

engadget **distro**

101411 #7

iOS 5 **Apple's** **mobile** **OS is all** **grown up**

T-Mobile gets
the **Galaxy S II**

Nikon's 1 J1
does mirrorless
for the masses

Ben Heck's road
to geekdom

+
Amazon
reignites the
Kindle

Nexus Prime gets ready for prime time, BlackBerry blacks out and Qwikster calls it quits

editor's letter

Welcome to the first truly new issue of Distro! If you jumped on at launch you of course got six whole editions to sink your teeth into, but this is the first one dropping post-release, and it gives me great pleasure to formally welcome you to our magazine. It's been many months since I first pitched the idea to the dev team here at AOL, many months of hard work by many to get this out, and I truly hope you're enjoying the fruits of all that labor. This week is, of course, iPhone 4S week. By now, many of you will have your new toys and will be spending the rest of your day trying to prove to less tech-literate friends that yes, indeed, you did get a new phone. You certainly won't be alone: Apple said over a million were pre-ordered in just the first 24 hours of availability. According to our own, perfectly scientific poll about 26 percent of you indicated you were down for the S treatment. 30 percent, meanwhile, are waiting for something with a bigger screen and LTE.

What has a bigger screen and LTE? The Samsung Gal-



axy Nexus, a.k.a. Nexus Prime does — at least we think it does. We've seen a variety of supposed specs for this thing, but a greater than 4.5-inch, 720p HD Super AMOLED screen curved like a banana looks to be a lock, along with LTE and a 1.5GHz

processor. Other than that... well, we're not entirely sure just yet, but the latest word is that it'll be unveiled to the world on October 19th. We're excited.

We're expecting this will be the launch device for Google's next flavor of Android, called Ice Cream Sandwich. We saw it in action thanks to a little video provided by a helpful reader last week and this week we got a good look at the new Music and Google+ apps. They don't look shockingly different than what we've seen before, but if you'd like to see for yourself the APK is out there for the taking.

We also got closer looks at new devices coming from Motorola, the so-called Spyder smartphone and the Xoom 2 tablets. The Spyder has a sexy carbon fiber back and looks to be deliciously thin, and I personally can't wait to get my hands on one. Moto's having a big event in New York City on the 18th and you can be sure

Hurtling around a test track at 110MPH in a car that's labeled "beta" is a little disconcerting, but admittedly fun.

we will be there to blow the doors off.


The CTIA show kicked off in California and AT&T got things going right with the announcement of five smartphones, one of which is actually interesting. It's the Atrix 2, and it's surprisingly going without much fanfare. Maybe that's because it looks quite a bit like the recently released Bionic, or because it'll be hitting AT&T without LTE support. It will have HSPA+ 21Mbps, a 4.3-inch qHD display and will be selling for just \$99 on contract — half the price of the original.

The final big phone news this week was a lengthy BlackBerry outage that started in Europe and the Middle East before gradually, over the course of the next few days, spreading to much of the rest of the world. RIM indicated a network issue was at fault initially, but that seems unlikely to have caused *this* much havoc world-wide. Certainly not the best impression to make on a week that sees iOS 5 and the iPhone 4S release.

In other news, Netflix changed its mind (again) and will indeed *not* be spinning off Qwikster, it's now aborted the separate entity for handling DVD mailings. Instead, things will look more or less the same for customers, but we'll still be asked to pay separately for discs vs. streaming, and we'll still be left wondering if or when Netflix will get a better grip on what its customers want. Investors are apparently wondering too — the stock is currently trading for less than half where it was just a few months ago.

Finally, I got to take a test-ride in the Tesla Model S EV. Hurtling around a test track at 110MPH in a car that's labeled "beta" is a little disconcerting, but admittedly fun. The fully electric sports car goes on sale next year, will do up to 300 miles on a charge and will start at \$50,000 after federal tax credits. However, if you actually want to go 300 miles you'll need to step up to the \$70,000 model, while opting for the faster Sport version will surely require a further financial com-

mitment. You have to pay to play, dear readers.

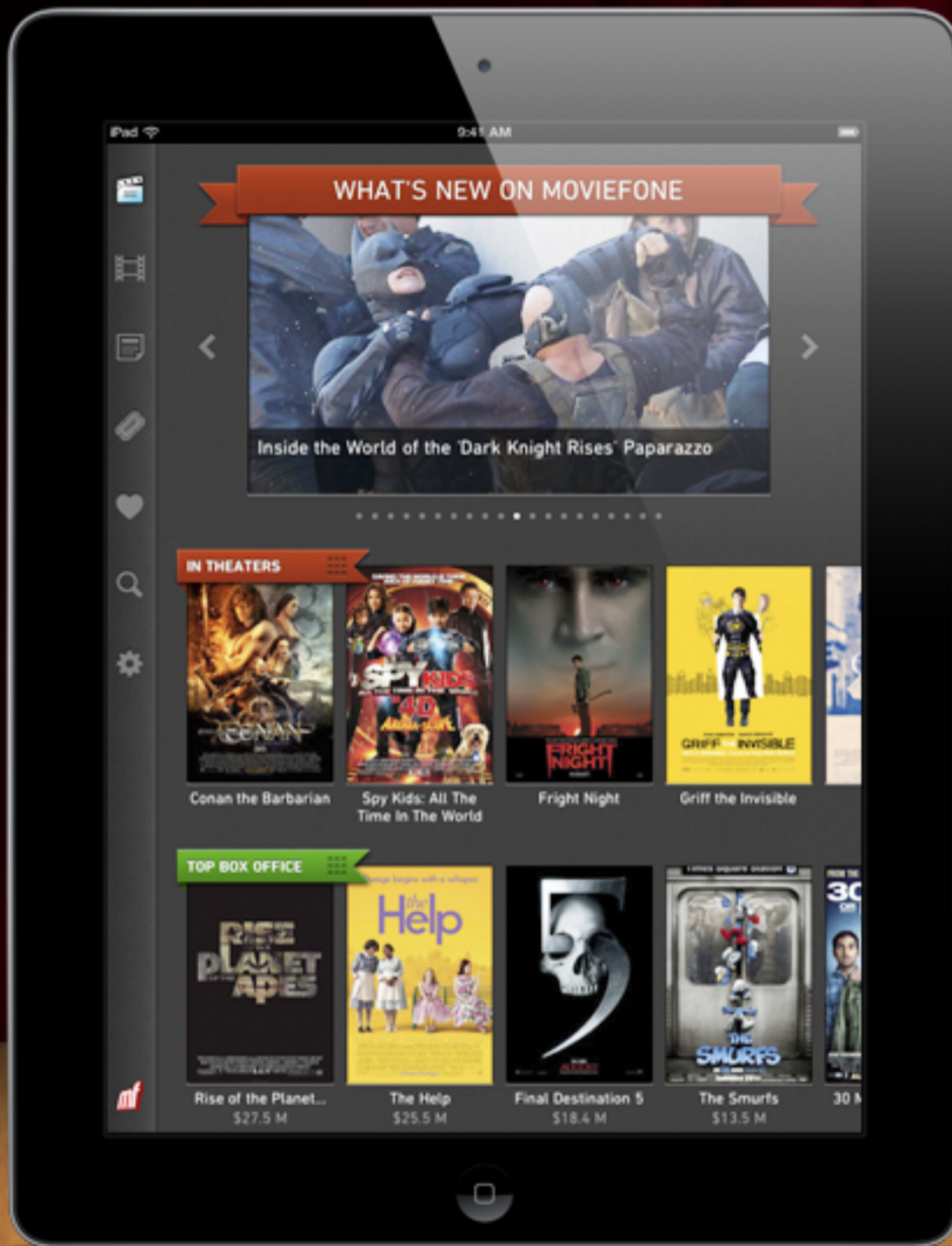
As for this week's Distro, as you could probably tell by the cover, we're featuring our incredibly in-depth iOS 5 review, which will tell you everything you need to know about this latest major release of Apple's mobile operating system. We'll recap the CEATEC show (just in case you missed any distinctly Japanese gadgetry) show you how modder extraordinaire Ben Heck grew to be the geek he is today and have full reviews of the new Amazon Kindle, the Nikon 1 J1 and T-Mobile's flavor of the Samsung Galaxy S II. Yeah, that's a lot of meat, so please relax and sink your teeth into it. 



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

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EDITOR'S LETTER

Nexus primed, BlackBerry blacks out, and Qwikster quits

BY TIM STEVENS



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IN REAL LIFE

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EYES-ON

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LAST WORD

The Relationship App

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Android Gingerbread has growth spurt, grabs 38.2 percent device share

Gingerbread has apparently made a substantial mark on Android users, with new figures showing it holds a 38.2 percent share of all Google OS-powered devices. That's some kind of growth from the one percent sliver it held earlier this year. Froyo still remains dominant at 45.3 percent, but continues to shrink, with 95.7 percent of all Google-coated devices now running Android 2.1 or above. These figures, taken from Android Market statistics over the last two weeks, give a pretty good illustration of the gulf between Android smartphones and tablets, as well, with Honeycomb versions accounting for a meager 1.8 percent. But the tablet version will likely get a boost from Ice Cream Sandwich — which, as we all know, is just around the corner. — *Mat Smith*

the weekly stat



review

T-Mobile Samsung Galaxy S II

T-Mobile's Samsung Galaxy S II didn't fall far from the family tree. It's good looking, fast and an overall great phone.

BY TIM STEVENS

What else is there to say? Whether in its original, exotic exterior, its lightly changed but rather more accessible AT&T-flavored model, or the decidedly Epic Sprint version, the Samsung Galaxy S II has never failed to impress us. In fact, we called that first release “the best Android smartphone yet” and still, nearly six months later, it sits mighty close to the top of the pile — if not squarely at the peak, waving its flag proudly

whilst taunting the others below.

Here today we're looking at the last of the Three Musketeers: the T-Mobile version. This marks the final US release of the Galaxy S II, unveiled in late-August. At that announcement event the device was curiously locked up in Lucite, but now it's right here in our hands. While we didn't really want to set down this 16GB, 1.5GHz, 42Mbps HSPA+ wonderphone, we gently laid it aside just long enough to write this very review.



Hardware

Each of the three GS II variants now subsidized at our domestic carriers have received some visual tweaking to differentiate themselves from the original, sliver-thin European model. Like the other two, the T-Mobile version has lost the physical front button, leaving a set of four capacitive receptors along the bottom of the screen for handling the typical swath of Android tasks.

Beyond that, the differences here are decidedly subtle. Of the US models, this version has the roundest shoulders, though you really need to stack the three up in a pile to tell. (Naturally, we did just that.) A bigger differentiator is the removable battery cover. On the

other versions the chin of the device is shiny chrome, but here the entire back of the has a soft-touch feel. That whole, rubberized plate peels away to reveal the battery, SIM card and microSD slot (the latter of which is vacant out of the box, inviting you to expand the 16GB integrated here).

The eight megapixel shooter on the back is vertically aligned with the flash, as was the Sprint version — rotated 90 degrees from the AT&T and international releases — but other than a distinct lack of manufacturer branding on its backside (you'll have to turn it over if you forget who made it) this is much the same device.

It's on the front you'll find T-Mobile

Yes, you can read it outside without much bother, but don't expect much in the way of contrast if you do.

and Samsung logos, both in discreet chrome embossed above and below the 4.52-inch, WVGA Super AMOLED Plus display. That matches the Epic 4G Touch version on Sprint for size, a slight step up from the (already more-than-adequate) 4.3-inch version AT&T and the rest of the world got. So, if you need a bit *more* this is it, but that comes at the cost of reduced pixel density — it's WVGA all the way, regardless of which flavor you choose.

But, we've said it before and we'll say it again: we're happy to give up resolution for the always-catching contrast and colors produced by this slice of organic diodes. Viewing angles are as close to 180 degrees as you can get, and straight-on the picture is gorgeous. When cranked to its brightest it'll make you recoil, but, as ever, readability in direct sunlight is not this technology's forte. Yes, you *can* read it outside without much bother, but don't expect much in the way of contrast if you do.

The gunmetal chrome ring that makes up the outer extent of this device is punctuated on the upper-right for the power button. The micro-USB port is on the

bottom, a volume-rocker on the upper-left, while the 3.5mm headphone jack is up on top. So it's the same basic layout of inputs and ports as the rest — give or take a few millimeters here or there.

Dimensionally, there are no big surprises to be found. At its thinnest, this GS II measures 9.4mm (.37-inches), but chubs up to 11.5mm (.45-inches) at that chin. You're looking at 69mm (2.7-inches) across and 130mm (5.1-inches) tall. This again puts it within spitting distance of the Epic 4G Touch, which skipped dessert last night and so comes in at just a fraction of a mm thinner. You won't really notice the difference between those two, but you will spot the full millimeter gained over the original. You'll notice the extra heft, too — 4.87 ounces (138g) according to our scale, which makes it the chunkiest of the bunch.

Perhaps that's to make room for that 1,850mAh battery (also the largest), or the bevy of antennas inside. Here we're looking at quadband GSM plus tri-band UMTS, most certainly including HSPA+ while also including Bluetooth 3.0 and 802.11a/b/g/n. And,



yes, there's NFC support baked in here as well, though none of the NFC apps we tried could actually read tags. Even worse, Google Wallet isn't even available for download yet.

Software

No surprise that this version of the GS II is running Gingerbread, but it's the highest numbered version of the three, coming out of the box offering 2.3.5. The extra few hundredths of a point don't make a lick of difference here compared to the others, and, as ever, it's TouchWiz that makes the most striking visual impact the first time you grace this thing

with your own touch. While TouchWiz is what it is, we find ourselves liking many of the customizations you'll find here. This includes a variety of gestures for navigating through the OS and gallery (as we detailed thoroughly in our original review) and a variety of helpful desktop widgets for things like power management and road traffic. There's also the customized applications list, which makes it easy to create folders and groups of applications within the full list. This is, of course, particularly useful for hiding some of the bloatware that this guy comes installed with.

Big Magenta has pre-installed some



utility apps, like 411 & More for finding infos and Name ID for displaying information about who's ringing you — if you're willing to pony up \$3.99 a month to make it work. There's obviously a selection of media apps, like T-Mobile TV and Kies air, which helps you to sync media manually (if you've opted out of Google's own avenues for media syncing). There are a couple of games you likely won't care about, Qik Video Chat is pre-installed and then there's the T-Mobile Mall, which lets you buy ringtones for \$2.99 a pop.

Remember when people happily paid three bucks for ringtones? Ahh, the days before Ringdroid.

Performance and battery life

A Galaxy S phone can't get by on looks alone, and the GS IIs have all been performers. With its 1.5GHz processor, a step up from the other phones' 1.2GHz chips, this should be the quickest of the bunch, right? Not so fast, dear reader. *Those* phones used Samsung's dual-core Exynos, while the T-Mobile flavor is instead using the dual-core Snapdragon APQ8060. While that isn't exactly like comparing apples to oranges, these two bits of silicon definitely wouldn't be found in the same section of the produce aisle.

There are many cases where this phone proves slower than its siblings, including a Quadrant score of 2,576 (the Epic 4G nabbed 3,244), Linpack single / multi scores of 42 / 70 MFLOPS, respectively (compared to 55.1 and 79.5) and Neo-

core hovering at around 57fps (compared to 59.8).

So, T-Mo got the gimped device, then? Oh no, it's never that simple. The SunSpider 0.9.1 JavaScript benchmark, which gives a good impression of how quickly a modern webpage will load and respond, delivered an astonishing 2,407ms. That's a full 1,000ms lower than the previous versions managed and a new Engadget world record.

Of course, none of this matters worth a damn in the real world; it's all about how the phone performs and feels in the hand, and when cradled thusly the GS II won't disappoint. It boots in a respectable 28 seconds and, once there, is very responsive to your every gesture. Webpages load quickly, apps launch promptly and suffice to say this isn't a device that will leave you wanting.

Battery life doesn't disappoint, even though this model doesn't match the heights of the AT&T version, which scored 9.5 hours on the battery run-down test. The Sprint version struggled to keep a video looping for 8.5 hours, while this model made it 7.7 hours. That is, again, despite having the biggest battery of the three. We're not sure whether to blame T-Mo's antennas or the new processor, but still we don't think you'll upset with the longevity here. We found a day of solid usage to be well within the realm of possibility, more if you keep things light.

In terms of network performance, this is a 42.2Mbps HSPA+ device and, while we weren't able to test in an area that has



that kind of bandwidth available, we've seen results showing 20 - 25Mbps down and 2 - 3Mbps up. Obviously your mileage here will vary considerably depending on network strength, and our own tests in an area T-Mo's coverage map lists as "4G Good" were admittedly less stellar, but still quite good: averaging 9.5Mbps down and 1.8 up. Pings of 700 - 800ms, however, mean you won't want to pipe your *COD* server through this connection.

Camera

The Galaxy S II has become world-renowned for the excellent camera assembly poking out the back, and this latest revision does nothing to detract from that halo-like status. It's the same eight megapixel sensor and other guts

we've come to know and love elsewhere and here it performs admirably. The camera is responsive, focusing and shooting quickly, and the resulting pictures tend to look fantastic.

But, they're not always perfect. As we've noticed before, the narrow dynamic range of the sensor here can create some washed-out images when shooting particularly bright scenes, or very murky ones when the lighting sways too far the other way. This was especially apparent in a photo of a motorcycle shot into the sun, where the glinting rays caused everything dark to get a bit pale. Stay aware of this limitation and you'll take some amazing shots on this phone, especially if you take the time to dive into the extensive customizations made possible through

the camera app, including exposure compensation, white balance and ISO.

Video has the same, contrast-rich look and records great-looking footage at 1080p, which is plenty of pixels to keep your HDTV sated (unless you *really* went big). The camera is generally quick to adjust focus for subjects near or far, but we did notice a bit of focus-hunting. Also, the dreaded CMOS jelly-vision effect is very noticeable here, so you'll want to keep a steady hand while filming any sunbathing pooches.

Wrap-up

If you'd been hoping this Galaxy S II with the higher clock speed would wipe the floor with the previous models, we're sorry to say that's not quite the case. It is indeed quicker in web browsing and some other situations, but when it comes to gaming and multimedia it's actually a bit slower. The result is basically a wash, so if you're buying this guy

over the others it's going to have to be on its other merits.

There are naturally many merits to choose from here, but none of them vastly out-shine the AT&T or Sprint versions we've already spent a lot of time with. At the end of this proverbial day the T-Mobile Galaxy S II is very much the same its siblings — and that is a very, very good thing. If you're on T-Mobile or were looking to get a little more magenta in your life, this is an incredibly good choice. But, if you're already on Sprint or AT&T and are reasonably happy to stay there, pick up one of those versions instead. Whichever way you swing, you'll be getting a great phone. [d](#)

Myriam Joire contributed to this review.

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

BOTTOMLINE

**Samsung
T-Mobile Galaxy S II**

\$230

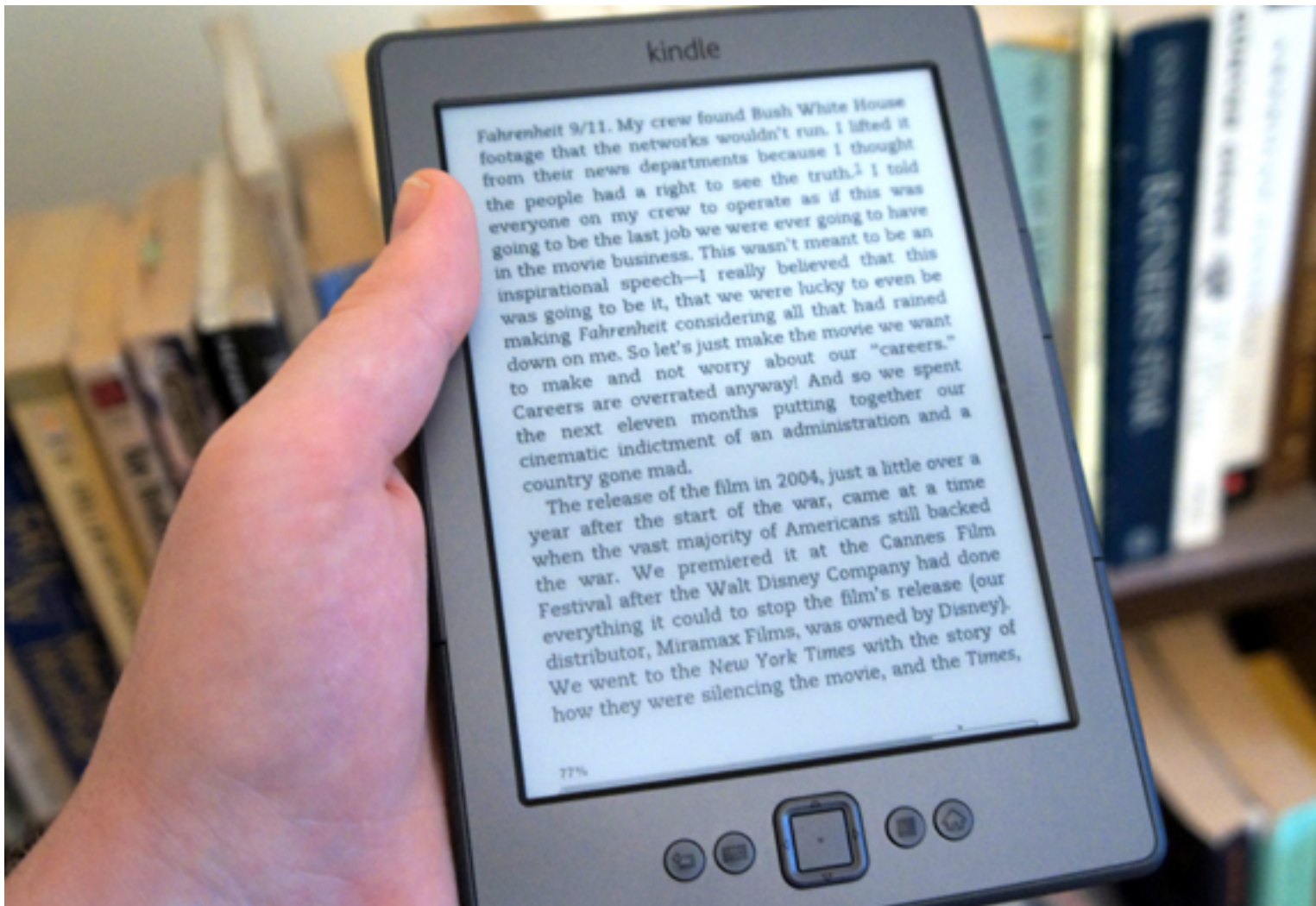
PROS

- Clean, good-looking design
- Great performance, especially while surfing
- Excellent screen
- Solid camera

CONS

- Not quite the battery life of siblings
- WVGA resolution

T-Mobile's Samsung Galaxy S II didn't fall far from the family tree. It's good looking, fast and an overall great phone.



review

Amazon Kindle (2011)

BY BRIAN HEATER

There's little question that the Fire stole the show at the recent Amazon event. After all, the new tablet marks a change for the company's Kindle line, which until now has been defined by relatively simple E-Ink-based devices. The Kindle Touch, meanwhile, stepped up to bat to take on the likes of new Nook and Kobo touchscreen readers. But while most expected that device to become the heir to the Kindle throne, the company made something of a surprise move, offering up a new device that will bear the reader's name. Now in its fourth generation, the Kindle has shed its keyboard and been reborn as

a pocket-sized, lighter-weight reader. And a cheap one, at that — \$109 for the standard version and \$79 for the ad-supported. So, is the new Kindle worthy of the name that has become synonymous with e-readers? Or did the company make too many sacrifices in the name of slashing prices?

Hardware

The new Kindle really is rather small compared to past versions, and the company isn't kidding when it calls the thing pocket-sized — it slips quite nicely into a pant pocket. You might run into a bit of trouble attempting this after putting



the reader in Amazon's proprietary case, but, even then, we managed to fit the device in our jeans with little effort. The reader shaves an inch from the height of its predecessor and 0.3 inches from its width, though it expands a hundredth of an inch in thickness to 0.34 inches — a pretty indistinguishable change, to be honest. The new Kindle's dimensions are pretty much on par with the latest Kobo reader (though Amazon's reader does come in a few fractions of an inch thinner), making the 0.47-inch thick Nook Wi-Fi look downright beefy by comparison. At 5.98 ounces, the new Kindle is also easily the lightest of the bunch, weighing in at about 2.5 ounces lighter than the last-gen model.

The device owes much of its smaller footprint to the company's decision to abandon the keyboard this time out — a decision that may rub some Kindle devotees the wrong way. Though at the moment, the QWERTY-riffic Kindle 3 is still on the market, on sale under the moniker Kindle Keyboard, with a \$99 / \$139 price tag for the WiFi and 3G

versions. In the case of the new Kindle Touch, Amazon stole a page from the Sony / Nook / Kobo playbook, replacing the keyboard with an infrared touchscreen. The new \$79 Kindle, on the other hand, has neither of these things, and instead requires you to interact with it using physical buttons.

You'll find long, skinny page buttons flanking the display on both sides. The rear of the device is rubberized to prevent slipping, but isn't quite as grippable as the Nook's concave back, so attempting to flip through pages while holding the device with a single hand is a fairly clumsy task. The loss of some real estate also makes the device more difficult to hold than the last generation Kindle. A row of small physical buttons lines the device's bottom bezel — Back, Keyboard, Menu and Home. In the middle of the row is a small toggle pad with arrows for navigating the reader's menus, with a small button in the center for choosing items. The power button is located on the bottom edge of the device on a slightly protruding lip alongside the

The text really does pop, and unlike its LCD-based competition, it's quite readable in sunlight, a long-time selling point for Amazon.

microUSB slot. Along the bottom of the reader's back are two small metal pads, which, when plugged into one of Amazon's \$60 cases, power a built-in light to illuminate the non-backlit screen.

Not surprisingly, there's no 3G option on the new Kindle. Amazon no doubt assumed that anyone who was willing to shell out for such functionality would also likely drop the extra cash for the Touch version. Support for audio files like MP3s and text-to-speech has been dropped as well. And really, it would be silly to dock the company for the lack of that option on what's truly meant to be a low-cost, entry-level device. As with past Kindles, Amazon opted to forgo the expandable memory here, instead relying on the device's built-in 2GB for downloaded texts. That's the same amount of storage included on the Nook and Kobo, which both have microSD slots and half of the previous generation Kindle (and the Touch, for that matter). But while the relative lack of storage is less than ideal, keep in mind that Amazon also lets you store texts in the cloud, taking some burden off the device itself.

For such a low-cost device, the Kindle's build feels really solid with a strengthened plastic faceplate that feels almost

metallic and a sort of solid construction that belies its weight. Drop the extra dime for one of Amazon's cases, and you have a device that should stand up to hours spent in a book bag or another carrying case. Amazon has also bumped up the processor to 800MHz (from 532), the same as the ones found in the Nook and Kobo readers.

Display

Despite shaving off a precious inch from its footprint, the new Kindle manages to maintain its industry-standard six-inch display. Like the Nook, Kobo, Sony, et al., the Kindle is built around a sharp Pearl E-Ink screen, offering up the same 600 x 800 resolution and 16-level gray scale as its predecessor. The text really does pop, and unlike its LCD-based competition, it's quite readable in sunlight, a long-time selling point for Amazon. The reader's page turn rate is on-par with the latest generation readers, as well — we put it up against the new Nook and Kindle 3, and couldn't detect a difference in speed, with both devices doing a full page refresh about once every six pages.

As with the last version of the Kindle, you can lop a significant chunk off of



the product's price by opting into the ad-supported version. Amazon CEO Jeff Bezos suggested during last week's event that the device's advertising is so *beautiful* that a user who didn't know any better would just assume that they were standard screen savers. Not surprisingly, this isn't really the case here — at least not with the ads we saw. All were pretty clearly advertisements, including ones for AT&T, the film *Anonymous* and, of course, Amazon itself, which was far and away the biggest advertiser we saw. That said, the ads aren't very intrusive, as they only pop up when you put the device to sleep or when you're looking at the home screen, which has small banners lining the bottom. For those who don't mind one ad delivery

method in an already saturated world, the option may well be worth the \$30 they'll save.

Software

The Kindle's lack of a touchscreen isn't a particular nuisance until it comes time to type. Clicking the keyboard button on the button bezel will bring up a virtual QWERTY. In this bare-bones model, typing means cycling through the letters using the navigation pad, which can be a pain when searching for books in the store. For anyone who plans on doing some serious typing on the thing — though we're not entirely sure why someone would — it may be worth the extra \$20 to upgrade to the Touch.

Firing up the device will bring you to a simple homepage with a list of all of the items you've purchased and a link to Archived Items, which gives you access to content stored on other Whisper Synced devices. A bar along the top lets you know the time, the strength of your WiFi signal, battery life and how much storage you've got left. Clicking the Menu button while on the homescreen gives you the option to visit the store, sync your content, rotate the screen's orientation and visit the settings.

There's also a search feature, which



brings you to a central page where you can find keywords on the device, the Kindle Store, Wikipedia, the built-in Oxford American Dictionary, Wikipedia and the Web. Entering text in the search field requires hitting the Keyboard button. The browser is, of course, quite basic, with a simple search bar on the top, where you can enter a URL or a keyword, using the toggle switch to switch between Go To, Wikipedia and Google. Pressing down on the arrow key will display a large box with a magnifying glass for zooming into a page.

The page layout is fairly simple, with the vast majority of the space taken up by the text, with the menu bar from the homepage carrying over. Hitting menu brings up options to search the text,


read a description and, in the case of a sample, purchase the book. You can also adjust the font from here, choosing from seven sizes, three typefaces and three line spacing options. At the bottom of the page there's a progress bar, letting you know how far you are in the book. With the toggle pad, you can also select words to look up and annotate.

As with past versions, the new Kindle reads TXT and PDF files, which you can drag onto the device via micro-USB. When looking at PDFs, the Kindle lets you zoom in and out and adjust the contrast. As with other readers, the whole process is fairly clunky and slow, but it's a nice feature for anyone who wants to review business documents on the go or import their own non-Kindle Store files.

Wrap-up

If you've ever played with a Kindle, it shouldn't surprise you to learn that the fourth-generation is one solid device. The hardware is well made, the processing is snappy and the screen is extremely easy to read. It is, however, sorely lacking in the bells and whistles department, with a renewed, almost one-track focus on reading. Nowhere is this more evident than in the lack of a keyboard or touchscreen, making browsing quite the chore. Naturally, though, typing is at best a secondary feature on a device like this. And if you felt strongly enough, you could always get the Kindle Touch for an extra twenty bucks.

Ultimately, though, this question of value comes down to price. The Kindle is \$79 with ads and \$109 without — a steal

compared to the \$139 launch price of the Kindle 3 and Nook WiFi. We've heard that the Kindle tends to be a money-loser for Amazon, with the company earning back its hardware losses with strong book sales, and that may well be the case here. But at that price, the new Kindle is likely to end up in the hands of users who have been eyeing e-readers, but are loathe to part with \$140. And while this certainly isn't the best or most fully featured e-reader we've seen — and can't be considered an upgrade over last year's model, the new Kindle is the best e-reader \$100 (or less!) can buy. 

Brian's work has appeared in Spin, The Onion, Entertainment Weekly, The New York Press, PCMag, Laptop, and various other publications.

BOTTOMLINE

Amazon Kindle (2011)

\$79 / \$109

PROS

- Relatively inexpensive
- Pocket-sized
- Fast processor

CONS

- No touchscreen / physical keyboard
- No memory card slot
- Not ideal for one-handed reading

The latest Kindle forgoes bells and whistles such as a touchscreen or physical keyboard, making it one bare-bones device. Still, you'll be hard-pressed to find a better e-reader at this price.

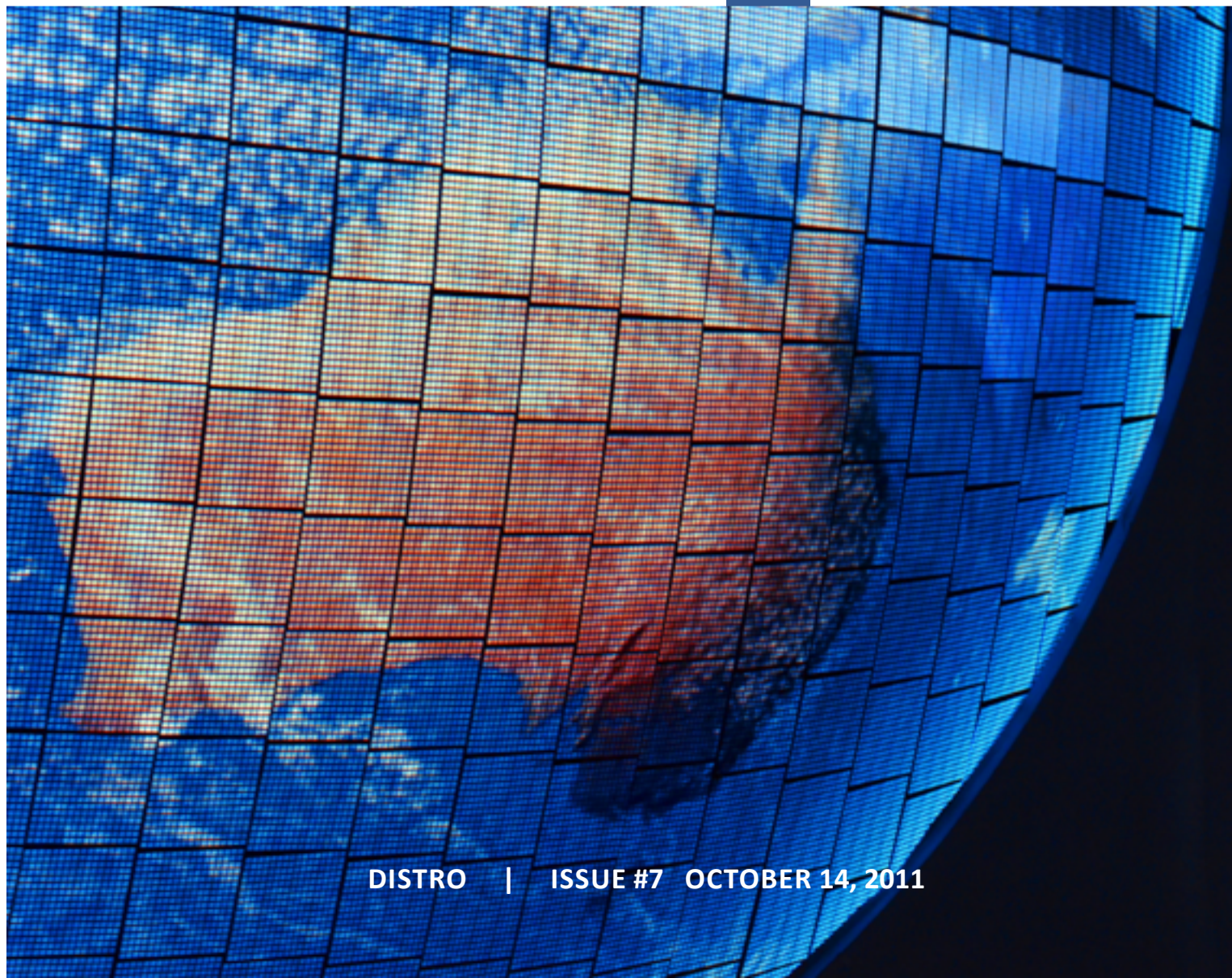
The Sights of CEATEC 2011

BY ZACH HONIG AND RICHARD LAI

eyes-on



With the country still amid a significant recovery from March's massive earthquake and tsunami, this year's CEATEC may have been more symbolic than industry changing for Japan. We saw a few consumer electronics that will probably never leave Japanese shores, but the show seemed to be dominated by prototypes and concept devices, rather than massively popular gadget announcements.

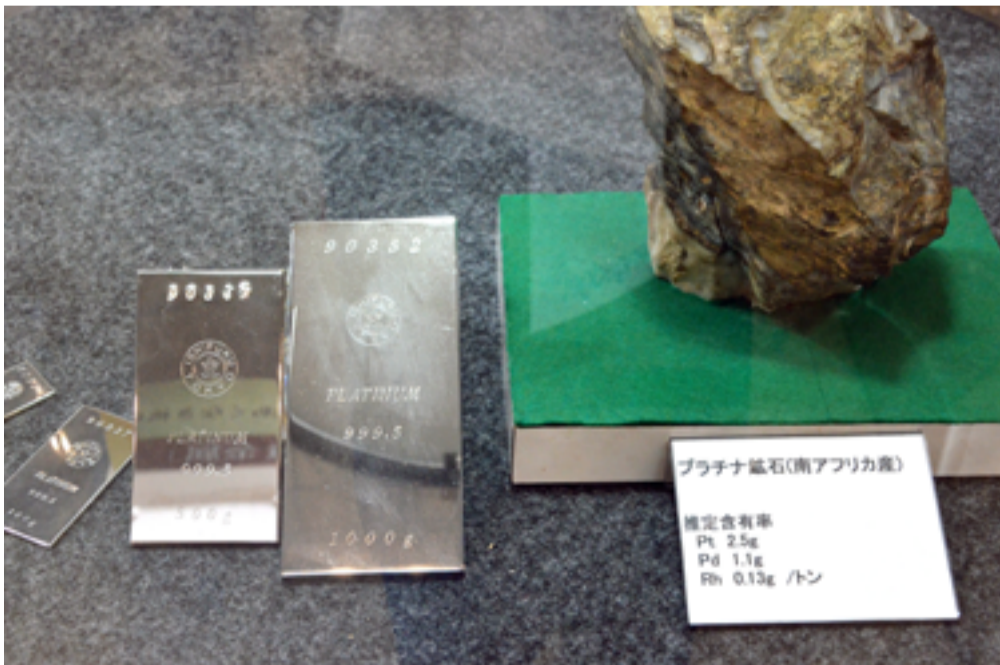


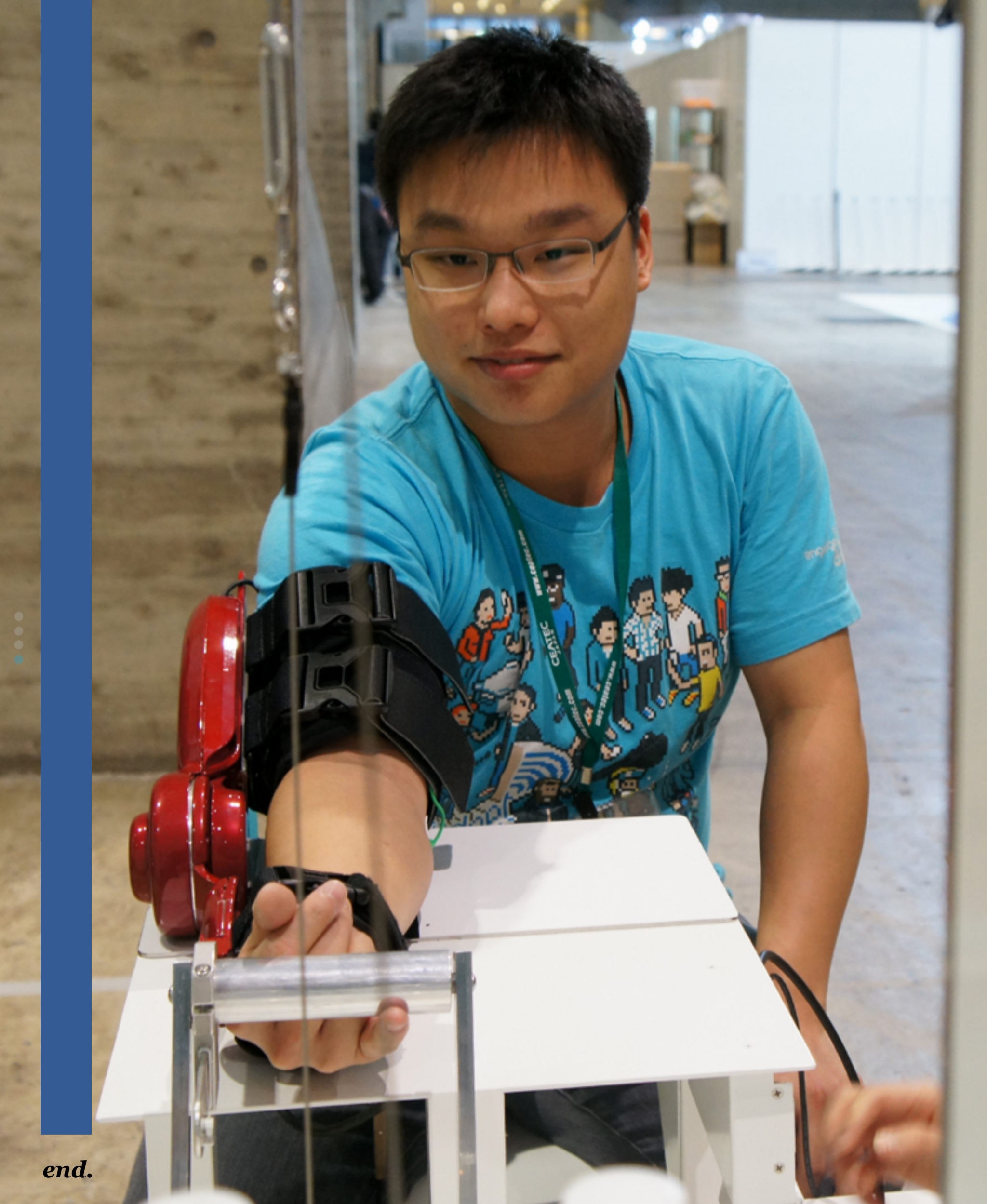


3D対応デジタル双眼鏡



Like most of the trade shows that we attend each year, elaborate booths abound at CEATEC — though most were on a scale far smaller than what we see at key events like CES, or even IFA in Berlin. Still, you can't walk ten feet without seeing flashing lights, robots, augmented reality displays, or even fake gold bars at Japan's Makuhari.





end.



review

iOS 5

BY DANTE CESA

Now well into its fifth year of life, iOS has always been known for its exceptional polish — and also, its glaring feature holes. But, just like clockwork, each year since its 2007 debut, those shortcomings have been addressed one by one in a sweeping annual update. In 2008, the platform was opened up to developers, giving us the App Store, 2009 saw the introduction of copy and paste — which we’d argue is still the best implementation to date — and last year “multitasking” finally made an appearance. So what has Apple chosen to rec-

tify in 2011? Well, for starters, notifications gets a complete overhaul with Notification Center, tethered syncing dies at the hands of iCloud and messaging receives a do-over with the birth of iMessage.

If you recall, we first got acquainted with iOS 5 in May after downloading the developer preview, but how does the final release stack up? And does it have the chops to compete with the latest from Mountain View and Redmond? After drudging through seven betas, we’re ready to conquer all that



the final release has to offer, so join us, if you would.

Overall look and feel

If you were expecting the fifth release to bring forth a visual overhaul, you're going to be sorely disappointed by iOS 5. Sure, there are some visual differences — e.g. rounded switches, which were previously square, and a little less shadow around message bubbles — but by and large this is the iOS aesthetic you know and either love or hate.



Siri

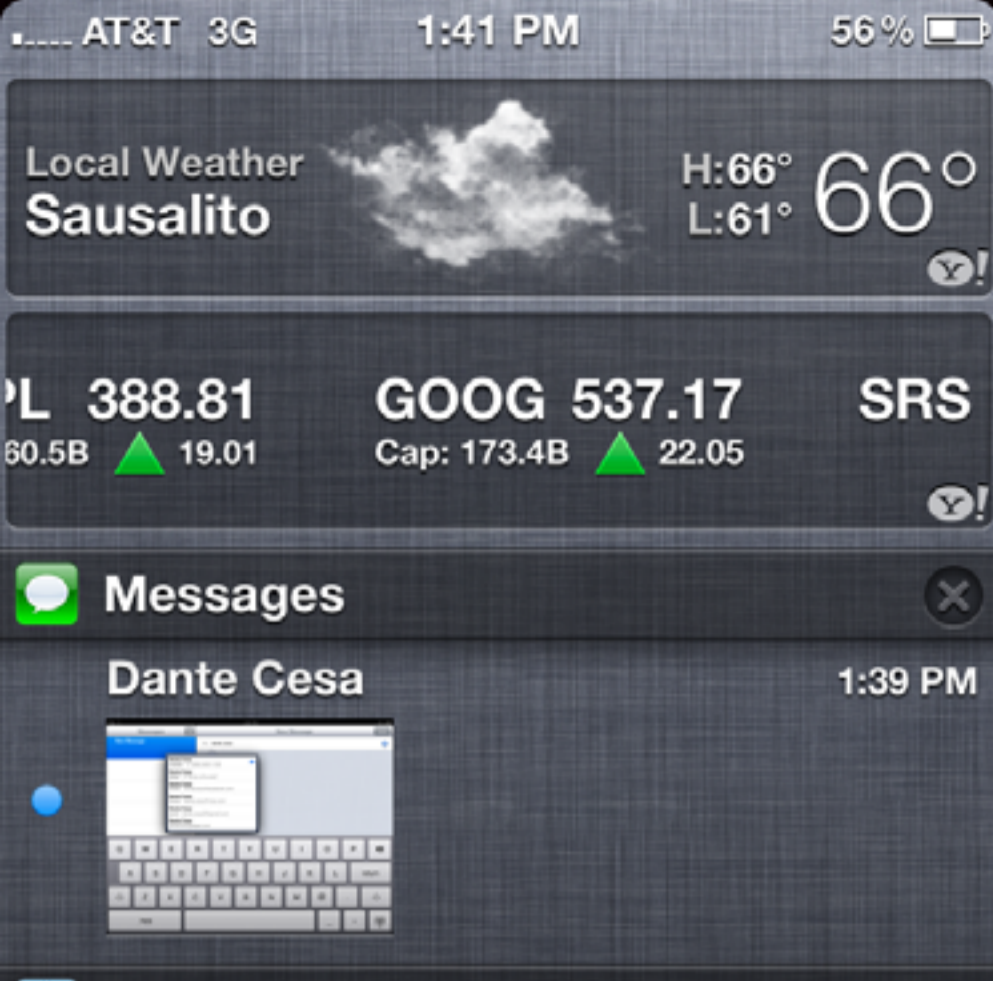
We'll need an iPhone 4S to play around with Siri, so until we get our grubby paws on one, there's unfortunately not much to see here. We can't help but note that Siri is the final evolution in a line of Apple assistants

that began almost two decades ago. We fondly remember scribbling sentences into Newton's assistant and watching it decipher them into commands and judging from what we've seen so far, Siri should be all that and then some. We'll update with impressions as soon as possible.

Notifications

Just because iOS' looks haven't changed radically, that doesn't mean significant work hasn't gone into replacing core components of the operating system. Take notifications, which have been redesigned from the ground up — a change that couldn't have come sooner, frankly. Gone are the workflow-breaking modal alerts that we have patiently endured since 1.0, replaced by something Apple calls the Notification Center. Instead of interrupting the front-most task, incoming alerts now present themselves with an unobtrusive banner that cube-flips from the top of the device. Functionally, notifications still work the same way, meaning you have two options for interacting with them: you can either address or ignore them, which will either whisk you into the appropriate app or relegate those alerts to an off-screen notification drawer.

If this sounds familiar, that's because it is. Cupertino's implementation is very similar to how notifications work on Android. And just like Mountain View's system, that drawer of notifications is revealed with the same downward swipe gesture. Once you do that, notifications



are split by app, and further organized by time or whatever metric makes sense to you (naturally, you can customize the order of these notifications by playing around in Settings). From here, you can tap a notification, which opens the corresponding application and subsequently clears all alerts in that category. Otherwise, you can dismiss the entire swath of notifications by tapping the "x" across from an app's name.

Among the notifications, you'll also find interactive weather and stocks widgets — which we presume is Cupertino's answer to the naysayers who've always wanted icons in the springboard to reflect more than sunshine and 72-degree temps. Stuffing this (location-aware!) info into the Notification Center makes more sense, as you can now glance at it any time, as opposed to jumping to and from the springboard. As of now, third-party apps don't have the luxury of placing widgets in Notification Center, which is a shame — hope-

fully we'll see this opened up by next year's release.

Another thing you should know about the notification drawer is that it is intentionally tough to open when you are doing something full-screen, such as playing a game or watching video. In these cases, the gesture to open the drawer must be replicated twice, which eliminates haphazard openings — say, when you're slicing your way to a high score in *Fruit Ninja*.

So does it work? In a word, yes — it's certainly far better than its antiquated predecessor (which, curiously, still lives on in Settings, where it's enabled for phone alerts and can be re-enabled on an app-by-app basis). And yet, we can't help but wonder why Cupertino stuck with the old design for four years before providing us with a refresh. Maybe we were expecting something more radical — say, notifications that sync across devices — but we're glad it's here, and boy does it make iOS more livable.



iMessage

Free texting apps, prepare to meet your maker. iMessage could be the offspring of the old Messages app and BBM — except they both agreed to not use the latter's ghastly PINs, which are oh-so 1999. The end result here is a messaging app that seamlessly takes the reins from its predecessor, but allows you to skirt messaging fees when chatting up other iPhone / iPad / iPod touch users who also have iOS 5 installed. It's not an earth-shattering concept in and of itself; its brilliance lies in its sleeper execution. Messages are composed just as before, except if the recipient has a phone or email registered with Apple, the device steps around messaging fees. If not, your iPhone will gracefully scale

down to SMS (or MMS if you're slinging more than just text) to relay your prose. It's dead simple, and frankly a breath of fresh air over futzing with third-party apps or expending time and effort in telling friends you've switched to a new (Google Voice) number.

So how does the behind-the-scenes magic work? Upon completing the "To" field in the new message, a query is sent to the mothership asking if the recipient supports iMessage. If the receiving party can, their contact (and subsequent message) bubbles are garnished in blue. If not, they'll appear green. From there on out, messaging is just like it's ever been, except that sending both iMessages and conventional texts happens a lot faster than on previous versions of the OS. And because iMessages are sent over data and not the traditional SMS channel, you can send them gratuitously even when you have WiFi access, but little or no cellular connection.

But what if you're messaging someone and you don't know what email or phone number has been registered with Cupertino's servers? Magic, apparently — when we tried texting a colleague's Google Voice number (which wasn't recognized by the service), our iPad suggested a phone number and an email that was. It's that kind of attention to detail that's always made iOS shine, and iMessage is no exception.

It is also an innovation we welcome with open arms — after all, texting charges are egregiously high and besides, how often do you see a device

and / or OS maker take aim at the carriers that feed it? While you won't be able to go entirely text-free (at least not until Apple opens up the protocol to others), we have to give props for audacity alone — tip of the hat to you, Cupertino.

iCloud

Another marquee feature in this year's release is iCloud — a free, revamped version of MobileMe that brings some significant add-ons. Mail, contact, calendar and bookmark syncing all remain essentially unchanged — apart from their new iPad-esque look on the new site icloud.com. But now, various iOS 5 apps can take advantage of the 5GB free locker on Apple's servers. Updated versions of the iWork suite (Pages, Numbers and Keynote) are one such example, as saving a document in those apps now triggers a push to the cloud, with subsequent pushes back down to other devices registered on the same account. Another iCloud-aware app is Photos, which now syncs the camera roll across all registered iCloud devices. It's worth noting, too, that photos slung across iCloud don't count towards your storage quota. Instead Apple's servers will only keep the last 1,000 pictures taken in the last month — whichever milestone you hit first.

As for the syncing itself, it's pretty much invisible. Documents and photos were flung across our iPhone 4 and iPad almost instantaneously, without any effort on our part.

While iCloud in its current incarna-



tion is nice, we're more stoked for what it could bring in the near future, as developers begin to take advantage of that storage locker. In baking this kind of functionality into every iOS 5 device, we hope it won't be long before we start seeing the kind of continuous client apps we've always dreamed of. Say, apps that remember state across devices and the like. Hopefully we aren't too far off from such wizardry, and it shouldn't take long for developers to wow us with things we've never even thought of.

The service also allows iOS 5 devices to back up into the cloud, against that free storage. But be warned: if you're coming from a previous iOS device, that 5GB won't go a long way — especially if you've got a lot of pictures in your camera roll. You can, of course, fine

tune what gets backed up in the Settings app, but having to pick and choose what makes the cut seems to defeat the whole purpose of, you know, backing up. Seems like the 10GB, 20GB or 50GB worth of additional storage might be a more popular choice than we initially thought.

The final piece in this makeover is iTunes in the cloud. It's also the least spectacular, as it's been available to iOS 4 devices since this June's WWDC reveal and, let's face it, enabling users to re-download content they've already purchased isn't nearly as tantalizing as other features the service has to offer. Still, it's a nice gesture, and could certainly prove useful when you want an episode of a TV Show or a movie, and are within range of fast WiFi but not your home computer.

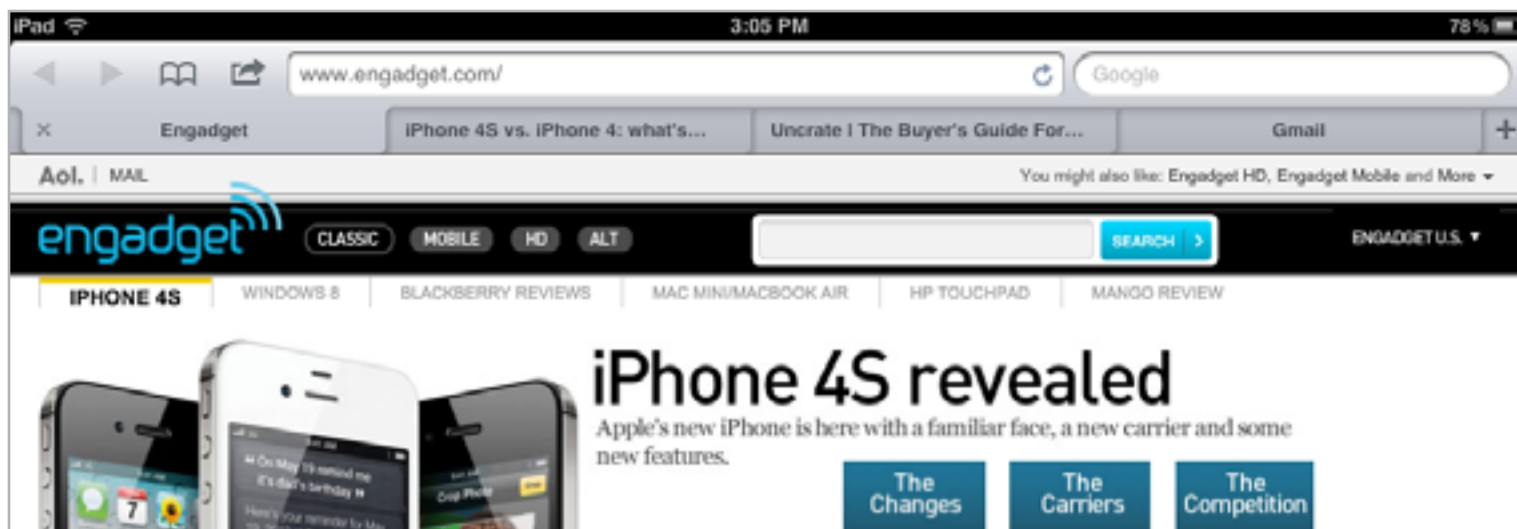
Camera & Photos

This year's release brings evolutionary updates to the Camera and Photos apps.

Beginning with the former, fans of tactility will rejoice at the ability to now take pictures with the volume up button, in addition to the existing onscreen shutter. But while that sounds great on paper, the placement of the volume button and camera lens on the same end of the device isn't ideal, as it's far too easy to obscure the lens with your fingers when taking photos. Another new feature is the grid option, which overlays a 3 x 3 grid over the screen to help you frame shots and abide by that cardinal rule of thirds. Getting to the camera app is easier now, too, as you can double tap the home button at the lock screen to expose a camera icon for quick access to the app. Most important to photography buffs is the addition of an exposure lock, which you can activate by tapping and holding a section of a photo.

In addition to those upgrades related to the new iCloud rollout, Photos gains some light editing features, such as cropping, straightening, one-touch





enhancements, rotation and red eye removal. The first two are particularly fun as you get to make gratuitous use of the pinch to zoom and rotate gestures while you tweak photos to your heart's content. Happily, edits are also non-destructive, so if you've cropped or enhanced and then tapped "Save," re-entering the edit mode later allows you to roll back the picture to its untouched glory. Naturally, these tools aren't going to replace Photoshop, but they've certainly proven their worth in our short time spent with them.

Safari

Safari has matured with this release, poaching features from its desktop brethren. For starters, iPad users (finally) get tabbed browsing, which streamlines the previously laborious two-tap hoopla into a single-tap, page-swapping procedure. For novices, it should also cut down on the accidental opening of the same website multiple times. You're still limited to a total of nine, though, but at least now you can reorder them.

Other new features are Reader and Reading list. Both carry over from the desktop version of the browser, with

the former reformatting content in a streamlined overlay, and the latter helping you save pages to peruse later. If you've ever used Reader on a desktop version of Safari, it works much the same here, stripping content from a page (even stitching multiple pages of pagination in some cases), removing formatting and visual clutter along the way, before presenting it in an easier-to-read overlay. It works, though we suspect you'll make more use of this feature on your iPhone's constrained display than on an iPad.

We were less impressed with Reading List, which is really just a glorified set of bookmarks that keeps track of read / unread links and syncs these across devices. While we like the underlying concept, you will quickly bore of its constricting organization and lack of third-party support, especially when compared to something like, say, Instapaper. That, and it becomes infinitely less useful if you don't also use Safari on the desktop.

Twitter

Twitter integration hasn't changed much since when we first played with it back in June. If you're not up to speed,



the Share icons littered throughout Apple's stock apps now feature a "Tweet" button which brings up controls for propelling photos, links, et cetera into the Twittersphere. To activate the feature, you'll have to enter your log-in credentials in the Settings app as a one-time setup. Apparently, those credentials will also be used by future third-party Twitter apps, should their developers choose to support it, meaning single sign-on goodness for all.

Just make sure you don't have the volume set too high while composing those tweets, as you're likely to be startled by a loud whistle noise that'll sound after you hit send.

From Settings, you can also match Twitter contacts with those in the Phonebook. Which sounds great on

paper, but we have to say, it would be a lot more useful with (cough, cough) *another* social network? We certainly recall seeing builds of the OS with Facebook in the Settings app, so whatever the grudge between Cook and Zuckerberg, let's just bury the hatchet. Please?

Older hardware

After having our iPhone 3G brutalized by iOS 4, we were curious as to how previous-generation hardware would fare with Cupertino's latest OS. In the case of the iPhone 4 and the iPad 2, iOS 5 made these devices feel as snappy as ever. Transitions were smooth, apps loaded quickly and we never felt like new features overwhelmed our device. On the original iPad, much of the same applies. To be clear, iOS 5 didn't make



our original iPad run worse than it does on iOS 4, but if you've ever used a first-gen iPad you know it has some obvious RAM limitations, and iOS 5 certainly won't be the cure-all you've been waiting for. That said, the original iPad is usable with Cupertino's latest release — something we were unable to say during our iPhone 3G's transition to iOS 4.

Miscellaneous PC Free and WiFi Sync

Combined with iCloud, this snazzy new setup assistant means iOS devices no longer have to be tethered to a computer for setup. From then on, iOS 5 devices sync over WiFi if plugged in and iTunes is open on the host computer.

Split keyboard

It's here and works. iOS 5-toting iPad users can enable it by either dragging the keyboard upwards from the bottom right corner, or by pulling it apart with two fingers. The small keys take a little getting used to, but more choice is better than none, we suppose. You'll also notice some interface weirdness in some apps when you're using the split keyboard — we're looking at you iMessage,

and your vast expanse of grey drab.

OTA Updates

Remember when you had to download an entire 500MB image of iOS, just to plug a security vulnerability? Updates for iOS 5 will be released in delta form, meaning only the parts that change are what has to be downloaded. And because they're smaller, they now come to you over the air and can be installed sans-PC.

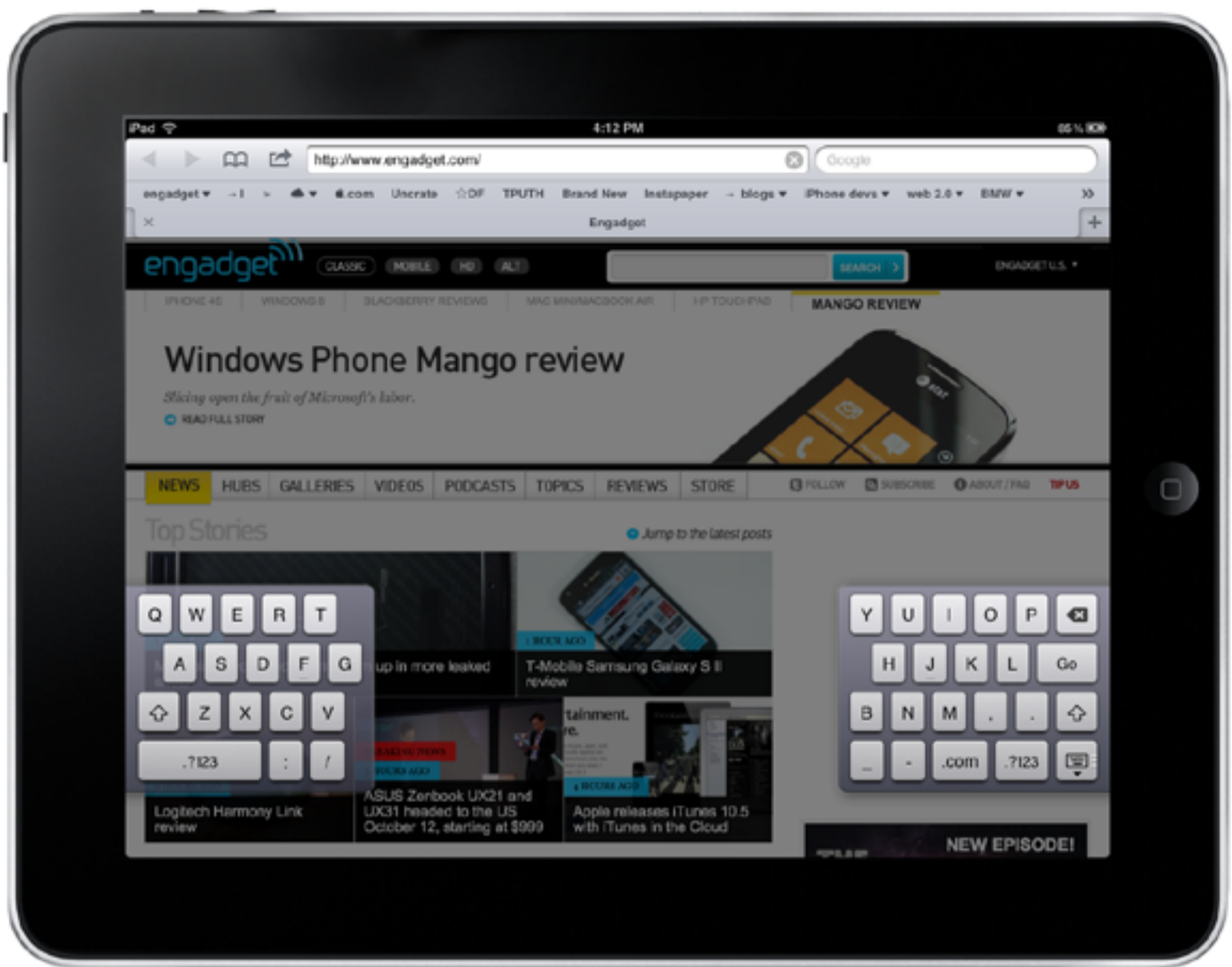
AirPlay Mirroring (for iPad 2 and iPhone 4S)

Second-generation AppleTV owners get video mirroring of their iPad 2s without wires. To be verbose, it's the entire UI, not just select content (like photos or a video) like on all other AirPlay-enabled devices. Think of it as the wireless equivalent of the HDMI or VGA accessory cables for the iPad 2 and something to watch when game developers start exploiting it.

Multitasking gestures (for iPad 2)

You'll recall that developers could enable these back on the original iPad back in iOS 4. Three-finger and four-finger swipes





are the name of the game here, allowing you to jump to and from apps without double tapping the home button or making a roundtrip to the springboard.

Mail

Flags and rich text editing make an appearance in this release, but we were most impressed by the gesture that reveals mailboxes when you're using your iPad in portrait mode. Just flick right from the left edge to make managing emails in portrait mode, oh-so much easier.

Reminders app

It's not a looker (maybe we've been spoiled by apps like Flow or Orchestra), but we suppose it gets the job done. The killer feature however, is the location-based alerts, which can be triggered upon arriving or leaving certain places. When combined with Siri, game over.

Dictation (4S only)

Android users have been enjoying voice-to-text translation for what seems like eons, and with iOS 5, Apple also supports the feature. However

OTHER MISCELLANY

despite being demoed at the “Let’s Talk iPhone” event it would appear the feature is only available to iPhone 4S owners — we’ll add impressions here when get to play with it.

Newsstand

It was inactive during all seven beta releases and it’s still inactive here. Not that there’s really much to write about a centralized shelf for all your magazines anyway. To recap, new issues of your favorite zines, download in the background, banishing manual magazine updates forever.

iTunes Match

The \$24.99 service debuts “late October” so we’ll circle back then with impressions on Apple’s foray into music subscriptions.

Wrap-up

While the distance between iOS and

its contemporaries has shrunk, Apple’s baby is certainly more polished and feature-complete than it ever has been. With gripes like notifications and wireless sync behind us, Apple’s been able to hone in on breaking new ground with features like Siri, iCloud and iMessage — all in an extremely refined way.

And that’s when it hit us. Other than turn-by-turn navigation, more multi-tasking APIs and some delectable widgets, there isn’t much, headline-wise, left on Apple’s hit list for iOS 6. The OS that once was functionally limited, yet smooth and pretty, has blossomed into something that is powerful and yet also slick. It’s certainly not the OS for everyone, but from a macro perspective, you can’t argue with it’s laser focus on attention to detail.

Your move, Ice Cream Sandwich. 

Dante’s been tinkering with gadgets since age 4.

BOTTOMLINE

iOS5 / APPLE

PROS

- Revamped notifications are a breeze
- iMessage intelligently skirts messaging fees
- Polished and bug-free release
- Cloud syncing and backups work well

CONS

- Siri requires iPhone 4S
- No turn-by-turn navigation

As glaring omissions dwindle, iOS has matured and hit its stride — allowing Apple to wow us with new features like iMessage and iCloud.



Growing Up Geek: Ben Heck

BY BEN HECK

Welcome to Growing Up Geek, an ongoing feature where we take a look back at our youth and tell stories of growing up to be the nerds that we are. Today we have Hacker Extraordinaire (and host of his own show), Benjamin J. Heckend-

As a kid growing up in Richland Center, WI, I sometimes had to be extra creative in finding things to occupy my time, and my creativity naturally gravitated toward all things technology. Soldering, erector sets and deconstructing toys were the epicenter of my young life. Taking things apart to find out how they worked was essentially a rite of passage for me to becoming the geeky man I am today.

I got my first taste of programming in elementary school on a collection of even-then old Apple II's, but I really got into it wholesale when, at age 11, I got my first computer — an Atari 800. While still ancient for the time, I did a lot of programming on it and learned a lot of fundamentals that are useful to this day.

During my teenage years, I started to



veer off the technology path a bit and dipped my feet in the pool of independent film making. I bought a camcorder and just started filming movies, using two VCRs taped together to edit whatever footage was captured (little did I know how useful this skill would be later in life!). Aside from film making throughout my young adulthood, I dabbled in many tech-related hobbies, but never forgot my love for gaming, electronics and programming.

At age 22, I had my first “real job” as a graphic artist and I was able to use my layout and design skills to build my first mod — I hacked an Atari 2600 gaming system to make it smaller, portable and complete with a graphic arts-inspired enclosure. I created a “Geocities” site about the project to share with friends, and I quickly realized how many other “geeks” there were with interests in obscure hobbies. At this point in time, the “geek culture” hadn’t really caught on so I was very surprised by the level

of interest I received in the mod — anywhere from 50-75 emails a day!

After a segment aired on TechTV in 2004, where I talked about the process of making portable units, I was offered a book deal from Wiley Publishing, Inc., and my book *Hacking Video Game Consoles* was born.

Looking back, modding the Atari 2600 was probably the best idea I have ever had; it certainly opened many doors for me career-wise, and it taught me to keep pushing forward on what I was really passionate about, a lesson I’ve come to appreciate greatly throughout my life.

After the book, I was lucky enough to eventually turn my addiction to video games into a career, entering the corporate working world in 2004 building video game prototypes for a range of companies. It was then that I realized being a geek was an incredibly positive attribute that allowed me to use my unique skills to help those with limited accessibility.



My newfound career allowed me to attempt another build I'd always wanted to try: a pinball machine. I combined my fascination with the mechanical aspects of pinball and my appreciation for the work of thespian Bill Paxton and thus, the Bill Paxton Pinball Machine was born! I spent many grueling hours building that machine, but I loved the challenge and learning how pinball machines work — and it's always fun to inspire others. I have a few ideas for future pinball machine builds, but my fellow pinball junkies will just have to wait and see if those pan out.

That brings us to the present. Last year, I embarked on a new journey as internet television host of element14's "The Ben Heck Show," an online show dedicated to educating viewers on the underlying technology powering each of the featured mods. With my interest in modding and element14's collaborative engineering community, it was a perfect match. I'm doing what I love and it complements element14's ongoing commitment to help like-minded individuals collaborate and exchange ideas to inspire new and innovative designs.

Season One was a glaring success, and I attribute that to the enthusiasm and interaction of the show's viewers.

As I embark on an all new second season of "The Ben Heck Show," set to go live on October 10th, I plan to dig even deeper into my inner "geek" and hopefully try my hand at some new and interesting hacks and builds, like using embedded systems and products I'm not familiar with to not only teach the audience what they can be used for, but teach myself as well. I was fortunate to realize early on that if you want to do something, do it. Never let fear be a factor and dissuade you from accomplishing big things. The path to becoming the person I am today has been a winding one, filled with twists and turns galore, but deep down I always knew that "geek" is not only who I have become, but what I was born to be. And so my story goes: toy-destroyer turned video gamer turned programmer turned movie maker turned author turned electronics hacker / modder show host. It's been the ride of a lifetime, and I wouldn't trade my journey to "geeky" adulthood for the world. d

Ben Heck has been a contributor to Engadget, a staple of our DIY coverage and a huge friend and asset to the entire hacker community. He even let us inside of his kingdom for an Engadget Show shoot. These days, he can be found on Twitter (@benheck) and schooling us all as host of "The Ben Heck Show."



review

Nikon 1 J1

Nikon's first mirrorless camera has a stylish design, but performance misses the mark for pro and other advanced users.

BY ZACH HONIG

So, Nikon finally has a mirrorless camera, after what was quite possibly the most dramatic launch event the company has ever conducted. Sure, competing models from Panasonic, Olympus and Sony have already reached the second, or even third generation before Nikon lifted the veil on its J1, but did last month's long-awaited announcement bring us the ILC to rule all ILCs? Well, no, not at all. Nikon isn't targeting pros or even advanced

amateur shooters with its latest addition to the interchangeable lens camera family. Instead, the company is marketing its J1 to soccer moms (and dads), fashion-conscious young folk, and casual shooters who want some of the versatility of a DSLR, but are willing to sacrifice excellent image quality for a more compact design. But what about the rest of us?

Will Nikon one day reward our patience with a true class competitor?



Perhaps, but that's definitely not what we have here. Nikon built the \$650 J1 "from the ground up" — a reference to its 10.1 megapixel, CX-size sensor with a 2.7x crop factor, along with a handful of quirky features that we probably won't use, but that some of you (or perhaps your family members) may love.

Hardware

The J1 is cute. Like, fluffy white kitten cute. It brightens your day just by hanging around and being fun to play with, but you probably won't be impressed when it comes time to capture some serious photos (like trying to get that tiny kitty to snatch up a family of mice). The rounded edges, well-disguised components and overall clean finish make it clear that Nikon designers put a lot of care into this camera's physical appearance. It's just as much a fashion accessory as it is a relatively capable imaging device, and, depending on which color you choose, it's likely to make quite a statement.

There's no flip-up LCD, as there is on Sony's NEX series, so you'll be spending a lot of time holding the camera at eye level. Fortunately, the 460k-dot, three-inch LCD has a decent viewing angle, which will come in handy if shooting from below or above is an

absolute must. The display occupies most of the two-tone plastic J1's rear, and is complemented by a healthy selection of dedicated controls. A mode dial lets you switch between Motion Snapshot, Smart Photo Selector, movie and still image modes (the latter of which enables exposure mode selections like the default Scene Auto Selector, programmed auto, shutter- and aperture-priority, along with the ever-so-critical manual). You'll find a playback zoom rocker above the main dial, which also doubles as the shutter speed control in manual mode. To the left is a function button, which serves a variety of purposes depending on your mode — exactly what it controls is defined with a text overlay when you switch to a different mode.

Further down is a display button, playback button, a five-position wheel with dedicated self-timer, flash, exposure compensation and auto exposure / focus lock controls, along with an OK selector in the center. There are menu and trash can buttons at the bottom, and a physical flash slider, which releases the tiny (and rather bizarre looking) flash arm. On the colored top panel, a power button, a shutter release and a movie record button sit all to the right of the retractable flash. The video record

button only works when the mode dial is set to video, so you can't simply press it to start recording in any mode. Some users may find the record button's positioning to be a bit awkward — it's at the top right corner, where you'd normally find a power button or shutter release.

Up front there's a lens release button, which lets you swap out the included 10-30mm f/3.5-5.6 kit lens for any of three other compatible 1-series optics, including a 30-110mm f/3.8-5.6 (\$250), 10mm f/2.8 "pancake" lens (\$250), or a 10-100mm f/4.5-5.6, which would be our lens of choice if it cost, say, a third of its \$750 MSRP. Oh, and don't be fooled by those focal lengths — Nikon opted to avoid including the CX sensor's 2.7x multiplication factor, making that last lens comparable to another manufacturer's 27-270mm, for example.

The camera itself is constructed almost entirely of plastic, but it still feels quite sturdy. You probably won't want to drop it on the street or even a football field, as you may have managed to do with one of Nikon's pro-level DSLRs, but we don't see it falling apart or even chipping with heavy use. We tossed the camera in the main compartment of a messenger bag (with the tiny lens cap attached, of course), and didn't notice any markings. The J1 is small and light enough to wear comfortably around your neck, but we opted to keep it out of sight more often than not, if only to avoid the bright white finish attracting awkward stares.

Performance

We certainly weren't blown away by the J1's performance. That \$650 price tag may imply excellent, always consistent shooting, but that just wasn't the case. Instead, we found a camera that did quite well when shooting under a bright sun, but often had trouble selecting the correct white balance, exposing and focusing in dim light. Nikon designed this camera for less advanced photographers — those making the jump from point-and-shoots to ILCs — so we left most of the settings untouched during our test period (after disabling the annoying and unnecessary beep), considering many future J1 owners will probably stick to minor adjustments, and opt to stay away from things like manual white balance and exposure compensation.

We were, however, impressed with the J1's ability to capture sharp, smooth and vibrant video — some of the time. We shot night scenes, a tricky pyrotechnics / fireworks display, and in bright sunlight. Unfortunately, some conditions presented a challenge for the camera when it came to focusing and exposure. We also experienced a flickering issue, regardless of shutter speed. We reached out to Nikon regarding this issue and they suggested that we may not have changed the flicker reduction settings before testing the camera in Japan. While the United States uses 60Hz current, Japan and many other countries in Asia and Europe use 50Hz current, and an adjustment is often needed to




Photo Details: Gondolas at Tokyo DisneySea at sunset. Shot at f/3.5, 1/8 second at ISO 1600. Aperture -priority exposure program.




sample
images




Photo Details: Hanoi, Vietnam. Shot at f/4.5, 1/100 second at ISO 100. Manual exposure for the sky.



It's certainly safe to conclude that the J1 photographs well. That is to say, it made a mighty fine subject when posing before the lens of our NEX-C3.



compensate for this difference, which is particularly apparent under fluorescent lighting.




Surprisingly, the camera offers full manual control while shooting video, letting you adjust the aperture, shutter speed — even the ISO sensitivity — before capturing both HD and slow motion videos. Manual control can be tricky when shooting video when you pan between scenes with varying brightness in a single clip, but aperture priority is an option as well, and the J1 can compensate by adjusting ISO in this mode. The camera can also capture high-res stills while shooting video. But you are limited to 15 stills per video clip (you can reset the counter by stopping and resuming your recording), and the photos you snap in video mode will be captured in 16:9 format. There's also a pair of front-mounted mics for stereo audio capture.

Perhaps our favorite J1 feature is its silent shooting. Because the camera lacks a mechanical shutter (unlike its V1 sibling), you can snap photos undetected, just as you're able to do with a point and shoot. This certainly comes in

handy for photographers who desire a bit of discretion in order to avoid attracting the attention of their subjects. From our experience, again, you're going to want to opt for a more traditional body color — our sample's white finish made the camera stand out much more than an audible shutter ever could. The electronic shutter also enables the camera to capture an image exactly at the same moment that you press the shutter release. The mechanical shutter in traditional ILCs results in a slight, but noticeable delay, that the J1 has managed to eliminate.

Image quality

It's certainly safe to conclude that the J1 photographs well. That is to say, it made a mighty fine subject when posing before the lens of our NEX-C3. But we're more concerned with what happens when those cameras switch roles. Sadly, many of the photos we shot looked like they came from a Nikon point-and-shoot — perhaps even a pricey super-zoom — not a mid-range interchangeable lens camera. The camera offers a native ISO range of 100-3200 with a







“Hi 1” ISO 6400 option. Unfortunately, noise was visible not only at ISO 3200, but even managed to creep its way in at 100 as well.

That said, it’s important to put the camera into perspective. The user base Nikon is going after here with its J1 may not have any qualms with image quality — pics won’t look like they came from a high-end DSLR, but J1 owners will generally be able to shoot the photos they’re aiming to capture, albeit at a slightly lesser quality than some competing models.

Shooting modes

We were generally unimpressed with the J1’s performance, but it’s tough to argue that designers didn’t put significant thought into Nikon’s new ILCs. There are four main shooting modes, all controlled using a dedicated dial on the rear. You’ll likely spend the majority of your time shooting in the familiar still image mode, marked by a green camera icon. From there, you can select between five exposure modes, including Scene Auto Selector, programmed auto, shutter-priority, aperture-prior-

ity and manual. There’s a RAW option when shooting in still photo mode as well. Nothing too fancy. Once you turn that main mode dial, however, things get *pretty* interesting.

There’s a wavy icon representing Motion Snapshot mode. This feature lets you capture one-second silent clips to pair with each image, along with an audio theme (Beauty, Waves, Relaxation and Tenderness). Then it presents the video with a 16:9 still, captured simultaneously. When you go to view your photo, that video clip plays in slow motion (one second becomes two), along with the audio theme you selected before you hit the shutter release. Stills and vids appear together when played back on the camera, but are captured as two separate files (one .MOV and one .JPG) with the same name — so they’re easy to find when browsing your SD card from a computer.

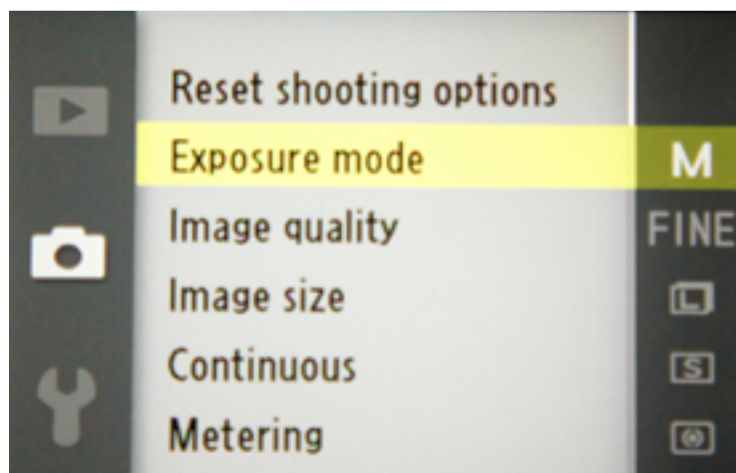
Next up is Smart Photo Selector. As its name implies, this mode allows the camera to snap a handful of consecutive images of your subject, then identify the frame that’s not only sharpest, but that also offers the best composition. Because

of the camera's silent electronic shutter, you won't need to deal with a rapid-fire shutter sound either. This feature is particularly useful for shooting in low light, or if you have a moving subject. Still, we preferred to use the more familiar manual or aperture-priority shooting modes, which offer the highest level of control for advanced shooters.

We've already provided an overview of the HD video capture options, which include 1080/30p, 1080/60i and 720/60p with H.264 compression. The J1 offers a few unique slow motion modes as well, though, including a bizarrely wide 8:3 (think 16:6, not 16:9) slow motion mode that snaps up to five seconds of 640 x 240-pixel video at 400 fps, played back at 29.97 fps. And if you don't mind tiny video clips, you can bump that video capture speed all the way up to a whopping 1,200 fps at 320 x 120-pixel res. You can shoot for up to five seconds in that mode as well, which will net you a whopping three minutes and 20 seconds of footage. It's not pretty, but it gets the job done.

User Interface

Nikon completely redesigned its user



interface for its J1 cameras, making it intuitive enough for newbies to navigate without digging through a manual. The menu is divided into options for playback, capture, and system settings. You'll only see options relevant to the current shooting mode — you can't adjust still photo resolution while in video mode, for example. Sure, it's not ideal for changing a handful of settings at once, since you'll need to jump between modes, but it certainly helps to keep things simple. As we mentioned earlier, there are a variety of dedicated buttons, so you'll really only need to jump into the main menu to make top-level adjustments.

The competition

If you're a diehard Nikon fan who absolutely won't consider a camera from another manufacturer, then you may want to jump past this section. However, more reasonable consumers will definitely want to read on. If the J1 had made it to market two or three years ago, we would have said, hands-down, this is the camera you need to own. Fortunately, we now have a variety of excellent options — perhaps none as sleek as the J1, but we wouldn't go so far as to call any of the competing models ugly.

If image quality is more important than looks, advanced photographers will probably want to search elsewhere. \$650 is a lot to spend on any camera, and when you consider that Sony's NEX-C3 is selling for the exact same price (and is available now), that has been, and still

remains, our first choice. The C3 excels in nearly every area — pro-level control, color and exposure accuracy, and overall image quality — though the J1 does offer a few unique and clever features, including slow-motion shooting and Motion Snapshot, along with that silent shutter. So does that make this camera a close second? Sadly, not by a long shot. That title would go to the Olympus E-P3, which offers class-leading focus speeds and consistent performance. Nikon's new ILC is more class competitive with, say, the novice-friendly Panasonic GF-3 or Pentax's Q (though we haven't yet had a chance to thoroughly test the latter).

Wrap-up

We really wanted to like the Nikon J1 — we've certainly waited long enough for it. So can you blame us for building up some great expectations? Sadly, this isn't the camera we were hoping for. From a range of colorful body options to the cutesy marketing video playing

at in-store displays, it's clear that the company is aiming to make the mirrorless category more mainstream, while perhaps overlooking the wants and needs of its loyal professional and advanced amateur customer base. That said, we can still see the J1 being a big hit, and would even consider recommending it to a few select friends and family members, if it weren't for that \$650 price tag. This camera would be a more reasonable option at, say, \$499 — especially if Nikon opted to throw in *two* lenses — but until that happens, it's difficult to suggest the J1 as a top pick even for beginners. For now, we're just going to have to accept that the Nikon ILC of our dreams has yet to arrive, as we hold on to our credit cards and keep on waiting. d

Zach is a Senior Associate Editor and heads up Engadget's features content. He's also a lifetime lover of everything aviation and photography.

BOTTOMLINE

Nikon 1 J1

\$649.95 with lens

PROS

- Compact, attractive design
- Built-in flash
- Manual control in video mode

CONS

- Inconsistent performance
- Expensive
- Average image quality

Nikon's first mirrorless camera has a stylish design, but performance misses the mark for pro and other advanced users.



AirPort Express, Jabra Freeway and rooting the Nook Color

BY ENGADGET STAFF

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.

Now that we've gotten all the dirty details on the new iPhone, we Engadget editors have a few precious days to kick back, unwind and futz around on our aging gadgets. Darren's traveling from Japan to San Francisco and back — most likely with his AirPort Express in tow, Joseph is rooting the snot out of his Nook Color and Brad's just trying to keep up on podcasts while driving the kiddies around.

Just a guy and his AirPort

Tim already covered one of my favorite travel accessories in a prior IRL, but I couldn't resist the opportunity to gush about my *second* must-have item when it comes time to scurry about. It's

Apple's AirPort Express, and even if it were made by Sanrio, I'd still have to have it. Why? Simple. Most European and Asian hotels that I've been to like to charge you *per connection*, and it's usually some insane rate. A pair of laptops, two or three phones and a tablet — it adds up. With this, I just plug a hardwired connection into the AE, pay once, and get all of my devices online. I know, it's hardly Houdini-ish, but it can save a road warrior quite a bit of cash in the long run. To boot, many hotels offer gratis Ethernet connections but charge for WiFi — with this, you circumvent the issue. There are plenty of reasons to keep a portable router on your person, but for heavy travelers, I see it more



as a requirement than anything else. Just don't leave it plugged into the wall socket when you check out; it's easier to do than you think.

— *Darren Murph*

On the road with the Jabra Freeway

Bluetooth speakerphones carry their weight in gold. As a family man who drives the kids around regularly, I find ample time to listen to podcasts, music and catch up on the latest Twilight audiobook, but my stylish seven-year-old minivan doesn't have the modern connectivity options we'd take for granted if we had one of them 2011 models. What's a tech-savvy geek individual to do? Wireless, of course! Most current smartphones offer the ability to stream audio over Bluetooth, so a speakerphone that can easily clip to the visor in your car can come in very handy — and a healthy portion of them are available for under \$100.

Recently, I've been using the Jabra Freeway, a speakerphone with three speakers, Virtual Surround sound, voice recognition and an FM transmitter. I wouldn't even consider using it without the last two features. Going hands-free on the asphalt is an absolute must-have — not to mention a requirement in many states — which the Freeway does well, offering a litany of voice commands, announcing the name of the incoming caller and prompting you to accept or reject the call. I also enjoy using the built-in FM transmitter because I can finally blare my Taylor Swift beats over the car stereo system. If you drive through an area with a lot of interference, you can change the transmitting frequency. Sure, it isn't perfect; the audio quality is inferior to a CD player or any direct plugin method, and the transmitter can easily be overpower-



ered by nearby devices, so you may be out of luck if you live in a heavily populated area that doesn't have any unused FM frequencies. Cue the sad trombone because it's a struggle that'll occur with

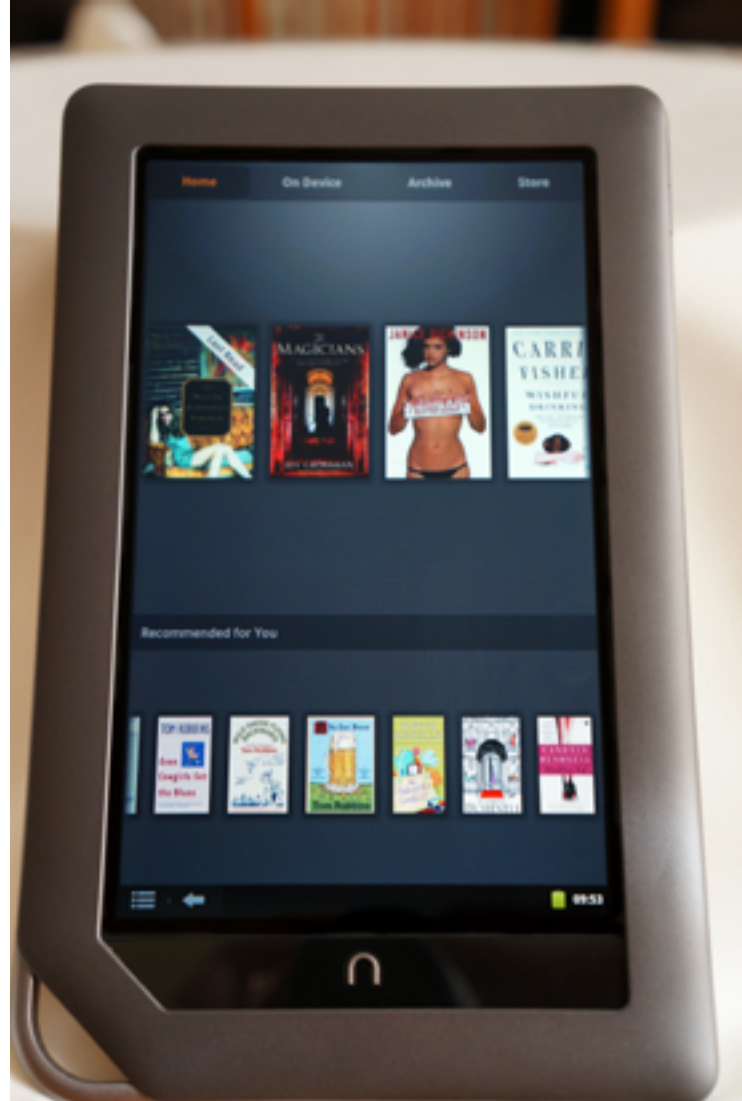
a lot of transmitters, but the Freeway excels in every other way — it picks up my voice easily, connects to my phone within two or three seconds of turning it on and doesn't have a problem pairing with multiple devices. And because the speaker's still considerably louder than most of the competition, I've used it to listen to music outside (and in the house) on more than one occasion. So if you've been looking for a safe way to listen to the Engadget Podcast on your daily commute, the Jabra Freeway's worth a mull-over.

— *Brad Molen*

A new lease on life

Last time I left off, I came clean about my secret life as a ROM flasher. Now, as part of my recovery process, I'm here to pull the curtains back on the newest object of my affection — a refurbished Nook Color. Yes, Barnes & Noble's sleeper hit had been on my forum radar for some time, and I knew exactly what hackery I could get up to with that discounted 7-inch slab in my grips. So, I did what any frugal, hopelessly devoted tech geek would do: I ordered it (ground shipping, of course).

A few sacrificial microSD cards and bootloops of CyanogenMod later, and my Yves Behar-designed tablet had Frankenformed into just that — a tablet. So, how does it fare in its new life as a slate? Surprisingly well, although a heavy amount of interweb sleuthing was required to get Flash, YouTube and full access to the Market up and running



— fixes that involved either sideloading of renegade .apks, or a rejiggering of the preset pixel density. Naturally, the experience is not without hiccups, as there's the occasional force close and touchscreen dead zone to contend with. Typing on the deceptively heavy device, even with an alternative thumb keyboard enabled, is at best cumbersome. At worst? Well, I've relegated all email- and chat-related correspondence to the physical keys of this very laptop.

Despite my sworn allegiance to E Ink displays, I've found the multi-tasking abilities of my modded Nook Color to be a convenience I'm not prepared to relinquish. Switching between Amazon's Kindle app (the irony) to the native web browser, to Twitter and back is not only seamless, but it also feels natural. It's no wonder B&N's dark horse has lit a Fire under Bezo's derriere.

— *Joseph Volpe*



THE RELATIONSHIP APP

BY DUSTIN HARBIN



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3 HOURS AGO iPhone 5 to have 21Mbps HSPA+ data? China Unicom says so

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

37 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

59 MINS 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

1 HOUR AGO

Iceland gets a data center to call its own, still believes in fairies

You say Iceland, we immediately think Eyjafjallajökull -- 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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