TRAVEL ISSUE

DISTRO

072712 #50

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THE TOP 10 DESTINATIONS FOR THE ALWAYS-ON

A ROBOTIC MONUMENT TO THE 2012 OLYMPICS

ISSUE 50

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ESC

On the Cover:
Illustration by Richard Perez for Distro

NOW WITH MORE ROAR

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07.27.12

EDITOR'S LETTER

Mountain Lion is upon us. Apple's Mac OS X version 10.8 is the latest bit of polish on a now 10-year-old operating system that, many would say, is perhaps getting a little long in the tooth. But, with each new release those fangs get more finely honed, and this latest version is the sharpest yet — not to mention one of the cheapest at just $19.99. It carries that price, perhaps, because it offers few "major" advancements over Lion, but there's certainly no shortage of little ones.

I've been playing with ML for about a week now and, while it hasn't rocked my world, I do like it. The new notifications system is slick, the iCloud integration is great (it would be even better if I used an iPhone as my daily driver) and, while I'm not giving up Chrome, the new Safari is a sweet upgrade. I'm firmly convinced Mountain Lion is worth the $20 — and Apple is too. It's so confident, that the Lion upgrade is no longer available. If you're looking to get off of Snow Leopard, it's Mountain Lion or bust. (It is, after all, better and $10 cheaper.)

This time there won't be any USB sticks available, so best find yourself some broadband before embarking on the upgrade. And a cup of coffee. The whole process can take over an hour depending on your download speeds.

The day before Mountain Lion pounced, Apple released its Q3 2012 earnings. They were predictably huge — but not as huge as some had predicted. Net profits of $8.8 billion is a $1.5 billion increase over the same period last year, but the Street wanted even more, with Apple falling about two billion short of some very, very lofty expectations. The outfit sold 17 million iPads, an 84 percent increase over this quarter last year, but Mac sales were up only two percent. Perhaps a more comprehensive refresh of the MacBook line would have helped. Or, perhaps there's no postponing the post-PC era.

We waded through plenty of other earnings reports this week, with AMD's revenues continuing to slide, but still turning a $37 million net profit. Netflix picked up 530,000 new subscribers and managed a slight $6 million profit. Nintendo, meanwhile, saw its Wii sales drop by half over this time last year, but still doubled its profits from the same period in 2011 thanks to booming 3DS sales. Finally, AT&T pulled in a $6.8 billion net profit for the quarter, backed largely by 5.1 million smartphones. 3.7 million of those were iPhones.

EDITOR'S LETTER

Samsung is moving millions too, more than 10 million Galaxy S IIIs worldwide. That's a massive success so far for a great smartphone — one that is sadly a little less great this week thanks to an OTA update pushed by Samsung to disable universal search in an apparent bid to minimize its legal hurt. International models of the phone, once updated, will search only the internet via the integrated search box, not contacts and other on-phone information. So, think twice before tapping "Yes" on the next system prompt you see.

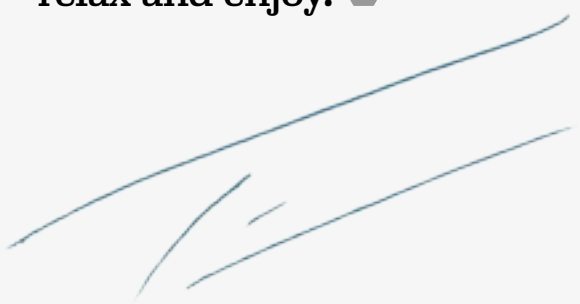
Canon finally joined the mirrorless camera brigade, announcing its EOS M. It's an 18 megapixel interchangeable lens shooter containing basically the same guts as the Rebel T4i in a much more compact body. This includes the 3-inch touchscreen on the back, which you'll unfortunately be using for the majority of the manual controls. It's due out in October and, with an $800 price tag, we're curious to see how it fits in against the definitively cheaper (and seemingly more professional-friendly) Sony NEX-5N.

Redbox launched its Instant online streaming service, but only to a very limited few who were granted access to the internal alpha-testing phase. Details are scarce at this point but it's clear the company, which succeeded in driving the final nails into the coffin of big video rental chains, is now targeting Netflix's streaming services. Verizon is onboard to move the bits, looking to position itself as a major player in the ever-intensifying space of streaming media.

Finally, Sally Ride, America's first female astronaut, passed away this week at the age of 61. She made a sizeable mark in history books with a June 18th, 1983 flight onboard Challenger before dedicating herself to education. She is survived by her partner of 27 years, Dr. Tam O'Shaughnessy.

In this week's Distro we're taking you to a place where photography and exploration converge. A place where photos not only capture what a place looked like, but where that place exists on a map. Darren Murph is your ideal tour guide on this journey, and along the way he'll also tell you just how Nokia Drive's offline mapping functionality works. Look for plenty of other photography-related details and impressions throughout this issue, too. We also have reviews of the Motorola Atrix HD smartphone and Acer Aspire S5 Ultrabook. We have new columns from Ludwig Kietzmann and Ross Rubin, more Recommended Reading and a Q&A from *Fable: The Journey* designer Ted Timmins.

It's a lot of great content, but as ever the most important part is you. This marks our 50th issue of Distro and I'm incredibly proud of how our neo 'zine has grown since last year. Thank you for coming along for the ride. There's plenty more greatness to come, but for now, kick back, relax and enjoy. D



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

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DISTRO
07.27.12

EYES-ON

RAZER BLACKSHARK HEADPHONES

Tap for detail

FOXTROT
TANGO
WHISKEY

COMFORTABLE
MISSIONS

PORTABLE
LISTENING

PHOTOS BY WILL LIPMAN

HOT CANS

Razer may be known for its high-end gaming laptops and mice that can house a dozen thumb controls, but the outfit also dabbles in headsets — the most dapper of which is the *Battlefield 3* BlackShark.

THE BILL

$129

CANON EOS M

There have been plenty of false alarms in recent months, but Canon's first mirrorless interchangeable lens camera (ILC) is finally here. The EOS M is clearly reminiscent of a point-and-shoot, such as the company's high-end PowerShot S100. Consumers willing to sacrifice hardware controls for a touchscreen-driven UI won't be missing out on much else — functionally, the EOS M is a near-clone of the Rebel T4i with the same 18-megapixel APS-C CMOS sensor, DIGIC

Click on product names to read full stories

PRICING:
STARTING AT $800

AVAILABILITY:
OCTOBER

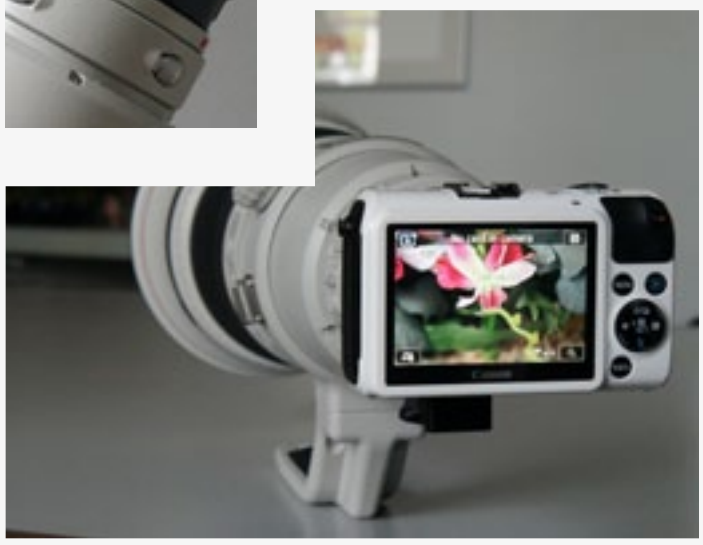
THE BREAKDOWN:
THIS ISN'T GOING TO REPLACE YOUR HIGH-END DIGITAL SLR RIG, BUT IF YOU'RE LOOKING TO SUPPLEMENT YOUR COLLECTION THIS IS CERTAINLY ONE TO WATCH.

5 processor and 3-inch touchscreen.

Even the advanced two-stage focusing system has made its way from the T4i, which utilizes both phase-difference and contrast AF in order to achieve focus more efficiently when capturing video. The housing design and lens mount are unlike any other that Canon has produced, however, combining features from other models without completely eliminating the need for a DSLR, or a compact for that matter. If you can get by without granular controls, you'll do just fine here — the design really is spectacular.

The EOS M feels quite nice in hand, with a smooth, but solid, finish on the black model and a glossy, reflective magnesium alloy coating on the white version. The display is sharp and vibrant, and the touch functionality is accurate and responsive. The touch-heavy interface reminds us of the Panasonic GF3, although the few dedicated buttons and the wheel make it possible to input key selections when tapping isn't ideal, like while navigating the multi-level settings menu.

Our focusing experience was surprisingly sluggish, even with the 22mm and 18-55mm kit lenses. Using full-size EF optics, like the 400mm f/2.8 L, was almost painful, with the camera struggling to adjust when shooting in a dimly lit room. Like image quality, which we weren't permitted to review on a computer, Canon says that the camera's performance is far from final, and given the October ship target, it's reasonable to expect significant improvements before the EOS M makes its way to consumers. Overall, our experience was generally positive, though it should be abundantly clear that the EOS M isn't going to replace your DSLR rig.



PANASONIC'S LUMIX DMC-G5, DMC-FZ200 AND DMC-LX7

Like the Sony NEX-5N, the G5 has a touchscreen round the back, and it is an absolute pleasure to use. It might just be the finest LCD we've seen on any mirrorless camera, with stellar viewing angles and crisp, color-correct reproductions of whatever you're shooting. The build quality is quite good, and lends the G5 a solid feel, but it is a bit bulky — even with Panasonic's svelte 14-42mm X-series zoom lens mounted on the front. Our pictures turned out pretty darn well, if we do say so ourselves. Unfortunately, we weren't able to get a sample video during our time with the G5.

The FZ200 is about the same size as the G5, with slightly different button placements and similar build quality. Naturally, the Micro Four Thirds camera also has a bigger sensor with a higher maximum ISO than the FZ200, but it makes up for such lesser specs with its built-in 25-600mm fixed f/2.8 aperture lens. We can vouch that the lens really is quite capable. The DMC-LX7 is a handsome little camera and it feels more solid than both of the others. While it has a smaller sensor than the larger pair, it still produced quality results.

PRICING:
$499-$799

AVAILABILITY:
AUGUST

THE BREAKDOWN:
WHILE THE G5 WAS THE MAIN ATTRACTION, ALL THREE SHOOTERS PRODUCED QUALITY RESULTS FOR THEIR RANGE.

Click on product names to read full stories

SAMSUNG MV900F

The MV900F boasts several changes that make good on its predecessor's flaws, ranging from an f/2.5-6.3, 25-125mm 5x optical zoom lens to added WiFi. Physically, the camera is similar in appearance, but it's noticeably larger to accommodate that touchscreen. The front-facing display is certainly the star of the show, even enabling gesture controls — you can zoom in and out or capture a shot just by waving your hand. Video capture has also been boosted to 1080p, while a variety of filters let you get creative in-camera. If you opted to hold out on the MV800 while Samsung worked out the kinks, this may be the time to jump. D

PRICING:
$350

AVAILABILITY:
AUGUST

THE BREAKDOWN:
THIS ITERATION PROMISES IMPROVEMENTS ON THE MV800'S SHORTCOMINGS AND SOME WERE IMMEDIATELY NOTICEABLE.

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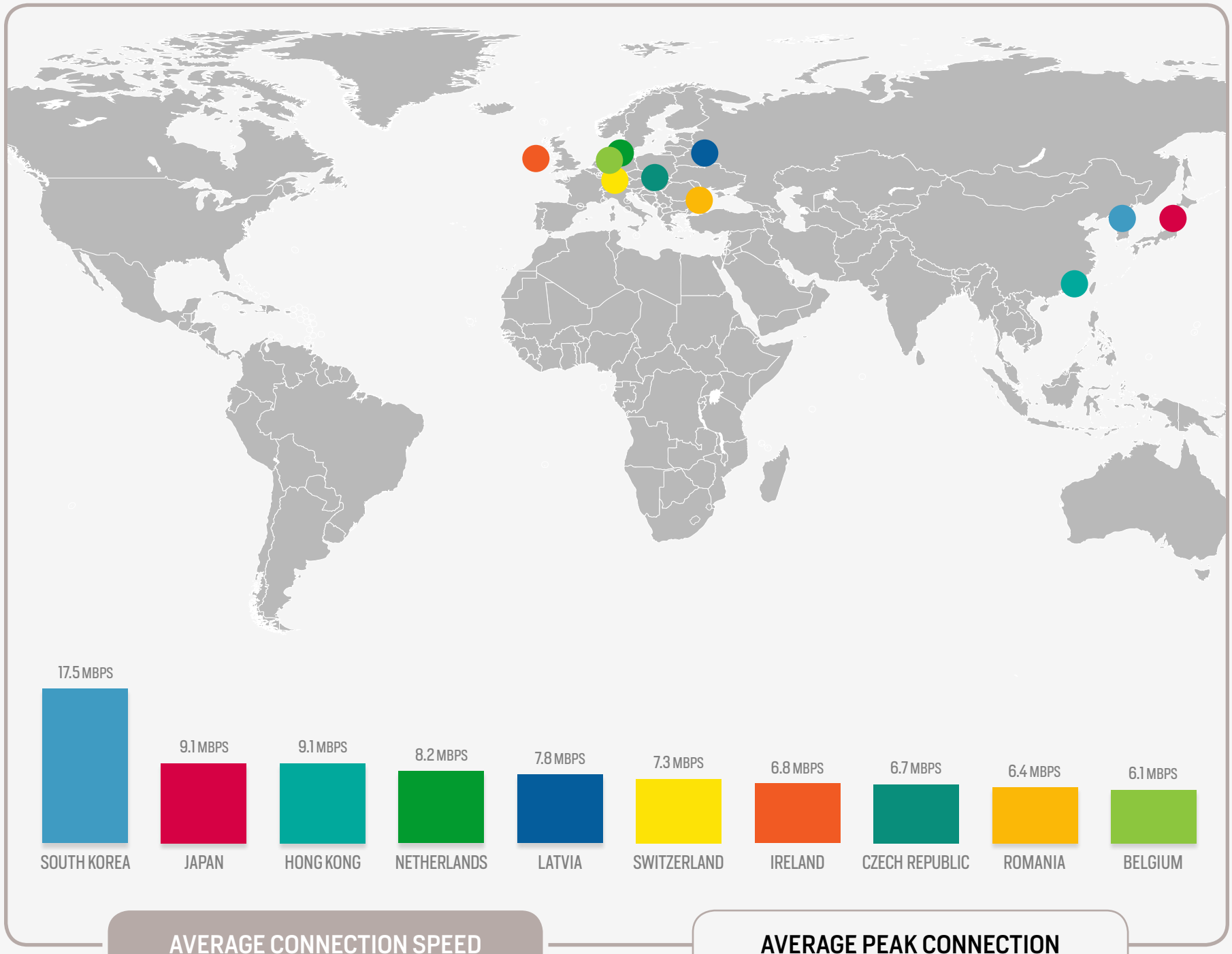
Connected Destinations:
Mapping the World's Fastest Internet



SOURCE: AKAMAI Q4 2011 STATE OF THE INTERNET REPORT

AVERAGE CONNECTION SPEED

AVERAGE PEAK CONNECTION

Earlier this year, Akamai released its most recent State of the Internet Report, revealing, among other findings, the 10 countries with the fastest average connection speeds*. We can't recommended it first hand, but if getting online in a flash is at the top of your list of travel priorities, South Korea is, unsurprisingly, the place to be, with an average connection speed of 17.5 Mbps. Japan and Hong Kong occupy second and third place, respectively, while the United States doesn't even make the list at 5.8 Mbps. It does, however, comes in at number 10 for average peak connection. —*Christopher Trout*

*RESULTS DO NOT INCLUDE MOBILE BROADBAND CONNECTIONS.

CAN I GET A PULSE?

DISTRO
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REACTION TIME

BY LUDWIG KIETZMANN

Psst. Hey, *Final Fantasy Versus XIII*. Are you dead? Don't answer that if you are.

The fate of *Final Fantasy Versus XIII*, which has rarely been seen outside of lavish computer-generated video since it was announced in 2007, has been debated and doubted enough to push the game well into the realm of vaporware. Yoichi Wada, the CEO of Square Enix, took to Twitter this week to euthanize our latest, seemingly premature obituary. "It seems someone is spreading a false rumor about *Versus* being canceled," he wrote. I hope he lets us know as soon as someone starts spreading the real one.

His comment, while presented without evidence, represented the first proper answer to come out of Square, which up until then had done nothing to mitigate the "false rumor." The games press would love nothing more than to quash or confirm the story, and it's one that shouldn't be simpler to resolve. Is your game still in development? Y/N.

The fact that such a binary choice can't make it out from behind the industry's ultra-starched curtain of secrecy is baffling — and becomes gradually less so the more times you see it happen. Either *Versus* is canceled, meaning we can all move on and pray that someone else makes a game about a young, androgynous guy with magical swords, or it's still in development, which is important news for people hoping to purchase it somewhere down the line. There's always lag and confusion between different parts of a company, only one of which is allowed to speak with true authority, but checking a pulse should be more primal than this.

Back in March 2011, journalists asked Konami whether a group of 3DS games from Hudson (which was eventually absorbed into Konami) was alive or dead. At the time, the response was a vague, placating stream of words that didn't respond in the negative or the affirmative. Needless to say, nobody's seen or played *Bonk* or *Bomberman* 3DS since then, so we have to presume they've been tossed into the recycling bin.

With *Versus XIII*, we can imagine there's more happening than what we're privy to — maybe the design direction is changing, perhaps the engine is being altered for different platforms, or maybe Tetsuya Nomura wanted to go back and add a few more zippers. There's a spectrum of information that can be shared with the press at will, from the essential (is the game alive?) to the inessential (what happens at the end?). The problem is that the entire spectrum is

treated with the same schtum, and it's because the overbearing, essential presence of marketing has imbued big games with a ridiculous level of secrecy. It can feel like the starting position on nearly any question, important or not, is that approval must be sought first.

You even see it with games that are (as far as I can tell) in no danger of being cancelled. When *Halo 4* was first being shown off, I asked one of the developers whether you could sprint in the game. The answer? "We're not talking about that right now." Translation: That feature is being held for a later unveiling.

Have you ever seen Hollywood shooting down basic information on their films to the press? If someone asks, "Is Michael Caine in this movie?" and he's signed the contract, the studio will say, "Oh boy, is Michael Caine ever in this movie! His emotional speech will reduce you to a quivering, soggy outline of a human being! Oh, and we've got lots of other actors. Ask us what other actors we have!"

I think developers and producers have reason to be careful about what they say and when they say it (the press hardly has a flawless record when it comes to fairly disseminating quotes), but there's an inherent problem with the way games themselves are discussed now. They're shown off behind bars, piece by piece and according to a blueprint. Inquisitive, enthusiastic lines of questioning are shot down because they came at the wrong time, and spontaneous features might not ever find a spot in the grand scheme of things. We all just want to talk about the games, don't we?

I understand the value of a good secret and the reveal that goes with it, so I'm not suggesting an all-access free-for-all going forward. I am, however, wary of hard secrecy being the default, even when dealing with a simple rumor — hardly a matter of life or death. D

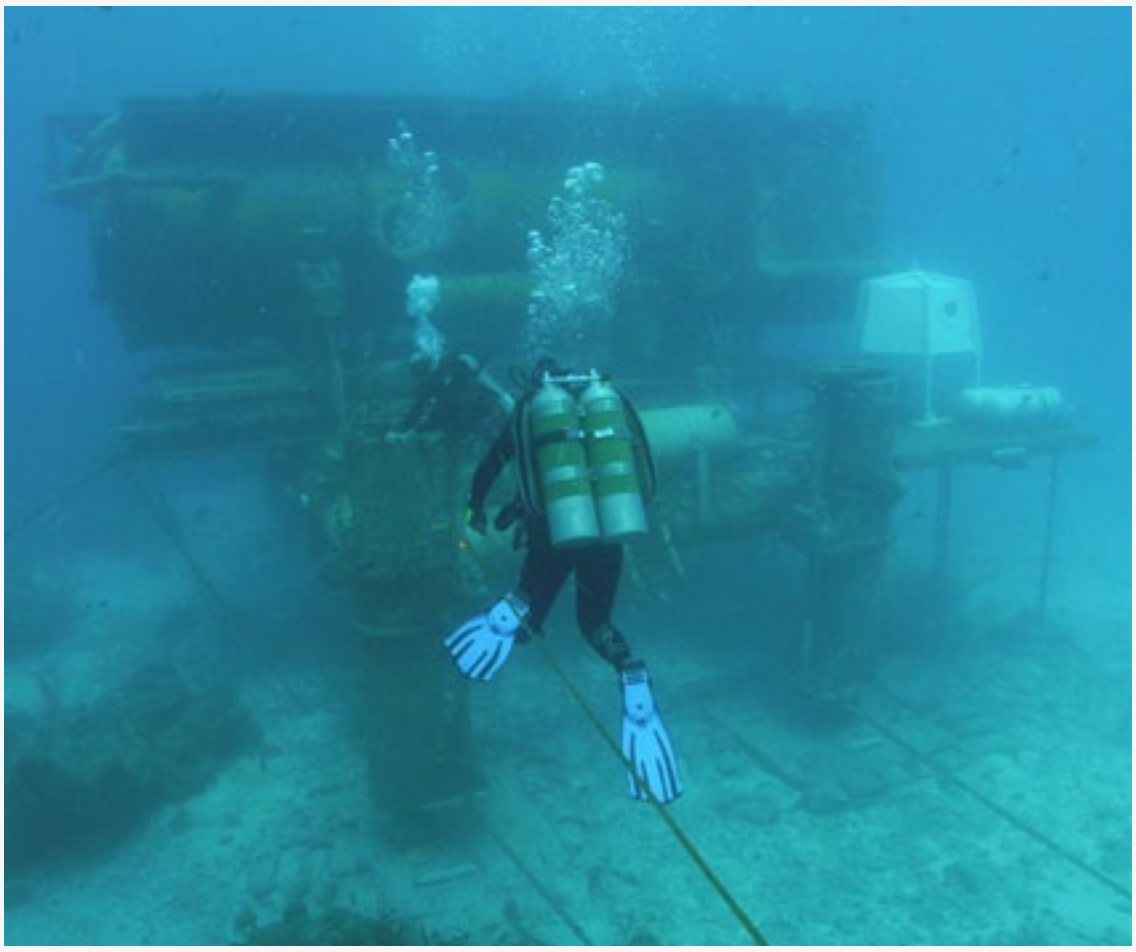
3 NEW GAME RELEASES FOR THE WEEK OF JULY 27TH

WRECKATEER
Xbox Live Arcade – $10

PROTOTYPE 2
PC – $50

Click on game to buy

FOOSBALL 2012
PlayStation 3 / PlayStation Vita – $8



Mission Aquarius

by Brian Lam
Gizmodo

Former *Gizmodo* editor and current *Wirecutter* editor Brian Lam has been producing a number of compelling reports on life and work under the sea lately, and this week-long series on the Aquarius Reef Base for *Gizmodo* is no exception. As Lam explains in the first piece, "Searching for the Ocean's Secrets From the Last Undersea Base," Aquarius is not only the last outpost of its kind, but it may have also seen its last mission now that its federal funding has dried up. That piece also introduces us to National Geographic's Sylvia Earle, and the ensuing articles (some written with Ben Hellwarth) paint a vivid picture of the other "aquanauts" that have taken up residence in the base and the life they face living under the sea for up to two weeks at a time. Naturally, there's also a look at some of the technology at play, including an article on how Aquarius stays connected to the rest of the world.

PHOTO CREDIT: NASA. **MORE IMAGES HERE**

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Iceland's Cheap, Green Cloud: How a Tiny Island Could Drive Big Changes
by Dan Frommer
ReadWriteWeb
Iceland may not be known as one of the great tech centers of the world yet, but, as Dan Frommer reports for *ReadWriteWeb*, the country is hoping to change that. Specifically, it's aiming to be a hub of sorts for data centers, a goal that could be aided by the country's convenient location and made even more attractive by its growing green energy infrastructure.

Russia's Top Cyber Sleuth Foils US Spies, Helps Kremlin Pals
by Noah Shachtman
Wired Danger Room
The name Kaspersky may be familiar to anyone who even casually follows computer security issues, but few are likely as well-acquainted with the man it belongs to. Noah Shachtman goes some way towards correcting that with this in-depth profile for *Wired*, which traces Eugene Kaspersky's rise from KGB training at 16 to one of Russia's richest and most influential figures.

Apes With Apps
by Ken Schweller
IEEE Spectrum
The Motorola Xoom may not be the most notable of tablets, but it's played a key role in one particular area of research. As Ken Schweller explains, he and his colleagues are using a Xoom and a larger touchscreen to study bonobos and their ability to understand human language — technologies that he says are giving researchers "powerful new ways" to study and document ape communication.

REVIEW

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Motorola
Atrix HD

Acer
Aspire S5

MOTOROLA ATRIX HD

The $99 Atrix HD touts some serious specs and a brilliant screen. So is it worth the savings or should you double down on the competition?

By Brad Molen

When it comes to storied products, the Motorola Atrix has already mushroomed into one prolific line of devices, even in its short, 18-month life. It began as the Atrix 4G, entering the market with a splashy press conference at CES 2011, earning our respect as a game-changer, with its fingerprint sensor and innovative Webtop system. Less than a year later we were treated to the sequel, which offered some incremental improvements in specs and design, but failed to dazzle techies the way the original did.

Enter the third installment of the Atrix saga: the Atrix HD. True to its name, Motorola's latest device is the company's first US-bound smartphone to take advantage of a 720p display. It's also the outfit's first handset to ship with Ice Cream Sandwich already installed, and it sweetens the pot with other goodies such as LTE and an 8-megapixel rear camera. The

spec sheet looks promising, and at $99 with a two-year agreement, so does the price. So is it worth your hard-earned Benjamin and two more years with AT&T? Let's find out.

HARDWARE

As far as industrial design goes, the newest rendition of the Atrix might best be described as the lovechild between its predecessor and the Droid RAZR. The front is all Atrix, with the same round corners and dearth of capacitive buttons (it instead opts for virtual navigation keys on the display, just like on the Galaxy Nexus). Instead of the flat plastic back, though, the HD brandishes its hindquarters in RAZR fashion, complete with Kevlar, a non-removable battery and a hump at the top where the camera module and LED flash live. The sides also resemble the RAZR, with the power button and volume rocker on the right; a plastic flap protecting the micro-SIM and microSD ports on the left; and the 3.5mm headphone jack next to a LapDock-friendly micro-USB and HDMI setup.

On the back you'll find Moto took a similar tack as it did with the RAZR series: there's minimal clutter here, with the exception of the typical legal-speak and model information near the bottom. In fact, the only components showing up on the 14.7mm-thick hump are that 8-megapixel rear camera and flash, along with a three-holed speaker grille. Flip it over to the front and you'll notice an even simpler layout: the top is studded with an earpiece, front-facing camera and Motorola logo on the top of the display. A large bezel with only the AT&T globe sits underneath. The Atrix comes in black and white.

> We've actually seen the Atrix HD body before: it has the same design as a Chinese RAZR variant.

After playing with the phone for a few minutes we realized that we've actually seen the Atrix HD body before: it has the same chassis and design as the Motorola MT917, a Chinese variant of the RAZR. It even offers the same screen size and nearly the same dimensions, but adds LTE and brings the camera res down to eight megapixels (from 13 megapixels). And now you know.

At 133.5 x 69.9 x 8.4 mm (5.26 x 2.75 x 0.33 inches) and 4.94 ounces (140g), the new Atrix is thinner, wider, longer and lighter than the Atrix 2 (although it's heavier than the OG). Due to the display's large bezel, it's also just as wide as the HTC One X, which is a bit unfortunate given this device's smaller screen size. The two phones are about equally thick, too, but the Atrix's edges are squared where the One X's are tapered and curved inward. This makes a difference when you're holding it in-hand, as the Atrix ultimately feels bulkier. Still, the comfort level is comparable to the

The rear of the Atrix HD has a familiar textured Kevlar panel.

RAZR Maxx, which is only a little thicker but features the same squared edges. In other words, it's easy enough to keep hold of, but it's still a tad awkward in a way that the One X and Galaxy S III aren't.

We have mixed feelings about the buttons lining the right side of the device. Located directly on the strip nestled between the top and bottom plastic pieces, the power button and volume rocker are set incredibly close to the body of the phone, which makes it more difficult to press. It's even less fun when you're trying to capture screenshots this way (read: by holding down the power and volume down buttons for a few seconds).

The Atrix HD is packed with more radios than you can throw a stick at — to be fair, we're not sure why you would want to lob thin wooden objects at a set of antenna anyway. The most important inclusion here is LTE, which comes in both of AT&T's current bands (700MHz and AWS), and is also backward-compatible with HSPA+ 21Mbps (850 / AWS / 1900 / 2100), UMTS and quadband GSM / EDGE. To support this litany of connection options, the device is powered by a dual-core Qualcomm Snapdragon S4 — an MSM8960 clocked at 1.5GHz, to be specific. This is a welcome departure from past Atrix devices which took advantage of Tegra 2 and TI OMAP — we much prefer the overall performance on Krait chipsets (more on this later).

We were disappointed to discover that even though the Atrix HD supports WiFi Direct, NFC is nowhere to be found. Thus, you won't be able to take advantage of Android Beam, nor can you use your phone for mobile payments once ISIS, AT&T's collaborative effort with Verizon and T-Mobile, is ready for primetime.

The non-removable battery is of the lithium polymer (Li-poly) variety, as opposed to the more frequently used lithium ion. This isn't a new development, especially with Motorola, since the Droid RAZR appears to use the same 1,780mAh Li-poly power pack. Still, it's an important point to bring up. Using Li-poly instead of Li-

ion is a strategic move: these batteries are more resistant to overcharging and offer a lower likelihood of leakage. They're lighter, thinner and can even be molded into non-rectangular shapes (this could be helpful as design choices evolve in the coming years). Sounds great, but there are sacrifices to be made: Li-poly batteries are more expensive, offer less energy density and fewer charge cycles.

Motorola's non-PenTile ColorBoost display shows off.

DISPLAY

Over the last two years, several manufacturers have started branding their own specific displays: Apple has the Retina display, Sony has its Reality screens, Nokia uses ClearBlack and the list goes on. Motorola's trying its hand at the name game as well by offering a Color-Boost display on the Atrix HD. It's a fancy name, but essentially it's a 4.5-inch, 1,280 x 720, TFT, non-PenTile panel that translates into a pixel density of 326ppi.

Having used the RAZR in the past, this display is a fine sight for sore, PenTile-riddled eyes: in fact, it's the most gorgeous we've seen on a Motorola device. The whites are brighter than on the Galaxy S III and One X, the darks are a little lighter and the text looks just as sharp. There's just one area in which the display falls short of our expectations: as arresting as it is when you power on the phone for the first time, colors appear slightly oversaturated, particularly when you're viewing pictures and watching movies. Still, you can't go wrong with a non-PenTile screen that has this many pixels packed in — there isn't a hint of pixelation here, no matter how much you try to find it. Viewing angles are better than the GS III because they extend all the way to the edge, but the One X does just a smidgen better because its screen drapes smoothly over the side while the Atrix HD's comes to an abrupt halt at the edge where it meets the plastic.

The display pops out at you when you first turn on the screen, but colors are slightly oversaturated.

While nearly everything about the display is excellent, we were a bit disappointed Motorola decided not to make the screen even larger than 4.5 inches, which it could have done without widening the device. Bordering the panel is a wide bezel occupied only by a single AT&T logo. That's wasted real estate, especially given the fact that the Atrix's virtual keys take up some precious screen space already. The bezel above and to the sides of the display could have been streamlined to make for more screen. As it is, the device feels unnecessarily gargantuan.

SOFTWARE

Motorola's celebrating an important milestone with the Atrix HD: it's the company's first smartphone to ship with Ice Cream Sandwich already on board. The question is, will it be roughly the same user experience as we've already seen on the Droid RAZR and RAZR Maxx? How much of an impact did AT&T have on the firmware this time around?

One major difference you'll see right off the bat is that the Atrix HD uses three virtual navigation keys on the bottom of the display, rather than capacitive buttons on previous Motorola devices. You'll be able to choose from the standard keys: back, home and multitasking. Indeed, there are no search or menu buttons on the front this time around — those are integrated directly into the UI itself, much like we've seen with Samsung's Galaxy Nexus.

We booted the device up for the first time without needing to set anything up. Instead, we were greeted with the standard Motorola ICS lock screen, followed by a single home panel. This is a pretty interesting move, no doubt, but even more intriguing is the method by which you add more panels to your home: swipe to the left and you're greeted with an "add a page" panel. Here you have the option to set up a blank page or start with a template (you can also manage your existing pages at the bottom). The templates are a modern twist on the old "Scenes" from past models, but with single panels rather than a full suite of them.

The Atrix HD is Moto's first smartphone to ship with ICS.

If you choose to go the template route, you can add pages that are geared toward social networking, AT&T apps, entertainment or getting you places. Each one offers a widget on the top that is related to your area of interest, as well as a row of apps with the same goal on the bottom.

As for the rest of the UI, the app dock and navigation pull-down menu are the same as what we've seen on the legacy phones. The app menu itself retains the same stock look, though it sheds the pull-down menu used in the RAZR's app tab. Swiping through the panels will still bring you to your widgets. No menu is offered here, but long-pressing an app gets it to your home panel, and at that time you can slide it up to the top for more options if you require them.

The carrier's thrown in a grand total of 12 pre-installed apps, which is par for the course. The programs added to the app menu are: AT&T Code Scanner, FamilyMap, Navigator, Ready2Go, Messages, Smart WiFi, Live TV, Kindle, myAT&T, *Real Racing 2*, Vehicle Mode and YPmobile. Fortunately, all of them can be disabled or uninstalled.

As we've seen on the RAZR series, the Atrix also brings SmartActions into the fold. The feature is Moto's simplified take on automation apps like Tasker, in which you can set rules for your phone to follow in certain situations. For instance, if your battery's getting low, you can have the device automatically tweak various settings to ensure your handset won't give up the electronic ghost before you've made it back to a charger. All told, the list of scenarios where you can exert some control is fairly wide: going into meetings, sleeping, plugging in headphones for a workout, connecting a Bluetooth headset when you get in the car or even arriving home after the work day is done. If that's too limiting, you can make up your own rules for whatever miscellaneous situation you think you'll find yourself in. The depth of the service is far-reaching and there are plenty of possible usage scenarios that you can dream up.

PERFORMANCE AND BATTERY LIFE

Interestingly enough, Motorola's keeping quiet on which specific chipset is used in the Atrix HD — a company rep only told us that it's a Qualcomm Snapdragon. No matter: we ran multiple apps that dig deeper into the silicon, and there's absolutely no doubt: it is, as we suspected, an MSM8960. This is the same chipset powering the Samsung Galaxy S III and HTC One X (LTE), and it's primarily due to the LTE modem found on the same die. The dual-core Krait chip is clocked at 1.5GHz and comes with 1GB RAM and an Adreno 225 GPU.

Given the processor inside, we expected the performance to be on par with other phones using it — and we were right. Transitions, animations, multitasking and web surfing were all very smooth, although we did encounter the occasional "burp" when loading apps. But how did it fare when we pit it against its Krait-pack-

AT&T PHONES COMPARED	MOTOROLA ATRIX HD	SAMSUNG GALAXY S III (SGH-I747)	HTC ONE X (LTE)
QUADRANT	4996	**5084**	4784
VELLAMO	2189	2153	**2259**
ANTUTU	6241	6713	**6956**
SUNSPIDER 0.9.1 (MS)	**1325**	1926	1453
GLBENCHMARK EGYPT OFFSCREEN (FPS)	55	54	**56**
CF-BENCH	9217	9439	**9479**
BATTERY LIFE	5:30	**9:10**	8:55

SUNSPIDER: LOWER SCORES ARE BETTER

ing competitors? Let's see.

For a phone with a 1.5GHz dual-core Snapdragon S4, the Atrix HD's results aren't mind-blowing, but they're at least consistent with similar devices. One area that left us particularly impressed is the SunSpider test, which yielded a score of 1,325ms — these are the best results we've ever seen pop up on a phone to date. Indeed, we didn't see any sort of tiling or struggling when perusing the web.

One glaring flaw that left us disappointed was the short battery life. In our standard rundown test, it lasted only five and a half hours before shutting down, which is nowhere close to what we've enjoyed on AT&T's Samsung Galaxy S III and One X. In terms of average everyday use (listening to music, taking a few pictures, writing and checking emails, a couple phone calls and a steady dose of social networking are just a few examples of our activities) the Atrix HD eked out 11 hours of runtime. This ultimately means that most days, you'll be scrambling for your charger just around the time you get home from a standard day at the office.

We were satisfied with the audio quality when listening to music and watching movies. The sound was definitely crisp and clear, especially when taking advantage of an equalizer, and we could pick out plenty of tiny details in some of our favorite songs. The external speaker is also quite loud, though it naturally doesn't offer the same level of clarity you'd enjoy with headphones.

Happily, the call quality is pretty satisfying. We didn't encounter any static, tinny sounds or warped voices on either end. The noise-cancelling mic also worked well — when standing in a noisy room, our friends on the other end of the line could barely tell we were next to anyone at all.

We're much obliged to AT&T for not

Our standard video rundown test lasted only five and a half hours before the phone died.

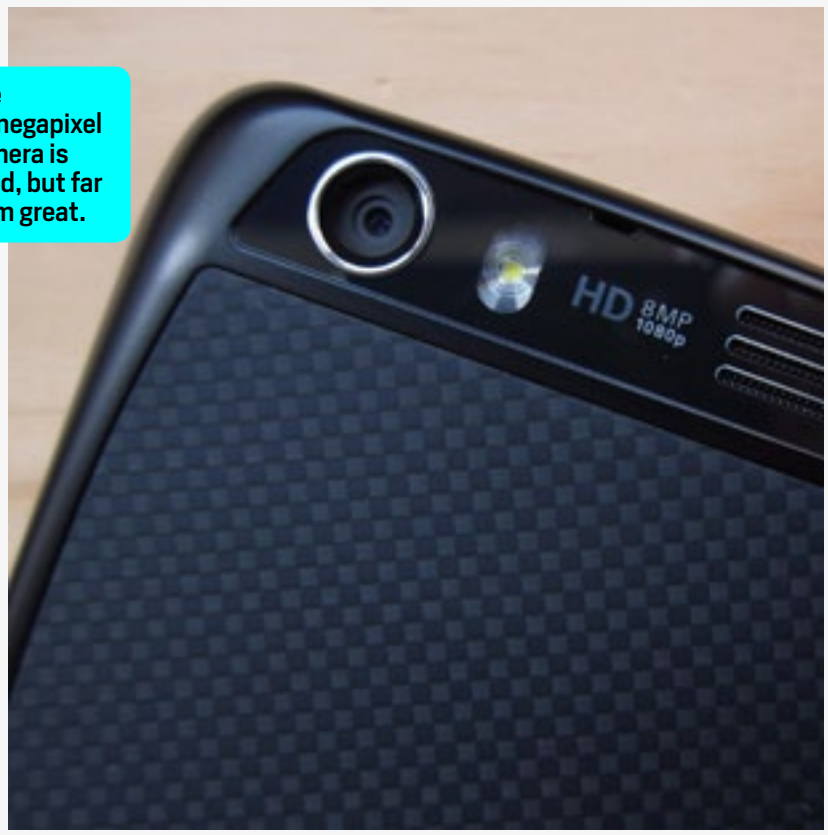
adding the term "4G LTE" to the phone's official name — one acronym is enough, if you ask us. Whatever you call it, that connectivity is ever-present and reliable. We had no problem connecting to AT&T's next-gen network in New York, with the phone pulling down roughly 25Mbps on average (and delivering 15Mbps up).

By offering both GPS and GLONASS support, the Atrix HD has the best of both global positioning worlds, and it performed flawlessly during our travels. It got a lock on our location within a few seconds and followed us as we drove around.

CAMERA

With a few exceptions (the ZN5 and XT720 come to mind) Motorola's handsets aren't usually remembered for their cameras. The Atrix HD continues this trend; there's nothing terribly wrong with this 8-megapixel shooter, but it's hardly a bellwether for newer devices either. Stills are generally decent, though they suffer from some over-sharpening and paintbrush-like artifacts in complex textures. While colors can be balanced given optimal lighting, the camera struggles with proper exposure in high-contrast conditions. There's room for improvement with low-light performance, too, especially when it comes to noise and white balance. We experienced some issues with the single LED flash, which often fires with the wrong intensity. On the plus side, shutter lag is virtually absent thanks to the fast autofocus and the shooter does a better-than-average job with indoor pictures. Video recording is handled at up to 1080p and 30fps with continuous autofocus and stereo audio. Quality is reasonable, with the same caveats we mentioned for photos. Despite a healthy 15Mbps bitrate, we experienced a series of dropped frames during capture, along with a lower frame rate in low-light — down to 20fps indoors.

In terms of camera UI, the Atrix HD is almost a dead ringer for the Droid RAZR, meaning it shares many of the same limitations. Some controls obscure parts



The 8-megapixel camera is good, but far from great.

of the viewfinder, making it difficult to properly frame shots. Combine this with a display that washes out in direct sunlight and tends to over-saturate colors, and it's a recipe for frustration. While the camera features panorama and burst modes, there's no HDR option — in fact, a lot of standard settings like image size, white balance and ISO are nowhere to be found. We also found a niggle with the flash setting, which returns to automatic each time the camera app is started. Thankfully, the on-screen shutter button locks focus (but not exposure) when tapped and held, allowing you to reframe and then release your finger to take the shot. Color filters and touch-to-focus are also on the menu, and video recording offers several helpful microphone settings, including one for noise reduction and another for loud environments. In the end, this shooter gets the job done — it's not perfect, but most users will be able to coax some worthy pictures out of it.

PRICING AND COMPARISON

Throwing down $200 on-contract for top-tier phones is the norm these days, so we were pleasantly surprised to see the Atrix HD hit AT&T's lineup at half that price. A quick perusal of the specs suggests that Moto's new flagship isn't too far off from what the Samsung Galaxy S III and the HTC One X are offering at a premium. It's also a

The Atrix HD and its pricier competition, the S III and One X.

FEATURES	ATRIX HD	SAMSUNG GALAXY S III (SGH-I747)	HTC ONE X (LTE)
PRICING	$100.00	$200.00	$200.00
DIMENSIONS / WEIGHT	5.26 X 2.75 X 0.33 INCHES (133.5 X 69.9 X 8.4 MM) / 4.94 OZ (140G)	5.38 x 2.78 x 0.34 inches (136.6 x 70.6 x 8.6 mm) / 4.73 OZ (134 G)	5.31 X 2.75 X 0.35 INCHES (134.8 X 69.9 X 8.9 MM) / 4.55 OZ (129 G)
SCREEN SIZE	4.5 INCHES	4.8 INCHES	4.7 INCHES
SCREEN RESOLUTION	1,280 X 720 PIXELS (326PPI)	1,280 X 720 PIXELS (306PPI)	1,280 X 720 PIXELS (312PPI)
SCREEN TYPE	TFT	SUPER AMOLED HD	S-LCD2
BATTERY	1,780MAH LI-POLYMER	2,100MAH LI-ION	1,800MAH LI-POLYMER
INTERNAL STORAGE	8GB	16GB	16GB
EXTERNAL STORAGE	MICROSD / MICROSDHC, NONE INCLUDED	MICROSD / MICROSDXC, NONE INCLUDED	NONE OFFERED
REAR CAMERA	8MP, AF, LED FLASH, F/2.4	8MP, AF, LED, F/2.6	8MP, AF, LED, F/2.0
FRONT-FACING CAM	1.3MP (720P VIDEO)	2MP (720P VIDEO)	1.3MP (720P VIDEO)
VIDEO CAPTURE	1080P (30FPS), H.264 / MPEG4	1080P (30FPS)	1080P
NFC	NO	YES	YES
RADIOS	LTE 700 / AWS; HSPA+ 21.1MBPS, 850 / 1900 / 2100MHZ; GSM / EDGE QUADBAND	LTE 700 / AWS; HSPA+ 21MBPS / UMTS 850 / 1700 / 1900 / 2100; GSM / EDGE QUADBAND	LTE 700 / AWS; HSPA+ 21.1MBPS, 850 / 1900 / 2100MHZ; GSM / EDGE QUADBAND
BLUETOOTH	V4.0	V4.0	V4.0
SOC	QUALCOMM SNAPDRAGON S4 MSM8960	QUALCOMM SNAPDRAGON S4 MSM8960	QUALCOMM SNAPDRAGON S4 MSM8960
CPU/GPU	1.5GHz DUAL-CORE / ADRENO 225	1.5GHz DUAL-CORE / ADRENO 225	1.5GHz DUAL-CORE / ADRENO 225
RAM	1GB	2GB	1GB
WIFI	802.11 B/G/N/A	802.11 B/G/N/A	802.11 B/G/N/A
OPERATING SYSTEM	ANDROID 4.0.4, MOTOROLA UI	ANDROID 4.0.4, TOUCHWIZ UI	ANDROID 4.0.3, SENSE 4 UI

The Atrix HD comes in either a black or white exterior.

clear winner against some of other $100 Android contenders, including the Sony Xperia ion, which runs Gingerbread and a Snapdragon S3 processor, and last year's Galaxy S II.

WRAP-UP

What can we say? We love the Atrix HD as a sub-$100 offering on AT&T, and can't help but marvel at what Motorola was able to deliver at that price point. If you've always wanted a RAZR on AT&T, the Atrix HD is your best bet — and it offers a more impressive resume of specs, too. Even if you're turned off by the terrible battery life, this device could still be awfully tempting. If money is no object, we'd still recommend the HTC One X or Samsung Galaxy S III over this, but this is nonetheless Motorola's most compelling AT&T device in a long time, and it's worth a long, hard look. D

Myriam Joire contributed to this review.

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

BOTTOMLINE

MOTOROLA ATRIX HD (AT&T)

$99 (CONTRACT)

PROS

- Krait processor brings solid performance
- Great specs for the money
- Nice build quality

CONS

- Dismal battery life
- Slightly oversaturated display
- Camera falls short of the competition

BOTTOMLINE

The Atrix HD is the best AT&T Android device you can get for under $100, though it doesn't match the One X and Galaxy S III despite having similar specs.

REVIEW

ACER ASPIRE S5

It sports a motorized port cover and a $1,400 price tag. Is Acer's Aspire S5 more than just a pricey Ultrabook relying on a gimmicky trapdoor?

By Dana Wollman

With dozens and dozens of Ultrabooks on parade, you'd be forgiven if one skinny laptop with an ultra-low voltage processor started to look like the next. Even so, it's tough to forget the Acer Aspire S5: of all the ultraportables we've seen these last nine months, this is the only one with a motorized port cover. Yeah, *that* one. It's an intriguing product, to be sure, and the stakes are especially high given that $1,400 price: you'd have to *really* enjoy that form factor (and everything else) to choose it over some less expensive ultraportable. So is it worth it? Is that

drop-down door anything more than a gimmick? Questions for the ages, and ones we'll tackle in our full review.

HARDWARE

Back in January when it was announced at CES, the S5 was touted as the "world's thinnest" Ultrabook, at 15mm (0.59 inches) thick. Nearly seven months later, we're not sure the S5 still qualifies for that title (the 13-inch Samsung Series 9 widens to 0.5 inches), but no matter: it still cuts a skinnier figure than most of the Ultrabooks we've tested. In contrast to last year's Aspire S3, which costs about half the price, the S5 marks an improvement in craftsmanship, with magnesium alloy now covering the lid, bottom *and* palm rest.

No doubt, it feels sturdier than the S3, but the build quality is still unremarkable compared to other Ultrabooks, especially other high-end ones. You might argue, for instance, that the S5's plastic keyboard deck and bezel are part of the reason it weighs a light 1.35kg (2.98 pounds), but the Series 9 is made of unibody aluminum and still weighs about four-tenths of a pound less. Ditto for the new MacBook Air, which weighs 2.96 pounds, or the metal-clad ASUS Zenbook Prime UX31A, which comes in at 2.86 pounds. We could go on, but you get the point: the S5 feels durable, but lacks the flair you'd expect.

Obviously, the conceit of the S5 is that most of its ports are tucked behind

The S5 feels durable, but lacks the design flair you'd expect from a premium machine.

MagicFlip, that motorized drop-down door on the laptop's rear edge. Ignoring for a moment how annoying it is to have all the key sockets located back there, it's a pretty good selection of ports: in addition to two USB openings, it has Thunderbolt and full-sized HDMI sockets, both rarities for Ultrabooks (heck, Thunderbolt ports on PCs are rare, period). Not all the openings are hidden, though: on the notebook's right edge, you'll find a 3.5mm headphone jack, while the power button and memory card reader sit on the left. Thought you'd find the power button on the keyboard deck? That space is home to the button controlling the drop-down door (much more on that later, of course).

The S5 isn't the skinniest Ultrabook, but it's still quite thin.

KEYBOARD AND TRACKPAD

Since Acer released its first Ultrabook last fall, the company has unveiled two more models, each of them marking a step up in overall quality. But one thing's remained constant: that flat, cramped keyboard. The keys here are quite lacking in travel, though they're easy enough to master. All told, they're no shallower than the ones on the Series 9, which we neither loved nor hated. The problem is, unlike Samsung's layout, which is fairly well-spaced, the S5's arrangement gets mighty crowded, especially toward the periphery where many essential buttons lie. The Tab key is tiny, for instance, as are Caps Lock and the four arrows, which you could easily miss if you tried to hit them without looking. Also, this keyboard isn't backlit, though you'd probably expect it to be on a machine this expensive.

The build is better, but the S5's keyboard still falls flat.

As much as we wish Acer would rethink its Ultrabook keyboards, the company at least got the trackpad right. The large pad responds smoothly to one-finger navigation, as well as multi-touch gestures like two-finger scrolls and pinch-to-zoom. Occasionally, the cursor would stop short on the screen before we got to whatever it was we meant to click, but we mostly carried on without many incidents. We'd also add that the built-in touch button is easy to click and makes a quiet, low-pitched sound when pressed.

DISPLAY AND SOUND

Given how pricey this machine is, you'd expect Acer would have gone all out (or at least met us halfway) when it came to display quality. A high-resolution screen would seem to be in order. IPS quality, too, or perhaps one of those Shuriken panels with the narrow bezels. Instead, what we have here is a run-of-the-mill, garden-variety TN screen with 1,366 x 768 resolution. Everything about this display is common, from the standard resolution, to the reflective finish, to the width of the bezels. It would've been fine

on an $800 system, but given that you can find lovely, higher-res screens on the MacBook Air, HP Envy Spectre 14, Samsung Series 9 and the entire ASUS Zenbook Prime family, we don't understand why Acer cut corners here. (Actually, we do: this could be a trade-off to going with a more complex design and a RAID 0 SSD configuration, but we're not sure either of these was worth settling for a mediocre screen.)

The sound coming out of the Dolby-enhanced speakers is a bit tinnier than we're used to, which is quite the feat. Aside from a metallic sound, we were able to make out a faint, buzzing distortion even at medium volumes.

One other interesting thing to note before we sign off on display and sound quality: the S5 is one of the few Ultrabooks we've tested recently that does *not* include Intel's Wireless Display technology. If you had no intention of streaming 1080p video to a big screen, carry on, but it does seem like an odd omission from what's supposed to be a high-end machine.

PERFORMANCE

At $1,400, the S5 comes with some top-shelf specs to match its lofty price tag, including a 1.9GHz Intel Core i7-3517U

BENCHMARK	PCMARK VANTAGE	3DMARK06
ACER ASPIRE S5 (1.9GHZ CORE I7-3517U, INTEL HD GRAPHICS 4000)	12,895	5,071
SAMSUNG SERIES 9 (13-INCH, 2012, 1.7GHZ INTEL CORE I5-3317U, INTEL HD GRAPHICS 4000)	8,624	5,155
MACBOOK AIR (2012, 1.8GHZ CORE I5, INTEL HD GRAPHICS 4000)	**13,469**	**5,827**
ASUS ZENBOOK UX31E (1.7GHZ CORE I5-2557M, INTEL HD GRAPHICS 3000)	10,508	4,209
ASUS ZENBOOK PRIME UX21A (IVY BRIDGE CORE I7 PROCESSOR, INTEL HD GRAPHICS 4000)	10,333	4,550
LENOVO IDEAPAD U300S (1.8GHZ CORE I7-2677M, INTEL HD GRAPHICS 3000)	9,939	3,651
SAMSUNG SERIES 9 (15-INCH, 2012, 1.6GHZ CORE I5-2467M, INTEL HD GRAPHICS 3000)	10,580	4,171
LENOVO IDEAPAD U310 (1.7GHZ CORE I5-3317U, INTEL HD GRAPHICS 4000)	8,345	4,549
LENOVO THINKPAD X230 (2.6GHZ CORE I5-3320M, INTEL HD GRAPHICS 4000)	8,234	4,891
SONY VAIO T13 (1.7GHZ CORE I5-3317U, INTEL HD GRAPHICS 4000)	8,189	3,847

CPU, 4GB of RAM and — here's the kicker — dual 128GB, LiteON-branded SATA III SSDs arranged in a RAID 0 configuration. Cutting straight to the chase, this is *the* speediest disk performance we've logged on any laptop, of any size. We actually ended up running ATTO more times than usual because we initially couldn't believe the scores: at their best, the two SSDs reached peak read speeds of 875 MB/s and writes as fast as 700 MB/s. In real-word use, those numbers are matched by a 12-second boot-up. And yes, our scores landed in this ballpark every time we ran these tests. No flukes here, kids.

For those of you who are curious, Acer confirmed to us that you cannot switch to a RAID 1 configuration: in the BIOS, you'll see options for RAID, along with IDE and AHCI.

When we switched to our other standard benchmarks, the S5 still notched some stellar numbers, though this time they fell a little more in line with other top-performing Ultrabooks. For example, its score of 12,895 in PCMark Vantage falls less than 600 points short of the 2012 MacBook Air's high mark — hardly a dramatic difference. Likewise, its score of 5,071 in 3DMark06 is among the highest we've seen from an Ivy Bridge machine. Not that that's saying much: even with the default settings (read: 1,024 x 768 resolution) *Call of Duty 4* chugged along with frame rates in the twenties — just good enough to be playable.

MAGICFLIP

In practice, pressing a button to expose key ports is more tedious than innovative. Imagine, for instance, that you want to connect a portable hard drive. You can't just plug it in; no, you need to press the button, wait a second or two for the door to open and *then* reach around to the back of the laptop to find the USB socket. If you can't do it by feel, you'll have to turn the laptop around so you can see the ports — an awfully big hassle just to plug in a peripheral.

One thing we weren't aware of when we first got hands-on with the S5 is that the motorized door will open on its own to expose the vents when the machine gets too hot. And yes, we mean "when," not "if." We first experienced this within minutes of unboxing our system — installing a program and running Chrome was enough to trigger the overheating mechanism. It happened again about 30 seconds into a game of *CoD 4*. The good news is that the machine stayed tepid enough that we could use it comfortably for extended periods of time, but in exchange for cool operation you'll have to put up with a good deal of fan noise.

To be fair, once the ports are fully exposed, it shouldn't have much bearing on your ergonomic experience and obviously,

In practice, pressing a button to expose key ports is more tedious than innovative.

we'd all rather our machines *not* overheat. Still, as brief as this interruption is, it can be distracting to feel your computer rise beneath your fingers while you're trying to work. And there is, of course, an easy solution for that: just build the ports into the sides of the laptop and not worry about laying claim to the "thinnest Ultrabook" title.

When the S5 was first announced, one of the most common responses from our readers and editors alike was, "What happens if the motor gives out?" Acer rates the door for 15,000 cycles, tested with 50 pounds of pressure — a claim we naturally didn't have the time or automated equipment to test. We will say that the motor makes a grating sound that doesn't inspire much confidence in the resilience of the various underlying parts. On the bright side, we appreciate that the door automatically closes when you shut down the computer or close the lid, even if you forgot to press the button to do it manually.

BATTERY LIFE

The S5's three-cell battery is rated for up to 6.5 hours of battery life, which is shorter than what many other 13-inch Ultrabooks promise. Indeed, its runtime is as uninspiring as the performance is fast. In our standard video playback test, it barely made it four and a half hours — a poor showing compared to the 13-inch Series 9, which lasted seven hours, and the new MacBook Air, which managed six and a half. Even middling ultraportables can outlast the S5 by at

LAPTOP	BATTERY LIFE
ACER ASPIRE S5	4:35
SAMSUNG SERIES 9 (15-INCH, 2012)	7:29
LENOVO THINKPAD X230	7:19
SAMSUNG SERIES 9 (13-INCH, 2012)	7:02
MACBOOK AIR (13-INCH, 2012)	6:34 (OS X) / 4:28 (WINDOWS)
HP FOLIO 13	6:08
HP ENVY SLEEKBOOK 6Z	5:51
TOSHIBA PORTEGE Z835	5:49
ASUS ZENBOOK UX31E (2011)	5:41
SONY VAIO T13	5:39
MACBOOK AIR (13-INCH, 2011)	5:32 (OS X) / 4:12 (WINDOWS)
HP ENVY 14 SPECTRE	5:30
LENOVO IDEAPAD U300S	5:08
SAMSUNG SERIES 5 ULTRABOOK (14-INCH, 2012)	5:06
DELL XPS 13	4:58
LENOVO IDEAPAD U310	4:57
SAMSUNG SERIES 9 (13-INCH, 2011)	4:20
ASUS ZENBOOK PRIME UX21A	4:19
Acer Aspire S3	4:11

least an hour. In fact, this is, quite literally, the shortest runtime we've recorded on a 13-inch Ultrabook since we tested Acer's own S3 laptop last fall.

SOFTWARE AND WARRANTY

Though it might not be the worst offender, the S5 does come with a good deal of bloatware. Pre-installed programs include CyberLink's MediaEspresso media converter, an eBay shortcut, Evernote 4.5.2, Fooz Kids (a children's gaming platform), Norton Online Backup, Skype 5.5, Nook for PC and a trial of McAfee's Internet Security suite. And, like other Acer machines, the S5 comes with the company's clear.fi media streaming software.

Additionally, it's worth mentioning that the S5 is the first Acer laptop to support AcerCloud, the company's recently launched service that backs up your photos, music, videos and documents online. It's free, and storage is unlimited — well, limited only by how much you can store on your local machine. You can, of course, access all this stuff remotely, provided your computer isn't completely powered off. In particular, with the help of a mobile app you can see your files on an Android phone, even if the two devices are not connected to the same WiFi network. Rather, AcerCloud attempts to create a peer-to-peer connection whenever possible and, failing that, uses a security token in the laptop to play middleman between your notebook and phone. For now, this service is only available in North America and China, but it's expected to roll out to other markets worldwide sometime in the fourth quarter.

Getting AcerCloud set up involves creating an account, a mercifully brief process that only requires you to give your name and email address, and to create a password. (Interestingly, as we progressed through the setup, McAfee popped up, asking if we wanted to grant AcerCloud access.) After creating our account, verifying our email address and using check boxes to confirm what we wanted to back up, we were up and running.

As for the warranty, the S5 is covered by a one-year plan, which is pretty standard for a consumer laptop, regardless of the price.

CONFIGURATION OPTIONS

Though Acer usually offers its laptops in various pre-configured versions, the S5 is only available for $1,400 with the specs we tested here (a Core i7 CPU, 4GB of RAM, the 64-bit edition of Windows 7 Home Premium and 256GB of solid-state storage). As is the case for almost every other Ultrabook we review, the drives, RAM and battery were not designed to be user-replaceable. Again, that's true of most every laptop in this class, but we'd rather remind you, lest anyone wind up disappointed.

THE COMPETITION

You want high-end Ultrabooks? Let's talk high-end Ultrabooks. Even for a high-end

The S5 suffers from some serious usability flaws, and nothing really justifies that $1,400 price.

machine, the S5 is pricey; we can think of several excellent alternatives that drip quality but still cost slightly less. For starters, there's the 13-inch Samsung Series 9 beginning at $1,300, which weighs just 2.55 pounds *and* has a higher-quality aluminum build. The Series 9 also leads the S5 (and every other 13-inch Ultrabook) in battery life. Its keyboard is equally flat, but better-spaced. And while its performance isn't rated quite as highly, it's also capable of 12-second boot-ups. If you're willing to consider a bigger screen, you might also want to check out the HP Envy 14 Spectre or even the 15-inch version of the Series 9, which measures just 0.58 inches thick.

Though we haven't yet tested a 13-inch equivalent, ASUS' Zenbook Prime lineup also looks mighty promising. We'll refrain from breaking down every specific configuration listed on Amazon, but suffice to say we're particularly excited about the UX32VD ($1,350 at Amazon), which combines a 1080p IPS display with an NVIDIA GT 620M GPU.

This laptop isn't for tinkerers . It comes in one flavor only.

For the OS-agnostic, we'll include the new MacBook Air in the high-end category: its battery life is on par with the champion Series 9, its keyboard and trackpad are comfortable and the performance is some of the fastest we've seen, even among Ivy Bridge machines. Regarding screen quality, a pain point for Acer's S5, the Air has the same 1,440 x 900 display as past generations. That's not the absolute best you'll find — not with the Series 9 and Zenbook Primes on the market — but it's still a step up from the S5.

WRAP-UP

The Aspire S5 has some key ingredients that might have made it a great Ultrabook: a thin shape, an impressive port selection and blazing I/O performance. Unfortunately, though, Acer seems to have invested its energy in all the wrong places. Instead of a higher-resolution display or finer build quality, it focused on stuffing all the ports behind a door in the back — a design choice that feels gimmicky at best, and tiresome at worst. In exchange for a skinny silhouette, it settles for a three-cell battery that barely lasts four and a half hours on a charge. Even the RAID 0 SSD configuration might well have contributed to the high price, and that's a shame since the S5 probably could have delivered strong performance even with a more standard setup. (875 MB/s read speeds? Maybe not, but that 12-second boot time? Quite possibly.)

As is, the S5 suffers from some serious usability flaws, and nothing really justifies that $1,400 price *except*, possibly, that screaming SSD setup. We look forward to possible redemption with the upcoming S7 series, but in the meantime we're certain you can find a better ultraportable for less money. D

Dana Wollman is Reviews Editor at Engadget, a marathoner, lover of puns and a native Brooklynite.

BOTTOMLINE

ACER ASPIRE S5

$1,400

PROS

- Thin, lightweight design
- Insanely fast SSD performance
- One of few PCs with a Thunderbolt port

CONS

- Poor screen quality for the price
- Drop-down port cover is tedious to use
- Subpar battery life
- Loud fan noise

BOTTOMLINE

The S5 is thin and light with blazing disk performance, but this overpriced laptop is marred by serious usability issues, including short battery life and inconvenient port placement.

EMBRACING GEOTAGGING:

How to Journal Your Trips (And Contribute to Google Earth) With Snapshots

BY DARREN MURPH

Uploading a geotagged photo of a bison herd from within Yellowstone National Park. So easy, the magic of it all is almost taken for granted.

Click Here to See the Full Trip on Picasa

GEOTAGGING.

It's not exactly a long-lost art, but it's certainly not something most folks bother to do after a trip. Avid travelers, hikers and the general outdoorsy crowd have been embracing the feature for years, but one product segment in particular is making it easier than ever for those in the mainstream to follow suit. Yes, it's the smartphone. Given the proliferation of iPhones, Android handsets

and Windows Phone devices making their way onto the market — coupled with the explosive use of geo-minded social networks like Path, Instagram and Foursquare — an entire generation is now growing up in a geotagged world. Phone users have it easy; so long as there's a data connection and an embedded GPS module (commonplace in modern mobile devices), there lies the ability to upload a photo with a patch of metadata embedded. Snap a shot at a national park, upload it, and just like that, viewers and friends from around the world now have an idea as to what a specific place on Earth looks like.

For travel hounds like myself, that's insanely powerful. I'm the kind of person who will spend hours lost in Google Earth,

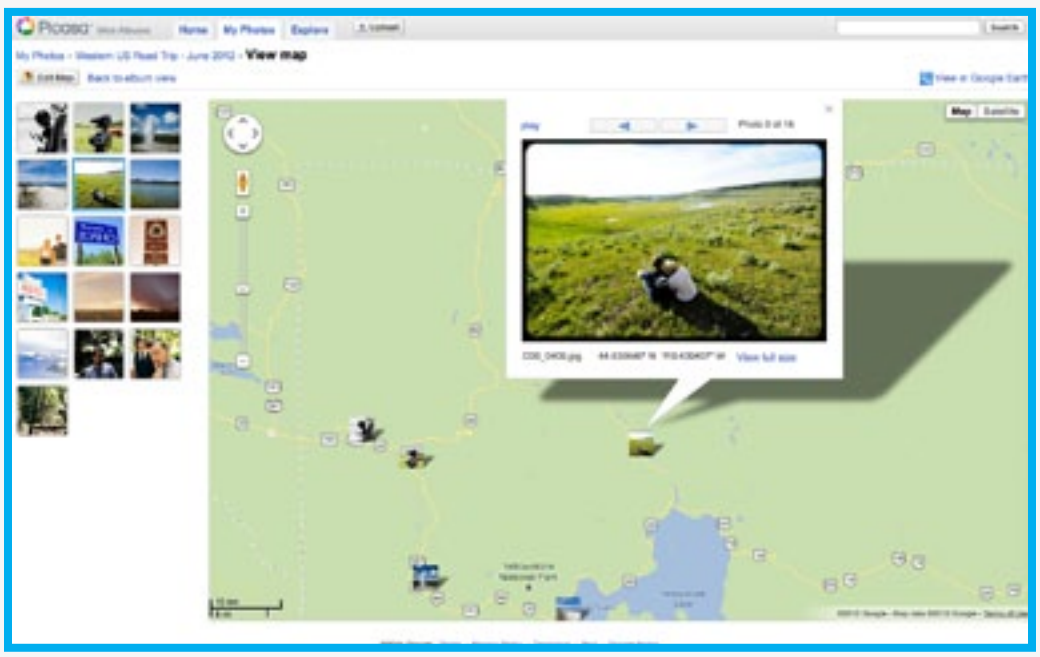
You don't need a geotagger to recognize Old Faithful. But what about those random snapshots you took seven or eight miles away? Or was it 12?

spinning the globe around and discovering all-new (to me, at least) locales thanks to the magic of geotagging. It's sort of the photographic equivalent of putting a face to a name. By stamping latitude, longitude, altitude and a specific time to any given JPEG, you're able to not only show the world what you saw, but exactly when and where you saw it. It's a magical combination, and with GPS modules finding their way into point-and-shoot cameras — not to mention external dongles like Solmeta's magnificent N3 — there's plenty of opportunity to start adding location data to your photos.

EXPLAINING THE ART

I'll keep it as short and sweet as possible: geotagging an image pins location and time information onto its metadata. It's the same blob of information that houses data about what camera and lens were used to capture the show, what ISO level was chosen and what aperture was selected. If you've never cared much to look into that data after stumbling upon an outlandishly beautiful snapshot on Flickr, you probably won't appreciate the art of geotagging. If you're a stats nerd through and through, you probably will.

Google's Picasa photo hosting site lays geotagged photos out beautifully on a Google Map. Reliving a journey takes on an entirely new dimension.



The general idea — where geotagging adds the most value — is to use geolocation data in order to tell stories. To show progress. To track paths. To remember spectacular places that one's feeble mind may forget without a precisely stamped image that leaves no doubt as to when and where it was taken. In fact, a lot of this links back to my personal uses of Facebook; life moves too fast to rely on my own brain to recall it all, so I simply rely on

social networks to act as digital diaries. Things like automated geotagging definitely help relive memories, and there's no better time to start taking advantage.

ACQUIRING A LOCK

In order to grab geolocation data, you'll need a GPS module within range of your camera. Perhaps the most convenient method is to use a modern smartphone — the latest iPhones and most Android / Windows Phone handsets have GPS or A-GPS built right in, and if you enable it in your settings, you can have each image stamped with the location where it was taken. Before setting off, I should mention two important caveats here. First, many smartphones require a data connection to properly tag images with location; if you're traveling internationally and keeping your phone in airplane mode, that'll put a stop to your geotagging bliss. Second, most smartphones take an annoyingly long time to acquire a GPS fix. It's also often difficult to tell from most camera applications whether or not it's still working to get a lock, or if it does indeed have one.

Alternatively, you can turn to a camera with a GPS module built into the hardware itself. Casio's Exilim EX-H20G is a solid example. The issue here, however, is twofold. For one, it's rare to find a point-and-shoot with GPS built in. Secondly, these cameras generally exhibit ho-hum feature sets and lofty prices, making them quite unappealing for those who already own an iPhone 4S or the like. It's still baffling to me how few cameras have GPS from the factory, but I'm hoping that these modules will become

Solmeta's N3 GPS module hooked up to my Nikon D3S. At $189, it's less expensive and better than first-party add-ons.

Coordinate information displayed on Nikon's D3S.

more feasible in both mirrorless and DSLR ranges as circuitry shrinks and power efficiency improves.

An option that's more universal is a Bluetooth-based geotagging accessory. These units effectively capture time and geolocation data independent of your images. Then you're forced to use any number of software programs to sync the time data from your Bluetooth logger with your image gallery. It's an absolutely painful and tedious process; so much so that I'd just outright not recommend it. If you have extraordinarily specific camera needs — using a body that has no compatible direct-connect GPS logger — it's still better than having no geolocation data at all. But be prepared to deal with missed tags, inaccurate readings and lots of consumed time syncing metadata after a shoot.

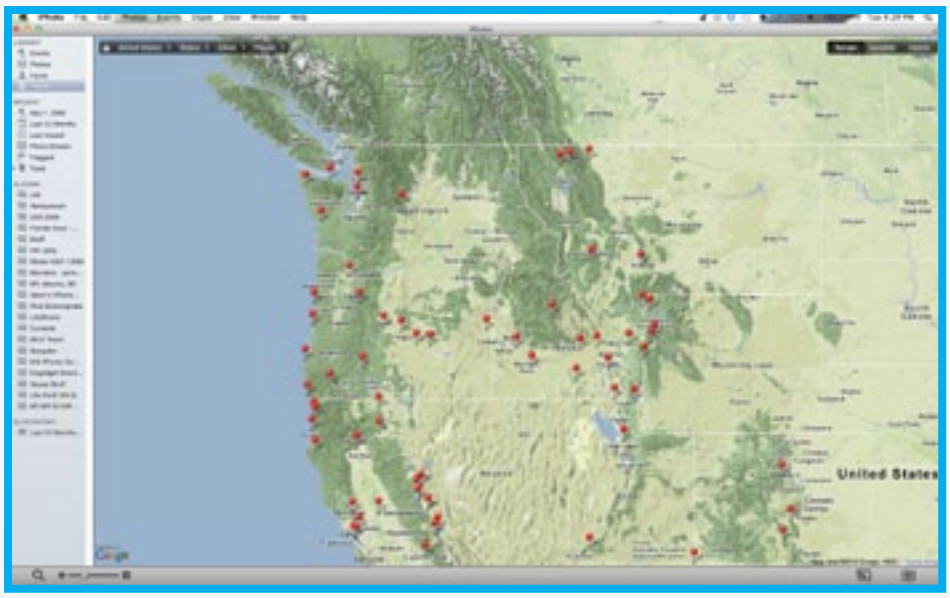
My preferred method is using a direct-connect module — a GPS device that's specifically made for a camera body, enabling it to tap right into the camera's menu system and embed location data directly onto each image. The downside here is that you'll need to carry around an accessory, and generally, it sucks battery life from the camera itself in order to keep track of your whereabouts. The upside, however, is that there's no mess after shooting. So long as you confirm that you have a fix prior to shooting, each image will boast precise location metadata right out of the memory card. Most major DSLR manufacturers offer GPS add-ons from $150 to $300, but oftentimes, the first-party solutions aren't the best. For example, I recently took Solmeta's N3 for a spin on Nikon's D3S (though the company makes models for a huge swath of Nikon bodies) and found it to be far superior to other alternatives, despite costing "only" $189. (If you haven't guessed by now, these GPS modules aren't what I'd call "cheap.")

PRO TIP #1

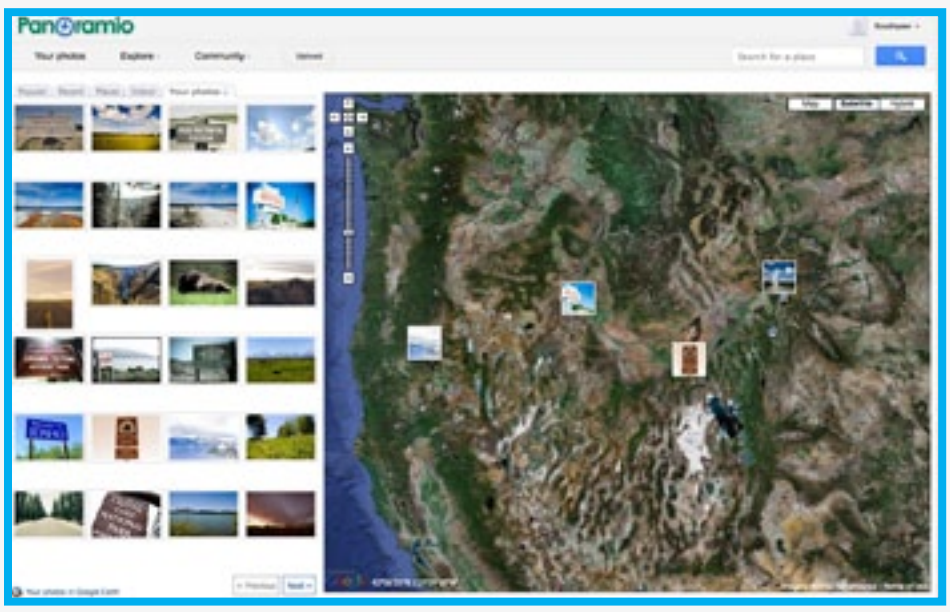
Opt for a third-party GPS module to capture precise location data. They cost less and work more efficiently than first-party add-ons.

MAPPING YOUR RESULTS

Procuring a camera setup that geotags images is the first (major) step, but the magic only truly shows itself if you



Above: For Mac users, iPhoto recognizes and pinpoints geotagged photos with minimal effort. Just know that you'll need to be online to view your galleries as pin drops. Below: A screen capture of the Panoramio interface.



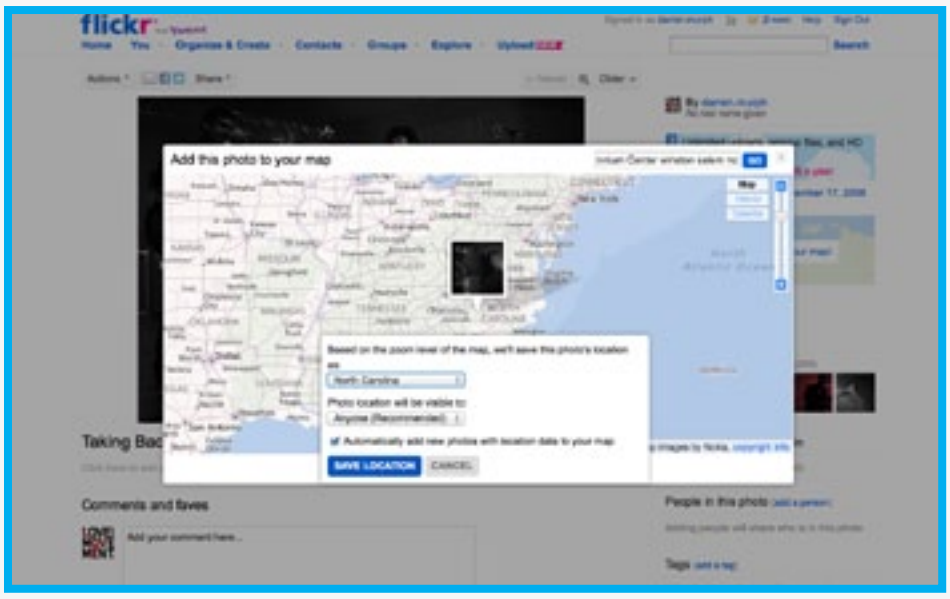
choose a proper display method. For me, the art of geotagging plays two huge roles. It not only gives me the ability to showcase trips by way of pictorial paths — after all, a photo is worth a thousand words or so — but it also gives me the ability to tap into something far larger than myself. Allow me to explain.

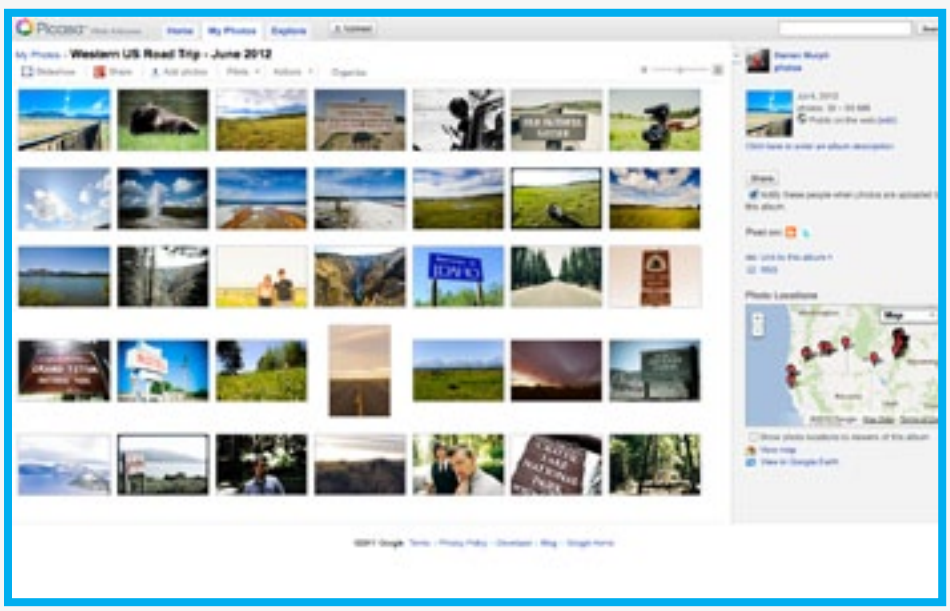
For personal showcasing, Mac users are spoiled. The iPhoto app, bundled gratis with every OS X-based Mac, touts a 'Places' section that automatically recognizes standardized geolocation data in photos. So long as you're connected to the internet, tapping that section will automatically display your photos by location, grouping nearby shots under red pins that are labeled based on locale data pulled from Google. (As an aside, Apple's recent shunning of Google Maps for its own iOS 6 mapping solution may mean that iPhoto is destined to follow that same route.)

If you're familiar with navigating via Google Maps, you'll be right at home here. Just zoom into a pin, hover to see the locale, and click it to see the images that were taken at that point. I *do* wish that iPhoto allowed for more customization when it comes to viewing shots with Places; as it is, you see pretty much everything at once, making it somewhat difficult to view pins specifically from a single trip. It's also worth noting that Apple's Aperture application offers a similar mapping view, for those already using it to manage and edit photo galleries.

Wondering where this Bates Motel is located? Google's Panoramio points out that it's in rural Oregon. It's spookier when you know, isn't it?

The northern entrance to Crater Lake National Park, suspiciously located in southern Oregon.





Above: Flickr may not be its old self, but it's still a widely used hosting site. Thankfully for you, it also supports geotagging. Below: Picasa can display an entire gallery as pins on a Google Map; just click on any pin to display the photo.

PRO TIP #2

Whether you're on a Mac or a Windows machine, you can use Picasa to tell individual stories: each gallery you create generates a separate map.

For those who wouldn't dare touch a Mac, you've a few other options. In fact, given that even iPhoto can't display geotagged photos in Places without an internet connection, I actually *prefer* the web-based alternatives. The first, and perhaps most obvious, is Picasa. That's Google's own photo-hosting tool, and one of the best aspects of it is its ability to ingest and display metadata. Opening up an account is free and, naturally, those already invested in Google's ecosystem — relying on Drive, Google+, YouTube, etc. — will reap even more benefits in terms of integration. Space will certainly be a limitation (though additional storage can be purchased), but it's important to note that even resized photos can maintain geolocation data. My preferred method is Adobe Lightroom; if you're already using this to touch up photos, just export to a smaller size and it'll keep all metadata perfectly in place.

One of the benefits of Picasa is that each gallery you create generates a separate map. That way, you can use a pinned map to tell individual stories instead of automatically having them all clustered together. For those worried about privacy, Google defaults to *not* showing location data to viewers — even if the galleries are marked "Public on the web."

I should also mention that Flickr provides a similar service, but with absurdly low storage quotas for free accounts (200 images, compared to 1GB from a free Picasa account) and no real ties with a major ecosystem, I'm convinced that Picasa is a better entry point.

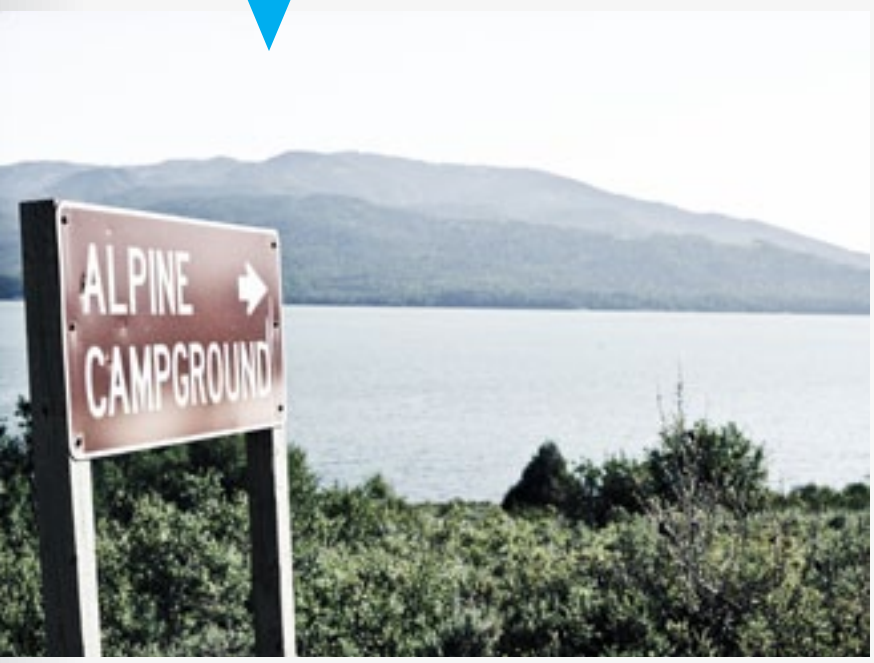
CONTRIBUTING TO THE WORLD

Beyond personal mesmerization, there's another incredibly compelling reason to geotag: education. Google has embarked on a number of efforts to map the world — from entering the Amazon to enabling Street View in Antarctica. But even Google can't do it all — as least not with any level of haste. Thankfully, there's a painless way for you to contribute your own geotagged images to Google Earth, and in turn, open the eyes of potentially millions of internet users who may only ever view a section of the world by way of your camera. Go on, call it cheesy; I call it mind-blowing.

Due to Google's ownership of Panoramio — also known as *the* portal for delivering images to Google Earth — it's brilliantly easy to port over images that were originally loaded into Picasa. Strangely, you still need a Panoramio username (though you can tie that to your existing Google account ID), but once you're in, adding new photos is as easy as clicking a

A bison just across the Wyoming border, shedding his winter fur while hordes of tourists gawk within Yellowstone National Park.

The border of Wyoming and Idaho, near Alpine, WY, showcases the natural beauty in this part of America.

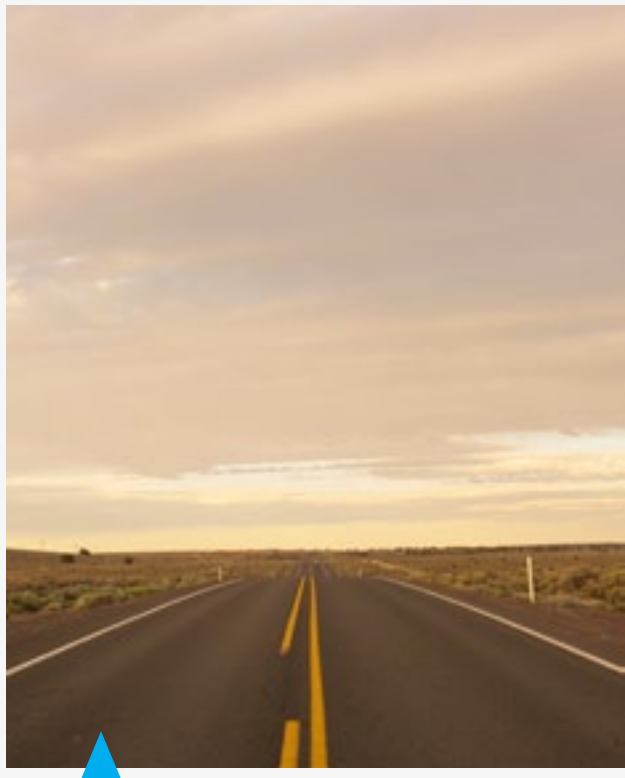


A stunning ray of light — but without a geotagging module, you'd never know if it's from North Carloina or the wilds of Wyoming.

Dancing in Northern California's redwoods never seemed so memorable.

Surely you know where Grand Teton National Park is ... but which entrance is this particular sign located at?

The waterfalls of Yellowstone. Probably worth remembering a Bucket List item like this.



Rural Americana — thanks to Solmeta's N3, I'm keenly aware that I'm on the Central Oregon Highway, about eight miles outside of Burns, OR.

link to select from Picasa, ticking the ones you want ported and confirming those selections. If your photo is geotagged in Picasa, it'll be geotagged in Panoramio. At some point after you've mapped your photo (usually between five and 10 days), Panoramio reviews its appropriateness for Google Earth and Google Maps. If the photo meets the acceptance policy, it's usually approved – assuming that location isn't already overloaded with brilliant submissions. Soon after, you can indeed surf over to a spot on the globe that you've shot at and view your own masterpiece. After you get over yourself (kidding!), think on this: folks with no access to transit, but limited access to the internet, can now better educate themselves on this crazy place called Earth with a simple mouse click.

Panoramio also provides a slightly different map view to showcase the photos that you've uploaded; the site in general is a bit more cluttered, as it caters more to the science and discovery crowds than the public at large. That said, I appreciate the detail in the maps, and being able to see when my photos have been ushered into Google Earth provides a geeky rush that's tough to top.

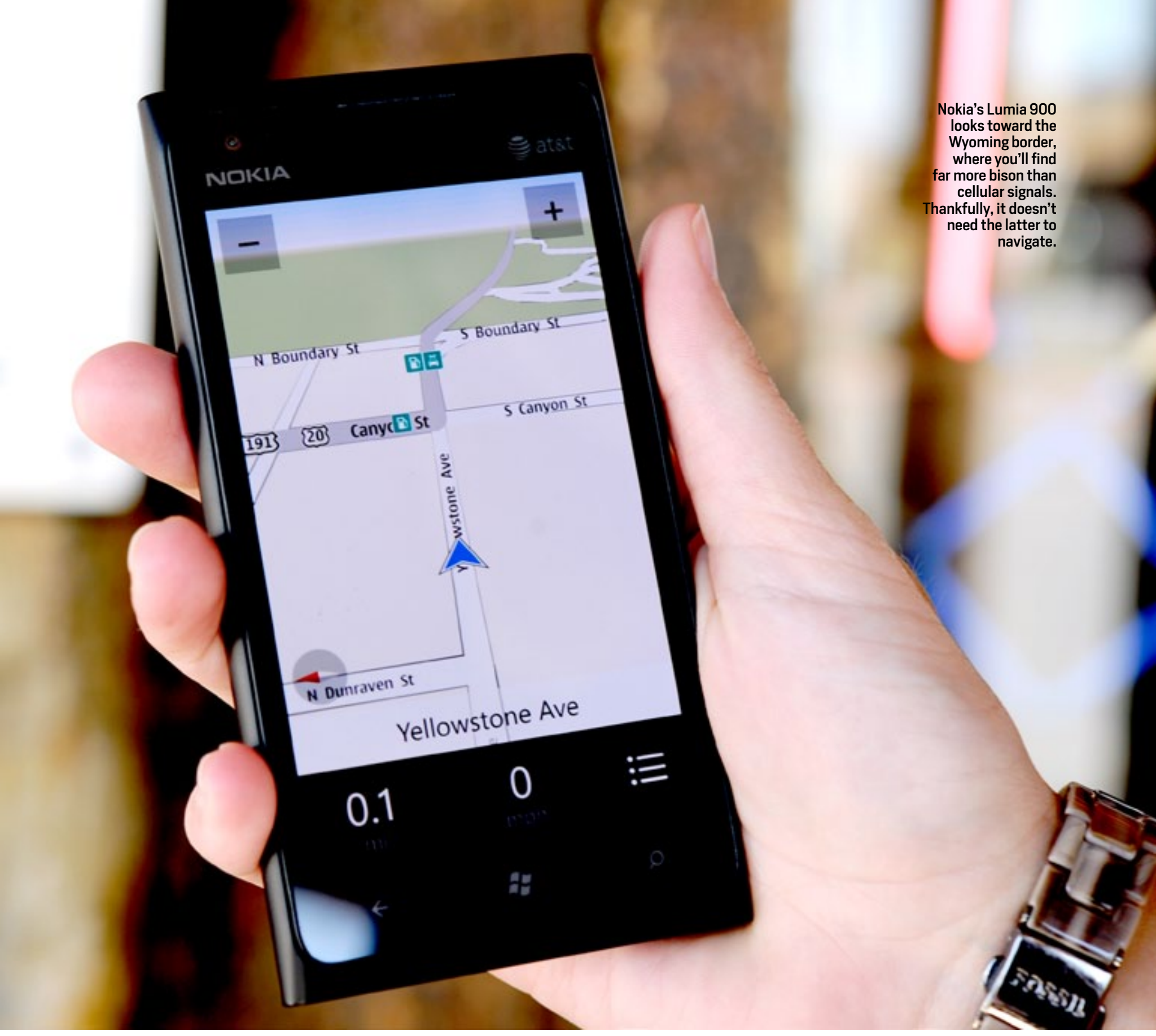
PRO TIP #3

Upload your photos to Panoramio and you could soon find your vacation memories peppering the globe on Google Earth.

WRAP-UP

Geotagging may not be a new concept, but I'm optimistic that the masses are on the brink of embracing it. Not only will it allow you to create walks down memory lane with the photos that you took along the way, but those who take the extra leap and contribute to Panoramio will also be building out a global view of our own planet. For those awestruck by travel, it's easy to understand the impact of this. For those that aren't just yet, give it a whirl on your next excursion, even if using only your smartphone to reduce entry costs. At the very least, it'll add a whole new level to those "Don't you remember when we visited [insert obscure locale here]?" conversations. D

Myself and my lovely bride, enjoying a glistening day in front of the Grand Tetons in Wyoming.



Nokia's Lumia 900 looks toward the Wyoming border, where you'll find far more bison than cellular signals. Thankfully, it doesn't need the latter to navigate.

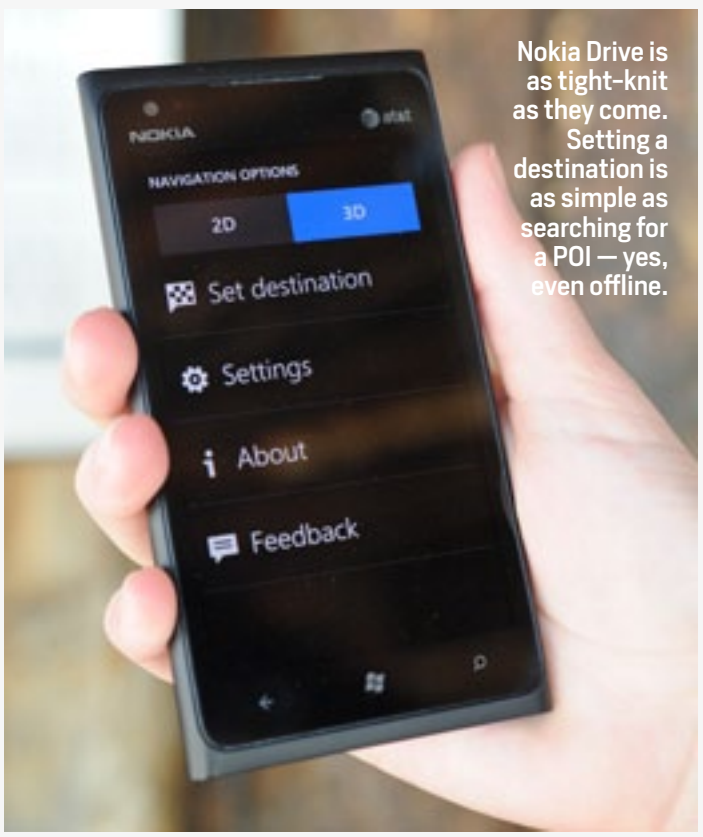
NOKIA DRIVE OFFLINE NAVIGATION: Taking the Lumia 900 for an Off-The-Grid Spin

BY DARREN MURPH

I'VE SUNG PRAISES ABOUT IT FOR YEARS,

but it seems like only now the industry is getting on the same train of thought. It could be my unnatural adoration of travel, or just an *entirely* healthy fear of getting lost, but offline navigation has long since been a top priority for me when choosing a mobile device. Or, more importantly, a mobile operating system. For the longest time, iOS forced my hand to Android due to Google Maps Navigation being available only on the latter, and while even that wasn't offline, it still far surpassed any other routing app in terms of system integration, map updates and general silkiness.

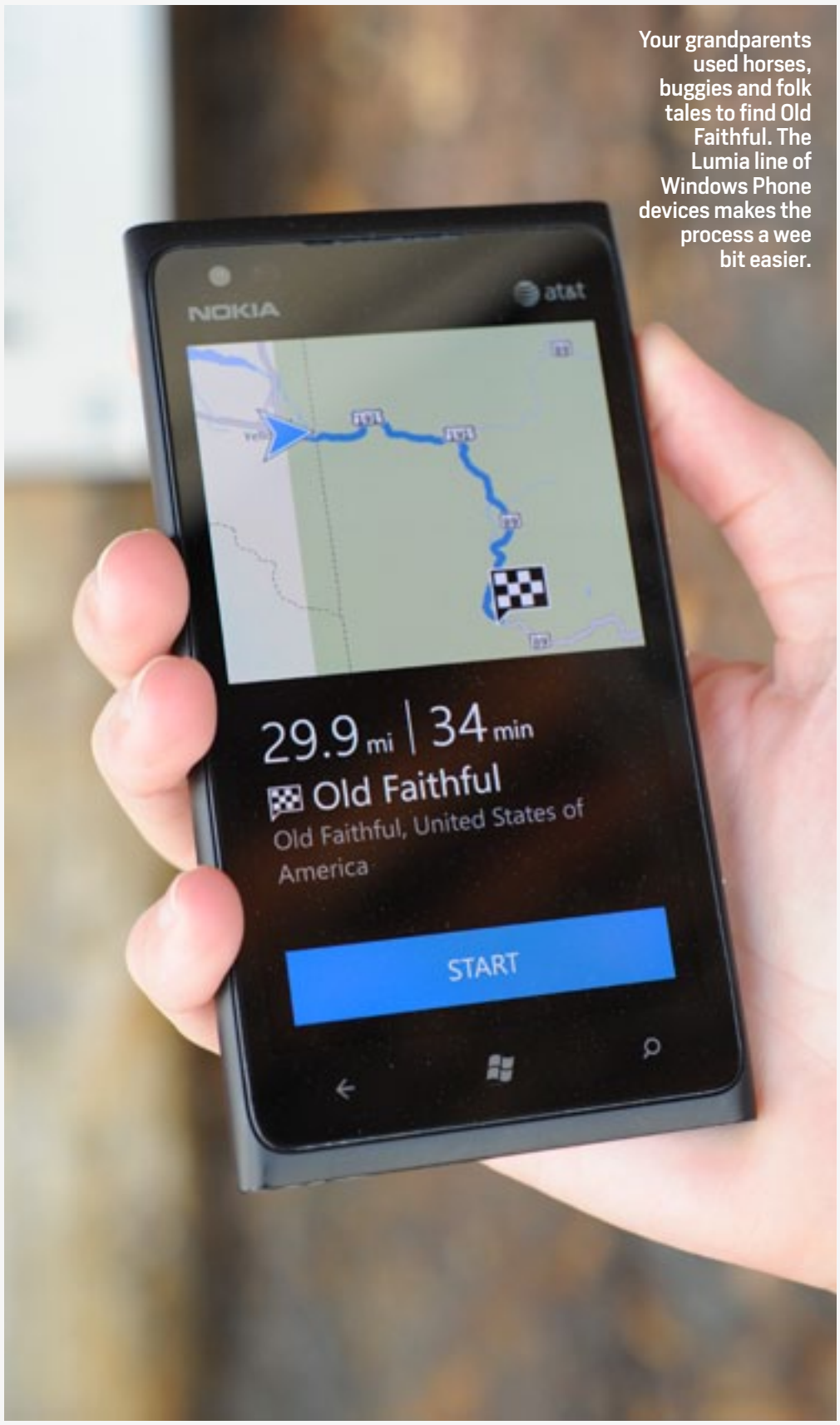
Even dating back to our 2010 mobile GPS shootout, Nokia has been a player. At that time, it was the outfit's Ovi Maps leading the pack, offering the only legitimate offline solution amongst a legion of ho-hum alternatives that required bits of data to keep you on track. But frankly, there wasn't a Symbian device in Nokia's stable that could show up my Nexus One in terms of overall utility, so begrudgingly, I pushed it aside. Eventually, Google came around and added caching to routes, which effectively downloaded all routing guidance along your path as soon as you plugged in a destination. The killer, however, was that it wouldn't take too kindly to veering far from that path should you ever drop signal. Close, but no cigar.



Nokia Drive is as tight-knit as they come. Setting a destination is as simple as searching for a POI — yes, even offline.

Fast forward to today, and we've got Google Maps Navigation already working in offline mode for Android 2.2+ devices.

Furthermore, the company's Brian McClendon confessed to us at its June 2012 Maps event that it's "committed" to bringing all of the app's features to iOS (and potentially other platforms). But in my haste to find something in the here and now, I recently turned to the Lumia 900 for guidance. Literally. Back in late March, the Lumia-exclusive Nokia Drive application gained full offline access, and I sought to use the handset exclusively to navigate a 1,900-mile trek through some of America's most remote locales.



Your grandparents used horses, buggies and folk tales to find Old Faithful. The Lumia line of Windows Phone devices makes the process a wee bit easier.

Introducing Nokia Drive

For those unaware, Nokia Drive is currently an app that's exclusive to Nokia's Lumia line. No other Windows Phone 7.x handset outside of that family is able to get it, making it a powerful differentiator that may indeed sway buying decisions. Much to Nokia's chagrin (we're assuming, anyway), that's changing with Windows Phone 8. Once codename Apollo rolls out this fall, WP8 devices of all creeds and origins will be privy to Nokia Drive. On one hand, that means Nokia's software will soon be seen by a much larger audience. On the other, that incentive to choose a Lumia over a product made by Samsung, Huawei or HTC vanishes.

Based on the most recent mobile OS marketshare statistics, it's no shock that Nokia Drive hasn't found a great deal of fanfare. Until Windows Phone manages to grab a larger piece of the pie that Android and iOS are currently hogging, I'm

guessing it'll remain that way. But the point here is to introduce you to what may indeed be one of Windows Phone's most compelling exclusives — it's an app that's so well-designed, and so well-implemented, that it could be enough to pull hardcore argonauts from the clutches of one of those *other* ecosystems.

Pre-Trip Setup

Nokia Drive is about as simplistic an app as you'll find in the Windows Phone Marketplace. Not just simplistic for a navigation app; simplistic, period. And that's a good thing. Avid road warriors will tell you that time is precious when pulled over on the side of the road — the last thing you need when frantically trying to reroute or find a nearby eatery is confounding menus tripping up your progress. What I did, and what I heartily recommend, is to sit down with a solid WiFi connection and an hour or two of time. Oh, and plenty of free internal storage space.

If you pop into the Settings of the app, you'll be able to 'Manage Maps.' In there, you'll find a list of countries all over the globe. Nokia has mapping data for 190 nations, and it collects information from Nokia Drive users and local authorities to provide traffic alerts in 26 countries. I downloaded pretty much every country I could ever imagine visiting, just for kicks. It's stupendously simple to do so; just find the country in the list, and start the download process. For the United States, you can download individual states or the nation as a whole, with the latter option requiring 1.8GB of storage. (In case you're wondering, *that's* why you don't need to try this over 3G / 4G.)

Once it's downloaded, you can honestly think of your Lumia as a PND, or one of those Personal Navigation Devices of yesteryear. Nokia even includes an option to force Drive offline in the event that you're on a flaky connection, and you simply want to disregard cell tower triangulation and get right to business. I'd leave this off by default, but if indeed you roll into an area only partly covered by GPRS or EDGE, flipping that toggle could save you some frustration. The only other pre-trip setup I'd recommend is managing the speed alert option. I set the device to alert me whenever I cruised 8 mph over the posted limit, and it worked incredibly well in practice. Over the course of 1,900 miles, I only noticed the programmed speed limit to be incorrect twice — and in both cases, it was only off for a few miles.

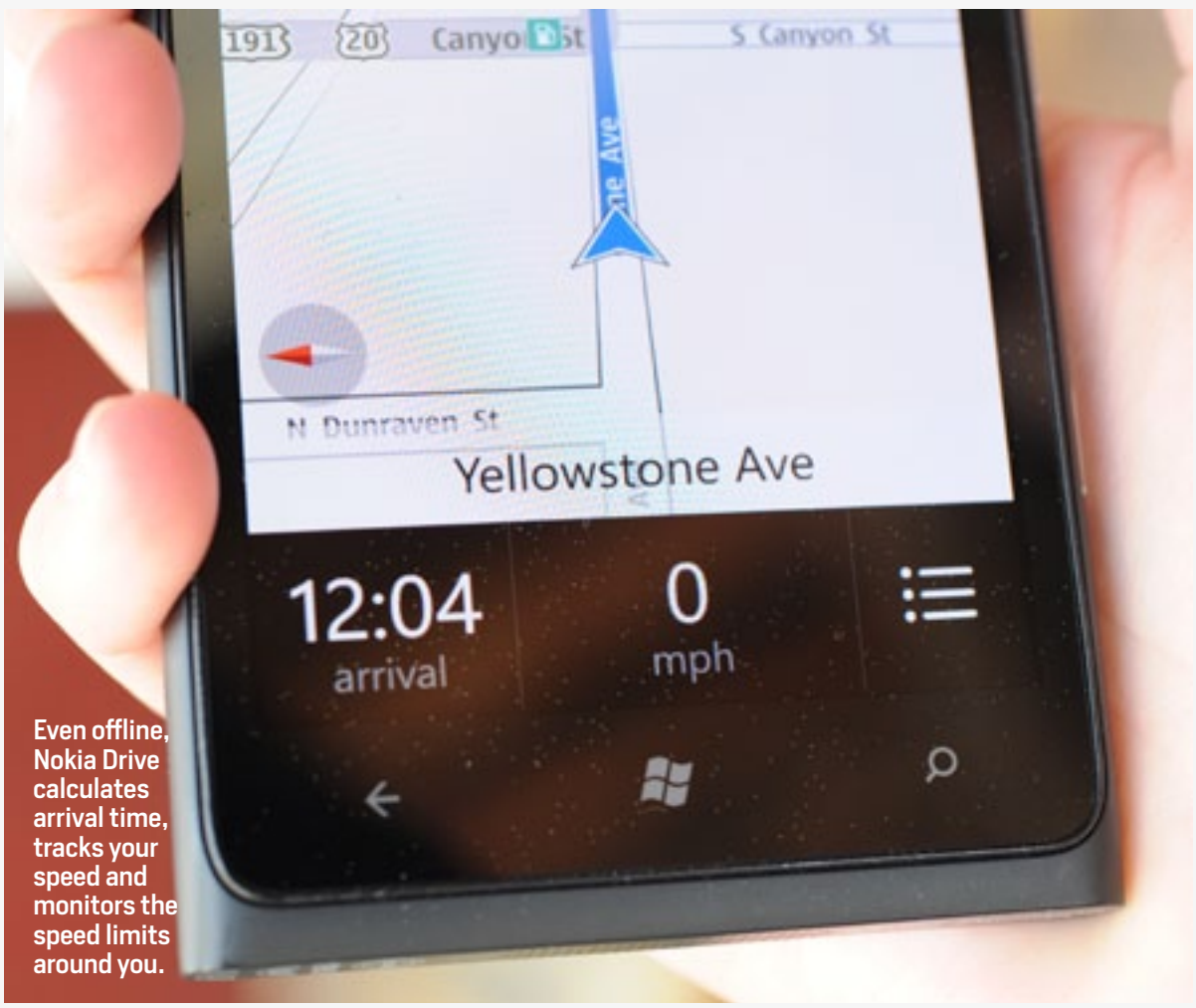
The (Offline) Drive

It started at Gallatin Field, just north of Bozeman, Mont. I landed, hopped in a rental (happily declining the optional GPS unit, mind you), and dialed up Gardiner, Mont. Locals will tell you that's a pretty easy place to find from Bozeman, but that's beside the point. I wanted a

plug-and-play navigation solution, and this was its first test. As it turns out, that 1.8GB of information includes more than just roadways. It also includes restaurants, town names, fuel stations and oodles of other points of interest. That means that even without a nearby signal, you'll be able to search for plenty of destinations. In my testing, Drive managed to find pretty much everything I searched for, save for one or two hotels that forced me to go back online in order to search the web. (And yes, it found both hotels once I did that.)

Of course, leaving a smartphone's display on for multiple hours as you traverse Montana, Wyoming, Idaho, Oregon and California isn't wise without a power source to sustain that type of abuse, so it's worth mentioning that I traveled with an AC inverter in order to keep a constant power connection to the Lumia 900. It's hard to say if it reveals more about the Lumia's display or the app itself, but while navigating, the phone barely gained any charge at all; it was all the thing could do just to hold steady. For what it's worth, I left the brightness to its own devices, automatically adjusting itself based on ambient light available. That's all well and good if you're starting with plenty of charge, but I did run into one instance where I had so little juice in the phone itself, that I had to let it charge in the vehicle for a solid five minutes before I could get Nokia Drive to open up and stay on the screen. Moral of the story? Don't leave home with a drained navigation device.

Using the app, as mentioned prior, was drop-dead simple. Tap the screen, pull up a search box, enter your destination and tap the 'Start' button. Prior to taking off, it shows a zoomed-out overview of the route it's planning to use, along with the amount of miles and the estimated time of arrival. In my experience, that estimate was accurate within 10 percent on either side, even on seven-plus-hour hauls. Impressive. I'd also say that it chose my preferred route roughly 80 percent of



Even offline, Nokia Drive calculates arrival time, tracks your speed and monitors the speed limits around you.

the time; for occasions where I intentionally wanted to take a more scenic route, I worked around the 'fastest time' limitation by simply searching for one of the scenic points prior to my arrival, and sort of "piecemealed" things. That's a tactic I've long since used to avoid interstate highways, and it seems to work well regardless of device.

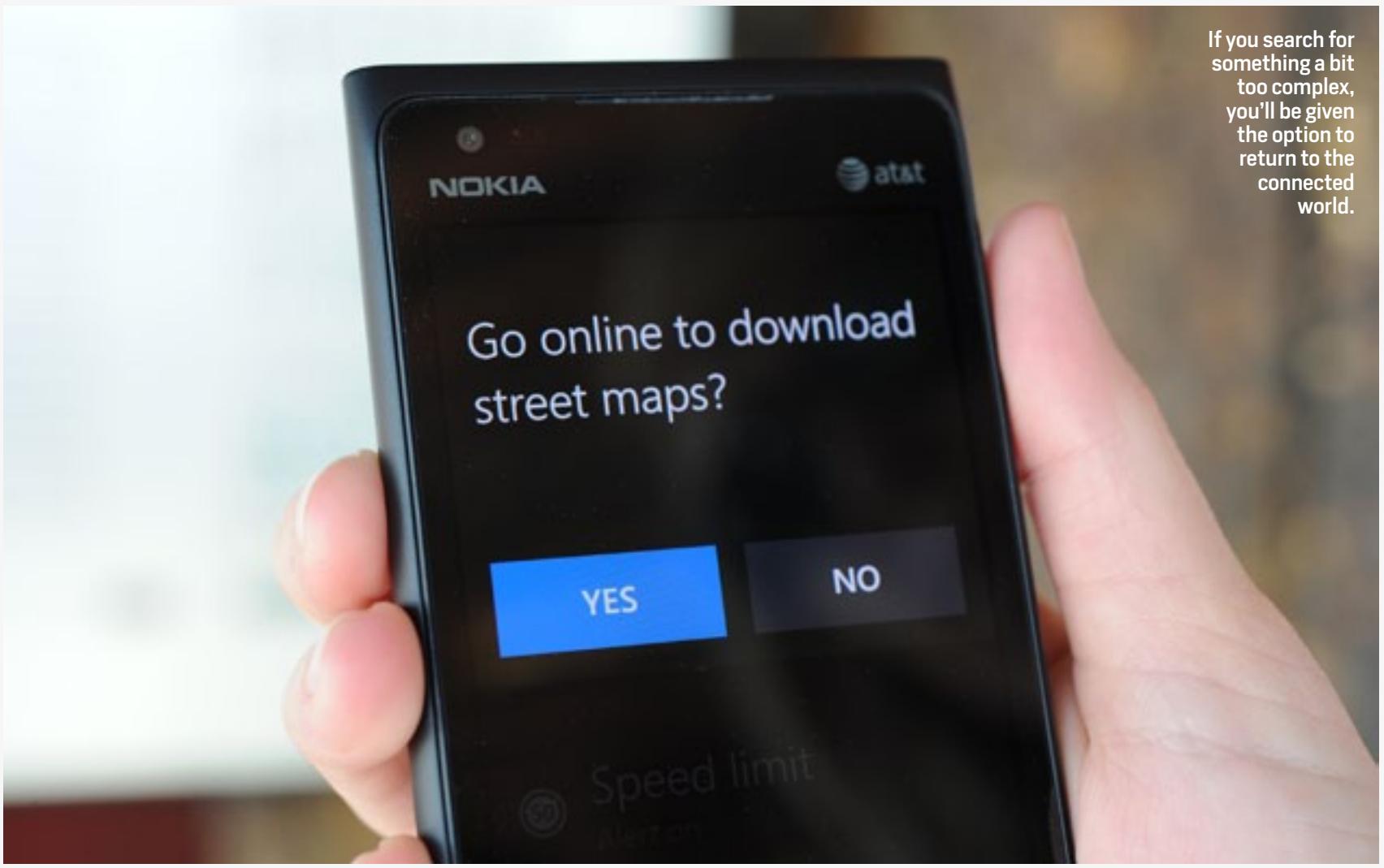
I also appreciated a subtle software decision that few other nav alternatives offer. As I was cruising, I'd often want a zoomed-out view of where I was headed — just to satisfy my curiosity, and also to get a visual on any potential alternate routes. A simple pinch-in gesture pulled things out, and a few more zoomed to a view where I could see hundreds of miles ahead. Once I was done pinching, pulling and zooming, I simply sat the phone back down. Within seconds, Drive automatically returns to the stock routing mode, zooming into the road you're on and placing useful information — the current speed limit, distance to your next turn, the road you're on, etc. — around the vehicle icon. No more attempting to zoom back in once you've zoomed out. Splendid.

In offline mode, I was downright shocked at just how fast everything operated. Even under deep forest cover in the California redwoods, the offline navigator managed to get a GPS lock within a few seconds. In fact, over the 1,900-mile trek, it only lost signal on two occasions: a 20-mile stretch of the Central Oregon Highway and just as I was driving onto the Golden Gate Bridge in San Francisco. In the latter example, it reacquired a fix by the time I hit the toll booth on the other side. Mind you, I forced the phone to use Drive in offline mode for every single mile outside of the times where I had to temporarily connect to AT&T to search for a specific address.

Software Design and Usability

I relied on the "Male (U.S.)" voice to guide me, and it's without question one of the less robotic navigational voices I've ever used. He's as suave as a humanoid gets, and he didn't even get overly perturbed when forced to reroute me following my decision to take the Avenue of the Giants instead of continuing on Highway 199 in California. Thanks, Male (U.S.).

As with pretty much everything in Windows Phone, Nokia Drive is a beautiful app to look at. The icons are big, bold and polished, with fonts that are pleasing and easy to view from afar. You aren't inundated with useless information, and in my humble opinion, Nokia provides the perfect amount of data — it's just enough to take advantage of at a glance. The app also does a reliable job of reminding you of your next turn when you're 10 miles out, and then once again when you're inside of a mile. Even after a week with this guy, I never found myself annoyed with an abundance



If you search for something a bit too complex, you'll be given the option to return to the connected world.

of updates. You may chuckle at such a notion, but let's be honest — is there anything worse than a GPS box that talks too much? No. No, there's not.

Rerouting, while I'm on the subject, was never a chore. I didn't encounter a single missed turn that took over four seconds to reroute. That's a feat. I'm guessing that having 1.8GB of roadways stored locally helps hasten that process, but still, that's significantly faster than even Garmin's nüvi 3790T from just two years ago — a product that retailed for $449.

It's also safe to say that Drive knows more than just main thoroughfares. In 1,900 miles, I only spent a couple of hours on true interstates; the rest was spent on backroads, scenic byways and stretches of asphalt that the majority of Americans would seek to avoid in the effort of reaching their destination in a more timely manner. Truthfully, there wasn't a single road that I passed that wasn't loaded in the app, and honestly, that's something worthy of laud. Lots of it, in fact. Not once did I hear something akin to "Your destination is located in an area where turn-by-turn guidance cannot be provided." And not once was I led to an incorrect locale.

What About Offline Google Maps?

A fair question, indeed. Offline Google Maps Navigation for Android (and soon

for iOS) is a formidable opponent, but it lacks one major feature that road warriors, road trippers and traveling salespeople will end up needing: the ability to download entire states or nations. As mentioned in my review of Android 4.1 (Jelly Bean), Google has bizarrely given users the option to pinch-and-zoom into a section of maps that they want to download for offline use … and nothing more. Once you zoom out to ~86MB of roadways, you hit a wall. Not even a WiFi connection can save you. There's no option to download entire states, and certainly no option to download entire nations.

That may not bother urban dwellers or infrequent travelers, but those with spontaneous aspirations may find more security in being able to have every possible road in an entire country at their disposal — offline — should they need it. To me, that's a shortcoming that cannot be overlooked. I admire Google's sexy solution to selecting small portions of maps, but why not *also* include the option to download far larger chunks? I can only assume that such an option will come in an update down the road, but for now, it's Nokia Drive with the winning hand on this front.

Wrap-Up

If you're an avid traveler, and you haven't given Windows Phone a chance, you should. Nokia Drive is honestly reason enough to consider switching if you use your phone for navigating as much as you do texting or calling, and I've reason to believe that it'll only get better with age. After all, the company now shares hallways with a few folks from Bing Maps — folks who have designed some pretty impressive travel tools themselves. The only legitimate gripe I had with Drive after 1,900 miles was this: when you're searching for something generic — 'Starbucks in Bend, Oregon' for example — it'll often find four or five like-named destinations. But at a glance, there's no street address listed in the results, so you have no idea *which* Starbucks you're about to head to. A minor niggle that will hopefully be corrected in future updates.

All in all, however, I can confidently say that Nokia Drive is the best purely offline navigational tool on the market, on any mobile platform. If you count yourself a Lumia owner already, there's no reason to not take advantage of the power within — it's a free download, after all. For those considering a switch, the timing couldn't be weirder. A Lumia 900 is still a bargain, even at $50 on a 2-year AT&T contract, but Microsoft has already confirmed that it'll never (ever!) get Windows Phone 8. If you're about to embark on a rural road trip this summer, having a Lumia with Nokia Drive would surely be of assistance, but the pragmatist in me says it's wiser to hold out for the impending rush of Windows Phone 8 devices this holiday season. After all, who wouldn't want to make that Christmas trip to grandma's house using a WP8-powered offline navigational tool? D

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TED THOMAS

The *FABLE: THE JOURNEY* designer chats about the original Game Boy, shape-shifting smartphones and the Super NES.

What gadget do you depend on most?
My phone. The smartphone changed everything.

Which do you look back upon most fondly?
I really loved my original Game Boy. Mainly because I wanted one so badly but my family couldn't afford it at the time, so when I eventually got my hands on one it blew my mind. I still have it! Not that I play it, mind you!

Which company does the most to push the industry?
I don't think it's one company, I think it's the competition between companies that push the industry. I'm fortunate to be a part of Microsoft and get to see first-hand the push for innovation in technology and software, but there are many other companies out there doing great work in these fields too. If there wasn't competition, there would be no push to succeed, or to win.

What is your operating system of choice?
I use Windows 7 for work and on my laptop at home, and I have a tablet running Windows 8. Although it's still an early version, Windows 8 (especially on Surface) could cause a real stir in the highly competitive tablet market. I really

like how it's a PC, laptop and tablet all in one. This is what I'm desperate for!

What are your favorite gadget names?
I really admire Apple's "i" naming convention, they really made all of their devices sound and feel personal. But I also like the name of the "Win 7" phone; I like the idea that my phone is always winning.

What are your least favorite?
The Virtual Boy certainly comes to mind! Given that you *play* video games, I wouldn't want to openly state that I play with a Virtual Boy! I know the Game Boy was a huge success, but I don't think Nintendo thought their naming conventions through deeply enough with this one.

Which app do you depend on most?
I won't say Facebook or Twitter as that would make me sound like some kind of social addict, so instead I will say the maps app – as it makes me sound like I explore and travel a lot. But in all seriousness, there are so many that I depend on on a day-to-day basis that I couldn't even imagine what it would be like to go back to a not-so-smart-phone.

What traits do you most deplore in a smartphone?
I really, really hate that no company has yet to release a smartphone with buttons. You know, those crazy little things we had a few years ago. I really miss them, so I look forward to the day when a smartphone screen can adapt (or perhaps shape-shift sounds more exciting!) to provide buttons when I need to press a button, but then disappear when I don't need them and return back to touch. The day that happens, I will be a very happy gadget lover.

What is your earliest gadget memory?

Which do you most admire?
The fact that my mum can use one. For years I have struggled teaching my mum new technology, so I really admire how she can now use most modern-day products. The average consumer has really become paramount to design. I really admire that.

What is your idea of the perfect device?
I think it's the device that does

“I hope that the next generation of smartphones are actually better at being phones.”

everything I want it to. Even with my smartphone that I depend on every day, there’s still so much I’d like to change with it that, although it is incredible, it is still far from perfect. The main irony being that it’s actually quite poor at being a phone! Typing SMS messages is just such a horrible experience with a touch-screen, or maybe I just have fat hands!

What is your earliest gadget memory?
The first time I played *Super Mario World* on the Super NES. From that moment on, I knew I would love video games and gadgets for the rest of my life.

What technological advancement do you most admire?
I really admire the advancement in the microchip. Technology is expanding at such a huge exponential rate, even in this economic downturn, that it’s amazing to think that my huge PC of just 5 years ago is now probably slower than my small smartphone.

Which do you most despise?
I really despise the nuclear bomb. I’m sure that for its time it was an incredible advancement in technology, but the stockpiles of nuclear weapons that some countries have today provide a scary outlook on the future of the human race. Fingers crossed we never find out!

What fault are you most tolerant of in a gadget?
Definitely writing text on a smartphone. I really despise any form of typing on my smartphone, either in emails or SMS messages, but I have to tolerate it because I have no other choice. I hope that the next generation of smartphones are actually better at being phones.

Which are you most intolerant of?
I’m not sure really, I guess I’m just quite a tolerant person! Perhaps if I had one intolerance it is that there isn’t a very good app store (at least from my experience) on any smart phone device. It makes finding new

“If a Ferrari counts as a gadget … I’d definitely covet that.”

(useful!) apps difficult, so I tend not to browse the store and instead just go on word-of-mouth recommendations.

When has your smartphone been of the most help?
I genuinely do use the maps app a lot. Mainly as a GPS to drive to a location, but sometimes to find my car in a car park, or to find a certain landmark. Satellite navigation is really incredible technology given the low price, but it’s certainly brought a whole new breed of “Driving under the influence of sat-nav” driving to our roads. Some people really can’t do two things at once.

What device do you covet most?
I’m very bad at this, because if I want a gadget badly enough then I will just buy it and realize later that I can’t afford it! If a Ferrari counts as a gadget, though, I’d definitely covet that.

If you could change one thing about your phone what would it be?
I wish that at my command, I could stretch my phone out into a tablet, and then at my command shrink it back down into a phone again. Like how I mentioned “button” technology for touchscreens, I hope this stretchy-screen technology isn’t too far into the distant future. Combine both of these technologies, and you have my dream smartphone.

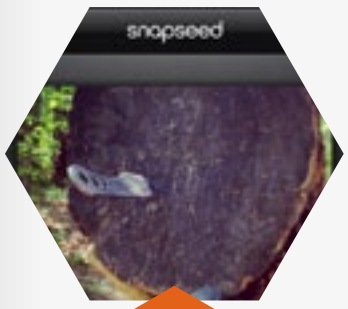
What does being connected mean to you?
For me it means that from wherever I am in the world, I can connect with my friends, family and work from any destination. It also means that I’m never alone.

When are you least likely to reply to an email?
When I’m on an airplane, purely because I can’t! Although I’ve seen recently that some airlines are trialing WiFi, so I hope that this becomes normal in the near future.

When did you last disconnect?
So long ago I can’t even remember! Hopefully once we’ve finished *Fable: The Journey*, I’ll get a chance to do so. D

IN REAL LIFE is an ongoing feature where we talk about the gadgets, apps and toys we're using in real life.

CANON EOS 7D



Snapseed for iOS

Panasonic's Lumix DMC-TS4

There's no question DSLRs are excellent shooters, but there's just one little snag: let's just say they have some *body size* issues. Personally, I have a pair of slim, capable non-DSLR options within reach — a Sony NEX-5N and a Canon S100 — so it's tempting to leave my much (*much*) heavier 18-megapixel Canon 7D DSLR in its bag. But when push comes to shove, I use it for assignments or personal stuff more often than not. Though it's a beast, it's a well-trained one: it does what I want, how I want it and with great speed.

For starters, it's never fun to bob and weave through camera menus, but the 7D's are the best I've used, as the settings only comprise a single, easily scrollable page. That makes programming it a little less tedious than some of its competitors, and Canon also wisely endowed it with three custom settings directly on the main mode selector dial. All my favorite settings for ISO, picture style, bracketing, etc. can be dumped onto those presets for wholesale shooting changes in one click (think: going from indoor to outdoor snapping, or shooting high speed video). So, while programming the DSLR still isn't high on my list of favorite things to do, at least I can get it over with quickly.

Even after that, using Canon's top APS-C shooter is pure gold. For starters, it's so brawny that I never feel I have to treat it with kid gloves out in the field. The ergonomics are second to none, with manual adjustments as convenient as can be and all the buttons in the right place for one- or two-click setting changes. Once I'm ready to open fire, it responds instantaneously, kicking out eight frames per second in continuous mode — making it great for action and obviating the need for a tripod during bracketed HDR shooting. And whether you're a fan of DSLR video or not, it's a no-brainer here (focusing aside), and you can snap still photos even as you're capturing video — an especially handy trick if you're filming kids. In short, the camera feels like a full-bore pro camera that happens to have a non-pro-sized sensor. —*Steve Dent*

SNAPSEED FOR IOS

Canon EOS 7D

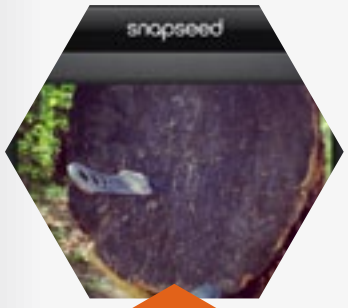
Panasonic's Lumix DMC-TS4

Look, Instagram — I get it. It has filters and an absurdly large community behind it. That's fine. I use it, I dig it. And honestly, it's an incredible app for $0.00. But oftentimes, I find myself wanting to squeeze just a bit more out of the photos taken with my iPhone 4S. When I'm home and have plenty of time, I just drag 'em onto my laptop and fire up Adobe Lightroom. But on the go — when I'm trying to capture *the moment* — Snapseed seemed like a safe bet. There are hundreds upon hundreds of positive reviews for this $4.99 iOS app, so I figured I couldn't go wrong.

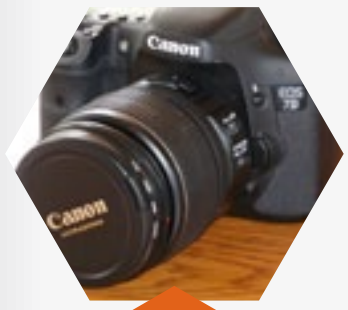
Turns out, I figured correctly. Snapseed is a really powerful, really quick photo editing app. The navigation takes a few minutes to grok, but afterwards, the gesture-based system becomes second nature. The filters here are (by and large) not gimmicky, and the ability to fine tune 'em to your liking is a major boon. Tilt-shift and center focus modes are super fun to mess around with, and there's a 1:1 crop function that tidies your photo up for direct uploading to Instagram. I've also been duly impressed with how quickly the app implements changes and renders previews.

Yes, it's five bucks, which is more than free. But, it's one of the few paid apps I've come into contact with that I find myself using daily, and I'm actually excited about it. You've got a zillion photo editing options on the App Store, but if you're looking for a solid bet, this is it. — *Darren Murph*

PANASONIC LUMIX DMC-TS4



Snapseed for iOS



Canon EOS 7D

Until recently, I couldn't remember the last time I shot with a point-and-shoot. For one thing, I use an NEX-C3 for events and product photography, and my status as a gadget reviewer means I can use a borrowed One S here or a Galaxy Nexus there for more casual shooting. None of that would have sufficed in Puerto Rico, though. I had a holiday planned, and snorkeling was on the itinerary, as were zip lining, late-night kayaking and hiking through El Yunque. Only a durable compact camera would do.

I ended up taking the Panasonic TS4, a $400 flagship built to withstand six-and-a-half-foot drops, temperatures as low as 14 degrees Fahrenheit and immersion in up to 40 feet of water (bingo!). To that end, it works as promised. I dropped the thing at least once, and not because I was trying to be a smartass reviewer, but because I can be clumsy sometimes. In any case, it survived, and doesn't have many scratches to show for it. I also didn't have any issues turning the camera on underwater or using it after I was back on dry land. Still, no amount of R&D can prevent condensation on the lens from spoiling a shot or two.

As for image quality, I've never been under any illusions that ruggedized cameras take particularly good photos, so I wasn't surprised that my vacation photos all needed a bit of editing. The TS4 struggled in the tropical sun, losing shadow details while washing the background in white. A round of auto-enhancing helped restore only a tiny bit of that dynamic range before I started in with the post-processing. All told, my shots were good enough for Facebook, though I didn't necessarily need a $400 point-and-shoot to achieve that kind of quality.

Unfortunately, most of my underwater shots never made it online. If a human was in the shot, it was easy enough to make out their pasty skin on that small, dim LCD screen. But when it came to capturing fish and coral reefs, my only recourse was to aim my camera and hope for the best. Even boosting the brightness didn't help. Still, I scored some nice pictures just above the surface, and off the railing of various boats. *And*, I didn't ruin any gear in the process, so that's a plus, right? — *Dana Wollman*

For OUYA, It's Game On

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SWITCHED ON

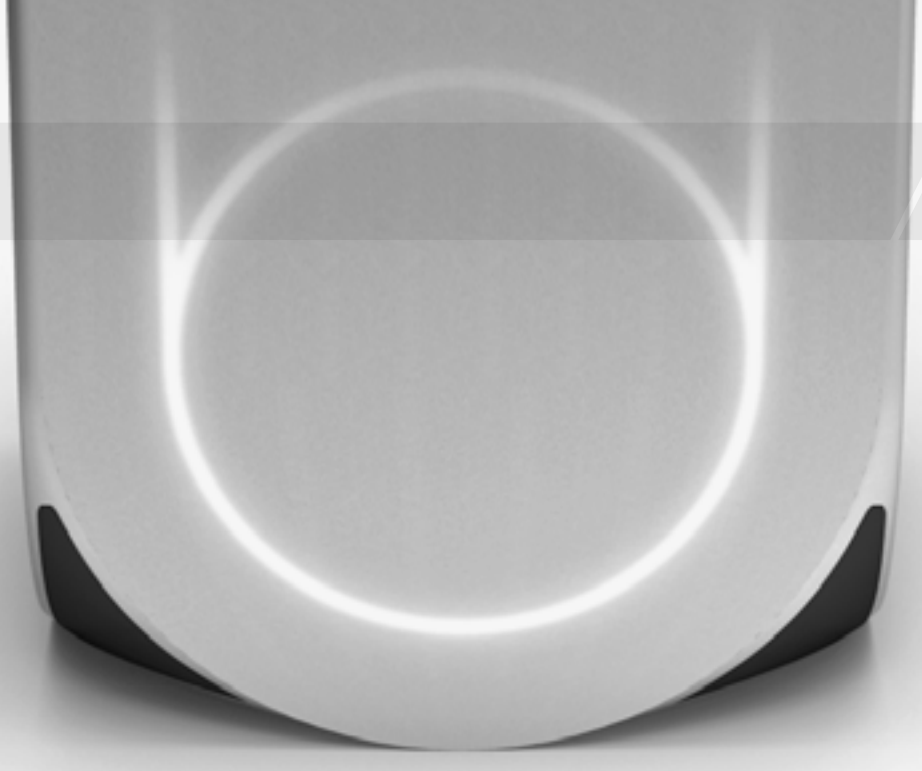
BY ROSS RUBIN

In discussing the varied routes Android has taken to the television, Switched On recently touched on OUYA, the cuboid game console that will run free-to-play Android games. The project has surpassed the $5.5 million mark on Kickstarter and it will likely break the Pebble smartwatch's record for overall funds collected just like it broke the record for funds collected in the first day.

Such a war chest will be useful in avoiding the fate of a long list of companies that failed at various times in the videogame console business, even after a wave of success. One reason why many of these companies faltered is that they could not attract the key franchises and compelling titles, much less exclusives, that drive an industry some deride as stagnant.

OUYA, its backers say, is different, because it eliminates the licensing fees needed to launch titles on a platform. For many of these games, though, it may largely eliminate revenue as it insists on a free-to-play model — without details at this point as to whether, or how, advertising will support such games. That could shift virtually all of the financial burden to in-app purchases and subscriptions.

It may not be a major investment to tweak *Angry Birds* for the OUYA. Indeed, that title has already been implemented on the Roku 2 and even on Samsung's gesture-driven televisions. But Consumers have shown limited interest in playing casual smartphone-style games on the big screen. Furthermore, interest in purchasing another



“Consumers have shown limited interest in playing casual smartphone-style games on the big screen.”

device to enable such games may wane as technologies for transferring media from smartphones and tablets to the TV — such as AirPlay and WiFi Display — mature.

If smartphone-class games aren’t compelling enough, why not bulk them up? OUYA’s Kickstarter page says it wants games to be cheaper, but that could be a relative descriptor. Developers can, of course, pour more time and money into their games, particularly if they are freed of other costs such as licensing fees and development kits.

However, such investment must then be weighed against the ROI (return on investment) offered by competing and often more established platforms, like console game stores and general PC app stores, fast-growing tablets, the burgeoning base of smart TVs, and even the Web itself. And all this effort would be for the speculation of OUYA volume and an unknown percentage of its users who will clear the progressively taller hurdles of discovering the app, downloading the app and paying for a premium aspect of it.

As of this writing, about 43,000 people have already preordered an OUYA via Kickstarter. If the console continues to attract backers at the rate it has, it will have attracted about 180,000 preorders when the campaign ends. Developers may be excited by a maverick move in the console space, but, even with less friction, sound business propositions ultimately determine the difference between a successful game machine and a hacker’s plaything. D

The week that was,
in 140 characters or less.

BIG MONEY, BIG CATS AND THOSE OLD TWEETS

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Everyone freak out about Apple's numbers now. Then be blind-sided in two quarters. Again.

@bheater
Trying to come up with a slogan for Netflix Watch Instantly. What do you think of Netflix: Prepare to Meet Wally Sparks All Over Again?

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Sign of the times: An OS X launch feels infinitely less exciting than an iOS launch

@laura_june
I don't want my old tweets back. That's why I gave them to you

@JohnPaczkowski
love that Apple's out-side law firm's e-mail address is @mofo.com

THE STRIP | BY BOX BROWN

ASTROLABES

MODERN EQUIVALENT:
Google Maps with GPS

Originating with the Greeks in 200 BC, and further developed by the Islamic world starting around 800 AD, the Astrolabe wasn't quite a smartphone, but it may have been the closest thing in terms of navigation. It allowed the user to lock-in on a location, date and time based on their position under the stars.

PHOTO: JEAN-PIERRE DALBERA / FLICKR

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