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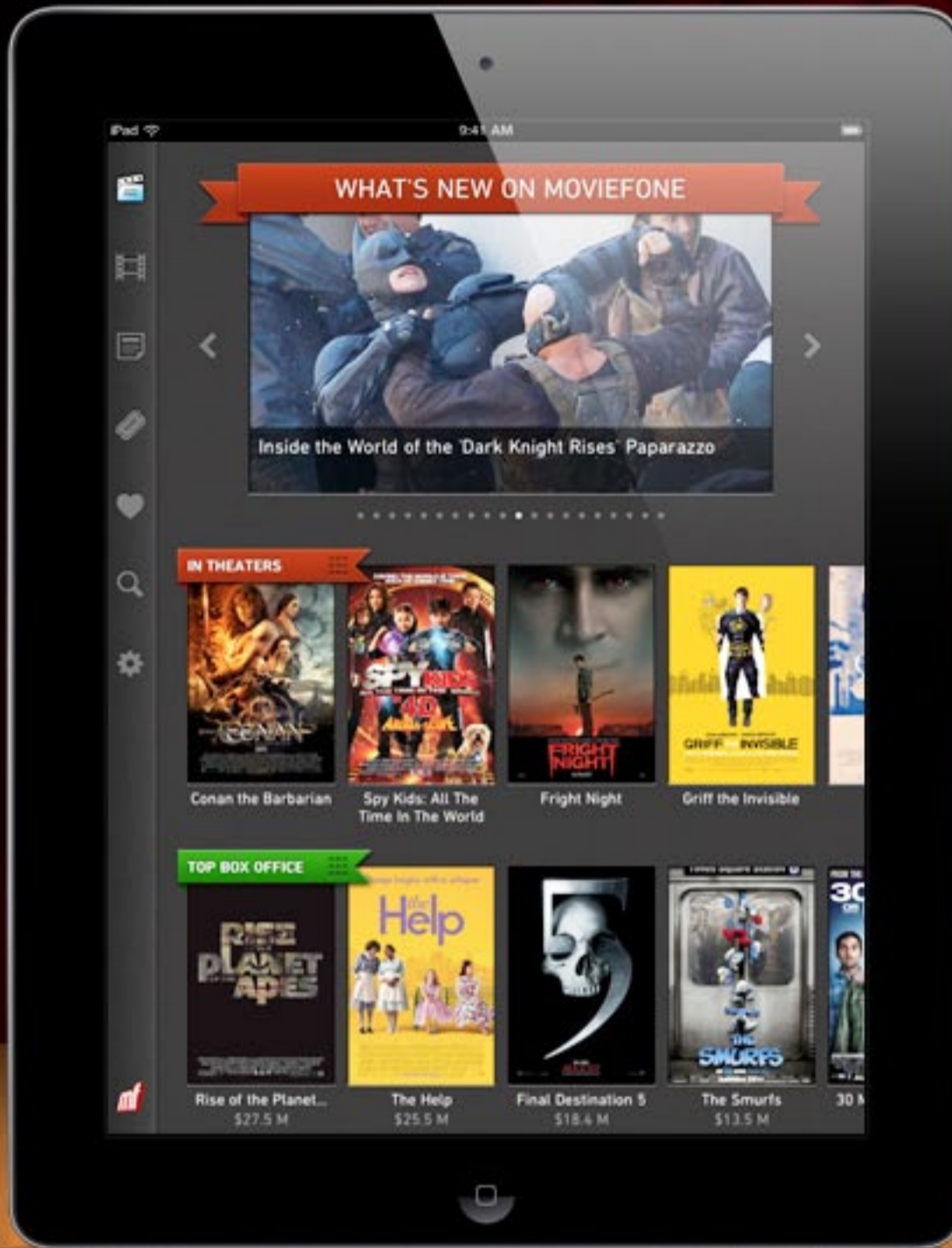
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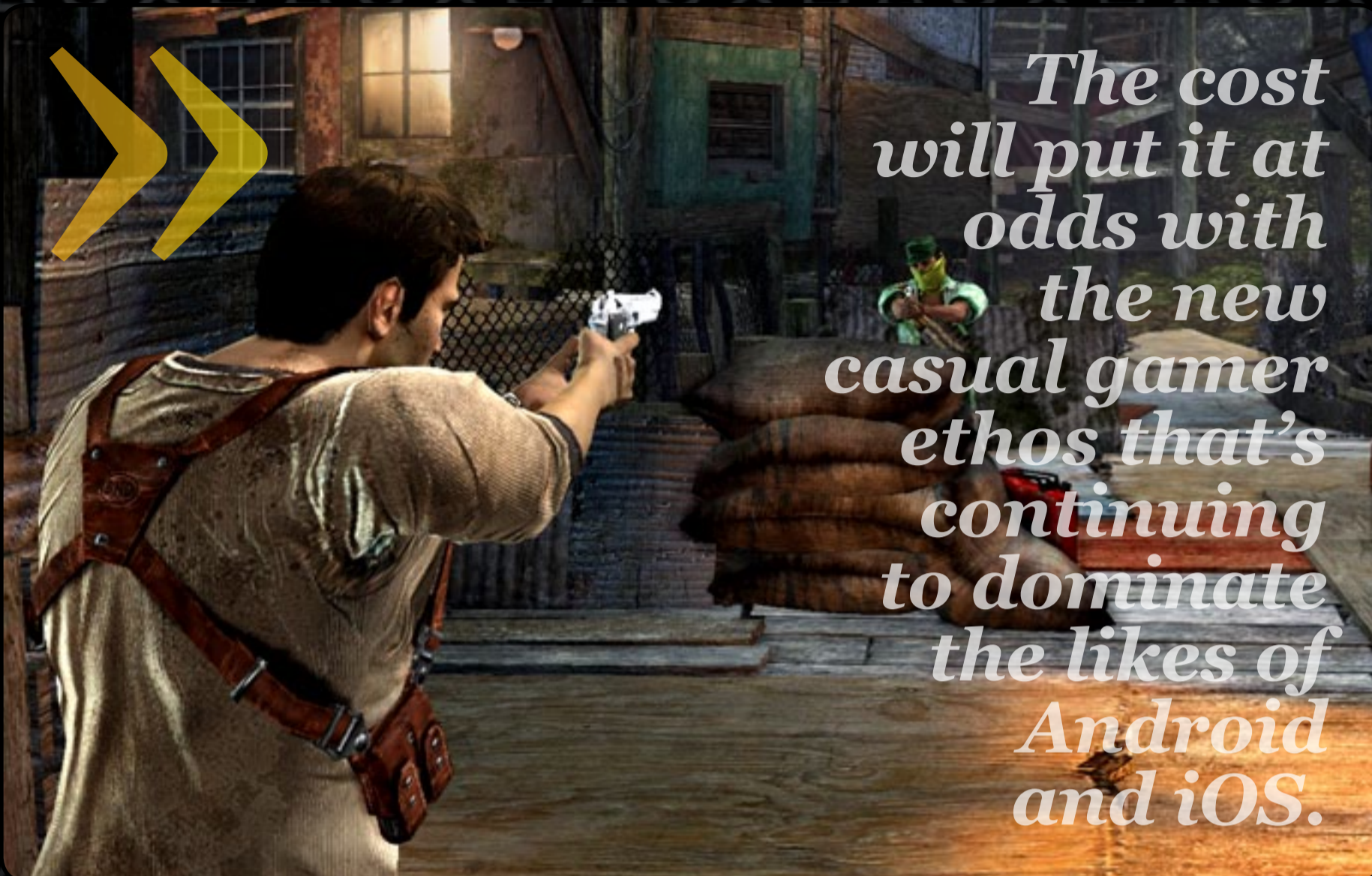


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The cost will put it at odds with the new casual gamer ethos that's continuing to dominate the likes of Android and iOS.

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A New Year and a New CES Are Upon Us

Editor's Letter

There's a new year at our door and the 2012 Consumer Electronics Show is knocking to come in. As I write this I am on my way to Nevada, knowing full well that what happens in Vegas stays in Vegas — yet somehow I always wind up coming home with a nasty cold. That isn't exactly something I look forward to but it is just part of the experience, an experience that you, dear reader, will thankfully not have to share with those of us who will be there.

However, we will be working tirelessly every day to deliver a taste of everything *else* that we do, starting with a full studio on the show floor itself. From there we'll be bringing you dozens of live broadcasts, including interviews with tech personalities and demos of hot products. They'll all be streaming as they happen, but, if you can't be at your browser all day long, we'll have them re-hosted and playable whenever you can get back to our URL.

And, of course, we haven't forgotten about Distro. We'll have special editions produced right from the floor in Las Vegas, pushed out over that city's (especially bright) fiber chan-



nels right onto your device. So, even if you like to read things at a somewhat more leisurely pace, you'll still be up to speed.

But that's all to come. Right now we're here to talk about the first week in news in this

new year, which got off to a late start for anyone still using an iOS 4.2.1 device, as alarms were non-functional. The same bug that made people late for work last year on January 1st and 2nd reared its sleepy head again in 2012. The solution, of course, is to update, but iPhone 3G owners actually can't update past 4.2.1, meaning now would be a good time to start looking for alternative means of awakening yourself ahead of next January.

Google's Andy Rubin, meanwhile, rang in the new year by celebrating 3.7 million Android device activations on December 25th and 26th. That is, of course, quite healthy and, cross-referencing that with a figure of 6.8 million Android and iOS devices activated on December 25th, it's safe to say that Android is holding its own.

Microsoft, meanwhile, in need of its own number to trumpet announced



We'll leave it as a reader exercise to make up your own jokes about the trouble of accepting payment from dubious sellers.

it has received 50,000 submissions to the Windows Phone Marketplace — though the number of apps actually ready for download in the US of A sits at a slightly lower 42,655. 17,000 of those were submitted in the last 90 days, an acceleration that I think will continue.

Verizon suffered another embarrassing LTE data outage that had many subscribers mumbling profanity while enabling and disabling data and rebooting their phones before finally getting online through another device to confirm the network was down — though perhaps that was just me. Anyhow, the company indicated that 3G data, voice and texting were not affected, but my LTE device would not connect with any number of Gs, and many others online reported the very same issue.


If that weren't bad enough, Verizon went through the wringer again for a plan to charge a \$2 "convenience fee" for anyone who would have the shocking gall to make a

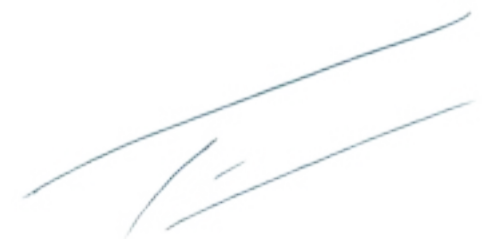
payment online. Mailing in a check, meanwhile, would be totally free. Perplexing, I know, but don't bother trying to figure that one out, as the company quickly turned-tail and pledged to eliminate the fee.

Yahoo! got a new CEO, with PayPal's Scott Thompson the latest to try to maintain a seat at the head of that company. We'll leave it as a reader exercise to make up your own jokes about the trouble of accepting payment from dubious sellers. Kodak, meanwhile, readied to file for Chapter 11, something of a sad state of affairs for anybody with fond memories of the company. Those younger than age 25, meanwhile, may continue wondering why everyone is so broken up about the manufacturer of all those crummy digital cameras at Walmart.

In this issue of Distro we have three reviews for you: Brad Molen's take on the Pantech Pocket, Michael Gorman's evaluation of the Samsung Series 7 Chronos and Mat Smith's English analysis of the

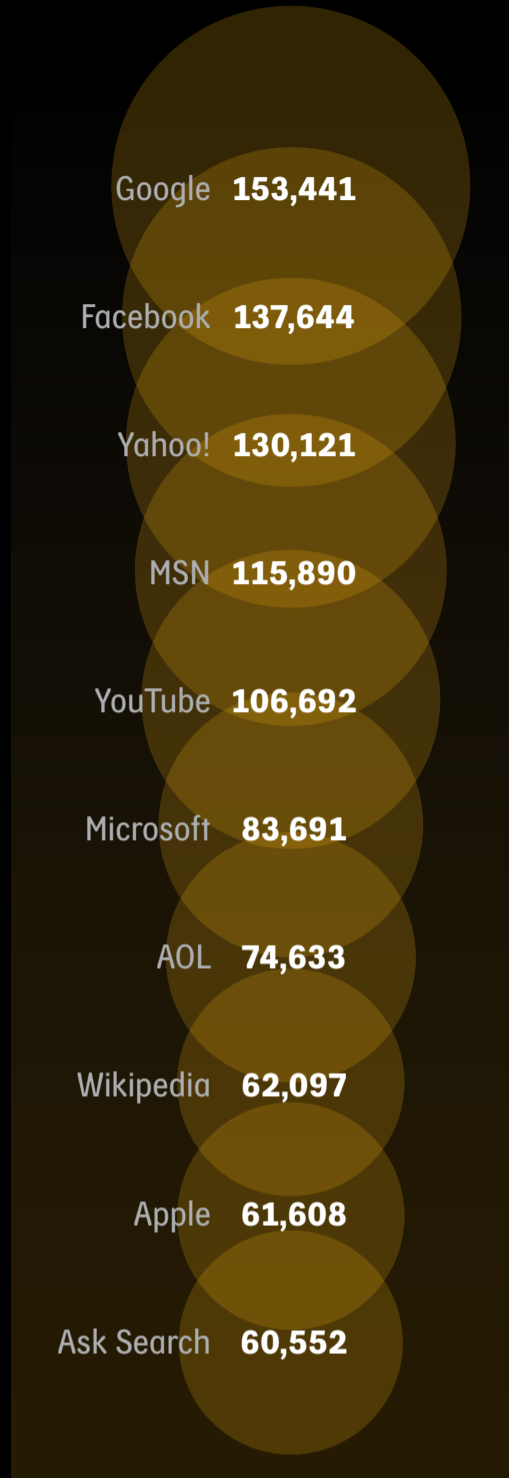
Japanese PlayStation Vita. Don is back with another batch of recommended readings for you, Ross Rubin brings us the "The Three D's of CES TV," and, if you haven't had enough of me, you can read my opinions on a relatively simple and potentially profitable way for the FAA to approve devices for use in-flight. As a man who is presently sitting in an airport terminal waiting to board a flight to Las Vegas, I'm wishing more than ever this would come to pass.

Regardless of whether you're in coach, first or living room class I hope you'll enjoy this issue of Distro. Whatever you do, rest up this weekend, because we have a lot of news and excitement coming from CES next week. 

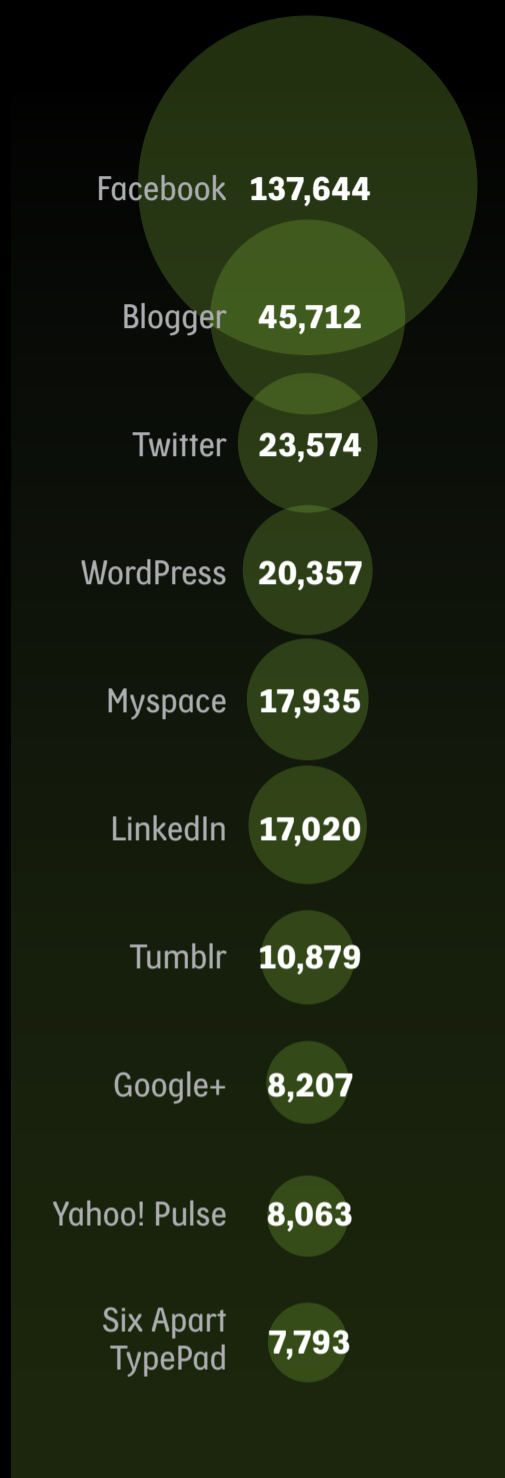


TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

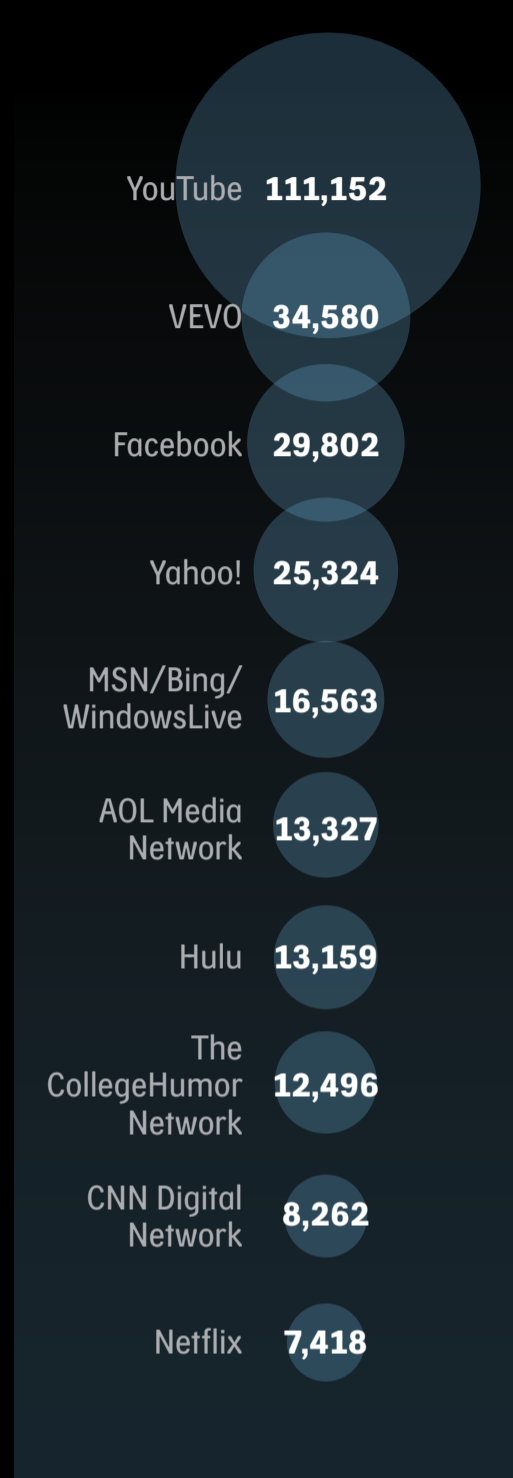
AVERAGE NUMBER OF UNIQUE VISITORS PER MONTH IN MILLIONS



Top Web Brands



Top Social Networks & Blogs



Top Sites for Video

Topping Nielsen's 'Tops of 2011'

Those perpetual rankers over at Nielsen unveiled their "Tops of 2011" list this week, revealing the most popular brands and products across all manner of categories. There's nothing particularly shocking over on the digital side of things — Google topped the list of Top US Web Brands, followed by Facebook. Perhaps a bit more surprisingly, Yahoo managed to hold its own in 2011, rounding out the top three. Over on the smartphone side, Apple came out on top with a 29 percent marketshare in data pulled from August to October 2011, followed by HTC. Despite a fairly tough year, RIM managed the number three spot. On the social side, Facebook scored number one, followed by Blogger and Twitter, while some site called "YouTube" was ranked number one in video. — *Brian Heater*

The Weekly Stat

THE THREE D'S OF CES TV

Switched On



BY ROSS RUBIN

The walls of Las Vegas casinos — devoid of clocks and windows — form chambers in which time loses its mastery over the existence of those who dwell within them. So is it too for the products on display at CES, which run the gamut from things currently in stores to concept products that may not materialize for years, if ever. ¶ Nonetheless, with Mobile World Congress and the CTIA Wireless show still vying for the attention of handset introductions and Apple and Microsoft relying more on their own events for major PC OS announcements, television remains a CES staple, with nearly all major US brands having a presence on the show floor or off-site. At CES 2012, one can surely still expect a lot of focus on 3D television. Increasingly, though, three other D's are coming to represent the direction of television.

DEFINED

For a few years now, companies have shown off prototypes of “4K” or ultra-high definition televisions that quadruple the resolution of today’s 1080p variations, continuing the old pattern of migrating technolo-

gies from the cinema to the home. Beyond the question of price, which it is too early to tackle, these sets raise several issues. First is the addressable market for such sets. As we’ve seen with 1080p, the benefit of higher resolution becomes more evident on larger sets. Most manufacturers have been showing 4K on sets that are 80 inches or larger. This represents a tiny fraction of the TVs in the US and an even smaller fraction outside it. It could just be that our TVs are finally starting to outgrow our homes.

Next, of course, is the old issue of content that once held back HDTV and now dogs 3D, although a new generation of movies de-

Ross Rubin (@rossrubin) is executive director and principal analyst of the NPD Connected Intelligence service at The NPD Group. Views expressed in *Switched On* are his own.

veloped for 4K cinema projectors can help with that. But this raises the third question: How do you distribute them? There has been no “Blu-ray 4K” announced on the horizon and the public is weary from the last disc format migration.

DECOUPLED

With broadcasters in many cases still stuck on 720p for over the air video and cable systems strapped for capacity, the answer would be broadband. But streaming 4K programming would overwhelm consumer broadband connections so movies would have to be delivered to a hard drive. That sounds a bit like the original premise of the Vudu box, which used a peer network to create a BitTorrent-like system for broadband HD distribution. Vudu gave up on that idea, and ultimately the boxes altogether, becoming a video service provider competing with Netflix, Amazon.com and the like.


Regardless, connected TVs will be taken up a notch at CES. There have long been rumors that companies such as Apple and Sony have been plotting to take on cable companies more directly with a subscription service that offers a core of cable-like programming on demand. It is still likely too early for

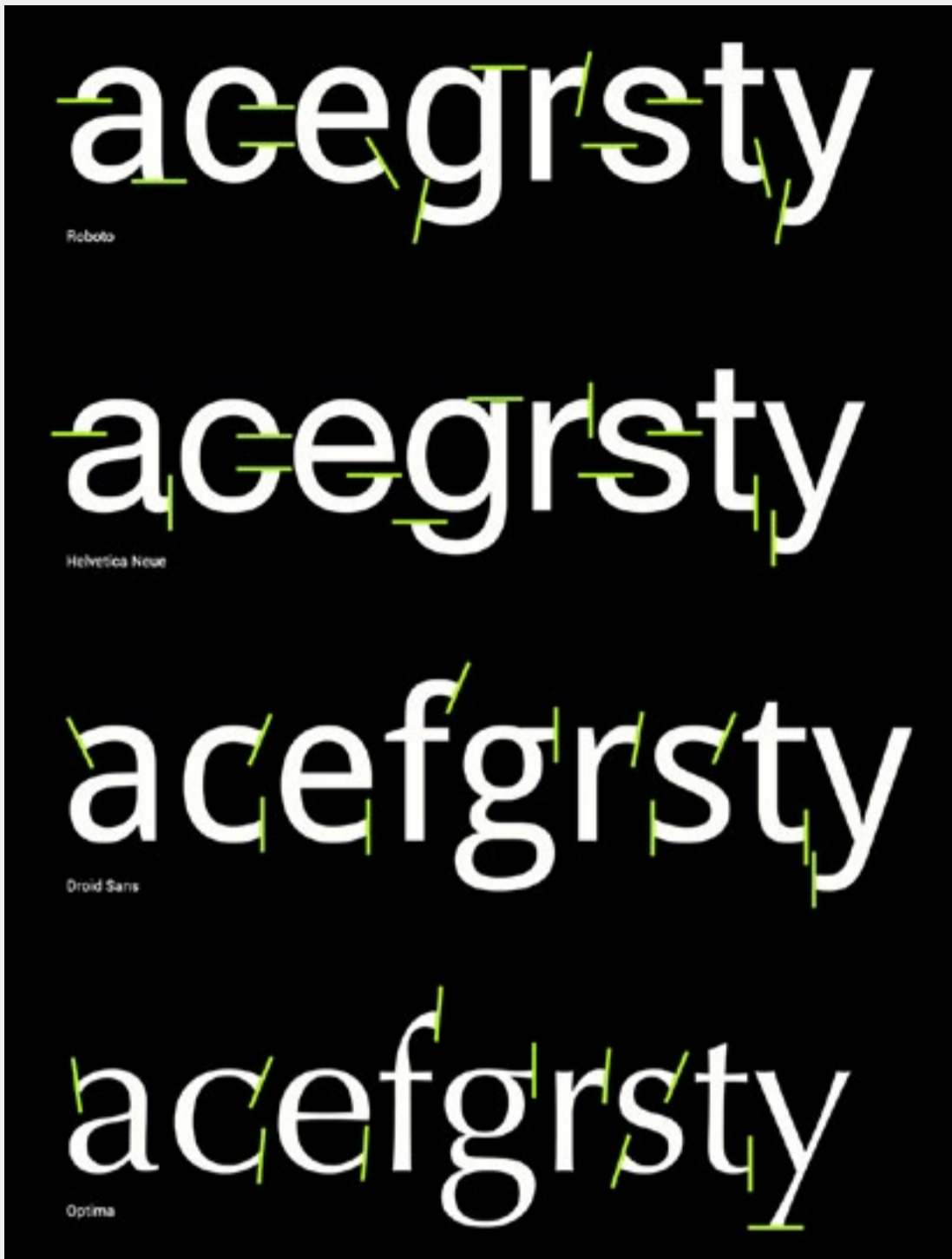
It could just be that our TVs are finally starting to outgrow our homes.

such a major move to be made effectively. Increasingly, though, connected TV is progressing from a cable augmentation to something that relies on the pipe as a primary source of programming.

DISTRIBUTED

Sometimes referred to as “multiscreen” or “stacking”, the proliferation of personal screens such as tablets

and smartphones in the living room is changing the nature of the TV watching group experience. On some level, this behavior has been going on for at least a decade as consumers have long lounged with laptops. But now, TV programmers and app developers are being more tantalized by the idea of coordinating these multiple screens for everything from driving community interaction during shows to multiscreen games like those of the forthcoming Wii U. This will be aided by a technology called Automatic Content Recognition, which has already been implemented in apps such as Umami and Yahoo’s IntoNow. In fact, multiscreen may hold the key to unlocking the power of smart TV, by embracing the very devices that stand to otherwise disrupt the controlled loop that TV manufacturers are seeking to create. 



Domo Arigato, Mr. Roboto

Few fonts in recent years have garnered as much attention as 'Roboto,' the new face of Android, and it doesn't look like folks are about to stop talking about it anytime soon.



by Glenn Fleishman
Boing Boing

Glenn Fleishman is the latest to chime in, offering this thoughtful analysis for *Boing Boing*.

AROUND THE WEB

The Heart of Bleakness



by Jason Mojica
Vice

We overlooked this incredible piece of journalism for our year-end wrap-up and just had to squeeze it in here. Between this photo-essay and the accompanying *Vice Guide to the Congo*, the *Vice* team have provided a look unlike any other into the world of so-called "conflict minerals," and where they begin before winding up in today's consumer electronics.

The Danger of an Attack on Online Piracy



by David Carr
The New York Times

There's been quite a few must-reads written about the Stop Online Piracy Act, but David Carr's piece still manages to offer a fresh and important perspective on the controversial bill and its potential consequences (intended and otherwise).

A Very Irish Box of Tricks



by Fintan O'Toole
The Irish Times

Fintan O'Toole looks at the impact television has had in Ireland on the occasion of its 50th anniversary in the country, and provides a broader examination of the effect technology can have on culture in the process.

The Un-Internet



by Dave Winer
Scripting News

Is the tech world an "infinite loop"? Dave Winer says so, and explains why the open internet always seems to prevail over efforts to control it.

Recommended Reading



Pantech Pocket

The Pantech Pocket is a unique smartphone with an intriguing design, but ultimately falls short in performance, UI and comfort.

BY BRAD MOLEN

Hundreds of smartphones of all shapes, sizes and colors pass through the doors of Engadget HQ every year, so it's natural for a few oddball devices with crazy form factors to end up in our hands from time to time. The Motorola Flipout, LG DoublePlay, Kyocera Echo and Samsung DoubleTime are all instances of carriers trying something new, seeing what sticks. Of course, pushing out a phone with an unproven form factor is a huge gamble for a mobile provider, and as a result they only ship to stores

in low volume and rarely receive any kind of marketing campaign at launch. Indeed, the vast majority of these types of phones are low-end devices aimed at young adults and first-time smartphone buyers, but we still find it adventurous to take a break from the monotony of black slabs and try out something completely different.

The Pantech Pocket is definitely unique — not because it flips or slides a weird way or because it has two and a half screens, but because its 4-inch dis-

play, whose 4:3 aspect ratio promises 20 percent more horizontal real estate. Did AT&T's gamble on the display pay off? Is it worth the \$50 that AT&T demands with a two-year commitment attached? It's time to find out.

Hardware


Is it difficult to imagine a 4-inch phone that's wider than the 4.65-inch Samsung Galaxy Nexus and the 4.7-inch HTC Titan? Guess what — now you no longer have to, because it's a reality. At 3.07 inches (78mm) wide, the Pantech Pocket wins the title against the Titan by a full 7mm and is skinnier than the 5.3-inch Samsung Galaxy Note by a whole 5mm. But what more can you expect when the handset is as close to a square as you'll likely ever see?

Indeed, the Pantech Pocket — which, ironically, is the least likely smartphone to actually *fit* into your pocket — sports a 4-inch SVGA (800 x 600) display and boasts an aspect ratio of 4:3. It's bright enough, but isn't as color-saturated as an AMOLED panel. The premise behind this screen is that you'll have a better app viewing experience, a wider keyboard and more screen real estate for reading e-books and surfing the web. We found that the Pocket was great for digesting content, but unfortunately this comes at the expense of comfort. Holding the phone was an incredibly awkward experience in almost every way, whether we were making a call or just trying to maintain a solid grip on the device. And we'll warn you up front: putting the handset

up to your ear invokes the feeling that it's trying to eat your entire face.

The only method in which we could hold the phone *somewhat* comfortably is by moving our index finger to the top of the phone, the remaining fingers cradling on the opposite side.

Fortunately, the Pocket isn't a heavy handset, at 4.66 ounces (132g). With a depth of 0.44 inches (11.3mm), it's not the thinnest either, thanks to the device's rubberized build (though we didn't find this to be a lingering concern



Putting the handset up to your ear invokes the feeling that it's trying to eat your entire face.

when handling the phone). We could tell that the handset exudes a solid look and feel, and for good reason: Pantech told us it's made of "a non-crystalline thermoplastic that offers high quality heat resistance, good transparency and high-impact strength and other physical and mechanical properties." In other words, it's going to be a bit more durable than your standard phone. Don't confuse durable with indestructible, though: this isn't a phone you'll want to throw against the wall or onto the concrete, if you can help it. It feels like it can hold up to a bit more pressure, but it's not military-certified and is still vulnerable to abuse.



It is, however, much more likely to hold up to normal wear and tear — as well as the occasional drop — than your average phone.

You can see the thermoplastic lining the sides and back of the Pocket, and it even curls up onto the front of the device as well. Instead of laying flush with the screen, the edges bubble up just a tiny bit above it, which in theory adds a little extra protection to that massive display just in case you drop the phone at just the right angle.

Also on the front are the usual four navigation buttons, manifested as hardware keys instead of capacitive controls. These buttons are tall enough to come up just barely above the bottom rubberized edge, which allows for easy pressing. One button that doesn't, however, is the tiny power / screen lock on the top left of the phone. Its small size and prominence already offer a difficult target for our fingers, but that unpleasantness is magnified when we hold the phone in our left hand; as awkward as it already is to grip our phone, it's compounded as we attempt to unnaturally stretch our index fingers

even further to the left. If you normally hold handsets in your right hand, however, you'll be just fine.

Accompanying the power button on the top is the 3.5mm headphone jack, located just to its right. The remainder of the Pocket's exterior is quite minimalistic; only a micro-USB port sits on the right side of the phone, while just a volume rocker takes up space on its left side. The back only offers a camera lens poking out just above the textured battery cover and a small speaker grille to its right. Taking the battery cover off reveals the Pocket's 1,650mAh juice-pack, a 2GB microSD card (which can be swapped out with any size up to 32GB) and a microSIM — made popular with the iPhone 4 and 4S. It looks like the smaller SIM cards are finally expanding out to other phones in AT&T's lineup.

The Pocket uses quad-band GSM / EDGE (850 / 900 / 1800 / 1900) and tri-band HSPA+ (850 / 1900 / 2100), capable of hitting speeds up to a the-

It claims a resolution of 720p HD, but the quality of our movies — both in MPEG4 and H.264 — didn't seem to match that claim.

oretical max of 14.4Mbps. We were happy to see that AT&T left the “4G” moniker out of the title this time — it seems as though the carrier’s gradually getting over its excessive use of the term (in name, at least).

Camera

The Pocket uses a 5MP rear shooter but doesn’t offer a LED flash and lacks a hardware shutter button and front-facing cam. But that’s just the beginning of our concerns. The camera app takes a good five seconds to load and shutter lag lasts roughly four seconds to allow for autofocus — even worse, you need to hold the phone perfectly still the entire time or the image will end up blurry. There are no tap-to-focus or continual focus options, and there’s no way to lock in exposure or drag the focus box around to various parts of the screen. This means there are no workarounds for shutter lag, and the camera is simply useless when it comes to grabbing quick snaps. Once you’ve finally succeeded in getting the shot you want, it’s displayed in eternal playback mode and can’t take

another image until you physically hit the back button. If there’s a way to turn this off somewhere, we have yet to find it in the incredibly limited settings menu offered for the Pocket’s camera.

The white balance is also off, as colors simply appear flat and washed out in most cases; there were a few circumstances, such as outdoors, in which we could actually pull off a pretty decent image, but the end result is inconsistent at best. Images taken indoors typically appear muddy in detail and low-light photos completely lack crispness. And there’s very few settings to help you in special situations. Macro focus, zoom and exposure are present, as well as a few basic white balance settings (daylight, cloudy, fluorescent and tungsten) and filters (mono, sepia and negative). It’s missing, however, several adjustments you would find commonplace on a Samsung or HTC device, such as ISO, metering, anti-shake and panorama mode, to name a few. We understand that we’re being incredibly critical for a lower-end device, but we’ve used plenty of budget phones (the Samsung Stratosphere comes to mind) that offer 5MP cameras with higher quality and more customization options.

We came to the same relative conclusion about the Pocket’s video capture.

Motion was incredibly choppy and the movies lacked a significant amount of detail. Believe it or not, it’s difficult to recommend the Pocket’s camcorder over the Stratosphere’s 480p SD max resolution.

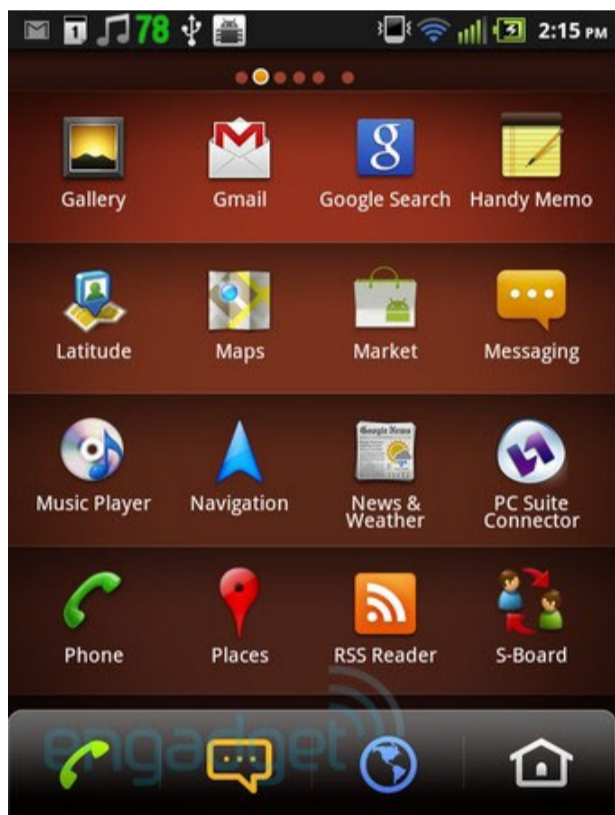


Software

The Pocket comes with Android 2.3.4 loaded with Pantech's proprietary skin on top. The UI has a personality unique to the Pocket, but has a lot of similarities to the Crossover and Breakout before it. This particular UI, much like the one seen on the aforementioned devices, doesn't really bring anything new or innovative to the table, and it looks and feels like a cheapened version of Touch-Wiz or Sense.

The first thing you'll notice when turning the Pocket on is the lock screen, which features direct shortcuts to five different apps on the phone à la Sense. This is by far the most we've seen offered on an Android OEM's skin to date, for which we're intensely grateful, but here's the problem: they aren't customizable. Oh, and a shortcut to the camera app is nowhere to be found. Perhaps we're being too picky here, because we at least have fast access to messaging, music player, email (the app which contains every email account that's not Gmail, that is), your call logs and the browser. All of these are wonderful to include on the home screen, of course, but we prefer choice. There are plenty of apps we'd like to get to as quickly as possible — camera being by far the most important, given our need to capture precious moments as they happen — and we have a hard time believing that it's terribly difficult to add in the capability.

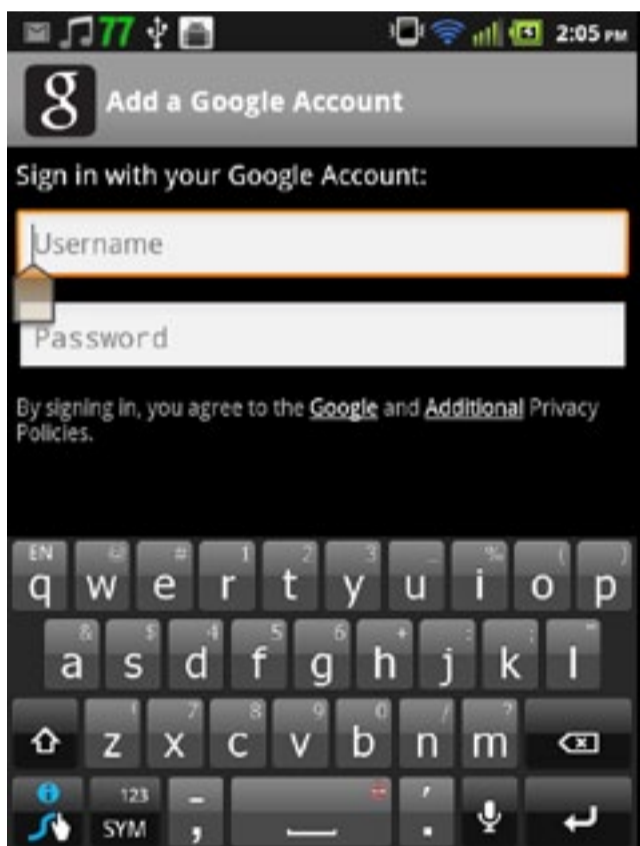
Also included with Pantech's UI is Themes, a feature that can be found on Sense, MotoBlur and plenty of other



proprietary skins such as SprintID. Just like on the others, Themes offers various customizable sets of home panels, each one attempting to fit a different environment or lifestyle. If you're leaving work to go out for a night on the town, you can change your theme to a set of home panels, apps and widgets that you will theoretically find far more useful than those spreadsheet editors and PDF

haps a different wallpaper and two or three different widgets scattered about the set of seven panels.

It's in the app tray, though, that you'll find Pantech's most creative flourish. You'll still be greeted by the same 4x4 grid of app icons, but you can choose a different background to add a little "spice" to your experience. Some backgrounds cleverly make each row look



Two-handed typing on the keyboard was good, but it's a completely different story when only using one hand.

readers. In addition to your own user-defined theme, you can choose between Active, Social, Work, Play and Favorite. Sadly, Pantech didn't get much further than this point in the development process, as it doesn't appear like there was any thought put into what each theme contains. No matter which theme you choose, you'll be greeted by the same apps on the main front screen, with per-

like shelves (which looks eerily similar to stuff we've seen come out of Apple's camp, such as Newsstand). It's different and looks kind of cool, but it's also completely unnecessary and likely hinders the phone's performance. We should note, however, that you can avoid these by simply choosing the all-black background.

Bloatware, as is typical with carrier-

branded phones, runs amok on the Pocket. Along with the standard pre-installed Android apps (or Pantech's own version of each, anyways) comes a few proprietary Pantech apps as well as AT&T's suite. Games weren't a focus here, as evidenced by the fact that there aren't any that come on the device. Amazon Kindle, AT&T FamilyMap, AT&T Code Scanner, Live TV, Movies, myAT&T and YP are all uninstalleable without needing to root your phone, but everything else on there remains stuck. Fortunately, Pantech threw in the ability to rearrange icons in the app tray so all of those useless apps you can't stand can at least be put to the end of your list so they're not getting in the way, but we were disappointed by the lack of folders within the tray in order to just hide these apps from plain view forever and ever.

Pantech threw in an app called PC Connector Suite, which allows you to access your phone from your computer using either a USB connection or the same WiFi network. If you're unable to find the desktop client for the Pantech suite, head over to the support page for the Pocket and you'll find it there as a downloadable program.

Another disappointment is the inability to change out the bottom row of static icons which features the phone app, messaging and browser. And adding insult to injury, AT&T has publicly admitted (though downloading a detector app would tell us the same thing anyways) that the Pocket is currently riddled with CarrierIQ.

One perk of having such a large screen was that we had no difficulty typing with two hands on the virtual keyboard in either portrait or landscape mode. Using one hand, however, proved to be a bit more of a challenge in both modes. We expect to have a hard time doing one-handed typing in landscape mode, but it gets frustrating when we have to outstretch our thumbs and risk straining them just to hit a letter on the opposite side of the keyboard. By default you're given two virtual options: the stock Android 'board and the ever-popular Swype. Either one will do the job just fine, and your personal preference should easily steer you towards one or the other.

As for that frozen, dairy-flavored elephant in the room, it's unclear if the Pocket will be the lucky recipient of an upgrade to Android 4.0 — also known as Ice Cream Sandwich — as the company has yet to confirm either way.

Performance and Battery Life

The news doesn't get a whole lot better with the phone's performance. Before we go any farther in our assessment, we'll quickly point out that the Pocket is a budget device that's likely geared toward first-time smartphone users or young adults, and is not meant to be the fastest phone on the planet. So if you fall into one of those categories and only need your handset to do basic tasks, you're likely not going to see (or care) what all of the fuss is about.

That said, the Pocket doesn't feel like it's using a 1GHz single-core CPU with

	POCKET	BREAKOUT	DOUBLEPLAY	STRATOSPHERE
Quadrant	1,341	1,323	1,361	1,691
Linpack ¹ (MFLOPS)	40.96	38.5	36.6	17.75
Neocore ¹ (fps)	50.6	58.3	58.9	59.6
NenaMark 1 ¹ (fps)	31	33.7	57.1	50.4
SunSpider 0.9.1 ² (ms)	3,304	4,001	3,824	6,029
Vellamo ¹	744	700		573

¹Higher the score the better.

²Lower the score the better.

512MB of RAM. We would've guessed it was running on a 600 or 800MHz CPU instead. It's not dreadfully slow, but don't expect a zippy performance from it when handling multiple tasks. We saw some delays when swiping from one screen to the next, and internet browsing has a noticeable lag when scrolling up and down on a large site and even when pinch-zooming. As mentioned earlier, the camera itself exhibits a hefty amount of lag — not just in processing the image, but even opening up the application takes a significant amount of time.

While we don't judge solely on benchmark scores, the ones we ran on the Pocket were all over the place. Its Quadrant score stuttered in the 1,300 range, but the phone had an above-average Vellamo and SunSpider score, and Nenamark and Neocore were both significantly lower than similarly-spec'd models.

In addition to feeling like you're holding a tablet to your face every time you make a call, the actual voice quality isn't top-notch either. While nobody complained about our mic or the way we sounded, the voice on the other end of the line would often be tinny or slightly

distorted. Fortunately, we rarely ever had to ask the other person to repeat themselves, but the Pocket isn't the best when you're looking for noise-free calls.


The volume on the speakerphone and media player was workable in a quiet room while playing at an average level, but it was too soft to play in a louder environment; the sound was always distorted and the entire battery cover buzzed and vibrated whenever the meter was cranked up to a maximum.

The battery on the Pocket is rated for six hours of constant talk time, and when doing our standard video run-down tests, it lasted for six hours and fifteen minutes straight before dying. We were easily able to get through a full day of moderate use with roughly ten to 15 percent left over, but you'll want to charge it up every night while you're asleep.

Lastly, on multiple occasions we locked the screen only to discover a few minutes later that the phone was in eternal sleep mode and would not wake up without a hard battery pull. This was most common when we were outdoors, leading us to wonder if the Pocket just isn't able to handle certain weather conditions very well.

Wrap-Up

We want companies to be creative and innovative. We often find ourselves rooting for the little guys that are willing to go out on a limb and try something new and clever, even if there's little chance of succeeding. After all, you never know if something's going to be a hit until you give it a shot. While we're disappointed that the Pantech Pocket didn't work out quite the same way we'd hoped, we applaud the possibilities being explored and would love to continue seeing new and creative ideas to break up the monotony of the same 'ol slate phones that dominate the industry today.

Here's the problem: it's so risky to put out a device like this that neither the carrier nor OEM want to invest much money in executing the concept to its fullest. Because of this, phones that fall under this category typically aren't made well, don't sell well and poof — goodbye innovation. The Pocket could have been a powerful handset with terrific performance, but was instead regarded as an experiment. A phone like the Pocket may be perfect for a small slice of users who have large hands, need a basic smartphone that does simple tasks and offers a larger viewing experience, but it's not going to tempt anyone else. 

Brad is a mobile editor at Engadget, an outdoorsy guy, and a lover of eccentric New Wave and electro. Singer and beatboxer.



BOTTOMLINE

Pantech Pocket

\$50

PROS

- Durable design
- Good battery life
- Wide screen is ideal for consuming

CONS

- Subpar video and still photos
- Feels slower than a 1GHz CPU should
- Uncomfortable to hold

» The Pantech Pocket is a unique smartphone with an intriguing design, but ultimately falls short in performance, UI and comfort.



Samsung Series 7 Chronos

The Series 7 Chronos' matte screen, backlit keyboard and prodigious battery life make for a compelling package. But, a glitchy touchpad and middling build quality are holding it back.

BY MICHAEL GORMAN

Thin and light may be the name of the game for many when it comes to mobile computing, but there's still plenty of folks who need a full-featured portable machine. Samsung's Series 7 Chronos is just such a PC, packing an optical drive, numpad and discrete graphics beneath a brushed aluminum façade. While it may look like just another MacBook Pro clone running Windows 7, this Sammy's got some surprises up its sleeve that set it apart from Apple's offering (aside from

a \$1,000 price difference) and other laptops running Redmond's OS, for that matter. To find out what the Series 7 brings to the table and how it stacks up against its competition, you'll have to read on ahead. Let's get to it, shall we?

Look and Feel

We liked what we saw when we first laid eyes on Samsung's Series 7 earlier this year, and little has changed since then. Upon pulling the Samsung out of



its packaging, the 15-inch laptop cuts a handsome, if understated figure, with a beautiful layer of brushed aluminum covering the lid, keyboard deck and bezel. It's a darker shade than the aluminum we're accustomed to, the pewter color giving the impression that the Chronos is wrapped in the stuff usually seen covering high-end kitchen appliances and Doc Brown's favorite time machine. We think it's an appealing package, particularly since you get the luxe appearance of stainless steel without the weight gain.

Despite its solid construction, we do have a few niggles regarding its build quality.

There's only a modicum of branding adorning the machine, with a textured silver Samsung badge on the lid, a painted logo on the bezel beneath the display and unsightly ATI, Intel and Windows 7 stickers affixed just south of the keyboard. A chrome power button resides above the right side of the grid and a 1.3 megapixel webcam's centered above the screen. While the topside of the Series 7 is all posh metal, the underside and edges are, alas, made of comparatively low-rent plastic.

The Chronos has a slot-loading DVD-RW drive and a single USB 2.0 port on its right hand side. Moving around to the left edge, you'll find mini-VGA, HDMI and dual USB 3.0 ports along with a Kensington lock, 3.5mm headphone / microphone jack and a hinged RJ45 connector. The Ethernet port is hinged to accommodate a full-sized Ethernet connector despite the laptop's skinny profile (caused by a beveled underside meant to give the laptop a more svelte



appearance). An SD slot is on the front of the machine, and the bottom sports a woofer speaker grille, cooling vents and a removable panel that provides easy access to the machine's memory.

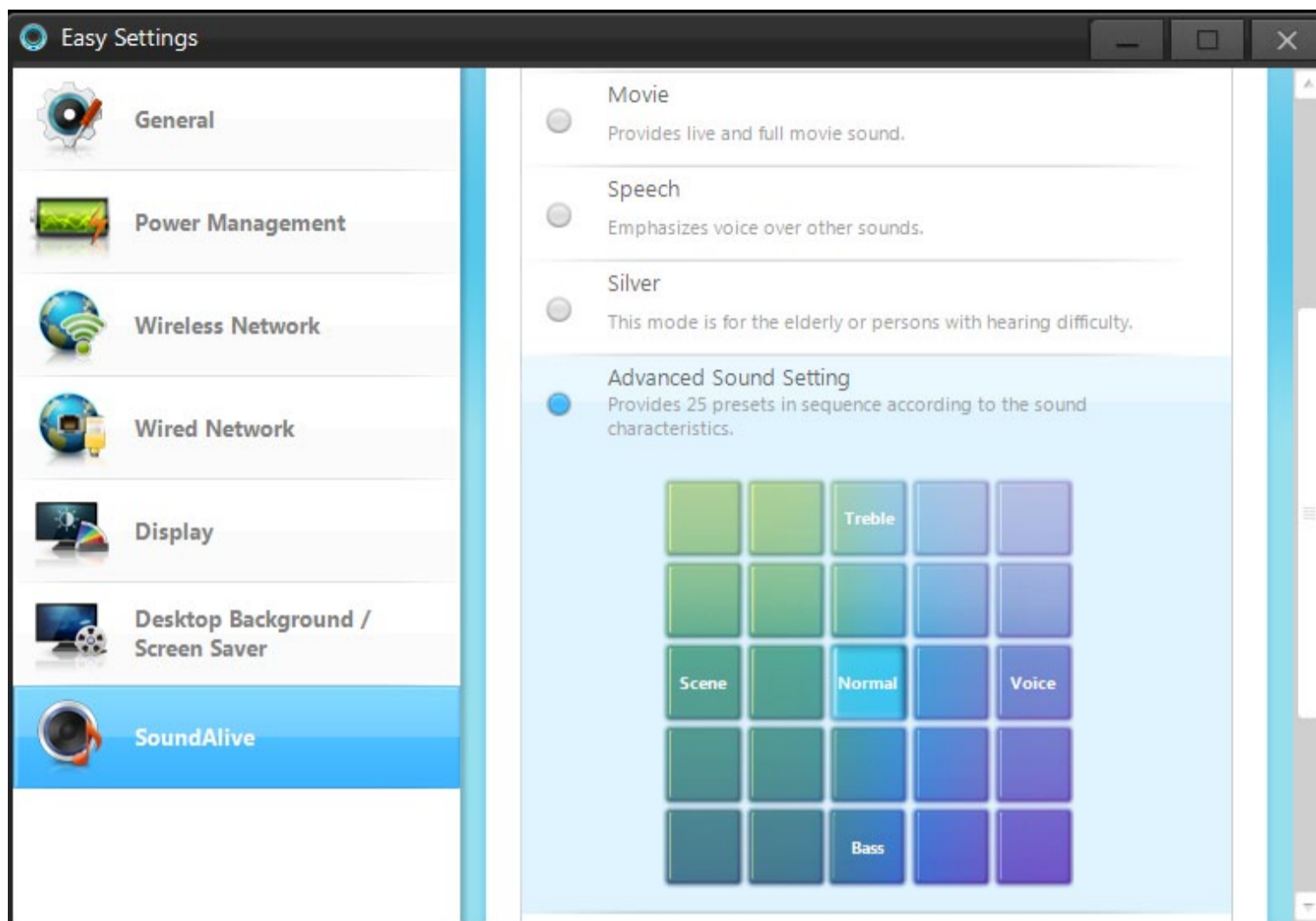
Overall, the Series 7 Chronos is a sturdy laptop, with zero flex in its keyboard deck and a robust screen hinge. It also sports a slim silhouette, checking in at .94 inches (24mm) thin, which is .03 inches slimmer than Sony's svelte VAIO S and at 5.05 pounds (2.29kg), it's lighter than the 15-inch competition from Cupertino that weighs 5.6 pounds (2.54kg), but heavier than the aforementioned 4.4 pound (2kg) Sony. Despite its solid construction, we do have a few niggles regarding its build quality. For one, the laptop's skin is made of several separate sheets of metal and plastic. This isn't an issue in and of itself, but the pieces aren't fitted together as well as we'd like. There are small gaps on either edge where the display bezel meets the lid, plus the metal keyboard deck doesn't fit flush with the plastic bottom, resulting in a protruding ridge of plastic around the palm rest. Hardly a huge deal, but the fit and

finish are somewhat disappointing at this \$1000+ price point, and it doesn't compare favorably to the clean look of a unibody chassis, either.

Keyboard and Trackpad

The Series 7 has a pretty nice grid of backlit buttons, and Samsung managed to fit in a number pad as well. Typing on the Chronos was a joy, as the chiclets are located in a recessed channel in the deck to allow for a nice, long throw with each press, and the backlit keys were easily found by our touch-typing fingers. Our one nit to pick with the grid: a softer finish akin to the Lenovo U300S' keys would've provided a more pleasant tactile typing experience.

Our time with the trackpad was a less pleasant experience, however. It's a clickpad unit made by Elan, and it suffers from many of the foibles that seem to plague many of the Windows 7 breed. Left clicks often registered as right clicks, while our attempts to move the cursor were often taken for double clicks — resulting in dragging windows or highlighting text unintentionally. And while typing, the cursor would ran-



domly hop elsewhere in the document, a problem fixed only by hitting F5 to turn off the trackpad. We had better luck with multitouch gestures, as two-fingered scrolling was fairly reliable and smooth, three-fingered swipes for page up and page down worked well and four-finger swipes to bring up a cover flow-esque carousel of our open windows did too. Pinch-to-zoom was functional, but so choppy in its operation that getting to scale properly was a chore.

Display and Sound

One of the real selling points with the Series 7 Chronos is its 15.6-inch, 300-nit, 1600 x 900 display, which gives multitaskers plenty of screen real estate to play with. The resolution leaves something to be desired, however, when com-

pared to the 1080p panels found in the XPS 15z and VAIO S. Samsung has done consumers a solid by using a matte-finish LCD (hallelujah!), so screen glare is never an issue, and the rail-thin bezel surrounding it is the skinniest thing this side of the Shuriken display in Dell's XPS 14z. Viewing angles are mediocre, as the LCD washes out considerably when moving the screen towards you, and images turn to negatives and whites turn a sickly yellowish hue when moved away. Side-to-side viewability is quite good, however, and provides near 180-degree viewing.

Audio comes courtesy of two 1.5-watt speakers and a woofer — though we think Samsung's taken some liberties with that description given the laptop's limited bass range. Sound reproduction

BENCHMARK	PCMARK VANTAGE	3DMARK06	BATTERY LIFE
Samsung Series 7 (2.2GHz Core i7-2675QM, Intel HD 3000 / AMD Radeon HD 6750M 1GB)	7,824	8,891	5:47
Dell XPS 15z (2.7GHz Core i7-2620M, NVIDIA GeForce GT525M)	8,023	7,317	3:41 (Optimus disabled) 4:26 (Optimus enabled)
Lenovo IdeaPad U400 (2.4GHz Core i5-2430M, Intel HD 3000 / AMD Radeon HD 6470M 1GB)	7,281	4,463	4:18
Dell XPS 14z (2.8GHz Core i7-2640M, Intel HD Graphics 3000 / NVIDIA GeForce GT520M 1GB)	7,982	5,414	4:54
HP Envy 14 (2.3GHz Core i5-2410M, Intel HD Graphics 3000 / AMD Radeon HD 6630M 1GB)	6,735	7,214	3:55
Sony VAIO S 15-inch (2.4GHz Core i5-2430M, Intel HD Graphics 3000 / AMD Radeon HD 6630M 1GB)	5,632	6,898	3:59 (stamina mode) / 8:58 (stamina mode, slice battery)
Dell Inspiron 14z (2.3GHz Core i5-2410M, Intel HD Graphics 3000)	6,177	4,079	6:37

Notes: the higher the score the better.

is decent otherwise, as the mids and highs of Freddy Mercury's lyrical stylings from "Queen on Fire: Live at the Bowl" came through clearly at every volume level. Speaker sound while watching movies was respectable too, though the audio wasn't as rich sounding as on a MacBook Pro. The Series 7 also comes with Sound Alive 3D software, which applies sound effects (read: different EQ settings) tailored for music, movies and speech along with an advanced mode to let you choose from 25 other presets as well. We fooled around with all of them and found the standard set-

ting suited our ears best.

Performance and Battery Life

For this review, we had the top-end Chronos configured with Intel's 2.2GHz Core i7 2675QM CPU with integrated HD Graphics 3000, a discrete Radeon HD 6750M GPU, 8GB of RAM, a 7200RPM 750GB HDD, plus 8GB of flash memory on the motherboard, enabling Samsung's ExpressCache technology. Sammy claims its automatic caching shaves 45 percent off normal boot up times and helps your most used applications launch up to two times faster

depending upon your PC's settings. The Chronos starts up fairly quickly, as boot times were consistently under 40 seconds. However, that time didn't change whether we had the ExpressCache feature turned on or off, so we were unable to confirm the company's claims.

In general and workday use, the Series 7 performed admirably, letting us multitask with ease — it didn't slow down even as we had multiple HD YouTube videos playing, 15 tabs open in Chrome, a chat client running and typing away on this here review. While the laptop would heat up and the fan would kick into gear while watching videos or performing graphically intense tasks, it didn't run nearly as hot or as loud as the MacBook Pro does under similar loads. Plus, there's a silent mode hotkey to turn off the fan if it gets too noisy. During regular web browsing and word processing, the laptop never heated up past lukewarm. We also played a little *Warhammer 40K Space Marine* to really put the GPU through its paces, managing 60fps while wandering around between battles, and frame rates dipping to 48fps while cutting our way through hordes of orcs.

The benchmark scores back up our snappy user experience, as the Chronos scored an impressive 8,891 on 3DMark06, though it didn't fare quite as well on PCMark Vantage.

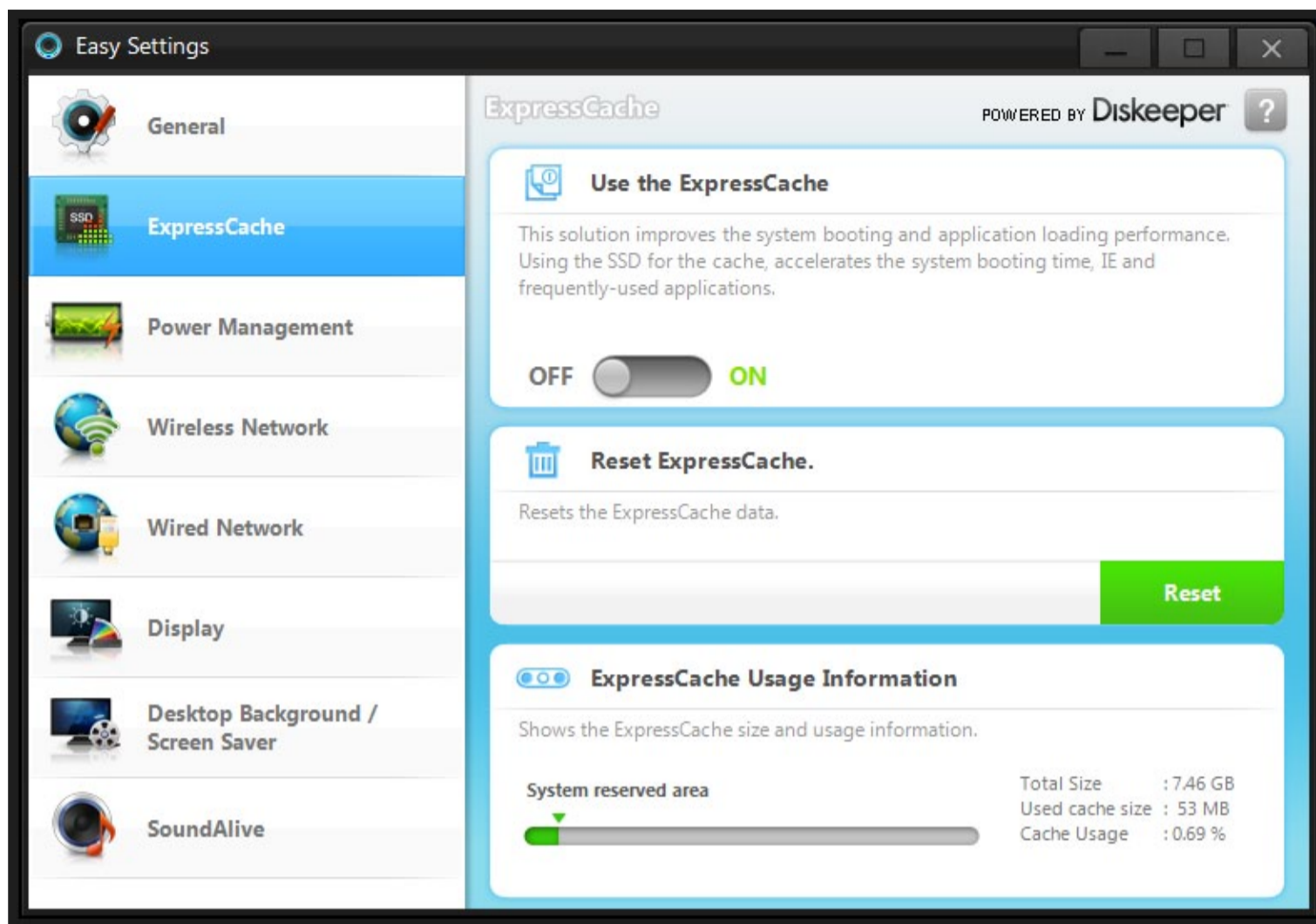
All that computing power doesn't mean meager battery life, either. In our standard rundown testing, with a video looping off the hard drive, WiFi on and screen brightness set at 65 percent, the



Series 7 managed an impressive five hours and 47 minutes — and that was with five percent of the juice left in the eight-cell lithium polymer battery. In general workday use, checking email, web surfing and word processing in Notepad, we got well over six hours out of our Series 7.

Configuration Options

As we said before, we performed our review on the high-end Chronos, but there are three other Series 7 laptops available. On the low end, \$1,000 gets you the same Core i7 2675QM CPU as our test unit, but exchanges Radeon graphics for an AMD Xeymour HD 6490 card and lacks the 8GB SSD. There's also a 14-inch model packing a Core i5 2430M CPU and Radeon HD 6490 GPU for \$1,099. Lastly, there's a \$1,149 model with identical hardware to our tester, but it comes with Windows 7 Home Premium on board (as do the other cheaper models) instead of Windows 7 Professional.



Software

The Series 7 comes with its share of preloaded bloat, though there's not an extensive amount of it. Skype, Norton Internet Security and Online Backup, Cyberlink Media Suite and YouCam software are the third-party applications on board, and Samsung's smartphone syncing software, Kies, is included as well. Easy Settings is a useful little program that lets you access your wireless networks, power management, sound and display options and other settings from one place. There's also a software launcher that populates an OSX-like app tray at the bottom of the screen. A bundle of games from WildTangent is included as well, ensuring you have plenty of time-wasting options aside from *Solitaire* and *Minesweeper*.

The Competition

Ultrabooks aren't for everyone — some folks want optical drives and discrete graphics, and fortunately, there are plenty of mainstream 14 and 15-inch laptops that fit the bill.

Dell brings a couple of XPS machines to this mid-range party, the 14z and 15z. Each has the aluminum exterior that's popular these days, but come with design flourishes (see: chrome trim and lattice-work speaker grilles) not found on the austere Samsung. Round Rock's laptops will give you similar performance to the Series 7 at a similar price, but you'll trade the Chronos' matte screen, numpad-equipped keyboard and superior battery life for a better trackpad and higher-res (but glossy) screen.

Lenovo's IdeaPad U400 is another

Chronos competitor, and comes with an identical Core i5-2430M to the 14-inch Series 7, so their performance should be similar, though the U400 lacks Samsung's SD card slot and backlit keys. The Chronos gets the nod in graphics with a slight bump in the GPU department, pushing pictures to a non-glossy higher-res screen (1600 x 900 vs. 1366 x 768). However, the U400 does have seamless construction and can be had for \$200 less.

Sony's VAIO SE packs neither the hardware punch nor the rigid build of its Korean counterpart, but its LCD panel packs more pixels and offers a Blu-ray drive. Apple's basic MacBook Pro 15 model is another entrant that appeals with a higher performance CPU, identical discrete graphics and unibody construction. But, it comes with half the RAM, a slower and smaller HDD and lower-res glossy screen in a heavier package that's \$500 more than the Series 7. HP's new Envy laptops may also give the Chronos a run for its money, but we'll have to wait until they are released to know for sure.

Wrap-Up

Samsung's Series 7 Chronos is a good, but not great laptop. It's got lengthy battery life and provides quite the hardware punch for a reasonable, if not bargain price. It's graced with restrained good looks, and has a lot of the features we love in a laptop, but its build quality lags behind (relatively) similarly specced offerings from Dell and Apple.

BOTTOMLINE

Samsung Series 7 Chronos

\$1,099+


PROS

- Great battery life
- Matte display
- Loads of connectivity in a thin profile

CONS

- Flaky touchpad
- Fit and finish leave something to be desired
- No 1080p display option

» The Series 7 Chronos' matte screen, backlit keyboard and prodigious battery life make for a compelling package. But, a glitchy touchpad and middling build quality are holding it back.

In short, we don't think you'll be disappointed should you decide to plunk down a grand or more for the Samsung, but you won't wake up thanking your lucky stars you get to use it every day, either. 

Michael Gorman is a Senior Associate Editor at Engadget, attorney, Hokie and 8-bit gaming enthusiast. He likes dogs, too.

HOW FAA-CERTIFIED GADGETS COULD IMPROVE AIR TRAVEL AND ELIMINATE THE TERRIBLE 10,000 FEET

Editorial



BY TIM STEVENS

Tim Stevens is Editor-in-chief at Engadget, a lifelong gamer, a wanna-be racer, and a born Vermonter.

If you're reading this now and have experienced the wonders of modern air travel then you have surely suffered through what I call the "Terrible 10,000 Feet." This is the period between the clunk of the cabin door closing and the bong of the cabin indicator, the chime signifying arrival of the magic altitude where "approved electronic devices" can then be used again. The first half of the worst part of the flight is then over — the latter half to commence as soon as the plane dips again below that gadget ceiling. ¶ This is the loudest part of the flight — engines throttled up, flaps and gear hanging in the breeze and scared kids doing their best to drown all that out with screams and shouts. It's exactly when you most want to use your portable music player, and exactly when you aren't allowed. We've been told this is for safety reasons, to prevent interference from the myriad devices carried by passengers, but that's never felt satisfactory to me. (Why is it okay to use those very same devices over 10,000 feet? Why can pilots use iPads but I can't?)

So many questions, but I'm not here to second-guess the people who keep me safe as I schlep myself, my roller bag and my personal item across the country yet again. I'm here to propose a very simple solution: a certification program in which manufacturers submit devices for testing and the FAA charges a (possibly hefty) fee for their approval. It could not only improve the lives of fre-

quent travelers like myself, but could also stand to provide millions in funding to the FAA, funds that could be put toward its unfortunately named Next-Gen air traffic control system. Win win?


Let's start by taking a step back. There was a time, not all that long ago, when laptops stayed snug in their bags. Those were halcyon days of fast-moving security lines staffed by friendly attendants who smelled of lilac and cinnamon. Or, that's how *I* remember them. In 2007, TSA restrictions tightened and it was decided your luggage needed to be scanned a little more closely; an unobstructed view required. So, all laptops had to come out, and those lines dragged to a crawl.

Frequent fliers yelled and, after enough complaints, "checkpoint-friendly" bags arrived. These TSA-approved cases could flip open, leaving your laptop perfectly exposed to the prying rays of a security scanner. Problem solved? Not exactly — the authorized bags tend to have compromised designs or crazy prices. Few have bothered to buy them and so they've hardly greased the wheels at JFK's many and messy bottlenecks.

Hardly a success, then, but it is a case of a safety-minded government agency making a concession for your convenience. FAA-approved devices could be seen as a similar concession, but a far more successful one if done right. Let's start by looking at the problem most cited when explaining why a given device can't be used: interference. It's debatable whether modern devices are

actually liable to interfere with an aircraft's communication, navigation or control systems, but there's no doubt that there are *some* devices out there that could interfere with *some* aircraft.

Indeed, in 2006 *Mythbusters* found unshielded cockpit instrumentation used in older aircraft could be affected by GSM cellphones. A Boeing report cites multiple cases of odd in-flight behavior caused by interference and,



There was a time, not all that long ago, when laptops didn't need to be removed from bags. Those were halcyon days of fast-moving security lines staffed by friendly attendants who smelled of lilac and cinnamon.

recently, Honeywell cockpit displays started blanking out when subjected to WiFi interference — something increasingly common as services like Gogo continue their lethargic rollouts.

Scary stuff, but all very isolated. The question is which devices affect which systems, a task that seems impossibly huge. But, look at it from another perspective and things get a little easier:



you don't need to test *every* gadget anyone could bring on a plane, just find out which avionics components are vulnerable to what sorts of interference. These are tests already performed in many cases, but what's missing is a central repository to track which frequencies and emissions levels are problematic

for which systems.

The population of such a database, perhaps done with help from the FCC, would be slow and expensive, but it would be key to the creation of a certification program that would allow us to keep on gadgeting at *any* altitude. Just like the TSA has approved certain bags

for use in security checkpoints, so too could the FAA approve certain devices.

The first and biggest component of the certification would be looking to see whether the device in question emits troubling interference within the already identified ranges, a process that could piggyback on the FCC's current testing. For an additional fee, our



Just like the TSA has approved certain bags for use in security checkpoints, so too could the FAA approve certain devices.

favorite communications commission could specifically target those known electromagnetic trouble spots and certify that a given device plays nice with all the pilot's many toys up in the cabin.

But that wouldn't be all. Additional testing would be needed to ensure the device has an easily accessible airplane mode, silencing any radios not allowed for use in-flight. Finally, it would ensure that the size and composition of any lithium or lithium-ion batteries fall within the FAA's regulations.

Since this would be a separate, optional certification, manufacturers could choose whether or not to apply.

It would also mean the FAA could charge for the service, and ask a pretty penny if it liked. Hiring a testing facility and consultants for FCC certification usually costs between \$5,000 and \$20,000, depending on the nature of the thing. It's reasonable to assume that the optional FAA interference testing would at least double this. There would also be additional costs for FAA personnel to verify those other metrics, like battery size and composition.

Overall cost to the device producer? Why not a flat \$50,000 fee to the FAA — rather expensive for upstart rapid fabricators, but, for the Amazons and Apples of the world, a drop in the bucket. Top-shelf devices would be the first approved and that "FAA Flight Certified" stamp on the box would be a strong selling point, encouraging others to get their latest and greatest devices certified — also encouraging consumers to upgrade their aging tech to something new and approved. Approved devices could be used at any time during the flight, while anyone owning anything else would have to sit patiently through the Terrible 10,000 — though it might make sense to suspend their use during the security briefing.

But what is to stop someone from using a non-approved device? Absolutely nothing — just like today. I don't know how many times I've reached into my pocket at 10,000 feet to pull out my phone, only to realize I never turned it off. More often than not I'll accidentally leave a tablet turned on in my bag and, frankly, once the flight attendants






take their seats for takeoff there's nothing stopping me from pulling out my laptop and getting to work if I really wanted to. Enforcement of the current rules lies mostly with you and me.

So today's system is largely based on passengers playing by the rules, and this certification program would still heavily rely upon that. Fliers would have to voluntarily put aside their uncertified devices because there's no way flight attendants could spot the difference between an unapproved Galaxy S II and a properly tested Galaxy S III. Would passengers play along? In my experience most seem to willingly follow today's rules, but it isn't that hard

to envision taking this a step further, requiring that any certified device sport a purple LED that blinks into life when airplane mode is enabled. Those harried attendants could then spot with a glance who's playing by the rules.

Whether entirely trust-based or aided by a blinkenlight, this sort of certification would help raise awareness and provide insight into the true risks of in-flight EM interference, make the FAA some much-needed money and, most importantly, let me keep my Spotify playlist going throughout the entire duration of the flight. And, if we can find a way to get Gogo enabled at take-off, I'll be all the happier. 



REVIEW

Sony PlayStation Vita

The PS Vita dwarfs all other portable contenders with sheer processing power. It's proudly a gamers' game console, but it comes at a premium.

BY MAT SMITH

It's hard to believe that Sony's venerable first portable has just reached its seventh birthday. The PSP launched in 2004: a year when the Motorola RAZR V3 claimed top phone prizes and tablets were called tablet PCs. Since then, its closest rival has undergone several sub-

stantial transformations, but the PSP has remained largely untouched, aside from getting a little slimmer. Sony's hoping its new portable superstar is less evolutionary, more revolutionary. And it may have to be. Mobile gaming is snapping at its heels, with game devel-



opers continuing to boost the scale and polish on smartphone offerings. Even Sony has been attempting to get in on the mobile action, with underwhelming results so far. So here's the PlayStation Vita, attempting to breath new life into the portable gaming market. There's no 3D screen, it doesn't do phone calls (although our test model is the 3G-connected variant) but there is, however, a load of power underneath that 5-inch OLED hood. It looks to be the answer to more "traditional" gamers' prayers, but there are plenty of questions we've been itching to answer. Is a portable gaming console still a valid gaming option? How long will the battery last? What's that rear touchscreen all about? Read on and see how Sony's next-generation portable stacks up.

Hardware

The Vita arrives in a piano black guise and that glossy finish is pretty hungry for your fingerprints. It's likely to pick up more than its fair share with the double touchscreen setup found here. In our hands, the Vita feels pretty similar to the original launch PSP, although it's impressively light for all the high-end internals. The 3G/WiFi model weighs in at 279g (9.8 ounces), matching the first generation Sony handheld, although it remains heavier than the 3000 series, which scraped underneath 190g (6.7 ounces). The 3DS is also slightly lighter, although due to its clamshell composition, it's a little thicker when in transit. Your eyes will be immediately drawn to the broad 5-inch OLED capacitive touchscreen. The apparently Samsung-



manufactured screen makes the most of its 960 x 544 resolution and the OLED technology makes for superb viewing angles, although we'd have appreciated a bit more brightness here for outdoor play. Videos downloaded from the PlayStation Store are optimized for the Vita's not-so-common resolution and are sharp and vivid. Games also sparkle, with an occasional frame-rate wobble that we're (optimistically) hoping disappears when developers get to grips with the new hardware.

The touchscreen is paired with another narrower patterned touch panel across the back. We, however, didn't just come here for touchscreen gaming — let's take a look at the controls. You'll find them evenly distributed on either side of the screen. On the left side you'll find a d-pad slightly smaller than the one found on both its predecessor and the DualShock controller. Underneath it resides the primary analog stick, which is suitably 'sticky' enough for play, although it seems to give a little easier than the sticks on the PSP and the PS3 controller.

Finally, a PlayStation button anchors you to the UI's home screen whenever it's pressed. Press it in tandem with the

start button and you can take a screen grab in both the UI and (some) games. Like the PlayStation button, both the start and select buttons lie flush with the screen, this time joining Sony's trademark button medley and the (increasingly necessary) second analog stick on the right side. The pair of shoulder buttons round out the controls and, like we mentioned in our first hands-on, seem a tad livelier than those found on the PSP. Sound like enough control options? Well, don't forget that there's also the same Sixaxis motion controls found in the PS3 controllers.

Touring the rest of the hardware, there are two slots along the top edge of the Vita, both protected with silvery plastic covers. While the Vita-labeled cover on the left takes the new proprietary game cards, the one on the right has been revealed as the anonymous-sounding "accessory port."

Next to the covers, you'll find a design nod to the PSP Go, with some reassuringly sturdy volume controls and the power button. Standby mode is a brief button press away, while you'll need to depress for three seconds for a full shutdown.



A cover on the left edge accepts the SIM card for 3G connectivity, with Sony's new game memory storage slot located at the base. The proprietary connection for power is also here and around the back the aforementioned capacitive touchpad is flanked by two grip pads to rest the device comfortably in your hands. They'll also raise the Vita slightly off the surface, sidestepping the chances of scuffing the symbol-patterned touchpad. The placement here seems better located for petite hands, as we found our fingers typically placed themselves closer to the center. A metallic plastic strip that runs around the circumference of the device extends into two strap loops at the bottom of each corner.

Inside, it's another quad-core beast, an ARM Cortex A9 with an additional SGX54MP4+ GPU and 512MB of memory and an additional 128MBs of VRAM. When it comes to raw specs, it simply dwarfs the PSP. In fact, it also has double the RAM of the PS3, although that guy strikes back with more dedicated VRAM (256MB versus 128MB for the Vita). Unfortunately, while we expected the built-in apps to jump into action this generally wasn't the case — the browser, in particular, puts on an especially poor performance. Games, which are understandably quite complex, often take their time to load up, but when they do, they offer us a very visible jump on the scale and detail of what we've come to expect from portable gaming. Sound quality is also suitably crisp, with rich noises projecting out from the two stereo speakers.



Charging and Battery Life

If the Vita had us worried about anything, it was reports of a lightweight battery. Three hours? That's on par with the 3DS, which didn't earn any points in the power department either. Like the PSP Go, there's no removable battery, so how does it cope? Were we going to be forever tethered to the AC socket? We tried several different run-down tests to get to the bottom of this. On an all-out gaming test, it looks like the rumors were right — you're looking at around three hours of playtime. It took us around an hour and a half to recharge from zero to full, during continued use. That aside, you'll be wanting to take some sort of power cable with you. USB recharging is possible, but boy, it's slow.

In more casual use, with a smattering of half-hour gaming sessions, some Twitter, video and music, this stretched out to around five hours, but it's very much dependent on use. *Near*, the Vita's location-based social network seems to assist in bringing the battery to



SAMPLE
IMAGES

an early demise. We were unable to get the DoCoMo-connected Japanese variant to connect with our own SIM cards, but we'd imagine 3G use would be even more taxing on the battery. It's hard not to take issue with the Vita's longevity, or lack of. Would it have been too hard for Sony to bulk up the proportions of its latest handheld to offer us a more substantial battery life? It's not going to win any prizes for being the thinnest slice of gadget we've seen this year — to handle it properly, we're pretty glad there's some depth to the Vita. A blocky battery extension is promised to arrive in Spring next year, but hopefully Sony — or some prescient third-party manufacturers — won't take long to offer up a more subtle battery-extending peripheral, but this is something the electronics giant could have seen coming much earlier. Also, we wonder how a life-extending battery grip might piggyback on this handheld without blocking its rear touchpad.

Camera and Multimedia

The primary rear-facing camera has several different functions here. There are augmented reality gaming features incoming, but as a classic camera, results leave a lot to be desired. Topping out at 640 x 480 stills, like the 3DS, stills are often pretty noisy and low on detail. There's some auto-focus functionality, but don't expect the results to be of a respectable standard.

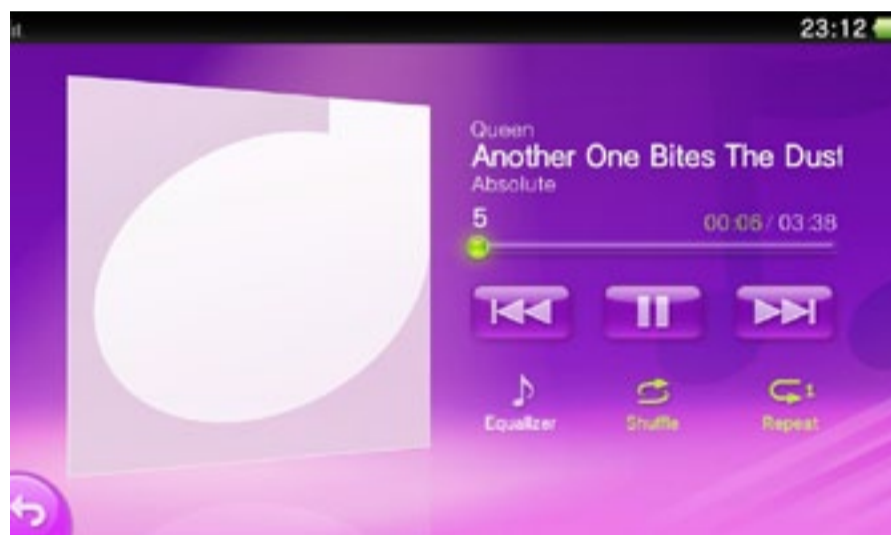
While both the front and rear-facing cameras appear able to stream video,



there's no recording functionality here. It's a shame not to see camera specifications on par with today's smartphones, given the premium price Sony's commanding for its latest portable. It's certainly got the tiny camera sensor chops to have provided something far more pervasive to this portable console.

Software

The Vita's UI is smooth and ran mostly untroubled by our multitasking. If you've dealt with any smartphones in the last few years, you'll know exactly how to feel your way around the device. Even if you



haven't, navigation remains very intuitive. As we touched on during our UI run-through, we're able to flick through running programs with a horizontal swipe. Closing unwanted apps involves a diagonal motion and a cool page-flipping animation, which lifts it away. The gentle inoffensive backing music and general bubbly design reminds us of the UI found on Nintendo's recent hardware. It's hard to complain when it's this gentle, although some more customization on wallpapers and that muzak would have been nice.

The apparently resource-heavy web browser is locked-down during gameplay, although you'll be able to hop to music, your friends list and Twitter — presumably to rave about your new

favorite console. The browser itself, well... it works. Despite the touchscreen interface, rendering is slow and we suffered plenty of tiling. You'll find it takes an age for pages to load, even on a WiFi connection, and scrolling through a page seems to discard the previous parts of the page you've already seen. The capacitive screen makes this games console a triumph for typing in web addresses and tweeting, however. There are suggested words and even a customizable dictionary all built-in — we'd love to see some version of Gmail on this 5-inch screen.

Other apps are relatively short on supply — there's a Twitter client available in the PlayStation Store, and some lightweight Facebook functionality within the PlayStation network. Will third-



party devs be willing to port their wares to the Vita, and jump through the PlayStation Store hoops? We guess that'll depend on sales, but for the moment, the app cupboard remains pretty bare. Connectivity with both the PlayStation 3 and PC is (at the moment) the only way to drag content off and onto the PS Vita, and no, there's no native Mac support here. It's worth mentioning that a lack of built-in storage means your media content will have to bunk up with any game-saves you've got on that proprietary Vita memory card. We also hope that the expanded controls (second analog sticks are a necessity for a lot of Sony's back-catalog) will improve the availability of future PS3 titles that can be remotely played. At the moment, remote play remains an extra option for streaming media from your more capacious "main" console.

Games

We'll leave the full critiques to our colleagues battling through them over at *Joystiq*, but here's our brief impressions on a selection of the first draft of games you'll hopefully be enjoying when the Vita arrives over here in 2012.

Uncharted: Golden Abyss - Likely to be the flagship title, if only because it showcases both the gameplay possibilities and graphical scale of the PS Vita. The Sixaxis sensors, both touchscreens and all the physical inputs are integrated into the first half-hour of play. Hopefully this is just the tip of the iceberg.

Ultimate Marvel vs Capcom 3 The 2D fighter arrives with the same bombastic presentation of the series. The tinier d-pad requires a little more concentration for the moves, although

thankfully there's a simple control option for the less dexterous

Dynasty Warriors: Next - The Vita manages a decent draw distance and number of characters on-screen. If you've played one *Dynasty Warriors*, you should know what to expect. The extra coating of graphical sauce doesn't go amiss.

Touch My Katamari - The ball-rolling space opera demands the dual-analog sticks. Play is smooth and well, with this soundtrack — it's just awesome.

Welcome Park - This built-in bundle includes some lightweight "games", although they're not comparable to the likes of *Face Raiders* and those game cards built into the 3DS. There's a picture-sliding puzzle, a sound-echoing app and (our favorite) a mode where you try to find faces in things. We don't completely get it either. To be honest, we were hoping that *Reality Fighters* would arrive *gratis* on the handheld. In fact, it isn't yet on-sale in the PlayStation store.

Pricing

So how much is the future of portable gaming going to set you back? Well, it's not for the fainthearted and will depend on whether you're looking for some cellular connectivity thrown into the mix. US buyers can net an early first edition 3G-capable Vita, like our review model, plus a case, a 4GB memory card and a

copy of *Little Deviants* for \$350, while Canadian buyers will be able to buy the WiFi-only version for \$299.

Ours is the Japanese 3G model, which is priced at 30,000 Yen (\$385). Meanwhile, its closest gaming rival, the 3DS, is now available new at around \$165, following its price drop from a headier \$250. That difference in raw power will be pretty visible on your bank balance. Regrettably, there's also no support for multiple PSN accounts on a single Vita.

Wrap-Up

The Vita is a beast. The first-string gaming selection really gives us a scale of portable gaming not seen before, while the ability to dip in and out remains effortless. For extended play, the OLED screen is sharp and comfortable on the eyes, although we worry how long it'll last unblemished in the rough-and-tumble of everyday use. The controls, too, soon felt familiar to these gaming paws. The additional analog stick now makes the device a close substitute for the PS3's DualShock. With the upgraded screen resolution, Remote Play is also stepped up — for the games it does work with.

It's the extra flourishes like the pattern touchpanel on the back and software transitions that make this yet another stylish slab of hardware from Sony. However, there's something here that needs some attention — we need longer battery life. Like we said in our 3DS review, it's a high price for a handheld device that lasts through just three

hours of playtime — a battery performance that's enough to make even the Thunderbolt smirk. We'd be willing to add some more bulk to the device's svelte frame for the privilege. Likewise, the games also attract a similar premium as Sony attempts to make two new proprietary media cards a success.

The cost will put it at odds with the new casual gamer ethos that's continuing to dominate the likes of Android and iOS. However, there's still noth-



BOTTOMLINE

Sony PlayStation Vita (Japanese Edition)

\$300


PROS

- Intuitive, smartphone-esque UI
- Truly console-quality gaming
- Dual-analog controls
- Top-class OLED screen

CONS

- Subpar battery life
- Loading games and other programs is sluggish

» The PS Vita dwarfs all other portable contenders with sheer processing power. It's proudly a gamers' game console, but it comes at a premium.

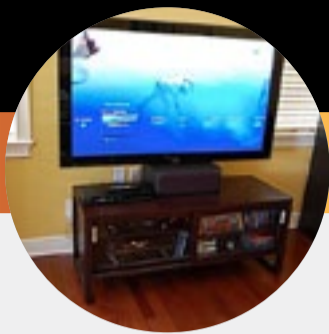
ing on these nascent gaming platforms that can stand up to the sheer scale of *Uncharted*. Until that happens with a \$5 price tag, there certainly remains a space for this kind of premium gaming. Can you resist until Sony does the inevitable and brings out a thinner, less power-hungry model? While we're not sure how many new fans the Vita's going to attract (and yes, that battery life will surely be a deal-breaker for many), the sheer spectacle of some of these launch games may have us hooked again on portable gaming. For the gaming faithful, we've found your first gadget buy of 2012. 

Mat is a contributing editor who lives in the UK. He's a Liverpool supporter who enjoys obscure Japanese game-shows.

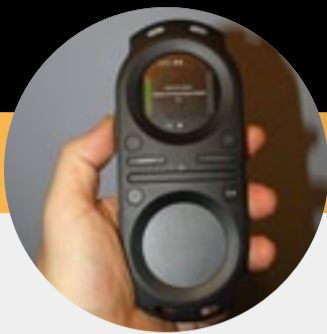
IN REAL LIFE

Welcome to IRL, an ongoing feature where we talk about the gadgets, apps and toys we're using in real life and take a second look at products that already got the formal review treatment.

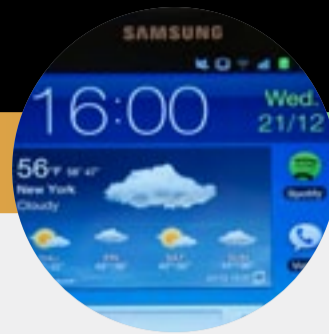
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Pioneer Kuro PDP-6010FD, Tonium Pacemaker, and the Samsung Galaxy Note

BY ENGADGET STAFF

For those of you who think all we do in IRL is wax nostalgic about gadgets we've owned for years, you'd be... mostly right. Indeed, this week we've got Mr. Ben Drawbaugh talking up the HDTV he owns (as opposed to the one he wants), and James is here to break down the limitations of his discontinued Tonium Pacemaker. We've got one happy new gadget owner, though, and

that would be Zach Honig, who recently traded his iPhone 4 for a Samsung Galaxy Note. So how's that S-Pen working out for him? Read on to find out.

60-inch Pioneer Kuro

Up until I bought my Pioneer Kuro in 2007, it was hard for me to make it each year without buying a new HDTV — I mean, it's been increasingly difficult



to ignore the latest smart TVs with 3D panels, super thin bezels, low power consumption and larger screens. But every night when I come home (and find time to watch it) I'm amazed by the deep blacks that have made the Kuro so sought after — Kuro does mean “black” in Japanese, after all.

Even besides the great picture quality, my PDP-6010FD has served me well. Sure, I never use more than one HDMI input (thanks to my AVR), nor the HDMI-CEC, CableCARD slot or even the included remote. But as a monitor for my Blu-ray player and HTPC, it hasn't missed a beat in four years. It hasn't been perfect, though. For starters, the power supply does have a slight buzz that's only audible during rare

quiet moments in my house. And the whites have always been a bit dingy. All that said, I still look forward to replacing it one day with something bigger and better. For now, though, there isn't another TV in the world that I'd rather have — well, besides the 103-inch Panasonic that I can't afford.

—Ben Drawbaugh

Tonium Pacemaker

If you're into DJ'ing and gadgets, it won't be long before you discover the Tonium Pacemaker. It'd be crude to call this thing an iPod for DJs, but I suppose that's kind of what it is. Sorta. It sets itself a relatively simple task — cram the functionality of two decks, a mixer and a hard drive into the palm

of your hand. Suffice to say, it does this job well, but not without a few twists along the way. The original Pacemaker packed a 120GB hard drive, but mine is the cheaper second-generation with “only” 60GB on board (that’s plenty for me, anyway). Cleverly, it’s about the size of a first-generation PSP, so all the cases for Sony’s handheld happen to fit the Pacemaker.

All told, it packs a surprising amount of functionality into such a small space. Then again, I’ve used full-blown DJ consoles with fewer features, that manage to do those few things better. The Tonium’s pitch / speed control is forever going out of time, and needs constant readjusting to bring tracks back into the mix (great practice!). The EQ controls make swapping the bass on track A for that of track B pretty clumsy. To be fair, it has a feature to appease this, but it’s not the same, and using it can be fiddly at best. Despite all of this, despite the mediocre battery life, it’s still a joy to behold — as long as you don’t take it too seriously. I almost never use mine to mix out loud, beyond the privacy of my headphones. It’s just a luxurious toy, and since Tonium doesn’t make them any more, it’s one that many will never get to enjoy. —*James Trew*




Samsung Galaxy Note

Yes, I realize it’s the size of a small book, and no, it doesn’t have Ice Cream Sandwich, but man am I in love. The Samsung Galaxy Note is one of the few pieces of technology I’ve bought in the past year or so — besides my laptop, of course — but I don’t feel a bit of buyer’s remorse. I purchased my Note at



such a large touchscreen at all times are plentiful. Naturally, the 5.3-inch, 1280 x 800 display is gorgeous for web browsing, but you can also use that extra real estate to add more icons to the home screen, watch videos with friends, and — perhaps most notable of all — take advantage of an enormous onscreen keyboard, both in portrait and landscape modes. I typically use Swype, which often works just as well on smaller handsets, but if you need to type out individual letters, having larger keys is an enormous help.

If I have any complaints regarding the Note, it's about that S-Pen — Samsung's more-than-a-stylus instrument has a tiny button near the tip, but it's incredibly difficult to press. You need to use it to bring up the quick memo mode or to take a screenshot, and I find myself searching every time. Still, you don't *have* to use the S-Pen at all, though I do find it quite useful when I need to sign documents, make a quick note or type while wearing gloves. Beyond that, the experience is top-notch. The 2,500mAh battery lasts the entire day (and then some), the camera is decent enough for casual use and the phone is unlocked, so I can use it almost anywhere in the world while paying local rates. The Note is part of my life now, and I can't imagine being this happy with anything else. —Zach Honig 

Carphone Warehouse for roughly \$900 (after VAT refund) during a recent trip to the UK, popped a \$25 SIM inside and had a total blast using it around London for a week. When it was time to come back home to the States, my AT&T SIM worked just fine on HSPA+, after some minor (and well-documented) APN tweaks in the settings menu.

The Note is certainly not for everyone, if only because of its massive screen, but I've found the size tradeoff to be quite worthwhile. It still fits in my hand and pocket, and the benefits of having



MATT LEES OF THE *OFFICIAL XBOX MAGAZINE* TALKS ABOUT HIS DEPENDENCE ON GOOGLE MAPS, HIS AVERSION TO CRAPWARE AND MOURNING THE LOSS OF A CREATIVE ZEN JUKEBOX.

MATT LEES

Q&A

What gadget do you depend on most? It used to be an iPhone, but now it's my Galaxy S2. There's something faintly dull about being unable to live without a mobile phone, but these days it barely even gets used for calls.

Which do you look back upon most fondly? The Creative Zen Jukebox. My 80GB version died just over five years ago, but I still keep its corpse in a shoe-box coffin. MP3 players don't really exist any more, and I'm still quite saddened by the way they've been replaced. Streaming tracks from a distant database isn't the same as being able to constantly carry your own personal collection — you miss out on moments where you stumble on gems from the past.

Which company does the most to push the industry? For me right now it has to be Samsung. Apple have had their moments over the years, but it feels like they've started to stagnate with their success. Fashion is always the enemy of creativity, and it's become quite clear which one they've jumped into bed with. Samsung's innovations aren't very exciting, but it's a

welcome change to see something more pragmatic: The devices they create are well-built, reliable, and remarkably cheap. Anything that pushes the tech industry away from artificially high prices is always a step in the right direction.

What is your operating system of choice? Windows. I spent too much of my childhood learning how to fix the blasted thing, and can't face the prospect of that knowledge becoming useless.

Which app do you depend on most? Google Maps. It tells me when to get off the bus, and guides me home on a Friday night. The world before smart phones was a night-bus nightmare.

What traits do you most deplore in a smartphone? Forcing you to use specific software. iTunes' obsession with regular syncing is the last thing you need when facing an emergency. If I've got a solid-state hard drive inside my device, I'd like to be able to use it however I see fit.

Which do you most admire? Battery life. If you don't have that, then all of the other cool tricks are use-

Ugliness.

Sleek looks are always a bonus, but really I'd rather have something that works.

less. It's the area that clearly needs innovating the most — being tied to a charger simply isn't ideal.

What is your idea of the perfect device? Whack a few days worth of extra juice and hard drive space into my current phone, and I'm not far off my ultimate dream. I love the idea of a fully-fledged entertainment device, but the kinds of games I like just don't work without a controller. We'll work it out someday, but I don't see an answer yet.

What is your earliest gadget memory? My dad had a handheld pocket word-processor. It had a tiny screen and didn't seem very useful — years later he passed it onto me as a trinket. I don't think he used it very much at the time — I did the same thing myself with the first EEepc.

What technological advancement do you most admire? Wireless technology never ceases to amaze me. It's the tiny details that blow me away — like the realisation that Spotify has synced offline tracks to my phone wirelessly without me even having to press a button.

Which do you most despise? I spend a lot of time on public transport. Tiny speakers have a lot to answer for.

What fault are you most tolerant of in a gadget?

ANSWER

Which are you most intolerant of? The lack of standard inputs. USB 2.0 is pretty good, guys — can we stop faffing around with one-shot cables?


When has your smartphone been of the most help? I got lost in suburban Seattle earlier this year — it was late at night, and I didn't have any cash on me at all. The 3G bill cost an arm and a leg, but eventually I managed to find my hotel. I try to avoid using maps when possible,

but as a safety net it's saved me hundreds of times.

What device do you covet most? As much as I've grown to dislike Apple recently, I'd secretly love to get my hands on an iPad. I can live without gaming on my android phone, but stuff played on the iPad looks utterly delicious.

What does being connected mean to you? Twitter, these days. I pump so much of myself into it, and it's amazing to see how much you get back. It's hard not to use it as a crutch at awkward parties, but it's reassuring to know you've got hundreds of like-minded people in your pocket. Being able to share my disdain for the world with strangers feels like a super-power.

When are you least likely to reply to an email? First thing in the morning or last thing at night. The rest is always a hectic blur.

When did you last disconnect? Two months ago. I went to Portugal, ate fish, swam in the sea, and switched off Twitter. I can't lie — it was fairly glorious. 

Q&A : Matt Lees

INSIDE U.S. GOVERNMENT #SOPA MEETINGS





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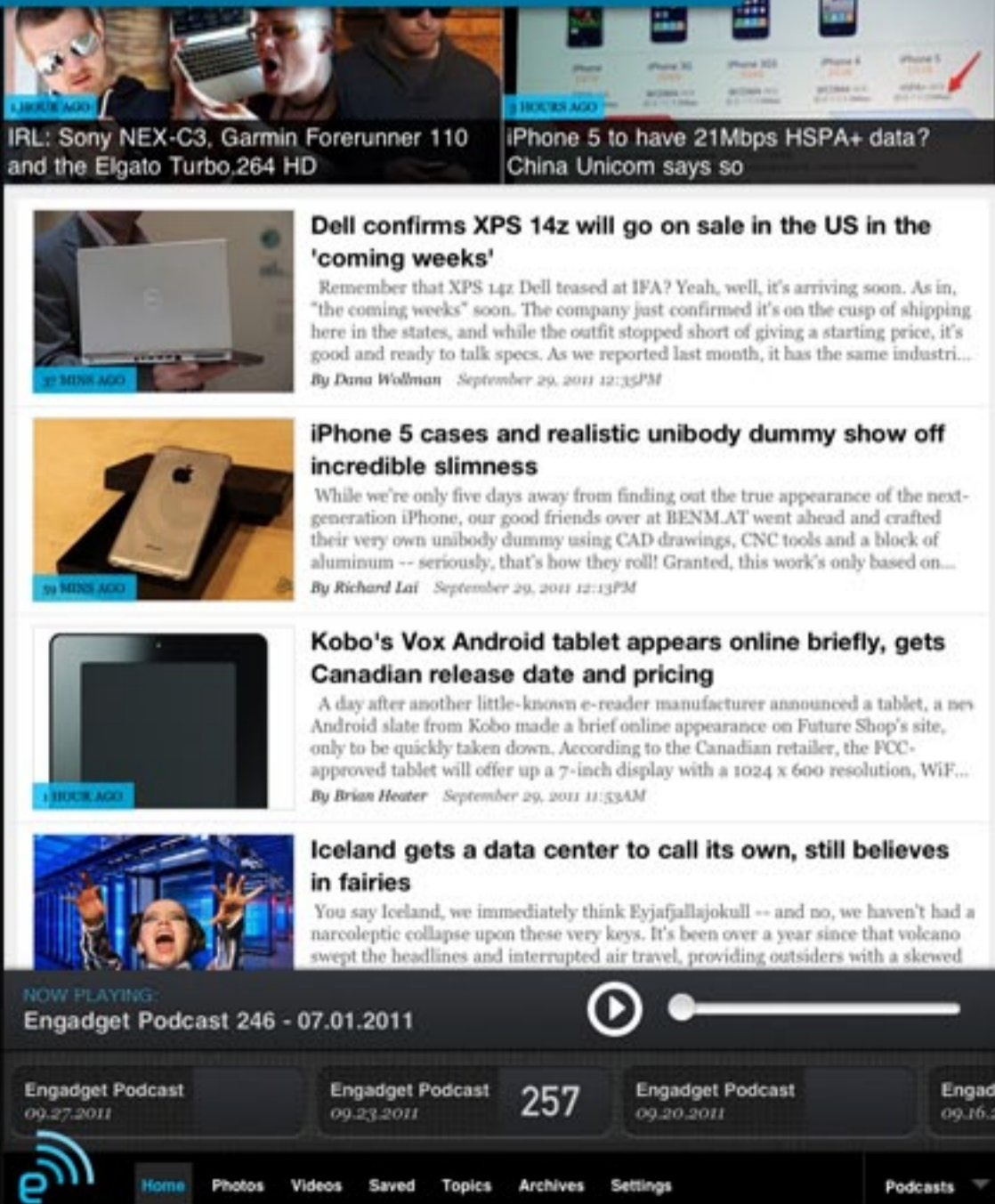
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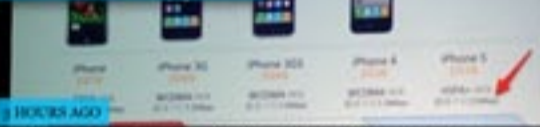
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 **Dell confirms XPS 14z will go on sale in the US in the 'coming weeks'**
Remember that XPS 14z Dell teased at IFA? Yeah, well, it's arriving soon. As in, "the coming weeks" soon. The company just confirmed it's on the cusp of shipping here in the states, and while the outfit stopped short of giving a starting price, it's good and ready to talk specs. As we reported last month, it has the same industri...
By Dana Wollman September 29, 2011 12:35PM


54 MINS AGO  **iPhone 5 cases and realistic unibody dummy show off incredible slimness**
While we're only five days away from finding out the true appearance of the next-generation iPhone, our good friends over at BENM.AT went ahead and crafted their very own unibody dummy using CAD drawings, CNC tools and a block of aluminum -- seriously, that's how they roll! Granted, this work's only based on...
By Richard Lai September 29, 2011 12:13PM

1 HOUR AGO  **Kobo's Vox Android tablet appears online briefly, gets Canadian release date and pricing**
A day after another little-known e-reader manufacturer announced a tablet, a new Android slate from Kobo made a brief online appearance on Future Shop's site, only to be quickly taken down. According to the Canadian retailer, the FCC-approved tablet will offer up a 7-inch display with a 1024 x 600 resolution, WiF...
By Brian Heater September 29, 2011 11:53AM

 **Iceland gets a data center to call its own, still believes in fairies**
You say Iceland, we immediately think Eyjafjallajokull -- and no, we haven't had a narcoleptic collapse upon these very keys. It's been over a year since that volcano swept the headlines and interrupted air travel, providing outsiders with a skewed

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