapers, but that's it.

Score: iOS 2 - Android 2 - WP 0

Hardware Requirements

The good thing about iOS is that it doesn't require high end quad-core processors or endless gigs of RAM. The latest version of iOS has brought in support for 64-bit processors, and the platform still runs pretty smoothly on older devices such as the iPhone 4S.

With Android it's all about the hardware. If you have top of the line hardware, you are bound to get great performance. The OS is power hungry and has brought in octa-core processing to the smartphone world. Thankfully the latest KitKat update is also supported on devices running on a mere 512MB of RAM which is some relief for low-end and older smartphone owners.

Windows Phone has also started raising the bar in the hardware department as recently Nokia launched the first quad-core smartphone with a full HD display - the Lumia 1520. The latest Black update does require one to have a smartphone with 1GB of RAM to enjoy all the features and to make it happen Nokia has started launching smartphones with a minimum of 1GB RAM. However, it's quite clear that even on relatively low-end hardware (read: 512MB of RAM and a dual-core processor), Windows Phone still works well.



Windows is the least spec hungry

Score: iOS 2 - Android 2 - WP 1



Android wins hands down on UI customisation

Conclusion

As you can see, each platform has its share of pros and cons. That's why it's only fair that overall it's a tie between iOS and Android, the two biggest mobile operating systems out there. Windows Phone is relatively new, but don't count it out, because it is offering some exciting devices at some very enticing price points. Soon we might find a three way tie if Microsoft and Nokia keep at it.

Winner: iOS and Android (it's a tie!)



MIRRORLESS CAMERAS VS DSLR CAMERAS



Gone are the days when DSLRs were the only choice for those wanting quality and manual control of shooting modes. DSLRs meet mirrorless, fight!

Swapnil Mathur

Up until now, the DSLR's supremacy in the arena of delivering top notch image quality and shooting experience was unrivalled. Then came about the mirrorless camera, which started as a small, unknown new category of cameras, but slowly has come to be, believe it or not, the thing that challenges the supremacy of the DSLR. They pack equally sized sensors, come with some of the sharpest and best built lenses in a much smaller and lighter form factor. We wouldn't be surprised if you're on the fence between a DSLR and a mirrorless camera, in fact, we're going to help you make the jump to one camp immediately.



Fujifilm X-E2

Imaging performance

In the early days of the mirrorless camera, the sensors were small. However, with Sony and Fujifilm taking a keen interest in the segment, we now see many mirrorless cameras with DSLR sized APS-C sensors. In fact, Fujifilm claims that their APS-C X-TRANS sensors match the performance of full frame sensors in DSLRs. Last month, the Sony Alpha 7 and Alpha 7R came in with actual full-frame mirrorless cameras! In all our tests, we've consistently seem mirrorless cameras produce stellar image quality. Thus, it's a tie.

Score: Mirrorless 1 - DSLR 1



Nikon D3300

AF performance

Regardless of how good your camera's sensor may be, it isn't worth much if the AF module can't lock focus. In this area, the DSLR is absolutely unrivalled, but only when considering top end models. For entry-level DSLRs, the AF performance is at par with mirrorless cameras. In fact, we are now starting to see Hybrid AF modules in mirrorless cameras that focus a lot faster, with much more accuracy, and have a penchant for being really amazing in low light. DSLRs are more consistent though, and only select mirrorless cameras can match and surpass them. DSLR is still king.

Score: Mirrorless 1 - DSLR 2

Lenses

There is no doubt that there are FAR more lenses for a DSLR outfit than for mirrorless, but that is actually not the complete story. The DSLR lineup has several versions of the same lens floating around (for example, three versions of the Canon 50mm, at varying apertures). In the mirrorless segment, the choices are limited, but what they lack in choice they make up for in covering all the necessary focal lengths. Also, while "kit lenses" on DSLRs are pretty mediocre in quality, the bundled lenses that come with mirrorless cameras are amazing. We've seen the sharpest of images coming from kit lenses supplied by Olympus, Sony, Fujifilm and even Panasonic! Do they match up to the Canon L lenses? Fujifilm's own, and Zeiss for Sony and Fujifilm do. Also, Olympus just released their 12-40mm f/2.8 (24-80mm equivalent) that knocks almost every zoom lens out of the park. Bottomline, although there are fewer choices in the mirrorless segment, they're top quality.

Score: Mirrorless 2 - DSLR 2



Carl Zeiss Touit 2.8/12

Portability

As you grow your photography skills, your kit will start to include more bodies and lenses. As your equipment list grows, the backpack grows heavier and before you know it you have a rucksack filled with photography equipment. In the case of DSLRs, two bodies and four lenses will start tipping the scales at around 25 kilos, and you will start resembling Quasimodo. The mirrorless camera wins here because it's compact and light, as are the lenses. We carry a Fujifilm X-E1 along with 3 additional lenses in one 10 inch long sling bag, with enough room for an iPad and a few cables. That's portability!

Score: Mirrorless 3 - DSLR 2

Winner: Mirrorless cameras.



HYBRIDS Vs ULTRABOOKS Vs TABLETS



THE BATTLE OF THE PORTABLES

Portable computing is here to stay, but the correct form-factor is still a matter of contention. Which one wins? Let's find out

Vishal Mathur

The conundrum continues – is the ultrabook better for you? Is the hybrid a more attractive package? Perhaps the good old tablet is all you need. If there's one thing we've learned with the advancement in technology and evolution of products over time is that there's always a problem of plenty, and zeroing in on the right product for the right need may not always be an easy – as is the case with mobile computing devices, in recent times. It's not an easy decision to make, but we attempt to give you a better idea of what each of these three device types are especially good at.

Performance and future Proofing

If you are looking to buy a machine that doesn't really compromise on performance, an ultrabook will possibly be the best bet for you. The choice of the Core i3, Core i5 and Core i7 processor options that you can pick from are obviously dictated by the price bracket you are considering. However, remember, that these will be a lot more powerful than the Intel Clover Trail or Bay Trail CPUs that power most Windows 8 convertibles and also offer better performance than most of the processors that you get with Android tablets. No matter what others say, or whichever review you read, always remember one thing: you will just get more done on an ultrabook than on a hybrid or tablet. Period.

Also, ultrabooks usually copme with generous helpings of RAM (4GB and more), which is useful as your computing demands and OS upgrades demand more system resources.

Storage is more with an ultrabook – upwards of 500GB, as opposed to



Tablets and hybrids still can't touch an ultrabook in terms of pure performance

a paltry 16GB to 128GB bundled into and offered by tablets and hybrids. For future-proofing and performance, it's obvious, ultrabooks still rule.

Score: Ultrabooks 1 - Tablets 0 - Hybrids 0

Portability

Both tablets and hybrids are obviously at an advantage here, as ultrabooks are nowhere as razor thin as the other two form factors.

If you need a device to quickly access files, play around, surf, watch videos, and generally consume more than you create (which is standard on the move behaviour) the ideal device is a tablet (with or without an additional keyboard accessory). If you need your tablets to be a little more versatile, then Windows 8 hybrids also fit in perfectly here. A tie between tablets and hybrids.

Score: Ultrabooks 1 - Tablets 1 - Hybrids 1

Battery life

While ultrabooks are themselves far superior to laptops when it comes to offering battery life per single charge, it is no secret that tablets outperform even the best ultrabook in terms of battery life. However, the hands down winner here are the Windows 8 hybrids. With two batteries – one in the tablet mode and another in the dock – you are looking at combined battery backup times well in excess of 15 hours! Truly all-day computing (on a single charge) is finally a convenient reality, thanks to hybrids.

Score: Ultrabooks 1 - Tablets 1 - Hybrids 2

Ease of use/adaptability

Technically, all three devices (tablets, hybrids and ultrabookds) are meant for pretty much the same tasks – at least as far as the basic tasks are concerned. But, some of those tasks are better done

on a tablet or a hybrid. For example, web browsing or watching videos. You could use a tablet without having to lug around a keyboard attached to it, or even use it comfortably in the car or lazily on the bed. Not all ultrabooks offer a touch-screen, but all tablets and hybrids offer that. And for most tasks, at least those that fall under the bracket of "content consumption", the touch environment works better.

Unless you are at the very top of the food chain, where a BlackBerry phone for sending one line responses to emails is considered a fairly hectic day at work, chances are that you will actually be spending a lot of time with a PC. This could involve a fair amount of text heavy documents, presentations and spread-sheets and possibly even more. While a tablet or a hybrid may work well for some (depending on comfort level with a more compromising form factor), we would recommend a proper 13-inch or 15-inch screen size ultrabook or laptop for getting some actual work done. Since most of us go through cycles of con-sumption and creation during the same day, this one's a tie.

Score: Ultrabooks 2 - Tablets 2 - Hybrids 3

The OS

While Android remains the platform of choice in India for a consumption device, Windows 8 hybrids have brought a rather fresh perspective to the tablet eco-system – in a space otherwise dominated by Android and iOS for the past two-three years. Through Windows 8, what you get is a full-fledged OS, which can be used to replicate almost all the tasks you



The best of both worlds

do on an ultrabook. With hybrids, you get the ability to run most PC apps on the go, whereas with ultrabooks you get complete satisfaction without compro-mise. with , with enhanced file compat-ibility. Result? A tie between ultrabooks and hybrids, where tablet OSes still have a lot to do to effectively challenge the might of Windows.

Score: Ultrabooks 3 - Tablets 2 - Hybrids 4

Price

The critical bit to most of us. Price is the great leveller of most debates involving purchasing decisions, as it should. You could be looking at some very decent tablets just upwards of ₹16,000, (Samsung Galaxy Nexus 7 tablets, etc). Spend a little more, and you get into the Apple iPad Mini and the Apple iPad/ Samsung Galaxy Note 10.1 territory. Just below ₹30,000 is where the Windows 8 hybrids come into the picture. And just beyond ₹40,000 is where the first ultrabooks emerge. Hands down tablets win, as they are the most inexpensive of the three form factors.

Score: Ultrabooks 3 - Tablets 3 - Hybrids 4

Features

In this particular criteria, tablets and hybrids will always trail the ultrabooks of the worlds. Things such as screen size: will you be OK with a 7-inch tablet? What about 9- to 11.6-inch? If portability is of utmost importance, you might settle for a smaller screen, if not, you want as large a screen as possible without making it too heavy to carry easily. Ultrabooks seem to win hands down because of a more diverse feature set and the ability to choose from a wider range of screen sizes and weights.

Score: Ultrabooks 4 - Tablets 3 - Hybrids 4

Gaming

In the realm of mobile games, the activity of playing games on your devices is essentially of two types in this context: the casual Angry Birds/ Despicable Me/Simpsons types or more serious FPS / MMORPG type that needs better and beefier hardware. The choice is almost made instantly between tablets and ultrabooks, based on the type of gamer you are. Android or iOS are equally awesome for casual gaming, and fully-functional Windows is still the choice for PC gaming. Hybrids, sadly, don't score a point here.

Score: Ultrabooks 5 - Tablets 4 - Hybrids 4



The iPad, the ultimate tablet?



GOOGLE DRIVE Vs MICROSOFT OFFICE 365 Vs APPLE iWORK



The battle to be the office suite in the cloud has never been more hotly contested. It's not as straightforward as it seems either

Nikhil Pradhan

It wasn't too long ago that Microsoft Office was the only viable alternative when it came to a productivity suite on the PC. Today, Office, while still popular, is only one of the suites that you can opt for when you want to work with documents, spreadsheets and presentations. Google Drive has jumped the line in terms of popularity and is almost as ubiquitous as Office was back in its heydays and, thanks to the overwhelming user base of iDevices, Apple's iWork (that's made up of three separate software – Pages, Numbers and Keynote) has also made its presence felt in all manner of tech products such as desktops, laptops, tablets and phones.

That's why it really isn't a long shot to imagine that plenty of users would be confused about which suite to opt for. So, let's get down to helping you decide:

(Note: To remove any confusion, we will be talking about Office 365 and not Office 2013 – both are pretty much the same except for the fact that Office 365 requires an annual subscription while Office 2013 requires a one-time payment).

Core features

Microsoft Office has always been top-dog when it comes to features and Office 365 offers the full-featured versions of the most popular Office software including Word, Excel and PowerPoint (and also OneNote, Outlook, Publisher and Access). If you've ever used Office before, you know that you can't beat it in terms of the options it provides with respect to working with files. If you've subscribed to Office 365 (or own a Windows Phone), then you also get access to Office Mobile, which is a pared down version of the desktop suite – with limited formatting options and inability to create presentations.

Google Drive almost seems lightweight when compared to Office 365. While basic users probably won't miss much when working on Drive, they might feel slightly frustrated if they're used to Office, on account of the lack of formatting options, templates, etc. Like with Office, the Drive mobile app is a 'lite' version of the actual service and does not allow you to create presentations.

Apple's iWork is kind of like the midway point between Office and Drive. It offers more features than Drive but not as much as the Microsoft software. It offers the standard software for documents, presentations and spreadsheets (Pages, Keynote and Numbers) and all of these software also have their mobile app versions for the iPhone and the iPad.

Score: Office365 1 - Drive 0 - iWork 0

Price

Office 365 can be yours for ₹4,199 a year. This will let you install Office on five devices whether they be phones, tablets, laptops or desktops.



Some will like Google Drive's basic, minimalistic interface while some may find it lacking.



As always, every component of Office 365 (Word shown above) is chock full of features, many of which you will never use.

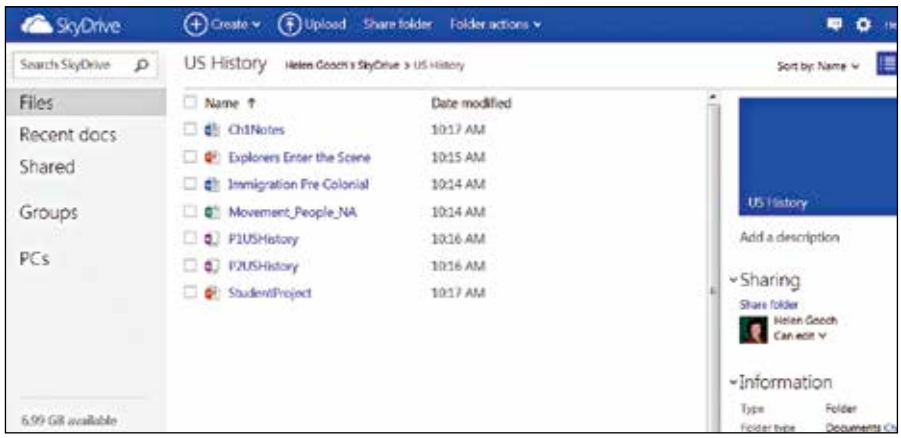
The three components that make up iWork each cost ₹1,100 (for the Mac) and ₹550 (for iOS) and can be installed any number of times on any number of devices with the same iTunes ID. However, if you've bought a new iDevice or Mac, the entire iWork suite is yours for free.

Google Drive is, as expected, unconditionally free and thus the winner here.

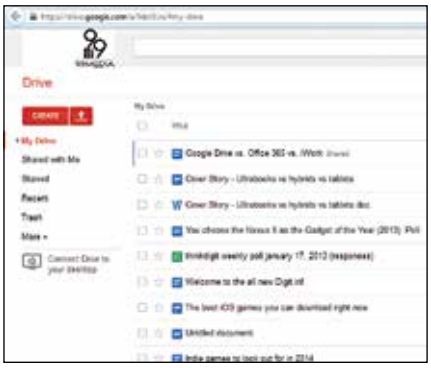
Score: Office365 1 - Drive 1 - iWork 0

Cloud integration

Office 365 uses SkyDrive as its cloud solution which means that all you need to do is install the SkyDrive app on your desktop (Windows or Mac), or phone/tablet (iOS, Android or Windows Phone) and you'll be able to access the files created under the same ID. In Windows or Mac, installing SkyDrive will create a new folder where all the files you want to access on the cloud can be saved. In a step that's quite confusing, using SkyDrive online (through Outlook.com) lets you edit and create spreadsheets, documents and presentations. Now, remember



SkyDrive allows you to both save files to a local folder and also view them online



Google Drive also allows you to either save files to a local folder or directly save them online.

this is without any Office branding and inside Outlook Live, so it's strange that Microsoft would effectively hide this functionality. The SkyDrive app, on the other hand, merely lets you view files and if you want to edit them, then you'll need to install Office Mobile and subscribe to Office 365.

Google Drive makes the entire process simpler by letting you create and work with your files directly on the cloud (through the browser) so that everything is synced instantaneously. Like SkyDrive, you can also install the Drive tool on your PC and then move files to the folder that's created.

iWork uses Apple's iCloud to store files in the cloud. Everything that you create using the iWork tools either on iOS or Mac is automatically saved to the cloud. However, unlike Drive or SkyDrive, you can't directly access the files on your local drive since iCloud does not create a local folder. On the other hand, like Drive, iWork for iCloud lets you create and work with files online (on the icloud.com webpage through the browser). You can also download any such files to your PC and then work on them using any other compatible productivity suite. However, unless you're using the corresponding Apple app/software to do so, the file won't be automatically synced to iCloud. Result: tie between Drive and Office 365.

Score: Office365 2 - Drive 2 - iWork 0

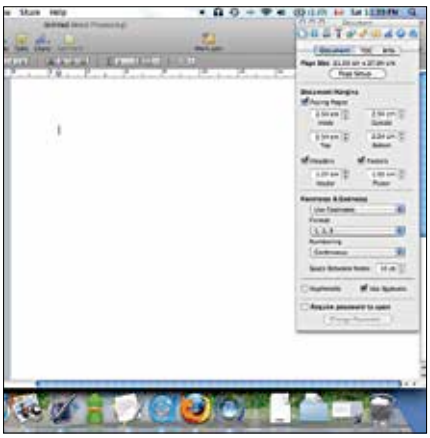
Ease of Use

Setting up Office 365 requires you to first subscribe to the service, download it and then install it on your PC. On Windows Phone, you'll need to download and install the Office Mobile app and then sign in using the same ID to be able to use it. Once installed, Office on Windows can be a little overwhelming especially for people who've never used Office before. However, that comes with the territory since Office is, by far, the most powerful productivity suite of the three and therefore, offers a lot more tools and options.

Google Drive is the simplest to use of the lot, if you're only looking to work online. Just open http://drive.google.com in the browser where you're logged into your Google account, and you'll immediately see all the files you've worked with. Since the entire suite works online, there's no need to install anything on your machine. The downside is that there's no simple way to work offline. You can set up an offline profile, but in our personal experience, it's quite a buggy mess.

iWork offers a simple enough process to get started. Just install the software/app on your iDevice, log in using your iTunes account and you're good to go. You will see all your files in one place within the corresponding app (Pages, Keynote, Numbers). The actual interface within these apps is quite clean but many will find them shorn of common features, especially if they have some experience with Microsoft Office. Overall, iWork will satisfy users who've previously worked with iWork while others will prefer Drive or Office. Winner? Drive.

Score: Office365 2 - Drive 3 - iWork 0

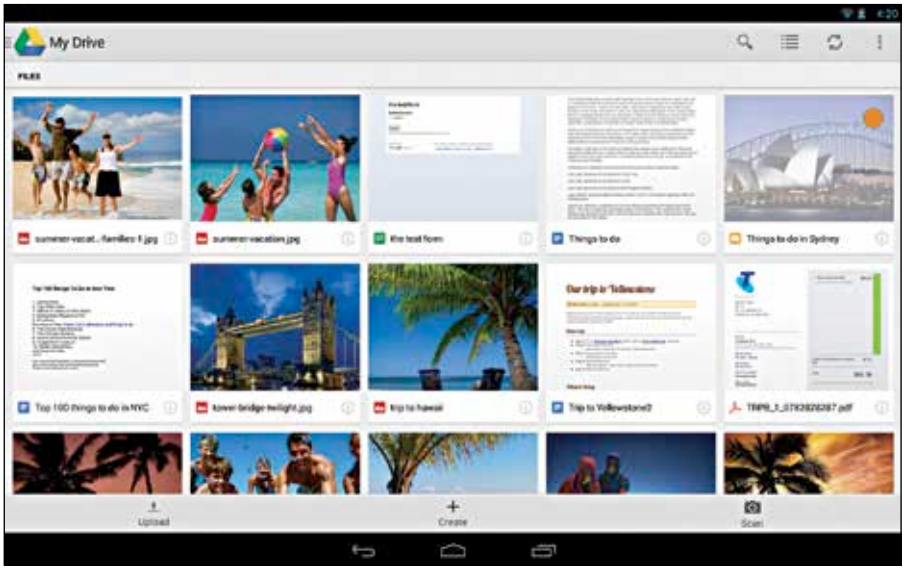


iWork (Pages shown above) tries to go for a balance between a simple interface and availability of features.

On the Mobile

Office Mobile for Office 365 is available on iOS, Android and Windows Phone. On Windows Phone, Office Mobile is a fully-functional productivity suite that comes pre-installed on every device. To use Office Mobile on iOS and Android, you will need to have a subscription to Office 365. Office Mobile offers a relatively succinct interface that suits small screens. Like Google Drive, it does not allow you to create PowerPoint presentations. To be able to access your cloud files, you will have to install the SkyDrive app separately.

Google Drive continues its tradition of simplicity in its mobile app as well. You just need to install the Drive app and you're good to go. You can create documents or spreadsheets from within the app itself, as well as browse through your folders and files. The options on offer when creating spreadsheets or documents are quite basic at best even when compared against the apps from Apple and Microsoft.



Google Drive on the mobile just requires you to install a single app to be able to access and work on all your files.

On the iPhone and iPad, all three iWork apps are available as separate downloads from the App Store. Even though the apps do feel like they deserve larger real estate than an iPhone's 3.5 or 4-in screen, there's no doubt that these are the best productivity apps for touchscreen devices. The intuitive design of the apps sparkle on the iPad and it's quite amazing how fluidly Keynote and Numbers work. This is also the only mobile app suite (among the three) that lets you create presentations.

Score: Office365 2 - Drive 2 - iWork 1

Collaboration

Collaboration is pretty much the 'buzz word' for productivity suites and Office 365 obliges. You can invite other users to start working on a document/spreadsheet/presentation with you, by saving the file in SkyDrive and then emailing the link to the other users. The users will then be able to work on the file either in Word (provided they too have Office 2013 installed) or online in the Word Web app (for which they require their own Microsoft ID). While this sounds fine, in practice, we stumbled across multiple connection issues which meant collaboration was almost impossible. Also, real-time collaboration (as you witness in Google Drive) doesn't exist.

Google Drive, on the other hand, does a fine, fine job at collaboration. Just invite other Google users through email, and they'll be led by the hand to your file through an email. Real-time collaboration tools such as live chat and notes work flawlessly and when we say, real-time, we mean real-time as in when other users begin typing on your file, and you see the changes almost instantaneously.

Apple allows for collaboration through the iWork for iCloud service that, surprisingly, works seamlessly. Go to iCloud.com, sign in, open a document and click the share button. This allows you to email a link of the file to anyone, yes, even someone without an Apple ID. This person can then start working on the document at the same time as you and you will see the changes real-time. Drive wins here again, but iWork is a worthy mention.

Score: Office365 2 - Drive 3 - iWork 1



Not only are the iWork apps exceptionally good on iOS, Keynote beats every other presentation tool hands down.

Conclusion

The battle for the best productivity suite is quite a tough one as can be seen above and it feels a bit unfair to just name one as undoubtedly the best. Therefore, let us cheat a bit and give you three winners across three different use-case scenarios.

If you're looking for a powerful, full-featured productivity suite and plan to work primarily offline on your desktop or laptop, go for Microsoft Office 365. If you're a home or student user, then choose the free Google Drive.

If you're looking for a basic productivity suite that compromises on features to give you excellent accessibility and you don't mind always working online, then Google Drive is quite obviously the choice for you.

If you already own an iPad and other Apple devices, and want to work on it while on the go, then the iWork suite of apps will allow you pretty decent productivity for a decent price.

At gunpoint, if asked to choose only of the suites as the winner, we're in unanimous agreement that Google Drive is by far the suite we wouldn't want to live without. Plus, it's free and easy to use!

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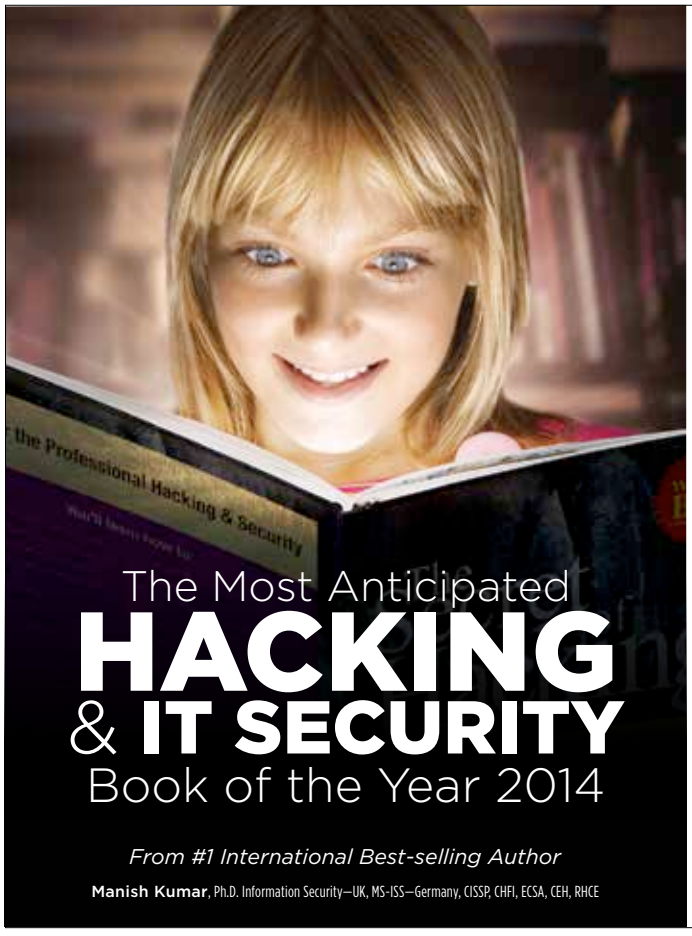
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Disappearing drives, overworked CPUs, OSs replacing other OSes. Oh! the horror...

Failing hard drives, malware troubles and slow SSDs never seem to deter the good folks from Team Digit and they come to the rescue of our readers to troubleshoot their digital lives

Q Ubuntu replaced Windows?

I'm quite new with Ubuntu and I'm not that good with computers at all. I was using Windows 7 but thought of trying out Ubuntu by installing it alongside Windows and using dual boot. Before installing Ubuntu via a USB drive, it provides you with an option for testing it first. However, I accidentally started the installation of the operating system without giving any directory or paths. After which, my entire data on the partitions "C:" and "D:" were deleted. The computer is now running on Ubuntu at the moment from the connected USB drive. Now, instead of showing "C:" and "D:", Ubuntu shows one partition with the entire capacity of the computer. I had no idea that this kind of a thing would happen and so I never performed a backup of my data stored on the drive before installing Ubuntu. My question is that, can I get back my lost data as it's very important for me. I've also refrained from overwriting any new data on the drive in the hope that I can recover the old data. Please help. Thank you in advance.

–Emo Ete

A It's good that you didn't overwrite data on the drive. For recovering accidentally replaced or overwritten partitions, you can use TestDisk for Ubuntu. TestDisk is a partition scanner and disk recovery tool which checks the partition and boot sectors of drives and is very useful in recovering lost partitions. To use Test-Disk, follow these steps:

- First boot, into the Live session of Ubuntu as you normally do using the connected USB drive.
- Download and install TestDisk to the live session using the software center or by heading to this link: dgit.in/TestDisk1.
- Next, head to this link: dgit.in/TSteps and find a step-by-step guide to using TestDisk to recover data.
- Once you're done with the above process, you should've recovered your accidentally deleted data. Be prepared and careful the next time.

Q CPU under load

My system's specifications are:

- Intel Core-i5 2320;
  Gigabyte motherboard;
- 4GB Kingston HyperX RAM;
- 1TB HDD;
- NVIDIA GeForce GT 640 GPU;

I recently installed a lot of important software that I downloaded off the internet. But the problem is that I see my CPU always under heavy load, even when it's completely idle. Is it because of some newly installed program? Can you help me to understand what's eating up my CPU?

–Pratik Jaiswal

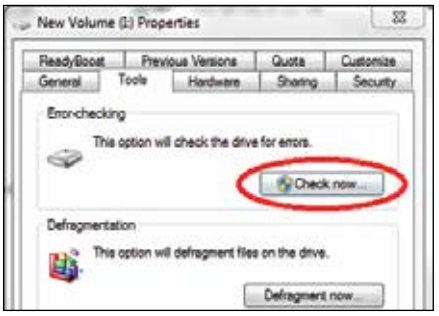
A Heavy CPU utilisation is usually a sign of malware. Since you've recently installed many new programs, it's quite possible that a malware or two might have crept in and infected your system. Make sure you have an antivirus software installed and then run a full system scan. Next download and install Malwarebytes from malwarebytes.com and run it to get rid of malwares if any. You can also start the Task Manager to see the running processes and check which process is eating CPU usage.

Q Disappearing Hard Drive

I have an internal Seagate 500GB Hard Disk Drive in my desktop which I use for secondary storage. It was working fine from a long time and didn't give me any trouble whatsoever. But recently, I discovered that the the drive isn't visible in my computer. What can be the reason for this? I have a lot of data on the drive. Please help.

–Ramesh

A Since the drive was previously visible in the explorer, the first step here would be to check and see whether the drive shows up in the BIOS. Do the same while booting up your system and going into the BIOS. If it doesn't show up in the BIOS, then you'll have to open your desktop's cabinet and check the drive's SATA or power cables and tighten them. If the drive shows up after that, you'll



Click on the "Check Now" button

have to run CHKDSK on it by right-clicking the drive in the explorer and choosing `Properties > Tools> "Check now"` and `"Automatically fix file systems errors"`. If for some reason the drive still isn't visible in your

system, then it might have failed. You can try to recover the data on the drive by doing something that drive recovery experts call as "the freezer trick". Take two good quality plastic zip-lock bags, put the drive inside one bag, lock it and then keep it inside the second one and lock it. Now take this wrapped up drive and keep it inside your refrigerator's freezer for at least 12 hours. Next remove the drive, connect it to your system and see whether it shows, if it does, then copy all your data from it. If the drive's still under warranty, you should then give it for RMA.

Q SSD or Tortoise?

I recently bought a new SSD after searching for a good one for a long time. The problem is that, the performance of the SSD is slow as compared to what I've seen in reviews. I've used a lot of slow computer components all my life, but even to me this came as a surprise. Why is it so? And what should I do to make the SSD perform better and as advertised.

–Gaurav Dhingra

A It's understandable when someone complains about the performance of their HDD because HDDs by SSD standards are usually slow. But when you say that an SSD is slow, it means that, there is definitely something wrong with your system or the SSD as a whole. Since you haven't provided us with the model no. and details of your SSD along with any performance numbers. We would assume that you're getting speeds which are lower than the ones advertised. You shouldn't always directly compare the performance scores of your SSD to that of a review because there would obviously be some difference between them due to the difference in test components used. But keeping that aside, you can take a look at the rated specifications of the SSD and then download a benchmarking utility like "AS SSD" for example and check out the sequential read/write scores that you're getting. The reason for the SSD to not run at its rated specifications may also be due to connection to the wrong SATA port. Open your case and make sure that the SSD in question is connected to the native SATA 6Gb/s port and not on the motherboard manufacturer's proprietary SATA port (ASmedia ports on ASRock motherboards for instance). Connecting an SSD to the non-native SATA port is often the cause of slow speeds. Finally, also make sure that you have enabled AHCI mode instead of IDE mode inside the BIOS as AHCI mode provides a better performance.



HANGOUTS

Introduced at Google I/O Developer's 2013 conference, Hangouts is a new instant messaging and video chatting platform developed by Google. Hangouts replaces the three previously developed services: Talk, Google+ Messenger and Google+ Hangouts, which is a video chat service available within Google's social network.

Let's quickly get started with our tips and tricks on Hangouts.



Hangouts 07
Web Automation 09
PhpStorm 12

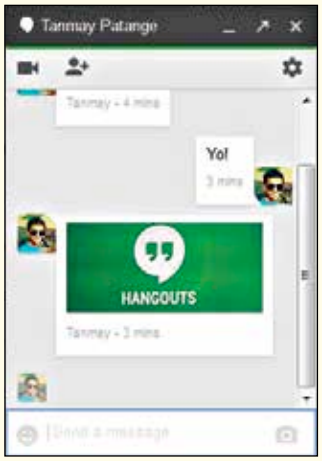
Tips & Tricks has its own page numbers, and does not follow the rest of the magazine's page numbers. This is done to ensure that you can cut out and save T&T in a separate folder for later reference.

Minimum system requirements

Hangout runs on the major web browsers such as Google Chrome, Microsoft's Internet Explorer, Mozilla Firefox and Safari. You'll need to ensure the availability of an updated version of any of these web browsers running on your system. Hangout supports operating systems such as Mac OS X, Windows 7/Vista/XP, Chrome, Ubuntu and other Debian-based Linux distributions. You can have a group Hangout messaging session with up to 100 people at a time and a video call with up to 10 people at a time. For video calling on Hangouts, a broadband internet connection is necessary. For a smooth experience with Hangouts, make sure you have minimum upload speed of 1 Mbps and at least a 2 GHz dual core processor or greater running on your system.

Enable Hangouts in Gmail

Google rolled out Hangouts as a default instant messenger for Gmail and Google+. However, if you're still using the old XMPP (Extensible Messaging and Presence Protocol) based Google Talk from within your Gmail account and want to experience the new Hangouts messaging system, you can easily switch with just a few clicks. All you have to do is click your profile photo at the top of your Chat list and select "Try the new Hangouts". Gmail will automatically refresh and you'll be able to start using Hangouts.



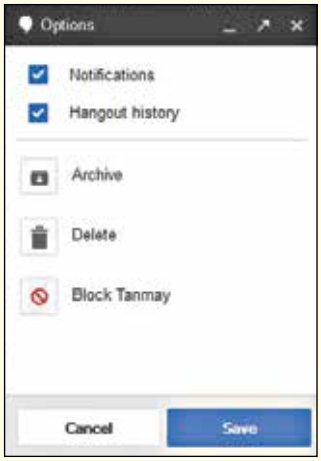
The Hangouts chat window

Disable Hangouts in Gmail

If you don't feel at home with Hangouts and want to stick to the old Google Talk interface within Gmail, you can easily revert to the old chat system. Just click your name or profile picture again and select "Revert to old chat" from the dropdown list of options.

Turn on / off notifications

Do you want to get rid of all those notifications? Notifications settings in Hangouts are easily adjustable. While notifications in Hangouts are turned on by default, you can easily switch them off in case you don't want to be notified about activities of any specific person from your Hangouts list. `Click the name of the person in the Hangouts list > Click the gear icon on the upper right of the chat window > Uncheck "Notifications" in the Hangouts Options screen that follows > Click "Save"`



Uncheck "Notifications" for each friend from the Options screen in the chat window

Turn on/off sound notifications

Sound notifications in Hangouts can be annoying, especially when you're busy working on some other tabs in your browser. Each time you receive new messages, especially one after another, the notification sound is capable enough to distract your busy mind from the task at hand. Like other notifications, sound notifications are also turned on by default. If you want to disable them, click your name and select "Mute sounds".

Snooze notifications

If you're worried that you'll miss an important update from friends for whom you've turned off notifications, there's a solution to put you at ease – snooze notifications. Find this option just above the "Mute sounds" option when you click your name. Once selected, it lets you determine how long you want to disable the Hangouts notifications for. When you turn on snooze notifications for a particular period, you won't be notified about any new messages or video calls. It's helpful for times when you don't want to be disturbed, as it minimises distractions.

Turn Hangouts history on/off

If you don't want chat history to be saved in your profile, you better turn it off. Once it's turned off, all incoming messages will only be visible in the Hangouts

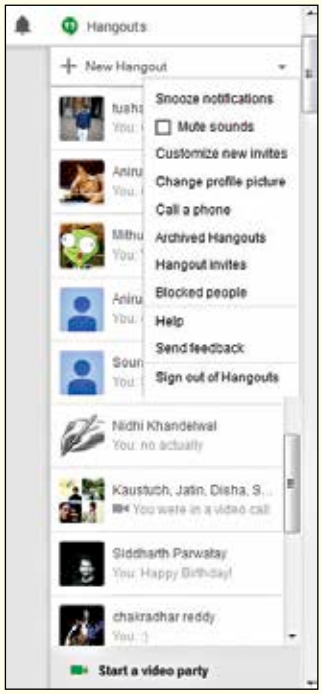
window until the session lasts and will then be automatically deleted from the window when closed. You can turn on or off Hangout history individually for each person on your list. To do this, `select a person or a Hangout > Click the gear icon > Select or deselect Save "Hangout history" checkbox`

Delete Hangouts

You can also delete each Hangout for specific people on your chat list. `Select person > Click the gear icon on the top of the chat window > Select "Delete Hangout" > Click "Delete".` As of now, there's no way to delete history for a group Hangout. However, you can leave the Hangout anytime by clicking the gear icon and selecting "Leave Hangout".

Archive a Hangout

If you don't want any particular Hangout to be visible in your list of Hangouts, you can simply archive it. Archiving doesn't delete your Hangout or message history. It simply prevents that particular Hangout from showing up in your list. However, it will be visible in your list once a new conversation occurs from either side. To archive a Hangout, `select person > Click the gear icon > Select "Archive Hangout" > Click "Save"`



The Hangouts menu helps you manage a range of options

Keyboard shortcuts for Hangouts messages

Action	Windows	Mac
Bold text	[Ctrl] + [B]	⌘ + [B]
Italicize text	[Ctrl] + [I]	⌘ + [I]
Underline text	[Ctrl] + [U]	⌘ + [U]

Share photos and images

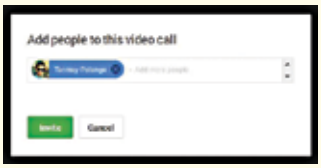
Sharing photos with your friends was never easy and instant with Google+ or the old chat system on Gmail. With Hangouts, it's become a lot easier. Now, all it takes to share and upload pictures with your friends is a click. That's right, simply click the camera button at the bottom right of the Hangout window and upload pictures from your computer/laptop or the existing photos and albums in your Google+ profile. You can even share photos taken from your web camera. To select and share photos with friends via a mobile device, you'll similarly tap the camera icon to upload. The photos you share will be stored in the share album of your profile as well as the profile of the Google+ using friend with whom you've shared them. The photos shared when the Hangout history is turned off will be temporarily visible in the shared album, but will be deleted shortly.

Start a video call

Before getting started with your first video call, make sure you have checked all the system requirements carefully mentioned in these tips and tricks. Now select a person who you wish to have a video call with from the list of people. To start the video call, click the grey video call button. Simple.

Add people to a video call

You can add people to a video call by clicking the "Invite People" button at the top of the video call window. You can select people from your Google+ profile or manually add email IDs as well.



Invite friends to video chat with you easily with Hangouts

Add applications in Hangouts

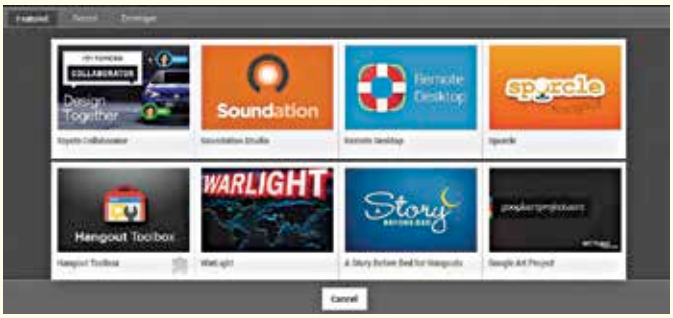
Here we're talking about applications that can be used during a video call. Such applications help you achieve tasks such as creating documents, playing games, or adding some fun effects to your video call, without going through any kind of undue installation process. Once you're in a video call, you'll notice an array of default app icons on the left side of your Hangout window. If you want to select another app that's not listed in the bar, click "..." and select "+ Add apps". Doing this will present you with some good quality apps in the Featured list such as YouTube for Hangouts, which allows people added to the video call to watch videos together, or Cacoo for Hangouts, which is a user friendly drawing app to collaboratively work on charts and diagrams in real time. Once you've found the app you want, select it and click "Add to this video call".

Mute microphone and turn off webcam

If you don't want people to hear you or see you in a video call, you can turn off your microphone and webcam. Click the microphone button at the top of the video call window and mute your microphone. Once you mute your microphone, the button will turn red. If you don't want to listen to someone in a video call, hover over their video and click the microphone button to mute them. Similarly, if you want to prevent people from watching you, click the video camera button at the top of the video call button to turn it off. If you want to enable your microphone and webcam once again, just click on the same buttons.

Adjust bandwidth settings

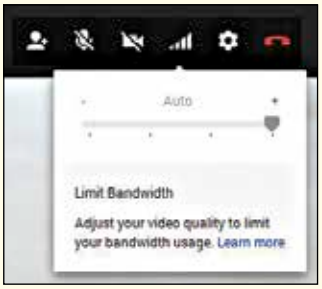
If you're facing issues with video or sound quality in your Hangout, it could be due to poor internet connectivity. To remedy this, click the "Adjust bandwidth



Select the app you want from the displayed collection



Make sure your devices are correctly configured



Drag the slider till you have the best fit for your net connection

usage" button at the top of the video call button. Now drag the slider whose range varies from "HD video" to "audio only" till you have a setting that works for you.

Keyboard shortcuts for video calling

Action	Windows	Mac
Enable / disable camera	[Ctrl] + [E]	⌘ + [E]
Mute / unmute microphone	[Ctrl] + [D]	⌘ + [D]
Open / close chat	[Ctrl] + [B]	⌘ + [B]
Move focus to chat	[Ctrl] + [M]	⌘ + [M]
Close / remove app	[Delete]	[Delete]
Focusing apps menu	[Ctrl] + [Y]	⌘ + [Y]

Make HD video calls

For experiencing HD video calling, you need to have an HD 720p capable camera along with a CPU with at least four logical cores (i5 with HyperThreading) and a minimum upload speed of 1.5 MBPS. Set your bandwidth setting to "Auto HD" manually, in case it doesn't detect your system meeting the criteria due to certain issues with connectivity, web browser, plug-in or operating system. That's all. You're now ready to make HD video calls.

WEB AUTOMATION

The web occupies such an all-encompassing presence in our lives, with us relying on various websites and web applications for numerous tasks throughout the day. We get our news from the web, keep in touch with friends, stream music and movies on demand and use it as a digital storage for all of our personal documents and photos. It wouldn't be wrong to say that a web browser is the most often used program on our computers!

Our increased reliance on Web Apps means our personal data is often spread across several different web services. Our emails are stored in Gmail, photos on Instagram, our favourite news stories on Twitter and our documents in Evernote or Google Drive. Each of these web apps has its strengths and is suited for a particular use-case, but having your data distributed across so many different services can be irksome. What if you want to silently move data between various web apps without manually downloading and re-uploading them? You may, for example, want to archive your favourite articles from RSS feeds, get updates about the weather every morning on your phone, or download your Instagram photos to your desktop for easy browsing. These, and many more tasks can be easily automated using just a few web apps such as IFTTT, Zapier and Yahoo! Pipes.

IFTTT - If / Then / Else based automation

If This Then That (IFTTT) is probably the most well known of all web automation apps, though it doesn't have quite as many features as others like Zapier. It's incredibly easy to setup and includes all popular web apps like Facebook, Twitter, Gmail, Google Drive, Evernote etc., called "channels". You can combine two channels together to create a "recipe", which is a task that fires every 15 minutes. To use a channel, you have to activate it first, by signing in using your credentials.

Here are some of our favourite IFTTT recipes:

Get SMS updates with cricket scores

We all know it can be frustrating to refresh the Cricinfo homepage every five minutes hoping for another wicket or another six. Instead of constantly polling for an update, have IFTTT send you an SMS (or an Email, if you prefer) with the score of a match you're interested in.

Head over to https://ifttt.com and sign in. Click on the 'Create' button on the top bar, and then click on the giant blue "This" link. This will bring up a list of available recipes. We're going to use Cricinfo's RSS feed to search for our cricket score, so go ahead and select RSS Feed.

When asked to choose a trigger, choose "New feed item matches" (If you choose the "New Feed Item" option, you'll be notified for every cricket match that's currently in progress, which can get annoying). Enter a keyword or phrase that best describes the match you're looking for, such as "India" for any matches India is currently playing. In the second box, enter the URL http://static.cricinfo.com/rss/livescores.xml.

In the "That" section, choose how you'd like to be notified. You can have IFTTT send an SMS to your phone (which will require you to register your phone with a one time PIN), an email or even a Facebook post.

Recipe link: https://ifttt.com/recipes/83678

Use Evernote to archive your digital life

Evernote is an excellent service which lets you create notes and sync them across your desktop, mobile and the web. It lets you store pretty much anything in your notes, including rich text, audio, images and checklists. It's a great way to permanently store all your fleeting moments of inspiration captured in a Facebook post, a tweet or a photo in Instagram.

To archive your Facebook posts, choose "New Facebook Status by you" as the trigger in the "This" section, and select the Evernote channel and choose "Create new note" (or optionally "Append to note" if you don't want to create multiple notes) as the action.

Similarly, you can create one for Twitter with "New Tweet by you" or "New favorited tweet by you" as the trigger, or one for Instagram with "Any new photo by you" or "You like a photo" and save them to Evernote with the appropriate action. You may want to create separate notebooks to store different kinds of content, and you can specify the target notebook.

Recipe link: https://ifttt.com/recipes/51161

Additionally, if you're an RSS junkie, you can send your saved-for-later articles from Feedly or archived notes from Pocket to Evernote for the sake of posterity.

Recipe link: https://ifttt.com/recipes/99723

Gmail is the most popular web-based email, but what if you need access to your mail offline? Chrome has web-app for offline Gmail, but if you're already using Evernote on your Windows/Mac computer, you can have all your mail stored in your Evernote account. If you'd rather not create a duplicate Inbox within Evernote, you can have IFTTT archive only your starred emails to Evernote.



Evernote can archive anything and it can be retrieved easily

Recipe link: https://ifttt.com/recipes/73746

Save all your Instagram photos to your desktop

Instagram is a very popular service, but unfortunately doesn't let you download all your photos to your computer (short of manually copying the photos from your phone to your PC). IFTTT makes this possible, and even goes a step further by letting you download photos by others you've liked. This is made possible by setting an IFTTT trigger then copies your photos to a Dropbox folder. If you have Dropbox installed on your PC, it downloads the files to your PC.

Recipe link: https://ifttt.com/recipes/56

Save your favourite Pocket articles in PDF format

Pocket is a fantastic tool for reading lengthy web articles later, and this recipe lets you save your starred articles as PDF files to Box. It uses the Joliprint API to convert the starred article to a PDF file and uploads the PDF file to the location of your choice. We've used Box.com, but you can upload it to Dropbox or Google Drive as well.

Recipe link: https://ifttt.com/recipes/140500

Yahoo Pipes

Yahoo Pipes is a very powerful tool that lets you aggregate, organize and combine content from different websites. If that description sounds vague, fear not. They're basically like Unix pipes for the internet, combining and redirecting web content. We'll get you started right away by creating some Pipes to demonstrate the power of Pipes.

Follow your interests across multiple websites

If you regularly follow a bunch of news websites or blogs but would rather narrow down your reading, you can use Yahoo Pipes to filter these sources into one neat feed containing only the relevant content. For e.g. if you follow tech sites like The Verge, Ars Technica or Techcrunch, but really, you're only interested in their Android stories, you can filter them out in a custom RSS feed, which you can then push to Pocket or Instapaper (using IFTTT) or add it to your favourite RSS reader like Digg Reader or Feedly. A variation of this (one that I use personally) is monitoring a particular series of articles from a blog, like Lifehacker's "How I Work" series, or product reviews from Ars Technica or The Verge. Add the appropriate keywords to the Pipe Filter and have those articles delivered right into your Pocket or Instapaper account using an IFTTT (or Zapier) recipe.



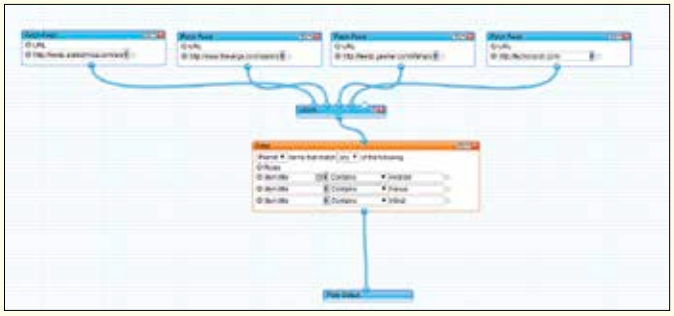
IFTTT's recipes are a great way to automate most online tasks

Visit http://pipes.yahoo.com/ and sign in with your Yahoo account, and click on "Create a Pipe". You'll be faced with a dashboard and a list of menu items on the left. From here, you can drag and drop items onto the empty canvas, make connections by "piping" together different sources, perform operations such as joining multiple feeds (Union) or filtering them based on keywords (Filter).

Start by dragging the "Fetch feeds" item over to the dashboard and enter the URL the feed you want to track. Repeat this for every website/feed you're interested in. Next, expand the "Operators" section and drag the Union operator onto the canvas. Now connect each source to the head of the Union using the blue dots at the bottom of every source feed. By doing so, you've concatenated all the feeds into one 'superfeed' of sorts.

To filter out only the topics you're interested in, add a Filter operation from the left and connect it to the output of the Union operation. You can have Pipes scan for keywords in the title of the feed by choosing item.title in the feed and adding keywords. Make sure the filter says "Permit"





Yahoo Pipes is a tool that lets you combine your newsfeeds like a boss, through intelligent filters

and not "Block" on the top left. Once you've added the filters of your choice, connect the output of the Filter to the Pipe Output and save your pipe. You'll get a "Pipe Saved" message at the top, along with a Run Pipe... link. Click on it and you'll see the status of your pipe. If all goes well, you'll be able to export your Pipe as an RSS feed or as a JSON file.

Zapier

IFTTT is great for automating tasks that involve text-based or image-based data, such as Facebook posts, tweets or emails. However, if you find yourself looking to move around files and folders, or you're looking for a more business-focussed service for your SME needs, take a look at Zapier. It includes enterprise-grade services such as Amazon's S3, DynamoDB, Basecamp, Mailchimp, etc. The catch is that it's a paid service with a free tier that gives you upto five zaps, but they trigger only once every five hours.

Backup files from Dropbox to Google Drive

Dropbox and Google Drive both have their strengths, and if you want to backup your data redundantly across both services, this simple "zap" will do the job for you. Sign up for Zapier and select Dropbox with "New file in directory" as your trigger and Google Drive with "Copy file from trigger" as the action.

Once you authenticate your accounts, you'll be asked to specify which folder in Dropbox you want monitored. We've chosen the /Photos folder, as Dropbox automatically backs up photos from your Digital Camera's SD card when you plug it in. Next, specify the destination folder in your Google Drive, along with parameters such as the filename. If you're uploading documents, you might want to turn on the automatic file conversion to make your documents editable in Google Docs.

Sync your Base CRM contacts with Mailchimp

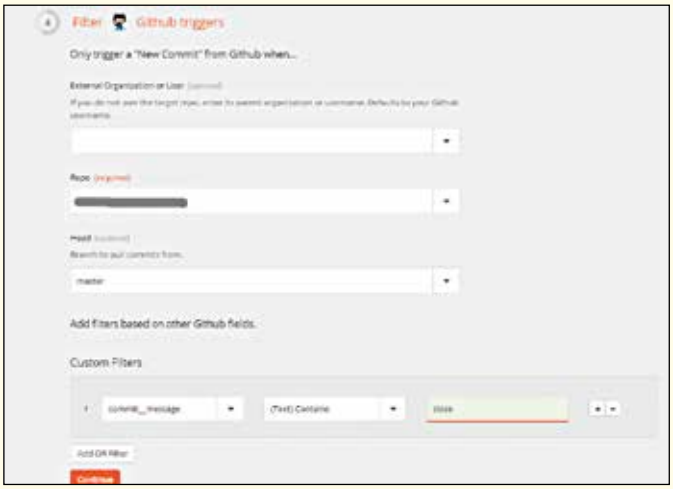
Base is a popular Customer Relationship Management tool used by small businesses, and Mailchimp is a leading provider of Email newsletter and email analytics. Syncing your contacts between these two services is almost a no brainer! Create a new zap with the trigger as a new contact in Base, with the action being adding a new subscriber to your Mailchimp account.



Zapier takes the concept of IFTTT to a whole new level

Automatically share new blog posts on FB / Twitter

If you maintain a blog, you probably also want to be able to share it with your friends on Facebook and Twitter. This zap monitors you blog's RSS feed, and creates a new post in Buffer every time you add a new blog post. This way, you can have Buffer send out your tweets or status updates at an optimum time when they'll be visible to the majority of your friends and followers. You'll need to have an account with Buffer (it's free) to enable posting via Buffer. This zap should work irrespective of your blog host (Blogger / Wordpress / Tumblr) as it only uses the blog's RSS feed. Alternatively, you can use it to share updates to any interesting blogs you follow.



Filter Github triggers to stay on top of what you're doing

Inform your team of bugfixes to a Github repository

This zap is one that Wade Foster, the co-founder of Zapier claims to use himself. It checks for keywords like "close" in the commit message of every commit made to a Github repository, and sends an email informing people of the change. This is particularly handy if you have a number of developers collaborating on a project, as it keeps everyone up to date on the status of an important bug fix or feature enhancement.

In the trigger, select Github, authorize your account, and specify the repository and the branch you wish to monitor. You can add filters to match only a special type of commit, and specify the email addresses of those you want to inform.

These certainly aren't the only automation tools out there on the web. If you're privacy conscious and fairly tech-savvy, check out Huginn (https://github.com/cantino/huginn) which is a system that lets you build "agents", each like an IFTTT or Zapier action that can continuously monitor the web. You can use it to scrape websites for information for great shopping deals, or check Twitter for trending topics that interest you. It's very powerful, but you need to host it yourself on your server with Ruby installed. Smaller examples are Boomerang, (http://www.boomeranggmail.com) that lets you schedule emails for a later date

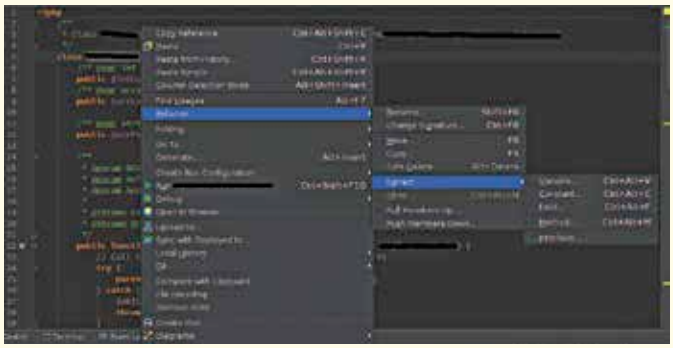
and follow up on email replies, or Buffer (http://bufferapp.com) that lets you pile up your tweets and status updates, only to be posted on a fixed schedule.

PHPSTORM

PHP is a popular language and there are many IDEs for PHP around. PhpStorm is one of the best IDEs for PHP. While it isn't free, the features it offers are amazing and worth the price. However, if you're a student or developer of an Open Source PHP-based project, creators of PhpStorm (Jetbrains) will give you a free license key. Installation is quite similar to that of Eclipse and you can start using it right away. The tips and tricks here will help you quickly get around. Remember that after reading what follows, other IDEs may feel more or less like Notepad. You've been warned!

Choose multiple project locations

PhpStorm allows you to create new projects from just about anywhere. You can create new projects with local files, check out from a revision control system such as Git/GitHub, Mercurial, SVN, etc., get deployed projects via FTP or even fetch files over network shares. You get this option when creating your first project or when creating a new project from existing files. You also get to choose your web server configuration e.g. is it configured locally, on a remote server or not configured at all.



Don't be overwhelmed by the vast number of options

Set up PHP debugging

Debugging is an essential part of any type of development. PhpStorm allows you to set up debugging right away. Just make sure that a debugger is installed (XDebug is recommended). Then go to `File > Settings > Project Settings > PHP > Debug > Set the debugger parameters`. Restart the IDE and you're good to go. But that was just for the IDE. For the web browser, you can install 'Xdebug Helper' for Google Chrome/Chromium. Similar extensions exist for Firefox too! This is by far the easiest PHP debugging setup that we've seen.

Search for settings

If you go into your menu settings, you'll notice the exhaustive size of it. Don't let this overwhelm you. On the left pane at the top is the settings search where you can key in the setting you're searching for, and it will take you to the related page and section. For example, if you type 'Xdebug' in the field, it will take you to Project Settings > PHP > Debug > Highlight the XDebug section on the left pane - quite useful for new users.

Inspect errors for PHP, JS, HTML, CSS and SQL code

Unlike many other IDEs which do basic type checking of PHP code, PhpStorm also understands your code. And that's not just for PHP code but also for HTML, JavaScript and CSS (and LESS, SASS, SCSS, SQL etc.).

So if you commit an error – say you try to print a variable which is undeclared (or mistyped), write non-optimised code (E.g.overwriting a variable immediately after its creation), neglect to close your HTML tags, forget a semicolon in a CSS file, write a longer styles rule when a simpler one is available, or create a nested if-else ladder where some code becomes non-reachable – PhpStorm will inspect your code for all of them and report them to you. The IDE detects a large number of simple and small yet common mistakes you commit as a web developer and reduces the time and frustration usually spent on mundane mistakes. All you need to do is to go to `Settings > Project Settings > Inspections` and turn on the settings you think you need for each supported language.

Use code refactoring to replace and move files around

It's not easy to get everything correct the first time and we'll all want to change variable names, move files, rename classes, functions and parameters at some point of time. While find-replace is supported by most IDEs, that isn't how it should be done; you might end up with a broken query or an accidentally renamed class. With PhpStorm, you can right-click the variable, parameter or class name and then select `Refactor -> Rename` (or just press [Shift]+[F6]) and the IDE will inspect all the places where the class has been used and rename those instances. You need not worry about anything else changing.

NOW,
YOU'LL RUN
OUT OF TIME,
BEFORE YOU
RUN OUT OF
BATTERY.



Take the power with you.
Wherever, whenever.

DP-Y-5200
Colours available:

Samsung **5200** mAh Li-Ion Battery
LED Charging Indicator
LED Torch
Overcharge/Short circuit protection
Over Discharge protection

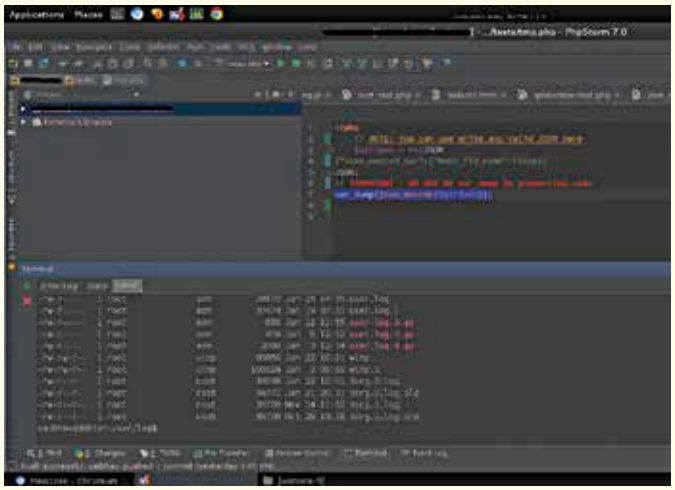
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You may also search for variable and class usages – an invaluable asset when you want to remove an old file or legacy class/function from your codebase. Note: When you move files from one directory to another, all references to the file path (includes, mentions, file_open calls, etc.) automatically get updated.

Want to have a quick getter or setter method for a class member? Right-click the variable and select 'Generate'. The rest is quite easy. You can also pull/push members down the class hierarchy tree. So if you wrote a wrapper which you think can go into that class' parent class, just right-click the class name and then go to `Refactor > Select the pull/push action on the members of the class members`. If there's a variable you created once and now, for performance reasons, want to make its value be inline on all points of usage, refactoring features of PhpStorm will come to your aid again. The number of features are jaw-dropping.



Terminal is accessible at the bottom in PhpStorm

Automate deployments

So you have a site that's working the way you want and you want to alter a file (or update multiple files to bring in a new feature)? No, you don't have to take full backup of your server, zip files on your laptop, upload them to the server, unzip them and then reconfigure the server. Configure the automatic deployment option in `Tools > Deployment > Configuration` and that's about it. Next time, you want to make a change, right-click the file(s) in the project explorer and say 'upload'. Thou shalt be done on the server! You could map individual directories and ignore some from being uploaded, e.g. a 'tests' directory might not be needed on the server.

If you're tracking your code with revision tools such as Subversion, Git, Mercurial etc., PhpStorm will show only the changed files in the 'Changes' toolbox (button at the bottom of the IDE interface). You can choose to upload the complete set of changed files in exactly three clicks. It maintains a copy of files deployed on the server so if the contents on the server were changed after your last push, you can either ask your team-mates if they pushed an update or panic because someone overwrote a file on the server without you knowing about it.

Familiarise yourself with the in-built GUIs for revision controlCode revision systems are cool and useful, but writing commands on a prompt can be tiring. PhpStorm comes with a built-in GUI for a number of code revision systems. If it detects your project to be a working copy for one, it will notify you. Go to `Project Settings > Version Control > Choose your VCS and configure your project`. Thereafter, the built-in GUI will follow all your work. You can have passwords set up for your GitHub and Bitbucket accounts, too. Pushing to remotes and other actions such as committing, rebasing, branch managements, tracking, pull, push, merge, comparison etc. are made available from the VCS menu at the top. Finally, PhpStorm features a 'diff' viewing feature that lets you go back in history and visually see the differences between commits.

Set your style of coding

When it comes to coding, everyone has personal preference regarding spaces, commas, newlines, brackets and what not. Tell PhpStorm about these preferences in `File > Settings > Project Settings > Code Style` and once you're done, all code indentations will obey your rules.

Change the interface theme

Don't like the default black theme? You can change the IDE's UI in the settings window under `IDE Settings > Appearance`.
Open a terminal

If you need the terminal for some task, go to `Tools > Open Terminal` and one will open up at the bottom of the IDE. This feature works on all supported platforms. You can click on '+' button on the Terminal interface at the bottom to open more than one terminal session at once.

Not only does PhpStorm understand various languages, it also understands frameworks. If you're using a popular Open Source framework, chances are you're pretty well covered by PhpStorm's intelligence.

Surround code with constructs

So you wrote an expression and now want it inside braces? Select the text and hit [Ctrl]+[Alt]+[T] and you'll get a menu which lets you select the type of construct you want to surround the selected text with. Want to wrap text inside an if, or if-else condition or ensure robustness by placing it inside a try-catch block? Options unfold when you press that key combination.

Set custom colors for certain comments

Being a developer means having a long list of things at hand to do, remember and take note of. Most IDEs offer a different color for 'todo' comments (comments that start with 'todo'). PhpStorm goes a step ahead and gives you additional formatting options to create more colored comments. For example, you can have comments beginning with 'note' to appear in orange, italics and underlined with dots OR have comments beginning with 'urgent' to appear in red and bold and so on. To set those up, go to `Settings > IDE Settings > Todo > Add or edit existing patterns and their color formats`

Set custom key binding for events

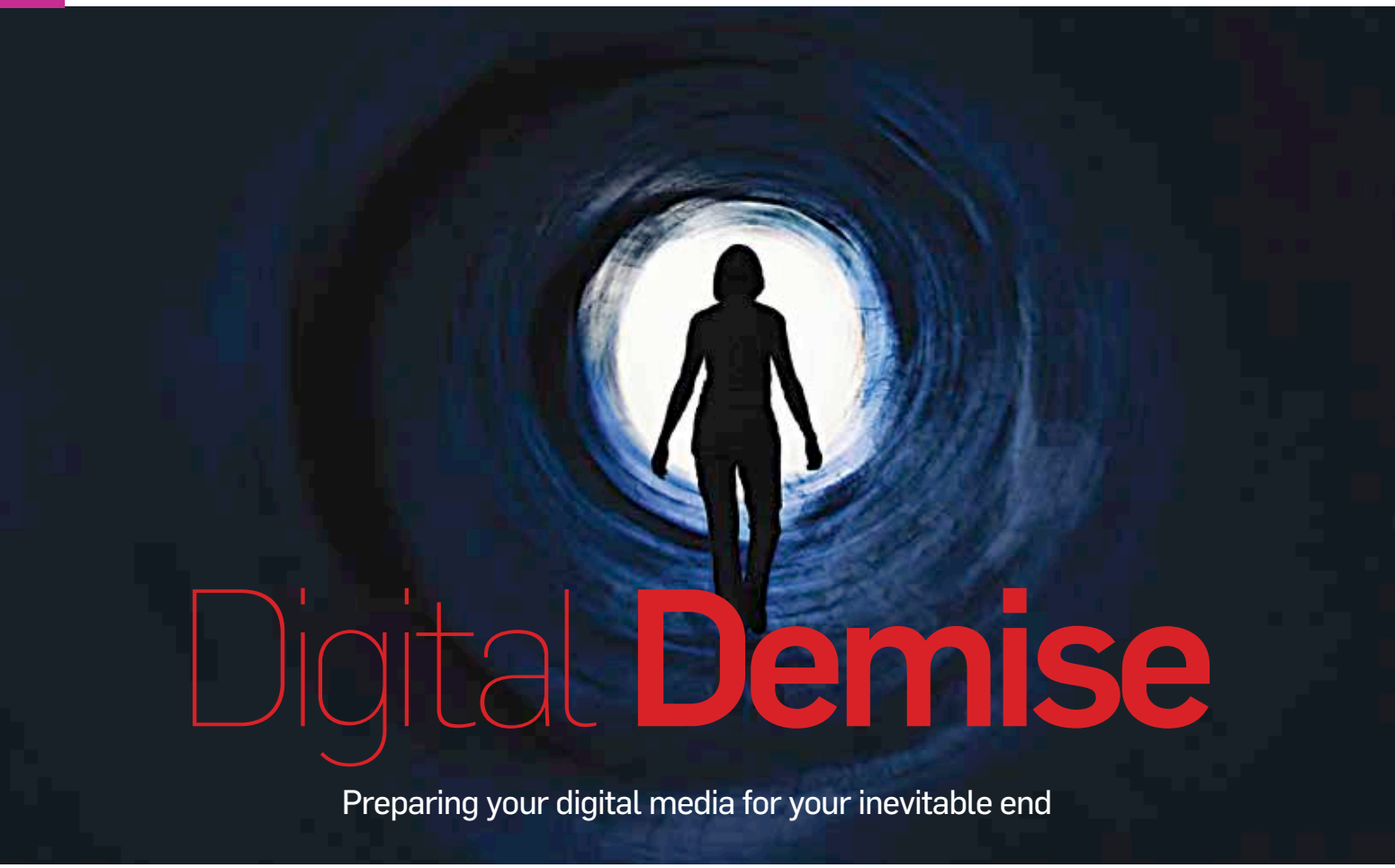
There is a possibility that PhpStorm's own key binding conflicts with your OS's key bindings. To cite one, the 'surround code with' shortcut [Alt]+[Ctrl]+[T] would open a terminal window on Ubuntu. You can change these in `Settings > IDE settings > Keymap`



Asimov's prediction of 2014
See how Isaac Asimov predicted in 1964 the state of the world as it would be in 2014. How accurate was he? **http://dgit.in/asimov2014**



Christine
After Stephen King's horror novel, here's Razer, taking it to a gaming level. Read more about Project 'Christine' **http://dgit.in/rzrchrstn**



Digital Demise

Preparing your digital media for your inevitable end

Prakrit Dhondiyal
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If there's one thing that's certain in life, it's the fact that one day, regardless of whether you'd like to or not, you will die. A decade ago, sorting out your affairs would have involved a person in a suit, holding your last will and testament while your loved ones silently mourn your passing.

Today, all that aside, you have a variety of media and dozens of online profiles to keep in mind, and your loved ones have to deal with every Tom, Dick and Harry who knew you (or an avatar or username of yours) who wish to pay their respects to the person you were.

If taking over your life wasn't enough, the Digital Age clings onto your coattails on your way to the afterlife, like your own personal little demon looking for a ride into paradise.

But analogies aside, with 2,405,518,376 internet users around the world (and counting), out of which more than 1.4 billion are on Facebook and other social networking websites, one must face the inescapable truth: "You have a digital side, which deserves closure too".

The people who have an online presence can be roughly divided into four typecasts:

The Zeroes: These are the people who have an identity online, but couldn't care less whether or not it existed. Their name shows up only because they had to make a LinkedIn profile for work, and would be completely at peace not having a virtual identity at all.

The Ones: The hyper social cyber freaks. To whom hourly tweets and Facebook posts are a second nature (if not their first). The people who live their cyber lives showing the world who they are. The ones to whom their online image is the be all and end all of things.

The Leets: The ones who exist behind the cloak-and-dagger of usernames, firewalls, multi-layer encryptions and proxies. The ghosts of the digital world who are happy watching from their cyber-pedestal, strategically coming out to show their hooded faces when they deem necessary (if at all).

The Zen: The Buddhists of the cyber world. The ones so comfortable balancing the cyber world with reality. They have a clear-cut distinction between both worlds, and prioritize accordingly.

Based on these typecasts, one can extrapolate their reactions to cyber death. The Zeroes wouldn't really care what happened to their social profiles and online presence as a whole. They'd stay grounded in reality, very comfortable letting their Facebook page and WhatsApp profile gather pixelated dust and crumble to outdated data over time. The Ones would love to die knowing that their life has been immortalized online. In the open books of the cyber world, the Ones would make that extra effort to keeping their online avatars alive as long as possible. The Leets would be an interesting lot. Considering



Skyrim 2014
If you're not already a Skyrim fanatic, read this article to be convinced otherwise **http://dgit.in/srim14**



Botanic Fountain of Youth?
Take a look at the controversial apples that refuse to turn brown! Another step towards plant immortality? **http://dgit.in/gmoapps**



Doubt you'll listen to your collection once you're gone.

their stealthy nature, they would either leave behind a legacy for their names heirs to follow, or go out with one final act to brand the internet with their decal one last time. Both actions showing a hint of pride, but the latter is the spot saved for the stereotypical megalomaniac. The Zen may or may not take measures to wrap up their cyber affairs. If they do decide to do so, it would usually be out of concern for others, rather than their own ego.

Considering you're reading this article, we're sure you're anything but a Zero. Keeping that in mind, here are some guidelines that may help you pass, knowing your virtual character is in safe hands.

The Digit Checklist

Here's Digit's own checklist to make sure you don't leave anything undone. Unlike leaving without car keys, dying makes it a little difficult to come back and pick up something you forgot about.

- Letters from the afterlife for those closest to you.
- Passwords for your several widespread social avatars.
- Passwords for PayPal accounts, Europay accounts, and other net banking/internet finance-based accounts.
- Backup details – You may have backed up your greatest memories, cherished videos and other relevant data somewhere. Maybe on a physical hard drive, or maybe even on a password-protected cloud server.
- Blog info and your online legacy – For all you online writers and bloggers out there who don't intend to let all your hard work go unappreciated, even after you pass away. Remember to leave your content in the hands of someone you trust to continue the legacy you created.
- Skeletons in your closet. Okay, maybe not a dead body. Maybe just digital proof that you killed someone. Or on a less dramatic note, possibly all that 'tongue-in-cheek' content you have hidden away for a rainy day that you wouldn't want people other than a select few to see.
- All those Steam/Desura/UPlay/Origin games you bought. I mean really, write them off, please. (P.S: Team Digit will take all you have and remember you very fondly for it).

The Death Switch

Ever seen those whodunit movies where the ingenious criminal mastermind controls the guy who has a skeleton in his closet by threatening to leak his secret in the event of his death? Well, that's actually possible. Which may not be good news for people who can be easily blackmailed, but it's definitely good news for all those who are interested in passing their essential information (like bank account details and social networking passwords) to their nearest and dearest in case they die of unforeseeable causes. Death Switch (deathswitch.com) is a website which deals with what we call 'Information Insurance'. A death switch (or a dead man's switch) is an automated system that prompts you for a password at a regular interval to make sure that you are still alive. If the password is not entered for a certain period of time, the system prompts you once more, after which, if no response is detected, it infers that you are either dead or critically disabled. At this point, it passes on your pre-scripted messages to the people you have named in the registration.



It's always good to be prepared for the unknown

The Memorial Move

Technically, not something that you can do for yourself, but in the memory of a dear friend or family member that passed away, Facebook offers to convert said person's profile into a memorial page. Essentially making it inaccessible, but still up and live, leaving the wall open for people to post their farewells. This prevents spam messaging from the late person's profile, so people on their friend lists won't get random invites for Farmville or Poker games. The memorial page also prevents anyone except confirmed friends from viewing the profile.

Make a Will

If that hadn't struck you, you really need help. Make a will specifically for your digital life and entrust it to a lawyer or someone you can actually trust. The will would contain specific details of your various online accounts. From Facebook passwords and iCloud/Google Drive/Sky Drive access, consolidate the access to all your data - both, sensitive and casual. You may even assign a caretaker for your blog or Twitter ID, if you think you need to leave a legacy behind.

If you're not much of a DIY person, there are several websites out there which will help you out with this. One such website is: youdeparted.com. You Departed (now called 'Asset Lock') saves your personal directives, last wishes, emails and messages to loved ones, banking passwords, or passwords of any kind, which will be delivered to anyone, as per your own request.

All said and done, here's some leavetaking advice: Keep in mind that there is no way to maintaining your online posthumous existence without a trusted friend in real life. Technology of any kind can only get you so far. After all, the main reason for you to take any of these measures is to know that your cyber image is intact (or non-existent) after you pass. And the only way to do that is to have someone you can really trust to take care of it all when you're gone. So make a real friend or two. Good ones.

How to backup your social media for free!

With real social lives of us netizens dying by the day because of our migration to online social media, let's figure out how to preserve that virtual world a little closer to home.

Samir Alam
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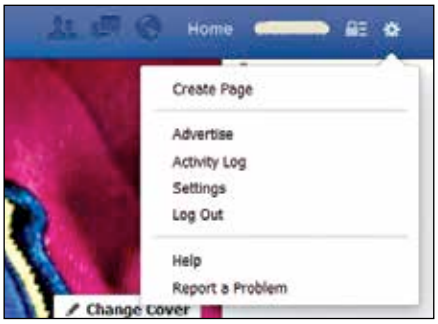
The age of social media is upon us. The time spent by people on social media when using the internet has tripled over the last three years according to a report by BI Intelligence. The integration of online identities and relationships now is an everyday part of most people's life and its only getting deeper.

The emotional and time investment made to upload all our memories and mementos to the web makes the digital network worth being scared about over the fear of loss. It's indeed a frightening thought, that with so much of ourselves being shared online - photographs, videos, tweets, updates and blog posts - any instance of a technological failure can erase our digital existence. A website's closure , a glitch on the host's servers, a malicious hack-attack or an all out zombie apocalypse can make all those fragments of our digital selves nothing but truncated bits and bytes.

So whether you're obsessed with preserving your online assets, or you simply need to preserve a copy of that embarrassing video from the New Year party, you can rest easy - for we take you through the ways of backing-up your social networking data. And in case of an actual zombie apocalypse, we suggest you do a separate backing up of real world essentials yourself (you know, food, water, weapons, gold – those other less important things).

Facebook

Facebook has a simple backup system built-in. By following a series of steps you can download a copy of all your Facebook data in a matter of minutes. Here are the steps: **1)** Click on the gear icon in the top right corner of your Facebook page and click on Account Settings, 2) At the very bottom of the General Account Settings page, click on "Download a copy of your Facebook data", 3) On the next page, click on the green button that says: "Start My Archive", 4) Enter your password at the prompt, 5) Click on "Start My Archive" again at the next prompt. That's it!



Go to your FB account settings from here

An email is sent to your registered email ID for verification to ensure that the request is genuine. The process takes a little time, depending on the size of your data, because Facebook collates all the images, contacts etc., into a downloadable file. The variety of information included in the backup is comprehensive and can be accessed through Facebook's help page regarding "Accessing Your Facebook Data". It's Simple.

Twitter

As Twitter went public last year the talks of its future were both hopeful and horrid. On the off-chance that Twitter does go to the darkside and leave all the tweets hanging, it's best to have a record of your 140 character sized acumen neatly saved for that day, or the day you finally decide to stitch them together into your magnum opus. Fudge! Even the Library of Congress is hoarding tweets, so shouldn't you follow suit?

Downloading your Twitter archive is even simpler than with Facebook - just three clicks - 1) Click on the gear icon at the top right of your Twitter page, 2) Click on Settings, 3) Scroll down the Accounts page and Click on the "Request your archive" button. Bingo! You're done. Expect an email from Twitter with a ZIP file containing all your data an attain tweet nirvana.

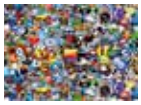
Google+ and Apps

Lets face it, Google pretty much owns our online life; from emails, attachments of all types, chats, Blogger posts (just kidding, who still uses it?), Picasa images, YouTube videos to pretty much everything else we share using its many wonderful apps. Mercifully, Google is benevolent enough to let us have a copy of our data - once it's done adding it to its growing "SkyNet" of course (just kidding, hopefully). Over a period of years Google's various acquisitions like Picasa and Blogger have created a bit of a mess when considering data backups, but now the key elements of the Google family have been integrated to one simple process.

Once you've logged in to your Google account you only need to follow a series of simple steps: 1) Click on the circular profile button to the top right and select Account, 2) On the Accounts page, go to the "Data tools" tab, 3) Click the "Select data to download link" in the "Data tools" box, 4) Click the blue "Create an archive" button. From the next step, Google offers you options on which Google products you want your data archived from, after



Top Patent Recipients
IBM, Samsung and Qualcomm are among the Top Patent recipients of 2013. Read more here: **http://dgit.in/PatTop3**



How successful are apps?
If you'd believe Gartner's estimate, fewer than 1 in 10,000 consumer apps go on to become financial successes. Devs, are you taking note?

which you just have to click the red "Create Archive" button for a Zip file.

As of now there are 18 products on the list which include all the essentials. Once you've selected and finalised your archive Google starts collating all your data. The time taken for this process depends on the size of your data file but its fairly fast so your data is taken care of in no time. All hail Google!

Instagram

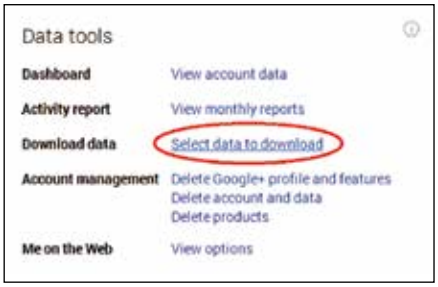
Who doesn't love a selfie? Are we right? Nevermind. But for those of you who really do document your lives through digital filters, fear not since Instaport (instaport.me), a free third party application is willing to help you out, even if Instagram isn't. Maybe that's a bit too harsh since Instagram claims it will soon allow image portability between Facebook and Flickr but for now, this nifty free online service will do it in three simple steps.

From the Instaport site you just need to: 1) Click on the "Sign in with Instagram" button and authorise the link with your account, 2) Select the parameters of your selection - all or selective - and click on "Start Export", 3) Hang around on the page waiting for a download link since they don't email stuff. Damn hipsters.

Flickr

Despite the competition, Flickr followership hasn't dwindled. But it's a safe bet to make sure that your "art" is not left helpless in one single basket especially if that basket is owned by Yahoo. And although Flickr doesn't offer a convenient mechanism for archiving your photographs, there are a few free third party applications that will take care of the issue for you. The best amongst which is Bulkr (clipyourphotos.com/bulkr).

Bulkr is a tiny software which runs on Adobe Air and needs to be downloaded to your system. Available in three versions; free, Pro and Pro+, it can not only backup all the images from your account, but also browse, search and download bulk batch images along a variety of parameters. Although the latter two paid versions offer a lot of useful add-on features like metadata and tags, the free version is sufficient for most casual users. Once installed the user



The Select data to download link.

friendly interface allows you to select up to 15 Flickr sets for download in 4 size options. Another simple and free program available on the Adobe Air platform is Flump (bit.ly/1cWJCTR) that allows you to download all public photos of any account whose username or ID that is known. Its slow at times but gets the job done in a rough and tough Sean O'Connell kind of style.

LinkedIn

Of course, apart from all the fun stuff out there on the web, even our professional identities need to be preserved. LinkedIn has become the professional contact book of the new age and contains all our professional social network data which can prove to be a critical asset for our careers. Understanding its own value to its users, LinkedIn has a very easy way of making a backup of your profile and contacts. From your homepage or your profile page follow these steps: 1) Click on the "Contacts" option under the "Network" tab, 2) Click on the gear icon at the end of the Contacts header for Settings, 3) To the right click on "Export LinkedIn Connections", 4)Choose the output format (CSV or VCF only) you would like for your contacts information list, 5) Prove you're not a robot. Done!

WordPress

Now which one among us hasn't had the temptation to carve out a little piece of the internet for themselves and their promulgations? Yes, it's a guilty pleasure and regular people have regret for starting a blog and then losing it to the internet forever. Since Blogger is already included in the Google package, the only key contender is WordPress. Here as well, a series of simple steps or tools can secure your online journal without any trouble. WordPress users can archive all their online files, posts, pages and even comments through the WordPress dashboard. Just find the Tools option at the bottom of the left panel and select Export. The Export screen will give you two options: Free and Guided. The free option is a down and dirty XML file that contains all your content. It's perfect if you want to transplant it to another blog, or tweak it for personal hosting. An alternative to this indigenous archive system is the use of the excellent (and free) WP-DB-Backup plugin (bit.ly/1eeN39s), which regularly backs up your blog database and can be customised for your convenience such as emailing your archive and scheduling backups.

Pinterest, Tumblr and third party apps.

Pinterest and Tumblr are surely the loveable oddballs of the social networking family. Both these services have a huge following of pinheads and tumbleweeds who prefer them as an alternative or add on to their usual social networking choices. And since Pinterest doesn't have a built-in archive option and Tumblr only offers an out-dated Mac OS X app, it's worthwhile to mention a third party online backup option that takes care of them both.

Socialsafe.net is an all encompassing online paid service that not only archives your online identity but also packages it for immense narrative effect in an elegant user interface to basically create the story of your digital life. Socialsafe.net also manages to catalogue, organise and dynamically update all your data to offer analytic insights about your life. All the data is easily transferred to your desktop or exported to Dropbox within seconds.

What's your life worth?

Unfortunately Socialsafe.net only has a 30 day free access to its Premium tools for upto 4 social networks, after which it offers options of archiving up to 4, 10 or 20 social network accounts at rates between 7 to 28 US dollars annually. It's always great to be able to get free stuff and services but if you're interested in getting the best possible option for preserving your social media existence in the most convenient way possible, you might want to consider if the price is worth it to you. After all - YOLO

Baby Steps 1, 2, 3D

With the interest in 3D printing holding strong, we give you the lowdown on a web application that will help you take your first couple of steps into the rather complex world of 3D modeling

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The application in question here is 3DTin (www.3dtin.com), a web-based 3D editor for use in web browsers. Its clean layout gives you the best of both worlds by being as easy-to-use as MS Paint while providing some pretty high quality results. That's right, no experience whatsoever of 3D design is required.

Requirements and the layout

If you're accessing the app on Chrome or Firefox, no download or installation is required for this free-to-use 3D modeling tool. Since all sketches are stored on the cloud, you can easily access them from anywhere and share them with others via a unique URL. The service uses webGL so Internet Explorer isn't supported. And a compatible browser is all you really need.

The layout is, as we've said before, very clean with all your basic tools arranged on the left. Perpendicularly above the toolbar are the options to save, open and create new projects. A very interesting feature here is the 'Camera Animation' button, which allows you to rotate your project to view it in 3D and record the movements. The next part of the layout is the color bar located at the left bottom of the screen. This is also where you can store a pallet of colors with a color picker. The workspace is a 2D grid which serves as a flat base that works as a reference.



Easy-to-understand tools with a quick note that pops up when you hover over them

Placed at the bottom-right corner are the camera controls.

Basic tools

Here's a basic overview of each of the 12 tools starting from the top of the toolbar and going to the bottom:

1. **Add Geometries:** Allows you to generate objects from an array of preset shapes. You can also create your own shapes using 'Make your own geometry' while 'Make geometry from 2D Shapes' lets you create 2D objects and convert them to 3D.
2. **Add Cube:** Generates perfect cubes that can be placed next to each other to draw other 3D objects.
3. **Erase:** Does what it says. Removes unwanted objects from your workspace.
4. **Select:** Allows the user to select multiple objects by holding down the left button and dragging the mouse to draw a rectangle. This is similar to the way you'd select multiple icons on your desktop.
5. **Color Change:** Allows the user to change the color of each individual object one by one.
6. **Color Picker:** Gives the user clarity about which color the desired object will be changed to if used before the 'Color Change' tool.
7. **View Rotate:** Allows the user to rotate the workspace through the X, Y and Z axes.
8. **Orthographic/Perspective:** Switches between a real, 3D representation of shapes and a simpler 2D representation of 3D objects.
9. **Snap to Grid:** On by default, it makes objects align themselves to the nearest intersection of the displayed grid on the 2D workspace. The grid can be shown/hidden by clicking the 'Grid on/off' option.
10. **Light options:** Allows you to light the object from various angles using a variety of sources.
11. **Symmetric Add:** Allows you to easily place a mirror image of an object anywhere in your workspace.
12. **Super Symmetry (premium feature):** Allows the user to draw a mirror image of any object in real time as well.

The Object toolbar

Once you generate an object, clicking on it brings up another toolbar that lets you to make further changes to the object. Using this toolbar you can:

- **Rotate**
- **Scale:** Extends the object symmetrically or through one or two of the axes.
- **Shear:** Keeps any two sides on the same plane while angling the other two sides. Imagine turning a rectangle into a parallelogram.
- **Flip:** Flips the object either vertically or horizontally.
- **Clone:** Creates a copy of the object.
- **Delete:** Gets rid of the object.
- **Group/Ungroup:** Appears when you select two or more objects to create one single object.

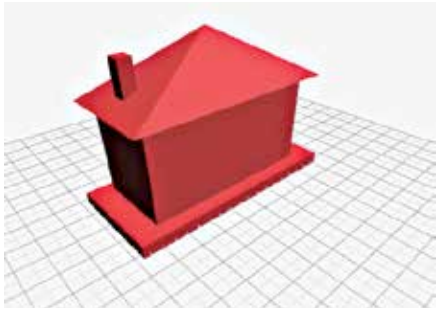
Let's build some 3D models!

As you begin to get the hang of 3DTin, you may find yourself spending a lot of time constructing shapes using cubes. Try to avoid this since the edit options normally

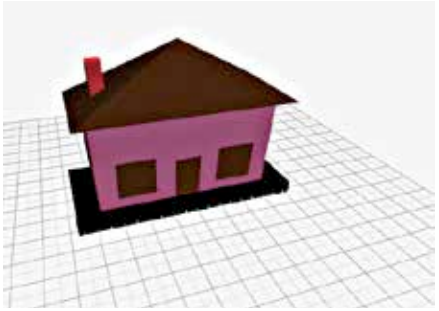
SimCity offline mode coming
After staunchly denying the feature at launch, EA has finally caved to player demand and community outcry, and they'll soon release an offline mode for SimCity **http://dgit.in/simoffline**



Meet SteamVR
Valve has announced an Oculus Rift mode of Steam called SteamVR. A match made in heaven? **http://dgit.in/SteamVR**



The basic shape of a house



Home! Sweet Home!

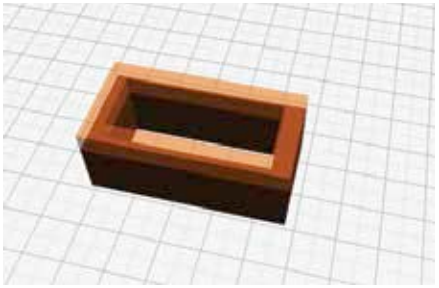
available to all the other shapes are not present for cubes and objects composed of cubes. With that advisory out of the way, let's get on to drawing an actual 3D model.

Let's start building a house. A simple, ground plus one affair with pink walls, a large sloping roof, chimney and a nice solid foundation.

1) Lay the foundation with the 'Add Geometries' tool and search for rectangle in the search field. Select the sheared box and key-in the values for its length (X), height (Y) and width (Z) and hit 'Add'. Find a suitable spot on your workspace to place the foundation. You can make the foundation bigger by placing more rectangles next to each other and clicking 'View Rotate' to get rid of the shape.
2) The next step is adding the walls. Use the same method, but this time, remember to make the height (Y) greater than the width (Z) and place all the four walls.
3) Next, for the roof draw a tetrahedron (better known as a pyramid) and place it over the walls. Click 'View Rotate' and then the tetrahedron to bring up the 'Object' toolbar and select 'scale'. Extend the shape across the X, Y and Z axes and centre it.
4) The chimney is just one cuboid on the roof with one end buried into the roof. Our house is almost ready!
5) Throw in the appropriate colors using the color change tool. All that's left now is the detailing.
6) Using the basic shapes available, with a thickness of 0.1, create a door and square-shaped windows for the lower floors. Group squares with half cylinders to make windows for the upper floors and the house is complete!

It would be pertinent to point out at this point that the entire house could in fact be constructed entirely with cubes using the 'Add Cube' tool which brings us to a tool available only to cubes in the object toolbar. The tool is called 'Extrude' and basically adds layer upon layer of an already present object, effectively building walls and other raised objects without going through the trouble of keying in exact values.

Let's try making the walls of the same house only with cubes. Click the 'Add Cube' button and place your cubes next to each other to form a rectangle. Once you hit the 'View Rotate' button and click on the newly drawn shape, an object toolbar will appear with a few missing tools and a few extras. The extras of course include the extrude tool, with which – as we mentioned before – you can add layer upon layer of an object onto it. As long as it's on a flat surface, you can extend an object till infinity in one direction with the extrude tool.



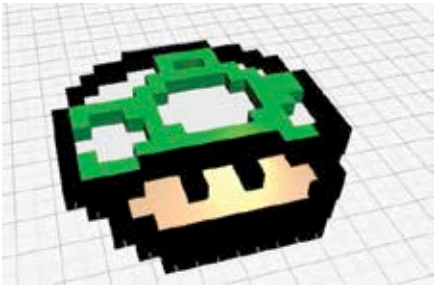
Horizontal extrusion using the Extrude tool

The other extra tools include 'Inflate', which allows you to double the object's dimensions symmetrically and 'Edit', which takes you to the 'Smoothen' tool. This smoothens out the edges of an object.

A word of advice

All said and done, this nifty little application has its own drawbacks. While some of the controls are very intuitive to engage, disengaging them takes some getting used to. Take, for example, the 'View Rotate' tool. Once you click it, you're at liberty to move the camera around at any angle. While one would instinctively hold the left button and move the cursor, it isn't necessary and you're left a little annoyed when you realize that you need to click the left button again unless you enjoy playing a violent game of earthquake with your design.

Another thing to keep in mind is in terms of moving the objects around. You must remember that any object from a particular camera view can be moved only along two axes at a time. That is, if you're facing the house head on, the door once created, can be moved up and down or left and right but not back and forth. Although in this particular example moving an object through a third dimension on a 2-dimensional display is sort of impossible, the same gets a little cumbersome when the camera angle is a little off to the side and you think you've got the angle right.



8-bit 1-Up by Robb

On the whole, 3DTin is simply brilliant if you want to draw a mock-up or rough 3D rendering for presentations and prototypes. Even more impressive is the fact that the cube-based rendering option makes generating stuff like the 1-Up mushroom from Mario by user Robb shown here, a cinch. And since 3DTin is affiliated to Creative Commons, if allowed by the creator, you can actually fire up your 3D printer and print some amazing work made by some amazing people! Just don't sell the models.

Tips on entertainment projector



Huge LED TV's are passé. Follow Agent 001 as he gives advice on projector's and what to look for while going for one in the market today.

Agent 001
agent001@thinkdigit.com

Mention projectors and often the first mental image most of us picture is that of a beam of light emerging from the back of a cinema hall and illuminating the large screen in front while enjoying the latest movie, or dull and boring slideshow presentations from countless office boardroom meetings. We seldom think of projectors as the centrepiece of our home entertainment system, always desiring to invest in a big screen HDTV instead. Perhaps the deep-seated notion that projectors are expensive and mostly for commercial use is an added deterrent.

I'm here to tell you that drive that notion out of your head. Granted that having a projector setup in a household isn't the same as installing a large screen high-definition LCD TV, there are some clear advantages the former enjoys over the latter. With a projector, any room can be a movie room – be it the living room or guest room, wall or ceiling – and the resulting image it throws can be bigger, better and larger than your HDTV. Most HDTVs measuring over 40 inches are priced between Rs. 50,000 to Rs 1,00,000 – so are most good home entertainment projectors, as I've found out. But when you're considering to purchase a home entertainment projector, pay attention to the following things:

1) Brightness and Contrast: While buying a projector, brightness of picture is a top priority. We know that you may not be able to test this out yourself, but nothing stops you from visiting electronic stores and trying out projectors. In my experience, I've found 3LCD projectors to be slightly better and brighter than conventional DLP ones. But the margin is very fine. Thumb rule is to buy a brighter projector if you aren't guaranteed a fully dark, theatre-like room at home for your movie-watching sessions.

While you should always consider buying a projector with a high native contrast ratio, most projectors tout dynamic contrast ratios (taking into account technologies and features that add on to the native contrast ratio) which are very difficult to ascertain by you and me. It happens in real-time where the projector adjusts the light output at any given frame of image. But always remember that projectors with a high dynamic contrast ratio may not perform as well as a projector with a high native contrast ratio.

2) Throw Distance: This matters a lot in urban homes that have space constraints – like my own. Consider buying a short throw or ultra short throw projector if you don't have large rooms, or don't want the distance between the projector and the screen to be more than a metre, so it doesn't block space unnecessarily. Ultra short throw projectors are capable of sitting a few inches from a wall or screen and project between a 40 to 60-inch image without a hitch, from what I've seen.

3) Resolution: I can't stress enough on this aspect. If you are considering purchasing a home entertainment projector – for watching Blu-ray or 1080p flicks, or HD gaming on a console or PC – it should have a Full-HD resolution. End of discussion. Pumping in a full-HD movie from your laptop / media device and watching it squeezed down to fit into a 1280x800 or 1280x720 projector screen is nothing short of blasphemy. Say no to black bars!

4) Audio: Most, if not all, self-respecting home entertainment projectors will come with onboard speakers. But let me tell you that these speakers are great as a contingency option, don't look at them as the primary audio outlet to your movie-watching needs. Try as hard as they may, onboard projector speakers are just not very good – they're alright if you want to watch a news broadcast. It's the same as expecting laptops to have great audio output – they just don't, despite however hard they try. They can never compete with a good 2.1 speaker set or a proper 5.1 audio setup. So do yourself and those ears a favour and invest in a good pair of speakers (at the very least) to go along with that spiffy new home entertainment projector you're thinking of buying.

5) 3D: 3D is slowly coming off age not only in cinema halls and TVs but also in projectors, I've noticed. I'd still advise that you don't buy a projector solely based on its 3D capabilities, because eye fatigue can still kick in, no matter what. However, when you purchase a 3D-capable projector, ensure you invest in the requisite 3D glasses – active shutter or passive ones, whichever are applicable in your case – and not the cheapest ones you can get. It's after all your eyesight that's at stake, so please take care.

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Smarthone needed

I'm planning to buy an Android phone under ₹13,000. There are a lot of choices available in the market and I'm confused. My requirements are: screen size should be 4.5" or above, at least a 1.2GHz processor, 720p HD display, 1GB RAM, 4GB of minimum internal storage with memory card slot. Also, please tell me which phone is better from amongst the Micromax Canvas Magnus and the XOLO Play.

Naveen Santosh

A Out of the two smartphones, we would say that the XOLO Play is a nicer option as it performs better, has an NVIDIA Tegra CPU as compared to the Canvas Magnus which has a Mediatek processor. If you keep your options open, you can also take a look at the XOLO Q1000 or the Q1000S both of which fall in the same price range and are decent phones.

Headphones under 5k

Hi, I need help in buying a new pair of headphones and my budget is ₹5000. After researching for some time, I've set down five different options to choose from and they are: Sennheiser HD439, Sennheiser HD449, Koss Portapro, Grado SR80i and the Sony MDR-XB600.

The looks of the headphones matter to me and I usually listen to hip-hop, metal and pop music. Please advise the best set headphones that I can get in my budget.

Zayed Saquib

A As you said that you like to listen to hip-hop, metal and pop, your choice of music basically covers the entire gamut of our test spectrum. Anyway, since you haven't mentioned whether you are looking for portability or not, we'd like to say that the XB600 and the Portapro are portable while you can also carry around the Grado SR80i if you wish, because they're compact too and sound nice as well. As for the Sennheiser's, they're circumaural so they would not be passable as portable headphones but they're decent for inhouse use. We'd like to recommend the Koss Portapro to you, as it's a timeless design and because the looks of the headphones matter to you. The sound quality of the portapro is brilliant and the headphones themselves are very comfortable for prolonged use as well. The Red version of the Portapro is available on ebay.in for ₹3800. Go for it.

Gaming laptop wanted

I want to buy a laptop and so I'm searching for one. The primary purpose of this laptop would be gaming and Photoshop. I'm really confused between the HP Envy 15-j001tx and the Dell Inspiron15 - 7537 (Core i7 and NVIDIA GT750). Please recommend a good one.

Shubhanshu Agarwal

A There is a significant price difference between the HP Envy and the Dell Inspiron as the Envy is priced higher than the Inspiron by about 20k. But for the price difference, there is not much of a difference when it comes to performance between the two. This is why the Inspiron 15 - 7537 is a better option in terms of value for money. However, the Envy 15-j001tx has a full HD display and if that is something that is very important for you and you can afford to pay a premium price of ₹85,000, only then you should go for it but remember that the Inspiron would still be a better buy.

Dual band router with USB

Hi, I'm interested in buying a new router and I have the following requirements:

- Should have up to 2-4 ethernet ports;
- Should have WiFi so that I can connec laptops and other portable devices;
- Dual band would be preferrable;
- Should have in-built USB port for media sharing.

Also advise whether an 802.11ac or a 802.11n would be better?

Sunil Rajput

A Since you haven't mentioned any particular price bracket, we'll enlist some good routers from different price categories that should meet your criteria. First is the TP-LINK TD-8968. Available for ₹2,500, TD-8968 is a single band n-router with a maximum bandwidth of 300Mbps. Next is the Belkin N600 DB which is a dual-band n-router and is available for ₹4,100. As the name suggests, the router supports a maximum bandwidth of 600Mbps and is a well rounded router. But if you want the best of the best and go all out, then you should consider the ASUS RT-AC68U which sells for ₹19,500 and is an extremely feature-rich router. At the end of the day, it all boils down to whether you require that many features. If not, then our first suggestion i.e., the TP-LINK TD-8968 would suffice. Finally, about the difference between an 802.11ac and 802.11n router is that, the ac is just an upgrade to the older standard. The 802.11n standard was limited by bandwidth, but it kind of served as a draft for the ac standard with improved speeds and also many other aspects such as less interference.

Which IEM?

I want to buy a good pair of earphones and I zeroed-in on the Sennheiser CX-180 and the Tekfusion Twinwoofers. I've read a few reviews online on forums by audiophiles which say tht the Tekfusion Twinwoofers are a good set, but I'm still confused about which one to go for. Please advise.

Sushil Kumar



A Let's look at the Sennheiser CX-180 first. Although a decent budget IEM, we think it's a a little over-rated. Same goes for the Tekfusion Twinwoofers because they also sound decent for budget IEM's but aren't really superlative. We would recommend you to take a look at the Cowon EM1 as those are a great set of earphones. Our tests showed that they're well balanced and provide a good sound response. You'll get the non-mic variant of the Cowon EM1 for around ₹900 and the mic variant for ₹1200 which is a pretty decent deal considering you get tangle-free cables and fairly decent build quality. You should definitely try the Cowon EM1 and you won't be dissapointed.

HBO Go on PS3/PS4
HBO Go will arrive for the PlayStation 3 first then PS4. Read more here:
http://dgit.in/HBOGoPS4

AVG domains in trouble
19 official domains of the company have been defaced. More here:
http://dgit.in/AVGHacked

SPEND SMART

Keep up with the latest prices for new gaming peripherals in the market today. Shop for mice, keyboards and mouse pads this month.



GAMING MICE

Brand	Model	DPI	Sensor Type	Buttons	Polling Rate (in Hz)	Acceleration (in g's)	Weight (in grams)	Weight Adjustment (Y/N)	Warranty (in years)	Price in ₹
Cooler Master	Storm Xornet	2000	Optical	7	1000	23	142	N	2	1,980
Cooler Master	Storm Spawn	3500	Optical	7	1000	20	142	N	2	3,638
Cooler Master	Storm Recon	4000	Optical	9	1000	20	139	N	2	3,990
Cooler Master	Storm Sentinel Advance II	8200	Laser	8	1000	30	139	Y	2	4,443
Corsair	Raptor LM2	2000	Optical	6	1000	20	120	N	2	1,049
Corsair	Raptor M3	1600	Optical	6	500	20	NA	N	2	2,199
Corsair	Raptor M4	6000	Laser	6	1000	30	NA	Y	2	3,199
Corsair	Vengeance M60	5700	Laser	8	1000	30	160	Y	2	3,050
Corsair	Vengeance M90	5700	Laser	15	1000	30	165	N	2	3,199
Corsair	Vengeance M65	8200	Laser	8	1000	30	NA	Y	2	3,938
Corsair	Vengeance M95	8200	Laser	15	1000	30	158	N	2	4,299
Genius	Death Taker	5700	Laser	9	1000	NA	NA	Y	3	3,150
Logitech	G100	2500	Optical	4	500	23	80	N	3	1,020
Logitech	G300	2500	Optical	9	1000	30	111	N	3	1,769
Logitech	G400	3600	Optical	8	1000	25	133	N	3	2,499
Logitech	G500s	8200	Laser	10	1000	30	121	Y	3	4,920
Logitech	G600	8200	Laser	20	1000	30	133	N	3	4,766
Logitech	G9X	5700	Laser	6	1000	30	156	Y	3	4,500
Mad Catz	Cyborg R.A.T. 5	4000	Laser	7	1000	50	NA	Y	1	5,381
Mad Catz	Cyborg R.A.T. 7	6400	Laser	8	1000	50	NA	Y	1	11,000
Razer	Abyssus Mirror	3500	Infrared	3	1000	15	72	N	1	1,851
Razer	Death Adder	3500	Infrared	5	1000	15	148	N	1	2,620
Razer	Imperator	6400	Laser	7	1000	50	139	N	1	4,748
Razer	Lachesis Ambidextrous	5600	Laser	9	1000	50	128	N	1	5,118
Razer	Taipan Expert Ambidextrous	8200	Laser	9	1000	50	132	N	1	5,134
Razer	Naga Molten	5600	Laser	17	1000	50	134	N	1	5,493
Razer	Naga Hex	5600	Laser	11	1000	50	134	N	1	5,493
Razer	Ouroboros	8200	Laser	11	1000	50	115	N	1	10,890
Roccat	Lua	2000	Optical	3	1000	20	70	N	1	1,990
Roccat	Kova+	3200	Optical	9	1000	30	90	N	1	3,400
Roccat	Kone Pure	8200	Laser	7	1000	30	90	N	1	4,920
Roccat	Kone XTD	8200	Laser	8	1000	30	123	Y	1	5,680
Steelseeries	Kinzu V2	3200	Optical	4	1000	30	77	N	1	4,066
Steelseeries	Sensei Fnatic	11400	Laser	8	1000	NA	102	N	1	7,799
Steelseeries	Sensei Raw	~5700	Laser	8	1000	30	1000	N	1	5,129
Tt eSPORTS	Black	4000	Laser	6	1000	50	NA	Y	2	3,355
Tt eSPORTS	Black Element	6000	Laser	9	1000	50	106	Y	2	3,910
Tt eSPORTS	Theron	5600	Laser	8	1000	30	NA	Y	2	4,320
Tt eSPORTS	Level 10 M	8200	Laser	7	1000	30	185	N	2	6,840



Next Hitman coming soon
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http://dgit.in/NextHitman

Official AMD Driver on SteamOS
AMD Catalyst driver 13.11 Beta 9.9 now officially supported.
http://dgit.in/SteamOSAMD



GAMING KEYBOARDS

Brand	Model	USB Slots	Audio Pass through	Keyboard Type	Key Type	nKRO	Macro Keys (Y/N/ No.)	Game Mode	Backlit (Y/N)	Palm Rest (Y/N)	Misc	Price in ₹
Corsair	LK1	N	N	Membrane	Rubber Dome	20	N	N	N	N	NA	1,049
Corsair	K70	1	N	Mechanical	Cherry MX - Red	Full	N	Y	Y	Y	Textured keys	8,450
Corsair	K95	1	N	Mechanical	Cherry MX - Red	Full	18	Y	Y	Y	18 macro keys	9,699
Cooler Master	Quick Fire Ultimate	N	N	Mechanical	Cherry MX - Red	Full	N	Y	Y	N	NA	8,185
Cooler Master	CM Storm Trigger	2	N	Mechanical	Cherry MX - Red	6	5	Y	Y	Y	64KB Memory	10,000
Cooler Master	CM Storm Mech	2	Y	Mechanical	Cherry MX - Blue	Full	5	Y	Y	Y	Detachable cord	11,000
Logitech	G510s	N	Y	Membrane	Rubber Dome	6	18	Y	Y	Y	Monochrome LCD	7,100
Logitech	G19s	2	Y	Membrane	Rubber Dome	5	12	Y	Y	Y	Colour LCD	15,425
Razer	BlackWidow Ultimate 2013	1	Y	Mechanical	Cherry MX - Blue	10	5	Y	Y	N	Braided Cable	10,800
Razer	Deathstalker Ultimate	N	N	Membrane	Rubber Dome Chicklet	10	5	Y	Y	Y	4.05" Touchscreen	23,702
Roccat	Arvo	N	N	Membrane	Rubber Dome	6	5	Y	N	N	NA	3,580
Roccat	Isku FX	N	N	Membrane	Rubber Dome	6	8	Y	Y	Y	NA	7,320
Roccat	Ryos MK Pro	2	Y	Mechanical	Cherry MX - Black	6+	5	Y	Y	Y	NA	12,000
Steelseries	6GV2	N	N	Mechanical	Cherry MX - Black	6	N	N	N	N	NA	5,849
Steelseries	7G Pro	2	Y	Mechanical	Cherry MX - Black	Full	N	N	N	Y	NA	9,999
Ttesports	Poseidon	N	N	Mechanical	Cherry MX - Blue	6	N	Y	Y	N	NA	5,500
Ttesports	Meka G1 illuminated	Y	Y	Mechanical	Cherry MX - Black	6	N	Y	Y	Y	NA	9,900



GAMING MOUSE PADS

Brand	Model	Variant	Length (in mm)	Width (in mm)	Height (in mm)	Price (in ₹)
Cooler Master	Storm RX	Small	250	210	5	600
Cooler Master	Storm RX	Standard	320	270	5	809
Cooler Master	Storm RX	Large	450	350	5	1499
Genius	GX-Control	Standard	320	230	5	799
Razer	Goliathus - Fragged Omega (Speed / Control)	Small	270	215	4	699
Razer	Goliathus - Fragged Standard (Speed / Control)	Standard	355	254	4	940
Razer	Goliathus - Fragged Alpha (Speed / Control)	Large	444	355	3	1198
Razer	Goliathus - Extended (Speed / Control)	Extra Large	920	294	4	1800
Razer	Vespula	Standard	300	240	4	2200
Roccat	Taito Mini	Small	265	210	3	650
Roccat	Taito Mid	Standard	400	320	3	1080
Roccat	Taito King	Large	455	370	3	1585
Roccat	Alumic Hardpad	Standard	331	272	3	3300
Steelseries	QCK Mass	Standard	320	270	6	773
Steelseries	QCK+ Limited Edition (Fnatic)	Large	450	400	4	1549
Tt eSports	Pyrrhus	Standard	360	300	2	1150
Tt eSports	Conkor	Large	400	320	4	1449

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BASIC RIG

Processor	Intel Pentium G2020	3,689
Motherboard	Gigabyte GA-H61M-D2H	3,657
RAM	Corsair 2GB DDR3 1333MHz	1,550
HDD	Seagate Barracuda 500GB	3,700
Monitor	AOC E2043FSK	6,800
Graphics Card	None	0
Cabinet	Huntkey T-91	1,650
PSU	Corsair VS450	2,268
Speaker (2.1)	Logitech Z103	1,500
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	Amkette Ash Black (Bundle)	500
Keyboard	Amkette Ash Black (Bundle)	0
Sound Card	None	0
Total		**₹26,264**

HTPC

Processor	AMD A8-5600K	6,955
Motherboard	MSI FM2-A75MA-P33	4,423
RAM	Kingston HyperX Blu DDR3 4 GB	3,500
HDD	Western Digital WD20EZRX 2TB	6,500
Monitor	None (your TV)	0
Graphics Card	None (HD7560D onboard)	0
Cabinet	Cooler Master Elite 120 Advanced	2,977
PSU	Cooler Master Thunder 450W	2,645
Speaker	None	0
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	Microsoft Desktop 2000 wireless combo	1,980
Keyboard	Bundled	0
Sound Card	None	0
Total		**₹29,930**

ENTRY-LEVEL GAMING

Processor	AMD A10-5800K	8,900
Motherboard	ASUS F2A85-M-LE	6,200
RAM	G-skill F3-10600CL9S-4GBNT	3,000
HDD	Seagate Barracuda 1TB	4,100
Monitor	AOC I2251FWE IPS	8,350
Graphics Card	None	0
Cabinet	Huntkey T-91	1,650
PSU	Cooler Master Thunder 450W	2,656
Speaker	F&D F680	3,500
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	Amkette Ash Black (Bundle)	0
Keyboard	Amkette Ash Black (Bundle)	500
Sound Card	None	0
Total		**₹39,806**

MID-RANGE GAMING

Processor	Intel Core i5-3470	13,674
Motherboard	Gigabyte GA-B75M-D3H	4,600
RAM	Kingston HyperX 8GB (KHX1600C9D3B1K2/8GX)	4,935
HDD	Toshiba 1TB DT01ACA100	4,390
Monitor	BenQ G2420 HD	10,500
Graphics Card	ZOTAC GTX 650Ti Boost	14,299
Cabinet	Antec One - S3	3,260
PSU	Seasonic S12II 620 Watts	6,350
Speaker	F&D F680	3,300
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	CM Storm Devastator (Bundle)	3,100
Keyboard	CM Storm Devastator (Bundle)	0
Sound Card	None	0
Total		**₹69,358**

ULTRA HIGH-END GAMING

Processor	Intel Core i7-4770K	24,100
Motherboard	ASRock Z87 Extreme4	13,200
RAM	Kingston HyperX Beast DDR3 16 GB RAM (KHX18C10AT3K2/16X)	18,725
HDD	WD WD30EZRX 3TB + Samsung 840 Pro	25,426
Monitor	BenQ GW2760HS	18,837
Graphics Card	NVIDIA GeForce GTX 780Ti	59,000
Cabinet	Corsair Obsidian 900D	25,499
PSU	Cooler Master V1000	14,199
Speaker	Logitech Z906 5.1	23,000
Optical Drive	LG Blu-ray WH14NS40 RW	6,500
Mouse	ROCCAT Kone XTD	5,200
Keyboard	Corsair Vengeance K95	9,699
Sound Card	ASUS Xonar Phoebus	10,500
Total		**₹2,53,885**

OPTIONAL ACCESSORIES

Surge Protecter	Belkin 6 Socket Surge Protector	811
Controller	Xbox 360 Controller (wired)	2,250
UPS	APC 1000VA - BR1000G-IN	8,500
Webcam	Microsoft LifeCam Cinema	4,980
Headphones	KOSS Portapro	3,870
Mousepad	Razer Goliathus Fragged Control	940
Wireless Router	TP-LINK TD-W8968	2,505
Sound Card	ASUS Xonar Essence STX	
External DVD-Writer	Lite-On eUAU108	2,700
Thermal Paste	Arctic Silver 5 (3.5 grams)	600
CPU Cooler	Cooler Master Hyper 212X	2,649
Fan Controller	NZXT Sentry Mesh	1,725
Case Fan	Noctua NF-F12	2,100
Total		**₹33,630**

worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

(MUST READS)



FOLLOW A SHARK ON TWITTER!

As if following celebrities and comedians on Twitter wasn't entertaining enough, you can now follow a bunch of sharks off the coast of Western Australia! More than 300 have been tagged with acoustic transmitter that sends out an alert when the shark is less than a mile from a beach, which then sends a tweet with the shark's approximate location, size and breed.

http://dgit.in/1cQmqXA

BEATING CENSORSHIP, LIKE A PIRATE

Fed up of being taken down multiple times, the Pirate Bay announced its plans for a tool that makes users the P2P hosts of the site, along with its own, alternate DNS. This means they won't have to rely on obscure web hosts or domain registrars, in a move that may just end up beating censorship for good!

http://dgit.in/1dMfmkS

URINE-POWERED SMARTPHONE BATTERY

Scientists in Bristol, England have come up with a battery that uses human urine and turns it into some extra juice for your phone. It uses a microbial fuel cell which contains organisms that break down the urine, producing a tiny amount of electricity in the process. Sounds great? Bill Gates thinks so too, so he's funded the research!

http://dgit.in/1hITE0f

[Lifehacker Corner]

THE COMPLETE GUIDE TO ANIMATED GIFS



Unless you've been completely offline for the last couple of years, you'll know that animated GIFs are all the rage on the internet. They're an integral part of Internet culture, with Internet forums chock-a-block with them. They're a great way to share short animated clips, being considerably more lightweight than videos. Get the lowdown on creating an animated GIF with this wonderful guide at Lifehacker http://dgit.in/1cQBAMo



10 writing tips from George R. R. Martin

You've read the books and you've watched the show; now get tips on writing fantasy fiction from George R. R. Martin, himself. He talks about various elements of fantasy fiction. Even for non-writers, it makes for a riveting read. http://dgit.in/1ijlNfX



Get smarter

Being smart is awesome, and it's a skill – the quality can be acquired, provided you know how. Lifehacker gives 10 ways to become smarter, including reading more (and faster), getting more exercise, learning a new language and of course, believing in yourself. http://dgit.in/19LOXnU



DIY Soylent

Soylent is a synthetic food-substitute that contains the essential nutrients your body needs, tailored to suit you. The idea holds a lot of promise, as it takes the drudgery out of "What should I cook tonight?". Soylent is yet to be released, but you can make your own at home: http://dgit.in/LOgBnU

SHORTS

MOBILE INTERNET AT 450MBPS



If you thought your 3G was fast, prepare to be blown away. Two South Korean telecom operators will be launching a 300Mbps Wireless LTE network later this year.Speeds are set to go up to 450Mbps come February! http://dgit.in/450korea

YOUR CHROME EXTENSION MAY BE INFECTED



Think before you download an interesting new extension for your browser. How-to-geek reports Chrome extensions injecting adware into regular websites and may even be tracking your browser activity. Here's a list of infected extensions: http://dgit.in/LAPyvO

WINDOWS 8: THE NEW VISTA?



Let's be honest - Windows 8's sales haven't exactly been stellar - people either love it or can't stand it. Turns out, many Microsoft employees refer to Windows 8 as the "new Vista" – an admission of Windows 8's underwhelming reception. http://dgit.in/1cQRpTe

A 3D PRINTED LIVER!



3D printers have been capable of printing clothes, food and a house; But San Diego- based company Organovo came out with the world's first 3D-printed liver. This tech should ease the shortage of organ donors. http://dgit.in/1anFBgW

5 essential apps for rooted Android devices

Here is a suggestion of the most essential apps that one should consider installing after rooting their Android smartphone or tablet

- By Kunal Khullar

Most Android users may have heard about rooting a device. In simple terms, this process allows a user to gain privilege control of the Android subsystem. A rooted device enables users to perform functions that are not available to other Android users.

Rooting a device is not that difficult. There are a number of sources on the web that will help you out. However, rooting a device would mean negating the warranty of the device and could also result in a bricked device. Utmost care is required. After rooting, you should definitely try these apps:

1. Root Checker

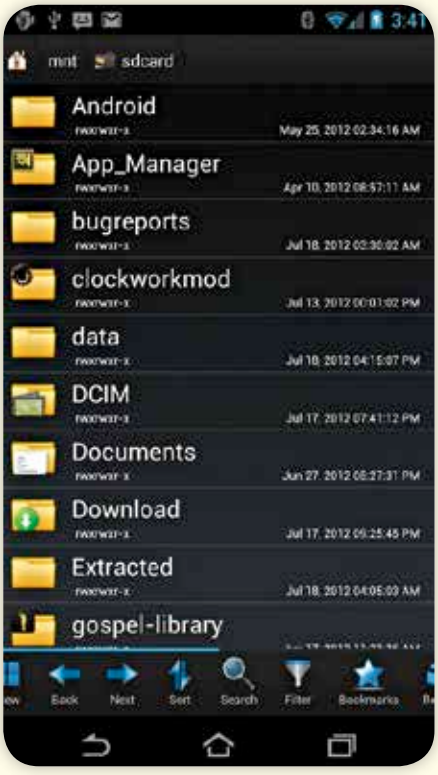
As the name suggests, this app confirms whether your device was rooted properly or not. Once you run the app, it checks for system admin access. In case you do not have root access, it means that you need to go through the rooting process once again. Useful for people rooting their device for the first time. Download: http://dgit.in/1aM6lge

2. ClockworkMod (CWM)

This is where the terms get a little technical. Clockwork recovery is a very essential tool for all rooted devices. This app enables you to access your device's recovery mode. Through the recovery mode you can install different customized ROMs, make an entire backup of your system as an image, install apps directly into the system, perform system-related functions like formatting and partitioning your memory and more. If you are rooting for the first time, go through instructions and tips on using CWM. It isn't that easy to use. Note: You will need ROM manager to install CWM on your system. Download: http://dgit.in/1eTlmVb

3. Titanium backup pro

One of the best backup tools available for Android is Titanium backup pro. The app requires root access and lets you back-up all of your apps along with your data. It even lets you backup your system apps in case you plan to change your smartphone or even just your ROM. One of the best features of Titanium is that you can uninstall any app from your device. So all unnecessary bloat-ware apps that you don't use can be removed. A word of caution: do not remove any system-related apps as you could end up damaging the operating system files. Titanium backup pro is available from the Google Play store for Rs. 329. Download: http://dgit.in/1ioc1u8



4. Root Browser

This is your traditional file manager application which allows you to access all your files and folders. You can move, copy or delete files, open or create zip files, sort your files to any order, share files with anyone, etc. Once you have rooted your device this app will let you access your system files and set read/write permissions for files and folders. It is a very useful app. It makes the task for searching files and folders easier. It is available for free at Google Play: http://dgit.in/1hky5lQ

5. STweaks

If you are looking for an app to personalize your system then Stweaks is the answer. The app is a powerful tool that allows you to reconfigure your Android kernel, so use this app with extreme caution. You can perform various system tweaks like changing the clock speed of your processor, boost your audio output, enable dual-booting and so on.

The app has one drawback. It is supported by a limited number of kernels, so one should go through the list of supported kernels before using it. Stweaks can be downloaded free of cost from the Google Play. Download: http://dgit.in/1dPXfKC

YOUR BRAIN V/S A SUPERCOMPUTER



Have you ever wondered how powerful a brain really is? The number of flops may be accurate, but not too intuitive. Japanese scientists have reported that even the most powerful supercomputer takes nearly 40 minutes to simulate one second of brain activity! http://dgit.in/1juCX9l

THE CASE AGAINST SPOTIFY



An Indie musician talks about how Spotify and other streaming services may not be musician-friendly. While these are great options for listeners, artists get a raw deal. Royalties amount to as low as $0.003 per listen. http://dgit.in/1moBj8M

REDDIT'S FAVOURITE BOOKS



If you're a book lover, you've faced the question of what to read next. Sit back, and let the Internet help you out. Reddit user Raerth has compiled a massive list of the most up voted books from across multiple Reddit threads – over 200 books. http://dgit.in/1anlsXg

SILICON VALLEY - A CLASS DIVIDED



America's Silicon Valley may be the seat of the brightest minds in tech, but it's not without problems. As engineers' salaries sail through the roof, the class divide increases. Protesters surrounded a bus carrying Google employees only serves to highlight this problem. http://dgit.in/Kzp5hY

Smartphone Cameras: 5 ways they can improve in 2014

It's a new year and we're starting it off by hoping that one of the most popular forms of photography will gain some serious technological advancement in the next 363 days.

- By Swapnil Mathur

The previous year was pretty big for cellphone photography. Nokia dropped the 41MP bomb-shell, Sony packed a larger sensor into their water-resistant Xperia Z1. The iPhone improved upon certain aspects of their camera performance too; but 2014 is a new year and we are fresh on hope. Here is a list of five features that we are hoping cellphone and imaging companies will innovate on in order to take cellphone imaging to the next level.



About the optics

While sensors are getting bigger, what we see lacking is optics. Even today, most lens elements in a camera phone are made from plastic. It may be high grade plastic, but it's still not as good as its glass counterpart. One of the reasons glass isn't used in cellphones is because of the rugged conditions a cellphone is subjected to. That was also why a mechanical shutter was never introduced into camera phones, but the Nokia Lumia 1020 defied that. One can only hope that phone manufacturers will figure out a way to add glass to the assembly, without compromising the integrity of the device.

Low-light wizardry

Even though a lot of the modern cellphones produce decent enough photos in low-light (as long as you see them on the phone and nothing bigger), but they aren't *great*. We hope that this year, manufacturers would improve upon the low-light performance by pushing the apertures as far as f/1.4 (or even f/1.0 if we had to be ambitious). However, that would have to be coupled up with a better image processing engine as well.

More juice!

Screens are definitely the most battery draining component on a cellphone, but when you kick that camera into the on position, you're taxing your battery, hard. Switching from photo to video makes it worse. The whole camera thing is such a drain that Nokia bundled a spare 1020 mAh battery into the battery grip accessory. Even with that kind of power, the Lumia 1020 barely lasted the day, with somewhat heavy usage, of course. So with better cameras, we await better batteries, or at least better battery life.

Unleash the RAW power!

One of the drawbacks of camera imaging has been the little control users have over the nature of the output. There's not a lot of scope left around for editing (unless you're just using Instagram), which is a bit of a turn off, especially if you've invested in a *good* camera phone. Nokia fixed this by adding RAW DNG capture support to some of their high end Lumia phones like the Lumia 1520/1020. We'd still like to see the likes of Sony, LG, Samsung and Apple bring RAW capture support to their phones. Using Adobe's open DNG format,would save a lot of R&D.

A useful flash

Many have attempted to make the cellphone camera flash actually usable, with very little success. Nokia threw a curve ball when they packed an uber-powerful Xenon flash tube into the Lumia 1020 which showed promise. While the power was there, the flash failed at delivering correct colour temperature to photos, often causing a green cast. Apple too introduced the "TrueTone" flash with the iPhone 5s, but even that leaves much to be desired. It would be nice to see the cellphones come with a flash with a little more effect in terms of intensity and colour temperature so that the photos are not only well-exposed, but also have a more natural colour tone.

While these are definitely the top 5 innovations we'd like to see in our cellphones in 2014, we wouldn't mind a Lytro-type functionality, either. And since most of these companies are probably paying attention, we wouldn't mind a built-in neutral density filter or a Polarizer either. Kthxbai.

(worldview)

ALLTIME10S

This channel gives you the Top 10 of absolutely anything. Whether it's the 10 most polluted places on earth, or 10 Amazing facts about the Simpsons, or 10 bizarre christmas traditions from around the world – you'll get these and much more.

http://dgit.in/allttop10s

(QR Code)

For a list of all the links from this section, head over to http://dgit.in/wwfeb14
Or point your phone to the QR code above

(PRODUCT LAUNCHES)

TYPO KEYBOARD



The makers of the Typo keyboard release a physical keyboard that connects to your iPhone. The hardware keys are similar to those on the Blackberry Bold, and it's an interesting add-on for those who can't stand typing on a touchscreen.

Price: $99 (approx ₹6000)

APPLE MAC PRO



Apple's most powerful computer just got a major boost including a spanking new design. The all-black beast is housed in a cylindrical tower, can now be upgraded to an 8-core processor and 64 GB of RAM.

Price: $2999 - $8099 (approx ₹2 lakhs - 5 lakhs)

OPPO N1



The Opp N1 is the first ever phone to ship with the most popular custom Android ROM - Cyanogenmod. The phone has high-end specs, including a unique swivel camera. Cyanogenmod adds many minor tweaks and enhancements to the stock Android.

Price: $599 (approx ₹ 37,000)

WORDJUMBLE

ABSOLUTE TIMEPASS

C	Y	P	K	F	N	A	L	E	T	K	Y	U	P	S	Q	S	J	Y	M
E	F	T	X	M	Y	Q	G	K	S	T	Y	J	S	B	A	T	E	M	G
H	R	L	O	C	O	T	O	R	P	D	K	D	C	K	V	S	Y	M	M
E	W	P	H	I	S	H	I	N	G	V	O	X	G	O	T	B	S	P	R
M	N	J	B	Y	E	U	B	R	F	B	L	V	R	E	A	P	S	M	F
O	H	G	N	E	T	I	Q	U	E	T	T	E	D	W	D	X	U	X	L
T	Z	R	H	K	M	G	K	S	F	Z	U	T	A	F	P	E	I	P	L
I	C	D	D	N	Y	D	R	J	D	R	X	H	N	P	R	I	D	A	G
C	I	T	V	H	P	U	H	S	A	M	V	B	U	A	P	Y	G	C	L
O	G	O	P	H	E	R	E	J	H	N	F	J	W	C	H	L	P	K	T
N	V	O	P	R	T	R	H	C	I	R	E	D	T	N	U	W	E	E	L
M	E	M	E	T	X	A	J	E	K	L	A	C	J	T	U	N	S	T	O
J	S	N	K	W	U	X	S	W	U	S	S	C	C	Z	V	N	K	Y	P
M	G	N	F	K	S	R	C	K	H	L	V	K	I	L	C	E	Q	Q	F
L	X	K	W	F	J	L	G	C	B	H	P	P	X	H	N	Z	A	N	M

There are 12 internet related words in the grid alongside. Find them all.

Top 3 YouTube Picks

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



Walk on water prank

Want to see someone walk on water? The last time this happened was probably 2000 years ago.

http://dgit.in/wlkwtr



Audi's Android Tablet

It's been known that Audi and Google are working together on an in-car entertainment system. Watch CNet go hands on with it.

http://dgit.in/1eStt4s



Game of Game of Thrones

All you Game of Thrones fans out there, Saturday Night Live has a hilarious parody in the form of a game show called Game of Game of Thrones.

http://dgit.in/1bhVUXa



Demonstrate: a new app to help you create iOS apps

Creating stunning visualisations using R

>>Data visualisation is coming up fast and strong. Try your hand at it if you don't want to be left behind>

What is data visualisation?

Put simply, data visualisation is the pictorial representation of data. Any data set can be understood at a glance by representing it on interactive charts and graphs. This presentation method is employed everywhere around you, right from statistical graphs in textbooks and academic papers to colourful infographics in newspapers. As technology has progressed, we've been able to add increasingly more specifics and data, and with more data arises the need for accurate and appropriate visualisation techniques. That's where 'R' comes in handy.

What is R?

R is a language developed primarily for statistical computing and data analysis. Data analysis and data graphics go hand in hand so it's imperative for a language of R's nature to have support, which will help it employ some amazing graphic techniques for data visualisation.

Programming to create visualisation? Is R user friendly for students?

R, since its introduction, has become quite popular not only among the PhD holders in Data Science but also amongst mainstream users in need of a common platform for computing and visualisation. In this workshop, we'll get you started on some simple data visualisation techniques using R, which will serve as an adequate platform to develop visualisations that are even more advanced. For first time users of programming languages: Do not be afraid. The idea of coding from scratch can be intimidating, especially if you've never used programming languages before. Remember that every line of code is simply a written equivalent of a keyboard shortcut in a sense. It performs a task and these commands can mostly be looked up in a book or online.

What are the advantages of using R over MATLAB?

R has some distinct advantages. Since it's a free software service released under the GNU license it's free! This gives it a huge advantage over commercial software such as MATLAB, which are really expensive especially for students and small enterprises. Because of its Open Source nature R attracts a host of talented developers which means awesome support, documentation and user defined packages for diverse needs. R has some amazing packages to unlock a variety of complex and useful data visualisation techniques.



A screenshot from the data sheet where Sachin Tendulkar's records are stored. Source: stats.espncricinfo.com

What else can R do?

Besides creating stunning visualisations you can also easily perform run-of-the mill data analysis. There's good support for computations regarding statistics and probability, and support for machine learning and data mining is getting better.

Installing the IDE

One of the best and most robust IDEs for R is RStudio. (An IDE or integrated development environment is a facilitator that helps you communicate effectively and intuitively with the programming language). It comes bundled with R software and basic packages, and can be installed on Linux, Windows or Mac with the single click of a button.

The installation in Windows/Mac is a routine procedure as with any other software. Download RStudio Desktop, run the .exe file and follow the procedural steps. While in Linux one has to install R via the terminal (type 'sudo apt-get install r-base') and then install RStudio separately by selecting it from the software centre.

Basic layout – as user-friendly as it gets!

The home screen is an arrangement of four panes, each of which can be expanded to fill the screen whenever required. The top left

window is where the codes are written and run en masse, however this part is not important to our tutorial. The top right window maintains a history of all the commands written. The bottom left window is the 'console' where you enter commands and see the results (if any) in the bottom right window.

Select and read data

Let's now create a visualisation. Here's some data from Sachin Tendulkar's batting record each year (Source: stats.espncricinfo.com) pasted in an Excel sheet as shown here:

```
Click on File > Save as > Save it in the CSV (Comma Separated values) format in My Documents (the default location from which RStudio inputs files)
```

In the RStudio console (bottom left), type the following:

```
sachin<-read.csv('sachin.csv',header = TRUE);
```

This will ensure that sachin is now a data set with rows and columns. Type 'sachin' and press [Enter] to view the table with its headers.

The default packages allow some plotting in R. For example, type the following:

```
qplot(sachin$Grouping,sachin$Average);
```

You'll find a plot of the average scores by Sachin in each year, with the 'Grouping' column showing along X-axis and 'Average' column showing along the Y-axis. It might seem a little haphazard so change the scales until you find a graph that works for you. For example:

```
qplot(sachin$Grouping, sachin$Average, ylim = c(0,200));
qplot(sachin$Grouping, sachin$Average, ylim = c(0,2000));
```

These produce radically different visualisations compared to the first data set!

To unleash the full potential of R's graphing capabilities, employ the ggplot2 package. Ensure you have a working internet connection and type:

```
install.packages("ggplot2");
library(ggplot2);
```

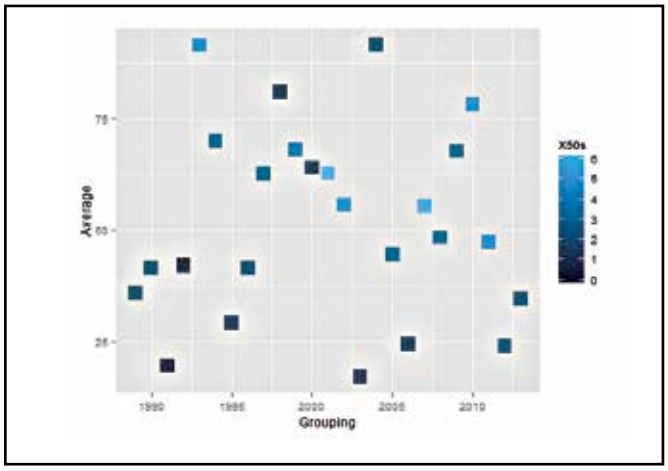
You can now use all the functionalities of ggplot2.

ggplot2 has two basic components: aesthetics, which is all the data and elements, which is the kind of visualisations you want – viz bars, lines, heat maps, etc.

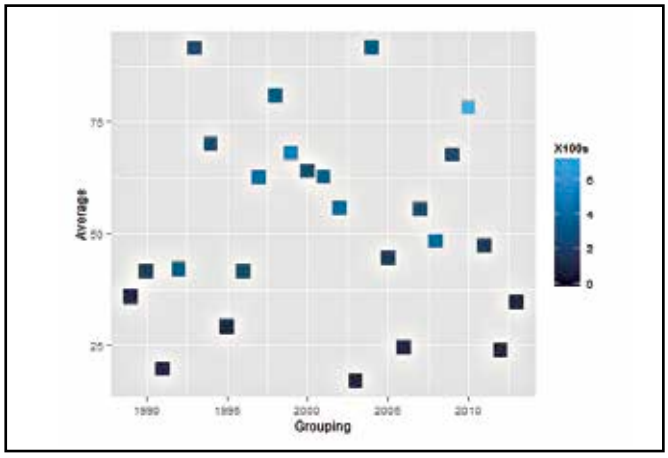
In the console, let's try the following:

```
ggplot(sachin, aes(Grouping, Average)) + geom_point();
```

This yields the same graph as the one shown above with the difference being the ability to customise. Type the following:



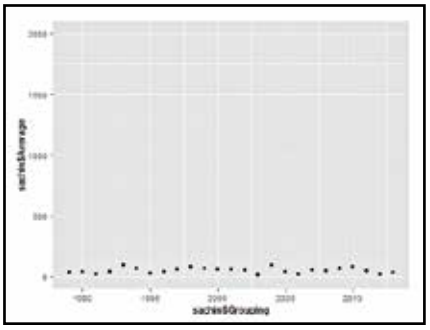
Tendulkar's average annual runs tally shaded according to number of 50s scored



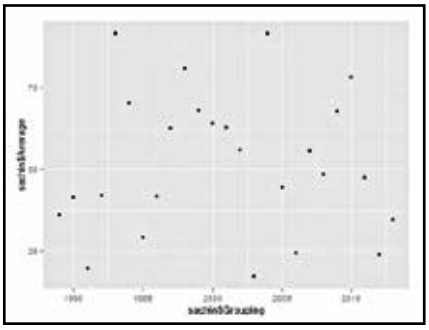
Tendulkar's average annual runs tally shaded according to number of 100s scored

```
ggplot(sachin, aes(x=Grouping,y=Average,colour = X100s))+geom_point(shape=15, size = 6, alpha = 0.8)
```

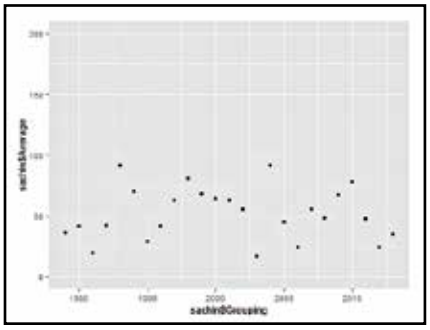
This gives a plot of averages versus grouping, except each point's shade is determined by the hundreds – lighter the shade, more the number of centuries that year. The shape and size can be changed accordingly, and the parameter 'alpha' determines the intensity of colour. Replace 'X100s' with 'X50s' and you'll get the point shaded according to the 50s scored.



Average annual score plotted versus every year - heavily scaled up graph. While there seems to be remarkable consistency, it does appear to push the average score closer to zero



Average annual score plotted versus every year - the default setting



Average annual score plotted versus every year - slightly scaled up graph. Notice how everything seems to appear a lot more 'averaged' and 'flattish'

ggplot(sachin, aes(x=Grouping,y=Average,colour = X50s))+geom_point(shape=15, size = 6, alpha = 0.8)

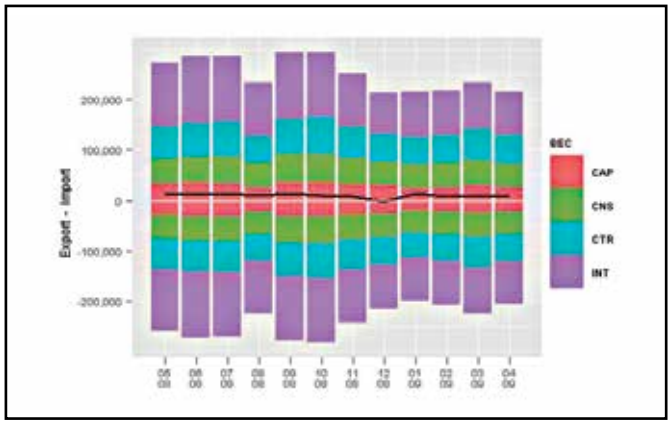
This brings some new insight into the dataset – for example, it shows that the more 100s he scores, the higher is his average. However, his highest average runs in one year need not have the maximum number of centuries – indicated by the lighter points occupying a band of points just below the maximum score. Even with the 50s (replacing X100s with X50s), you see a similar pattern although maximum runs in a year is also very close to the year with maximum number of fifties.

This sort of an analysis, called 'correlation' is central to every aspect of study – from cricket stats to the population of tigers in a jungle.

There are several built-in functions and dozens of sources from which you can get interesting plots and analyses.

Interface and Interfacing

Each of these plots can be saved in PDF or JPEG formats with the simple click of a button. Just click on the 'Plots' tab in the bottom right window, select 'export' and choose the required option. You can even adjust the size and aspect ratios before saving.



EU27 trading data from the BEC group since 1999 - a beautifully coloured graph for a seemigly drab data set!

Some interesting sources to learn data visualisation using R:

- **Code School** (http://dgit.in/19wUoFn) –Learn R coding - it's easy!
- **Fell In Love With Data** (http://dgit.in/LaeJVC) – Some tips on R
- **R Graphics Cookbook** (http://dgit.in/1aQy6x5) – A good book at Amazon on R graphics
- **The Yaksis** (http://dgit.in/1j21D8Z) – Chart chooser in R
- **Learning R** (http://learnr.wordpress.com/) – This old site at WordPress has some standard applications of ggplot2 graphing
- **REvolutionAnalytics** (http://dgit.in/19wV3Xt) – This YouTube video demonstrates the importance of R
- **Information is Beautiful** (http://www.informationisbeautiful.net/) and FlowingData (http://flowingdata.com/) – Some of the most popular visualisation websites hosting graphs done in R

There is extensive help available for R. You can search online forums for commands and codes, or if the command is known, a '?' followed by the name on the console will give all the information on the respective command.

R has one of the largest numbers of packages and these are still growing. Several languages and GIS applications can be integrated with R, apart from visualisation. Basic R charts and graphs are the basis for several infographics, which you can then polish up with some art to improve visually appeal.

You can even make interactive graphs with given data, similar to the one just described.

http://www.rstudio.com/shiny/showcase/ has several such examples. RStudio's package 'Shiny' makes it super simple for you to turn analyses into interactive web applications that anyone can use. It lets you incorporate parameters such as sliders, dropdowns and text fields, and gives you control over the number of outputs you want to add such as plots, tables and summaries. Shiny also provides a guide to creating such interesting apps. >

*the source code



Behind the scenes of Wii U's software development

>>A third-party software developer talks about working with Nintendo and developing its latest console. Read the article below to know more:

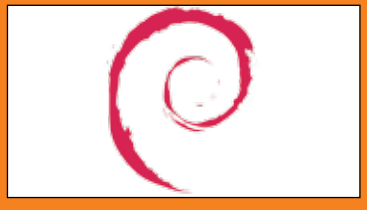
http://dgit.in/wiiubts



The difference between coding and literature?

>>An interesting blog post by Peter Seibel as he struggles to understand the obvious desparity between coding and literature. Read on to read what he says on the subject:

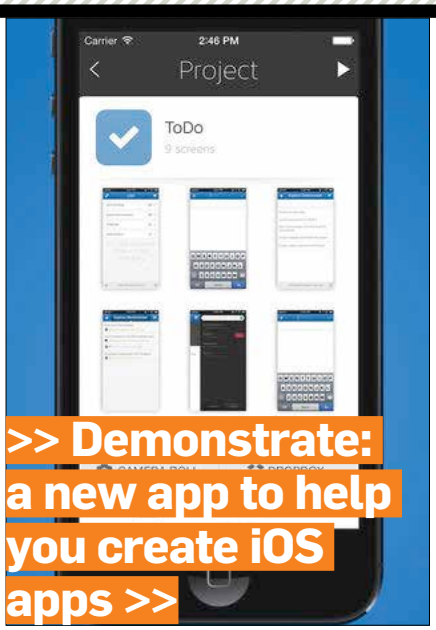
http://dgit.in/litcoding



Thank you, Debian. Free games, all around!

>>Valve seems to hold every debian developer responsible for the development of SteamOS. So they're offering all Debian developers offer full access to current and future games produced by Valve.

http://dgit.in/loyl2vlv



>> Demonstrate: a new app to help you create iOS apps >>

>>We try out Demonstrate, an app that lets you create a working mock-up of an iOS app in very little time> **by Nikhil Pradhan**

Demonstrate, an iOS app developed by Chennai based developer NFN Labs (that stands for Noef Fing Name- say that really fast), gives you a simple way to build a mock-up of an app and share it among friends and colleagues. It is particularly suited for those of you who have an app idea planned out and know what it should look like and what it should do. At this stage, you can use Demonstrate to program the way your app behaves, without actually requiring any coding experience.

I have had the chance to try out Demonstrate (limited version available for free on iTunes) and the first thing that struck me about it was its minimalistic design that uses a lot of the same elements as iOS 7 (predominantly white backgrounds, thin fonts, non-skeuomorphic icons etc.). At first start, the app throws up a basic tutorial, after which you can either play around with the demo project to get a hang of how the app works, or jump right into the fray by uploading your apps' sketches or renders from your iOS device's image library or Dropbox.

After the renders have been uploaded, you can then choose areas to link within a particular screen and what other screens they should link to. For example, if you have a button marked as 'Contacts' on a particular screen, you can link it to a separate page where you have the contacts listed. Doing this is quite simple- all you do is drag a square/rectangle over the area you want to treat as a button, click on the 'Link' option that pops up and then choose the screen that should open after the button has been clicked. Demonstrate also lets you choose what transition effect should come into play while moving between screens, effects which have been introduced in iOS 7.

Once you're done with your project, simply swipe down on the main screen to export your project using Dropbox or iTunes in an editable format or just as a demo.

But is it any good?

As I mentioned earlier, Demonstrate is a particularly simple way to create a mock-up of an app. It cuts down on time you may have earlier had to spend coding and lets you get your app out of the door quickly and in style.

There were a couple of things that I thought were limitations with the app. First, the free app limits you to only two projects beyond which you'll have to pay $4.99 (Rs. 310 approx.) per month if you want to create unlimited projects with unlimited screens. This may prove to be expensive for those who may just be finding their feet in the world of iOS development because this is definitely an app that they would find extremely helpful. Another thing I missed was the inclusion of gestures as currently Demonstrate only lets you program button taps but not gestures for different actions.



I also wish the developers had included a more exhaustive working example of an app mockup than the default one.

Overall though, these are just minor gripes because in its current state, Demonstrate is definitely a very useful app if you are interested in developing for iOS. >

To see move screenshots head over to: http://dgit.in/1c3fr15

*coding matters



Dart 1.1 Launched

>>Google's Dart 1.1 launches, with statistics showing that it runs 25% faster than Javascript. Is google dipping its fingers into the next generatio of coding? Find out:

http://dgit.in/dart1_1



Hohndel on GTK and Qt Took-Kits

>>Dirk Hohndel of Intel's Open-Source Technology Center talks about his experiences in GTK and Qt. He also states his problems with the former.

http://dgit.in/gtk_Qt

Slowly gathering steam...

This year's CES wasn't without its share of highly-awaited revelations. Apart from all the hoopla surrounding wearable devices' coming of age, 4K displays gaining more traction, cars that drive you, 3D printing, connected homes and more devices waking up to the Internet of Things, there was an unveiling of a different kind. Probably it didn't grab as many eyeballs as one would've thought, situated in a dimly lit Vegas hotel suite, devoid of much razzmatazz, conducted by a speaker not really known for his speaking prowess or charisma that's expected at big-ticket CES keynotes.

After a lot of hype and expectations, Valve's Steam Machines finally came out in the open, and one of the first things that struck me was the diversity of Steam boxes on offer, their yet unconfirmed and myriad hardware specifications, all available for purchase at several price ranges – spanning from $500 to a whopping $6000 – depending on your budget. Wait for AMD's Kaveri APU-based Steam Machines to pop up, and the prices will sink even lower – around the $250 mark. Not bad for a dedicated gaming machine, right? This shows that Valve's offering something to everyone, letting customers pick and choose their gaming experience. This is an excellent feature of Steam machines, in my opinion. What's even more exciting is that Steam Machines are re-branded PCs; which means you can say no to all these Steam Boxes, format your Windows PC, install Steam OS (the final build some time in the future), stick a Steam logo on it, and voilà – your trusty gaming rig is now a Steam Machine. And Valve will hold no grudges against you for doing that.

Which brings me to SteamOS. It's basically a Steam client installed on Debian – one of the most stable Linux distros you could find – configured to open into "Big Picture" mode by default. SteamOS is critical to Valve's plans, something they want us to adopt as customers and are trying hard to entice game devs with. Steam's bare collection of Linux-only games obviously is a big dent right now, but it's something that Valve will have to fix if this whole proposition has to succeed. Since Valve began as a software developer, I'm less worried about them not cracking that puzzle. Given Valve's track record, it's a problem that they will solve better than anyone, but it won't happen overnight. Will it be enough? Only time will tell. But as things stand right now, PC gaming is monopolized by Microsoft (and Windows), which has lost the plot for quite some time. At least with Valve, as a company that has built gaming software and understands how PC gaming works, engages with and indulges the gaming community better than any other, one can hope with a fair amount of certainty that they'll not let PC gamers down.

If Valve deliberately tried flying under the radar at CES, they brought out the big guns within days of CES' conclusion, at Valve's very own Steam Dev Day. Biggest revelations at the 1200 strong developer conclave included a redesigned Steam Controller with a new layout for the ABCD buttons. Plus there's also Steam VR, a virtual reality headset that Valve's building by itself, which various first-hand non-Valve devs are claiming is a superior VR HMD than Oculus Rift Crystal Cove. Not just gaming machines, Valve's working on devices and tech that have far-reaching effects and it's doing all that from publishing and distributing PC games online like no other; its primary source of income and unabashed fan loyalty. That's a healthy sign as far as PC gaming (in general) and PCs (in particular) are concerned, don't you think?

The significance of Gabe Newell's unveiling of the 13 Steam Machines wasn't lost from the PC's perspective. Steam Machines are nothing short of a second coming of the glorious PC that we've all grown up using and it stands to affect so many more industries: personal computers, gaming, entertainment, and digital interaction, to name a few.

As things stand, Steam Machines aren't likely to challenge Microsoft and Sony's duopoly on the console gaming market anytime soon, not for the next couple of years. That's alright, I'm in no hurry, and neither is Valve – who like to do things nice and slow. From chip manufacturers like Intel, AMD and NVIDIA to OEMs like Dell, Gigabyte, ZOTAC (and many others) hopping on the Steam Machines bandwagon, it's clear that the good ol' PC hasn't run out of steam just yet.



Jayesh Shinde
Manager - Test Centre
jayesh.shinde@thinkdigit.com

"At least with Valve, as a company that has built gaming software and understands how PC gaming works, engages with and indulges the gaming community better than any other, one can hope with a fair amount of certainty that they'll not let PC gamers down."

Bazaar

THE LATEST PRODUCTS REVIEWED FOR YOU

The Digit Test Centre receives hundreds of products every month. Each of these products is put through a series of tests and is finally given a score. The final score is arrived at after considering a number of factors and evaluating them in terms of features, performance, value for money, build quality, and, in the case of software, even ease of use.

For better understanding of our ratings, here's a quick guide to our overall score

- 10 to 30 **Extremely poor product.** Keep away!
- 31 to 50 **Strictly OK.** Not recommended
- 51 to 70 **Decent product.** Go for it, but there may be better products out there.
- 71 to 90 **Very good product.** Highly recommended.
- 91 to 100 **Ground-breaking product.** We've never seen anything like it before. A definite must buy!



INSIDE



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Fujifilm XE-2

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HTC One Max



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Lenovo Yoga 8 Tab

PLUS

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088 | Portronics Bean mouse
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090 | WickedLeak Wammy Titan 3
091 | XOLO A600
092 | Nikon Df
093 | Karbonn Titanium S5 Plus
094 | NZXT Source 530
095 | Plantronics BackBeat GO 2
096 | MSI Z87M Gaming Motherboard
098 | Plextor M5 Pro Xtreme 256GB SSD

& MORE...

Lenovo IdeaTab Lynx K3011

A very functional Windows 8 hybrid

There are two parts to this product - the Lynx as a tablet, and the overall package with the keyboard dock attached. Weighs just more than 640 grams as a tablet, and the keyboard dock adds another 660 grams to the weight. In combination, the entire package weighs pretty much like an ultrabook. There is no doubt that the Lynx is good to look at, with the darker colour tone at the front and the lighter rubberized finish at the back. However, the in-hand feel of the tablet isn't one that is the most premium. The back panel flexes when you push in near the Lenovo logo, and tapping on it brings out a rather hollow sound.

The critical aspect is its keyboard. The key design is very similar to some of the recent IdeaPad and Yoga machines. The problem is the curve design at the bottom of every key, which makes it difficult for the fingers to really get used to the layout without a learning curve. Touchpad isn't very big, but the precision is consistent.

But, the way Lenovo has blended the two together makes the Lynx look like a clamshell mini-laptop, rather than two separate devices joined together.

The 11.6-inch screen on the Lynx does not have a Full HD resolution, and instead is limited to 1366 x 768 pixels. In the proper tablet mode, we would have much more appreciated a higher res screen to bring it in line with the Android tablets in the same price bracket. However, the display is crisp, colour reproduction is not as vivid as some of the AMOLED screens, but the IPS panel means the colours are extremely accurate. As a tablet for multimedia consumption or in the docked mode when you may be reading a bunch of text, this IPS screen is extremely comfortable. Hopefully, with the next update, the resolution will be bumped up as well. Touchscreen response is accurate and quick, and that just makes using Windows 8.1 a lot more fun.

Lenovo claims 8 hours of battery life from the tablet's battery, and another 8 hours with the dock's additional pack. For the tablet battery, we registered an impressive 6.5 hours in our battery benchmark, run at full load and 100% display brightness. Translate this into a typical usage scenario at work or at home, and you will usually never have brightness levels above 50%. That will mean you will get more than 8 hours on a single charge, which is what we experienced.

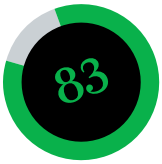


Even without having to carry the dock around, the IdeaTab Lynx is good enough to last a complete day at work.

The Clovertrail based Atom Z2760 dual core processor, paired with 2GB of RAM, is no performance charts scorcher. In the benchmark tests, PC Mark 07 score, registered at 1431, is pretty much in range of most other Windows 8 convertibles - HP Slate x2 and the Asus VivoTab. The real world performance is very smooth, although you cannot really multi-task on this machine, beyond a point. Within the power package limitations, you get a very competent performer, with the main focus being good battery life, albeit very successfully. The 64GB flash storage is fairly quick, booting into Windows 8 in about 11 seconds. The 2GB RAM does prove to be a limitation when you open 10 tabs in Chrome and want to open iTunes in the background – app opening times become that much longer. But, for most typical home and home office uses, tasks like multimedia viewing, web browsing, emails and document creation - the IdeaTab Lynx works very smoothly.

All things considered, there is enough evidence of the IdeaTab Lynx to be a very functional and reliable performer, with the extreme flexibility of the proper tablet mode and the keyboard dock. That, and the good battery life makes this a device that is very usable. The IPS screen, albeit not Full HD, is very good as well.

Vishal Mathur



Features 80
Performance 85
Build 85
Value 80

Specifications

Processor: Intel Atom Z2760; **RAM:** 2GB; **Display:** 11.6-inch IPS (1366 x 768 pixel); **Storage:** 64GB flash + expandable; **OS:** Windows 8.1

Contact

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GTA4 on WP8
Rockstar confirms port for WP after release on all other platforms
http://dgit.in/GTA4WP

Flickr's Camera Finder
Analyze Flickr's image stream to find out the most popular cameras out there.
http://dgit.in/flickCAM

ROCCAT Isku FX

A good gaming keyboard with a not so good price



Price ₹7,500

Amidst the glut of gaming keyboards available in the market today, there are only a few membrane and mechanical keyboards that stand out and actually provide adequate bang for your buck. The ROCCAT Isku FX tries to be the best of both worlds, but fails when it comes to its price. Mind you, we say this because the amount of features that the Isku FX offers surpasses many membrane (and a few mechanical) keyboards that we've seen recently, but a price of ₹7,500 leaves a bad taste in our mouth. Talking about the keyboard itself, the design is sharp and very well thought out with adequate spacing between the different areas of the keyboard. A large wrist rest with a granular finish is the thing that stands out the most and it surely makes using the keyboard comfortable. Feature-wise, the Isku FX has configurable multi-colour key illumination with four brightness levels. Five programmable macro keys with a live macro recording ("REC") button help in mapping your game inputs on-the-fly and set up to a maximum of 180 macros in five profiles. The included profile status indicator LEDs let the user know of the selected profile. It's also interesting to see the addition of three configurable thumb buttons below the spacebar. The Isku FX was spot-on while gaming and regular use. A jewel of a gaming keyboard marred by its price. Go for it if your budget permits.

Siddhant Sharma



Features 79
Build Quality 82
Value for money 54

Specifications

Key type: Membrane; **No. of keys:** 123 keys; **nKRO:** 6+ keys (limited); **Macro Keys:** 5 programmable (additional 20 easy zone); **Extra Keys:** 3 Thumb Keys; **Backlighting:** Full; **Game mode:** Yes; **Polling Rate:** 1000Hz; **Response Time:** 1ms; **Cable Length:** 2 metres **Dimensions:** 24.7cm x 50.9cm; **Warranty:** 2 years

Contact

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Email: mail@tirupati.net
Website: www.tirupati.net

Portronics Bean

Don't spill the bean(s)



Price ₹700

Despite the rise of touch-screens, the good ol' trusty mouse is too hard to replace because of its familiarity and ease of use. Portronics' Bean, a mini 2.4GHz wireless mouse is actually shaped like a bean. It's incredibly small and is very lightweight thus making it great for carrying around. It uses a standard optical sensor and though there is no on-the-fly DPI adjustment switch, you can press down the left and right click buttons simultaneously for three seconds to switch DPI. Surely this is a tedious way to switch DPI but at least the Bean provides you with an option to do so. Build quality is okay but its design is too small, forcing a learning curve. Better options exist.



Features 56
Build Quality 65
Value for money 73

Specifications

Requirements: Windows XP/Vista/Win7/Win8, USB port; **Connectivity:** 2.4GHz wireless; **Battery type:** 1 x AAA batteries (included); **Warranty:** 2 years

Contact

Portronics Digital Pvt. Ltd
Phone: 011-23412342
e-mail: sales@portronics.com
Website:www.portronics.com

MSI Z87I AC Gaming Motherboard

Less is more



Price ₹7,500

One might wonder why would there be an ITX board with such a set of high-end features but in recent times there has been a rising case for small form factor computers and this board caters to them. This is a great option for building a Steam Machine especially since it comes with 802.11 AC Wi-Fi card that sits in a mini-PCIe slot in one corner. The BIOS is packed to the hilt with a ton of features including a wide voltage range that increments in steps of 0.001, overclocking profiles and support for OC'ed RAM to run at 3000MHz.



Features 45
Build 75

Specifications

Chipset: Intel Z87; **Memory support:** 2x3000(OC)MHz upto 16GB; **LAN:** Killer E2200 Gigabit Ethernet; **Audio:** ALC1150 7.1; **SATA** - 5x SATA III, 1x eSATA; **Expansion:** PCIe x16; **Dimensions (LxWxD);** 170 mm x 170 mm; **Warranty:** 3 years

Contact

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Samsung Galaxy Note 10.1 (2014 Edition)

The fastest Android tablet, but costs a lot of money!

Finally, it has happened. For a while, we had lost hope, but someone at the Samsung headquarters heard all the criticism directed towards the previous Galaxy Note 10.1, the tablet that was eventually added to the Royal Collection of the Queen of England, Diamond Jubilee Celebrations. But, we digress, and what we were specifically talking about is the overdose of plastic that turned off quite a few people, particularly when analyzed with the price of the tablet. The glossy plastic has been chucked out of the window, and in comes the soft leather-like textured material. While the previous edition had a strip of chrome at the top, the latest one gets the leather-like finish throughout. Technically, this material basically consists of polycarbonate, but the fact that it doesn't look like plastic makes all the difference. Without a shadow of doubt, the soft feel finish helps immensely when gripping the tablet, something that was an issue with the slippery polycarbonate shell of the previous one.

The display is one area where Samsung has never lagged behind Apple. The Note 10.1 builds on that brilliance, using a 10.1-inch Super Clear LCD panel, with a massive resolution bump up to 2,560 x 1,600 pixels. The display goes well beyond Full HD resolution, and that makes this tablet very much future proof.

In terms of brightness levels, the Note 10.1 registers a Luxmeter reading of 1654, while the iPad Air's 9.7-inch screen registered 1522, both at 100% brightness with the same content on the screen. Between these two displays, the whites look purer on the Note 10.1, and so does the text for the same content. Where the iPad has the advantage is with the slightly softer colours and the warmer tones, if one prefers that.

The Note 10.1 packs in Samsung's Exynos 5420 with a quad core cluster at 1.9GHz and another quad core cluster at 1.3GHz, paired with 3GB of RAM. As expected, the benchmark scores make this the fastest Android tablet out there.

In everyday use, the Note 10.1's performance superiority over most other Android tablets shows. Apps open quickly, multi-tasking is a breeze, and there is no disagreeable stutter when switching between apps. This tablet is equally comfortable with almost any usage scenario you may throw at it - simple web browsing and social networking or productivity tasks, or be it a session of Real Racing.



Price ₹49,990

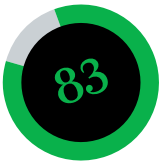
The performance potential is well translated every time. However, this isn't to say that the Note 10.1 is faultless. Yes, the TouchWiz UI has been further tweaked and looks much lighter than the earlier version, but you will see an occasional lag or stutter when flicking between the home screens or the app drawer pages.

It's good to note that the device doesn't heat up when stressed, and the fake leather layer at the back is one of the reasons why fingers don't singe after an hour of playing Real Racing or GT Racing.

Samsung has packed in a humongous 8220mAh battery in the Note 10.1, which should mean that the tablet is starting on a fairly stable ground. In the video battery drain test, with the same HD video via VLC with screen brightness at 100% and volume at 50%, the Note 10.1 from 100% came down to 86%. In the same test, the Apple iPad Air still retained 95% charge after one hour of rocking the HD video. Having said that, it's very much possible to get 8-9 hours of usage from a single charge, with assorted usage scenarios. The critical bit is to turn off all the features that you don't need - like Smart Stay and Multi-Window.

The Galaxy Note 10.1 (2014 edition) costs a lot of money. And if you haven't already balked at the price tag, then what this gets you is pretty much the fastest Android tablet out there, with an excellent display to spice things up further. But equally, it provides an overload of features that you may or may not use.

Vishal Mathur



Features 90
Performance 90
Build 80
Value 70

Specifications

Processor: Exynos 5420 quad core cluster at 1.9GHz + quad core 1.3GHz; **RAM:** 3GB; **Display:** 10.1-inch SLCD (2560 x 1600 pixels); **Graphics:** Mali-T628 MP6; **Storage:** 32GB + microSD; **Connectivity:** Wi-Fi + 3G; **Battery:** 8220mAh; **OS:** Android 4.3

Contact

Samsung India
Phone: 1800 3000 8282
Email: www.samsung.com/in/support/ermsl



Philips' 27-incher
Philips' 27-inch monitor with NVIDIA's G-Sync reviewed for gamers who like their silky-smooth visuals. Read on: **http://dgit.in/phili27**



Did you know?
Concentrating on a movie story calibrates your brain, which helps you having better focus on your work; Intel India tweets.

Wickedleak Wammy Titan 3

A copy cat

Wickedleak is a manufacturer is known for making smartphones that look identical to other flagship devices available in the market. The Wammy Titan 3, for instance, looks exactly like the Samsung Galaxy Note 3.

The phablet has a full-HD 5.7 inch display and even sports the soft leather-like back panel just like the Note 3. However, the overall finish cannot be compared to the original. Powered by a 1.5GHz quad-core MediaTek processor with 1GB of RAM which provides enough power to run apps for your daily tasks. It runs on stock Android 4.2 Jelly Bean with a bunch of small add-ons that make the UI look a bit like Samsung's TouchWiz layer. We didn't see any sort of stutter in the performance and we were quite satisfied with the screen response.

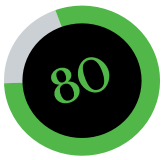


Price ₹16,490

Synthetic benchmark scores showed that the Wammy Titan 3 is quite capable of good performance. Comparing the results we found that the phablet is at par with the LG Nexus 4 and much better in productivity and task based benchmarks.

For the price, the Titan 3 offers a good set of features and scores well in the performance department. But if you're one of the brand-conscious ones and would feel embarrassed by being seen with a phone that looks so much like another, then you should definitely look for something else like the Sony Xperia C or the Samsung Galaxy Grand.

Kunal Khullar



Features 85
Performance 75
Value 90
Design 70

Specifications

Operating System: Android 4.2 Jelly Bean; **Display:** 5.7 inch IPS with 1920x1080 FHD pixel resolution; **Processor**: 1.5GHz quad-core MediaTek processor; **Memory:** 16GB internal storage, 1GB RAM; **Camera:** 13MP rear with LED flash, 5MP front; **Battery:** 3200mAh

Contact

Wickedleak
Phone: 9029174436
e-mail: support@wickedleak.org
Website: www.wickedleak.org

Thermaltake Sybaris

For the rich, mobile gamer

The Sybaris is an unusual headset in the sense that it's been designed to do double duty as a gaming headset and a portable Bluetooth headset for your mobile device. The set is a departure from what we expect from a pro-gaming headset, especially one from Thermaltake, which sacrifices bass in favour of precision. The audio quality is good, better than most gaming headsets, but still a far cry from normal headphones at the same price. The quality is decent, you'll hear a fair amount of detail, but the problem is that it's neither here nor there.



Price ₹12,121

What you're supposed to get for this ridiculous price is a very well-built set that's a cross between a gaming headset and a wannabe audiophile one. What you actually get is a set that's neither an audiophile set, nor a true gaming headset. It's not a bad set mind you, it's the price that kills it.

It's a very feature rich set and you've got everything from NFC to Bluetooth to detachable microphones to extended cables and a quality carrying case bundled as default kit. Bluetooth range is great and pairing via NFC is just a tap away. At half the price, we'd wholeheartedly recommend the Sybaris. At ₹12,000, we're very hesitant.

Anirudh Regidi



Features 85
Performance 65
Value 30
Design 75

Specifications

Driver: 40mm; **Frequency Response:** 20-20000Hz; **Sensitivity:** 97dB; **Impedance:** 32ohms; **Connectivity:** Bluetooth; **Play time:** 14hrs; **Warranty:** 2 years

Contact

Savera Marketing Agency Co., Ltd
Phone: 9830866800
e-mail: samit.ghosh@savera.co.in
Website: http://savera.co.in/Default.aspx



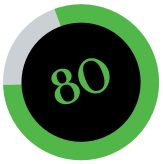
Volatic's portable sorlar charger
Do you travel a lot? If yes, then Voltaic's amp solar charger is for you. One of the compact and travel friendly solar chargers available in the market today.



Modbotted
Introducing the Modbot: bringing robotics into the palm of your hand. Bring on the DIY revolution! **http://dgit.in/modbot**

Acer K335 projector

A portable projector that delivers good performance



Features 80
Performance 80
Build 85
Value 75

Specifications

Lamp Type: LED; **Brightness:** 1000 lumens; **Aperture:** f/1.5; **Native Resolution:** 1280 x 800 pixels; **Connectivity:** HDMI with MHL, USB, SD Card, composite in; **Weight:** 1.30kg

Contact

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Website: www.acer.co.in

The Acer K335 sits tentatively under the branding of "travel projector". It isn't a pico projector by any stretch of the imagination, and neither can it be made to sit alongside the bigger entertainment and office projectors. The K335 has an f/1.5 LED lens, which means the startup is quicker than good old lamp versions. Set up is a breeze, and we were up and running with each device in under two minutes.



The projection size for the K135 is around 65-inches, from a distance of 3 feet from the screen. However, the sharpness is excellent till about 80-inches. We played back a variety of 720p and 1080p media content as well as still images through multiple HDMI sources and a smartphone via MHL. USB supports limited video formats, but does well with reading office documents. So you'll need to hook this up with an HD Media Player for sure. Yes, the native resolution isn't Full HD, but does not take away from the facts - projected content is sharp, colours look rich and a bit of ambient light trickling in doesn't have a negative impact on the experience. One issue was that with the Black colour enhancer setting enabled, there was the issue of periodic signal dropouts, irrespective of the source. Turn that setting to off, and the problem goes away permanently. As far as portable projectors go, the Acer K335 offers a no-compromise feature set, very good performance and would be equally comfortable at home watching a movie, or in the office over non-stop discussions around a presentation.

Vishal Mathur

XOLO A600

The inexpensive performer



Features 70
Performance 60
Value 70
Design 60

Specifications

Operating System: Android 4.2 Jelly Bean; **Display:** 4.5 inch IPS with 960x540 pixel resolution; **Processor:** 1.3GHz dual-core MediaTek processor; **Memory:** 4GB internal storage, 512MB RAM; **Camera:** 5MP rear with LED flash, VGA front; **Battery:** 1900mAh

Contact

XOLO
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e-mail: care@xolo.in
Website: www.xolo.in

The A600 is one of XOLO's decent smartphones in the low to mid-range segment is the Xolo A600. The smartphone is made out of soft plastic (not the usual glossy finish) and somehow it doesn't look too shabby; in fact it feels nice in the hand. The handset has just the right weight and with the 4.5 inch display, it doesn't look gigantic when you use it. There is a 1.3 GHz dual-core MediaTek processor with 512MB of RAM and a Mali 400 MP GPU powering the device, which is pretty good considering the low cost of the smartphone. We have had bad experiences with MediaTek processors hogging battery, but thankfully A600 comes with the Xolo Power battery management app.

Running on stock Android 4.2, the A600 doesn't have much to offer in the UI department apart from a bunch of wallpapers.



Talking about performance, the handset runs really smooth but because of the limited 512MB RAM, running multiple apps at the same time does slow down the overall performance. The A600 scored better in task-based benchmarks rather than graphics which means that the smartphone will do well if you are likely to use it for checking emails, browsing and social networking. On the entertainment front, the Xolo A600 managed to run HD videos and didn't stutter much when we played games like Temple Run 2 and Angry Birds Star Wars 2. Of course high end games like Real Racing 3 were a bit too much for the smartphone to handle.

The A600 would be perfect for a casual smartphone user but if you are looking for high-performance, then you should look elsewhere.

Kunal Khullar



The geekiest joke ever?
Argon walks into a bar... Well we won't spoil it for you. Follow the link to read the end of that and a hoard of geeky jokes contributed by the Quora community: **http://dgit.in/lolgeek**

Video of Steve Jobs from 1980
Watch as a moustached Steve Jobs predicts the PC revolution in this old video dug up from the archives of the Computer History Museum **http://dgit.in/PCjobs**

HTC One Max

A competent phone, ruined by the ridiculous price tag

HTC took the HTC One, stretched it to a 5.9-inch display, and voila, we have the One Max. Well at least that's what it feels like but in this case, it didn't really work out too well. For a phone that weighs over 215 grams, this immediately falls in the unwieldy and uncomfortable category. The One's single block of finely crafted anodized aluminum has been tweaked with a white polycarbonate frame running around the phone. This just looks out of place.



Price ₹56,490

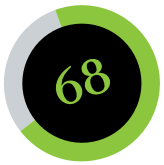
The phone packs in a Snapdragon 600 processor, which isn't top of the line, but is definitely no slouch. Performance isn't slow by any stretch of the imagination unless of course you are getting into the Real Racing 3 load time battle with a friend using one of the other Snapdragon 800 powered phones out there. The positive change though is that the One Max heats up a lot lesser under load than the HTC One.

The 1080p SLCD3 display offers extremely even colours and the display is excellent.

The humongous 3300mAh battery performs well, with the phone lasting two days on a single charge, when the HTC One would drain inside one day.

This is a prime example of a competent phone, ruined by ridiculous pricing. We wholeheartedly acknowledge the One Max's very good display and consistent performance, but you get much better alternatives at lesser price points - Samsung Galaxy Note 3 and the Sony Xperia Z Ultra. And if you are willing to consider an alternate OS, we would strongly recommend the Nokia Lumia 1520.

Vishal Mathur



Features 75
Performance 75
Build 70
Value 50

Specifications

Processor: Qualcomm Snapdragon 600; **RAM:** 2GB; **Graphics:** Adreno 320; **Display:** 5.9-inch Super LCD3 (1920 x 1080 pixel); **Storage:** 32GB; **OS:** Android 4.3

Contact

HTC India
Phone: 1 800 266 3566
e-mail: http://www.htc.com/ sea/ contact/email/
Website: http://www.htc.com/in/

Nikon Df

Return of the Retro

It all started with Olympus, the first company to give the retro look a functional home in a modern camera's deisgn language. Fujifilm took that up one notch by introducing the x-Pro1, a mirrorless camera that was purely retro, being designed as a range-finder. It was an instant hit with many users, which resulted in a spurt of cameras with the same design.



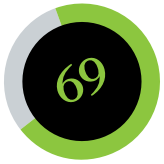
Price ₹1,83,995 (body only)

The Nikon Df is just that. The Df is modern circuitry crammed into a body from yester-years. The Nikon Df houses a 16 megapixel sensor straight out of the Nikon D4 and an AF system that's more D610 than anything else. That's a 39 point AF system with 9 cross type AF points. It can shoot at a maximum 5.5 frames per second and comes with an EXPEED 3 chip to push all the RAW sensor data into a finished product on your memory card.

The Nikon Df feels like an incredibly confusing product at best. From the front and top, it looks like the old FM2, but one look at the back and it becomes a reminder of the digital age we live in. The mode dial needs to be lifted upwards if you want to change its position, something most people wouldn't be aware of unless they were specifically figuring out how to change shooting modes.

Nikon's taken the Fujifilm approach of slapping dials onto the Df, each of which has its own individual dial lock. God forbid you ever have to change a setting on the fly (or two). The Nikon Df does not have a video mode. Back in 2008, a statement like this wouldn't have even raised an eye-brow, but in today's times, when video recording capabilities are synonymous with DSLRs, especially full frame DSLRs.

Swapnil Mathur



Features 60
Performance 90
Design 65
Value 60

Specifications

Pros: Really good high ISO performance; Weather sealed; Compatible with old F mount Nikon lenses; **Cons:** No video; Dials are cumbersome to deal with

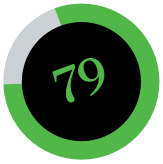
Contact

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End of Moore's Law
With the end of Moore's Law in sight, see how technology's innovating to overcome this legendary bottleneck **http://dgit.in/JMkvfN**

Breaking the ice
Ever wonder what happens if you jump on a frozen trampoline? Since most of us don't have one lying around, watching this video is the best you can do: **http://dgit.in/dtrampo**



Karbonn Titanium S5 Plus

A well balanced smartphone

Features 70
Performance 80
Value 85
Design 80

Specifications

Operating System: Android 4.2 Jelly Bean; **Display:** 5 inch IPS with 960x540 pixel resolution; **Processor:** 1.3GHz quad-core processor; **Memory:** 4GB internal storage, 1GB RAM; **Camera:** 8MP rear with LED flash, VGA front; **Battery:** 1800mAh

Contact

Karbonn India
Phone: 080 40894888
e-mail: info@karbonnmobiles.com
Website: www.karbonnmobiles.com

The Android-running smartphone has a decent design with an all plastic body. For a smartphone with a 5-inch display, the Karbonn Titanium S5 Plus is pretty lightweight and slim as well measuring in at just 7.9 mm. With chrome accents around the display, the overall finishing of the handset is actually great. We just wish that it had a 720p display, or maybe we are being over-ambitious.

The Titanium S5 Plus is powered by a 1.3GHz quad-core processor and has a gig of RAM that handles multitasking quite well. In the daily usage tests, the smartphone proved to be stable and we didn't notice a lot of glitches. Karbonn has put a custom UI layer that lets you apply some themes and wallpapers – a nice touch, especially if it doesn't slow down the device. The benchmark tests showed that the Titanium S5 Plus is a mean machine and managed to get scores similar to the LG Nexus 4. We did some gaming on it and the smartphone handled games with low fps quite well, however games like Real Racing 3 and Asphalt 8 had quite some issues as they ran terribly slow.



There is an 8MP camera on the Titanium S5 Plus which seems to perform just decent enough in bright conditions. The quality of pictures produced is not very good as it lacks a punch in colours, sharpness and the noise reduction is very poor. It does manage to take full HD videos but in 3GP format which is a little disappointing.

For a sub-10k smartphone, the Karbonn Titanium is actually a good option if you are looking for an Android device, but we would strongly recommend the Nokia Lumia 525 if you are not inclined towards the Android platform.

Kunal Khullar

Cooler Master Cosmos SE

A feature rich yet costly case



Features 88
Performance 78
Build Quality 75
Value for money 53

Specifications

Dimension: 569.4(H) x 263.8(W) x 524.4(L) mm; **Motherboard Support:** ATX, micro ATX, mini-ITX; **Expansion Slots:** 7+2; **Form Factor:** Mid-tower; **Drive Bays:** (x3) 5.25", (x8) 3.5"; **Cooling:** Front 2x120mm, Rear 1x120mm, Top 1x140mm; **Front I/O:** (x2) USB 3.0, (x2) USB 2.0, Audio jacks; **Weight:** 10.8kg

Contact

Cooler Master Co. Ltd.
Phone: 9820207871
Email: sanket_naik@coolermaster.com.tw

Cooler Master is back yet again with another Cosmos case, and this time around it's the Cosmos SE. Following the design of the Cosmos II which was sportscar-inspired, the Cosmos SE or Small Edition carries the same curvy look but in a mid-tower's skeleton instead.

The case comes in two side panel options – one is the transparent panel with an acrylic window and the other is the covered mesh side panel that comes with a meshed grill, a dust filter and fan mount area. The top cover of the case can be removed and you can install a 240 or 280 mm water cooling radiator or fan. The front of the case in particular can accommodate a 360mm radiator after removing the drive cages. The drive cage can also be rotated 90 degrees to allow for mounting drives directly from the front. During load testing, the case returned an internal temperature reading of 43.5 which is in line with cases in a similar price range.



Since the Cosmos SE is a smaller stripped down version of the Cosmos II, you see quite a few differences between the two. Though the case is smaller, it still offers a lot of room for building a powerful system but the asking price of ₹14,999 is very much on the higher side and you'll easily get other mid-tower and full-tower cases with similar features at a lesser price. Go for it if you like the looks.

Siddhant Sharma

Should you use an equalizer?
Well music is all about personal preference, and whatever sounds good to you is what you should use but here are some basic principles: **http://dgit.in/pushdtempo**

Ask Digit!
Having Tech difficulties? Check our colophone page on how to reach us, and see your queries answered on: **http://dgit.in/askdigit**

NZXT Source 530

Great case for the price



74

Features 78
Performance..... 76
Build Quality 68
Value for money..... 75

Specifications

Dimension: 235mm x 507mm x 510.5mm; **Motherboard Support:** ITX, mATX, ATX, E-ATX; **Expansion Slots:** 8; **Form Factor:** Full-tower; **Drive Bays:** (x3) 5.25", (x6+1) 3.5"/2.5"; **Included cooling fans:** Rear 1x140mm, Top 1x120mm fan; **Front I/O:** (x2) USB 3.0, **Weight:** 9.2kg; **Warranty:** 2 years

Contact

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Website: www.primeabgb.com
Phone: +91-98218 08900

NZXT has been known for their Phantom series of cases and we've actually tested quite a lot of them. What's synonymous with the Phantom range is the asymmetrical design which makes the cases look futuristic. While the Phantom series of cases are feature-rich, they're also quite expensive.

This is where the NZXT Source series comes into play by coming up with cabinets that are not only adequately feature rich but also considerably priced lower. The Source 530 – a full-tower – is the new top end case of the series. Looks wise, there is nothing special with the 530 but it does have a chunky sort of appeal. The whole case exterior is an amalgamation of plain black steel and glossy plastic with a good amount of mesh thrown into the mix. The front facia is a big meshed panel which is receded into a plastic frame with glossy plastic strips running along the outer rim of the face-plate. Front I/O options include two USB 3.0 ports, audio jacks, power and activity indication lights, power and reset buttons and also a rear I/O LED on/off switch. There is also a rear I/O LED which is a pretty useful feature because it lights up the rear I/O shield thus making ports visible and easier to work with, considering spaces underneath most desks are dimly lit.

The top of the case is laden with a huge grill to allow for mounting fans or liquid cooling radiators. The Source 530 can accommodate a total of up to three 120mm or two 140mm fans at the top or you also have the option to use the top space for installing a 240mm or 280mm liquid cooling radiator. Moving to the side of the Source 530, there is a big transparent acrylic side panel window. The bottom of the case has dust filters and big stands with rubber feet.

Though the exterior seems lackluster, it's the inside of the Source 530 where all the magic happens. First and foremost, the design of the motherboard tray is well thought out with a big cut-out for the CPU backplate area. Cable routing holes are aplenty on the motherboard tray and so we were able to do a very neat job with the cable management for our test setup. The next useful feature is the addition of a pivotable fan mount on the drive cage that allows you to install a 120mm fan and point it towards either the CPU or the GPU.

There are three drive cages in the Source 530 and these cages sit on top of each other while also being completely removable. Removing the drive cages makes room for yet another 240mm water cooling radiator. Even if you remove all the cages, you still have the option to mount an SSD inside the 530, behind the motherboard tray. Another great feature of the 530 has to be the included fan hub. This fan hub supports 10 fans, is appropriately placed behind the motherboard tray right beside the hidden SSD mount and it makes it very convenient to power all the fans inside the 530. The case has enough fan mounts to install a total of up to nine fans and the best part is that the case has removable dust filters for all the air-intake areas.

We set up our standard AMD Phenom II X4 955 BE rig within the case and the case gave us decent internal readings – 40°C while the CPU was under load at 45°C. All in all, the NZXT Source 530 is a wonderful case with all the features that an enthusiast would usually ask for and then some more. If you're someone who prefers function over form, and are on a tight budget, the Source 530 is a great choice.

The Corsair 400R available for ₹200, is another great option at this price point and a direct competitor to the Source 530 but the 530 edges it out by a small margin when it comes to features.

Siddhant Sharma

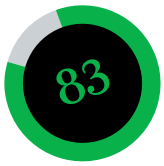


How to be a Polymath
The age of the specialist is gone and neither can you be a jack of all trades. Follow this link and learn how to be a master of all: **http://dgit.in/polyduh**

How do astronauts sleep?
With no gravity to keep them from floating away special measures have to be taken. Watch Japanese astronaut Koichi Wakata demonstrate in a video tour of ISS Harmony: **http://dgit.in/astrosleep**

Plantronics BackBeat GO 2

A rather stylish package



Features 85
Performance..... 82
Build 90
Value 75

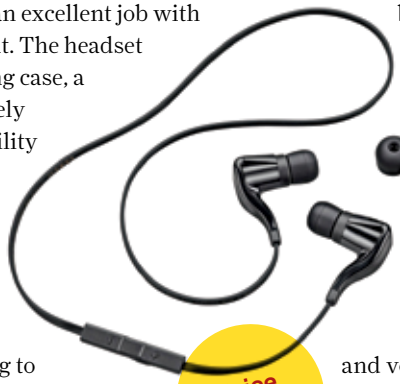
Specifications

Type: in-ear Bluetooth headset; **Bluetooth:** v2.1; **Compatibility:** All smartphone platforms; **Rated range:** 10m; **Rated battery:** 5 hours talktime + 14.5 hours charging case

Contact

Plantronics India
Phone: 1800 180 1064
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Website: http://www.plantronics.com/in/

Plantronics has done an excellent job with the updated BackBeat. The headset comes with a charging case, a utility that is extremely useful. BackBeat Go 2's usability has been enhanced, with the P2i nano coating which protects the earphone against moisture - Be it a splash of drizzle on the way home from the gym, or the sweat as you head from one meeting to another on a summer day.



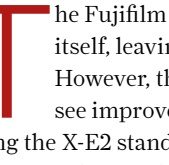
The unique design, with the band snaking behind the neck, is extremely comfortable. With the audio in both ears, the BackBeat Go 2 is more of an all-rounder - equally comfortable with phone calls as it is in a workout session, streaming tunes from the iPod. The in-line controls, traditional design as we have seen on other headsets, tends to be a bit irritating by being too close to the side face at times. Battery life is a delight. On a single charge, usage of 2 hours a day got us through 3 working days straight! The headset goes into Deep Sleep Mode when paired smartphone or media device goes out of range. The charging case adds another 12-14 hours of music playback and voice calls.

This does not feel like a "bluetooth headset", but the comfort level is closer to that of a good quality in-ear earphone. The eartips are soft, and surely you will find your favorite size in S,M and L. The design includes "stabilizers", which ensure that the earphones stay put. The behind-the-neck band also adds to the comfort, with no tangling cords to deal with.

Vishal Mathur

Fujifilm X-E2

The Way a Sequel Should Be



Features 85
Performance..... 85
Design 70
Value 80

Specifications

Sensor: 16 megapixel APS-C CMOS X-TRANS II; **AF Module:** Contrast + On sensor phase detect; **Lens Mount:** X-mount

Contact

Fujifilm India
Phone: 18002000608
Website: http://fujifilm.in/

The Fujifilm X-E1 was a great camera in itself, leaving very little to be desired. However, the little that we did hope to see improve has come to embody everything the X-E2 stands for. It has a re-designed 16 megapixel CMOS X-TRANS II sensor paired with an EXRII chip that we were first introduced to in the X100s, another excellent performer.

The X-E2 retains the 16 megapixel count, but brings the much awaited PDAF (Phase Detect Auto Focus) functionality to the X-series. While the AF in of itself has received a significant performance boost, PDAF has also aided in that improvement. However, the camera leverages its phase detect pixels by giving the user an option to turn "Pre-AF" on or off, which is something most other cameras with Phase Detect do not offer. Turning pre-AF really does speed up the performance, but turning it off doesn't take away from the speed or accuracy of the AF module. In terms of imaging performance, the X-E2 exceeded our expectations, especially in low light performance and managed to extract noise-free images even at ISO 3200.



The camera does tend to render images that are on the warmer side, but it's great for portraits and landscapes.

The build quality was a bit of a let down, but overall, it's a great camera and a great deal at this price. The EXRII chip really helps speed up the camera.

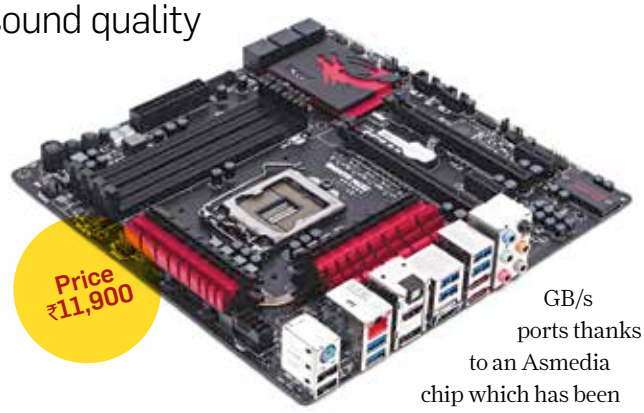
Swapnil Mathur

Yahoo Sports for iOS update
Yahoo Sports for iOS is updated with a feature which lets you transforming any of your favorite moments from the game into an animation. Check it out: **http://dgit.in/YahooSportsiOS**

The hardest game ever?
What's the hardest game you've ever played? Go to the link to find out **http://dgit.in/1fe7HdM**

MSI Z87M Gaming Motherboard

A gaming board with a good focus on sound quality



Sitting right in the middle of the Gaming series motherboards from MSI is the Z87M Gaming. The series is identified by the black coloured PCB with red accents all over the place and a silhouette of a dragon over certain elements like the PCH heatsink. While the Z87 chipset only supports 6 USB 3.0 ports, we do see an additional two ports thanks to an Renesas chip and two extra SATA 6 GB/s ports thanks to an Asmedia chip which has been channeled to the back I/O panel as a pair of eSATA ports.

The sound on the board deserves special mention since the new ALC1150 chip has pretty good characteristics. The codec is then connected to an op-amp capable of driving 2k ohm impedance over 800mA. The board also features Sound Blaster Cinema driver support. This covers almost all high end audiophile headphones, however, isolation is something that all audiophiles crib about. The audio section is cordoned off on the motherboard with red LEDs highlighting the outline of this segment. But as with audiophiles, we know that they'll never be satisfied with onboard solutions.

Build quality of this board is pretty good. The heatsink on the VRM and PCH are quite huge, the PCIe slots are such that only dual slot cards can fit in the x16 slots. The BIOS has plenty of customisation options enabling good overclocking potential. Overall the board is feature packed and is cheaper than its mini-ITX cousin.

Mithun Mohandas

64

Features 53
Build 75

Specifications

Chipset: Intel Z87; **Memory support:** 2x3000(OC)MHz upto 16GB; **LAN:** Killer E2200 Gigabit Ethernet; **Audio:** ALC1150 7.1; **SATA:** 5x SATA III, 1x eSATA; **Expansion:** PCIe x16; **Dimensions (LxWxD):** 170 mm x 170 mm; **Warranty:** 3 years

Contact

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Website: http://www.smcinternational.in/

Foxconn H81MXV Motherboard

A basic H81 board



When all you want to do is get a simple board that would be compatible with your Haswell processor then you need an H81 board and this Foxconn board is just that. We've seen laptops with more options in the BIOS than this board but anyone going in for the most basic motherboard wouldn't quite need all the extra bells and whistles. The COM port might interest those with legacy devices. However, certain components weren't placed well prior to soldering them on which shows the attention paid to the product during manufacturing.

46

Features 22
Build 70

Specifications

Chipset: Intel H81; **Memory support:** 2x1600MHz upto 16GB; **LAN:** Realtek RTL8111F Gigabit Ethernet; **Audio:** ALC662 5.1; **SATA:** 2x ATA II, 2x SATA III; **Expansion:** PCIe x16, PCIe x1; **Dimensions (LxWxD):** 215 mm x 173 mm; **Warranty:** NA

Contact

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Website: www.foxconn.com/

Gigabyte H87M-D3H Motherboard

Hitting the spot



Gigabyte has had a great board for mid-range rigs and the H87M-D3H is pretty much it. This board is for those who like to hit the sweet spot between having almost all the features of a new platform at the right price. The placement of the PCIe slots are such that even triple slot cards fit easily. The components are all well placed and the VRM has a heatsink that is placed far enough to allow CPU coolers with low height clearance to be mounted. The audio is fine since the ALC892 chip is sufficient for most mid-range quality headphones.

60

Features 46
Build 74

Specifications

Chipset: Intel H87; **Memory support:** 4x1600MHz upto 32GB; **LAN:** Realtek RTL8111F Gigabit Ethernet; **Audio:** ALC892 7.1; **SATA** - 6x SATA III; **Expansion:** PCIe x16, PCIe x8, 2x PCI; **Dimensions (LxWxD):** 244 mm x 225 mm; **Warranty:** 3 years

Contact

GIGABYTE Technology Pvt. Ltd.
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Galaxy GTX 780 Ti HOF

When it seems that they've hit the sky, out comes another flagship

For a change. this time we got to see a new brand come up on top of the rest. Galaxy has been bringing out their high-end graphics cards with factory overclock under the "Hall of Fame" brand for quite some time but this is the first time we've gotten our hands on one of them and that too the second most powerful SKU in their arsenal. There is a Galaxy GTX 780 Ti HOF+ edition which has a slight edge over the vanilla HOF edition. We hope you realised that what we just described as vanilla is itself a high-end SKU.

The difference between the Galaxy and ZOTAC card is that this one has the memory clocked 50MHz lower than the ZOTAC card but the performance figures put the HOF ahead of the AMP! card(strictly speaking about the GTX 780 Ti cards). Everything about this card is custom, the PCB is bright white with a matte finish. The days of "matte black" PCBs are about to be passé and the time has come for a change. Cooling has been given some extra attention since the heat sink assembly now consists of a vapour chamber sitting atop the GPU and there are four heat pipes affixed to the vapour chamber. Then come the fins which aren't the densest we've seen but the accompanying fans are high-airflow fans so one need not worry about poor cooling under load conditions. The stock GTX 780 Ti comes with a moderately spaced grill on the mounting plate for letting the hot air out, but this card took out a few of the vertical bars to give you just two wide holes for ventilation.

The placement of the 8-pin power sockets are the same as other cards but one thing that we don't like is how the latch on the socket is facing inwards rather than the opposite. As a result, removing the power cables becomes slightly cumbersome. One last thing is that the body is well protected on both faces. The back has a full plate and the front has a polycarbonate fire-resistant housing. The mere presence of such material does raise a few eyebrows but then again, the high-end segment is all about overkill.

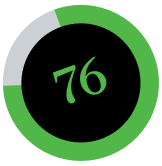
There is an on-the-fly overclock switch in the form of a plunger on the mounting plate which boosted the core clock to 1097MHz with the memory clock scaling proportionally to 3499MHz. This gives the card a 9% clock speed boost but the performance didn't increase by a good margin. For example, the Fire Strike score in 3DMark went from 10528 to 10604. That isn't much and the game benchmarks reflected the same in their results. A good outcome to this feature was that the RPM of the cooling fans went up by such an amount that the load temperatures actually went down on a higher clock frequency. However, the noise level creeped high enough to be a nuisance. OpenCL benchmarks don't put the card at an advantage compared to the competitor since the difference in performance was varying in such a manner than in certain runs this card would be ahead of its closest competitor while in other runs of the very same benchmark, this card would be behind. Also, the difference was within the error margin so that pegs this card as equal to the 780 Ti AMP! edition as far as OpenGL performance goes.

The card is definitely faster than the ZOTAC 780 Ti AMP! edition but it comes at a higher price as well, the MRP currently stands at a whopping ₹70,000 so that makes it about ₹10,000 more than the competitor. That's quite the price premium to lay down for something that is just a few MHz ahead of the competition.

The card is well built and performs better but we won't be labelling this card the new king just yet, we're reserving that judgement for when we receive the GTX 780 Ti HOF+.

Mithun Mohandas





Performance..... 90
Value 75
Build 60

Specifications

Chipset: GK110; **Base clock:** 1006MHz; **Memory clock:** 1750MHz; **Stream processors:** 2880; **Texture Units:** 240; **ROPs:** 48; **Manufacturing process:** 28nm, PCIe 3.0, 2560 x 1600 digital resolution support, 3GB Memory; **DirectX support:** 11; **OpenGL support:** 4.3; **Power Connectors:** 8Pin + 8Pin; **TDP:** 250W; **Dimensions (LxWxD):** 290mm x 132mm x 53mm; **Warranty:** 3 years warranty

Contact

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Corrigendum
The price of the Sennheiser CX 300 II was wrongly printed in the January 2014 issue. The correct price is ₹3,990.

Corrigendum
The price of WD Black 4TB internal HDD was printed wrong in the Nov' 2013 issue. It actually costs ₹23,999. We apologise for the error

Lenovo Yoga 8 Tab

Bend your World



The Yoga 8 tablet by Lenovo has a brilliant design, thanks to the all metal body and a foldable kickstand that allows you to easily use the tablet in landscape mode. The tablet has a bulge on one of the longer sides, which houses the kickstand, battery (non-removable), stereo speakers, 3.5mm audio jack, 5MP camera and the power/lock button.

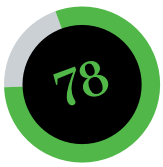
Underneath the kickstand we have the microSD card slot and a microSIM slot, which is a pain to use as the whole card goes inside and it gets very difficult to remove either of them. By squishing all of the hardware into the bulge, Lenovo has managed to keep about 75 per cent of the tablet in a slim and compact design.

The 8-inch display with a 1280x800 pixel resolution which doesn't sound bad, however the glass covering the display is quite horrible as it gives off really bad reflections and gets fingerprints and smudges in an instant.

In the performance department, the tablet proved to be quite stable thanks to the 1.2GHz quad-core MediaTek processor packed in with 1GB of RAM. The tablet runs on Android 4.2 with Lenovo's custom UI on top and we didn't notice any hiccups while scrolling through the menus and apps. The tablet even impressed in the gaming department, with games like Real Racing 3 and Injustice running quite smooth. One of the best features of the tablet is the huge 6000mAh battery which lets you use the tablet for two days.

The Yoga 8 gives quite a competition to the Nexus 7 (2013) but lacks in certain areas. It does fall in the screen resolution and a bit on performance, but overall it is one of the most well-built tablets out in the market.

Kunal Khullar



Features 86
Performance 60
Value 89
Design 78

Specifications

Operating System: Android 4.2 Jelly Bean; **Display:** 8 inch IPS with 1280x800 pixel resolution; **Processor:** 1.2GHz quad-core MediaTek processor; **Memory:** 16GB internal storage, 1GB RAM; **Camera:** 5MP rear, VGA front; **Battery:** 6000mAh; **Connectivity:** Wi-Fi, 3G

Contact

L enovo India
Phone: 1800 3000 9990
e-mail: customercare@lencare.co.in

Plextor M5 Pro Xtreme 256GB SSD

Too expensive to recommend



Coming in an all aluminium housing with a brushed aluminium finish, the M5 Pro Xtreme features a height of 7mm which makes it very easy to install inside laptops and ultrabooks. The real world read and write transfer figures for an 8GB sequential file were in the range of 347 MB/s and 448 MB/s respectively. The benchmarks show that the drive is quick, with it being placed right next to the SanDisk Extreme II but still a little bit below the Samsung 840 Pro series SSD. With a price of ₹19,500, Plextor is pushing its luck considering the better performing Samsung 840 Pro is available for about ₹16,000.



Features 82
Performance 88
Value for money 55

Specifications

Capacity: 256GB; **Form factor:** 2.5"; **TRIM Support:** Yes; **Interface:** SATA Rev 3.0 (6Gb/s); **Controller:** Marvell 88SS9187; **TRIM Support:** Yes; **Buffer:** 512MB DDR3; **Interface:** SATA 6Gb/s; **Warranty:** 5 years.

Contact

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Zebronics Iron Head

A budget performer



Zebronics has been impressing us with their latest assortment of gaming headsets. They're less "gaming" headsets and more headset with fancy colouring. That said, they're actually quite good. We're not going to wax lyrical over the audio quality, but we'll say this for the Iron Head, it's a great sounding set at the price, and the USB interface means that people on a budget needn't worry about a sound card. The build quality is decent and the padding is quite soft, making the set comfortable for long term use. This is a set that can make a great gift for a younger sibling, or even yourself if you're on a budget.



Features 60
Performance 65
Build 60
Value 80

Specifications

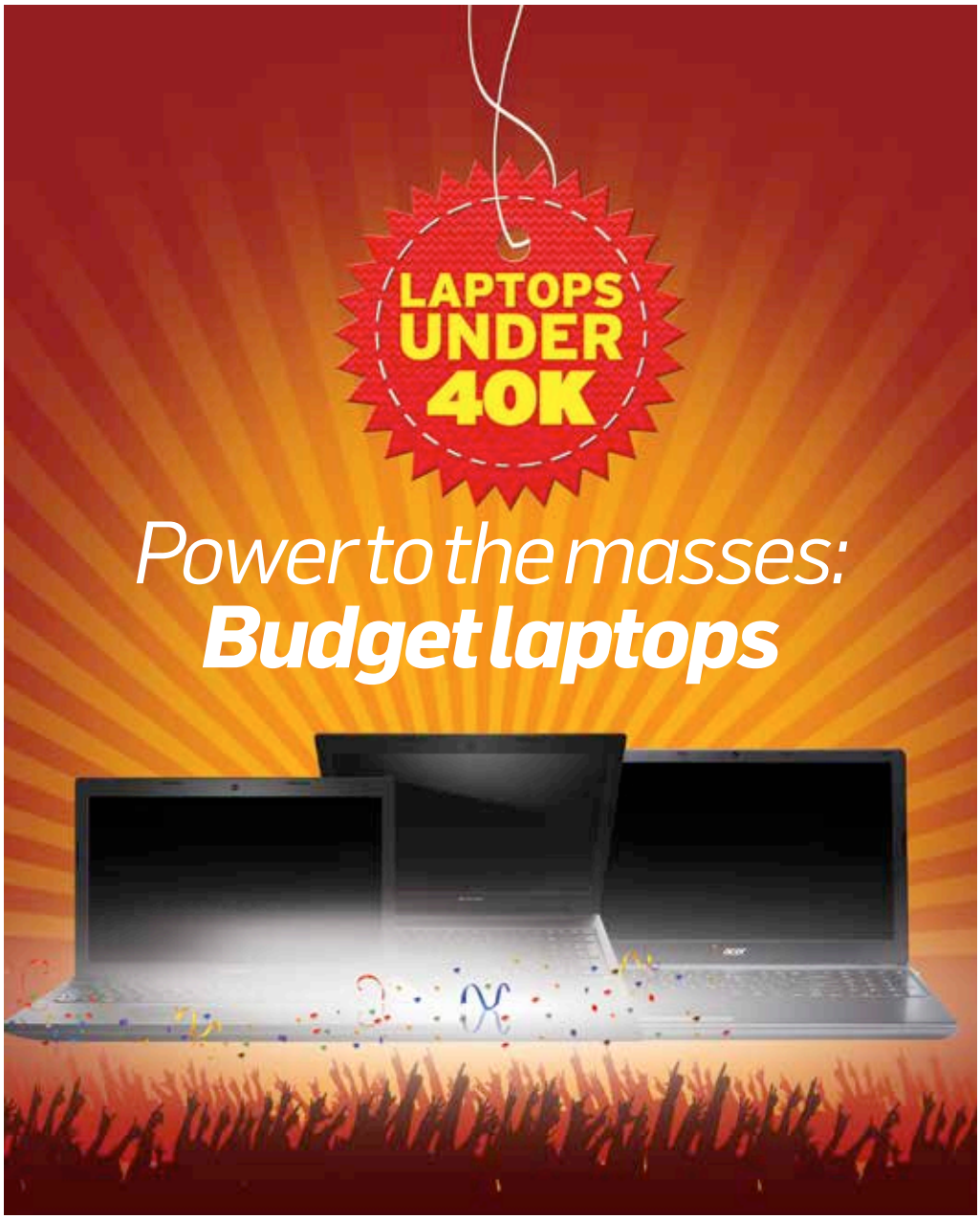
Driver: 40mm; **Frequency Response:** 20-20000Hz; **Sensitivity:** 111dB; **Impedance:** 32ohm; **Input:** USB; **Warranty:** 1 year

Contact

Top Notch Infotronix India pvt ltd (Zebronics)
Phone: 044-40000007
e-mail: enquiry@zebronics.info
Website: www.zebronics.com

NES cartridge for $5,000
An extremely rare NES cartridge was spotted on eBay containing the rare Nintendo World Championships game.

Windows 8.1 update 1
According to reports and leaked screenshots, the next update to Windows will be arriving by March in the form of Windows 8.1 update 1.



Power to the masses: **Budget laptops**

No computing powerhouses these, but even so, budget laptops are the workhorses that keep this world running. Here are nine worthy contenders for your hard-earned cash.

Anirudh Regidi
anirudhregidi@thinkdigit.com

The budget laptop is the Ford Model T of the PC. The device that'll bring the joy and power of computing to the masses in a functional and appropriately powerful form factor and suitable price. We've come a long way from the truly horrific netbooks that made up the budget category of yesteryear, laptops that ruined the reputation of portable computing the world over. Though tablets have helped.

The budget laptops that we received this time around are far more powerful, far more usable and definitely something that everyone would want, even if it's just something to carry as a backup device. Everything's received a significant upgrade, Windows 8.1 is supposed to be much lighter on resources, the CPUs are far more powerful and also more efficient at the same time. We've also seen the resurgence of AMD with their E1 and A-series APUs, not to mention vast improvements to Intel's Celeron CPUs. Something else that we were pleasantly surprised to see was the presence of touchscreens in this segment. Not an essential feature mind you, but it's novel and Windows 8.1 is definitely more fun, and functional, with a touchscreen.

What we don't yet see in the budget segment are the latest processors and of course, SSDs. That said, all the laptops were well-built and the Achilles heels of earlier budget laptops, lack of power and awful displays, is something that seems to have been completely eliminated.

The horrible netbooks that we mentioned earlier were horrible not because of what they represented, which was cheap computing, but the fact that they were so badly implemented. The budget offerings this time around are sensibly designed and definitely feel like a more mature and appealing segment to us.

Without any further ado, here are the contenders.

Lenovo S210 Touch

Lenovo is known for its great ergonomics and the S210 Touch is yet another example of their skill. The laptop is tiny, but it's powerful and incorporates what we feel is the best touch-pad in the 11-inch form factor; it's a pitfall that many manufacturers still haven't learned to avoid. The device is well-built, has a solid hinge and hosts a very decent and responsive touchscreen. The design of the battery

e-cigarettes in prison
Sales of e-cigarettes have been increasing by quite a margin since a number of county jails are selling them to inmates in the U.S.

Audio-Technica ATH AD500X
Check out our review of the Audio-Technica ATH AD500X open back headphones here **http://dgit.in/ATHAD500X**



Lenovo S210 Touch



HP Pavilion n207tu

compartment is actually quite interesting as it protrudes a bit when the laptop is open, but it's designed to be invisible once the lid is closed. It's an elegant compromise between a bulky design and allowing for an adequate battery compartment.

We were very disappointed by the keyboard on the device though. It's not a terrible keyboard per se, but we expect Lenovo laptops to have the best keyboards around and the one on the S210 just wasn't up to the mark. Touch-typists will finding typing on the device a bit of a chore as you have to bang down on the keys with deliberate force and you're liable to miss a few alphabets from time to time if you're not careful. The battery life was also quite a disappointment, 110 minutes just doesn't cut it anymore and we can't help but feel that the inclusion of an SSD or a Haswell CPU would have done wonders in that department.

This is a good laptop, but with a little more care and effort, it could have been a great one.



Lenovo Ideapad 505s

Lenovo IdeaPad 505s

The 505s is a great laptop. It's missing a few features compared to the competition, but it more than makes up for it in power and design. Powered by an A10 APU, this laptop is one of the few laptops in this test that's actually capable of light gaming. It's a large device, and definitely priced on the higher side, but it's a capable device and one that should be able to handle almost any workload that the average person will throw at it. It also sports one of the few keyboards with a fully-functioning numpad.

The 505s is an all matte-black affair with the trademark Lenovo ergonomics. Its keyboard is a joy to use and the touchpad is functional. The laptop is missing a touchscreen and the HDD capacity is a bit low at 300GB, but hey, you're getting a reasonably powerful laptop at a price that's not too hard on the pocket.

One huge downside to the device is the absolutely terrible battery life of 80 minutes. That's barely sufficient for anything other than emergency typing on the go.

This is a good laptop, but the disappointing battery life, high price, and the existence of Lenovo's own G500s means that we can't recommend this unless you desperately want only a Lenovo laptop with a numpad.

HP Pavilion n207tu

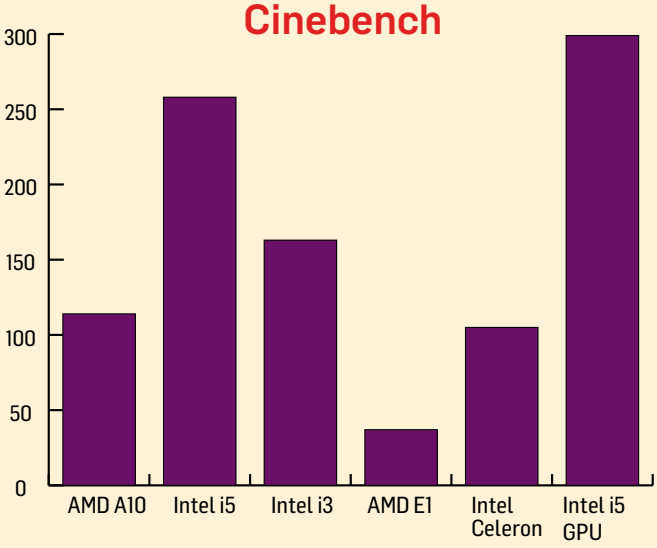
HP's only offering in this segment is an unremarkable one. The aesthetics are quite nice and anyone who's familiar with HP laptops will recognize the design and the sort-of-glossy plastic that makes up most of the device.

There really isn't much to say about this laptop. It's a good laptop, strictly average in most areas and it's reasonably priced. We did notice that the viewing angles were actually quite good on the device, probably the best in our tests, and also, the contrast ratio was the highest here, albeit not by much. The volume levels are also very good and so is the battery life of over three hours. All this leads us to conclude that the Pavilion n207tu might make for a fairly decent communal multimedia hub, on a budget.

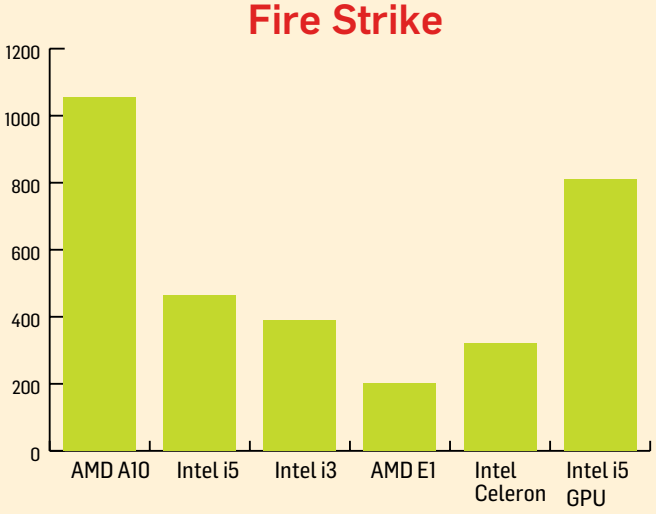
Other than that, we see no reason to strongly recommend

CPU GUIDE

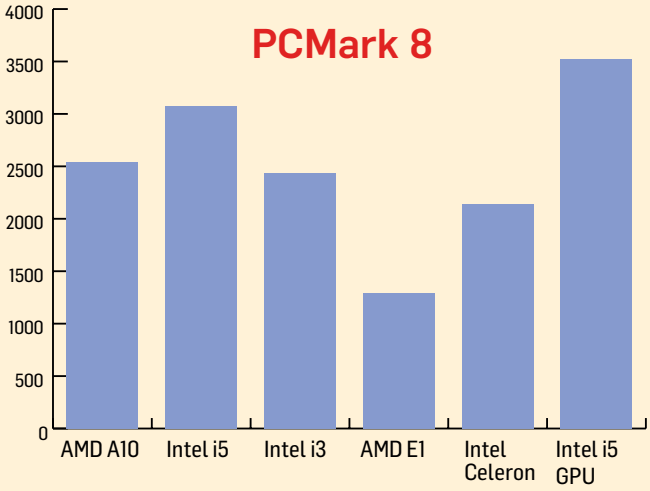
We've got nine very different laptops powered by six different CPU+GPU combos. Picking the right one can be quite a headache and to ease that headache, we've sorted out the salient information that you will need to make a buying decision.



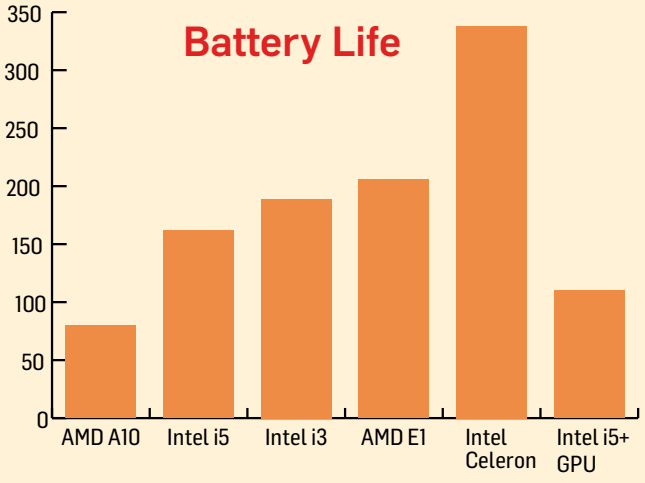
PROCESSING POWER:
If it's raw processing power that you want (for programming, Premiere Pro, etc.), it's the Intel Core i5 CPU that you need. As can be seen from the graph, even AMD's fancy A10 APU can only manage the processing power of Intel's low-end Celeron CPU.



GAMING:
If it's games that you want to play, the graphical prowess of the APU is not in question. As you can see, the Intel Core i5+720M combo is also a little behind. That said, do note that the extra processing power of the Core i5 will be more useful to you than the APU's GPU power.



OVERALL PERFORMANCE:
For all practical purposes, PCMark8 is an excellent indicator of overall system performance. As you can see, a better CPU is more advantageous than a GPU. Note that the Intel i3 is not that far behind the Core i5.



BATTERY LIFE:
The lower end Celeron takes the lead, and by a huge margin. As you can see, the APUs are extremely power hungry and this is due to their powerful on-board GPUs.

As you can see, the choice is still not an easy one, but if you're clear about what you want to do with your system, the choice is obvious. Our recommendations are as follows:

- Basic PC usage and great battery life: Intel Celeron series
- A reasonable all-rounder PC: AMD A10 or Intel Core i5 based laptop depending on budget
- Gaming: Intel i3 or i5 with a dedicated GPU

Brand	Lenovo	Lenovo	Lenovo	HP	Acer	Sony	
							
Model No.	**G500s Touch**	**Ideapad 505s**	**S210 Touch**	**Pavillion n207TU**	**Aspire V5-472**	**Vaio Fit 15E**	
Price (₹)	**37490**	**42290**	**34990**	**35490**	**35637**	**36990**	
Performance (so 40)	**18.06**	**16.92**	**17.36**	**17.16**	**17.41**	**18.00**	
Features (so 40)	**29.03**	**27.43**	**24.80**	**23.27**	**23.29**	**20.60**	
Design and Usability (so 20)	**14.18**	**14.82**	**14.09**	**13.09**	**11.00**	**12.36**	
Total Score (so 100)	**61.27**	**59.17**	**56.25**	**53.52**	**51.70**	**50.96**	
Specifications							
CPU	Intel i5-4200M	AMD A10-5750M	Intel i3-3227U	Intel i3-3217U	Intel i3-3217U	AMD A8-5545M	
RAM (GB)	4	8	4	4	4	2	
Graphics	NVIDIA GeForce 720M	AMD HD8650G	Intel HD4000	Intel HD4000	Intel HD4000	AMD 8510G	
Screen Size (Inches)	15.6	15.6	11.6	15	14	15.5	
Screen Resolution	1366x768	1366x768	1366x768	1366x768	1366x768	1366x768	
HDD Size (GB)	320	300	500	500	500	500	
Weight (kg)	2.7	2.6	1.5	2.33	2.1	2.5	
No of Ports (USB/Firewire)	3	3	2	3	3	4	
No of USB 3.0	2	2	1	0	1	2	
Performance							
PCMark 8 Score - Home score	3520	2544	2563	2435	2507	2258	
PCMark 8 Creative score	3011	1940	2068	1941	2040	FAIL	
3D Mark							
Ice Storm	48722	28512	36241	33836	36025	35280	
Cloud Gate	4839	4278	3121	2983	3153	2590	
Fire Strike	810	1055	425	389	447	457	
Peacekeeper	3136	1701	1722	1634	1639	1453	
Cinebench R11.5							
OpenGL	26.62	18.5	12.75	12.52	13.29	15.56	
CPU	3.27	1.24	1.9	1.82	1.8	1.75	
WinRAR Benchmark (KB/sec)	3744	2092	2849	2684	2855	2596	
PixPerAn readability	6	7	8	7	8	7	
Battery Life (minutes)	110	80	114	189	238	155	
Lagom LCD test							
Contrast (so 10)	9	9.5	9.5	9	8.5	9	
Gradient (so 10)	9	10	10	8	9	9	
Black Level (so 20)	17	20	15	17	16	18	
White Saturation (so 12)	8	8	7.5	8.5	7.5	5	
Sharpness (so 4)	2.5	3	3	3	3	2.5	
HD video playback (so 10)	9	9	9	9	9	9	
Speaker							
50 per cent (so 10)	5	5	2	6	4	8	
100 per cent (so 10)	6	6.5	5.5	7	7	9	
Screen brightness (cd/m^2)	140	152	108	70	135	151	
Contrast Ratio (x:1)	95.30	86.70	78.08	97.83	61.35	66.77	
Temperature (Max.)	75	62	60	60	63	60	

	Acer	Dell	Dell
			
	Aspire V5-123	**Inspiron 14R 5420**	**Inspiron 11 (3000 series)**
	24719	**39000**	**32900**
	12.74	**16.96**	**17.43**
	23.65	**24.95**	**20.83**
	12.00	**11.82**	**12.36**
	48.39	**53.73**	**50.62**
	AMD E1-2100	Intel i5-3210M	Intel Celeron 2955U
	4	4	2
	AMD HD8210	Intel HD4000	Intel HD Graphics
	11.6	14	11.6
	1366x768	1366x768	1366x768
	500	500	500
	1.2	2.29	1.43
	3	4	3
	1	4	0
	1293	3076	2136
	890	2499	1497
	13468	45723	13637
	1150	3759	2163
	200	464	321
	533	2585	1526
	8.79	14.08	11.84
	0.48	2.91	1.2
	744	3657	1489
	7	8	7
	206	162	338
	10	9.5	9
	9	9	8
	20	17	16
	8	8.5	10.5
	3	3.5	3.5
	4	9	8
	4	4	6
	5	6	8
	153	138	57
	69.84	66.34	60.42
	70	72	52



Sony Vaio Fit 15E

the device, but then again, we see no reason not to recommend it. It's a functional, generic laptop with a great screen and good speakers and a numpad. Nothing more, nothing less.

Sony Vaio Fit 15E

The Vaio is the best multimedia laptop in the comparison, primarily because of the fact that it has the best speakers here. They're loud and clear and feature quite a bit of detail and bass (as much as can be expected from a laptop, which isn't expecting much). The screen itself is a tad washed out, but that's also probably because it's also one of the brightest screens in the test.

The device is well-designed and well-built, but is no different from the Vaios most of us are familiar with. The touchpad is really nice to use, it's precise and responsive, and its keyboard is easily among the better ones here. Speaking of keyboards, this one comes with a numpad as well. We did face some issues with our benchmarks, where PCMark 8's Creative test suite kept failing



Acer Aspire V5-472

Carmick Shift
John Carmack's shift to Oculus VR is a move that has the potential to forever change the way we game. Here's why: http://dgit.in/Carmick

Life at 2400bps
What was life like at 2400bps? You young 'uns need to read this.
http://dgit.in/1dWSWNJ

and we couldn't pin-point the source of the problem. We were using the Enterprise edition of Windows 8 and not the default version that comes bundled on the laptop itself so we're not laying the blame on the Vaio. Also, this shouldn't be an issue in everyday use as we didn't face any problems while using the device.

The AMD A8 APU should give you reasonable gaming performance and while the Lenovo 505s does feature the A10 APU and a similar feature set, it's also considerably more expensive. Sony's had something of a reputation for overpricing their laptops, but this one's a great deal at this price.

If you're looking for a multimedia laptop, look no further than the Vaio Fit 15E.

Acer Aspire V5-472

This is a surprisingly likeable laptop and also a surprisingly disappointing one. The Aspire V5-472 features a very slim chassis that looks very elegant and is well-built. The screen is quite good but definitely not much better than average. The bezel is quite slim and the battery is built-in, so can't be reached easily if you do need to change it.

The laptop does feature a somewhat unusual (some would say uncomfortable) port layout wherein you only have one USB 2.0 port on either side of the device, but you do get a USB3.0 and Thunderbolt port on the rear of its spine.

Yes, you read that right, a Thunderbolt port on a budget laptop. There aren't many device that take advantage of Thunderbolt yet, definitely when it doesn't offer much more over USB 3.0, but the option is present. The rear of the device also hosts the HDMI port and the LAN port, which has a spring-loaded flap that partly obscures it (for aesthetic considerations we assume).



Dell Inspiron 14R 5420

All this is well and good, the laptop is slim, cheap, comes with Thunderbolt and is adequately equipped, but there's one thing that completely ruins the laptop for us and that's the touchpad. For whatever reason, the touchpad on this particular V5 was so hyper-sensitive that it bordered on the pre-cognitive, dancing and jumping all over the screen the moment more than one finger came anywhere near it. We tried uninstalling and reinstalling drivers to no avail. We're not sure if this issue was specific to the review sample we received, but the touch response was enough to completely turn us against the device. Purchasing this laptop would have been a no-brainer with a better touchpad

This is a great laptop, one of the slimmest you can buy at the price and easily the most feature-rich here, not to mention the 4+ hour battery life. However, the awful touchpad completely ruins the experience and we cannot, in good conscience, recommend the device to anyone.



Lenovo G500s Touch

Dell Inspiron 14R 5420

Powered by an Intel Core i5 CPU, this is one of the more powerful laptops in our comparison. The device features excellent connectivity in the form of four USB 3.0 ports and also hosts one of the better screens in the comparison. In fact, both the Dell laptops (including the Inspiron 11) aced our screen sharpness tests.

The laptop itself is a bit large and bulky, but the keyboard is roomy and comfortable and the touchpad is quite good, though its keys are a bit stiff. Volume levels and audio quality were a bit on the lower side, but at least not as bad as the levels on the S210 Touch.

Battery life was also barely acceptable at 2.5hrs in our tests, which means that it should last you upwards of three hours. We were also very disappointed with the thermal efficiency of the design. Load temperatures were in the 70s and we expected much better temperature management from such a large device, though the CPU must share some of the blame here– it's a powerful one after all.

The 14R should have been slimmer and run cooler, other laptops have managed it in the same price and with the same screen size. It's not a bad product, but it's hard to recommend over the competition.

Best Performer Lenovo G500s Touch

The best performer in this test has to be something special, and it truly is. The G500s touch ticks all the right boxes as far as



Acer Aspire V5-123

Contact Details			
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HP India	1243886238	www8.hp.com/in/en/contact-hp/contact.html	www8.hp.com
Lenovo India Pvt.Ltd	1 800 3000 9990	customercare@lencare.co.in	www.lenovo.com
Acer India Pvt. Ltd.	080-39408700	ailenquiries@acer.co.in	www.acer.com/in
Sony India	1800 103 7799	NA	www.sony.co.in

performance, price and features go. Packing in a Core i5 CPU, a discrete NVIDIA 720M GPU and 4GB of RAM, this is the most powerful laptop (on paper) in this comparison and the performance scores lend credence to that claim. The NVIDIA 720M GPU in particular is responsible for the performance crown, especially so as it proves to be more powerful than the A10 and A8 powered machines mentioned earlier.

The design of the G500s and G505s is identical, they're both encased in a plain, yet elegant, matte-black chassis. The G500s comes with an optical drive and a 15.6-inch screen, not to mention the usual connectivity options that one would expect on a laptop. The screen itself is quite good, though we would have preferred a higher resolution given the screen size, and the audio, despite being Dolby certified, is quite disappointing due to the comparatively low volume levels. The laptop features Lenovo's island style keys, which are a pleasure to use and among our favourite laptop keyboards around.

All this powerful hardware does extract a heavy toll on the system's battery output, though. Battery life is a barely acceptable 110 minutes and the temperatures, well, they're high. The laptop easily touches 75 degrees Celsius under load, enough to burn through your lap if you're gaming.

The Lenovo G500s is, without a doubt, the best performer in our laptop tests, but it does come with a few caveats and you need to be sure you're OK with them before you go for this laptop. If you do go for it, you won't be disappointed.

Best Buy
Acer Aspire V5-123

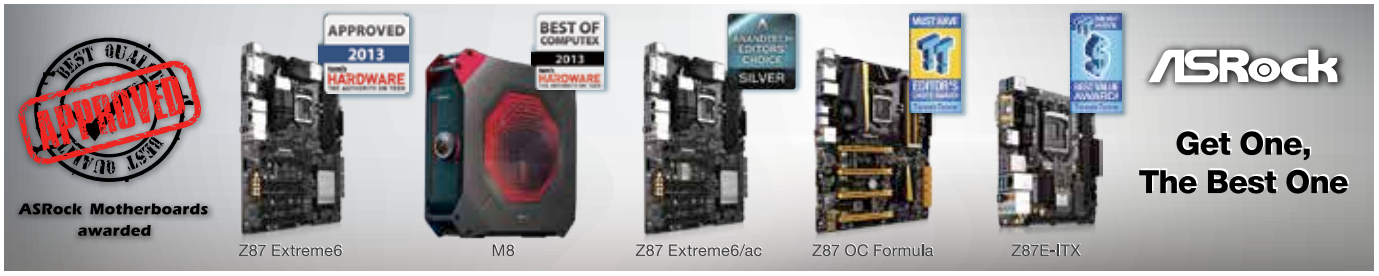
The smallest, weakest and cheapest laptop in our comparison is our best buy winner. You might wonder why we're even recommending this device. It's only powered by an AMD E-1 APU after all, it runs quite hot, hitting 70 degrees under load, can just manage to play heavy, HD clips and has limited aural capabilities. Why are we recommending it?

The answer to that is very simple. A budget laptop should be, by definition, cheap, but it should also be functional. There's no point in purchasing a cheap laptop if it's not of any use to you, making it an expensive brick rather and that's where the V5-123 shines. The power is limited, but the E1 is an APU, lending this laptop a modicum of more power than any of Intel's ultra-low end CPUs can. At the same time, the hardware is powerful enough to let you perform basic functions without you grounding your teeth to dust in frustration.

This piddly little device is light, does run a little hot under load, but still manages to give



Dell Inspiron 11 3000 series



Survival instincts
Stolen identity? Here's what you need to know.
http://dgit.in/1eP8hhe



Project Blueshark
What happens when the US Navy gets its hands on the Oculus Rift?
http://dgit.in/1elXMiv

you more than 200 minutes of battery life (maybe even 4hrs or more if you're careful) and has a decent keyboard and a nice touchpad. All this at a price that's half that of the competition. Not bad, eh?

If you really are on a tight budget and need a laptop for working on (browsing and typing only mind you), the V5-123 might just be the one for you.

Editor's Pick
Dell Inspiron 11 3000 series

While this laptop didn't win any performance crowns in the comparison, it was still easily one of our favourite laptops that we tested. The device itself is tiny, given the 11.6 inch screen that it has, and as you can see from the table, it doesn't seem well-endowed in the performance department.

However, the performance on offer is just sufficient to keep the device ticking. There is some amount of lag but it's only noticeable under medium-high loads, where you've got a dozen or so Chrome tabs open or are trying to play a really high-quality HD video file. Windows 8.1 itself is very smooth and the touchscreen is very responsive.

The device is well-built and in terms of design, this was one of our favourites; the matte grey lid with the black Dell logo look really cool. The screen is thicker than we expected, almost as thick as the body in fact, but we suppose that's a side-effect of incorporating a touchscreen.

What impressed us the most was the incredible battery life of over 5.5 hrs, quite a feat in this segment and especially considering that our tests are quite strenuous, you should be able to extract anywhere between 6-8 hrs of usage from the 4-cell battery. Another thing that stood out was the incredibly low temperature under load (52 degrees celsius) though admittedly, the CPU isn't capable of crunching too many numbers in the first place. Not bad at all.

The only disappointment with this laptop has to be the screen itself. It's nice and sharp, but the backlight is a bit dim and viewing angles are not as good as some of the others we've tested. Also, the touchpad can be a bit hyper-sensitive, but it's nothing you can't get used to.

This Dell Inspiron laptop wins the Editor's pick award for its great design and excellent portability, given the great battery life and low operating temperature it offers.

And that pretty much brings us to the end of this insightful comparison. We were pleasantly surprised at the variety of devices that fell into our budget laptop category, and their improved overall quality from just a few years ago. We did receive many more laptops, including some from ASUS, but owing to issues while prepping them, we've been unable to feature them in our tests this time.

Be sure to keep an eye on http://www.thinkdigit.com for more in-depth reviews of these laptops, and others that weren't featured here.

HOW WE TESTED

Testing laptops is no dark art, our test processes are quite thorough, but also simple enough to be performed by anyone at home, with the right tools and disposition.

Initial preparation
For every laptop we receive, we first log features, including making notes of bloatware, if present. The laptops are then completely formatted, all recovery partitions wiped and a fresh copy of Windows 8.1 Enterprise Edition (x64) is installed. Windows update is allowed to run and any remaining drivers are manually installed.
The batteries are allowed to charge fully, any power saving options are disabled and the High Performance power plan is applied. All test suites and benchmarking programs, along with any essential programs, are installed on all laptops. All laptop screens are calibrated using the Spyder 3 Elite calibration tool.

1) Performance Tests
Performance tests consist of a whole suite of tests that give us an idea as to the laptop's capabilities under stress. The following tests are conducted:

PCMark 8: This suite is one of the best tools for acquiring a complete picture of any PS's performance. We consider scores for the Home and Creative test suites.

3DMark: This tool is used to measure the raw performance capabilities of the laptop. The three tests that comprise the results fully stress the CPU and GPU like no other.

Cinebench R11.5: This tool is the ideal tool to indicate raw CPU performance. It renders a test scene using all CPU cores to give a result.

Battery life: PCMark 8's in-built battery test suite is used to estimate battery life. The test runs through a gamut of functions that are expected of a home PC, including browsing, chatting, video calls, light gaming, etc.

Sound quality: This is a subjective test where our reviewers rank each laptop's audio at 100 per cent and at 50 per cent volume.

Screen quality: The quality of the display is measured via the Spyder 3 Elite (calibration, brightness and contrast ratio), a physical device attached to screens. Lagom.nl is also used to measure black levels and various other factors including sharpness and white levels.

2) Features tests
All laptop features are listed out and assigned appropriate weights to come up with a final score. This includes the laptop configuration, connectivity options, weight, screen resolution and more.

3) Design and usability
These tests are mostly subjective and are an indicator of a laptop's ergonomics. Points are given for keyboard layout, touchpad functionality, quality of the construction materials, layout of ports (USB, HDMI, etc.) and presence of useful software.

4) Final Score
The Performance, Features and Design scores are assigned appropriate weights to derive a final score for all the products. The best performer award goes to the laptop with the highest performance score, regardless of price. The best buy award goes to the laptop with the best price to performance ratio based on a formula that we use.

What formula? If we tell you we'll have to kill you? Not really. Nothing that cliched. Just write in to us at testcentre@thinkdigit.com with any queries regarding our test process and we'll gladly help you out if we can.

Apple's remedy
Following iPhone users' complaints about iOS 7's glitches, Apple decides to take action **http://dgit.in/Applrem**

Deadline extended
It seems we've been given some more time before the Earth dies. Find out more: **http://dgit.in/mortym**

WIRELESS WONDERS

Portable audio has finally come of age. Choose your bluetooth companion now.



PHOTO: JITEN GANDHI IMAGING: BAIJU N.V.

Siddharth Parwatay
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Smartphones can do a lot of things these days, but if there's one thing they just can't manage (no matter what the specifications) is the ability to play great music from their built-in speakers. You've probably had one of those awkward moments with your friends when you excitedly vouch for some great new song, proceed to play it on your phone and in the end turn red-faced and back down because your phone just doesn't do justice to the song. Halfway through, you either have each of them plug in headphones or promise to send them a download link to listen to it later making vague promises that it does indeed sound better otherwise.

This is precisely where portable bluetooth speakers come in with a promise to save the day, so to speak. The proposition is that you'll have loud and, perhaps, high fidelity music with you wherever you go. And towards that goal, bluetooth speakers seem to have matured and evolved quite a bit over the initial "proof of concept" level offerings we saw just a few years ago. Bluetooth speakers aren't just speakers anymore. They've evolved to include additional functionality – doubling up as portable powerbanks, modern day iterations of lava lamps, stereo speakers (thanks to daisy chain capability to pair with other speakers for a true stereo effect) and pen drive/microSD card readers for your music.

That being said, in most portable speaker reviews you'll read, there's always that one

NSA denied!
Privacy and Civil Liberties Oversight Board states that an NSA metadata program lacks a viable legal foundation **http://dgit.in/NSAmeta**



Lincoln Navigator 2015
Check out the specs of the new Lincoln Navigator, due to launch in 2015
http://dgit.in/lincnav15

HOW WE TESTED

A modified version of our test process for regular speakers was used for this test. Normally our preference in **test tracks** is not this eclectic. Our discerning ears for years have been biased towards guitar-driven Rock and Metal. But for this test, we realised that this would just not work. One of the main reasons for this is that most of these speakers just can't take the complexity, layering and instrument density that goes into most Progressive Rock numbers. Our test samples previously consisted of *Between The Buried And Me*, *Motherjane* and occasionally some *Porcupine Tree*. On 90 percent of these speakers, *Selkies* sounds like noise – and that's not even when pushing the volume dial to its extreme. The only way that we could spot nuances or prowess in certain frequency ranges was if we switched over to well mixed acoustic numbers or genres that leaned more towards classical music. To mix it up a little, we zeroed in on 'Lotus Feet' by *Shakti* – a beautiful Indian Classical Jazz Fusion masterpiece with delicate flute tunes, percussions and strains from a sympathetic steel string guitar. The other reason for changing up our standard track list was the plausible use-case scenarios. These speakers are meant to be portable and will most likely be used in outings with friends, house parties, camp fires, and other such occasions. We can't imagine a campfire where you find *Sabbath* playing; well at least not the kind normal people go to. Hence the addition of the catchy dance-pop 'Stereo Love' by *Edward Maya feat. Vika Jigulina*. As for the rest of the track selection, we used old favourites (some of which we've been using for years now) to test specific attributes such as stereo separation, vocal tonality, detail, etc. Each speaker was paired with a Nexus 5 and the test tracks were played to judge the speaker quality. The **files used** were FLAC format, fully uncompressed WAV format or at least 320 kbps MP3 format. Scores were given specific to each sample. For instance, for testing bass performance we used 'Angel' by *Massive Attack*. Other **parameters for performance** were aesthetics, build quality, loudness and range. While aesthetics was purely subjective, things like build quality were assessed based on the materials used, the finish and attention to detail. If there were gaps in the joints, points were cut while things such as covered ports were given a good score for this parameter. Range was tested by taking away the source slowly within line of sight. The best range got scores close to 20 while loudness was judged on a scale of 100. Since loudness is important when it comes to portable speakers, this factor contributed significantly towards the performance score. Overall, **performance was given much higher weightage** as against features when calculating the final score (80:20). Within features, weights were assigned for things such as presence of NFC, battery level indicator or the ability to charge via a USB port as against a dedicated DC adaptor. Features such as the ability to charge other devices were given extra weightage. Battery level indicator was only counted as present if it showed more than three levels of calibration. Some of these speakers double up as speakers for handsfree call answering. While testing this capability, we realised that none of them really stood out – they were all pretty much the same. Hence this score was taken under features rather than being clubbed under performance. Finally, **to arrive at the best value for money proposition**, we calculated the ratio of performance per unit of price. Dividing up the speakers into logical categories based on price we then got best value for money devices within that price range. But of course, like always there was only one best performer.

caveat associated with this category and it goes something like this: it's good, for a portable speaker. And this tip still holds true. Every one of these speakers (well almost) can be described as good but only if you make concessions for them being portable. They can't hold a candle to the sound quality most regular fixed speakers would produce. But do you really care about high-fidelity audio? Or do you care about good enough (Read:loud) audio for the moment? It's like those debates technology pundits used to have ages ago about camera phones – everyone supported the fact that the best camera was the one you had with you. Here too, the best speaker is the one that's with you, the one that you can carry around and the one that will keep your party going. This is why parameters such as loudness were factored into our test process. Be sure to go through the "How we tested section" before getting to the various price categories under which we've compared the 20 odd speakers next.

BELOW ₹5,000

This might be the most low end category in our test, but as it happens this is where most of the purchases actually happen; so in that sense it's the hottest category. There are a number of options for those seeking an audio companion on a shoestring budget. Options available are from Indian companies such as iBall, SoundLogic (co-branded with MTV) and Portronics. There are new international entrants also like HMDX with some quality products.

The speakers in this category were the most diverse in terms of their performance. Many of these speakers were single driver units packaged with a battery pack. As you can imagine mono speakers can only serve the sole purpose of giving you a volume upgrade over your phone speakers. Let's start with the units from Portronics. **The Portronics Drums and Sound BT** were decent performers but upped their game when it came to features. Drums was one of two speakers in the entire test to have voice cues. The moment you paired it with a device, a metallic woman's voice (with an Indian accent!) would announce the successful pairing. The build quality of the Drums was slightly better than that of the BT, but the latter has two transducers (meaning: a slightly better sound). The Drums has some neat battery saving mechanisms that put the speaker on standby when no input is detected but it also had a design flaw. Perhaps in an effort to build on aesthetics, the device had a down-firing driver. The deflections caused by this muddled the sound considerably. Put the device on its head or on the side (if you're okay with it rolling off the table) and the sound improves. The **SoundLogic MTV Twister** has an entirely rubberised body and claims to be splash resistant. Since we couldn't find any Ingress Protection Rating defined we dared not put this claim to the test. Though the



Experience for yourself

Our short video comparison will give you an idea of subtle differences between the audio quality of the JBL speakers and how they compare with the Bose SoundLink Mini: **http://dgit.in/JBLBosecomp**



Zoook Air Drum ZB-BS100

rubberised body helped give it a rugged feel, the sound performance was abysmal. It was loud enough but badly distorted. The other model from the same line, the **MTV Soundbox** had a similar story. It was decent to look at but underperformed in terms of sound quality, however unlike the **Twister**, this one didn't even evoke confidence with its build. While on the topic of underperforming speakers, we were quite surprised and rather bummed about the prospect of clubbing the elegantly designed **F&D Swan** in this category. Now let's get to the speakers that actually stood out. The **Zoook Air Drum ZB-BS100** and the **iBall UFO3** were neck and neck in terms of performance and features. Both had all the bells and whistles in terms of various controls, sources they could take input from and looks. The Zoook had a nice bright sound signature and room filling sound. It was loud and although it looks like it's one of those mono speakers, it's actually stereo. One flaw is that its performance is on the lower end of the spectrum. On our *Dream Theater* test track the difference between this and the more expensive **Jam Plus** was noticeable – both seem to have the same level of detail but the bass tuning of the Jam Plus gives it a more balanced or rather well rounded sound. The Zoook is loud and ready to make noise but the Jam Plus at least gave the illusion of some bass. The **Jam Classic** is literally like a stripped down version of the Plus – same design but relatively diminutive volume. The Jam Classic had a curious problem: it kept losing battery rapidly when left on – not desirable at all. The most standout feature within this category (and perhaps even in the whole test) was the ability of the Jam Plus to pair with another Jam Plus speaker to make it into a proper stereo set. The Jam Plus has a switch that lets you designate each mono speaker as either left or right channel. The effect (and loudness) that you get when running a pair of Jam Plus speakers in stereo is quite amazing. Hold each one a meter or so away from your ears and you get enveloped in an orb of sound. In terms of performance, the Jam Plus was the front-runner in this category but it's expensive too. As for the others, there isn't a lot of difference between Zoook, UFO3, Jam Classic or Drums in terms of pure sound quality. It just boils down to which is louder and what feature set you prefer. The Zoook however stands out as the best value for money proposition in terms of performance per unit of price. It gets our **Best Buy Award** in this category.

₹5,000 – UNDER ₹9,000

This is what we'd like to call the mid-range space for Bluetooth speakers. It has some of the most recognised names in the industry; namely JBL, Sony, Edifier, UE, etc. Let's start with the Edifiers. The **Edifier Extreme Connect** was a strange little speaker; it seemed well built, was compact and in terms of design was a cross between the Jambox by Jawbone and the Jabra Solemate (which we've reviewed before, but isn't part of this test). It had a couple of things going for it like the availability of not just play/pause but also the forward/rewind controls on the device which were displayed in a funky random manner as if strewn about by accident. The performance, however, was not upto the mark. The sound was almost muffled and bass performance was bad. It produced no sound for the first three or four seconds of '*Angel*' by *Massive Attack*, except a slight buzzing. Most likely those few seconds, the bass notes are out of the device's frequency range. **The Edifier Bric Connect** is big, loud and runs on double AA batteries (which it eats through, in case you were wondering). It's incidentally the only one in the test with a remote, so that's a nice little addition. The sound quality is way better than the Extreme Connect but it's not the best in this category. Next up, we have the Jam Party from HMDX. The speaker delivered very little thump in Santana's '*While My Guitar,*' but produced soaring clarity. Nice open vocals, and the acoustic guitar sounded especially realistic. The trouble with the Jam Party is that its cut off doesn't seem to have been put in place properly. You can drive its transducers to the extremes resulting in distortion if you take it beyond 80 percent. That's pretty much its operational limit. This is something that the UE Mobile Boombox has managed very well. No matter how much you push it, the speaker just won't distort. The mid range clarity and quantity of bass on the **UE Mobile Boombox** is pretty good – there's almost no clipping in any song. The price of a tiny footprint though is that there's not enough volume output. It's great for a close quarters experience but you won't get that room filling sound. The only JBL to feature in this category is the **JBL Flip 2** – an impressive upgrade to our old favourite JBL Flip. Amongst other things not present in the original Flip, such as Micro-USB charging, is NFC pairing present in Flip 2. In terms of performance, the JBL Flip 2 ranks high on clarity but eve-



Sony SRS-BTM8

		BEST PERFORMER digit FEBRUARY 2014				BEST BUY digit FEBRUARY 2014			
									
Brand	**Logitech UE**	**Bose**	**Bose**	**JBL**	**Creative**	**JBL**	**Logitech UE**	**JBL**	**HMDX**
Model no.	**Boombox**	**SouldLink Mobile Speaker II**	**SoundLink Mini**	**Pulse**	**AirWave HD**	**Charge**	**Mobile Boombox**	**Flip 2**	**Jam Party**
Price (₹)	21,995	20,138	16,200	14,990	12,999	9,990	8,995	8,990	7,990
Performance (on 80)	65.97	67.61	61.72	52.69	52.37	52.84	49.07	52.81	53.47
Features (on 20)	4	6	6	10.4	10.4	14	8	10.4	4.4
Total	69.97	73.61	67.72	63.09	62.77	66.84	57.07	63.21	57.87
Specifications									
Weight	1.98 kg	1.3 kg	0.67 kg	NA	980 g	470 g	298 g	450 g	NA
Dimensions	15.2 x 3.1 x 6.5	5.1 x 9.6 x 1.9	2 x 7.1 x 2.3	3.1 x 7.2	3.8 x 10.3 x 3.8	2.91 x 6.91	4.4 x 2.6 x 2.4	2.6 x 2.7 x 6.3	7.5 x 2.6 x 2.5
Frequency response	55 – 20kHz	NA	NA	100Hz – 20KHz	NA	150Hz – 20kHz	150 Hz – 18 kHz	100Hz – 20KHz	NA
Mono/stereo	Stereo	Stereo	Stereo	Stereo	Stereo	Stereo	Stereo	Stereo	Stereo
Power output in RMS	NA	NA	NA	2 x 6W	NA	2 x 5W	NA	2 x 6W	NA
Rated battery life (in hours)	6	8	7	5 (with lights) 10 (without)	7	12	10	5	12
Rated range (in feet)	50	30	30	NA	32	NA	50	NA	30
Battery capacity	NA	NA	NA	4000 mAh	2600 mAH	6000 mAh	NA	2000 mAh	NA
Performance Tests									
Audio Tracks									
Santana feat. India Arie – While My Guitar Gently Weeps - thump & guitar	80	85	75	70	55	65	60	65	65
Dream Theater – Pull Me Under - density	68	70	60	65	65	60	57	65	62
Chris Rea – Call On Me - vocals	92	90	80	65	70	72	65	65	60
Massive Attack – Angel - bass	75	80	78	38	42	40	38	38	35
Shakti – Lotus Feet - detail	80	80	75	58	62	60	60	60	65
Edward Maya – Stereo Love	80	80	75	60	60	60	60	65	65
22 kHz to 20 Hz sweep	80	80	70	60	65	60	50	62	50
Build									
Materials used / buttons etc	80	90	90	75	75	80	75	80	80
Other parameters									
Aesthetics	75	80	85	85	70	65	75	65	70
Loudness	100	80	55	58	68	65	35	60	70
Range	10	12	10	8	8	10	10	10	12
Features									
Can charge devices?	N	N	N	N	N	Y	N	N	N
Daisy chaining	N	N	N	N	N	N	N	N	N
Micro SD	N	N	N	N	N	N	N	N	N
Aux-in	Y	Y	Y	Y	Y	Y	Y	Y	Y
Playback controls	N	N	N	N	N	N	N	N	Y
USB charging	N	N	N	Y	Y	Y	Y	Y	N
Playback via USB	N	N	N	N	N	N	N	N	N
Speakerphone call answer	N	N	N	N	Y	N	Y	Y	N
NFC	N	N	N	Y	Y	N	N	Y	N
Battery level indicator	N	Y	Y	Y	N	Y	N	N	N

rything seems ever so slightly suppressed when bass notes appear. Flip 2 is much sharper than the JBL Charge in its sound signature. This was clearly apparent in 'Pull Me Under'. It's a great speaker and incidentally bagged the top overall score in this category, but we're not sure whether the price bump for primarily NFC is worth it. Rounding up this category is Sony's rather purse-like **SRS-BTM8**. On the *Santana* track, the initial kick drum – a nice tight thump – caught our attention. Sound is warm so guitars sounded nice enough, but we noticed 'burr'ing in the bass notes on 'Call On Me'. It dried up regular (non-heavy duty) batteries pretty quickly but not as fast as the Edifier Bric Connect. Overall, the Sony SRS-BTM8 is the most value for money option with great performance at a reasonable price. Having said that, remember that our value calculations are based on MRP. There might be a situation (flash sales online, for example) where you'd be able to pick up any of these great speakers for a steal. Have a look at the table, where you have the overall score which is basically a ranking. If you find a speaker with a good score on sale, pick it up! [Hint: at the time of writing this test, Flipkart had the UE Mobile Boombox listed at 47 percent off for ₹4,680]

ABOVE ₹9,000

This is the premium category. When you look at products in this group, suddenly the caveat we'd mentioned earlier of being lenient with these devices because they're portable, gets thrown out of the window. When you're paying close to 15k for a speaker you expect quality,

												
	Edifier	**Sony**	**Edifier**	**SoundLogic MTV**	**HMDX**	**F&D**	**Portronics**	**SoundLogic MTV**	**Portronics**	**HMDX**	**iBall**	**Zoook**
	Bric Connect	**SRS-BTM8**	**Extreme Connect**	**Soundbox**	**Jam Plus**	**Swan**	**Drums**	**Twister**	**Pure Sound BT**	**Jam Classic**	**UFO3**	**Air Drum ZB-BS100**
	6,699	5,990	5,599	3,999	3,990	3,990	3,499	2,999	2,999	2,900	2,499	2,495
	49.44	49.34	35.45	20.69	39.80	23.29	26.71	25.99	29.09	31.24	31.46	32.38
	6	8.4	9.2	6	6.4	8.8	9.2	6.4	9.2	6	9.2	8.4
	55.44	57.74	44.65	26.69	46.20	32.09	35.91	32.39	38.29	37.24	40.66	40.78
	1.4 kg	1,060 g	0.45 kg	0.615 kg	NA	600 g	380 g	0.361 kg	195 g	NA	NA	330 g
	5.24 x 3.54 x 11.81	9.6 x 7.3 x 3.5	6.3 x 2.4 x 1.7	7.5 x 2.1 x 2.6	3 x 3 x 2.6	3.3×3.3×3.1	3.1 x 3.0	7.5 x 2.1 x 2.6	8 x 2.3 x 1.2	2.5 x 2.5 x 2.5	5.4 x 2.4	3.8 x 2.3
	40Hz – 20kHz	NA	190Hz–18KHz	NA	NA	60Hz–20KHz	NA	NA	NA	NA	100Hz – 20kHz	60Hz – 20KHz
	Stereo	Stereo	Stereo	Stereo	Mono	Mono	Mono	Mono	Stereo	Mono	Mono	Stereo
	6W x 2	2W x 2	2W x 2	3W x 2	NA	2W	2.5W	3W	NA	NA	NA	3W x 2
	NA	NA	12	4	6	NA	NA	4	10	4	6	4
	NA	30	30	30	30	NA	NA	30	NA	30	NA	30
	6 AA Batteries	4 AA Batteries	1400 mAh	NA	NA	NA	NA	NA	1000 mAh	NA	NA	NA
	50	60	40	20	40	22	25	20	35	35	36	38
	45	50	40	22	48	10	40	20	30	30	40	45
	60	62	20	10	45	10	25	20	30	30	28	30
	45	45	12	8	20	12	15	5	15	18	16	17
	40	50	25	10	25	10	12	8	10	12	14	12
	60	60	25	5	40	10	28	10	35	37	32	30
	50	60	40	20	30	15	15	20	20	25	20	22
	70	75	75	30	75	65	45	70	60	75	40	65
	70	60	70	60	60	70	60	60	45	60	50	50
	72	60	35	30	30	30	25	35	40	28	30	40
	14	10	10	8	16	4	8	8	8	6	18	10
	N	N	N	N	N	N	N	N	N	N	N	N
	N	N	N	N	Y	N	N	N	N	N	N	N
	N	N	Y	N	N	N	Y	N	Y	N	Y	N
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	N	N	Y	N	N	Y	Y	Y	Y	N	Y	Y
	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	N	N	Y	N	N	N	Y	N	Y	N	Y	N
	Y	Y	Y	N	N	N	Y	N	Y	N	Y	Y
	N	Y	N	N	N	Y	N	N	N	N	N	N
	N	N	N	N	N	N	N	N	N	N	N	N

regardless of whether they're portable or not. Thankfully, many of the speakers we got didn't disappoint. Even in terms of innovation we had speakers trying to differentiate themselves in an already crowded space. One such speaker is the **JBL Pulse** with an integrated array of LEDs on its grille. These lights "pulsate" to the music that you're playing in five pre-programmed patterns. The colours and the patterns look quite trippy and we're sure the speaker will find loads of takers in the US state of Colorado, if you get our drift. While the sound quality doesn't differ much from that of either **JBL Charge** or JBL Flip 2, the light show is quite the conversation starter. It's the digital era equivalent of a Lava Lamp! Although the Charge is supposed to be rated lower in terms of its RMS output per channel (5W instead of the Pulse's 6W), we found it to be louder than the Pulse. The Charge delivers better bass performance. Even with *Shakti's*



JBL Charge



A History of D&D
Dungeons and Dragons turns 40. Here's an interesting blog post outlining the history of the franchise **http://dgit.in/dad40**

Unbalanced
19 of the most illogical swords in gaming history are analysed and reassessed based on practical use **http://dgit.in/19swords**

'Lotus Feet' the charge had a fuller and richer sound.

Talking about the Charge, it has another trick up its sleeve – the speaker doubles up as a portable powerbank with which you can charge your portable devices on the go. If you think about it, the convergence of these device categories makes perfect sense. A bluetooth speaker is something you'll pull out once in a while from your backpack, maybe at a house party, camping trip, or the occasional commute just to annoy your fellow passengers, but now you don't need to carry another infrequently used device: a portable charger. The JBL Charge leverages the heart of this device – the powerful 6000 mAh battery – beautifully. It makes for a much stronger use case for carrying around another device in your bag. The dual use case and the standard level of performance make the Charge our **Best Buy** in this category.

Next up, we have a go at the **UE Boombox**, the **Bose SoundLink Mobile Speaker II** and the **Bose SoundLink Mini** together. They were the top three performers in the test and it's only fair we talk about them in reference to each other. The UE Boombox is a monstrosity when it comes to its size, but the speaker was one of the few that could at least give out some amount of thump. The cellos on 'While My Guitar' sounded natural but lacked the vocal and guitar clarity that was present on the Bose SoundLink Mobile Speaker II. As for the *Dream Theater* track, the lower ranges are clearly amplified. What this means is that you get a lot of boom and a fair amount of thump. This gives an impression of a well rounded full range sound even if the the mids are a bit muddled. The highs are not clear enough and bass management is great. Having said that, the Bose SoundLink Mobile Speaker II was quite a treat when it came to *Massive Attack*'s 'Angel'. The lows were clearly the best in the category. Even with 'Lotus Feet' the bose had more clarity.

What of the diminutive Bose SoundLink Mini, you ask? It's a great piece of engineering wizardry to begin with. It's transducers are supposed to move more air for greater bass, and the passive radiators face opposite directions reducing vibrations. And guess what, it works! The ability of this little thing to churn out radiating, room-filling lows was impressive to say the least. 'Call On Me' sounded very clear, pleasing and rich. The only niggle we noticed was this wavy sort of doppler effect on vocals whenever there was a bass attack or the instrumentation density went up. That aside, when you see what exactly is creating the rich room-filling sound you'll keep these aspersions to yourself and simply go "whoa!" Now comes the lone ranger from Creative – The **Airwave HD**. This speaker is loud and has a thump that's on par with the best. What it lacks is clarity but it atones to some extent (if at all) with loudness.



Bose SoundLink Mobile Speaker II

READY RECKONER
Here's a quick decision maker for various scenarios and requirements you may have

I want something funky:	The JBL Pulse is the way to go. An LED light show is something even the most level-headed of geeks won't be able to resist.	
I'm on a tight budget:	The Zoook Air Drum ZB-BS100 is the way to go. At an MRP of ₹2,495 and possibly an even lower street price, it's perfect for those on a budget.	
Size is not a problem:	Go for the Logitech UE Boombox. It's huge but you get the boom to shake up the neighbourhood.	
I want something super-portable, has great audio and won't cost a bomb:	What you need is the Logitech UE Mobile Boombox, especially when it's available for half the MRP online.	
I want a speaker and a power bank:	The JBL Charge – A perfect example of convergence that makes sense.	
Superb lows, high fidelity in a small package, price no bar:	The Bose SoundLink Mini. Deceptively loud and sonically brilliant.	
A gift for my valentine OR The ultimate in stereo separation	With 14th Feb coming up, you need to get yourself two units of the HMDX Jam Plus. The special "His & Hers" collection is available in bright colors of lemon, pink and blue. Pair it together when you meet your significant other.	

THE VERDICT

So, which speaker is the best performer? While the Logitech UE Boombox was the loudest speaker in the test, it was also the largest. On the other hand, the Bose SoundLink Mobile Speaker II while being almost as loud was comparatively much smaller. It's performance in terms of overall sound quality was better. So...you guessed it... the Bose SoundLink Mobile Speaker II walks away with the **Best Performer** crown. If you want the best your money can buy, this is the speaker to go for. Having said that, each of the top three performers in this test have a use case they satisfy. Happy listening.



A legacy unborn
Might & Magic X: Legacy aims at the revival of the classic RPG, but forgets to be interesting in the process **http://dgit.in/mamten**



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'OLX Pe Bech De'

India's e-commerce segment is still at a nascent stage, but the Customer to Customer (C2C) platforms are gaining a lot of popularity. Portals such as OLX and Sulekha have made massive investments in this segment. We had an opportunity to interact with **Amarjit Singh Batra, CEO, OLX India** about the online classifieds segment, hottest categories on OLX, users' response and also how it's dealing with competition.

Kul Bhushan
kul.bhushan@thinkdigit.com



Amarjit Singh Bitra, CEO, OLX India

How has been the journey so far for OLX.in's journey in Indian e-commerce?
It wasn't easy to create a consumer-to-consumer (C2C) market for used goods in India. The task was hard but the journey of OLX.in has been extraordinary. From a little known brand, today OLX has become the largest used goods marketplace in India with about 850 million page views every month, and growing at a fast pace. Our 'OLX Pe Bech De' tagline has hit a chord across the nation.

How many active users/visitors does OLX have? What is your demographic break-up and which is the most active demographic?
OLX has about 850 million page views per month (this includes website and mobile traffic). Interestingly, 62 per cent of OLX traffic is from mobile. This makes us the biggest site in our category, especially because of our focus on C2C. According to the ComScore data, we are the biggest free horizontal online classifieds site in India at 405 million page views in Oct 2013, about 45 per cent bigger than the #2 site.

Users from all age groups are active on OLX. Overall, 65 percent of the users are male while 35 percent are females. According to the latest ComScore data, the largest traffic on OLX is in the age group of 25-34 years, followed by users falling between 18-24 years. Interestingly, users above the age of 50 - 55 years are also quite active on OLX owing to its simplicity and ease of use.

How has been the response from Tier 2 and Tier 3 cities? Which cities are the most active on your portal?
The response from Tier 2 and Tier 3 cities is very encouraging because of the growing mobile Internet adoption in India. More than 40 per cent of our traffic is coming from Tier 2 and Tier 3 cities. Since we are focused on C2C segment of used goods, and because of our wide number of categories, we have managed to attract people from all over India to OLX.

Which categories (type of products) are the most active on your portal?
The most popular and active categories are that of mobile phones, computer, electronic items, household goods such as furniture, and used cars and bikes. Categories like sports goods, art and collectibles, books and clothing are also fast gaining traction.

Gadgets is the fastest moving category on OLX because of the desire of the consumers to upgrade them often. The top gadgets sold on OLX include mobile phones, cameras, computers, laptops, tablets, video game consoles, and home appliances like television, refrigerators, air conditioners, oven to even hair driers and ceiling fans.

A marketplace or retailer – which is a better concept? Do you see them co-exist?
I'm a big believer in the marketplace model. It is the most scalable and low touch model but it also has its challenges. At OLX, we follow the marketplace model and we are an open marketplace so anyone can sell and buy here. The content on our website is hundred percent user generated and we don't mediate between the buyer and the seller.

What is your strategy to compete with the competition and traditional 'classifieds'? Please provide some figures.
In the last one year our page views have grown at nearly 400 per cent, our listings by more than 400 per cent, and our visits by almost 200 per cent. We have established ourselves as the market leader and are growing at a phenomenal pace. We focus on the C2C market whereas our competitors, including the traditional classifieds, are focusing on B2C classifieds. Our strategy is to keep growing in a way that helps C2C percolate down to the masses in remotest parts of the country, making people's lives easier.

What are future plans of OLX?
OLX has seen tremendous growth in the last year and expects to increase manifold in the next year. We will continue to focus on diverse and new demographics in the coming year. With the increase in penetration of mobile internet, a large part of our focus will be on the mobile, which is a challenging and difficult space to survive in.

Almost legal
A step closer to making BitTorrent clients legal? See what Judge Robert Lasnik of Washington District has to say **http://dgit.in/limprf**



Egyptian find
New archaeological find uncovers some unknown secrets about the Egyptian Abydos dynasty **http://dgit.in/abydos13**

Redefining mobile entertainment

Zenga is a free live TV and video-on-demand service that presents a range of Indian and international television channels which can be accessed through PC, tablets, mobile phone (whether smart or featured) and plays through your resident media player. We talked to their **CEO, Abhishek Joshi,** to gain some insights into this fledgling yet rapidly growing entertainment segment.

Jayesh Shinde
jayesh.shinde@thinkdigit.com



Abhishek Joshi, CEO, Zenga

How is Zenga TV different from other VOD and mobile TV apps / services like Spuul, BoxxTV, Eros Now, and BigFlix?
Most of them are paid and only do VOD while we are Free and live and VOD both are available on our platform, We are also the only one which can operate on 2.5G network with as low as 20 kbps bandwidth while others need 70-80+ kbps to start streaming. You would need an app in most cases while our users are mostly on browser.

Any facts or figures on how many people use Zenga TV? User base in India, demography of users, etc...
We have 24 Mill unique active month on month users out of which we have 19 Mill users are from India. 2/3rd are men and the age group is from 15-44 yrs.

Since its inception, how has Zenga TV grown over the years?
Almost doubled in user base & views year on year and similarly on revenue.

Any word on viewers and how content consumption habits are changing in the digital age?
Our users spend an average of 6-10 Mins per view calculated monthly. Search based content specific to genre and our original programing is becoming more popular.

What is the state of the mobile TV and VOD market in India, and what's your forecast for the next 5 years?
The market is destined to grow in multifold, the predictions are a growth form 150 Cr to 3000 Cr in 2 years, I would say most of the time the predictions have been surpassed in the Indian market but even if we do half of it I guess we all go home happily.

What happens to Zenga TV when Netflix or Hulu officially launch in India?
No such difference that we saw, in fact we usually see an increase in consumption and users whenever such an incident happens as the awareness grows and the ecosystem becomes bigger, people with access to low bandwidth eventually come to us to have a seamless experience. Like the launch of 3G gave a boost to video consumption for us on 2G.There is enough space in this ecosystem for everyone to exist and grow!

How do you counter the argument that services like yours and others that provide mobility driven VOD and live TV will always be restricted to secondary entertainment mediums, and therefore will never be as popular as TV (the real deal) or YouTube, for e.g.?
Just to correct that notion, Youtube's consumption on mobile is significantly higher than Youtube's consumed on PCs in India, which ever device will get the maximum time of an eyeball will be called as the primary source or medium, I feel that TV will move to secondary viewing soon, like Theater has become after TV came in to existence. The real deal which is in making is the Digital viewing, it will be with you 24 x 7 and thus will get maximum time from you very soon.

If we look at foreign outlets that function in a manner similar to yours, there are a few shows which are paid for by the service themselves. This leads to an independent production process and has led to shows like "House of Cards" that enjoy a significant following. Any similar plans?
We are already producing shows, content and have started populating such content in collaboration with Artists and Celebrities, you will see more of them soon.

What about movies/series that developed a cult following a few years after production stopped (example - Firefly). Would you be open to reviving such shows on your service? By reviving, we mean licensing and producing new episodes. (Could be a long term objective.) Any plans?
Very soon, you will see some extremely popular international shows which has a cult following and it would be a delight for the users to be able to view and sample them.

Programming idiosyncracies

The programming world is a world of geeky obscurity to the layman, full of jargon that bamboozle the heck out of everyone. But coding and programming life isn't without its funny moments; some of them have gone on to become quite epic, too, as far as pop cultural references go. Here's a quick insight into the idiosyncracies that make us geeks human.

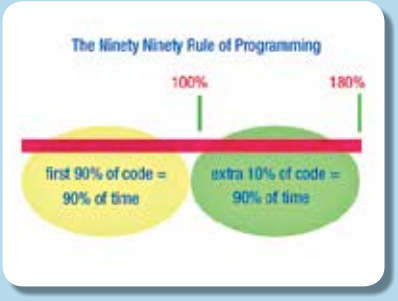


IP over Avian

If satellites and undersea cables can't get the Internets to you then pigeons will. IP over Avian was even tested successfully in Norway with nine pigeons, having a packet return time of just 3000-6000 seconds. So if you don't mind getting your email with a few feathers and pigeon droppings here and there then a 10 megabeaks/sec plan should suffice.

Ninety-ninety rule

It states that "The first 90 percent of the code accounts for the first 90 percent of the development time. The remaining 10 percent of the code accounts for the other 90 percent of the development time." If you've ever been part of a coding endeavour then you'll know this to be true. Simply put, it means that it takes more time and code than originally planned.





Hexspeak

While the rabble of the IT world have their communication limited to the decimal system, the "Neo"s prefer Hexspeak. It's even in practice right now. Example: 0xDEADD00D which translates to "Dead dude" is used in Android to indicate an error. 0x8BADF00D ("ate bad food") in IOS is used as an error message for slow-poke applications.



Internet Oracle

While not the sweet old lady from the Matrix, the internet does have many oracles whom the sub-serviant coders turn to when the need for answers arises. Birthed at Harward in 1976 the oracle began as a simple "QnA" program where the person asking a question would be given someone else's question to answer. And soon enough, nerd humour ensued.

FINO

When you are programming and you simply can't figure out what to do with a particular variable/data type you resort to a FINO queue. Abbreviated in the same manner as FIFO (First In First Out) and LIFO (Last In First Out), FINO stands for First In Never Out. It's the Azkaban of coding where you send ones and zeroes to languish forever.





User error

Ever had the computer insult your intelligence? That depends, have your ever encountered the following error messages – PEBCAK, PICNIC or ID10T. These translate to "Problem Exists Between Computer And Keyboard" in some form or the other. It's often used by tech-support personnel too, so now you'll know when you're called an idiot.



Hipsters on the prowl
Hunting fashion is in, not the hunting itself, but is that about to change?
http://dgit.in/1elOBib



Sci-Fi freight
Freight yards can come to life at night, with the right photographer.
http://dgit.in/M7S4dD

How we unwind



Question of the day
This was an event that was instituted in honour of the Ant, for his unwavering ability to regale us with the innermost workings of his mind. It's been some time since we exhausted that resource however (he's a man now) and the burden (honour) has passed on to the Pony, who's ably filling the shoes and keeping our spirits up.

Rats in the house
Those of you who're regulars know that we've a rat problem of sorts. Those furry devils are a real terror and create quite a nuisance. Creatively setting traps for them has become a sort of routine pastime for us and executing them a duty. The Pony fulfilled that duty this month, with a ponderous earnestness.





What a Vu!
Vu was kind enough to lend us their newest 55-inch TV and boy did we have fun with it. Mithun, since he was the one who was present when the TV arrived, conveniently hooked up the TV to his PC, much to everyone's chagrin. World of Tanks on a 55 incher is a sight to behold. Take that, Gabe!

digit DIARY

It's a hard life we lead at Digit. Sure we get to play with the world's most awesome gadgets before any of you can get your hands on them, but these very same awesome gadgets don't stay with us for too long (they're too awesome, you see). They spoil us silly, we fall in love with them and when they go back, the world seems like such a drab and dull place. Till the next awesome gadgets comes along that is.

The first person to suffer a bereavement this month was Big Daddy himself. We'd received what was possibly the most awesome chair we'll ever use, the Steelcase Gesture (**http://dgit.in/StICse**). After spending more than a month wallowing in the armchair of the Gods, to have it taken away was cruel beyond measure. Big Daddy's been melancholic ever since; the drab office furniture was never very appealing, but now it feels dreadfully dreary. He's not one for moping around for long though (hakuna matata?) and he's now zeroed in on a replacement, Herman Miller's gonna get a call pretty soon.

The next tale of woe belongs to the Pony. He's been rearing to prove his worth, and doing a pretty good job of it, but we don't know what fit of madness overcame him when he got his pony tail (carefully nurtured for over a year) chopped off. The sudden loss of what was almost an appendage seemed to move his centre of mass forward and it seemed to take him a few days of teetering around before he got the hang of walking without his tail.

But it didn't stop there, just as Samson shed his strength with his hair, so did the Pony, his mental strength that is. He's been coming up with the most ridiculous of theories. How ridiculous? Well, the Pavlovian twist as we call it for example. He initially claimed that Pavlov trained dogs to drool from their, ahem, anus, at the tinkling of a bell. Regardless of how a dog would accomplish such a task and the ingenious barbarity required of a scientist who could train a dog to do that– not to mention the surgery required to relocate the salivary glands (an unsavory experience, for the dog and scientist). No, what was surprising was that the incongruity of what he said didn't strike him even after he saw the team rolling on the floor, convulsed with uncontrollable laughter; it took a Google search for that.

Was that all? No. Quick question, what's the capital of Africa? Most of you must have gone "huh?" Not the Pony. Mozambique was his instant, unblinking, utterly sincere response. That answer is just so wrong on so many levels that we were left stumped for a bit, marveling at what the loss of a few strands of hair can do to an intern. Only the Ant has ever entertained us like this in the past and we could go on forever. Since that fateful day (the tail chopping) he's been instructing us in his own personal brand of uTorrent voodoo (voodoo mama juju (sorry, we couldn't resist)) and about the fact that he's a comic book elitist (a statement that he since regrets ever uttering), arguments on what makes a hipster (read his contribution to the cover story) and many more.

In the midst of all this, he disappears for hours on end on what are ostensibly "calls from friends". We have a sneaky suspicion that there is a Delilah here somewhere. Why else would he give up his precious pony tail? Who knows? Regardless, we're still having fun and we'll never say no to any new form of entertainment. His IQ levels are slowly levelling out as his hair grows back (maybe the strands act as antennae to ease communication with his alien overlords) and such days should, for his sake, be numbered. We'll miss them though.



SteamOS beta's new features
The constantly evolving SteamOS from Valve now supports dual-boot login, partitioning of hard drives, and more. **http://dgit.in/1hNuw8A**



Case mod 2013
Cooler Master's annual case mod competition winners announced here: **http://dgit.in/ModCM**

digit SQUAD

This month we highlight some aspiring tech writers and their spirited attempt to get published in the magazine. Let's have more!

Readers' write-ups



Sanjeeth Gopalakrishnan

The Sudden rise of Indian Companies in Consumer Electronics

Those were the Days when Nokia was ruling the Mobile world with those N-Series models. There was but moderate opposition from Sony Ericsson. Hardly have I remembered any other brands about a decade back when mobiles were still moderate luxury products and Samsung was hardly considered a competitor. Decks changed in 2007 with the introduction of iPhone. Google introduced Android ; deriving from iOS which led to revolution of mobile industry in India. Samsung slowly increased its market value and became the market leader in quick succession replacing Nokia.

Generally all those companies starting from soaps to bikes , Indian products were always the least choice of preference. Right from looks to advertising ; Indian products lacked that punch to compete with international brands. Although Indian brains are worth enough to occupy 34% of Microsoft in USA , we lacked that individual identities of leadership.

Decks have changed again with companies like Micromax , XOLO by proudly launching products that have shaken the basements of well-established foreign companies. First of all these companies have to take a bow for breaking the jinx. The concept of entrepreneurship has taken a new level; thanks to these companies.

Technology plays a major role in removing the under exposedness in Indian minds. Technology literacy is slowly vanishing even in remote areas. Even the smallest invention in technology is helping a store owner in some way say example, a Google map. Recently facebook acquired Little Eye Labs ; an Indian start-up company.

It is a contradictory statement to justify this acquisition. It is a proud moment for those people in Little eye labs. Since that company is worth enough to be acquired ; it would have been a majestic moment if it had rejected the offer and continue to function independently.

For all those who say Indian products copy from International brands ; they are not aware that even Android was derived from iOS. Hiring Hugh Jackman as a brand ambassador for Micromax is a wow factor which helps in building international exposure to that brand. 2013 led to the development of Indian companies among India. Every big victory begins with small steps. Lets march together from this February to support all quality Indian brands and be a squirrel in India's development.
Jai Hind !!



Praneet Sah

Create your own URL shortener

Everyone must have tried bit.ly or any other service to shorten URLs but imagine having a URL specially dedicated for you and your website or business. That would be really great! Moreover it would also increase popularity of your company. Currently there are few sites that provide you the solution to create your own URL shortener at some cost, but why to pay money when you can create your very own URL shortener for free.

I hope you have basic knowledge about HTML and PHP, you should also have installed 'XAMPP' for windows or 'MAMP' for mac, these software act as a local Apache server. If you have purchased online servers then that's also good to go with. First of all let me tell you the whole flow of this script. There are basically 4 files included in this whole process; namely "index.html", "process.php", ".htaccess" & "redirect.php".

The user will open the website say, www.your-site.com (index.html) and will put the long address in the field provided and would hit submit, now this would be processed by another file named "process.php" and it would return the unique short URL of that long URL. The short URL would be like this: "www.your-site.com/1" Here '1' is the unique shortcode or you may say ID. For the server to understand this URL with ID (say: '1'), we have edited ".htaccess" file, which understand the URL and then sends it to redirect.php file which query the database to get the long URL corresponding with that ID; and after getting the long URL it redirects the user to that address. So let's get started building your own URL shortener.

The very first thing that we need to do is to create a MySQL Database. You can give any name to your DB, I used, "urldb". After creating the DB you need to run the following SQL on it. This SQL would create a table named 'urltable' with two columns, 'id' and 'longurl'. The id column is primary key, therefore it's added automatically.

MySQL command

```
CREATE TABLE IF NOT EXISTS
`urltable` (
  `id` int(10) unsigned NOT
```



A smart pizza box?
Seen in India and Dubai, the VenTiT box is considered to be the world's most advanced pizza box. Read more: **http://dgit.in/Smartyzza**



Breaking Good
Check out this YouTube video that re-imagines Breaking Bad with happier characters. **http://dgit.in/BreakGood**

```
NULL AUTO_INCREMENT,
  `longurl` text NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB  DEFAULT
CHARSET=utf8 AUTO_INCRE-
MENT=16 ;
```

Now comes the home page of our site, as we are creating just a demo so it need not be fancy. We just need to display a text input field (where the user will put the long URL) and a submit button. Save this file as "index.html"

index.html code

```
<form action="process.php"
method="post"> <!--We speci-
fy the file where this form
would be processed and we'll
use the post method-->
URL(with "http://"): <input
type="text" name="longurl">
<input type="submit">
```

Now the form(for home page) is created, we now need to create the "process.php" file. This file is responsible to add the long URL in the DB and then 'echo' the short URL with its ID.

process.php code

```
<?php
//Make connection with database so that
we can put the long url in it.
$con=mysqli_connect("localhost","root",
"pass_if_any","urldb") or
die("Connection Error");
//Assign the variable $longurl to the
user's long address
$longurl = $_POST['longurl'];
//Put the longURL in the DB
$sql=mysqli_query($con,"INSERT INTO
urltable (longurl)VALUES('$longurl')");
//Now we selects the ID to which this
long URL has been assigned.
$result = mysqli_
query($con,"SELECT id FROM
urltable WHERE
longurl='$longurl'");
while($id = mysqli_fetch_
array($result))
  {
  echo "URL Shortened Suc-
cessfully! ".'<br>'."Your
shortened URL is "; //Dis-
play the message
  echo 'http://localhost/
shortener/' . $id['id']; //
and finally display the
short URL with ID
  }
mysqli_close($con);
?>
```

So we have put the long URL in the database and the 50% of the task is finished. Now we just need to code the redirection method for which we need to edit the ".htaccess" file, it is responsible to parse the ID from URL, via redirect.php file thus making the redirection possible. Save the following code as ".htaccess"; don't forget there's a full-stop in the name of this file before 'htaccess'.

.htaccess code

```
#Turn on rewrite rules in Apache server
RewriteEngine On
#It tells how to handle URLs
RewriteRule ^([0-9]+)$ redirect.php?l=$1
```

This is the most important file as it is responsible for all the redirection taking places. This file basically takes the "ID" from the URL, then it will query the DB for the corresponding longurl and then the user is redirected or a error message is displayed if the ID is invalid. Remember to save this file with name as "redirect.php".

redirect.php code

```
<?php
//check whether the ID is provided or not,
if not then condition won't be executed
$LocationId = (isset($_GET['l'])) ? $_
GET['l'] : null;
if( $LocationId )
{ //Make connection to DB
  $DBConn = mysqli_connect("localhost
","root","pass_if_any","urldb") or
die("Connection Error");
//Selects the URL which corresponding
to the ID as given by the user in URL
  $Resut  = mysqli_query($DBConn,
sprintf("SELECT longurl FROM urlta-
ble WHERE id LIKE '%s' LIMIT 0,1",
mysqli_real_escape_string($DBConn,
$LocationId))) or die( mysqli_error() );
  if( $Resut )
  {    $Row = mysqli_fetch_
array($Resut);
    if( isset($Row['longurl']) &&
!empty($Row['longurl']) ) //checks
whether URL exist or not
    {    header('HTTP/1.1 301 Moved
Permanently'); //if url exist in DB, then
set the header to 301 and redirect user to
the longurl
      header(sprintf('Location: %s',
$Row['longurl'])); //Redirects the user to
the long URL
      exit;
    }else {echo "Invalid URL"; //If inva-
lid ID given by user then return this
error}}}?>
```

So now everything is done! Make sure to keep all the files (include .htaccess) in the same folder. To open the site go to the address that is linked to your Apache server. This whole script is written by me and is just a short presentation to show you all the basics of creating a URL shortener. Currently there are many vulnerabilities in this script. Such as this script can get hacked easily as there are XSS vulnerabilities. You can add CSS to make the site look more fancy and then you can also add features such as 'hit' counter and other different things. Possibilities are unending with PHP, it just depends on how you make use of your skills to bring out the best in it.

Disclaimer: The views expressed in this section are of the respective Digit Squad members. Neither Digit nor 9.9 Media takes no responsibility of their claims whatsoever.

You too can get featured here! Just join...

digit SQUAD

Write in to us
editor@thinkdigit.com
Mention "Digit Squad" in the subject

Versus vs. Vs.

Initial versions of the cover this month had the text "Versus", and so we got to thinking about whether it should be Versus or Vs. Which is more identifiable? Vs. is used more commonly, and thus will resonate more with our readers. Versus is a whole word, not an abbreviation, and thus the grammatically correct usage. Vs. is just two letters, thus allowing the font size to be bigger, more visible and centered in a nicely symmetrical square or circle... Vs. it was in the end.

However, this isn't something strange to us, because we think of ourselves as creative people, and creative people love to dabble in the abstract. We actually do this every month, and some months a complete lack of agreement even ends up in a plain black cover with red text. (Yes, that's what happened!) We also revel in God vs Science type discussions, and I myself have spent hours debating that very topic on the Digit Forum with readers.

It's not just the need to scratch the creativity itch however, it's also part of the evolution of the species. Never before in history have there been as many philosophers as there are today, and there will be more tomorrow, and even more day after. Why? Because of technology.

Technology has enabled us to connect over great distances, and thus be exposed to new ideas and cultures. We have friends on all continents thanks to Facebook, and read about events and people from across the globe. Thus, it has exposed us to more, and encouraged us to share our opinions.

As a quick aside, in the spirit of exposing you to more, I'll paraphrase my favourite comedian, the late George Carlin, "I'm a high tech low-life. A cutting-edge, state-of-the-art, bicoastal multitasker, and I can give you a gigabyte in a nanosecond...I'm a hot-wired, heat-seeking, warm-hearted, cool customer, voice activated and biodegradable. I interface from a database, and my database is in cyberspace, so I'm interactive, I'm hyperactive, and from time-to-time, I'm radioactive..." Watch the video at http://youtu.be/Uy2mxBlwSow

Technology has given us more free time, or rather since we can interface on the go and from anywhere, we have found otherwise unutilised time and converted it to technology time, thus allowing us to wax eloquent on our choice of social network, or read something we wouldn't normally spend time on, and thus develop an opinion we may never have had before.

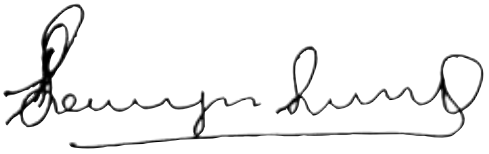
Technology also has us wired in 24x7, and we love it! We want more information than we can handle, and promptly proceed to suck it all down, digest it selectively, and excrete that semi-digested garbage on someone's Facebook post or on the Forum. It's human nature to form opinions, but opinions formed on half digested data leads to most of the arguments you read in the cover story this month. The truth we don't like to accept is that sometimes there just is no clear winner, no obvious choice, no matter how much that irks you. iOS vs. Android? It's a personal choice, and there is no universal winner - no matter how sure you are of there being a clear winner in your head.

I am sure we will, at some time in the past or future, make you hate us for bashing your favourite product or brand, I certainly hope it will be a temporary hate, as you realise that it is our job to find the truth and leave our personal biases out of our work. That's what's great about working here at Digit. No matter who voices an opinion, there's always someone to counter it. The variety in the team itself is it's own set of checks and balances that allows us to be unbiased as a whole.

It's why we have rigid test processes that our entire team of reviewers came up with together, which have to be followed when we review products. It's why our ratings seem overly strict at times, and indeed why we get hate mail for some of our reviews as well.

In other news, we are currently searching for new ways in which to serve you, and we will be improving some of the old ways in which we're already a part of your life, so keep your eyes peeled for those changes...coming soon....

We also love hearing from you, so hate mail or not, don't stop writing in and keeping us grounded.





Robert Sovereign-Smith
Executive Editor
robert@thinkdigit.com

"We want more information than we can handle, and promptly proceed to suck it all down, digest it selectively, and excrete that semi-digested garbage on someone's Facebook post or on the Forum"

Liked or hated this column? Write in to *robert@thinkdigit.com* and let me know your thoughts.

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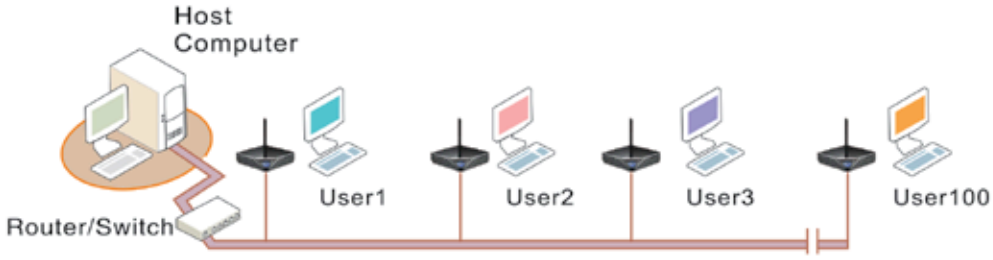
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WinCE based thin Client OS
Quick boot up time.
Ability to locally run WinCE applications
Available in PS2 & USB





QHM6051 PS2 THINCLIENT



Supports WIN XP Service Pack-2

QHM6056 USB THINCLIENT



Requires network protocol time through internet for login

QHM6051A PS2 THINCLIENT



Supports WIN XP Service Pack-2

QHM6056A USB THINCLIENT



Does not requires network protocol time through internet for login on WIN XP and WIN 7

- Minimum system requirements of a Host PC
  - 2.0 GHz processor
  - 512MB RAM
  - 40GB hard disk drive
  - Operating system requirements
  - Microsoft Windows or Linux
  - Ethernet switch or router
- This product is intended to reduce hardware deployment and maintenance costs.
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- Does not support 3D games.

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