Is the Surface Pro a Productivity Powerhouse?

DEVELOPERS ON OUYA'S PROS AND CONS

HP'S TACTILE TAKE ON WINDOWS 8

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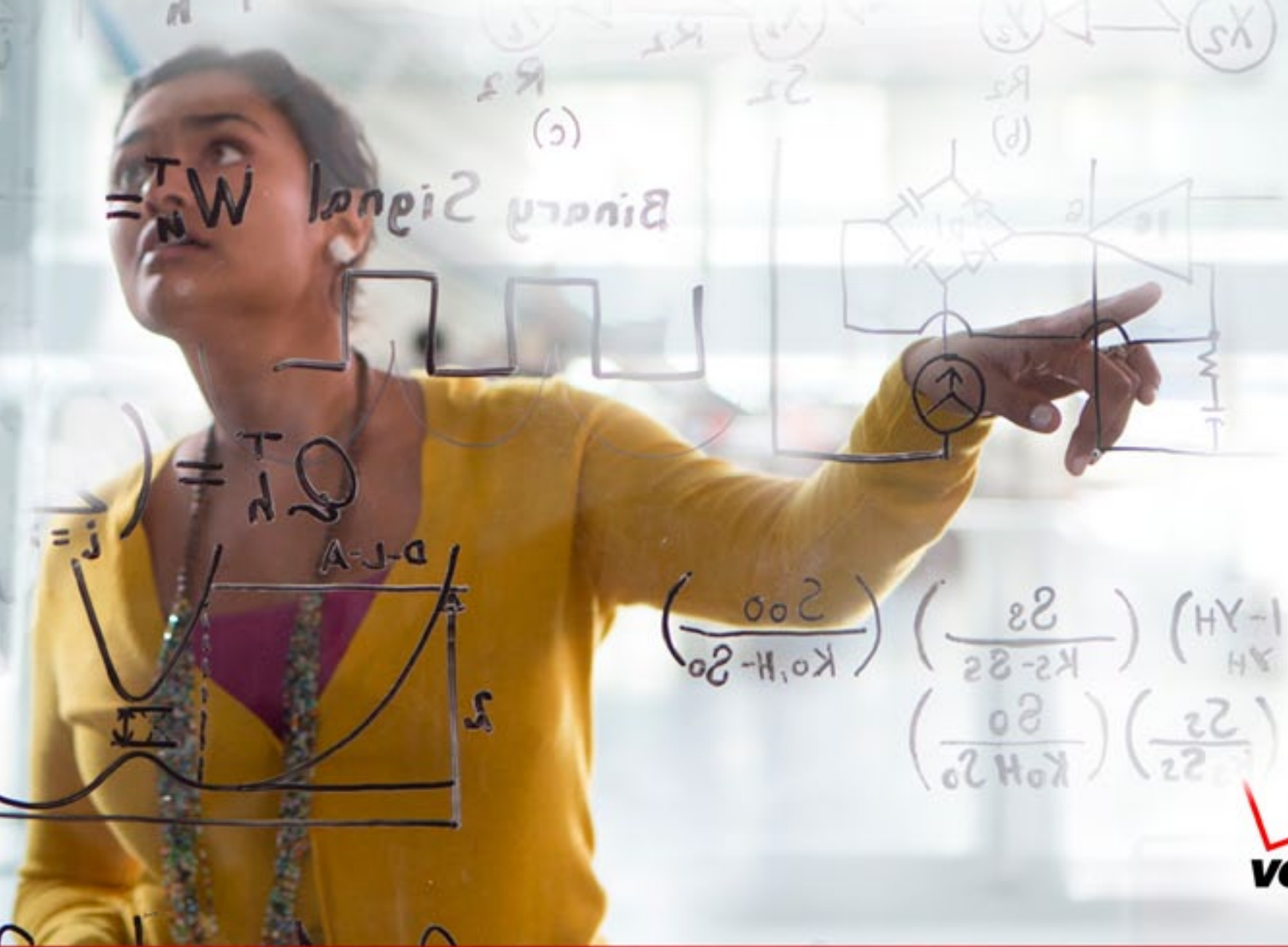

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ISSUE 77

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On the Cover:
Photograph by Will Lipman

WHEN THE RUBBER HITS THE ROAD

DISTRO
02.08.13

EDITOR'S LETTER

The time for talk and for analysis has come to a close. The BlackBerry company's first phone hit the market in earnest and now we wait and see how the market reacts. According to BlackBerry itself, initial indications are just fine. While the company followed in the footsteps of Amazon and Microsoft and refused to give solid numbers (probably wisely), it did say that sales for the Canadian release were 50 percent stronger than any of the company's previous launches there. In the UK things looked even better, with sales 300 percent greater than any previous BlackBerry release.

Of course, it's been a long time since we've had a major BlackBerry release in any country and the market has grown considerably since then. Still, demand for the Z10 is certainly looking strong, and that's good news. Similarly, demand for the QWERTY-having Q10 will presumably also be high when that ships in a few months. To help devs prepare, RIM has released the Dev Alpha C handset, which too has a physical keyboard. And, the company's much-hyped Super Bowl commercial hit the airwaves on Sunday to rather ... mixed reviews. The ad shows a Z10 user alternatively saving the world and morphing into an elephant while also catching fire and doing a lot of other zany things that, seemingly, do little to enamor viewers to the handset or the software it's running. No worries, BlackBerry still has a month to put together a new ad campaign before the phone drops here in the US.

BlackBerry was, of course, not the only tech company that chose to decimate its advertising budget with a 30-second spot during the Big Game. Plenty of nerdy commercials were on-offer, including the usual suspects like GoDaddy.com and Best Buy. Samsung made a bit of a splash with Seth Rogen, Paul Rudd and LeBron James in its commercial, while we got a bit of an intriguing look at *Iron Man 3* as well. As ever, it was a grand time to be watching commercials, though if you were only focusing on the ads you missed a heck of a game.

Speaking of Best Buy, that retailer is just one of the many places that you'll be able to buy the OUYA console when it ships en masse in June. Amazon, Target and GameStop have also signed on

EDITOR'S LETTER

to stock the $100 thing, with additional controllers costing $50. And yes, don't sweat: Kickstarter backers are still said to be getting theirs sometime in March, which should give you plenty to gloat about if you got in on that deal. If you didn't, well, there's always eBay ...

Those looking for a bit more control over their iPhone 5s and iPad minis will be happy to know that the evasi0n untethered jailbreak is now available. The iOS 6- and 6.1-cracking software will set your device free from its digital shackles and make you secretly feel a bit more dangerous when using your phone. Go ahead; get some — just back up your data first.

Dell, too, is feeling dangerous, confirming that it is indeed buying itself back from, well, everyone. The company is going private at a total cost of $24.4 billion, cashing out all the shareholders at a cost of $13.65 per share. That's a tidy 25 percent premium over the January 11th closing price of $10.88, which should make those (soon to be former) investors reasonably pleased. Microsoft chipped in $2 billion to help make this happen and Michael Dell will be contributing his own stock to the process. In return he gets to keep his job as CEO, but the question, of course, is what happens next? Will the newly liberated Dell shift its tack dramatically into crazy new ventures now that it doesn't have as many investors breathing down its neck? Or, will it re-focus on the enterprise and move away from consumer goods altogether? Suffice to say, we'll let you know either way.

Finally, we got a peek at Wine on Android this week. No, this isn't a new, boozy direction for Google's foodie naming scheme, rather a port of the popular Linux environment for running Windows apps. This could open the door to proper desktop productivity apps on Android smartphones and tablets, but if the performance of this early version is any indication, release is still a good ways away.

In this week's Distro we're taking you on a bit of a ride in Tesla's Model S sedan, which proves to be amazing, but still falls well short of perfect. We also have my review of Microsoft's Surface Pro, the "no compromises" tablet that, sadly, feels quite compromised, while Sarah Silbert weighs in on the HP Spectre XT TouchSmart. Ben Gilbert talked with a number of OUYA devs to get their take as we get closer to the thing's release, and Razer CEO Min-Liang Tan sits down for Q&A. That plus a new IRL and Eyes-On with Tesla's fee-free Supercharger. Now, make sure your reading device of choice is fully charged, and enjoy. D

TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

BERRY PERSUASION, CRIBBING WITH PEBBLE AND A QUESTION OF RATIOS

Touch article names to read full threads

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INBOX

RIM: A BRIEF HISTORY FROM BUDGIE TO BLACKBERRY 10

ISSUE 76,
FEBRUARY 1ST, 2013

"I think they can keep it from dying as a smaller, corporate-focused player. But as far as being a major player in the consumer space, no, it's too late."

— INSANEDREAMER

"I think BlackBerry has a chance if: A) it can persuade businesses their phones are far safer than the competition's and B) it can persuade users to use a BlackBerry at work. B is probably the tougher nut to crack and needs the apps to do it. A nice UI won't do it by itself."

— DRXYM

"Timing is good for them to get it right ... AAPL taking a big hit and all. ❡ Here's to more competition / consumer choice."

— JOEBLO1999

PEBBLE SMARTWATCH REVIEW

ISSUE 76,
FEBRUARY 1ST, 2013

"If it has enough text memory it might make a pretty decent crib sheet apart from its other uses."

— I._M._WRIGHT

"If I can save myself from getting my wife's frustration by glancing at my watch instead of pulling out my smartphone, I'm sold."

— BEYONDTHETECH

THE HIGHS AND LOWS OF HUMAN-POWERED FLIGHT

ISSUE 75,
JANUARY 25TH, 2013

"What if you pedaled a bike attached to a generator to create oxygen and hydrogen from water for a week or month and then used it in fuel cells to pow-

er a plane? Would that not be human powered?"

— ANDREWANALYST

"It's a simple question of weight ratios. A five ounce bird could not possibly carry a one pound coconut."

— MELISSAMCD

BLACKBERRY Z10 REVIEW
ISSUE 76,
FEBRUARY 1ST, 2013

"RIM (I mean BlackBerry) knows full well that this is the battle for the bronze metal. Chances are WP8 will come up on top but who knows."

— GARY 6

"Man, this thing looks like a hunk of junk to my eyes. That camera pan they did with the iPhone next to it pretty much sums it up for me. I'd bet my house this is the last hurrah for RIM. Kind of sad, but doesn't really surprise me as they had about as much vision as Steve Ballmer when they said nobody wants to use a touch device. No imagination will get you nowhere fast in this industry."

— 1LASTPOLARBEAR

"Since some are talking about the apps, I've just learned 28,000 Android apps work on the new BlackBerry. Some are saying BlackBerry is promising 70,000 apps at launch, that plus the 28k Android apps is a decent start. As an Android guy myself I will have to give BlackBerry a try."

— THE_SECRET

ENTER

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EYES-ON

TESLA SUPERCHARGER

Tap for detail

SOLAR POWER

ROCKET FUEL

30 MINUTES, 150 MILES

PHOTOGRAPHS BY WILL LIPMAN

ROAD TRIP!

In order to juice up those Model S — and soon-to-arrive Model X — whips for folks in California and in two East Coast locales, Tesla has constructed a total of nine Superchargers to deliver a half-charge in half an hour. This enables road warriors to venture out in their EVs without having to prolong bathroom breaks while they fuel up enough to make it more than a few miles.

Click on product names to read full stories

PENTAX OPTIO WG-3 & WG-10

Some might call it ugly; we'll say unique. Regardless of your take on Pentax's ruggedized Optio housing, you'll get a capable waterproof shooter, with a handful of practical features. Two new models appeared at CP+, and while both may look like they came from the same mold, the feature sets differ vastly. The more powerful compact, the WG-3, is also the slightly larger flavor. It packs a 16-megapixel CMOS sensor, a sharp 3-inch LCD and a 4x, f/2-4.9 lens. Its survivability stats, printed around the lens, claim it's waterproof to 14 meters (46 feet), shockproof to 2-meter (6.5-foot) drops, crushproof to 100 kilograms (220 pounds) of force and cold proof to -10 degrees Celsius (14 degrees Fahrenheit). Then there's the WG-10, which is basically just a rebranded WG-1, so we won't focus much on that.

Both cameras have similar designs that scream "rugged" — in other words, if you're a fan of Panasonic's original Toughbook design, you might find these attractive. They're incredibly solid feeling, so while trade-show tethers prevented us from doing any durability testing, they definitely look the part. We spent a few minutes with the WG-3 (or WG-III as indicated to the right of the lens) — it's almost intimidating in appearance, as if it's telling other cameras to watch their backs. The display is sharp and bright and the camera was generally responsive, though it certainly won't break any records for speed.

PRICE:
$180 & $300+

AVAILABILITY:
APRIL 2013

THE BREAKDOWN:
PENTAX OFFERS UP TWO UNIQUELY DESIGNED SHOOTERS POISED TO TAKE ON INTENSE EXPEDITIONS.

CANON POWERSHOT ELPH 330 HS & 115 IS

In Japan, they've been coined the IXUS 255 HS and IXUS 132, but folks in the US will probably recognize them as the ELPH 330 HS and 115 IS. By any name, they're Canon's two mid-range point-and-shoots for CP+, and while they were joined by the A2500 during the show's announcements, that latter model didn't seem to make it to the company's booth in Yokohama. In any case, if you've handled an ELPH model in recent years, you know what to expect here — Canon's design hasn't changed much, but we're not complaining. The 330 HS includes a 12.1-megapixel CMOS sensor, compared to a 16-megapixel CCD in the slightly smaller 115 IS.

Cosmetically, the biggest difference between the two is the powerful 10x optical zoom lens on the 330 HS, compared to a still-respectable 8x optic on the lower-end model. Both cameras offer the same familiar PowerShot UI, and they look nearly identical with the lens retracted. Zoomed in, however, it's clear which camera is the more capable of the bunch. Both performed very well during our hands-on at Canon's booth, though we'd definitely opt for the 330 HS, which offers a superior sensor and extended lens, not to mention built-in WiFi — it's definitely worth spending an extra 60 bucks to snag the $230 HS model.

Click on product names to read full stories

PRICE: $170 & $230

AVAILABILITY: MARCH 2013

THE BREAKDOWN: THESE POINT-AND-SHOOTS SPORT A FAMILIAR FORM FACTOR WITH THE PRICIER 330 HS TACKING ON BUILT-IN WIFI AND MORE.

NIKON COOLPIX S31 & AW110

You might figure that a climate-controlled exhibition center would offer a safe haven for even the most delicate of electronics, but with thousands of consumers getting handsy with these gadgets, many devices take quite a beating during a weeklong trade show. No drop to the floor, counter crush or attendee sneeze is too much for these ruggedized Nikons, however. The Coolpix S31 and AW110 were both designed with wild lifestyles in mind, with waterproof and shockproof housings offering protection on land and under the sea. Our test location this time around was limited to a display counter positioned front and center at Nikon's CP+ booth in Yokohama, so we can't speak to durability, but both offerings look convincing enough.

With a sticker price of $350, the AW110 is certainly the higher-end of the two. We were particularly taken with the 3-inch OLED display, which looked fantastic — it's perhaps the sharpest screen we've seen on any ruggedized model. The 5x internal zoom lens wasn't speedier than we expected, but it'll get the job done. The S31, however, looks very much like a child's plaything. And, considering the $120 MSRP (for a ruggedized camera, no less), it seems to be priced as such.

Click on product names to read full stories

PRICE:
$350 & $120

AVAILABILITY:
FEBRUARY 2013

THE BREAKDOWN:
NIKON'S AW110 SPORTS A STELLAR DISPLAY FOR A RUGGEDIZED UNIT, WHILE THE S31 FEELS MORE LIKE A TOY.

OLYMPUS STYLUS XZ-10

We have to say: Olympus has a very compelling point-and-shoot to show off at CP+. The Stylus XZ-10, which just launched, includes a small arsenal of features that you wouldn't normally find on a pocketable cam, including incredibly fast autofocus, a control ring around the lens, a dedicated mode dial and a very sharp (920k-dot) 3-inch LCD. The autofocus is the standout here, however — Olympus describes it as being on-par with its PEN Micro Four Thirds models, and as compacts go, it feels just about as speedy as Sony's RX100. The 5x, 26-130mm lens offers a maximum aperture range of f/1.8-2.7, which should have you covered in most lighting situations. There's a 12-megapixel CMOS chip on board, with sensor-shift image stabilization, and support for 1080/30p video as well.

PRICE: ¥40,000 ($440)

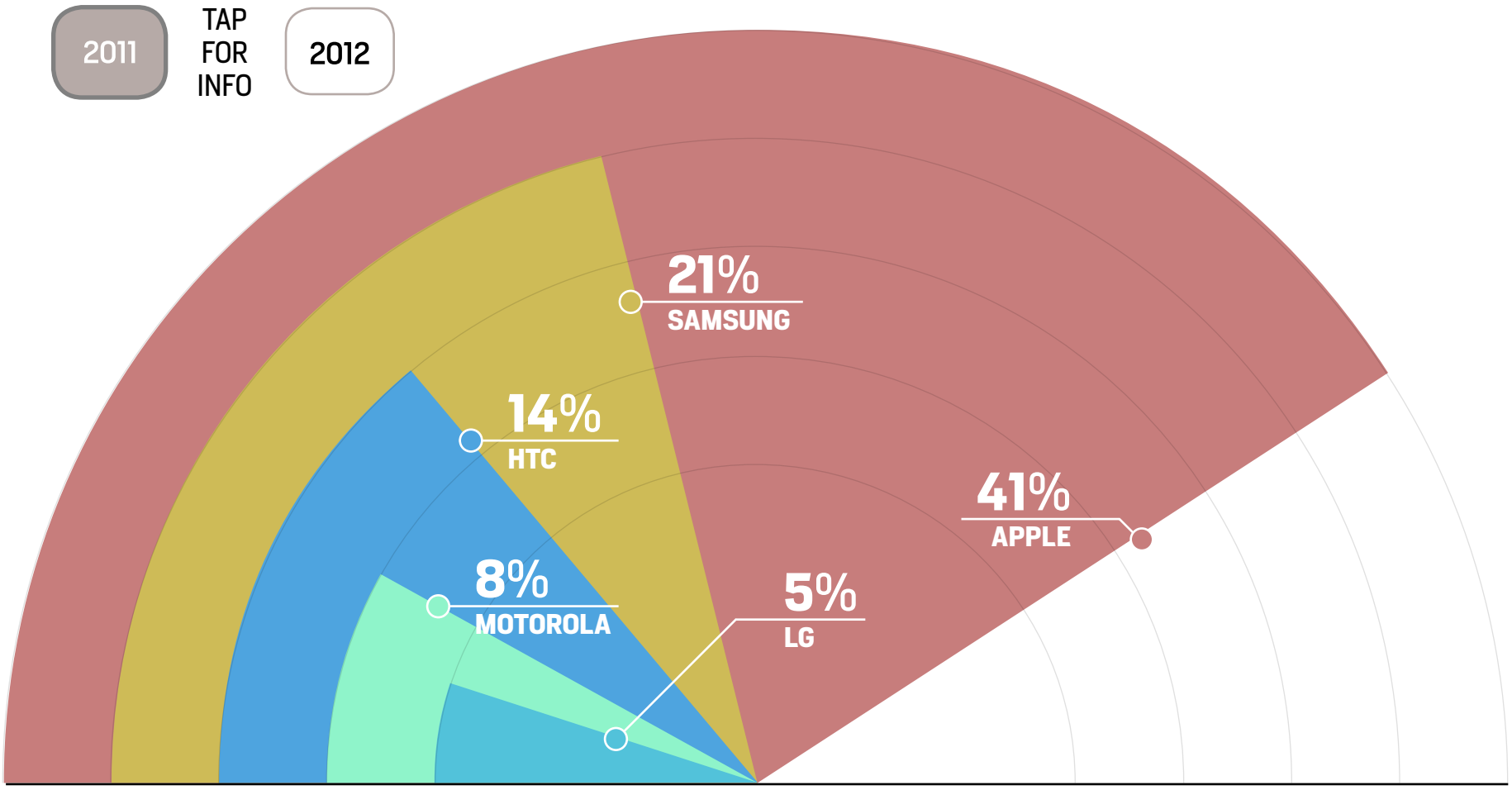
AVAILABILITY: MARCH 2013

THE BREAKDOWN: THE XZ-10 PACKS A CONTROL RING, 3-INCH LCD AND PEN-LIKE AUTOFOCUS, BUT LACKS ONBOARD WIFI.

Click on product names to read full stories

The camera itself feels very much like a premium device, and it's attractive to boot. There's no built-in WiFi, which we've been seeing embedded with quite a few pocketable models this year, but you can take advantage of some smartphone sharing and editing features if you add on an optional Toshiba FlashAir card. Sadly, there's still no US pricing to speak of, but Olympus reps here in Japan quoted a retail price of ¥40,000 (about $440), plus tax, when the camera hits stores. D

MARKET SHARE FOR THE TOP 5 US SMARTPHONE BRANDS



TOP-SELLING MOBILE PHONES IN THE US Q4 2011 - BY RANK

#1	#2	#3	#4	#5
APPLE iPHONE 4S	APPLE iPHONE 4	APPLE iPHONE 3GS	SAMSUNG GALAXY S II	SAMSUNG GALAXY S 4G

TOP JOCKS IN THE MOBILE GAME

Nothing super-shocking in this latest report from NPD — especially after seeing fairly similar numbers from Strategy Analytics not all that long ago, that is. According to the research group, Apple's leading the pack at 39 percent of US smartphone sales in the final quarter of last year — that number's down from 41 percent this time last year. Bigger changes are afoot over at Samsung, however. The handset maker jumped from 21 to 30 percent from the same time last year, thanks in no small part to demand for the Galaxy S III. Go figure, NPD's top five list is dominated entirely by iPhone and Samsung Galaxy S iterations — in fact, combined, the two manufacturers make up some 70 percent of sales. Motorola is in at a distant third, with 7 percent of sales, followed by HTC and LG, each at 6 percent. — *Brian Heater*

SOURCE: NPD

PHOTOGRAPH COURTESY OF MONOPRICE

How Monoprice Is Eating the Tech World from the Inside Out

By John Herrman
BuzzFeed FWD

It wasn't all that long ago that Monoprice was something of an insider's secret — the sort of thing recommended by friends and family the same way that shareware was recommended as an alternative to pricey commercial software. That's been changing, though, and as *BuzzFeed FWD's* John Herrman explains, you'll soon be seeing more of the company's name than ever, including affordable high-end monitors and other consumer electronics planned for the future. CEO Ajay Kumar doesn't even completely rule out the possibility of selling the company's products at retail stores.

Click on headlines to read full stories

When Science Meets Fiction
By Jennifer Ouellette
Scientific American
Science and science fiction sometimes have a tenuous relationship, but it tends to be an interesting one to explore. In this piece for her *Cocktail Party Physics* blog at *Scientific American*, Jennifer Ouellette traces that relationship back to the beginning, and highlights some recent examples of science fiction getting science right.

The Threat of Silence
By Ryan Gallagher
Slate
It's not Silent Circle's first encryption app, but its latest promises to go one big step further than its previous efforts and let iOS (and later Android) users send encrypted files directly from their mobile device. Here, Ryan Gallagher looks at the company and the people behind it, including the creator of PGP encryption, and the controversy that's sure to come.

The End of the Web, Search, and Computer as We Know It
By David Gelernter
Wired Opinion
The web has already changed considerably in the past 20-plus years, but David Gelernter sees far bigger changes coming in the future. As outlined here for *Wired Opinion*, he sees the web shifting from a space-based one to a time-based one, with a single "stream" replacing the current web — a shift that he says would profoundly change search and computing itself.

My Bloody Valentine, Bowie, and the URL of Things to Come
By Warren Ellis
Vice
Warren Ellis connects the dots from My Bloody Valentine's surprise release of a new album to David Bowie's similar surprise last month, and suggests that others would do well to follow their example: giving fans a gift to be shared, instead of a traditional marketing campaign that leads them on.

BATTLING FOR THE BRONZE

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FORUM

SWITCHED ON

BY ROSS RUBIN

Apple and Google, the latter riding on a Samsung partnership, continue to play an escalating game of units versus revenues to determine which is the top dog in mobile operating systems. However, two companies that were early players in smartphones, but late to revamp their operating systems, look on, seeking to establish themselves as solid third-place entrants, at least as a beachhead.

A couple of years into the re-emergence of Windows Phone and its slow crawl up the market share mountain, the company formerly known as RIM has released BlackBerry 10. Both operating systems lie somewhere between the cathedral of iOS and the bazaar of Android in terms of their tradeoffs between integration and flexibility, with Windows Phone offering a broader range of hardware since it is licensed and has been in the market longer.

Both BlackBerry 10 and Windows Phone have burgeoning app marketplaces, but are missing many key apps. While Windows Phone has been gradually building its catalog in the years since it launched, BlackBerry's debut lineup was surprisingly strong. Still, there were numerous iOS favorites missing, including Tweetbot, Instagram, Pandora, Spotify, Hulu and Netflix. Also unsurprisingly lacking on both operating systems is strong support for Google web services such as

Maps with navigation, Google Voice and Google Drive.

Strip away the app race and both operating systems also have ties to their respective pasts. The one for Windows Phone, though, is a circuitous one; it has less in common with its predecessor than BlackBerry 10 does with previous BlackBerry operating systems. Windows Mobile's history involved a close UI familiarity with the PC. From the beginning of Microsoft's mobile efforts in the PDA era, its touchscreen phone software had a Start button and windows that could be minimized like the classic Windows desktop. Windows Phone removed the family resemblance, but only temporarily as the Live Tiles presentation became the default look for Windows 8.

BlackBerry 10's nods to the past are more concrete than reinforcing cross-product continuity (although the operating system will eventually provide a huge app-selection boost to the company's PlayBook tablet). When BlackBerry was known as RIM, it did much to attend to a loyal following, many of whom were reluctant to acquiesce to a more modern user interface. Examples include BlackBerry's support for a physical keyboard as embodied in the more classically BlackBerry (and more universally pronounced) Q10, strong enterprise management and the ability to turn the phone off at a given time.

But perhaps the best embodiment of BlackBerry DNA in BB/10 is BlackBerry Hub. A listing of incoming messages that includes social network notifications, it is a modern take on the message list that was the default user interface of the earliest BlackBerry devices and embodies the company's focus on the phone as foremost a communications device. Indeed, there is no mail app in BlackBerry 10 as mail communications are managed through the Hub that is never more than one disjointed swipe away.

In contrast, while Windows Phone also has hubs strewn throughout its interface, its defining UI feature is the Live Tile, which is primarily a launcher with a light notification capacity. It takes a bit of gazing at various Live Tiles to get a holistic sense of what's going on. Windows Phone places a greater emphasis on contacts via its People Hub, making it easier to see in one place the various activities and updates from a range of people and even pin people (or rather, thankfully, their digital representations) on the top level of the user interface. It's more of an exploration model whereas the BlackBerry is a more active push to your attention. On BlackBerry 10, in contrast, family, friends and others are still simply listed in a nondescript and dehumanized "Contacts" app.

Some of the contrast might also be influenced by which products are most

essential for each company as they embrace both smartphones and tablets. At the debut of Windows Phone 7, many noticed that its panoramas would be well suited to a larger display. And once it was revealed that the Live Tile user interface would be coming to Windows 8, it became clear that Live Tiles had to be a great fit for the larger displays that are more often running Microsoft software.

In contrast, BlackBerry's bread and butter is the smartphone, and so much attention was clearly paid on delivering a user interface that could cram key information on the limited screen real estate without disrupting other apps. BlackBerry calls this Peek. The company's VP of User Experience Design Don Lindsay summed up the rationale at a developer conference last September when he said, "We know that, in designing for a mobile device experience, that it's all about screen real estate. And screen real estate is limited. In fact, screen real estate is precious."

With BlackBerry, it's about the message. With Windows Phone, it's about the messenger. Clearly, and as is the case with iOS and Android, all of these operating systems can relay the same information from the same people. Still, preferences in terms of interfacing with the people and information will play a role in whether consumers are willing to stray from today's most popular options as Microsoft and BlackBerry seek to recapture their former market leadership. D

PLEASE FIX TWO THINGS

DISTRO 02.08.13 | FORUM | THIS IS THE MODEM WORLD

BY JOSHUA FRUHLINGER

We can all agree that technology is pretty cool. It allows us to communicate with one another, entertain ourselves, meet new people, learn new things and even find love and health. We love to discover new technologies, see it do amazing things and get a glimpse of the future. We, the early adopters, are pioneers, beta testers and happy to be first in line. This is all good.

But despite our hammering, our pleas and our shouts from the tops of the greatest blogs we know, some bad things just don't change. When I say "bad things," I'm talking about two annoying little facts of technology that, in my opinion, don't need to be so painful. These are things we can and should fix.

Perhaps we're not heard loudly enough, or perhaps the technology isn't there to fix what we want, or maybe the manufacturers have better things to do. Whatever it is, let's list those things out here, perhaps so that some engineer or product designer will read this and think, "Why, yes … Yes. I should fix this."

SOFTWARE THAT DOESN'T AUTO-SAVE

A couple years ago, I was immersed in planetary exploration in *Mass Effect*. I was so immersed that I didn't stop what I was doing to tell the Xbox 360 to save my progress. I ended up at the end of a planet-mining run only to be the victim of an enemy's

cheap shot. The screen went dark and I was placed back at the beginning of the level. I turned the game off and haven't returned since.

Let me simply ask this: Is there ever a situation in which someone would not want to save his progress all the time? As a writer, I grew used to hitting Command-S every few minutes, so that muscle memory is there, but nowadays the better word processors save your progress — in several iterations — every few minutes.

There's no excuse for software that doesn't do that at this point. Back in the day, you had to tell the computer to save because it didn't know you had a disk in a drive or maybe you wanted to choose a different volume on which to save. But that's not true anymore. We're saving to solid-state drives, huge hard drives and now the cloud. It's time developers get with this fact.

CONNECTOR ROULETTE

Just a few months ago, Apple switched over to a smaller Lightning cable from its ubiquitous 30-pin connector. The net result is that tons of users are in pain from the transition. In my house, I have 30-pin connectors everywhere but I only have one Lightning cable. Sure, I can buy more from Apple for $20, but that's a bit of an insult.

So now I'll spend the next six months or so switching from 30-pin to Lightning. I have 30-pin connectors in my car, next to my bed, in the kitchen, hanging from my computer's USB ports and in the living room. This is no small investment, and now I get to do it all over again.

A few years ago — and perhaps this was my fault for being an early adopter — I had to slowly move from an entire home theater packed full of expensive DVI, component and Toslink cables to one lined with equally expensive HDMI cables. Sure, the net result is fewer cables, but is my viewing experience any better? Not so much. In the end, I felt bullied into the new cable technology.

While I understand that technology must move forward, manufacturers should offer pain-free conversion paths. In this case, Apple should have included more than one cable and even an adapter or two as a show of good faith, at least for the first year of the product launch. Instead, we're forced to buy cables and adapters at $20 a pop.

One last complaint about cables: The cost. Seriously, guys? Was your R&D and material outlay that expensive that a single cable should cost $20, $30, even $99? Are you banking on consumers not knowing any better, or do you actually believe that your cable results in the fastest, clearest audio ever? Perhaps if you priced them just a bit more reasonably — no one's asking for anything free here, and go ahead and offer a premium titanium-plated version for the suckers — the upgrade path wouldn't be so painful. D

REVIEW

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HP Spectre XT TouchSmart

Microsoft Surface Pro

Tesla Model S

REVIEW

HP SPECTRE XT TOUCHSMART

Is the Spectre XT TouchSmart priced and powered up enough to be the top pick for touchable Windows 8 Ultrabooks?

By Sarah Silbert

We had plenty of nice things to say about the HP Envy Spectre XT when we reviewed it last year, but we were already looking ahead to the HP Spectre XT TouchSmart, which steps up to a 1080p touchscreen. Well, here it is, and with 10-point touch and the same all-metal design as its predecessor, this 15-incher looks mighty promising. But is it worth $1,350 — or more, if you want an SSD?

HP SPECTRE XT TOUCHSMART

It's a bit hefty for the Ultrabook moniker at 4.96 pounds.

LOOK AND FEEL

The TouchSmart will look quite familiar to those who have seen the Envy Spectre XT. It sports the same elegant, all-metal chassis and brushed-silver finish, along with a reflective HP logo on the lid. The only real difference — apart from the TouchSmart's significantly larger footprint — is that the Beats Audio and Spectre XT TouchSmart branding sit on the top of the display, as opposed to below the screen on the 13-inch XT. All in all, it's an attractive package, though it's also one that draws constant comparisons to Cupertino's baby.

At 4.96 pounds and 0.87 inch thick, this machine is hardly the wispiest incarnation of an Ultrabook, but it's far from bulky for a 15-inch machine. Still, you will notice its weight when toting it in your backpack or briefcase; we're not sure you'd want to carry it to work every day. Like its non-touch sibling, this notebook feels very comfortable in the hand thanks to grippable, rounded corners and a lovely soft-touch finish on the bottom. The design feels very sturdy as well; it never creaked or bent under pressure throughout our hands-on time.

Everything is in its logical place on the TouchSmart, with the speaker grille and power button sitting at the top of the keyboard deck, and the HP TrueVision HD webcam centered above the display. The laptop's bottom is completely clean save for an air vent; there's no removable battery here. Along the sides, you'll find a generous selection of ports. An SD card slot, 3.5mm headphone jack, USB 2.0 port, charging connector and a Kensington lock slot sit on the right side, while an Ethernet jack, full-size HDMI port, Thunderbolt and two USB 3.0 connections line the left edge. Incidentally, this is the first HP system to include a Thunderbolt port.

KEYBOARD AND TOUCHPAD

We were big fans of the Envy Spectre XT's keyboard, and the 15-inch TouchSmart's backlit layout is equally comfortable. It took a bit of time for this reviewer's small-ish hands to adjust to the spacious setup,

HP SPECTRE XT TOUCHSMART

The keyboard layout is spacious and comfortable to type on.

but the keys themselves offer a satisfying amount of travel. You should have no trouble getting up to your usual words-per-minute pace.

The large keyboard deck provides ample space for resting your palms and wrists, and it also accommodates a sizable Synaptics touchpad. The clicker executes Windows 8 gestures flawlessly, and it offers just enough resistance for scrolling to be fluid but not overzealous. The integrated left- and right-click buttons are responsive and quite good at distinguishing accidental input from intentional taps. As we've seen on previous HP systems, this machine offers a trackpad-disabling feature, which is activated with a double tap on the clicker's upper-left corner.

DISPLAY AND SOUND

With a 1080p resolution and IPS technology, the TouchSmart's 15.6-inch Radiance display provides bright, crisp visuals. It's one of the best panels we've seen on an Ultrabook lately — on par with Acer's and ASUS' latest offerings — and it's one of the advantages this system has over the non-touch Envy Spectre XT, which sports a 1,366 x 768 screen. HP wouldn't confirm whether this is the same 1080p panel that had color calibration issues on the Envy 15, but a spokeswoman said TouchSmart users shouldn't experience that problem. (We didn't during our hands-on time.)

Colors look rich and accurate, and content is visible from even extreme off-angles. The touchscreen is very re-

Its 1080p Radiance display doesn't disappoint.

sponsive to all the Windows 8 gestures you'll be throwing at it. Scrolling, swiping to bring up the Charms bar and pinching to zoom all work without a hitch. Even though we're fans of this laptop's touchpad, we often preferred navigating via the touch display — its large screen almost begs to be touched.

Unsurprisingly, the TouchSmart packs

This is one of the best panels we've seen on an Ultrabook lately.

Beats Audio, and sound pumped through the machine's tilted speaker grille is plenty loud, if not particularly rich. As is usual with Beats, we didn't detect as much tinniness as we have on other laptops, but bass is still limited. Listening to music and watching movies with headphones is definitely a more immersive, sonically pleasing experience, but it's good to know you have enough volume should you want to blast some tunes in the open air.

PERFORMANCE AND BATTERY LIFE

Our review unit is configured with a 1.9GHz Core i7-3517U processor with 8GB of RAM, Intel HD Graphics 4000

BENCHMARK	PCMARK7	3DMARK06	3DMARK11	ATTO (TOP DISK SPEEDS)
HP SPECTRE XT TOUCHSMART (1.9GHZ CORE i7-3517U, INTEL HD 4000)	4,316	4,887	**E1165 / P613**	130 MB/S (READS); 72 MB/S (WRITES)
LENOVO THINKPAD X1 CARBON TOUCH (1.8GHZ CORE i5-3427U, INTEL HD 4000)	4,919	**5,309**	E1084 / P627	551 MB/S (READS); 518 MB/S (WRITES)
ASUS ZENBOOK PRIME UX31A TOUCH (1.9GHZ CORE i7-3517U, INTEL HD 4000)	**5,081**	5,043	E1154 / P597	554 MB/S (READS); 523 MB/S (WRITES)
ACER ASPIRE S7 (1.9GHZ CORE i7-3517U, INTEL HD 4000)	5,011	4,918	E1035 / P620 / X208	**934 MB/S (READS); 686 MB/S (WRITES)**

and a 500GB hard drive spinning at 5,400 RPM. The Ultrabook performed respectably on synthetic benchmark tests, such as PCMark7. When it comes to I/O performance, though, this laptop falls far behind the SSD-equipped competition — we're talking max reads and writes of 130 and 72 MB/s, respectively, while we regularly see Ultrabooks turn in reads and writes north of 500 MB/s. If you've been impressed up until this point, don't despair: there's an SSD configuration available (more on that later), and we imagine it will offer significantly better performance.

In everyday use, the TouchSmart ran smoothly, though occasionally we noticed a few-second delay in the touchscreen's responsiveness after waking from sleep. Still, cold-booting into Windows 8 takes 12 seconds, which is on par with most Win 8 machines we've tested, and the laptop was never sluggish in switching between apps and launching programs. When we fired up a demo on Steam, the fan started whirring almost instantly. Not that the sound was incredibly loud, mind you, but the laptop's bottom felt very warm, and it took the system several minutes to pipe down after we had closed the game.

When we ran our battery test, which entails playing a locally stored video on loop with WiFi on and brightness set to 65

HP could have used a bigger battery to increase runtime.

BATTERY LIFE	
HP ENVY SPECTRE XT TOUCHSMART	4:00
SAMSUNG SERIES 9 (15-INCH, 2012)	7:29
LENOVO THINKPAD X230	7:19
ACER ICONIA W700	7:13
SAMSUNG SERIES 9 (13-INCH, 2012)	7:02
MACBOOK AIR (13-INCH, 2012)	6:34 (OS X) / 4:28 (Windows)
DELL XPS 14	6:18
HP FOLIO 13	6:08
HP ENVY SLEEKBOOK 6Z	5:51
SONY VAIO T13	5:39
LENOVO IDEAPAD YOGA 13	5:32
DELL XPS 12	5:30
HP ENVY 14 SPECTRE	5:30
ASUS ZENBOOK PRIME UX31A TOUCH	5:15
ASUS ZENBOOK PRIME UX51VZ	5:15
TOSHIBA SATELLITE U845W	5:13
TOSHIBA SATELLITE U845	5:12
ACER ASPIRE TIMELINE ULTRA M3	5:11
TOSHIBA SATELLITE U925T	5:10
LENOVO THINKPAD X1 CARBON	5:07
SAMSUNG SERIES 5 ULTRABOOK (14-INCH, 2012)	5:06
ACER ASPIRE TIMELINE ULTRA M5	5:05

percent, the TouchSmart's four-cell battery lasted four hours flat. We don't expect stellar longevity from larger notebooks — especially those with touchscreens — but the TouchSmart still falls short of our expectations. Even the much thinner 13-inch Acer Aspire S7 lasted four hours and 18 minutes; there's no reason that HP couldn't have used a bigger battery to increase runtime.

SOFTWARE AND WARRANTY

HP's pre-load definitely makes its presence known, as Norton Internet Security pop-ups will greet you upon that first boot-up — you can either disable them or activate the complimentary two-year subscription. Other pre-installed programs include full versions of Adobe Photoshop Elements 10 and Premiere Elements 10 (signature amenities in the Spectre line) and proprietary software such as HP Support Assistant, Connected Music and Connected Photo. You'll find the standard shortcuts to the Kindle store and Netflix here, too. The Spectre XT TouchSmart comes with a two-year warranty, which is fairly generous considering that most notebooks come with just one year of protection.

The lid sports a brushed-metal finish and reflective HP logo.

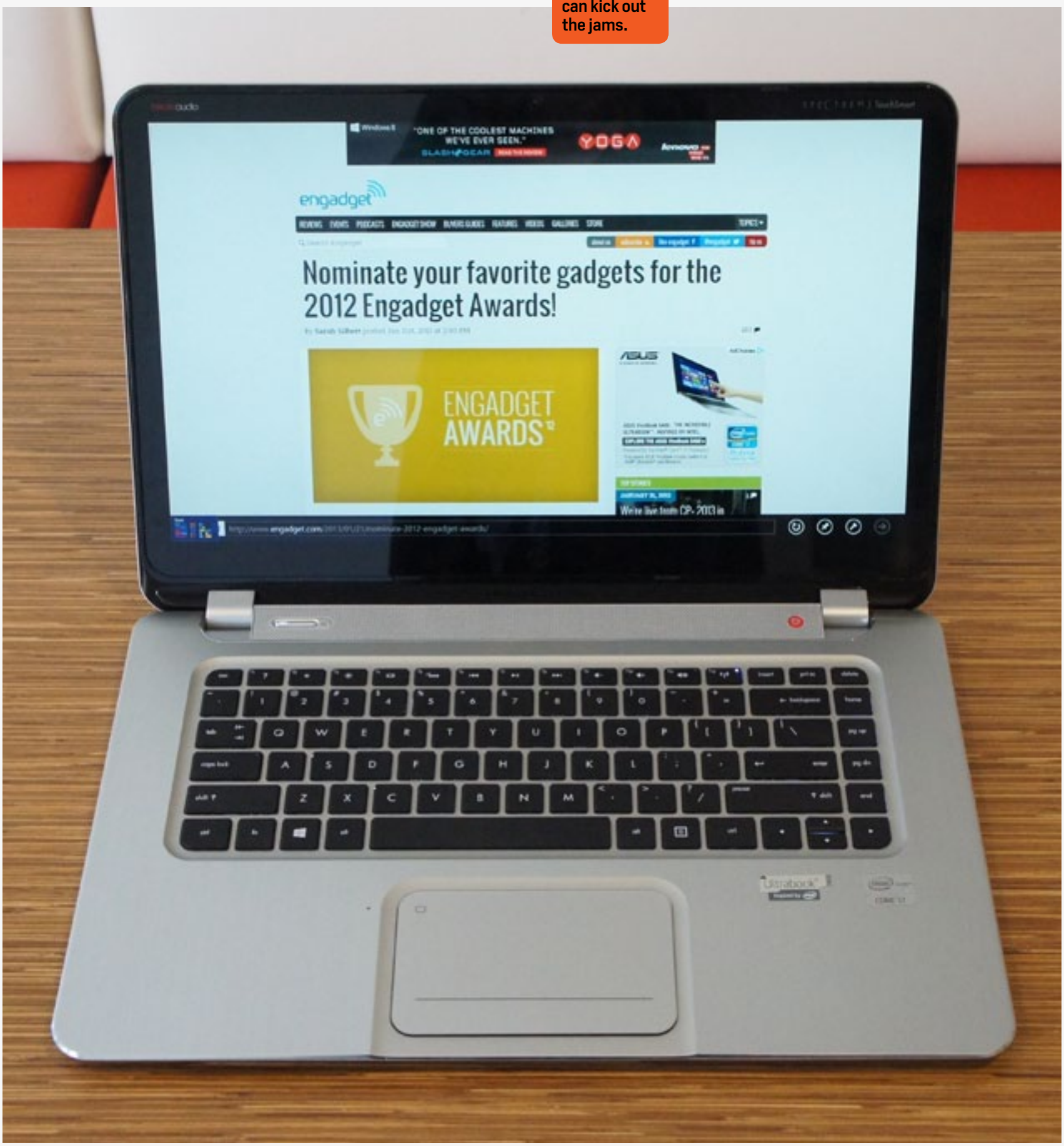
CONFIGURATION OPTIONS AND THE COMPETITION

We reviewed the $1,350 configuration of the HP Spectre XT TouchSmart, which includes a 1.9GHz Core i7 CPU, 8GB of RAM, Intel HD Graphics 4000 and a 500GB (5,400RPM) hard drive. The entry-level model goes for $1,275, and the only difference is that it packs 4GB rather than 8GB of RAM. For $1,520, you can upgrade to a 128GB SSD with 8GB of RAM, and $1,720 nets you a 256GB SSD with 8GB of RAM. As you can see, things get pricey when you factor in the speedier storage option, and you'll find many similar alternatives that undercut the TouchSmart's price by several Benjamins. A few of them follow:

Among machines in the TouchSmart's size category, the $1,100 Dell Inspiron

HP SPECTRE XT TOUCHSMART

15z is worth a once-over. It also offers a Core i7 processor, 8GB of RAM and a 500GB hard drive, but rather than integrated graphics it packs NVIDIA's GeForce GT 630M chip. It's a hair lighter than the TouchSmart, at 4.78 pounds, but it still manages to fit a DVD drive. It does offer a touch display, but with just a 1,366 x 768 resolution. If you don't need a touchscreen, we'd suggest the 15-inch Samsung Series 9, which delivers long battery



The angled Beats Audio speaker grille can kick out the jams.

life in a remarkably slim design. A model with a 128GB SSD, 8GB of RAM and a Core i5 CPU will set you back $1,399. And if screen size is negotiable, we recommend the ASUS UX31A Touch. The Core i7 configuration we recently reviewed is not yet available, but its fluid user experience and bright touchscreen earned our thumbs-up.

If you're game to hold out for a few more months, you could consider the Sony VAIO T15. Pricing and specs are still to come, but we found the laptop attractive and responsive when we went hands-on at CES. The new Samsung Series 7 Chronos could also be worth the wait if you aren't on a tight budget. The laptop will feature AMD's new Radeon HD 8870M GPU and a Core i7 CPU — and it promises 11 hours of battery life. We got a taste of the product at CES, but Sammy has yet to mention pricing and availability. Finally, if short battery life doesn't dissuade you, the Acer Aspire S7 has a lot going for it. Its 1080p display rivals the TouchSmart's, and it delivered impressive scores when we benchmarked it.

WRAP-UP

Overall, HP did a great job with the Spectre XT TouchSmart, releasing a notebook with a sleek, comfortable design and a top-notch touch display. While we want to give this Ultrabook high marks, we can't overlook that the poor battery life and high price could be dealbreakers for some. If you can live with those compromises and your pockets are deep enough, by all means splurge. Otherwise, you have a host of other compelling options to choose from — and there will only be more in the months to come. D

Sarah is Reviews Editor, a wannabe tap dancer and a closet film critic.

BOTTOMLINE

HP SPECTRE XT TOUCHSMART

$1,275+

PROS

- Brilliant IPS display
- Sophisticated, well-built design
- Good keyboard

CONS

- Short battery life
- Expensive

BOTTOMLINE

The HP Spectre XT TouchSmart boasts a great, 15-inch touchscreen and a comfortable, svelte design. The downsides are disappointing battery life and a high starting price.

REVIEW

MICROSOFT SURFACE PRO

Does Surface Pro's full x86 support seal the deal and make good on its promise of the ultimate laptop / tablet combo?

By Tim Stevens

It's a compelling proposition: all the power and application compatibility of a laptop running a proper desktop operating system, all the portability and convenience of a tablet, all mixed together in one package. That's the core idea behind Microsoft's Surface tablets but, as we saw with the Surface for Windows RT a few months ago, its ARM-based nature resulted in some substantial drawbacks. Namely: app selection.

Running Windows is all well and good, but when you're running the RT flavor, which strips compatibility with the entire, massive and still-

swelling catalog of Windows applications, you're left with a desktop-class operating system completely bereft of any desktop apps. Welcome, then, to the Surface for Windows 8 Pro, which promises all the niceties of the Surface RT — compelling design, build quality, performance — with full support for x86 Windows applications. (That is: every single Windows app released before the end of last year.) And, adding a 1080p display to the mix doesn't hurt. So, then, is this perfection in a single 10-inch, $899 device? Let's find out.

You'd be forgiven for taking a causal glance at the Surface Pro and thinking that Microsoft designers basically phoned it in here. Look closer and you'll see this is more than a processor transplant.

HARDWARE

You'd be forgiven for taking a causal glance at the Surface Pro and thinking that Microsoft designers basically phoned it in here; that they took the dark, angular, visually distinctive look of the Surface RT, made it a fraction of an inch thicker to make room for a 1.7GHz Intel Core i5-3317U processor (plus requisite active cooling) and called it a day. Look closer — or, better yet, hold them at the same time — and you'll see this is more than a processor transplant.

Yes, it does start with the same basic design language, monotone and edgy and deliciously free of any branding other than a Windows logo on the back, visible only by being slightly more matte than its surroundings. A little Windows logo is on the front, too, sitting down be-

Surface Pro is less than a quarter inch thicker than the RT.

It seems as if an additional back plate was grafted on to the Pro.

low the display, but that's functional: it's the capacitive Start button.

Indeed, the biggest change is in the dimensions: 10.81 x 6.81 x 0.53 inches (27.45 x 17.3 x 1.35cm) vs. 10.81 x 6.77 x 0.37 (22.45 x 17.2 x 0.94cm). (At just under two pounds, it's about 25 percent heavier, too.) But rather than just being a thicker version of the same, the Surface Pro looks as if it had an additional plate grafted on the back. The flat kickstand mounted on the rear returns, but here it's set a few millimeters away from the edges of the chassis. This forms a line that is continued around the entire device, a slight and curious gap between the back and the sides.

Where the bottom flips out to form the kickstand, the top is fixed in place and that gap serves as the vent for the device's internal cooling fan. Speakers, too, exhaust their sound through here, rather than the discrete outputs they have on either side of the RT chassis. Those speakers offer decent quality with a predictable lack of low-frequency response. Maximum volume level is fair, but you'll want some powered speakers if you really want to hear anything from across the room.

Port selection is largely the same across the RT and Pro Surface models, but placement is quite different. The single, full-sized USB 3.0 port (versus the 2.0 port on the RT) is found on the

left side of the device, opposite that on the RT and situated beside the volume rocker and 3.5mm headphone jack. Travel across to the right side of the device and you'll find the microSDXC slot, which is no longer tucked behind the kickstand as it was on the RT. While this does make it easier to get to, we think most people who use the expandable storage will slot a card in once and leave it alone, so we prefer the more protected placement on the RT. Also on that side is the magnetic power receptacle, which is the same as on the RT, and a Mini DisplayPort connector, which replaces the micro-HDMI found on the RT.

On the top is the power button, offset toward the right edge, and a single microphone. That's a step down from the stereo mics found on the RT, a change, we're told, that was made to reduce the sound pickup from the internal cooling fans. (Sadly, we don't think it was successful, as we'll discuss in the camera section.) On the bottom resides the magnetic connector used by the Type Cover, the Touch Cover and, presumably, future accessories. We're glad to report all covers work equally well with either the RT or the Pro, though on a few occasions we had to pop the Type Cover on two or three times for the system to detect it.

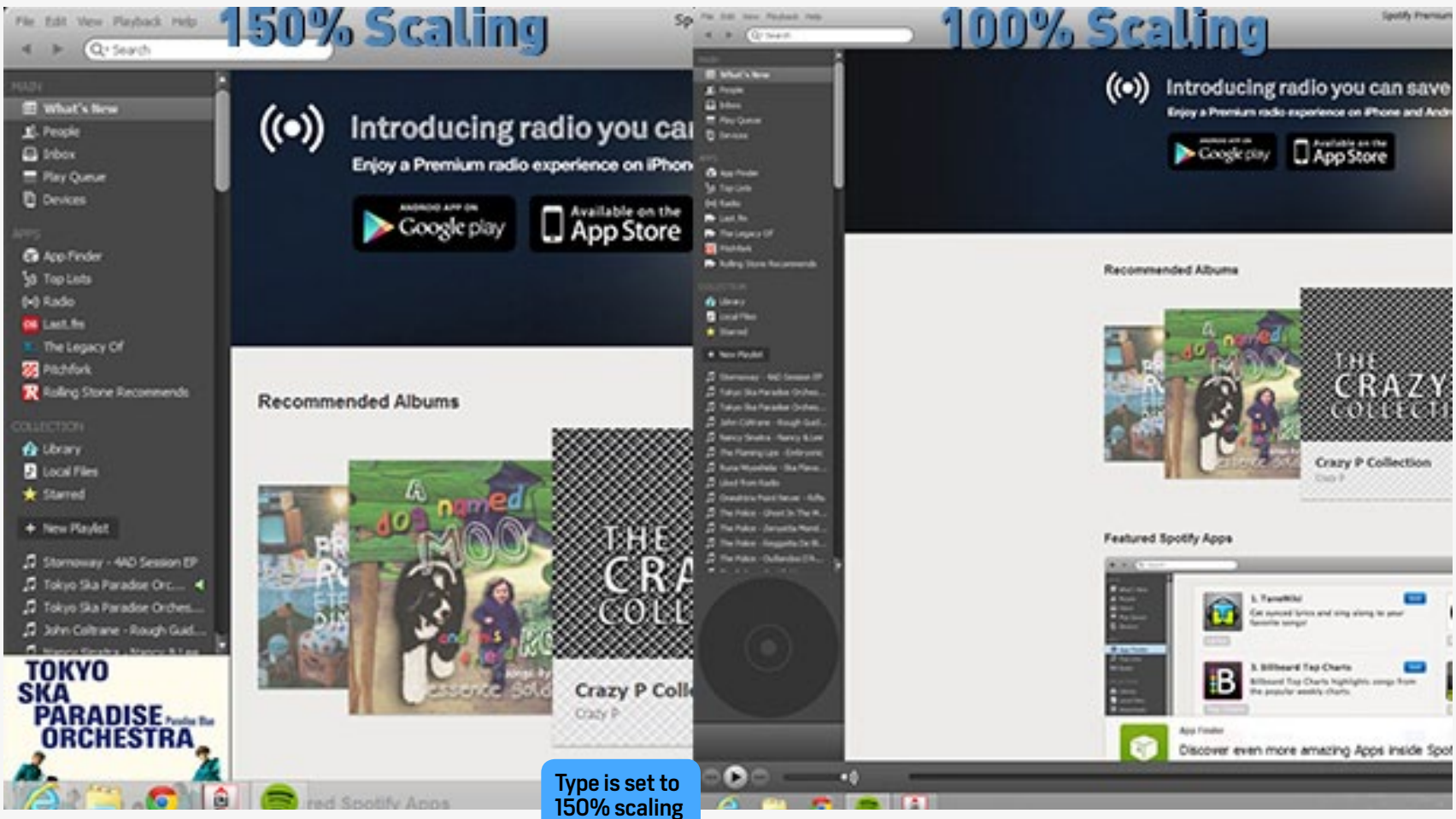
Now, while that's a healthy selection of physical connectivity for a tablet, many shoppers will be throwing the Surface Pro in the mix when looking for a lightweight Windows laptop. When stacked up against that company, this guy naturally comes up a bit short, with the biggest problems being the single USB port and, in our eye, the lack of a full-sized SD card reader for ingesting photos.

Wireless connectivity is comprehensive, offering 802.11a/b/g/n along with Bluetooth 4.0. No cellular models are on offer at this point, and Microsoft isn't talking about whether there will be one in the future.

DISPLAY

The Surface RT features a quite nice display, but we couldn't help but be a bit disappointed by the native resolution of 1,366 x 768. Ahead of that tab-

Surface Pro's display looks great, but there are some issues.



Type is set to 150% scaling by default, blurring text at times.

let's release, Microsoft went out of its way to show that resolution isn't everything, and indeed it isn't, but more resolution means more workspace, and if you're trying to eke maximum productivity from your slate, you'll take as many pixels as you can get.

But, with the Surface Pro, the resolution added by stepping up to 1,920 x 1,080 makes things a little more complicated. Here we have a 10.6-inch display that looks great, offering very nice contrast and brightness, plus viewing angles that maintain that contrast from just about wherever you can see the display. (Helpful, that, because the non-adjustable kickstand means you'll quite often be looking at this thing from a less-than-optimal perspective.) It's optically bonded, like on the RT, which helps to reduce glare when compared to a traditional glossy panel.

The 10.6-inch, 1,920 x 1,080 display looks great, but that resolution makes things a little complicated.

It's that higher resolution that we occasionally struggled with when running desktop apps. By default, the tablet is set to scale text to 150 percent its original size, making most (but not all) menus and buttons huge and reasonably finger-friendly. That's great when you're actually using your fingers, but it results in a lot of wasted space on the display when

you're using a mouse. More troublingly, it made the text and icons in many apps appear rather blurry.

So, we tweaked the scaling down to 100 percent and the result is the 1:1 pixel rendition that you'd normally expect from Windows. Everything now looks perfect and the fact that you can even toggle this option feels like a luxury, especially compared to the Retina MacBook Pros, where OS X forces you to up-scale the display to some degree. When running apps at 100 percent, the visuals are much cleaner, and those who want maximum screen real estate will be happiest here — but in this view scrollbars and other on-screen controls are tricky to hit accurately with a finger. Interacting with the desktop without a mouse suddenly becomes a chore.

So, then, one scaling size is good for fingers, the other for productivity with a keyboard and mouse. If you could quickly jump between the two that might not be so bad, but from the desktop it's five taps and swipes into the Control Panel just to get to this setting and, when you change it, Windows forces you to log out of the computer — thus closing all your currently running apps. It's hardly a quick change, so we wound up going for the unhappy median of 125 percent up-scaled text.

Now, this is only a concern if you'll be working in the traditional Windows desktop frequently, something of a problem since compatibility with legacy Windows applications is a huge selling point here. The OS desperately needs a way to quickly toggle between finger-friendly and native scaling of apps.

USABILITY

We spent quite a bit of time with the Surface Pro, sampling a variety of day-to-day scenarios to see how it fared versus the tablets and laptops it will be competing against. To test its productivity chops we opted to go for the more tactile Type Cover than the Touch Cover we focused on in the Surface RT review, mak-

The OS desperately needs a way to quickly toggle between finger-friendly and native scaling of apps.

A few design tweaks differentiate the Pro from the RT.

The Type Cover offers a more laptop-esque feel to keystrokes.

ing this feel more like a laptop. And, indeed, it offers a passably good typing experience, much easier to get up to speed on than the Touch. Still, the cramped layout and short throw of the keys, plus the dinky, unresponsive trackpad, gave us chilling flashbacks to the netbooks of yore. It's far better than 99 percent of the aftermarket tablet keyboards out there, but pales in comparison to even the keyboard on the similarly tiny ASUS TAICHI (which we'll be covering in more detail soon).

> Every app we threw at the tablet ran like a charm, which is a nice change from the RT.

Still, every app we threw at the tablet ran like a charm, which is a nice change from the RT. When we tested that device we tried to be productive, but the lack of support for x86 Windows apps meant we were without an IRC client and didn't have access to the suite of text-, photo- and video-editing tools we use on a daily basis. The Surface Pro ran 'em all with no troubles, and after 30 minutes of downloading and double-clicking on a bunch of setup files, we were getting some actual, honest-to-gosh work done.

Still, try as we might, we could nev-

er quite get comfortable in this layout. That keyboard slowed us down and its trackpad continued to frustrate. Due to the lack of finger-friendliness in the vast majority of legacy Windows apps mentioned above, we were frequently reaching for a mouse — in this case a Wedge, whose small size made it a good traveling companion for the Surface. Without it, accurately selecting toolbar buttons and controls was often difficult and precisely wielding photo-editing tools was impossible.

Thankfully, Microsoft saw fit to fix that particular issue with the inclusion of a stylus, which uses Wacom tech and offers 1,024 degrees of pressure-sensitivity — just like the Samsung Galaxy Note II. There's nowhere in the chassis to slot the pen in, but it does clip magnetically on to the power connector. It's a reasonably secure fit, but if you toss the tablet in your bag you're likely to have to rummage around to find the pen later. The pen works anywhere in the OS, but it's best-suited to the graphics and various other creative apps, including OneNote. It's not something we'd see ourselves using frequently, but we could definitely see it coming in handy from time to time for those graphics professionals who've opted to work in Windows.

While we spent much of our testing with the keyboard attached, to experience the thing as a tablet we popped off the Type Cover and headed to the couch, spending hours web surfing while whatever was on the TV slowly rotted our gray

Weight, combined with the angular edges that dig into fleshy parts of hands, means this is not a tablet you'll want to hold for long.

matter. Again, in this mode we could never quite get comfortable. The on-screen keyboard offers a selection of usable layouts, and the predictive text and autocorrect functionality mean you can type reasonably quickly. Additionally, using IE in this way is quite good, as it's finger-friendly and responsive, and of course in this way you're encouraged to use all the great Windows 8 gestures, which become intuitive enough after only a few minutes of use.

What's the problem, then? In this case we physically couldn't get comfortable with the tablet. When laying it flat on a lap it's fine, but we could never find a good way to hold it in a more upright position. At about two pounds, it's definitely on the heavy side, which is one major strike against and that, combined with the angular edges that dig into fleshy parts of hands, means this is not a tablet you'll want to hold for long. Sure, the kickstand means you can set it up on a coffee table if you like, but that's hardly the ideal, couch-based, lean-back experience most tablets do so well.

Additionally, when used as a tablet you'll want to steer as far clear of the traditional desktop as possible. We mentioned issues with text scaling, but we have more concerns. While there is a virtual keyboard for the desktop, it's wholly separate from the version you get outside of the desktop. It doesn't offer any of the predictive text or autocorrect functionality offered by the (identical-looking) keyboard you get in native Windows 8 apps. This makes typing a real chore.

Finally, just getting into the tablet takes longer than the Android or iOS competition. Hit the power button and you'll have to wait for about three to four seconds for the display to pop on. Then, assuming you've set a password, you'll have to type that in, and secure passwords are rarely fun on virtual keyboards. Login passwords can be replaced by a simpler PIN or even Microsoft's innovative picture login (where you tap on specific areas of an image), but there's no way to tell the OS to only ask for credentials after a certain period of inactivity. If you're the type who likes to quickly pop on your tablet to check for new email or Facebook messages every few minutes, you may find yourself forced out of that habit here.

Now, few of those laptops and tablets the Surface Pro will be compared against can cross those disparate use cases quite as well as this guy can, but within those individual categories of laptop and tablet the Surface Pro is handily outshined. Compromised. So, if you'll forgive us a bit for a tired idiom: this is a clear case of Jack of all trades, master of none.

PERFORMANCE AND BATTERY LIFE

Overall performance of our Intel Core i5 Surface Pro more than met our expectations. A cold boot is completed in eight seconds or less, which is quite impressive indeed, and apps launched snappily and reacted well. Performance here is definitely adequate to get some serious work done, impressions that were backed by our

A kickstand can be found around back for hands-free viewing.

BENCHMARK	PCMARK 7	3DMARK06	3DMARK 11	ATTO (TOP DISK SPEEDS)
MICROSOFT SURFACE WITH WINDOWS PRO (1.7GHZ CORE i5-3317U, INTEL HD 4000)	4,673	3,811	E1,019 / P552	526 MB/s (READS); 201 MB/s (WRITES)
ACER ICONIA W700 (1.7GHZ CORE i5-3317U, INTEL HD 4000)	4,580	3,548	E518 / P506	542 MB/s (READS); 524 MB/s (WRITES)
LENOVO THINKPAD TWIST (1.7GHZ CORE i5-3317U, INTEL HD 4000)	3,113	4,066	E1,033 / P549	136 MB/s (READS); 130 MB/s (WRITES)
ACER ASPIRE S7 (1.9GHZ CORE i7-3517U, INTEL HD 4000)	**5,011**	**4,918**	**E1,035 / P620 / X208**	**934 MB/S (READS); 686 MB/S (WRITES)**
LENOVO IDEAPAD YOGA 13 (1.7GHZ CORE i5-3317U, INTEL HD 4000)	4,422	4,415	E917 / P572	278 MB/S (READS); 263 MB/S (WRITES)
TOSHIBA SATELLITE U925T (1.7GHZ CORE I5-3317U, INTEL HD 4000)	4,381	4,210	E989 / P563	521 MB/S (READS); 265 MB/S (WRITES)

benchmarks. The Surface Pro attained a 4,673 average score in PCMark 7 and 3,811 in 3DMark06, marks that favorably compare to the similarly specced Acer Iconia W700.

It should be noted, however, that while running these benchmarks the back of the tablet did get very warm to the touch and the little fan in here certainly let its presence be known with a somewhat shrill, high-pitched noise. We rarely heard it during less-intensive use, but full-screen video playback was enough to make it kick in.

But while performance was just fine, battery life wasn't. On our standard Windows battery rundown test, in which we fix the display brightness and loop a video endlessly to exhaustion, the Surface Pro scored just three hours and 46 minutes, despite having a 42.5Wh battery — a third larger than the 31.5Wh pack in the Surface

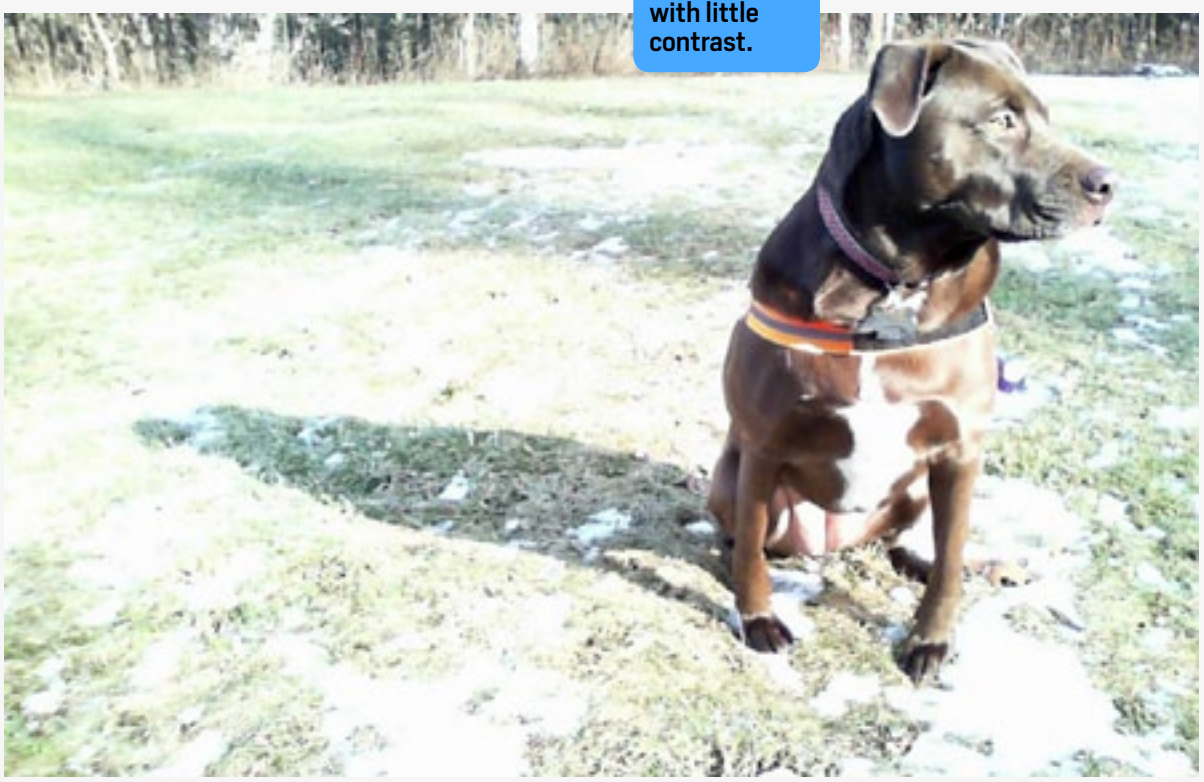
While performance was just fine, battery life wasn't.

BATTERY LIFE	
MICROSOFT SURFACE PRO	3:46
ACER ICONIA W700	7:13
LENOVO IDEAPAD YOGA 13	5:32
DELL XPS 12	5:30
TOSHIBA SATELLITE U925T	5:10
SONY VAIO DUO 11	4:47
ACER ASPIRE S7	4:18
LENOVO THINKPAD TWIST	4:09

RT. That's just more than a third of the nine hours and 36 minutes the Surface RT scored, well lower than the similarly specced W700 (which managed seven hours) and short of every touch-friendly Windows 8 device we've yet tested.

CAMERAS

Like the Surface RT, the Surface Pro has dual 720p cameras, one pointed in each direction. And, like the Surface RT, they're both pretty poor. Photos are incredibly full of noise and the sensor seems to be completely unable to manage contrast, resulting in images that are either totally washed out or far too dark. It's like anti-HDR. Video quality is similarly limited and we couldn't help but notice a whirring, buzzing noise in the background of all the footage we captured. Is this the CPU fan spinning away inside?



Cameras serve up low-quality snaps with little contrast.

CONFIGURATION OPTIONS AND THE COMPETITION

There's only one CPU on offer, the 1.7GHz Intel Core i5-3317U, and only a single RAM config, that being 4GB. Really, then, the only choice is how much integrated flash storage you want — but this, too, is an easy decision. For $899 you can get the 64GB model, but there's only 23GB available thanks to the recovery partition and, of course, the OS itself. If you're looking to buy, we'd highly recommend stepping up to the 128GB model, which has a far more livable 83GB free. (Note that you can delete the 8GB recovery partition, which helps a bit.)

When it comes to devices you might be cross-shopping

If you're looking to buy, we'd highly recommend stepping up to the 128GB model.

with, the most direct competition is the $1,000 Acer Iconia W700, which features the same processor paired with the same allotment of RAM and storage (4GB and 128GB, respectively). Performance was slightly better here than the W700 in most respects, but both were well within spitting distance of each other. The integrated kickstand in the Surface is infinitely better than the clunky, cranky external stand Acer packs in, but Acer's pack-in keyboard is far more comfortable than the Type Cover — though far less portable. It did, though, clock in more than seven hours on the battery rundown test.

We're also intrigued by the Samsung ATIV Smart PC Pro (which costs $1,200 for a 128GB model with S Pen) and the 11.6-inch convertible Lenovo ThinkPad Helix Ultrabook (starting at a rather more dear $1,500), but as we've not had a chance to review them just yet, we'll withhold judgment for a little while.

And then, of course, there's the most direct competition for this guy: the Surface with Windows RT. It's priced $300 less and offers comparable perceived performance with nearly three times the battery life, more usable storage space and all in a thinner, lighter package. But, as it's running the RT flavor of Windows 8, compatibility with legacy apps is... well, there isn't any. You're wholly restricted to what you can do on the web and to the still very limited selection of RT-compatible apps that have been released. If your intended usage leans far more toward casual content consumption, or if you do most of your work through a browser, these concerns may not bother you much at all.

App selection on the Pro is much more robust than on the RT.

WRAP-UP

We're still completely enraptured by the idea of a full-featured device that can properly straddle the disparate domains of lean-forward productivity and lean-back idleness. Sadly, we're still searching for the perfect device and OS combo that doesn't just manage both tasks, but excels at them. The Surface Pro comes about as close as we've yet experienced, but it's still compromised at both angles of attack. When trying to be productive, we wished we had a proper laptop and, when relaxing on the couch, we wished we had a more finger-friendly desktop interface — though more native Windows 8 apps might solve the problem by keeping us from having to even go there.

That it offers compatibility with the massive back-catalog of Windows apps gives this a strong leg up over the earlier Surface RT, but the thickness, heft and battery life are big marks against.

Surface Pro's display and solid build are definite pluses.

We're confident Microsoft will keep refining Windows 8 to make the OS as a whole more tablet-friendly, and we look forward to testing the dozens of touch-friendly hybrid and convertible devices due this year, but sadly Microsoft's second tablet doesn't have us reaching for our credit cards. Not quite yet. D

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

BOTTOMLINE

MICROSOFT SURFACE PRO

$899-$999

PROS

- Solid-feeling design
- Great 1080p display
- Good performance

CONS

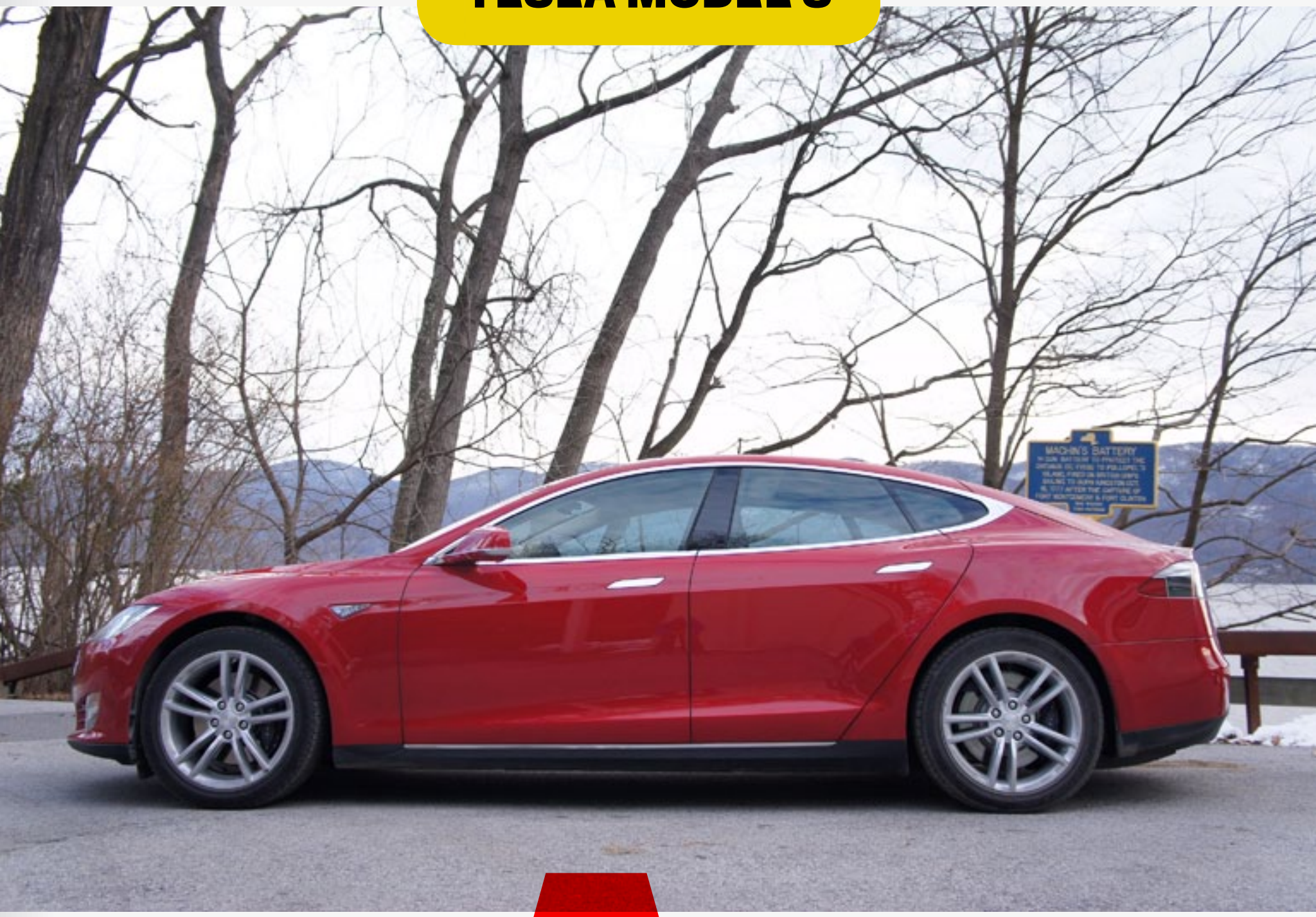
- Poor battery life
- Noisy, annoying fan
- Un-optimized experiences

BOTTOMLINE

Microsoft's Surface with Windows 8 Pro is the best tablet running Windows 8 we've yet seen, but still feels like a compromise when used as a tablet or laptop.

REVIEW

TESLA MODEL S



Can Tesla's Model S end the chants of 'Are we there yet?' in the race to build a sustainable car of the future?

By Tim Stevens

As we cover the mobile industry, where the evolution of devices and processors is relentless, we're used to being impressed. We're used to seeing a new generation of a product that instantly and irrevocably makes the previous one look tame. It's just the way this world turns. However, that's not something we're used to seeing in the automotive world, where each new model year is typically such a minor step forward that without the addition of new creases or wings to the body, bigger wheels and more boisterous badges on the trunk, you'd hardly spot the improvements.

That's not the case with the Tesla Model S. It comes not long after the retirement of the Tesla Roadster, a car we thoroughly enjoyed but found a bit too raw, a bit too rough around the edges for general consumption. The Model S is so much more refined, so much more polished that you can hardly compare the two. Yet they come from the same company and have one similar, defining characteristic: neither burns a drop of fuel. Join us as we explore what makes Tesla's latest EV such an amazing ride — and where the company must improve if it truly wants to compete with the BMWs and Mercedes-Benzes of the world.

HARDWARE

Where the Tesla Roadster was a repurposed Lotus chassis with a lot of customizations made to turn it into a battery-powered car, the Model S is a clean-sheet design, every aspect engineered with complete and utter disregard for internal combustion and all the tanks, pipes, hoses, pumps, radiators and other fittings that come along with it. As we learned when we spoke with (now former) Tesla Chief Engineer Peter Rawlinson, that provides a number of advantages.

Primary among them is the ability to put the weight of the car low. A car with a very low center of gravity will be a better corner-carver because weight up high makes a car rock from side to side as you turn from left to right. With the Model S, Tesla engineered a custom battery pack configured as a sheet that, when installed, runs the length of the car and is situated in the floor. It's the heaviest and it's also the lowest part of the car — well, other than the bottom of the wheels and tires.

This is a heavy car, 4,600 pounds or so, but this concentration of weight so low means that it handles like a lighter, more nimble auto. But that's not the only benefit. This battery pack arrangement gives the car a flat floor to build upon, which means a wide-open interior, uncompromised by a transmission tunnel, and a relatively massive 31.6 cubic feet of cargo space spread across the front and

The LED-accented charging port for the Tesla Model S.

rear trunks. (The BMW 5 Series offers less than half that, just 14 cubic feet.)

The electric motor itself is sandwiched between the rear wheels, again positioned low and out of the way, and depending on which specification you choose, you'll get a different motor with different outputs.

The car we were given to test was a top-shelf Performance model, with the 85kWh battery pack and plenty of other options: upgraded audio system ($950), the "tech package" that includes GPS nav and a very trick proximity-based key ($3,750) and some other goodies that brought the sticker price just into the six-figure mark: $101,600 to be precise. Of course, there is a $7,500 tax credit that helps to ease the sting somewhat, and the EPA rating of 89MPGe is estimated to save the average consumer $9,100 in fuel costs over five years. Depending on your driving habits, you might be able to do better.

INTERIOR IMPRESSIONS

We've never felt quite so welcomed as we have when walking up to the Model S. The car detects the proximity of the key and, just as you're about to reach the door, the lights come on and the door handles extend from their normally retracted positions. We've seen plenty of cars that turn on the lights when you near, but the physical changing of the car, the handles pushing themselves out just in time to greet your arrival,

The S boasts spacious storage and a sporty interior.

certainly feels very inviting. It's almost as if the car wants you to drive it, and indeed this is a car you'll want to drive.

The displays in the interior pop on as well when you're near, meaning if you want to check the charging status, all you'll need to do is wander up to the car and peek in the window at either of the car's integrated LCD panels. When you walk away again, they go dark, the handles retract and the car enters its stealth mode. Unlike the Roadster, even the LEDs that surround the charge port go dormant when you walk away, helping to keep this machine from drawing too much attention — though if you want to be subtle, we might recommend something other than the eye-catching red featured here.

Take a seat and your eye is immediately drawn to the 17-inch IPS LCD touch panel that dominates the interior. It's sandwiched vertically in the center of the dash, where the traditional stack

The car detects the proximity of the key and, just as you're about to reach the door, the lights come on and the door handles extend from their normally retracted positions.

of HVAC and stereo controls would normally lie. And, indeed, it replicates all that functionality and more. On the bottom, always present, are the HVAC controls, including dual-zone climate control and toggles for the seat heaters, plus a small volume control in the lower-right corner. (There's a physical volume dial on the steering wheel for the driver.)

Along the top is a sort of status bar, showing the outdoor temperature, a simple representation of the battery life for the car, the name of the currently loaded driver profile, a signal strength indicator for the integrated 3G modem and a tiny clock.

In the center is a Tesla logo. Tap that and you get a picture of the exterior of the car, not real-time mind, but it does show any changes to the car itself. Open the passenger door, for example, and the rendered version of the car displayed on the LCD does the same. Turn

The built-in touchscreen offers status updates and controls.

on the lights, pop the hood, open the sunroof — it's all replicated on the display. A nice touch. Mostly useless, but a nice touch.

Below this status bar is where the real meat of the LCD's functionality is accessed. A row of icons lets you bring up the media controls, navigation, current and average energy consumption, web browser, rear-view camera and phone-dialing interface. You can choose any two of these to have open at any time, one stacked vertically above the other and taking up half the LCD. But, if you really want to monotask, most of those views can be set to run full-screen.

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We've experienced lots of touch panels on lots of cars and the vast majority have been utterly terrible. We expected the same here but were surprised to find that we didn't mind Tesla's touch experience nearly as much as we had thought we might. Settings and options are, for the most part, logically scattered throughout multiple pages of toggles with a — dare we say it — iOS-like look and feel. You're rarely more than two taps away from tweaking anything, like whether the doors automatically lock when you walk away and whether the ambient LED lighting inside the car is on or off.

Once you get past that panel and its many charms, you'll start to perceive the rest of the interior, which is, for the most part, nice. The leather-wrapped seats offer a suite of power adjustments, including fully adjustable lumbar support, with controls that will be familiar to Mercedes owners. (In fact, much of the switchgear is borrowed from Daimler vehicles.) They're comfortable enough, but they don't offer much in the way of lateral support — a disappointment in a car that handles this well.

Much of the dash is likewise tucked away behind leather, while the headliner is plush Alcantara (a form of durable, synthetic suede). It all looks nice at a passing glance, but as we gazed more closely, we noticed some wavy stitching in places on the dash, a loose seam on one of the sun visors and a number of pieces made from somewhat cheap-feeling plastic.

In other words, the overall impression is quite good, but Tesla has some areas to improve before it'll truly be challenging the established players in the luxury car field.

DRIVING EXPERIENCE

Most cars feature an ignition of some sort where you turn a key or, at a minimum, some sort of button to push to turn things on. Not the Model S. By the time you take your seat and close the door the car is fully powered up. All you need to do is put a foot on the brake, flick the gear selector lever (a stalk on the right of the steering column) down to D or up to R and away you go.

While the Model S in

The sporty exterior is matched by surprising acceleration.

While the Model S is a technological marvel, it is surprisingly behind in a few key areas.

Performance guise offers a ridiculous amount of torque (443lb-ft) and a motor that's willing and able to give it to you instantly, the throttle curve is such that pulling away from a complete stop is gentle and smooth. Some EVs struggle to get off the line strongly without inducing whiplash and nausea, but that's not the case here. That said, a quick jolt of acceleration is never more than a twitch of the right foot away.

Traction control is of course standard business and you'll likely be making frequent use of it. The quick snap of torque from the electric motor is more than enough to spin the rear tires loose while cornering, quickly (and somewhat abruptly) rectified by the driver aids. In straight-line acceleration, though, the stock 19-inch tires were enough to keep the power down on brisk launches, the TC light only blipping occasionally and unobtrusively. Should you like to take a little more of your destiny in your own hands (and feet) you can disable the TC, but it'll naturally turn itself back on again the next time you get in the car.

On that note, we were surprised and honestly a bit disappointed to see a number of other driver aids absent in the Model S. There's no adaptive cruise control or lane-departure warnings, no auto-dimming headlights nor blind-spot indicators and, while you do get a big, clear look back from the rear-view camera, the car lacks the 360-degree wrap-around view that so many other cars offer these days. So, while the Model S is a technological marvel, it is surprisingly behind in a few key areas.

That's not the case when it comes to driving dynamics. You can bench race and talk about lowered centers of gravity all day long, but none of it matters until the electrons start flowing and you get moving on down the road. The Model S launches with a little wiggle of its tail and a few chirps as the rear tires struggle to maintain grip. The torque isn't quite neck-snapping; more like a wave that gently picks you up and then very quickly carries you way, way offshore.

Turn the very fat (borderline obese) steering wheel to enter a corner and while the car doesn't exactly dart the way the Roadster did, it does turn in with the sort of progressive feel that belies its impressive girth. It tracks

The torque isn't quite neck-snapping; more like a wave that gently picks you up and then very quickly carries you way, way offshore.

incredibly cleanly through sweeping turns, tucking its nose in politely if you lift off the throttle, but get a little heavy-footed with the accelerator mid-turn and the rear does have a tendency to wallow, likewise on faster transitions. This is a bit disconcerting if you're intentionally trying to over-drive the car and induce some tail-happy antics. But, as mentioned above, the traction control (if not manually disabled) will quickly pull things back in line, the yellow blinking light on the dash serving as a virtual wagging finger from the nanny-like computer.

So it may not bring you any trophies on the autocross circuit, but the Model S is more than capable of raising eyebrows at comprehensive speeds on fast, flowing roads, and we think it'd be a hoot on the track, too. Maybe if we ask nice enough Tesla will let us find out this summer.

Overall, though, it's the quiet smoothness that will leave the most lasting impression. The car seems to effortlessly consume miles on the road, suspension (ours was of the automatically adjusting air variety) soaking up bumps and providing a very comfortable, yet firm experience. And, with countless hours spent by Tesla engineers soundproofing and whittling away at the car's aerodynamic profile, the cockpit is a serenely quiet place to be. Only under very hard acceleration do you get just a bit of whine from the transmission, which honestly we wouldn't have minded hearing more of on this Performance model.

RANGE AND CONFIGURATION OPTIONS

A lowest-spec Tesla Model S, with a 40kWh battery pack, will cost you $59,900. This will, in theory, get you 160 miles on a charge if you're driving in ideal conditions at 55MPH. From there, it's an additional $10,000 to step up to the 60kWh battery pack (230 miles) and a further $10,000 for the longest-range, 85kWh model, rated by Tesla for up to 300 miles. However, if we look at the official EPA 5-Cycle Certified Range,

You'll want to plan your outings given the long charge times.

that drops to 265 — a fair bit less, but still comprehensively beyond most modern EVs, like the 76-mile Focus Electric or 73-mile Nissan Leaf.

Of course, driving habits and even climate can and will have a big impact on that range. If you're squirting away from every red light at maximum power you should probably halve those ratings. And, while the battery packs are liquid-cooled, temperature does still have an effect. On the 85kWh model that we tested, we made two lengthy drives in addition to a number of shorter ones, a mix of highway and backroad driving at temperatures between 10 and 40 degrees F. On the first trip, we covered about 165 miles with 40 miles of indicated range left. On the second, we stretched it to just over 200 miles and coasted in to our destination with about 10 miles left on the clock. Far short of advertised maximums, but temperatures were low and we were often traveling at 65MPH on the highway — and we might have done a few spirited accelerations on the way, too. Maybe.

We charged the car on a standard Level 2 charger, which took between 10 and 12 hours to go from a nearly empty pack to maximum capacity. That's a long time, but Tesla offers an optional ($1,500) twin-charging system, which will let the car suck down power at twice the speed. And, of course, if you happen to be near one of Tesla's Supercharger stations, you can pull 150 miles of range in just 30 minutes. For free.

Our charger wasn't free, but that

A 165-mile trip required 59.9kWh of juice to top off again. We did the math given current power rates in NY and that equates to $10.68.

165-mile trip required 59.9kWh of juice to top off again. We did the math given current power rates in NY and that equates to $10.68. With local gas prices hovering around $3.75 per gallon, that'd be enough to get us 2.85 gallons of gasoline, so making the same trip in a car, we'd have to make 58MPG to cover that same distance at the same cost. Something like a BMW ActiveHybrid 7 Series, which starts at $84,300 and goes *way* up from there, is a comparably sized car using a hybrid powertrain. It gets a relatively meager 30MPG highway. The diesel-powered 730d model manages 42MPG — but isn't available in the US.

Other add-ons in our car included the all-glass panoramic roof, a $1,500 option that makes the car incredibly open and bright feeling. But, with no shade available, it also made the cockpit rather blinding at times, with sun reflecting off that 17-inch LCD. Still we'd consider checking that box, as retracting the full-width panel gives a great, convertible-like feel.

The Model S offers comfort, speed and style.

WRAP-UP

So, then, the Model S is an amazing machine. Not perfect by any stretch of the word, but such a massive leap beyond the Roadster in almost every regard that it's tempting to call it so. That leaves us wondering: have we entered a time where cars have truly caught on to the digital revolution? Where major automotive advancements will finally start to come with the sort of regularity we see on the mobile device front? Is it time to draft an automotive equivalent of Moore's Law? Perhaps one that states EV range will increase by 50 percent while its cost decreases by the same amount every five years?

That's perhaps a bit optimistic, but moving past the hypothetical to this very real car in production today, we are left

mightily impressed. For a car at this price point, the interior disappoints in a few areas, and some features are missing that we'd like to see in future releases, but all that fades away when you drive the car. The Model S is a comfortable, silky-smooth rocket ship. It offers handling abilities that, given its size, are very good indeed. And, while its battery packs don't completely obviate range anxiety, it's about as good as you're going to get from a modern EV.

It is a fantastic car, though not a car for everyone. While the $60,000 starting price is fair enough, the smart buy is the maximum-range model, which starts at a rather more dear $80,000. From there it's all too easy to get into the six figures. That is a dealbreaker for many, and the limited range will take this car out of contention for many more. But, for those lucky enough to have a suitable budget and compatible driving routine, we salute you. D

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

BOTTOMLINE

TESLA MODEL S

$60,000+

PROS

- Smooth, confident handling
- Incredible power delivery
- Plenty of tech toys
- Best-in-class range

CONS

- Limited charging stations
- Occasional lack of attention to interior detail

BOTTOMLINE

Tesla's Model S is light-years beyond the Roadster in terms of refinement, and is the current benchmark for production EVs.

OUYA

The Developing Story

After a month with the open-source console, a trio of game developers talks coding, compatibility and potential.

By Ben Gilbert

YOU *STILL* CAN'T TOUCH AN OUYA. Not until March, at the earliest, and that's only if you're a Kickstarter backer. However, one lucky group of folks already has access: game developers.

Those among us who shelled out $700 — as well as the 10 lucky studios who won that contest — got an early jump on a pre-rooted OUYA dev kit, while those of us who dropped $95 (or more) are left in the lurch. Of course, those early units aren't exactly the couch-friendly consoles we expect to arrive in a few months, but they *are* representative of the final hardware.

And let's face it — the OUYA is important. A crowdfunded, extremely inexpensive, open-source game console? That's not exactly the standard (heck, Sony's PlayStation 3 debuted with a $500 baseline). The OUYA is essentially taking the low-cost / high-performance aspect of mobile gaming and moving it into a TV-friendly space, and that concept has even spawned some imitators (the likes of which we'll assuredly see more).

But what do we know about actually using the OUYA? Beyond basic specs and a sporadic showering of images, we've never actually touched the thing. With that in mind, we asked a trio of developers who've spent the last month with their dev kits how they feel about the console thus far, and we've compiled their thoughts below. One month out, how does the OUYA dev kit stack up for developers? Let's find out!

THE DEVELOPERS

RAMI ISMAIL represents Vlambeer, creators of indie hits *Super Crate Box* and *Luftrauser*.

NATHAN FOUTS represents Mommy's Best Games, creators of 2D gems *Shoot1UP* and *Explosionade*.

JERROD PUTMAN represents Tiny Tim Games, creators of animalia-laden titles *Sheepstacker* and *Word Monkey*.

What are the OUYA's advantages / disadvantages, its greatest strengths and weaknesses thus far?

Rami: We've actually been pleasantly surprised. Obviously, what we have is a dev console, so it's not the final version of anything from materials to UI. Considering the kit was on an extremely tight schedule, we are impressed, though — it's fully functional and the "bugs" they preventively warned for are practically non-existent.

Nathan: The OUYA is definitely an exciting piece of hardware as it's positively silly how quickly you can get something running on it. This may be obvious for all Android mobile developers, but coming from a console background, I was really impressed with the accessibility and open aspects of the platform. In fact, the openness of the OUYA is definitely one of its strongest traits. From its ease of development, to how open the marketplace is supposed to be, I think it's a real delight. Getting *Serious Sam Double D XXL* through XBLA's Certification was brutal! I'm happy to release the game there, but it's a nice break to have fewer restrictions.

I think the most interesting, strange part of the hardware is the touchpad. It's tough to integrate sensible uses during action games, such as game genres that you have traditionally designed with a standard controller layout. I think there is room for innovation to be made there, but [it] will take some adjustment. Because switching between buttons and touchpad is tricky, it's probably best used in games where the player has a moment to think first, like a puzzle or strategy-oriented game.

Jerrod: One of the reasons why we haven't even attempted releasing something on Android is due to needing to support potentially thousands of devices. While OUYA is technically "just another Android device," the fact that it's being presented as its own platform (custom marketplace, custom controllers, custom OS services) means that we can target the OUYA hardware specifically without having to also target thousands of other devices. And since it's being presented as a home console instead of a phone or tablet, we can produce games with larger scopes and longer play times than on portable devices.

Really the disadvantage of the hardware is the passage of time. The Tegra 3 chipset inside is powerful enough to push a lot of polys around and it can even handle a fair amount of pixel shaders, but there are already mobile chipsets being introduced that will surpass it easily. But this is just par for the course for consoles, and over time developers should be able to push the boundaries of what the chip is able to do.

OUYA'S KICKSTARTER STATS

LAUNCHED:
July 10, 2012

FUNDING ENDED:
Aug 9, 2012

TOTAL BACKERS:
63,416

ORIGINAL GOAL:
$950,000

TOTAL PLEDGES:
$8,596,474

8th
Project in Kickstarter history to raise more than one million dollars.

RECORD FUNDING TIME TO REACH GOAL:
8 hours and 22 minutes

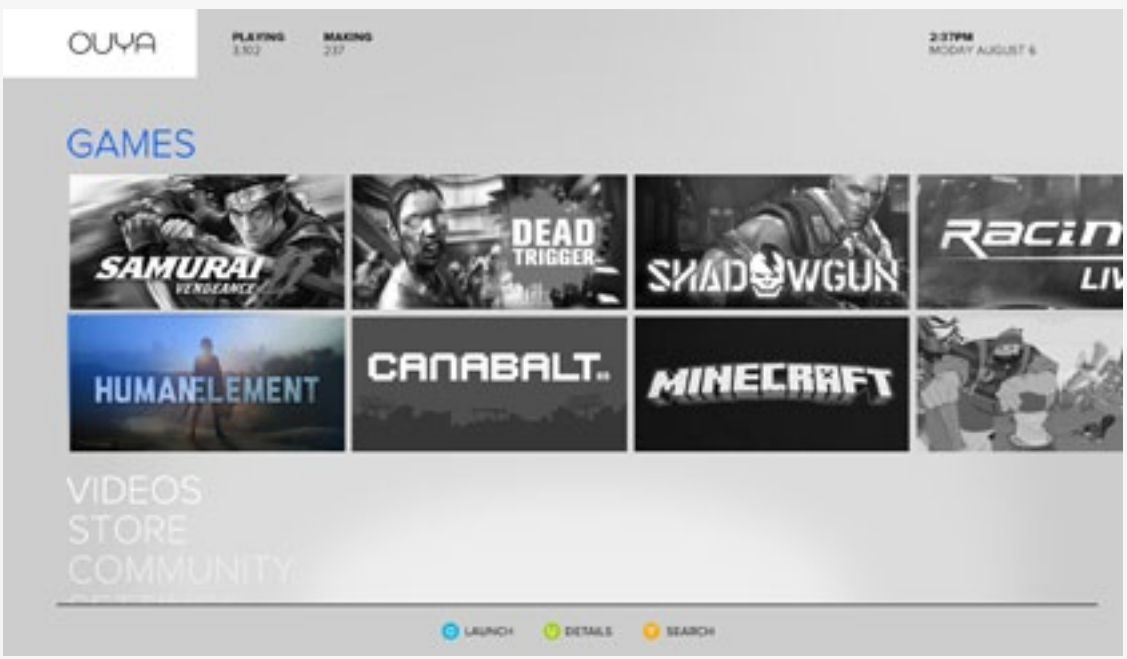
OUYA BOASTS BIGGEST SINGLE-DAY TOTAL IN KICKSTARTER HISTORY:
From launch day, July 10th 8:44AM to July 11th 8:44AM, OUYA earned $2,589,687.77.

Does it stand to change anything about the way you develop games?

Rami: Hooking the OUYA up to the TV is easy. The controllers feel nice (although the triggers and the analog sticks are still getting some rather welcome revisions for the consumer launch, we heard) and setting it up to accept and receive code was remarkably painless. We had "Hello World" on the screen within minutes of turning the OUYA on and we quickly loaded the original *Luftrauser* and some personal projects onto the console. Surprisingly, they performed well without too much hassle. We tried some "native" Android code, but also Adobe Air and Unity code and it all worked without hassles, which basically means pretty much anyone — amateur developer or professional team — could get started making games.

Nathan: Hardware-wise, we've not pushed it to its limits much, but we've definitely hit some barriers trying to get thousands of sprites drawn. Still, within days we were able to optimize some drawing routines and see massive boosts thanks to all the available online documentation and tutorials. The machine is clearly not a powerhouse, but it's not a slouch either, and I think there's plenty of room to optimize and improve.

Jerrod: Personally, I'm a console gamer, and I started game development in the console industry before moving to iPhone. While mobile games are certainly fun, it's difficult to match the scale of a console game on a mobile device. So for me, it's nice to return to the type of platform where those kinds of games are a better fit. And of course, the fact that the barrier to entry is so low compared to other consoles, it's really the only console [that] truly allows indies (and not just stuck in some sub-category, with access to only a small percentage of the console's power).



OUYA's home screen shows off a selection of games including Adam Saltsman's *Canabalt* and Robert Bowling's *Human Element*.

What do you think about the business potential of releasing games on OUYA?

Rami: There are still a few unknowns that will ultimately decide how OUYA pans out. Curation is a big one; too strict risks alienating creative developers, and too loose and you end up with a minefield of terrible apps similar to the Android Play Store. Another one is whether OUYA ultimately can convince developers to spend time and resources on making games for the platform long enough for it to grow into a feasible market. The final one is whether the developers are willing and able to create content that uses the strengths of console gaming: games that you can enjoy from the couch, alone or with friends.

Nathan: Business-wise, it's all up in the air as to how well the OUYA will treat developers. It's sort of a catch-22; since they have no massive backing (like Sony or Microsoft), it's tough for developers to commit for worry of low gamer numbers. Then there [are] the gamers who may be uncertain if the games will be there. So far the OUYA team has done pretty well, though, reaching out to developers. We were excited enough from the beginning to back the project on Kickstarter for a dev kit.

Jerrod: This is really the biggest unknown now. Naturally, we hope it does well, because at the moment, this is the only way we can actually release console games. There was certainly a lot of excitement for the Kickstarter from players and developers alike. But success for the platform can only come from developers making great games specifically targeted at the OUYA, and not just tablet game ports.

Since we use the Unity engine, one benefit for us is that since OUYA is built on Android, if things go south we always have the potential to release our games on other platforms.

> "While mobile games are certainly fun, it's difficult to match the scale of a console game on a mobile device ... for me, it's nice to return to the type of platform where those kinds of games are a better fit."
>
> — JERROD PUTMAN

How has it been working with the OUYA folks (did they send you a dev console or did you support the Kickstarter for one)?

Rami: We've always had great experiences working with Sony (seriously, they're great to work with as an indie), so we had pretty high expectations. We've had a good experience with OUYA's team, which is something we're really happy about. Talking to Julie [Uhrman] — the big boss herself — was quite refreshing too. You've got to hand it to her; this isn't the smallest undertaking.

Jerrod: They've been very responsive and have been great at responding to our feedback on the developer forums. They've already implemented some controller changes based on our feedback, and we've also worked through the fact that the controller doesn't have a dedicated Start / Pause button. We supported the Kickstarter and received a dev console through that.

Anything else you'd like to share?

Rami: While we were skeptical at first, we guess that the prospect of even relatively obscure developers being able to make amazing games for our TVs is a rather convincing argument to be less skeptical. While we're wrapping up on *Luftrausers* for PC and Mac and *Ridiculous Fishing* for iOS — working long days and nights for the next few weeks — we don't really have time to properly explore what we're going to do with the OUYA. We're definitely having fun toying around with it. We'll see what we do when we've got those two games under our belt, we guess.

Nathan: I'm hopeful for a very smooth production-to-release pipeline and the prospect of tons of fan support. It's all up in the air now, but it's exciting to climb aboard at the start.

Jerrod: The OUYA represents a real way for indies to truly join the console world, without needing to sign abusive publisher contracts or compromise on their vision. While the hardware may be underpowered compared to an Xbox 360 or PS3, I fully expect better-than-late-PS2 visuals. And game-wise, the PS2 was no slouch. D

Ben Gilbert is a Senior Associate Editor at Engadget who tends to write about video games, loves breakfast, obsesses over media, and recklessly employs serial commas.

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02.08.13

ROBOT SAFARI

PHOTOGRAPHS BY MARIO DEL CURTO / DELCURTOMARIO@GMAIL.COM

MIN-LIANG TAN

THE RAZER CEO talks about his Apple II takeover and Wikipedia as a dating tool.

What gadget do you depend on most?
First up, probably my Razer Blade gaming laptop. I live my life in transit, constantly on the move, so whether it's on a plane or train, in a car, hotel or coffee shop, the Blade allows me to do my work, keep in touch with people and play serious games. I need something portable and powerful for all that, and thank goodness (and no coincidence), Razer offers the perfect solution! Other than that – probably my mobile phones – I dual-wield an iPhone and a Samsung Android phone.

Which do you look back upon most fondly?
The day we founded Razer. It's amazing to work in an industry that you've always cared deeply about, doing my favorite pastime, and to have some sort of influence on how our gaming friends around

“Performance per watt. It’s amazing how much computing power they can stuff into a smartphone platform today.”

the world play their games is such an exciting—and at the same time humbling—experience for me.

Which company does the most to push the industry?
We work with some of the most talented people in the world and it’s hard to pinpoint one specific company that does the most to push the industry. Names like Intel, Apple, NVIDIA and Qualcomm are definitely bellwethers of the industry and they do an incredible job in pushing in the tech industry.

And of course, in our own little way for the gaming industry, we’re pushing the envelope of innovation every single day. We have insanely talented engineers who constantly challenge the norm and seek to make a difference to the gaming world in all the work that they do; and we’re motivated to do that with every product that we design. And we’re all gamers here at Razer, which makes a huge difference in the products we design (but it’s not great for productivity every time a new game is launched!).

What is your operating system of choice?
I appreciate the merits of the iOS, Android and Mac platforms, but I’m a hardcore PC gamer and our users are mostly the same, so I’m a Windows guy.

What are your favorite gadget names?
Razer Blade. I had waited so many years to unleash that pun on the unsuspecting tech world. My life-long goal is to make spellcheck change “Razor” to “Razer.”

What are your least favorite?
Whatever just comes with letters and then numbers after that. X100 or G-20 etc. Are we still in the ‘80s?

Which app do you depend on most?
Right now? *Clash of Clans* on my iPhone. Great for boring telecon-versations!

What traits do you most deplore in a smartphone?
Gaming performance. I need to play something more than *Angry Birds* to be happy. Auto-correct when I’m typing is a close second. I have no idea where some of the substituted words come from. Like who the hell spells “Razer” as “Razor?” What’s a Razor?!?!?!?

Min shows off the versatile Edge at Razer's CES 2013 booth in Las Vegas.

Which do you most admire?
Performance per watt. It's amazing how much computing power they can stuff into a smartphone platform today.

What is your idea of the perfect device?
One form factor that allows me to do everything. That's part of how the Razer Edge came to be. It's a tablet, it's a PC and it's two types of consoles, all in one platform. It's because of the push our community made in a crowdsourcing effort that multiple use cases were made possible.

What is your earliest gadget memory?
Apple II. I came home one day to see my dad playing *Rescue Raiders* on it. I took it over (I don't think he ever touched a PC since) and the rest is history.

What technological advancement do you most admire?
The microprocessor. I'm not a religious man, but when I went to the Intel headquarters for the first time – it was a semi-religious experience for me.

Which do you most despise?
Lag.

"First thing and last thing I do every day is to check my mails and messages. If I could jack myself into the grid, I probably would."

What fault are you most tolerant of in a gadget?
Price. We all want things to be as inexpensive as they can be, but if I'm able to get everything I look for in a device, I'll pay the money to be happy.

Which (faults of a gadget) are you most intolerant of?
Bad design generally. There's just so much crap out there that's badly designed.

When has your smartphone been of the most help?
Getting a cram course via Wikipedia on something my date was interested in. For the record, she was very impressed, but I was unveiled as a fraud days later when she realized the extent of which I was familiar with Salsa dancing (it's hard to learn dancing via Wiki). But it was worth it!

What device do you covet most?
A lot of the design philosophy at Razer is based around what we'd like to have ourselves, as gamers. That being the case, I've got just about everything I'd ever want right now. But if I had to go outside the company, I'd say the NVIDIA Shield. I played around with it at CES and it's phenomenal.

If you could change one thing about your phone what would it be?
That it could run the most popular PC games today with that same form factor. If we give our crack engineering team enough time and resources, I feel like we'll get there one day.

What does being connected mean to you?
It's pretty much about being alive. First thing and last thing I do every day is to check my mails and messages. If I could jack myself into the grid, I probably would.

When are you least likely to reply to an email?
That's a good question. When I sleep. And I never sleep, as far as anyone can prove. It takes a lot for me to not respond to an email.

When did you last disconnect?
I never have and probably never will. I don't see what's the big deal about going off the grid to be honest. D

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

SKOOBA CABLE STABLE

Kanex mySpot

HTC One X+

Why couldn't I have picked this thing up ahead of CES? There's nothing quite so frustrating as frantically attempting to untangle a pair of cords when you've got to hit a breaking news post — or attempting to dig a MiFi out of a messenger bag crammed full of press releases. I finally caved when Billy openly mocked my cable situation after Sony's CES press conference. So I bit the bullet. The Skooba Cable Stable isn't particularly cheap, but $30 seems like a small price to pay to get a jumpstart on a New Year's resolution.

At present, I've got a laundry list of gear in there: my MiFi, a battery extender, a laptop power cord, my Elgato stick, an Ethernet adapter, several pens, a handful of flash drives, a couple of SD cards, some batteries, a screen shammy, business cards, a flash for my NEX and three or four cables. I've yet to hit a convention floor with the Cable Stable, but it's certainly improved my day-to-day life so that I can actually find things in my bag — and the whole thing zips up, so even when contents are loosed from their respective bands, they still stay inside.

The one big downside is just that: size. It's not an especially slim case, but in the end it's actually saved me a bit of space by helping to do away with the tangled messes at the bottom of my bag. — *Brian Heater*

KANEX MYSPOT

Skooba Cable Stable

"Oh, thank heavens — someone finally replaced the EOL'd AirPort Express." That's what soared through my synapses upon first hearing of Kanex's $49 mySpot, and those who know anything about my traveling essentials would understand just how important such a thing is to me. For years, I used the *old* AirPort Express to set up makeshift offices in hotel rooms far and wide. Just plug it into the wall, pop an Ethernet cable in and turn room 409 into an ample hotspot. But for reasons unbeknownst to me, Apple redesigned the AirPort Express in June 2012, removing its usefulness as a traveling router.

Enter the mySpot. In essence, this is merely a WiFi router crammed into something barely larger than a typical USB key. You plug an Ethernet cord into one end, give it power via USB (a laptop's USB port or a USB wall charger will do), and watch as it creates a wireless network for your bevy of roaming gadgets to latch onto. The best part, however, is the size. It's *markedly* smaller and lighter than the old AirPort Express, and it works just as well — even with Apple products.

HTC One X+

In my testing, I had zero issues connecting and funneling one of those funky hotel connections — you know, the ones that make you pay per day with some god-awful login screen — into a room full of WiFi waves. It's a little funny about how long your password has to be, but otherwise, it does exactly what I expected it to. One paid hotel Ethernet connection morphed into a signal that could be used by five-plus devices in the room. Sold. — *Darren Murph*

HTC ONE X+

Skooba Cable Stable

Kanex mySpot

When we first tested the One X+ late last year, it was tough to compare it against the original One X solely based on hardware. The One X+ had a leg up in software by running Jelly Bean, while its ancestor was still saddled with Ice Cream Sandwich at the time. I've since had the opportunity to use both devices running Jelly Bean — the One X+ on Telus and the One X on Rogers — to see whether or not it's worth paying extra for the new model when the software is no longer a factor.

It will be if you care about gaming and would otherwise have to buy a Snapdragon S4-based One X, like that on AT&T or Canadian networks. The relatively new Tegra 3 chip still outruns the S4 in just about any app where 3D is involved.

Beyond that, however, it's hard to quantify the gains for most tasks: apps and web pages still load ever-so-slightly faster on the One X+, but the code parity makes it rare to find any noticeable speed gains in general use. Jelly Bean irons out the (relatively few) kinks on the older phone and puts its software feature set on par (i.e., you'll still get Google Now and improved responsiveness). If overall speed is the only deciding factor, save your money by picking up the original One X. You'll pocket $129 Canadian on a contract with Telus, and a larger-still $199 US with AT&T.

If anything, the One X+ makes the most sense in every category beyond performance. I'll freely admit that my favorite change in the One X+ is its matte, soft-touch finish, which takes the One X design from slippery to grippy in one fell swoop. The 64GB of storage certainly softens some of my gripes about the lack of a microSD slot. About the only step back is a display color temperature that isn't as warm or inviting as on the original. If you can score a small-enough price difference, buy the One X+ for the design refinements — any speed bumps are just icing on the cake. — *Jon Fingas*

The week that was in 140 characters or less

Tomorrow's Abrams, Credible Coins and the Ring's Not in on It

@markgurman

Is Michael Dell using Amazon Coins to give the money back to shareholders?

@Mr_Trout
OMG INSTAGRAM ON YR PUTER!

@DrKarateChop
With today's news about JJ Abrams working with Valve, I think it's safe to say he's a highly manipulative time traveler from the future.

@nickbilton
Beyonce's Website is down. I'm gonna go out on a limb & say the Chinese hackers aren't behind this one.

@darrenmurph

I'll say this: the Surface Pro read an external HDD that no Mac would read. Saved me big. Then the battery died.

THE STRIP | BY SHANNON WHEELER

WHAT IS THIS?

TOUCH TO FIND OUT

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engadget

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