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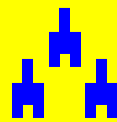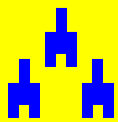
OUR TAKE ON 2 THROWBACK MIRRORLESS CAMERAS

FAST TIMES WITH ACER'S ICONIA TAB A510

ATARI ICON
TRACING THE CULTURAL IMPACT OF A GAMING HEAVYWEIGHT

READING IN THE DARK WITH NOOK'S GLOWLIGHT

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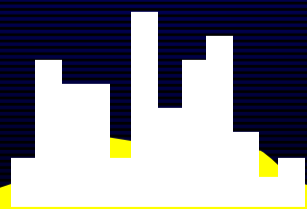2 THROWBACK
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ATARI ICON

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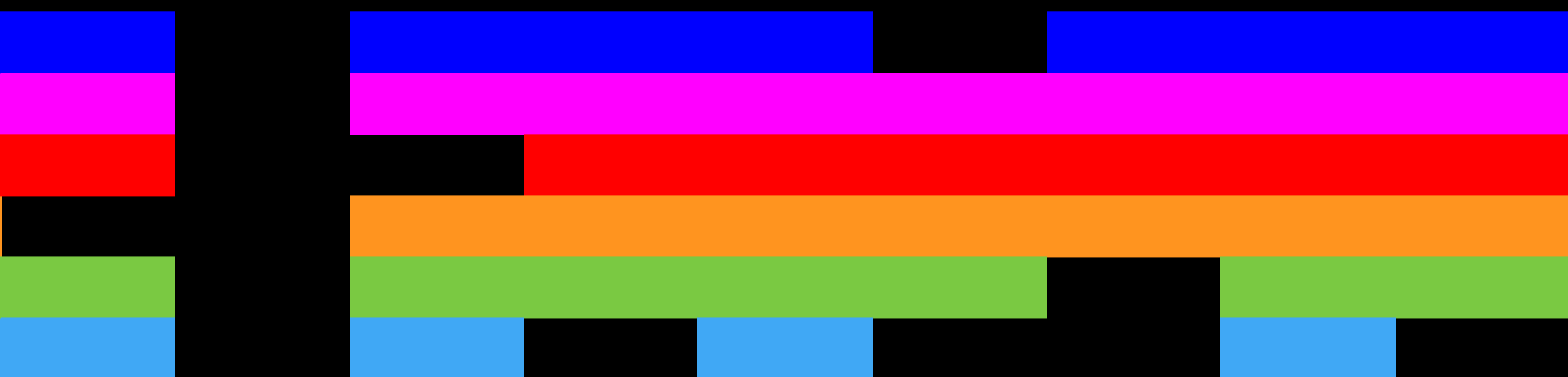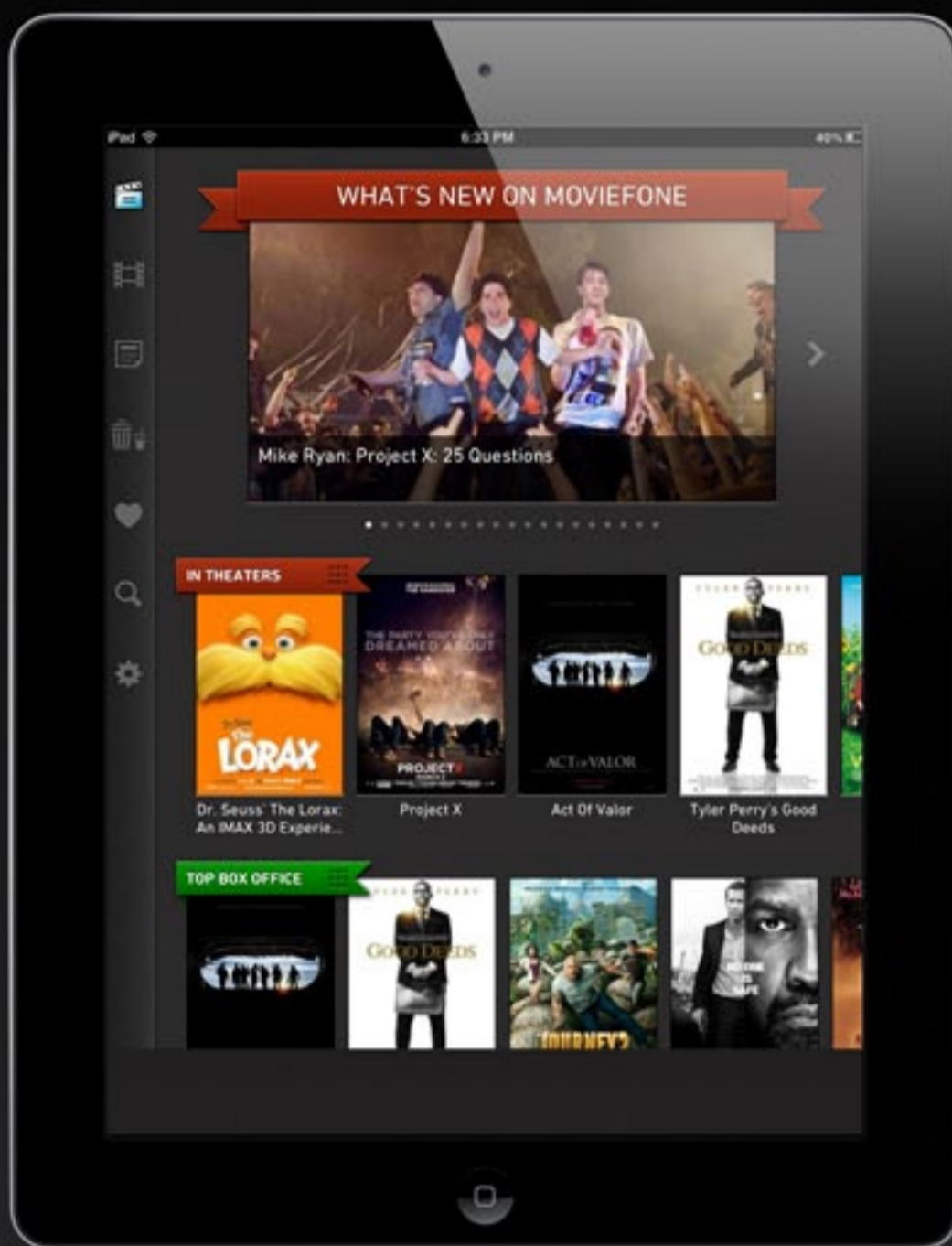READING
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DISTRO
ISSUE #39
05.04.12

Sliding Into BlackBerry 10

A little hard to know where to begin this week, but we'll start with the established player that's found itself gradually reduced to a status far less glamorous than its previous heights. Yes, I'm talking about RIM of course, and at this week's BlackBerry World conference we got our first *proper* exposure to BlackBerry 10. It looked good, modern, fast and responsive, with fancy gestures for peeking back at recently-discarded apps and Scalado-provided camera wizardry that lets you fix the momentary frown on an otherwise cherry friend's face.

The keyboard looked particularly hot, as you'd expect, kind of like SwiftKey on steroids. As you type, word predictions appear above individual keys, and to pick that word you just swipe up. Swiping to the left deletes a word and swiping down cycles through keyboard layouts. Multi-tasking looks great, multiple perspectives based on what you want to do with the phone is a nice idea and ultimately it has the makings of a really solid OS. A really solid OS that is, sadly, way too late to the party. We did briefly get our hands

on some early developer test hardware that shows a lot of potential, but with BB10 devices still months away, it's hard to see this new operating system really changing RIM's fortunes. Will it stem the flow of users away to other platforms? Yes, but in my book it's just too late to start the tides turning the other way.

Samsung, on the other hand, can seem to do no wrong. Even the laughably large Note has proven to be a success, but now it's time to introduce the successor to one of the most popular Android phones of all time. It's the new Galaxy S III and it looks — well, it looks a little disappointing, honestly. On the outside, that is. Samsung's smartphones have had a tendency to be a bit on the plasticky side and the GS III only encourages that perception.

But, get past the ho-hum exterior and you'll find a screaming-fast quad-core processor hiding behind a 4.8-inch HD Super AMOLED display that is sadly, PenTile, but still visually stunning. Our early benchmarks show this should be a class-leading device and a bevy of fancy software tweaks add intrigue, like the ability to automatically place a call when you place the

Spotify really focused on discovery this time around, long the critical weakness of its apps on other platforms.

phone to your ear, and even a Siri-like voice recognition system. Overall the thing isn't an awe-inspiring leap forward for the smartphone, but it is a truly impressive next step and a compelling rival to HTC's One X.

Other big news this week circled around Microsoft and Barnes & Noble entering into a $300 million "strategic partnership" — the odd result of a potentially ugly patent battle. We're not sure what this partnership holds in store once the two of them get done waving their olive branches around, but the deal has certainly spurred lots of discussion about a potential Windows-powered reader. As of now all we know for sure is Nook software running on Windows 8 tablets, but if Microsoft does enter the reader game it certainly has a solid partner.

Spotify unveiled its long-awaited iPad app this week and, while a predictable up-scaled version of the iPhone and iPod app probably would have sufficed, I'm happy to report it's more than that. Spotify really focused on discovery this time around, long the critical weak-

ness of its apps on other platforms. Here, new music is in your face at every turn, but you can, of course, just get to your playlists if you're into that sort of thing.
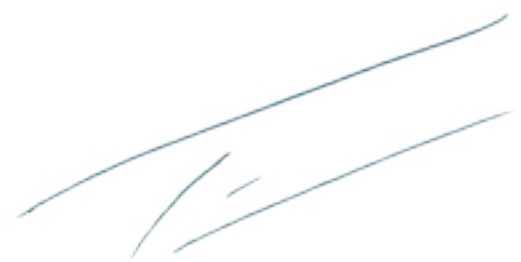
Finally, two bits of somewhat sad news this week. First, the final decommissioning of Google Wave. As an online service it was a solution to a problem that nobody knew they had and, while some such solutions go on to great successes, this one never caught on. Ultimately its technology would become a strong part of things like Google+, but Wave itself shall ripple no more.

And, the Space Shuttle Enterprise made its final voyage this week, boldly going around the New York City skyline on the back of a 747, making its way to JFK. From there it will be ferried to the Intrepid Sea, Air and Space museum where it will find a new home and many, many thousands of curious onlookers.

In this week's Distro we're taking a closer look at the cultural impact of an absolute gaming icon: Atari. As a gamer of a certain age I have mixed memories of this company, as

some of my best (*Pac-man*) and worst (*E.T. The Extra Terrestrial*) gaming moments occurred on Atari systems. Needless to say I wasn't the only one affected. James Trew brings us that story. This week's reviews include Brian Heater's take on the illuminating Nook Simple Touch with GlowLight and Joseph Volpe tells us all about Acer's Iconia Tab A510 while Sharif Sakr and Zach Honig each deliver a camera review: the Fujifilm X-Pro1 for the former and the Olympus OM-D E-M5 for the latter. We also have our impressions on Spotify's iPad app, BlackBerry 10, Ross Rubin looks at the implications of the Barnes & Noble / Microsoft deal and our very own Darren Murph makes his case for why hybrid computing should exist. It's big, it's healthy, and it's all waiting for you ahead.

TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

54.4%
Feb 12

Android Tablets Feel the Heat from the Kindle Fire

We've seen some pretty clear indications that the Kindle Fire was rapidly gaining market share among Android tablets, and ComScore is now out with a new report indicating it's crossed a big milestone. According to the research firm, the Fire's market share in the US fully doubled from December to February, with it standing at 54.4 percent as of the end of the month. Counted together, the Galaxy Tab family sits in second at 15.4 percent, while the Motorola Xoom and Asus Transformer come in at 7 and 6.3 percent, respectively. Of course, the Kindle Fire isn't quite your ordinary Android tablet, so this is likely better news for Amazon than Google. —*Donald Melanson*

29.4%
Dec 11

23.8%
Dec 11

15.4%
Feb 12

US MARKET SHARE OF ANDROID TABLETS BY DEVICE

11.8%
Dec 11

7.1%
Dec 11

5.7%
Feb 12

6.4%
Dec 11

6.3%
Feb 12

7.0%
Feb 12

TOSHIBA AT100

ASUS TRANSFORMER

MOTOROLA XOOM

SAMSUNG GALAXY TAB FAMILY

AMAZON KINDLE FIRE

The Weekly Stat
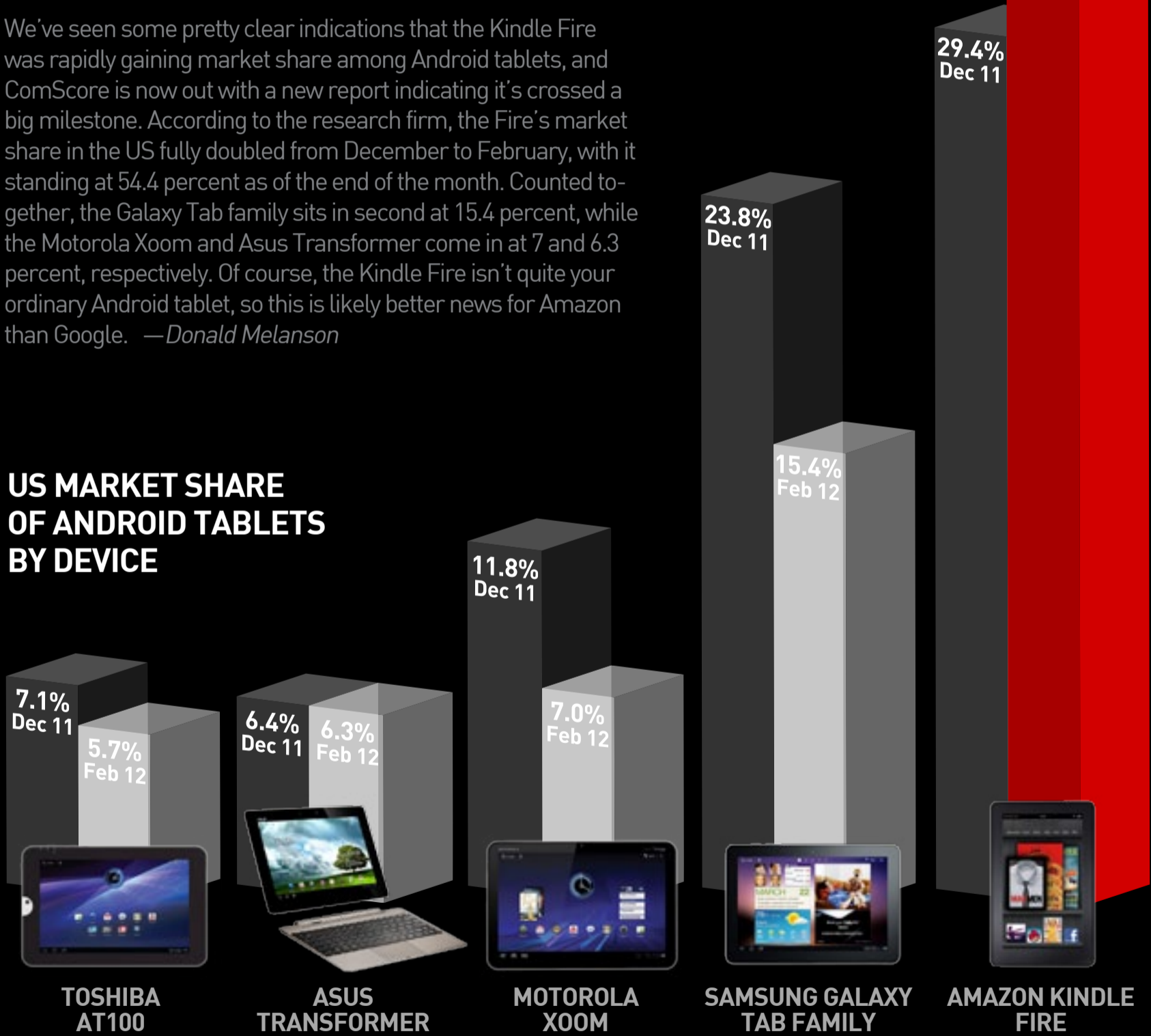
COMPETING BY HOOK OR BY NOOK

Switched On

BY ROSS RUBIN

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

Microsoft has a long history of supporting bitter rivals — even those that have long publicly disparaged the company, offering funds to Nokia, Corel and, most famously, Apple. It also has a long history of supporting e-reading. Prior to ending development last year, the company offered its Microsoft Reader software for about a decade — first on handheld devices using Windows CE and Windows Mobile and later on desktop Windows. Those two traditions intersected recently as Microsoft invested in a new Nook e-book business designed to compete better against Apple and especially Amazon.com.

It is a good bet that the Microsoft-infused Nook will move away from Android, the object of contention between the software giant and book retailer prior to the investment, but Barnes & Noble likely won't shed many tears despite its once spirited defense of its right to use Android against Microsoft. Even when compared to its rival, Amazon, which has maintained control of Kindle Fire apps via the Amazon App Store, Barnes & Noble turned up its nose at the vast majority of Android apps, hand-picking those optimized for the Nook experience.

The new venture's focus on textbooks should be a fertile ground for the partnership; the e-reader market has come a long way since Amazon launched the Kindle DX almost three years ago. Barnes & Noble has strong ties to the college textbook market and Windows 8 tablets can be expected to be larger than the average notebooks today. Already, even Android devices are testing the upper limit of tablet size with the 13-inch Toshiba Excite tablet.

Indeed, textbooks stand to be a great showcase for the power of Windows 8. Digital textbook startup Kno — which abandoned plans to ship not only a 14-inch tablet, but also a dual-screened version of such a device — has applied some effort into

designing a textbook experience that goes beyond the demands of simple book reading. However, far more can be done to enable truly collaborative studying and management of multiple texts. At the same time, a Nook experience should allow for long battery life and simple operation; these will also be battlefronts for Microsoft versus Android and iOS-based competition.

Amazon has shown what can be built from a focus on books. The Kindle and, in particular, the Kindle Fire, opened people's eyes to the role the company could serve as an ecosystem backer. Text-heavy books may represent about the simplest of digital media, and bestsellers may be of interest to relatively few when compared to music or movies. But the textbook market in particular has high potential for serving as a Trojan horse into households via schools, something that Apple has clearly recognized with its release of iBooks Author.

The Microsoft-Barnes & Noble tie-up breathes new life into the Nook, but it also shows that Microsoft is committed to closing gaps when it comes to competing with Apple, Amazon.com and Google in every digital media market. While the investment in the digital book space may have the most direct impact on Microsoft's Washington state neighbor, Amazon.com, the resulting trio of digital media storefronts – Windows Marketplace for apps, Zune for music and video, and Nook for books – creates a point-by-point answer to address Apple's iTunes app store, iTunes and iBooks.

The large e-reader market has come a long way since Amazon launched the Kindle DX almost three years ago.
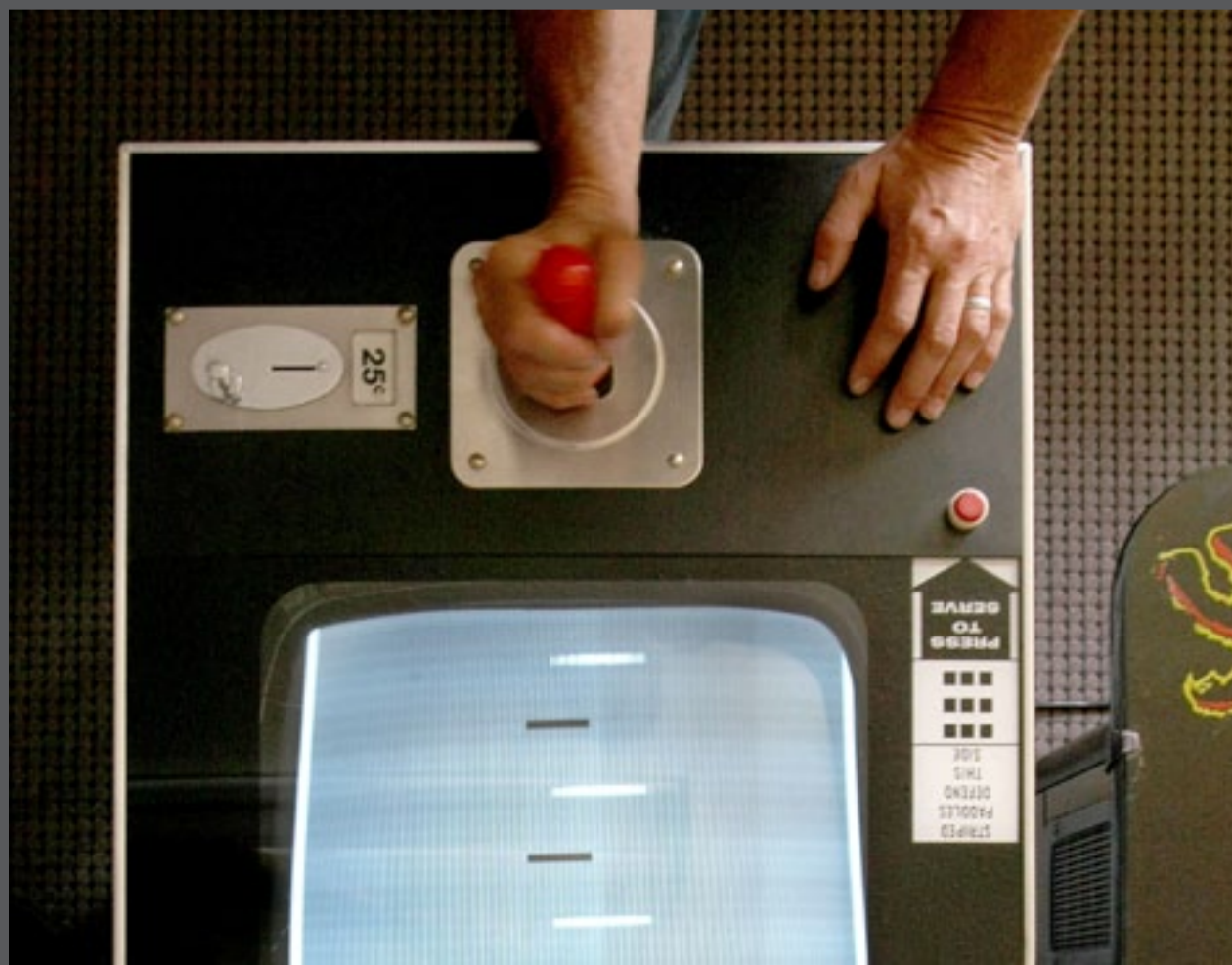
Token Memories

TOP: *Kate Pierson of The B-52s (circa 1982) flirts with the camera and sacrifices crucial game time.*

RIGHT: *A mid-70s cocktail table classic, "Futsball."*

BELOW: *The scene at a Hollywood arcade in 1982 — the influence of Atari and blowdriers is evident.*

Visualized

APPLE ISN'T MAKING A 'CONVERGED' LAPTOP / TABLET HYBRID, BUT I STILL WANT ONE

BY DARREN MURPH

Deflated. Disappointed. Let down. Unsurprised. All of those emotions ran through my being at one point or another following Apple CEO Tim Cook's comments regarding "converged" devices, but if anything, his denial has made me all the more hungry for this particular device. For months — heck, maybe even years — I've waited for Sir Jonathan Paul Ive and co. to finally nail the concept of a laptop / tablet hybrid. In many ways, Apple managed to get right on a smartphone in 2007 what I felt was wrong holding a BlackBerry. I still think the iPad's screen is about 2.7-inches too large for my own personal tastes, but the world on the whole has affirmed that it nailed that design, too. Oh, and the MacBook Air? C'mon — we all know it's the thin-and-light you always wanted, and given that it'll run Windows with poise, it's arguably the sexiest Windows laptop currently on the market.

The point? Apple has waited for companies to flounder about with certain designs before, all while perfecting its own take for a future release. Windows-based tablets were flooding out in the early noughties, and believe it or not, Toshiba was already giving the tablet / laptop hybrid thing a whirl in 2003 with the Portege 3500. Apple waited over half a decade to usher in the iPad, and the rest — as they say — is history. The iPhone followed a similar path; companies came before it and did their best to produce pleasing, long-lasting, highly usable smartphones, but the iPhone completely changed the trajectory of everything that came after. Love it or hate it, it's hard to imagine a 2012 with Windows Phone in it had Apple not pinned Windows Mobile in a corner back in 2007.

So, if Apple has shown an ability to thrive with designs that others have experimented with, why is the "converged" laptop / tablet a nonstarter?

During the conference call following Apple's blowout Q2 2012 earnings — a quarter where it raked in $11.6 billion in pure profit on the wave of monumental iPad and iPhone sales — Tim Cook was asked about the potential for converged devices. More specifically, if Apple had a plan for countering the impending glut of Windows 8-based tablet / laptop devices. His response?

"You can converge a toaster and a refrigerator, but those aren't going to be pleasing to the user."

Steve Jobs was well known for his own quips on conference calls, and it's clear that at least that aspect of leadership has not fallen to the wayside. Cook, of course, wasn't being serious. At least not completely. Converged kitchen gadgets have actually proven quite popular, but I'll con-
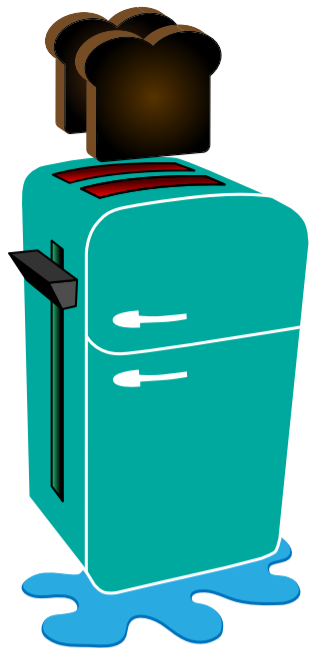
You can converge a toaster and a refrigerator, but those aren't going to be pleasing to the user.

fess that a 'fridge and a toaster may have too little in common to mash together successfully. But are tablets and laptops really *that* far apart? Is Apple really going to let Metro rule the converged space without so much as a fight? Cook continued:

"We are not going to that party, but others might from a defensive point of view. Anything can be forced to converge, but it's all about trade-offs. Some of these trade-offs leave you with something that doesn't please anyone. Our view is that the tablet market is huge — we've said that since day one — we were using them here and it was already clear to us that there was so much you could do, and the reasons for use is so broad. iPads have taken off in consumer markets, in education and in enter-

prise — it's everywhere you look now. The applications are so easy to make meaningful for someone, and as the ecosystem gets better and better — and as we continue to double down on making great products — I think the limit here is nowhere in sight."

I've stated once or twice before on the Engadget Podcast that my dream machine would be an ultra-sleek Windows 8 tablet with 10+ hours of battery life, blistering performance and a no-nonsense method for docking and becoming a full-scale Windows PC. If you need visuals, wrap your gord around a Transformer Prime with Windows 8. The idea here is simple: on the go, I've got a Metro-fied device that's conducive to touch (unlike the Windows 7 that exists today), but when I get settled, I can use the *exact same device* to access a full file system, and — quite frankly — do things that hamstrung tablet operating systems cannot. Is it a shoehorned approach? Of course — a single OS is servicing two methods of use — but why should that challenge be viewed as impossible? Or, uninteresting?

Apple rightfully suggests that the iPad is fantastic for a lot of things. Goofing off with photos in iPhoto, creating trailers for at-home use, sending the most basic forms of email, checking up on the weather, doling out beautiful presentations and scouring the web for a nonexistent sale on a pair of Jack Rogers sandals. But it's not a MacBook, and clearly, Apple

knows it. Attachments through email on the iPad are painful to execute (if not impossible in some instances), and the lack of support for a wide array of USB peripherals via the Dock Connector is a bummer for power users. To me, this screams opportunity. To Apple, it screams "run."

I fully recognize that ignoring this segment (or "potential segment," for the pessimistic) is the easy thing to do. There's essentially no risk involved in continuing to produce great iPad products and great MacBook products. They'll continue to do well so long as Apple continues down the road it's on. But I'll be honest — there's no consumer electronics company on the planet right now I'd trust to nail a converged device like Apple. Just look at what the company already has to work with.

It's managed to build an iPad with more pixels than your HDTV and a battery-sucking LTE chip, and it *still* lasts around 10 hours while pulsing full-steam ahead. It's created some of the world's thinnest and lightest laptops, also with world-class battery life, at price points well below even the original Adamo. It's built an insanely respected ecosystem that — in many ways — links OS X and iOS together. To say that there's no foundation in place would be foolish, and this is just speaking to the products the public knows about. Just imagine what's lurking in the test labs in Cupertino, and you can more easily see why I'm frustrated in Apple's choice to not even give this segment a passing glance.

And here's where it really gets crazy: Apple is an undeniable fan of convergence. During his 2007 Macworld keynote, Steve Jobs told the audience that three new products were to be announced in mere moments. He then proceeded to inform the crowd that a widescreen iPod with touch controls was the first device; following that, a "revolutionary new mobile phone." Finally, "a breakthrough internet communications device." He then affirmed that these "were not separate products," and indeed, iPod sales have been sinking in recent years as the converged iPhone became a suitable replacement for a dedicated MP3 player. Apple willingly cannibalized its own iPod market with a converged device. Something tells me Mr. Cook would view those two more like "a microwave and an oven."

It doesn't stop there. OS X 10.7 (Lion) was the first major edition of Apple's desktop OS that exhibited undeniable influence from iOS. With the introduction of the Magic Trackpad, Apple's highly customizable 'gestures' menu in Settings and Launchpad / Mission Control, even the most casual OS X user could feel the iOS creep. It was obvious.

And now, there's OS X 10.8 (Mountain Lion) waiting in the wings, making a beeline for a "late summer"

release. The biggest inclusions here? Mobile aspects, oh-so-clearly borrowed from iOS. Brian Heater was able to spend quite a bit of time with a pre-developer build a few months ago, and his words speak volumes about the mindset in its development:

"Until now, Mission Control has roughly approximated the iPhone's grid layout in a desktop setting — but that feature always felt like a bit of an aside, something the user could safely ignore if he or she saw fit. This time out, the mobile influence is far more robust, baked in to the point that it will almost certainly force upgraders to adjust their workflow."

And lest we forget the addition of Messages (a product that arrived in iOS first), Reminders (again, an iOS mainstay), Notes (just guess — go ahead), Notification Center (I'm boring you, aren't I?) and Game Center. The iOS-ification of OS X is not only a talking point, it's an incontestable reality. So, if Apple is already working to converge pieces of iOS and OS X, how is this *not* setting up a new device that bridges the gap between the functionally-limited iPad and the not-quite-as-portable MacBook?

The obvious issue, of course, is that Apple doesn't currently have an operating system that can *beautifully* work on both tablets and desktops / laptops. Windows 8 was engineered from the ground up to work well on both tablets and full-scale machines; it may have its pitfalls, sure, but it man-ages to pull off the hybrid thing better than any other operating system ever created, from what we've tested thus far. For Apple to craft a laptop / tablet conglomerate, it'd either need to allow a dual-boot scenario (iOS + OS X), or release a build of OS X that would strip out the more complex features and rely only (or predominantly) on the iOS-borrowed feature set when used as a slate. Or, it could outthink me completely and develop an even sexier usage scenario.

Whatever the outcome, I'd be overly curious about the final result, and would almost certainly be a prospective buyer. And if Apple could somehow create it in a way that fit into the iPad form factor, all the better. That would obviously allow tablet-only buyers to proceed as normal, while more ambitious customers could opt for a theoretical keyboard / trackpad docking accessory to unlock the desktop-like potential within. I'm genuinely hoping that Cook's stance stands a chance at changing as time rolls along, as tablet chips get more powerful and as iOS and OS X continue to lean into one another. But I'll be honest — I really wish he was more gung-ho about the whole concept in the here and now, and I'm pretty sure I could find at least a handful of folks that'd open up their wallet to agree with me.

»HANDS-ON

Our firsthand impressions of just-announced and soon-to-be-released devices

BLACKBERRY 10 DEV ALPHA

PRICE N/A
AVAILABILITY
Developers only

THE BREAKDOWN Following in the footsteps of the tech giants, RIM has unveiled a dev-only device based on BB10.

After a brief visit with the Dev Alpha, we weren't able to glean many juicy details. The device was more of a mini PlayBook than a BB10 phone

— it even had PlayBook OS 2.0 loaded rather than BB10. It boasts a 4.2-inch screen with a stunning resolution of 1280 x 768. We weren't able to snag a lot of specs, but we learned that it houses 16GB internal storage, 1GB RAM, microSIM slot and mini-HDMI port. While we were hoping to get quality time with BB10, it was nice to see the company offering a solid dedicated developer device.

SPOTIFY IPAD APP

PRICE $9.99 / month
AVAILABILITY
Now Available

THE BREAKDOWN

While extremely usable, the iPad app is merely a supplement to its desktop-bound counterpart.

Spotify has landed on the iPad and the new app is a no-brainer of a download for anyone with a premium account and an Apple tablet. The iPad version of Spotify isn't simply a scaled up part of its smartphone sibling — it uses the extra real estate well. You can keep track of your Facebook pals' listening habits and gain access to their top tracks and artists. The current track is always accessible via the anchored persistent play that lives on the bottom. Spotify's got a great app on its hands here that harnesses some of the service's best features.
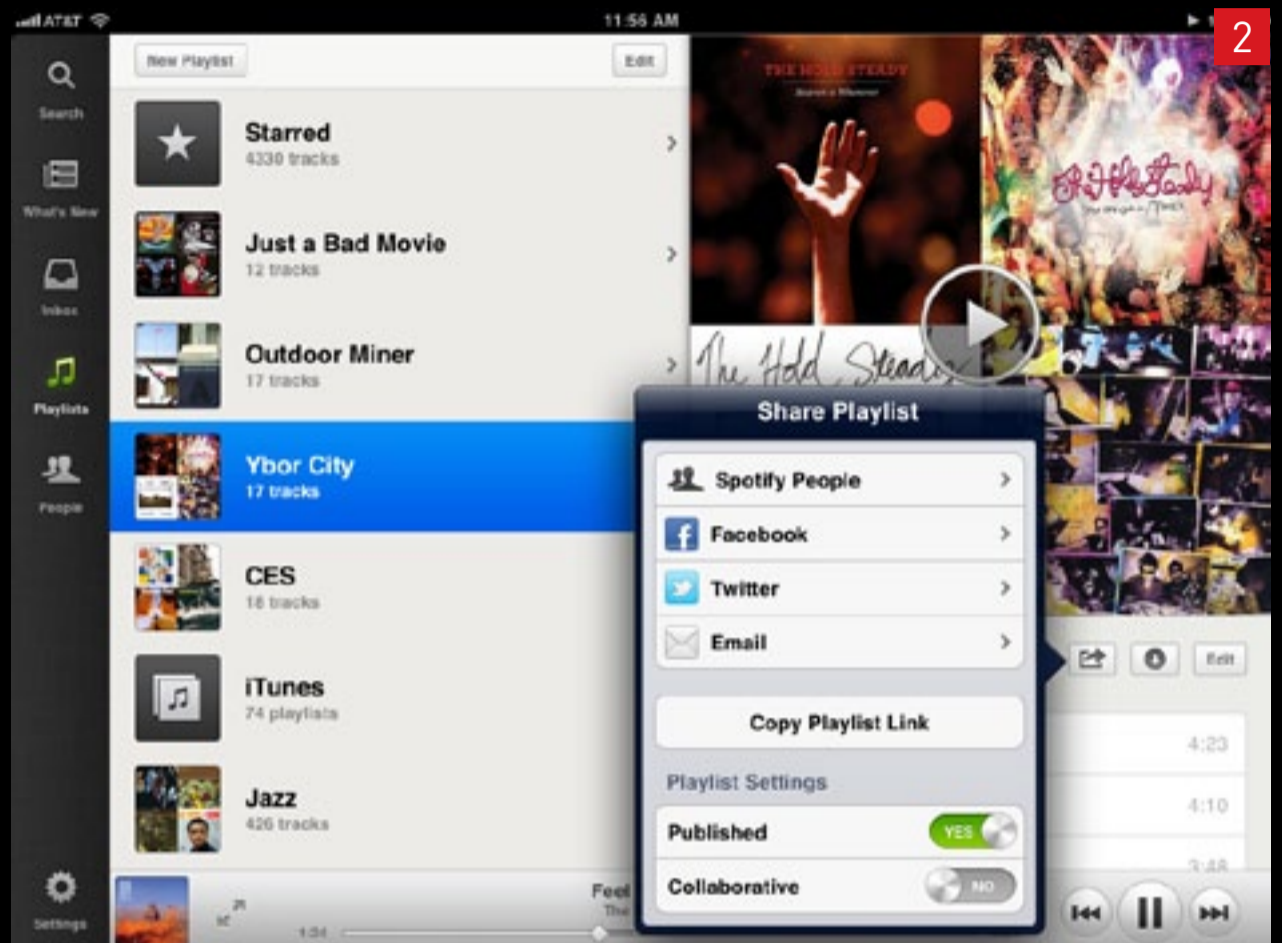
1) The dock icon
2) Playlist sharing
3) Track your pals
4) Search features
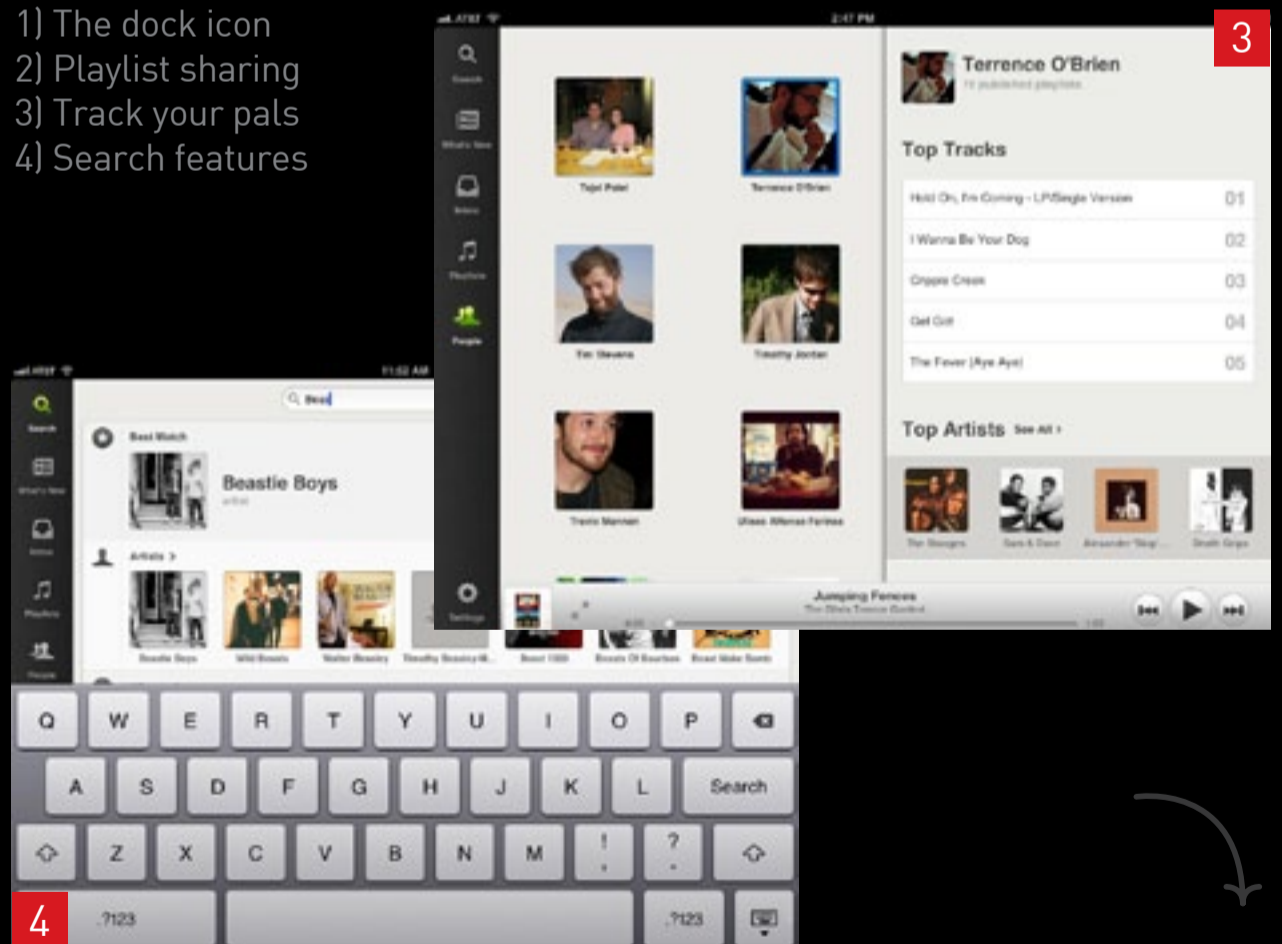
MICROSOFT SKYDRIVE

PRICE Free and
Paid Plans
AVAILABILITY
Now Available
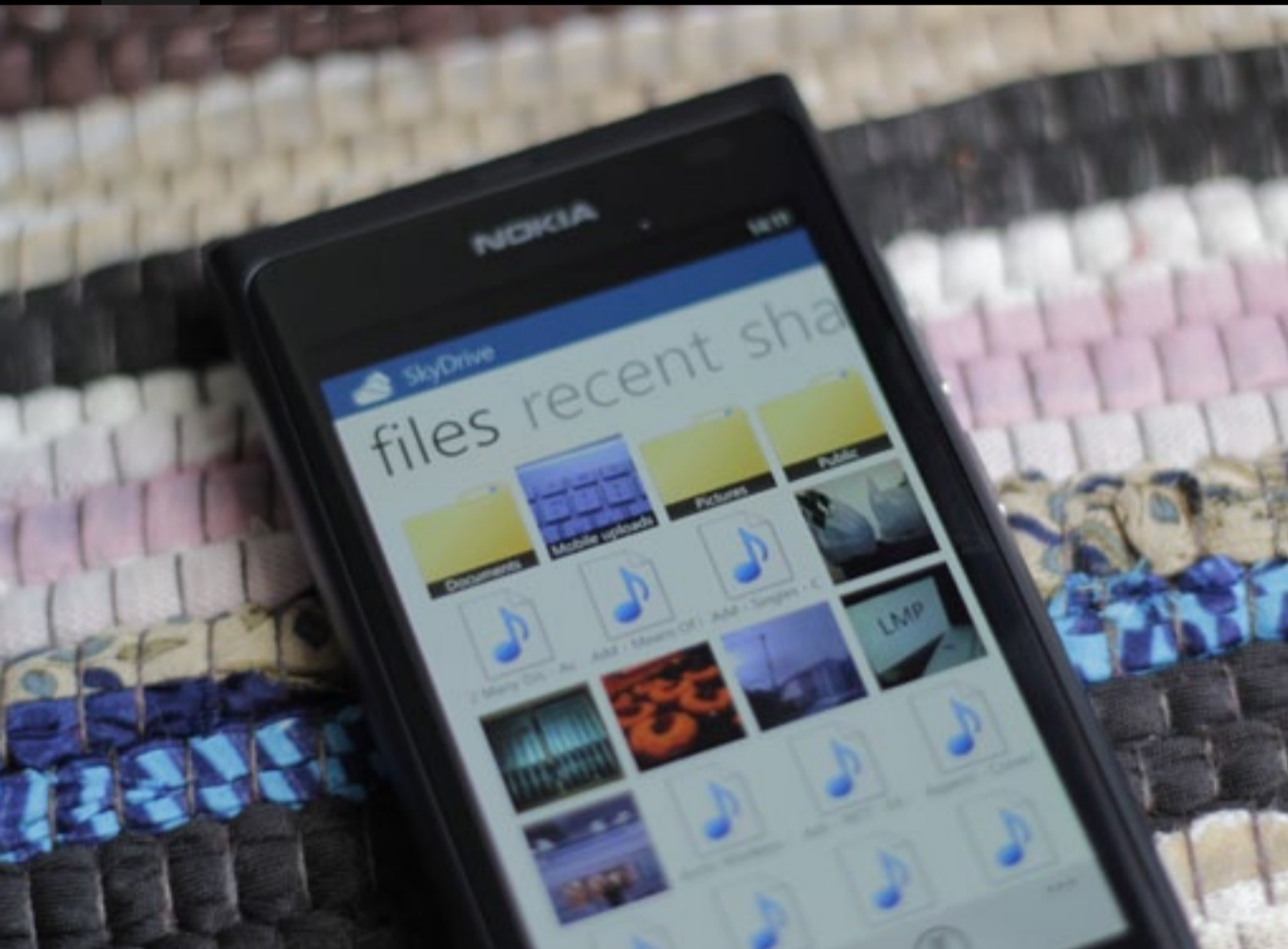
THE BREAKDOWN

Although support for non-Windows platforms is lacking, this cloud offers a wealth of storage options.

Microsoft's cloud offering is without a doubt a confident one. Simple to use, essential features and, perhaps crucially, good value storage options let you know that this is a product born from a company with more than a little experience in consumer products. Users have the choice of web access or a smattering of desktop, Windows Phone and iOS apps. The interface may not be all that snazzy, and some of the app support for non-Windows platforms (Android) is a little spotty, but the end product still manages to reach far beyond its PC and phone ecosystem.
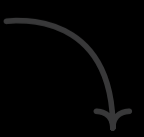
BLACKBERRY MUSIC GATEWAY

PRICE $50

AVAILABILITY
June

THE BREAKDOWN While it won't wow you with specs, the $50 NFC-enabled dongle is worth considering.

The music streaming accessory market is immensely saturated, but RIM is hoping to add spice with its latest version of the BlackBerry Music Gateway. A dongle no larger than the Bold 9900's display, the device easily pairs up with any Bluetooth-enabled phone, tablet or music player and lets you push your tunes into a home or car stereo. NFC is also added into the mix this time around, which means you can impress friends by simply tapping your BlackBerry to the Gateway to initiate the pairing sequence. While it's not overly flashy, its $50 price tag makes it a tempting offer.

Hands-On

IS TRIALS EVOLUTION THE PERFECT GAME?

Reaction Time

BY LUDWIG KIETZMANN

Ludwig Kietzmann is the Editor-in-Chief of Joystiq. com. He's been writing about video games for over 10 years, and has been working on this self-referential blurb for about twice as long. He thinks it turned out pretty well.

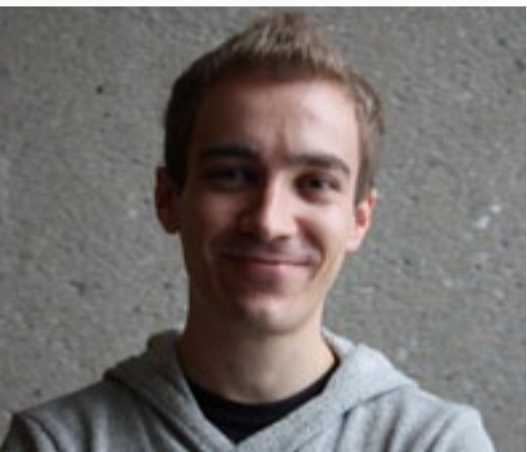*Trials Evolution* might just be the perfect video game. The subject matter doesn't seem worthy of the adjective, as it mostly involves a subject colliding with matter face-first after being catapulted from a motorcycle into an unimpressed log. It's just a simple, repeatable exercise in balancing a bike, which you steer through an insane obstacle course for no reason other than to succeed and see some flashy fireworks at the end.

So, perhaps it's not the greatest or most important creation to emerge from an industry packed with intelligent designers and bold artists. It is, however, a perfect encapsulation of what drives any good game. *Trials* is like a transparent cube – a simple shape to house and display the same gears that turn within more elaborate machines. (It also costs $15, so a comparison to one of those gaudy, see-through Swatches from the '90s might be more apt.)

Simplicity is often mistaken for stupidity in modern games, branded as the enemy of depth. But here simplicity is the partner of depth, obscuring it but never excising it. What you're doing — which is constantly adjusting your motorcycle's speed, angle, driver posture and center of gravity — is complex in the millisecond minutiae, but the marvel of *Trials* is that your interaction feels utterly primal and almost thoughtless. You're plugged in by the fingertips, steering through intuition alone, somehow predicting and controlling the physical behavior of an object that

doesn't even exist. It's the kind of connection that makes you lean, lurch and laugh in your chair as you play.

That *Trials* can tap into your sense of speed and balance, even when you're stationary, shows an impressive collusion of technology and visual communication. And having conveyed the behavior of your vehicle (your in-game avatar, in this case) so well, the game is free to fill the road with devious, unnecessary obstacles. And what is a game if not a string of unnecessary obstacles?

What sets *Trials Evolution* apart from its predecessor (beyond the absurd track editor) are the wild race locales. The venues are all built on the same, gigantic piece of land, but that's about the only context they share. By the time you're halfway through the single-player challenges, you've jumped and teetered through a tumbling dreams-cape, a sequence of bridges suspended

in the clouds and a beach in World War 2. The core challenge and the satisfaction of mastering it is the same throughout, and it can be transplanted just about anywhere.

Extrapolate that illustration to other

5 NEW RELEASES FOR THE WEEK OF MAY 4TH

Awesomenauts
(Xbox Live Arcade / PlayStation Network) $10

games, and you almost see why shooters are lambasted for doing the same thing over and over in different places (and to different enemies). If the combat is well designed — game designers in that department kinda know what they're doing by now — then the important part's done. Unfortunately, when games struggle with the non-essential it can detract from the entire vision, and we can't always be satisfied with just the raw, mechanical ingredients.

If *Trials* isn't perfect, then it might suffice to call it "pure." The effortless control, implicit communication, repeatable challenge (and, of course, the inherent joy in seeing a human falling his ass off) form a quintessential, *gamey* game, and everything else is … enough. More games could learn from that clarity of purpose, but then most have to explain more complex ideas than "a resilient dude jumps a bike over some gnarly stuff." Sometimes the dude has a gun.

My biggest hesitation in picking *Trials Evolution* as a candidate for the perfect video game is that it implies an endorsement of deconstruction. It's a great game in many regards, but truly valuable as a reminder of how we can connect with video games, outside of embellishments borrowed from other mediums. Recognizing that pure, mechanical brilliance is to celebrate what games bring to the table. You can see that as a suggestion to strip things down going forward (keep it simple, Stupid), or to build them up and accommodate players in even more ways (MAKE ME CRY, VIDEO GAMES). I'm going with the latter, but I'm keeping my Swatch.

Fable Heroes
(Xbox Live Arcade) $10

Mortal Kombat
(PlayStation Vita) $40

Orion: Dino Beatdown
(PC) $10

Sniper Elite V2
(PC / PS3 / Xbox 360)

The History of Atari: 1971-1977 & 1978-1981

By Steve Fulton
Gamasutra

Looking for some further reading on Atari following this week's issue? Then we'd recommend starting with this exhaustive two-part history of the company published by *Gamasutra* in 2007 and 2008. Written by game historian Steve Fulton, the first installment traces the company's origins and early years, from Pong to its entry into the home market, while the second looks at the company's "golden years" — a period marked by the success of the Atari 2600 game console and its continued run of hits in arcades. Another option, in book form, is *Racing the Beam* by Nick Montfort and Ian Bogost (published by MIT Press), which looks specifically at the Atari 2600 from both a technical and cultural perspective.

AROUND THE WEB

Machine Politics
By David Kushner
The New Yorker

By far the most in-depth profile to date of George Hotz, the infamous hacker who first unlocked the iPhone and then cracked the PlayStation 3 — a move that caused him to be sued by Sony and won him the backing of Anonymous, whether he liked it or not.

The Library of Utopia
By Nicholas Carr
Technology Review

A look at the state of two ambitious book-scanning projects: one from Google that remains tied up in the courts, and another backed by a Harvard-led group that may be able to make some progress where its rival has not — from Nicholas Carr, author of *The Shallows*.

The Dawn of Haiku OS
By Ryan Leavengood
IEEE Spectrum

Haiku OS may face an uphill battle to become anything more than a niche operating system, but like the one it draws on (the ill-fated BeOS), the story behind it is a fascinating one. Here, Ryan Leavengood brings us up to speed by taking us right back to the beginning.

She's Playing Games With Your Lives
By Bruce Feiler
The New York Times

Another profile of a figure slightly less controversial than George Hotz, but who's still sparked a fair bit of debate. Jane McGonigal is best known as a game designer who's pushing the boundaries of what a "game" is — and her latest, *SuperBetter*, is no exception.

Recommended Reading

Nook Simple Touch with GlowLight

Though not everyone will able to justify the $40 premium, the Nook Simple Touch with GlowLight is a worthy investment for anyone who's ever squabbled over lights-out time.

BY BRIAN HEATER

It's a plague against modern marriage, turning husband against wife, and tearing families apart. It's America's number one problem in the bedroom (according to handy stat sheets passed out by Barnes & Noble, at least): light. Spouses are leaving the light on, attempting to read past their designated bedtime, keeping their partners awake and putting a potentially insurmountable strain on their marital bonds. The solution: Divorce? Trial separations? Mariticide? A clunky clip-on reading light? Until now these were the best — nay, *only* — solutions to the problem of reading after dark.

All of that is about to change, thankfully, as Barnes & Noble readies the release of the new Nook Simple Touch, with the company's patent-pending GlowLight technology. The addition of after-dark reading capabilities is the most significant update to the company's e-reader, which otherwise remains

largely unchanged from last year's model. Is it enough to keep the Nook on top of the e-reader heap for another year? Read on ahead to find out — that is, if you're not afraid of the dark.

Hardware

Let's start with the familiar. Which would be... pretty much everything. There, that was easy, wasn't it? Barnes & Noble struck e-reader gold last time out, with an iconic design (to the extent an e-reader's design can actually be classified as "iconic"), with a squat shape and rounded corners. It's a bit wider than the touchscreen Kindle, thanks in large part to its sizeable bezels, which are just expansive enough to keep the device from fitting into some pockets. At least those bezels are home to physical page turn buttons — two small fins on either side of the screen that let you page forward or back with a press. Amazon dumped that feature with its fourth-generation Kindle devices, but anyone who's ever used one of these infrared touchscreen e-readers can tell you these displays have a vexing tendency to freeze and hiccup. It's nice having some physical buttons to fall back on, if only to avoid hurling the reader across the room in a fit of frustration. Between the extra screen real estate and the concave back cover, the Nook is also easy to hold, especially with one hand.

Again, from the front, the device looks pretty much identical to its predecessor: with the Nook logo sitting above the screen and the "n" button below, the latter of which you can use to wake up your sleeping device and pull up the menu bar while you're reading. In fact, the only obvious aesthetic distinction here is a lighter border on the face of the device — a nice contrast against the dark, matte gray. It's a subtle distinction you're not likely to notice until you place the two devices next to one another, but thankfully it's there so you'll never accidentally pick up a last-generation reader. Just imagine what the rest of your reading group would say if they caught you with one of those. It's almost enough to get you kicked out of book club.

On the bottom, just below the border, you'll find the micro-USB port. On the right-hand side is a microSD slot. As ever, there's 2GB of built-in storage (1GB of which can be used for downloaded content), and you can add a microSD card as large as 32GB. Granted, we never actually filled up the memory on our Simple Touch, and therefore never had to resort to extra

storage, but it's certainly a nice option for particularly voracious readers.

The power button is a large, fingerprint-sized tab that sits on the Nook's back side, up toward the top. On our unit, at least, it feels noticeably looser, even, than the last-gen model does after months of use. You'll mainly use that power button to put the device to sleep and to restart it when it freezes — an annoyance you'll have to resign yourself to with most any touchscreen e-ink reader. As with the OG Nook Simple Touch, that big, upside-down, horseshoe-shaped Nook logo is stamped smack dab in the middle of the back cover. Again, the Nook Simple Touch wasn't broken, so Barnes & Noble didn't need to do much to fix it. Still, we can think of at least one more difference of note: despite throwing in a smattering of new features, the company managed to trim a bit of weight — five percent in all, making it the lightest Nook ever offered, at just under seven ounces. Again, you're not likely to notice unless you've got the old and new versions to compare side by side, but we certainly aren't going to argue with a lighter reader either.

Things are pretty much the same on the inside, too. There's the same 'ole 800MHz TI OMAP 3 processor at the helm, meaning the pages turn at pretty much identical rates (assuming the older unit has undergone the requisite upgrade). The WiFi strength is also on par with last year's model (again post-upgrade), and as with that edition, Barnes & Noble still hasn't caved into

the trappings of the 3G world. That lack of choice likely won't affect the lion's share of users, but frequent travelers might miss the ability to download books while on the road. As before, Barnes & Noble is utilizing its brick and mortar locations to offer up free WiFi on the device. You can also piggyback on some 24,000 AT&T hotspots across the country.

Battery life has always been a bit of a dicey topic in the world of e-readers. For one thing, companies measure it differently, and also, two-months-plus runtime is one tough claim to test. Case in point: Barnes & Noble has actually altered the measurement for the battery life of the Nook Simple Touch between the release of devices, all while standing by the claim that the battery life has remained the same, in spite of the device's slightly lighter weight. The original rating was "*up to* two months, based on one hour of reading per day," a ceiling that has since shifted to "*over* two months, based on 30 minutes of reading per day" for both devices. Of course, turning on the GlowLight will cause the battery life to take a hit, cutting it in about half. Unless you're visiting Alaska in the off-season, though, odds are you're not going to be relying on the light that heavily.

Display
Here's where the new Nook shines — literally. For those who wondered where devoted e-readers could possibly go after touch, Barnes & Noble offered a simple,

but powerful solution: light. Let's look at the facts here: the earth's pesky rotational habit significantly eats into your reading time. If you're doing your reading on, say, an iPad, Kindle Fire or Nook Tablet, that's not really an issue, thanks to LCD backlighting. Until now, reading at night hasn't really been an option on e-ink devices. The new Nook isn't the first with a built in light, sure, but past models haven't always done a great job distributing the illumination. With most mainstream models, meanwhile, you're stuck picking up a clunky external light or a pricey (but oh-so elegant) accessory like the Kindle Lighted Leather Cover.

ON THE WHOLE, BARNES & NOBLE HAS DONE A GOOD JOB OF DISTRIBUTING THE LIGHT ACROSS THE DISPLAY.

The easiest way to access Barnes & Noble's patent pending GlowLight feature is by holding down the "n" button on the front for roughly two seconds. The light patently emerges from the top of the six-inch display. Tilting the reader with the bottom side up, you can actually catch a glimpse of the lights. Even without titling, it's easy to identify the top as the light source — it's noticeably brighter up there. The light also appears a bit more intense around the border of the screen. On the whole, though, Barnes & Noble has done a good job of distributing the light across the display, and the slight gradient isn't really distracting once you start reading.

This editor spent an hour before bed immersed in the new Johnny Ramone autobiography, and as advertised, the light isn't harsh on the eyes (the company claims that the strain should be "equal to or less than" what you'll experience with a backlit screen). At least, that's the case after you adjust the screen. In pitch-black darkness, the default setting is pretty intense — like, close-your-eyes-and-you'll-still-see-it intense. We dialed

it down to about a fifth of its full setting. Thankfully, too, when you tweak the settings once, the Nook will automatically default to that brightness level the next time you turn the light on.

Still, it's clear certain sacrifices were made to accommodate this new feature. A new anti-glare layer has been applied to the display, to maintain the device's readability in direct sunlight — something Amazon and Barnes & Noble will happily remind you is quite difficult on tablets with garden-variety LCD screens. And indeed it does a good job of cutting the glare — held up to the light, the new Nook is a bit less reflective than its predecessor. It's hard to say whether it's this added layer or some other bit of hardware, but when placed next to the original Nook with identical pages on the screen, there's significantly less contrast with the text here. The darkness of the e-ink on the new Nook is a bit uneven across the page as well. This is a pretty big bummer — the crisp contrast of E Ink has long been a selling point of these devoted readers, promising replication closer to physical books than tablets can offer. On the new Nook, the page looks a bit unevenly printed. It's another one of those things you might miss at first glance, but that you can't really un-see once you've had a chance to see the two devices next to each other.

The addition of that anti-glare layer also appears to have had the unintended consequence of giving the screen a bit more texture. The responsiveness, however, remains the same, thanks to the infrared technology being used here. Swiping, tapping, and other gestures are just as smooth as they are on the original Simple Touch. Unfortunately, Barnes & Noble still isn't matching the dual-touch offered up on Sony's reader, so you can't simply pinch to zoom when you feel like adjusting text size.

Software

Again, not much new to report. If you treated yourself to the Simple Touch upgrade, you pretty much know what's in

LEFT:
Nook Simple Touch with GlowLight

RIGHT:
Nook Simple Touch

store here. You've got the Home page at the center of the experience, showing you how far into your current book you are, along with a list of New Reads (your most recent downloads) and recommendations for what to read next at the bottom. Along the top tool bar is a link to your current book, a space for notifications (we have one at the moment, compelling us to invite people to be "Nook Friends"), WiFi signal strength, battery life and time. There's also an additional icon that lets you know whether or not you've left the light on. Clicking this will bring you to the GlowLight settings, which you can also access by clicking the "n" button.

Book pages are quite simple — as they should be. The majority of the page is devoted to text, with the title of the book up top and a page number at the bottom. Yep, the Nook defaults to page numbers, rather than the "Location" metaphor used on the Kindle. Honestly, we're a bit partial to Barnes & Noble's more traditional take on keeping track of your progress.

A little arrow icon above the page number brings up a menu from which you can access the table of contents, perform searches, re-size the text or skip ahead in the book. There's also a little bookmark icon in the upper right hand corner for — you guessed it — marking pages. As ever, you can highlight text to add notes, share over social networks or look up definitions in the Merriam-Webster dictionary. It's all still pretty no-frills, with an emphasis on what Nook does best: good old-fashioned reading.

Wrap-Up

With good reason, when Barnes & Noble was ready to unveil the Nook Simple Touch with GlowLight it skipped the pomp and circumstance it usually reserves for Nook product launches. There was no splashy press conference this time out; just one-on-one meetings with members of the press. The company says this was because the GlowLight technology doesn't translate as well

in a press conference-type setting. Fair enough, but it's hard to imagine a relatively minor upgrade like this commanding that kind of all-star treatment. Still, that upgrade is a rather welcome one, as it addresses a key issue with e-reading technology and could even have a real effect on users' reading habits.

IF YOU CAN'T WAIT THAT LONG, THE $40 EXTRA IS JUSTIFIED. NO LONGER BEING AT THE MERCY OF THE SUN'S WHIMS MEANS A LOT MORE READING.

Indeed, the addition of GlowLight should add some extra utility for frequent travelers, insomniacs and the nocturnally inclined. And heck, if Barnes & Noble's numbers are to be believed, perhaps it will even save a marriage or two. The loss of contrast is certainly a bit of a compromise, though it's not likely to be a deal-breaker for most users. Pricing, on the other hand, might be. The Nook Simple Touch with GlowLight costs $139, a $40 premium over the light-free Nook Simple Touch — which is admittedly priced to move compared to the $139 ad-less Kindle. Funny, $139 is also the price point the Simple Touch was selling for back when we used to call it the Nook WiFi. Odds seems pretty good that if you can wait until after the Mother's and Father's Day rushes, you can probably pick one of these up at a healthy discount.

If you (or you marriage) can't wait that long, however, the $40 extra is justified. After all, no longer being at the mercy of the sun's whims means a lot more reading, and that's sort of the whole point of picking up a reader in the first place, right? 🇩

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

BOTTOMLINE

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Barnes & Noble Nook Simple Touch with GlowLight

$139

PROS
- GlowLight works as promised
- Lighter than its predecessor
- Expandable memory

CONS
- Loss of contrast for onscreen text
- $40 premium for GlowLight functionality
- No 3G option

Though not everyone will able to justify the $40 premium, the Nook Simple Touch with GlowLight is a worthy investment for anyone who's ever squabbled over lights-out time.

Review

Acer Iconia Tab A510

The Iconia Tab A510 is an excellent choice if you're in the market for a 10-inch tablet offering Tegra 3 horsepower, Android 4.0 and long battery life.

BY JOSEPH VOLPE

We'll stop just short of quoting *Top Gun* here, but if it's speed you crave, these next thousands of words could have you emptying your wallet. How's that for an opening line? To be honest, it's been quite some time since any of us Engadget editors booted up a brand new device and immediately let loose a stream of expletives — all expressing unbridled delight, of course. Such was the beginning of our meet-cute with Acer's Iconia Tab A510, the company's first Tegra 3 slate, and the second to ship with Ice Cream Sandwich.

Apart from that 1280 x 800 TFT LCD display, this 10-incher looks, feels and performs nothing like its predecessor, the A500. Turbocharged with that quad-core CPU and 1GB of RAM, this Android 4.0 tablet joins a crowded category with a generous 32GB of built-in storage and a reasonable $450 price tag to match. So, does that excellence lose its luster with more extensive use? Is your money better spent on any of the other umpteen tablets running ICS? Will the lack of a higher-quality display prove too much of a con for your exquisite tech tastes? Follow on as we probe the A510 for answers.

Hardware

Tablet design is unoriginal — a complaint we've issued before and one we'll steer clear of in this review. So, consider this: when a manufacturer excises any emphasis on how something looks, the only thing left to focus on is how it *feels*. Though the A510 is flush with silicon at 1.5 pounds (680 grams), we're inclined to forgive that extra heft, since we get some jaw-dropping runtime in return (spoiler alert!). Besides, overweight or no, it manages to feel reassuringly grippy in-hand, at 10.2 x 6.9 x 0.43 inches (260 x 175 x 10.95mm). Sure, if you hold it in landscape mode the sharp edges feel a wee bit too sharp, but even so, it feels rigid, *formidable*. Much like the A200 before it, the tab's smooth back

is made of a soft, matte plastic and studded with bumpy dots that should eliminate any worries you might have about dropping it. Curiously, the company's also slapped the Olympic logo next to its own, smack dab in the center of the back cover, underneath which lies that hearty 9,800mAh battery. Clearly, it's a case of pimping out public awareness of its London 2012 partnership, but here it just seems awkward and unnecessary; a scarlet letter of sponsorship instantly dating this debut.

THE OLYMPIC BRANDING HERE SEEMS AWKWARD AND UNNECESSARY; A SCARLET LETTER OF SPONSORSHIP INSTANTLY DATING THIS DEBUT.

Above that collision of corporate branding is a 5-megapixel rear camera — the same one used on the A500, only this time it's lacking an LED flash. On the opposite end there's a logo for the Dolby Digital Plus audio compression powering the dual speakers tucked into

	ACER ICONIA TAB A510 ($450)	ASUS TRANSFORMER PAD TF300 ($379)	SAMSUNG GALAXY TAB 2 (7.0) ($250)	ACER ICONIA TAB A200 ($350)
Quadrant (v2)	3,754	3,695	2,840	2,053
Linpack single-thread (MFLOPS)	47.8	41.70	37.1	37.2
Linpack multi-thread (MFLOPS)	120.5	89.83	61.3	60.4
NenaMark 1 (fps)	62.8	60.3	57.6	45.6
NenaMark 2 (fps)	55.8	46.9	30.4	20.4
Vellamo	1,500	1,320	978	1,290
SunSpider 0.9.1[1] (ms)	1,850	2,120	2,239	2,251

Note: [1] Lower numbers are better

the tablet's bottom edge. Hardware keys and ports are sprinkled around the perimeter of the A510, leaving no side untouched. A micro-USB socket and recessed reset button take up residence on the lower edge, a power button and 3.5mm headphone jack lie on the left, a volume rocker and orientation lock up top and, finally, HDMI-out and a covered microSD slot sit on the right. Acer isn't throwing in any external storage to complement the tab's built-in 32GB, so if you plan on heavy media consumption you'll want to supply your own card.

The A510's front face is the usual mix of bezel, branding and camera, although in this instance Acer's downgraded that module from the two megapixels found on the A500 to a measly one megapixel. We don't have to spell out for you what that means in terms of imaging performance, so take care to check your disappointment before we continue on to the camera section. Once you've powered on the device and completed the initial setup process, the A510's speed becomes readily apparent, as does the relative excellence of the screen. Yes, the 1280 x 800 TFT LCD display has remain unchanged in this hardware refresh, bringing with it fairly good viewing angles that are, more often than not, occluded by its propensity for incredible amounts of glare. Wake the tablet from a dead sleep and you'll see the cold boot time hovers in the 30-second range. Even a year ago we were seeing tablets that could best this, but otherwise, the rest of the user experience here is surprisingly nimble and fast-paced.

Software

What more can be said about Ice Cream Sandwich at this point, especially when

that Android UI's dressed up in Acer's familiar UX? Yes, the interface here has been altered to include the same uninstallable ring launcher we previously saw on the A200. Nothing has changed in the jump from that lower-end slate to this one: you can still pull up that circular shortcut menu from the bottom of the homescreen, as well as access the gallery, browser, settings, bookmarked tabs or snap screenshots. We did notice, however, that while performance is generally zippy, this one particular enhancement suffers from uneven performance, waffling between an immediate and somewhat delayed response time. The lockscreen also features the company's subtle modifications, adding the ability to set shortcuts for specific apps.

As you might've come to expect, navigation throughout the five homescreens is carried out with a refreshing briskness that blessedly spills over into the app drawer, as well as the various menus peppered throughout Android 4.0. Browsing takes on the same rapid pace, with page load times ranging between 15 and 30 seconds for full desktop sites. Pinch to zoom also feels amazingly responsive, though we did notice some tiling and blank gray spaces as we waited for pages to scale.

You want an Android slate, you get some bloat. So, when you boot up the A510 and are greeted by a dozen-plus apps filling up its drawer, try to feign surprise and righteous indignation. It's all rather rote at this point. Acer's shov-

TABLET	BATTERY LIFE
Acer Iconia Tab A510	10:23
Samsung Galaxy Tab 7.7	12:01
Apple iPad 2	10:26
ASUS Eee Pad Transformer Prime	10:17 / 16:34 (keyboard dock)
Samsung Galaxy Tab 10.1	9:55
Apple iPad (2012)	9:52 (HSPA) / 9:37 (LTE)
Apple iPad	9:33
Pantech Element	9:00
Motorola Xoom 2	8:57
HP TouchPad	8:33
ASUS Transformer Pad TF300	8:29 / 12:04 (keyboard dock)
Barnes & Noble Nook Tablet	8:20
Acer Iconia Tab A200	8:16
Samsung Galaxy Tab 7.0 Plus	8:09
Lenovo ThinkPad Tablet	8:00
Amazon Kindle Fire	7:42
Galaxy Tab 2 (7.0)	7:38
RIM BlackBerry PlayBook	7:01
Acer Iconia Tab A500	6:55
T-Mobile Springboard (Huawei MediaPad)	6:34
Toshiba Thrive	6:25
Motorola Xyboard 8.2	5:25
Acer Iconia Tab A100	4:54

eled only a couple of its own applications onto the internal storage, along with various third-party offerings like Amazon's Kindle, MP3 and App-store trio; Netflix; Polaris Office; Evernote; SoundHound; *HW Solitaire*; and TegraZone. Thankfully, at least, purists can easily uninstall all of these in the settings menu.

Performance and Battery Life

Benchmarks can be a mixed bag, offering up quantifiable performance that doesn't necessarily match a product's real-world experience. With the Iconia Tab A510, though, you can sweep away all of that uncertainty. Pitted against the Transformer Pad TF300, another recently released Tegra 3 slate, as well as dual-core contenders like the Samsung Galaxy Tab 2 (7.0) and the lower-end A200, this girthy tablet absolutely dominates. There's no doubt about the massive processing power of its 1.3GHz SoC and 1GB of RAM. In nearly every category, the A510 leapt ahead with decisive, crushing victories — a string of wins that repeated themselves over and over in everyday use.

Its dominance may be unchallenged, but don't confuse the A510's top-dog ranking with consistently fluid performance. A quad-core CPU is not some magic wand an OEM gets to wave over its offspring to eradicate performance hiccups. As we saw with Samsung's Galaxy Tab 2 (10.1) at MWC and the ASUS Transformer Pad we've just finished reviewing, there will be moments,

fleeting though they may be, when the OS hesitates to execute an action. It's ever-so slight, but you will notice and wonder why, with all that horsepower under the hood, this forward-facing combination of Tegra 3 and ICS should stumble at all.

By no means will you be disappointed with the juicepack Acer's included in the Iconia Tab A510. Rated for 12 hours of video playback, the 9,800mAh battery should get you through bouts of heavy use with a charge to spare and then some. The lightest of users will probably wonder when they ever actually have to plug the tablet back in, given that it only fell to half capacity after three days of infrequent browsing. Put through the paces of our formal rundown test, the A510 fell a couple of hours short of the company's claim, but still kept a smile firmly planted on our faces as it racked up an impressive total of 10 hours and 23 minutes, putting it on par with Apple's iPad 2 and the Transformer Prime. Mind you, that's with brightness set to medium, Twitter syncing at 15-minute intervals, one push email account activated and WiFi enabled.

Camera

Taking photos with tablets not only looks silly, but also feels ridiculous. We throw that caveat out there because camera quality on Android slates is one of those areas best met by lowered expectations. To say the module on the Iconia Tab A510 is serviceable would be far

too generous. Its 5-megapixel shooter takes decent shots with an acceptable level of detail that diminishes as soon as you start to zoom in. Colors — reds in particular — are rendered in an oversaturated, unnatural way, while other parts of the image appear dull in comparison. As for Acer's custom camera app, it delivers an uneven experience that demands a fair amount of juggling while you attempt to access the various options scattered about the screen. And you can forget the robust array of scene modes offered in other slates: the feature set here is plain and straightforward, almost as if it's acknowledging how useless it really is.

The A510 is also capable of 1080p video, but the finished product doesn't necessarily translate into the full HD experience you'd expect. Given the camera's lack of image stabilization, the shaky quality makes the video almost unwatchable, with the occasional crisp frame when the slate was being held still. What *did* blow away our expectations was the phenomenal power of its Dolby Digital Plus compression technology. In our video test, the sounds of a far-off saxophone made a distinct cameo, as did pieces of various off-camera conversations. The downside to this stellar feature is the inconsistency with which it renders your *intended* audio — namely, your own voice. We shot several sample videos and noted occasional elements of distortion as the tablet attempted to parse all that background noise.

SAMPLE IMAGE

The Competition

So you're ready to take the plunge into the wild world of tablets, but where to start? No doubt, lots of first-timers are going to end up taking their credit cards and flinging them in Apple's direction. $500 for a 16GB iPad may be a steep price tag to swallow for some, but the simplicity of iOS make for a wise new purchase. You *could* also buck any pressure to have the next best thing and fork over four Benjamins for a 16GB iPad 2, though we've gone on record saying newcomers are better off splurging on that high-res Retina display.

But maybe you're not exactly a post-PC virgin, or you simply prefer Android to iOS. Luckily for you, you've got a plethora of options to choose from. For the sake of helping all the overwhelmed shoppers out there trying to make sense of the market, we'll narrow the field down to similarly priced 10-inch tablets running Android 4.0. For $400, the Transformer Pad TF300 is, in many ways, the A510's direct competition, loaded up with unskinned ICS, a Tegra 3 SoC and 32GB, though this, of course, is offered with an optional keyboard dock. The only downside preventing us from steering you directly to the Transformer is battery life. Though it managed eight-plus hours on a charge (12, if you count the $150 docking station), it's no match for the A510's ten-plus hours of runtime.

Meanwhile, if you cut the built-in storage to 16GB, lower the number of cores from four to two and keep the Android 4.0 software there's Samsung's Galaxy Tab 2 (10.1). It costs $400, the same as the 32GB Transformer Pad TF300, and twenty dollars more than the Transformer with 16GB of storage. Cast in that light, it's not quite as compelling a purchase, is it?

Spec for spec, you're really left with only two contenders: the A510, which costs $50 more, or Transformer Pad TF300. Shoppers hell-bent on heavy multimedia consumption should probably stick with what Acer's selling, if only for the phenomenal performance of that 9,800mAh battery. Android purists and folks intrigued by the idea of a laptop replacement, on the other hand, might want to jump on ASUS' bandwagon.

Wrap-Up

We can still hear the echoes of NVIDIA's CEO teasing the prospect of $300 Tegra 3 tablets, but while the promise of that affordable future isn't *quite* a reality yet, impatient consumers eyeing quad-core performance have a readily available option: the Iconia Tab A510. Acer's succeeded in building a superb Android 4.0 tablet, and it's one consumers with a penchant for media consumption might want to consider. Alright, so it isn't the immaculate Tegra 3 conception Acer (or NVIDIA) might've wanted it to be, prone as it is to brief software fits, though we'll confess we've noticed similar bumps on the similarly priced ASUS Transformer Pad TF300, as well as the dual-core Samsung Galaxy Tab 2 (10.1). So should those stifled hiccups be enough to put you off the A510's Olympic-branded trail? They shouldn't. With its bleeding-edge quad-core performance, exceptional battery life and all the benefits of Ice Cream Sandwich, this is a 10-incher worth its slightly heavier weight. For those of you intrigued by the idea of a tablet that can

also double as a netbook replacement, we still heartily recommend the well-performing, reasonably priced Transformer TF300. But if you're willing to invest in a dependable tablet and it's exceptional battery life that you're after, those $450 bucks stop here.

Joseph Volpe is ambiguously ethnic. He is also an Associate Editor at Engadget.

BOTTOMLINE

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Acer
Iconia Tab A510

$449.99

PROS
- Long battery life
- Runs lightly skinned Android 4.0
- Brisk performance, thanks to Tegra 3

CONS
- Relatively heavy
- Highly reflective screen
- Acer got rid of the camera flash

The Iconia Tab A510 is an excellent choice if you're in the market for a 10-inch tablet offering Tegra 3 horsepower, Android 4.0 and long battery life.

Fujifilm X-Pro1 Mirrorless Camera

Look past the X-Pro1's flaws, omissions and ransom demands, and you'll be heavily rewarded.

BY SHARIF SAKR

Hear any mention of retro-styled cameras with exorbitant price tags and it's hard not to get suspicious. That kind of talk brings to mind Leica's incessant re-branding of Panasonic Lumix models, or those unicorn limited editions out of Japan that just leave us baffled. But it's okay, you can relax with the Fujifilm X-Pro1. At $1,700 for the body only it's crazily expensive, sure, but not when you compare to an $8,000 Leica M9-P. Besides, it's a legitimate heir to a strong line of Fuji shooters that includes the

much-loved X100 and the more accessible X10. That's a strong pedigree, and no matter how deeply you peer into its mirrorless aperture, the X-Pro1 should offer up enough technology to stop you being cynical.

Like what, you ask? Well, a genuinely surprising bespoke 16-megapixel APS-C sensor, for starters, plus a hybrid viewfinder designed to keep everyone happy all of the time, and a Fuji X lens mount that already has a Leica M9 adapter available (plus others, like Nikon, if you scan eBay). It all adds up to something special, but before you go tweeting this article to whimsical rich uncles, there are also some complicating factors you ought to be aware of. Even in a utopian paradise where everyone could afford this camera, it's far from certain whether everyone would choose it over other interchangeable lens cameras. Read on and we'll explain why.

Hardware

Unboxing could be a full-on culture shock for the uninitiated. The X-Pro1 is designed to appeal to rangefinder lovers who dig over-sized control wheels along with over-sized everything. That's not everyone's tipple: we gave the camera to a seasoned photojournalist freshly returned from the Middle East who normally shoots on a Nikon D3, and she was repulsed. In her mind, it was too big to be a compact, too conspicuous, and too retro for her: "I'd be embarrassed if other photographers saw me with this."

YOU NEED PLENTY OF HANDS-ON TIME WITH THIS CAMERA BEFORE YOU TAKE THE PLUNGE, AND YOU NEED TO BE CLEAR ON WHAT TYPE OF APPLICATIONS YOU WANT IT FOR.

That said, it's all subjective. Yours truly also has a foreign news background, though I've generally shot video rather than stills, and I experienced no such allergic reaction. On the contrary, the X-Pro1 brought back memories of when my first employer sent me off with a celluloid Nikon F3 to "go and learn about lenses." Yes, I was surprised by the size: at 140mm (5.5 inches), the body is significantly wider than the new Olympus OM-D Micro Four Thirds camera and 20 percent wider than even the non-mirrorless Canon G1 X.

No one could dispute that the X-Pro1 is solidly built and surprisingly light-weight for its size — around 650 grams (1.4 pounds) with the 35mm lens attached, and easily usable with one hand. However, despite all its volume and mass, this camera is not weather-sealed, which will put some serious photographers off from the get-go.

The moral of the story? You need plenty of hands-on time with this camera before you take the plunge, and you need to be clear on what type of (hope-fully dry) applications you want it for. Oh, and don't feel obliged to splash extra on the LC-XPro1 leather case if you already use a camera bag — it isn't strictly necessary considering the natu-ral sturdiness of the chassis, and it per-haps pushes the retro thing a tad too far. On the flip side, it'd go great with safari shorts.

ONE OF THE BIGGEST CONTRIBUTORS TO THE X-PRO1'S SIZE (AND NO DOUBT ITS PRICE) ALSO HAPPENS TO BE ONE OF ITS MOST USEFUL SPECS: THE HYBRID VIEWFINDER.

One of the biggest contributors to the X-Pro1's size (and no doubt its price) also happens to be one of its most use-ful specs: the hybrid viewfinder, which has been carried over from the X100. It simply caters for any possible situation, by allowing you to switch between opti-cal and electronic modes. Optical gives you the brightest and most direct view of your subject because you're look-ing at them straight through a piece of glass. Electronic mode, which has an 800 x 600 resolution (or 1.4 million dots), gives you the most precise pre-view of your final image, with framing and focus displayed before you press the shutter. Both modes can be over-laid with all the information you need, including a live histogram, spirit level and lens-matched frame guides optical mode. Helpfully, the OVF also changes its magnification automatically when you switch lenses, so you get a broadly more similar view to what your lens sees. Overall it's not quite as natural as a DSLR's reflex system, but it's as good as you'll get on a compact.

Of course, there's also full viewing through the three-inch LCD panel, with an effective resolution of 640 x 480, which we found to be bright and clear when shooting outdoors. It's even usable in direct (albeit British) sunlight, which we guess is at least partly thanks to the RGBW configuration.

Before we get to the controls, a quick word on the lenses: there's already a Leica adapter in case you just happen to have some Leica lenses lying around, but for now the camera is mainly stuck with the three prime lenses for its all-new mount. These are truly delicious: an 18mm f/2.0 lens for your wides, a 35mm f/1.4 beauty for general use and a 60mm f/2.4 for zooms, portraits and macro photography. All these lenses come with quality metal hoods.

What we'd really like is a nice, fast and quiet zoom lens to go with this camera and it's all-new mount, and Fuji assures us that such a thing is in the works. Currently, unless you happen to have a bunch of Leica lenses lying around, you're stuck with these three primes. Working with these lenses will reduce your hit-rate if you're not already used to 'thinking' in terms of primes and planning ahead so that you have the right glass equipped for the shot you want to grab. For someone who's been raised on a lazy diet of powerful zooms, this is bloody difficult, but it can hardly be blamed on the X-Pro1. Over time, the discipline required to shoot with primes can only be healthy to learn.

User Interface

Now, those controls: they're perfect, or at least almost perfect. There's no ISO dial, but we're beginning to realize that Engadget staff may be more concerned about that than the average photographer, because we're forced to take so many close-up shots of gadgets in low-light situations. What we get instead is three other dials that all make a ton of sense for most situations, plus the aperture ring on the lens itself.

The shutter speed dial works exactly like you'd expect, except it has a slightly superfluous lock button to stop you accidentally shifting it out of Auto. To its immediate right sits the exposure compensation dial, which feels like a more natural part of the workflow as result of not being a two-stage setting like on many other compacts and DSLRs. The dial is too easy to knock accidentally, but only until you learn to be a bit careful.

At the back of the camera is a mystery dial that at first seems to be useless — especially when you make a habit of never reading the manual. But when you

discover what it does, there's a genuine "Oh, right!" kind of moment. This dial works hand-in-hand with the Q button, which brings up a quick settings screen. This screen is comprehensive rather than customizable: every likely adjustment is offered; you use the direction buttons to navigate the grid and select the one you want to change; finally you twiddle the anonymous dial to choose the right setting. You don't have to accept your changes, which means that all these settings are brought within a three-step reach. Three separate actions just to change ISO or white balance might sound like a lot, but the point is that you can access them without taking your eye away from the viewfinder (because the Q screen appears as an EVF overlay as well as on the rear panel) it works a treat.

In addition to Q, there's also an assignable Fn button next to the shutter release. You can stick ISO or any other function on this button instead if you prefer, but it won't really speed things up: it's still a three-stage process to hit Fn, select ISO with the arrow keys and then hit Menu / OK to accept. Other functions will have less steps and therefore make more sense, such as depth of field preview.

Battery Life and Performance

It needs to be said that the X-Pro1 with the prime lenses doesn't auto-focus as fast as a regular DSLR kit, especially in low light, and the focusing is noisier too. You could spend $1,000 on a Nikon D5100 and a fast lens and get better AF performance, including the ability to get macro shots without having to tell the camera first. There's something slightly icky about that thought, and it's a reminder that our skeptical photo-journalist friend might have a point — in fact, the slow autofocus was also one of her biggest criticisms. It's so bad the

RAPID FIRE

Shooting RAW+Fine duplicates at the 6fps drive mode setting, we fired off 11 shots in 1.8 seconds before the buffer filled up. Shooting fine JPEGs we could keep going, achieving 37 images in the space of 11 seconds.

continuous focus mode seems almost redundant — we couldn't use it to track anything, even the object was right in the center of the frame. Shooting from a standing start was less rapid — it took around five seconds to power up, focus through the EVF and snap a shot. Using the OVF or rear LCD reduced that to four seconds. This is all way slower than the Sony NEX-7, for example.

Meanwhile, the Drive performance was great. Shooting RAW+Fine duplicates at the 6fps drive mode setting, we fired off 11 shots in 1.8 seconds before the buffer filled up, which is just under 0.2 seconds between each shot. Shooting Fine JPEGs we could keep going, achieving 37 images in the space of 11 seconds, with slightly inconsistent gaps between each shot, ranging from 0.1 to 0.4 seconds.

Another positive is the battery life: we repeatedly lost track of it, for the simple reason that it lasted so long. As these words are being written, the camera has been used on five separate occasions over four days without being recharged, with 680 Fine JPEGs, 100 RAW images and four minutes of 1080p video captured. The battery still shows two out of three bars. It took another 11 minutes of 1080p to finish it off.

The X-Pro1 does crash occasionally — three times for us so far. We simply loosened the battery to restart the camera, and it wasn't so annoying because we tended to be previewing images when it happened. Hopefully it's something future firmware updates will fix; Fujifilm has a decent track record in that respect.

Image and Video Quality

Ah yes, the magic ingredient: the X-Pro1's bespoke Fuji X-Trans CMOS sensor. It's the right size for the resolution: anything smaller than APS-C would make the 16 megapixels too

crowded, while anything bigger would make focusing even harder. More importantly, though, it delivers surprising results: images you just could not predict and that you almost don't deserve. If you've ever taken a shot on celluloid, processed it and then thought, "Wow, did I shoot that?" then you'll know what we're on about. If photography were an Olympic sport, this sensor would be the equivalent of nandrolone.

In our hands, clumsy shots were transformed into hobby-level art. In the hands of a street-fighting pro like Steve Huff, the results are just awesome. Why? Well, maybe it has something to do with the extra randomness in the sensor's array of red, green and blue pixel units.

Regularly arranged color pixels can cause moire interference and false colors, which forces manufacturers to send light through an optical low-pass filter before it reaches the sensor. Like Nikon's D800E, the X-Pro1 does away

with that filter, but due to the random pixel arrangement Fuji claims we should see all the benefits and none of the drawbacks of that omission. Certainly, we saw no moire patterns in our shots — just wonderfully sharp images with incredibly stable colors that bring a sense of un-realness in the same way that celluloid used to.

We didn't mess too much with the in-camera digital filters, which promise to replicate the look of different Fuji film stocks. Those kinds of things can be done in photo editing software afterwards, but nevertheless it was nice to have these options and play with them occasionally to add some subtle nostalgia.

Images at high ISO settings were pretty good compared to other compacts we've reviewed, including the NEX-7 and the G1 X. Shots at ISO 3200 looked fine, and where we did spot grain at higher sensitivities it had a pleasant mottled look to it — in keeping with the X-Pro1's analog

OLYMPUS OM-D E-M5

FUJIFILM X-PRO1

vibes. We wouldn't reel 'em off at ISO 25600 necessarily, but there's nothing scary about 6400 or 12800.

Video was less exciting. It was just typical compact camera 1080p, with hand-held wobble creating all the usual rolling shutter problems, and with slow auto-focus and a bit too much hunting. If tripod-mounted and set to manual focus the X-Pro1 could potentially yield decent results, but how many people will use it like that? Ultimately, Fuji has just tacked on video recording because it felt it had to, relegating it to a slot at the bottom of the drive settings menu, and we'd just as happily have gone without it.

The Competition

We've got a feeling that many people who buy the Fuji X-Pro1 will do so for its particular build as well as for the output of its unusual sensor. Since both those things are subjective and hard to quantify, it makes sense to leave them aside and compare the camera against its rivals based on more concrete specs.

THERE HAS TO COME A POINT WHERE YOU LOOK AT WHAT A DSLR CAN DELIVER.

This inspires obvious comparisons with the OM-D E-M5, priced at $1,000 body-only, and the Sony NEX-7 at $1,200. In our OM-D review (also in this issue), we find that it has excellent autofocus capabilities. It also has five-axis image stabilization and our few test shots revealed very good high ISO performance too. The OM-D also has a faster 9fps burst mode, is drastically cheaper and overall promises to be a real challenger to the X-Pro1's perhaps more emotional virtues. On the other hand, the X-Pro 1 puts more manual controls at your fingertips, and for a lot of people that's a primary concern. The upcoming fight between these two cameras ought to be on pay-per-view.

And what about the Sony NEX-7? We were smitten with it, but it's already starting to lose some of its luster compared to newer competitors. It has 10fps continuous shooting, great battery life, decent high ISO performance and EVF, but none of that elevates it above either the OM-D or the X-Pro1. Its real advantage over the X-Pro1 is the $500 savings, but then the OM-D threatens in that area too.

Another option is the X100, which has accumulated many steadfast fans due to its quality optics and goes for around $1,000. It has the same hybrid OVF/EVF in its favor, a much lower price (especially now), and primarily only loses out in terms of its less impressive sensor.

Lastly, there has to come a point where you look at what a DSLR can deliver. $1,700 can buy you a weather-sealed Nikon D7000 or a Canon 7D with cash left over for a decent lens. These cameras will deliver superior autofocus performance, less noise and quicker burst rates. The only sacrifice is the size and weight — so you have to find those two things seriously off-putting before you rule them out.

Wrap-Up

The Fujifilm X-Pro1 is a work of art, and like any masterpiece there'll be some who hate it and others who get into heated bidding wars. If you're sensible and price-conscious, then by rights you should be waiting for the auctioneer to bring out the Olympus OM-D E-M5. Or you should be looking at the X100, or even considering a DSLR, before investing this amount of money. But if the retro form factor befits your personality, you have an abundance of cash *and* you care about the subtleties of the sensor's output, a powerful viewfinder and great controls, then there's every reason to buy in.   ⧉

Sharif is a British tech journalist with ten years' experience filming and reporting news for the BBC and other broadcasters.

BOTTOMLINE

**Fujifilm
X-Pro1**

$1,700 (body only)

PROS
- Filter-free sensor produces amazing images
- Hybrid viewfinder caters for all situations
- Great manual controls and UI
- Cheaper than a Leica

CONS
- Not everyone digs the bold retro style
- Other ILCs have weatherproofing, faster AF, gentler prices

Look past the X-Pro1's flaws, omissions and ransom demands, and you'll be heavily rewarded.

Olympus OM-D E-M5 Micro Four Thirds Camera

The company's best camera yet, but battery meter and focusing issues may be a deal breaker for some.

BY ZACH HONIG

Stepping across the great DSLR divide into the land of mirrorless cameras always requires some compromise. Focusing speed, image quality, lens compatibility and battery life are frequent casualties, but for everyone except professional shooters, the size and cost benefits of swapping a full-grown beast for a compact ILC surely help soften the blow. The latest Micro Four Thirds model from Olympus, the OM-D E-M5, adds functionality that expands that list of betterments even further, allowing

more versatility than larger DSLRs have to offer. These perks include a water-resistant design, for starters, along with a nifty lens that offers macro shooting and both manual- and powered-zoom in one compact package.

One area where the 16-megapixel EM-5 does match the footprint of its full-size brethren is in price: you'll drop a cool grand for the body alone, while the 12-50mm f/3.5-6.3 lens kit will bump that tag up another $300. Make no mistake, the EM-5 is a fantastic camera, but $1,300 is mighty steep for any mirrorless model, especially one with a Micro Four Thirds sensor. This, however, is no ordinary MFT camera. As the first model in Olympus' OM-D line — taking design cues from the company's popular line of OM film cameras — the E-M5 is in a class

of its own, at least as far as Olympus' portfolio is concerned. Besides physical appearance, perhaps, the most notable selling point is its focus speed: press the shutter release, and your subject comes into clarity with rapid-fire precision, whether you're shooting in bright sunlight or a dark restaurant. But while the EM-5 has already received accolades for its powerful focusing, you might be wondering how the whole package performs. Meet us in the paragraphs that follow to find out.

Hardware

Simply put, it's beautiful. If you've ever wistfully eyed a mid-twentieth century 35mm SLR, hoping that manufacturers would once again adopt the elegant designs of yesteryear, you can stop

dreaming. The EM-5 invokes a crafted feel unique to that model, that's reminiscent of select über-pricey rangefinders. We're particularly fond of the silver-and-black flavor, though we sadly had to settle for all-black, or risk delaying this review. Of course, the black version performs equally and is a perfectly fine choice, but if you have an opportunity to pick up the two-tone version, chances are you won't regret it.

Serious photographers care more about design and durability than the unrelated matter of color scheme, and both the black and silver models alike offer solid specs in these key areas. First

proof, however, so don't you dare take this thousand-dollar body into the sea.

With the body out of the way, let's circle back to those capture specs. There's a 16-megapixel Live MOS Micro Four Thirds (4/3) sensor on board, but with a twist — 5-axis sensor-shift image stabilization. What this means is that the camera can compensate for shaky hands on both the vertical and horizontal axis (just like many of its competitors) as well as on the rotational axis. What can we say? It really does make a difference. You'll still be subject to motion blur if your subjects move and you're shooting with a low shutter speed, of course, but

Simply put, it's beautiful.

up is the camera's "splash-proof" build. What exactly does it mean for a camera to be immune to splash-related damage? For starters, you can shoot with the E-M5 in the rain without having to concern yourself with an umbrella or fussy hood. Seals throughout the body also keep out sand and dust, and there's a Supersonic Wave Filter on board to assist in the rare event that a speck or two manages to make it past the camera's measures. You'll of course be subject to droplet accumulation on the front element of the lens, which you'll need to wipe off regularly depending on the conditions, but you don't need to fret about damaging the camera or kit lens when water pours down from the sky. "Splash-proof" doesn't mean water-

Olympus' new stabilization technique does help to minimize the effect with still subjects. It will also come in handy while recording video, keeping the picture steady even as you walk down the street, change position or maintain a long focal length. Movement is not eliminated completely, but you may even consider leaving that tripod behind on your next video shoot.

Another feature that we're seeing more frequently in the mirrorless category is a built-in 1.44-megapixel electronic viewfinder, providing a 100 percent field of view and an x/y-axis level gauge, along with direct feedback for all key settings. Like the Sony NEX-7, we've noticed that the proximity sensor can be a bit too sensitive, triggering the EVF when

you hold the camera too close to your body, for example. We'd like to see an option to tweak this, but in the meantime you may want to flip off the auto-switch mode and opt for the dedicated button to the right of the EVF instead.

You'll need to shift over to the main 3-inch 610,000-dot OLED tilting display to review images and tweak settings. In addition to adjusting downward up to 50 degrees and upward to 80, the display also includes touch support, letting you select the AF area, release the shutter and advance during playback by tapping the screen. Just like on the Sony NEX-5N, touch is there if you need it, but it won't get in the way if you don't. Naturally, the hardware controls duplicate this functionality, though toying with the five-position buttons is often less efficient than using the touch-to-focus feature.

Completing the tour, on the top of the camera there's a full-size hot shoe (a tiny external flash ships in the box) with a proprietary accessory connector below. Lifting the OLED display reveals a recessed notch, which helps you open a side panel with HDMI and USB / AV

connectors. The SD slot sits on the right edge, while the 1,220mAh battery lives in a slot on the bottom. Adjacent to that compartment, you'll find another proprietary connector hidden below a rubber door. This port is used to communicate with an optional accessory, which provides an extended camera grip with a second control dial and shutter release in one section and a battery compartment with vertical controls that can be added on below. We preferred shooting with just the grip portion, which enables the E-M5 to retain a slim profile while still allowing for some more comfortable handheld shooting.

User Interface

What good is having beautiful hardware if it's not easy to use? Fortunately, usability should be of little concern here. As always, you'll need to spend a few minutes flipping through the menu before you're able to declare that the camera is configured to your liking, but finding those key items isn't much of a chore. The main menu is divided into five tabs: playback, setup, custom settings and two shooting menus. That custom menu is by far the most complex, with sub-tabs for settings like autofocus and dial direction.

Speaking of those dials — you'll find two up top, with one controlling aperture and the second adjusting shutter speed in manual mode, for example, similar to what you can do on the Sony's NEX-7 competing "Tri-Navi" interface. In the
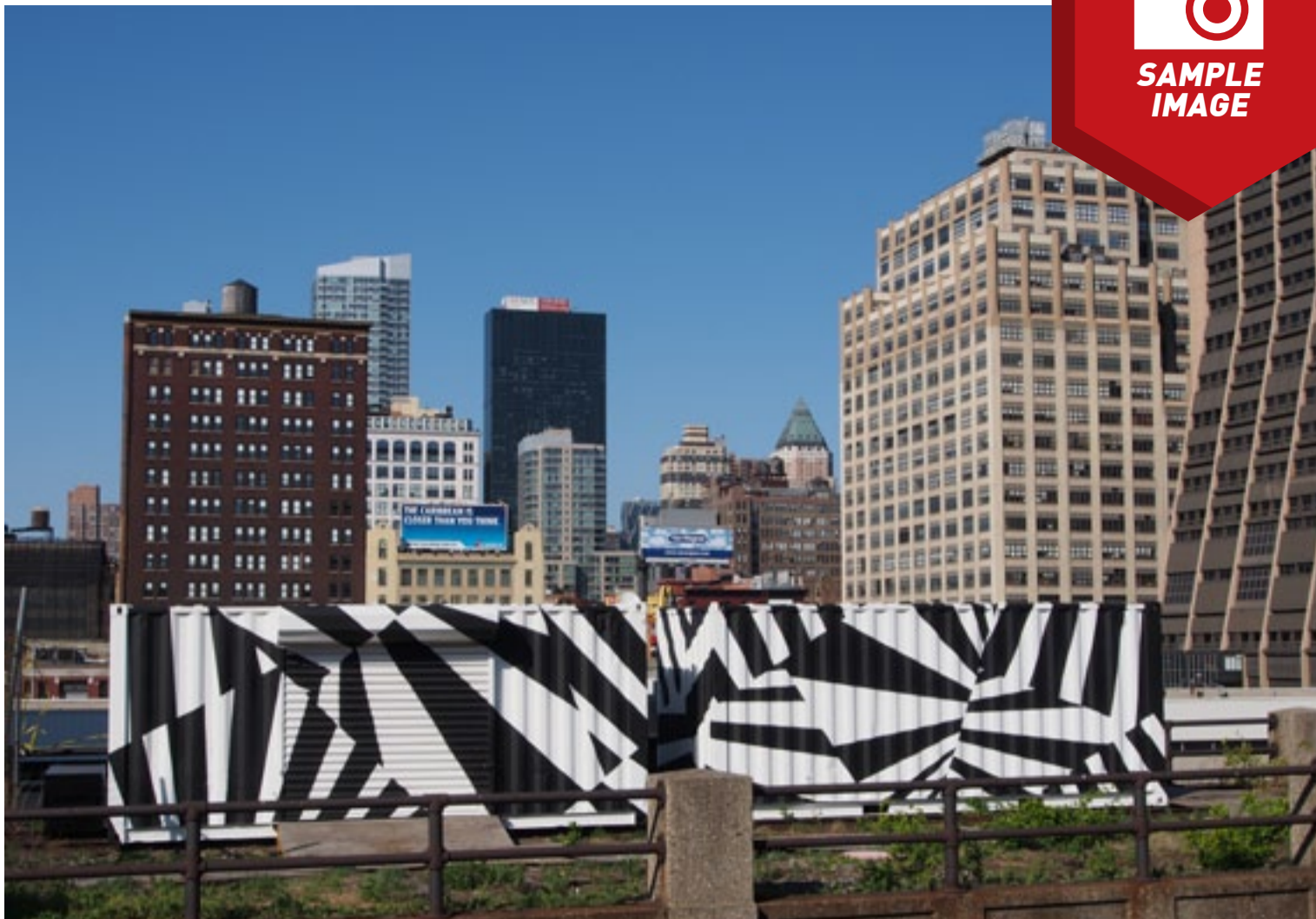
> ## When the camera works, it's peerless, but you won't have to wait long before stumbling on a scene it can't master.

center of the forward dial is a shutter release button, with an adjustable control to the right (we set ours to change the ISO) and a video record button just below it, which isn't in the most convenient location, to be perfectly honest. We'd prefer to see the function and video record buttons reversed, but it's a bit too late for that at this point. There's a second function button, along with a playback control right below the rear dial. To the right of the OLED display, there are dedicated controls for launching the menu, info panel and a delete key, along with a four-position panel with an OK selector in the center. At the bottom of the rear control panel, you'll find an On

/ Off toggle, taking the guess work out of the camera's current power status.

Performance and Battery Life

We can't talk about performance without revisiting the camera's focusing system. The ILC is so capable in this regard that bringing a subject into focus almost becomes an afterthought — most of the time, anyway. At its best, the E-M5 can adjust in a fraction of a second, and when it works, it does so with epic speed. It's not without flaws, however, and we've so far run into issues with several Olympus lenses. While the camera does a topnotch job with wide framing in good conditions, it has significant difficulty

focusing in scenes with little contrast.

Take it to the ski slopes, for example, and the E-M5 will clam up, only occasionally capturing a sharp frame. We experienced the same during a rainy day beach shoot with that 12-50mm kit optic zoomed all the way in. When the camera works, it's peerless, but you won't have to wait long before stumbling on a scene it can't master. The same is true of video capture: you'll want to steer clear of continuous autofocus while shooting in snow, rain or any dark or flat scene, lest you end up with a blurry mess. (You can avoid the continuous focus hunting by using single- or manual-focus modes.) For this reason, we're not confident in the camera's abilities as a video shooter — at least not until this focusing issue is addressed.

One area where the E-M5 offers consistent speed and accuracy is in high-speed consecutive shooting mode. Opting in

nets you a cool nine frames per second, for 15 shots. After the buffer takes a few seconds to unload (depending on the speed of your SD card, of course), you can fire off another burst. A lower-speed sequential mode gives you the option of shooting at 3fps for nearly two dozen consecutive frames. The camera can power on, focus and shoot its first image in as little as 1.2 seconds, while re-framing, adjusting focus and capturing a different scene takes just 0.3 seconds. Once a subject is already in focus, there's virtually zero lag between shots.

The EM-5's battery life is phenomenal for a mirrorless ILC; we were able to snap more than 600 stills and 22 minutes of 720p video on a day-long shoot around New York City. The camera's built-in power meter is seriously flawed, however, only providing an accurate reading when completely charged or fully

depleted. For roughly 90 percent of a cycle, the camera displays a full power indicator, dropping to two out of three bars for the final 50 or so shots, then flashing fully depleted for the next 50. Power cycling early during the depleted state will result in a full battery indicator for the next few shots, though as we approached the end of the battery's life, the cam consistently displayed empty. Olympus reps were unaware of the issue, but said that the company will investigate, and may be able to correct the meter with a firmware update.

Image Quality

The E-M5 delivers excellent image quality for a camera of its size, but at $1,300 with a kit lens, you'd be right to expect perfection. There's no 51,200+ high-ISO magic at play here, but we weren't disappointed with image quality — whenever the camera was able to focus, at least. One side effect of that low-contrast focus hunting is a slew of blurry photos, assuming you follow through with a capture after an un-sharp preview. The camera can focus in snow and sand, but it's definitely hit or miss, especially at longer focal lengths (where flatter details fill the frame). Professionals who focus on sea and snow sports will definitely want to steer clear of crowning the E-M5 their star shooter, but it is a winner if complementing a pricey high-end DSLR. Amateurs spending much of their time on the slopes or the beach may also share that sentiment, which is a slight letdown considering that "splash-proof" build.

> **The E-M5 delivers excellent image quality for a camera of its size, but at $1,300 with a kit lens, you'd be right to expect perfection.**

With a native ISO range of 200-25,600, there's quite a bit of flexibility in the sensitivity department, which will certainly come in handy for long-zoom captures with the f/3.5-6.3 kit lens. Images shot throughout that spectrum are usable at any size. ISO 25,600 looks quite fantastic. As with most mirrorless cameras with a MFT or larger sensor, you could quite comfortably leave the E-M5 set to ISO 3200 for casual shooting without any significant quality loss, but we would even be willing to push that limit to 6400 or higher if shooting in low light conditions. 16 megapixels won't prompt any sticker shock, but it's perfectly sufficient for most photographers, and well worth the tradeoff in order to achieve low-noise images at high ISOs.

The Competition

Pricing a mirrorless ILC above $1,000 doesn't come without deliberation — that figure is too high to make a significant dent in market share, but not low enough to cannibalize the Olympus PEN models,

which is obviously a concern here. The camera's incredibly fast focusing, high-ISO quality, 5-axis image stabilization and built-in EVF make an obvious pick for potential PEN E-P3 owners with a bit more cash to spare, but if you're in need of a sub-$700 Olympus kit, it'd be tough to argue against the E-PL3.

If you're looking to stick with the Micro Four Thirds format, Panasonic's Lumix GX1 is a solid pick, with a $700 street price for the 14-42mm kit. More in line with the E-M5's $1,300 kit tag would be Sony's NEX-7, which can be had for a cool $1,350 with an included 18-55mm lens. Many photographers have gripes with Sony's lens selection, however, arguing that the kit optic simply doesn't offer performance to match the camera's 24.3-megapixel sensor. If you can invest in higher-end lenses, like the $1,300 24mm Carl Zeiss Sonnar T f/1.8, and need to capture larger images, you may still consider Sony's NEX flagship, but if you're simply comparing both kits, the E-M5 seems like the winner here as well.

Wrap-Up

Simply put, we love the E-M5. It's a solid shooter — literally, thanks to its "splash-proof body" — with excellent image quality throughout the ISO range and a slick, versatile lens. That 5-axis stabilization is innovative as well, as is the incredibly fast focusing system. While powerful, that focusing system isn't perfect, often slipping with low-contrast sand and snow scenes. Still, that issue is arguably minor, considering that this cam-

era isn't designed for sports-shooting pros, and, like the battery meter, it may be corrected with a firmware update. The $1,300 kit price will be a tad too much to swallow for some, but with a solid body and a diverse collection of lenses, there hasn't been a better time to hop aboard Micro Four Thirds. 🄳

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

BOTTOMLINE

Olympus OM-D E-M5

$1,000 body only

PROS
- Incredibly fast autofocus
- 5-axis image stabilization
- Manual / auto-zoom kit lens

CONS
- Expensive
- Battery meter issues at launch
- Poor focus accuracy in low-contrast scenes

Olympus' OM-D E-M5 is the company's best camera yet, but battery meter and focusing issues may be a dealbreaker for some.

TRACING THE CULTURAL IMPACT OF A GAMING HEAVYWEIGHT

BY JAMES TREW

ATARI ICON

"**WE'VE OPTIONED *ASTEROIDS*** for a movie to Universal. We're being cautious about it, but we're optimistic something will get done there."

Jim Wilson, current CEO of Atari, is enthusiastic about the overwhelming number of licensing deals Atari is exploring right now. Which, for a brand with nearly 40 years in the technology business,

and more than its fair share of ups and downs, is not bad going.

"The one thing that I've been astounded by since I've been here is the number of weekly requests that we get from filmmakers, TV producers, writers and musicians who want to incorporate some aspect of Atari, even just in the background of a TV show, or movie," he continues.

By now, there's a good chance you've already conjured up the image of that famous three-pronged "Fuji" logo. Unsurprising, really, given how many early, joyful encounters with technology in which it's had a cameo. While everyone's Atari story is unique, history tells us they often contain similar touch-points, creating an interwoven,

IMAGES COURTESY ATARI

yet collective affection for the gaming pioneer.

If you are of a certain age, for example, it's probable that your gaming cherry was lovingly taken by an Atari mistress. Younger generations, on the other hand, will be unable to ignore the impact of the brand, even if it's without them knowing it, like when they're finding their seats for *Asteroids the Movie*.

How, then, has a brand that's been through some pretty drastic changes, periods of innovation, invention, abundance, mishandling and, even, landfill in New Mexico, endured? And not only in as much as it's still trading, but in the sense that it continues to write engaging stories, indoctrinate followers and inspire movie spin-offs.

ATARI®
40 YEARS OF FUN

CONTENTS

PLUGGING IN

IT'S THE EARLY '70s, and a young Nolan Bushnell is working in an amusement park, surrounded by games. Pinball and air hockey machines pepper the floor. Unaware of just how right he was, Bushnell already thought that if he could somehow create a game with the technology he had been learning about, it might prove popular with the quarter-laden kids passing through his doors.

"I knew the economics of the arcade business well," Bushnell, Atari's co-founder, chuckles to me over the phone. He's affectionately recounting how the first seed for creating a video game took root. Roots that would grow deeper than even he likely imagined, starting in 1972 with *Pong* — originally just a training exercise for the first engineer — and persisting to the present day.

"Technologically, we created a methodology that allowed the video game to be introduced about eight years ahead of when it would have been done anyway. Remember that Atari started before the microprocessor was invented, and that wasn't strong enough to do anything until about '77, '78."

It's not until that anecdote really sinks in that you realize how ahead of its time Atari truly was — it didn't even bother to wait for the microprocessor. But, and possibly more surprising than that, Atari's new creation was already having a surprising social impact.

"It turns out that women have better small muscle coordination than men do. Guys couldn't believe that this 105-pound woman could beat them [at *Pong*] in a bar. There were women *Pong* hustlers that made a lot of money wagering against these big jocks." Bushnell beams, almost proudly, before coyly adding, "Hundreds and hundreds of people have told me over the years that they met their husband or wife playing *Pong* in a bar!"

ATARI'S FIRST SELF-BRANDED HOME GAMING SYSTEM, THE PONG CONSOLE, ARRIVED IN 1976. IT WAS CODENAMED DARLENE.
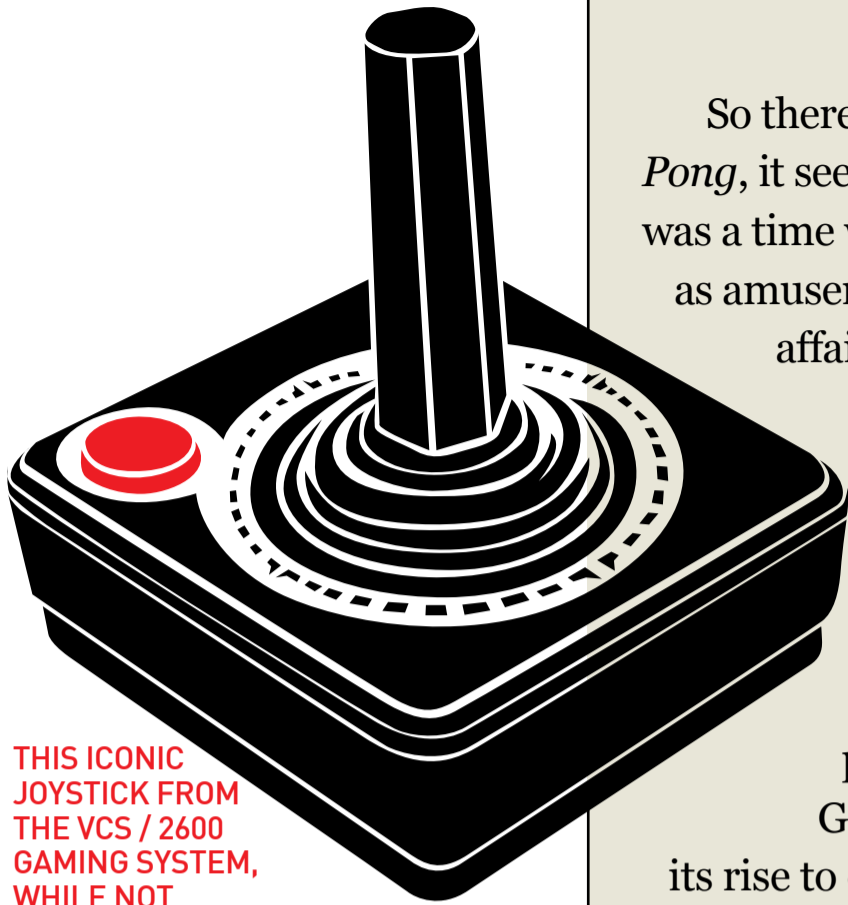
So there is, quite literally, an Atari generation, and *Pong*, it seems, is the rightful godparent. Remember, this was a time when video games were as prevalent in bars as amusement arcades, and as such they were a social affair, one that brought people together.

Of course, it wasn't long before Atari would practically invent the domestic gaming market as well with *Home Pong*, but it would have to wait until the release of the VCS (Video Computer System) in 1977 before we would start to see it's ubiquitous logo really pop up in living rooms and dens across the land. Given Atari's head start, it's easy to think that its rise to dominance was unburdened, but that would be doing a disservice to its creators. Even at the beginning, Bushnell and his colleagues understood the importance of brand, and by imbuing it with core values from the start, they would help set it aside from the ever-growing competition that was starting to show up from the likes of Coleco and Mattel's Intellivision.

"The brand started developing when I got a guy called George Opperman in. He developed the Fuji Logo. He taught me the importance of brand," says Bushnell.

From that point he would become a stickler for maintaining a look and feel, ensuring that Atari would stand for creativity and innovation; a decision that clearly paid off. After all, how many of you still see the Coleco logo? Or have an iPad accessory inspired by your Mattel console?

Of course, Atari's biggest legacy will always be its games, but there are other elements of today's technology industry that might not have happened without them, and we don't just mean the conception of future developers after a heated bout of Pong. In the early days, the company had what Bushnell calls a "party culture:" the workplace was fun, less formal than other technology setups. Something he thinks helped them along in the early years. By creating an egalitarian environment, he feels they were able to encourage loyalty and creativity, which ultimately trickled down into better products. This style

"
HUNDREDS AND HUNDREDS OF PEOPLE HAVE TOLD ME OVER THE YEARS THAT THEY MET THEIR HUSBAND OR WIFE PLAYING PONG IN A BAR!
"

There are basically three [favorites]: *Breakout*, *Tempest* and *Asteroids*, all of which were important for different reasons, having to deal with their playability, timelessness and the fact that they all represented big technical steps. *Tempest* was the first color vector graphics game; *Asteroids* was the first Atari microprocessor game; and *Breakout* turned out to be highly successful after no one had believed in my design. I had Jobs take it on because none of the other engineers believed in it.

of working, of course, would become the norm across the burgeoning Silicon Valley, and while it's hard to attribute this just to Atari, with some impressive alumni – both Steve Jobs and Wozniak, for example, would do a spell at the firm — it's not hard to imagine this model permeating into the consciousness of those who experienced it.

Ultimately, Bushnell would sell a successful company on to the monolithic entertainment mainstay Warner, and a new chapter would be ushered in. But in another universe, Atari's reach might have spread much, much further than most companies, or even governments for that matter, could have hoped.

"We were all geared up to create a telephone-linked game system. In fact, Atari had the patents on the fastest modems at the time, and our plan was to put little closets in various cities, so it was only a local telephone call to modems, and then link them together with T1 telephone lines to make a quasi-national network. This was 1976!" Bushnell says.

The idea was to simply allow users to play together by sharing joystick data over the network. The truth of the matter is, when applied to other data, this network bore a striking resemblance to something that would come later, and there's a good chance you're using it right now.

"It turns out that the packets look surprisingly similar to the IP stack of the internet," Bushnell says. "I've always been curious that, if we'd just launched that, and improved on it and improved on it, that it may have turned into the internet — and Atari would have owned it! I'll never know."

Bushnell laughs at this near miss with a heartiness that suggests that it was no biggie. He would later go on to see the company he started manhandled, and bent into completely different shapes, but that's not to say that Atari doesn't still play a small part in his daily routine.

"I've got all the Atari titles on my iPhone; I still play those a lot. I still love *Asteroids*, I still love *Battle Zone*, and I still love *Centipede*."

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ATARI® ICON

DARLENE, DOLLARS AND THE DESERT

"You'd get down to that last dollar in your pocket, and you'd have a choice: do I keep the dollar, and get home on the bus, or do I spend it, and call my parents and say 'I accidentally forgot?'"

Curt Vendel, company historian and author, explains his indoctrination to the Atari clan.

"I tried that, it worked twice, then finally my mother says, 'You know what? You need to learn your lesson. You can walk home.'"

It was a tight grip on teenage minds that made the early '80s a lucrative period for Atari. Having seen how well its titles were doing in the coin-ops, the firm worked hard to bring that experience out of the dollar-swallowing arcades, and into the front room. Unfortunately, it would be with some mixed success.

"You want to talk about the game that earned the most attention, this is really the coup for Atari, and what lights the fire under the 2600. *Space*

ADVENTURE FOR THE ATARI 2600 WAS ONE OF THE FIRST GAMES TO INCORPORATE EASTER EGGS.

Invaders, the first home licensed arcade game. It comes out, and people are going out and buying consoles just so they can play it," Vendel explains.

This may seem like no surprise in the present day, but in 1980 it was unheard of — Atari just invented the killer app. Unfortunately, the company was to learn that a name is not enough, and the same strategy would backfire famously the next time they tried it. *Pac Man*, the hottest arcade title of its time, was also licensed for the (renamed VCS) 2600 console. A sure fire hit you would have thought. There was just one problem: the conversion was a flop, and many fans of the coin-op were left bitterly disappointed. So much so that the firm was left with a vast excess of cartridges that they couldn't even give away.

"Here's Atari, saddled with millions of copies of *Pac Man* they couldn't sell… then of course the famous story of them being dumped down in Alamogordo, New Mexico, where they dumped them in a landfill and poured concrete over them. It was a write off," Vendel says.

While this might have

SURROUND™

combat

SPACE INVADERS*

RealSports™ BASEBALL

COLECO DONKEY KONG™

BLUEPRINT™

Raiders of the Lost Ark*

E.T.* THE EXTRA-TERRESTRIAL

YARS' REVENGE™

SUPERMAN*

DEFENDER*

CENTIPEDE™

COLECO VENTURE™

SPACE WAR
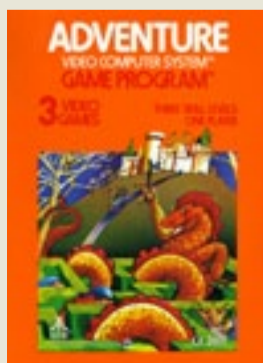
RealSports™ SOCCER

missile command

PITFALL!™

HAUNTED HOUSE

ASTEROIDS™

PAC-M

THE CONTROL CENTER Blow the dust off the contacts, slot it and go. Atari was the portal to exciting new worlds, battling aliens, saving princesses and shooting for the highscore, all at the cost of a few blisters and many sleepless nights.

earned Atari an unwanted page in the gaming history books, the company would soon embark on one of its most awkward periods. Increasing competition would saturate the market, and a confusing hardware release strategy — that included everything from home computers like the XL model, to the "AtariTel" Luma desktop video phone and the ambitious "Mindlink" peripheral — would see the brand Bushnell had worked hard to establish, and that had captured the imaginations of Vendel's generation, hit bumpy financial ground.

Vendel, however, believes it's more than just the products or games that saw the company survive. Something else had been going on that was more important, and would reach much more deeply into the impressionable minds of tech fans of the time.

"Atari was born out of the Silicon Valley lore and myth," he says. "Great stories about the guys: they were hippies, and they were building these incredible machines, and giving all these cool code names to their projects. For example, the Home Pong console, the code name was Darlene. It added to the whole myth and lore, and it became sexy and alluring."

"You then start reading in the video game magazines: 'The game programmer's name is in this secret room, inside *Adventure*.' Or, 'If you play level 13 on the home version of *Missile Command* and you fire all the missiles and get zero points, it puts the guys initials

IN 1989 THE ATARI LYNX BOASTED A COLOR LCD, A FIRST IN HANDHELD ELECTRONIC GAMING.

at the bottom corner.'"

Atari was — knowingly or otherwise — creating a sense of belonging, be it with its use of Easter eggs or the quirky products that would help build its cultural identity. This meant the users would start to build a relationship with the company on a more personal level.

There are still people who develop games for the 2600 to this day, even creating box art and packaging. Of course, a fondness for throwback video games is one thing, but when you're getting re-issued Atari breakfast cereal, belts, sneakers and, of course, T-shirts, something else must be helping the company dance into the hearts of so many new fans.

The early '80s was definitely a golden era for many, one that would eventually be marred by an industry-wide gaming crash in 1983. The following year Jack Tramiel, founder of Commodore, looking to return to the computer industry, would buy the majority share in the firm, and usher in a new era. The fruits of which would include the popular ST computer series, the innovative Lynx handheld, and the ill-fated, yet technologically solid Jaguar. If nothing else, this would represent a time when the original core values of Atari would return, albeit under a different leader. This also represents a period when the brand would start influencing once more in ways that might not necessarily have been planned.

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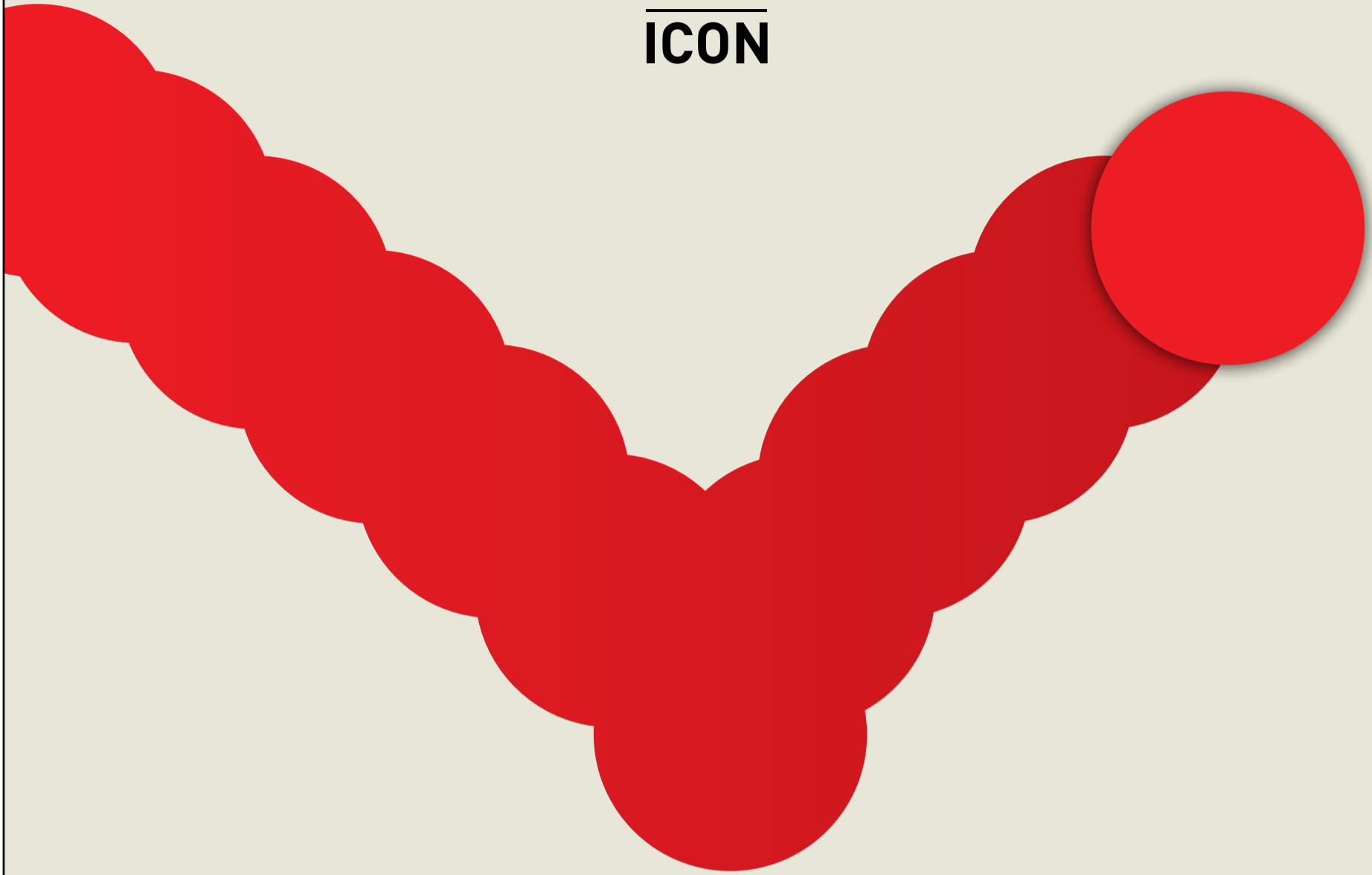
FROM PONG TO POING

AFTER WARNER SOLD OFF the Consumer Electronics and Home Computer divisions of Atari to Tramel Technology LTD, it introduced the Atari 520 ST. It was this computer that would possibly cause one of the more enduring — and surprising — cultural offshoots.

As a last minute decision, Atari added MIDI ports to the ST, which had never been done on a computer before. The outfit also wired them right into the main processor (instead of using a parallel bus, for example), which made them extremely effective. Accidentally, the firm had just created a powerful and, more importantly, affordable home music computer.

To put this in perspective, the Fairlight CMI Sampling Synthesizer, used by the likes of Stevie Wonder and Herbie Hancock (search YouTube to see the latter using one on Sesame Street), cost

tens of thousands of dollars. The Atari ST was priced at less than $1,000.

David Etheridge, working musician, lecturer and overseer of the official Atari Music chat boards for *Sound on Sound Magazine*, elaborates: "I think Atari were surprised (and probably delighted) by the explosion of interest from the music community. Remember that the addition of MIDI ports was essentially an afterthought. I'm guessing that Atari were probably thinking of the ST as a general purpose computer."

And this isn't just a phenomenon of the '80s, many people (including David) still use the Atari ST to this day.

"Atari's timing and sheer musical-ity beats more recent computers hands down," he says. "There are reports that the hip-hop and dance fraternity are coming back to the Atari as a desktop alternative to the beloved Akai MPC range, and there are one or two noted classical composers who still create scores and parts on the Atari."

The impact of the Atari ST on music in the '90s, especially electronic music, is therefore immeasurable. For a few hundred dollars, budding musicians could unleash their creativity on an unsuspecting world. Rave culture in particular would feed on this new source of innovation.

Maurice Steenbergen is one half of Dutch dance act Rotterdam

ATARI 1040ST, A DIRECT DESCENDANT OF THE BREAK-THROUGH ORIGINAL 520ST.

Termination Source. Their 1992 European hit single "Poing" crossed well over into the mainstream, despite its humble, Atari-based beginnings.

"I got my first Atari in 1991," Steenbergen remembers. "I sold that one in 1995 when I eventually switched to Mac, but I re-bought another one last year because I needed to open some old songs for re-recording. I also used it to re-record "Poing" from the original disks.

At the time, I ran Cubase and had an Akai S950 sampler. The Atari propelled electronic music, it made MIDI available to people who weren't engineers. It was a way more intuitive way to make music, so I think it pioneered the MIDI / bedroom scene."

Other artists were even more inspired by the Atari, even naming themselves after it. German "Digital Hardcore" group Atari Teenage Riot, came windmilling onto the rock-electronic crossover scene in the early '90s, with a 1040ST firmly under its arm.

"We've programmed the beats for our songs on this computer since we started in 1992," the band's Alec Empire explains. "It's a very stable machine that does the things we need it to do very well. It has a special timing, groove and attack to it that gives us a characteristic sound. It only has 2MB RAM, which is insane when you think about it. Yes, two MEGABYTES, not gigabytes… I love this little thing."

Despite a dedicated following, as was to be a reoccurring theme for the Atari brand, a mishmash of over-cooking ideas, and misguided project development would ultimately steer the ST range off the rails. As David Etheridge neatly puts it:

"By the time of the Atari Falcon, things were a complete mess; it hadn't been developed properly, and bugs in MultiTOS (the multitasking operating system) took 18 months to sort out. The Falcon could have been a Mac killer, but by the time Atari had its act together, Apple had snatched the lead away, and the rest is history."

DUTCH GABBER DUO ROTTERDAM TERMINATION SOURCE (MAURICE AT LEFT) WITH AN ATARI ST IN THE BACKGROUND AND PROUDLY HOLDING THEIR 1992 VINYL 12" "POING."

PHOTO COURTESY MAURICE STEENBERGEN

ART-ARI

--YOU'RE FINISHED!

AS WELL AS THE TANGIBLE IMPACT on music, the effect Atari's had on the broader art world is not to be underestimated. Be it the proliferation of 8-bit-infused retro graphic design, or straight-up Atari inspired art, the visual influence of the brand can be seen far and wide.

LA-based gallery iam8bit is an example of how deep this inspiration goes. The gallery specializes in American culture, with a focus on video game art. Atari's hand in this inspiration is no more apparent than in the work of one of its alumni, Jason Brockert. He's had a solo show at the gallery, and one of his collections is not only inspired by, but directly illustrates his fondness for the brand, featuring the old consoles and cartridges themselves.

"As an artist, I loved these things, I just had a personal connection, I had three parents, and Atari was the third one," Brockert says. "When things put an imprint on you when you're that young, they just keep coming up, and every time you find the old games you feel those emotions."

While this might seem true for all things in our childhood, not everything continues to inspire people in the same way when they get older. Brockert goes on to make the example of his wife's Cabbage Patch dolls:

"I teach college, and my kids all know Atari. They don't all know Cabbage Patch, though. They, of course, all know Barbie, so it's sort of 'the first and the best'

ATARI ENLISTED THE TALENTS OF DC COMICS' GERRY CONWAY AND ROY THOMAS TO BREATHE ARTISTIC LIFE INTO THEIR GAMES, RESULTING IN THE ATARI FORCE COMIC BOOK SERIES.

that seems to stick.

I've had kids come in with the retro T-shirts that they buy at Urban Outfitters, etc. Their experience is different — it's more about that three-striped symbol, with the Atari name underneath. I guess it's just retained a certain coolness factor for whatever reason."

One of those reasons, as Brockert points out, could be that the purchasing team at Urban Outfitters is, perhaps, comprised of buyers of a certain age, who were either fans of the brand the first time around, or recognise its continued relevance.

But what about the artwork used by Atari itself? That, too, is part of its identity, and still resonates with people who had the games when they first came out. It's unsurprising that a lot of effort went into this, as it was an easy, if not optimistic, way for making up for the actual machine's lack of graphical prowess.

"The *Adventure* Atari cartridge is my favorite," Brockert says. "Not because the game was any good, but because that picture on the front just lead you down a path, like, 'Oh my god, what's going to happen when I put this in the machine?'"

This is a tactic that the company took to extremes while under Warner's control. The media giant also happened to own DC Comics, and putting two and two together, they realised they had a marketing tool too good to ignore. Prolific comic book creators Gerry Conway and Roy Thomas were duly commissioned to create a comic series to give a rich visual companion to the brand, which resulted in *Atari Force.*

"They thought that when people saw the comics, they would transfer that in their minds over to the mediocre graphics on the video games as they were, you know 30 years ago," Thomas explains. "That was the age of space invaders and these rather crude games. So anything that would improve the visual aspect of the games, as they couldn't do it on the computer screen yet. They would complement that by doing comic books."

If you see a drawing by Ross Andru, Dick Giordano,

"THEY THOUGHT THAT WHEN PEOPLE SAW THE COMICS, THEY WOULD TRANSFER THAT IN THEIR MINDS OVER TO THE MEDIOCRE GRAPHICS ON THE VIDEO ...."

THIS 8-BIT DRAGON BECAME A FAMILIAR SIGHT FOR *ADVENTURE-*OUS GAMERS

Jason Brockert
Artist

As the little green square drifted across the TV screen in its shimmering mission, the tension in my 1980 living room was palpable. When the feared red dragon entered the screen I was transported to the anxious edge of my 9-year-old imagination. Atari *Adventure's* lure held me captive for over a year of my young life and I still feel a pang when I hold that magical cartridge in now somewhat older hands.

or George Pérez of the *Sword Quest* or *Atari Force* scene, that would kind of carry over to the games, and help them seem a little more real to you, potentially. It was coldly and crassly calculated, but that doesn't prevent you sometimes from doing some interesting work."

They say that life imitates art, and on this occasion that cliché rings true. Conway and Thomas were heavily involved in the creation of the *Sword Quest* game series from the ground up. It was a four-parter, each one coming with a special edition companion comic to help dress up the story, but only the first three would make it onto shelves.

"We basically became partners in creating the *Sword Quest* games, which were *Earth World*, *Water World*, *Fire World* and *Air World*. Although not quite all those games or the comics associated with them came out," Thomas says.

And, alas, another ambitious Atari project would suffer from boardroom anxiety, which is a shame, given that plans were already underway to have *Sword Quest* crossover into the real world with an elaborate treasure hunt tie-in. Thomas elaborates:

"Basically they were going to bury some kind of sword. They were hiding it somewhere, and there would be clues embedded by the engineers in these four games as to where it might be. The idea was that the person who found it would have a fabulous prize."

Sadly, someone else had a similar idea with a book, and that resulted in lawsuits when would-be treasure hunters started digging up land that wasn't theirs to dig, in search of the bounty. Atari got cold feet, and dropped the idea — and the game — before completion.

"For all I know, the sword might still be out there," says Thomas. "I don't know if they ever actually buried it."

So if you have the existing *Sword Quest* games, a cunning mind and enough to cover some potential legal fees…

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ATARI®
ICON

THE NEW STYLE

AS YOU'RE NO DOUBT AWARE, Atari lives on today, and the show is far from over. In its current form, the company has gone back to basics: games. In many ways, this is where the old and new worlds meet. Much of what came before: the games, the logo, the brand, remain, but with a new modern spin. Titles such as *Asteroids* and *Breakout* have been revisited and given a present-day twist, re-imagined for the modern era.

> ❝
> **ATARI IS A FEEL-GOOD BRAND. PEOPLE LOVE ATARI. PEOPLE HAVE GREAT MEMORIES OF ATARI, AND I FEEL THAT MILLIONS UPON MILLIONS OF PEOPLE COULD WRITE THEIR ATARI STORY. WE'VE EVEN THOUGHT ABOUT IT, FACILITATING FOR THE 40TH ANNIVERSARY FOR MILLIONS OF PEOPLE TO TELL US THEIRS.**
> ❞
> **Jim Wilson**
> Atari's current CEO

"There were different devices and different technologies that allowed people to do different things. I think this allowed an influence on pop-culture, whether it's music artists or game designers or film makers," says Wilson.

So what of those licensing requests? Well, Bushnell's Atari had a laser-like focus on creativity and innovation, a thread still visible in today's incarnation of the brand. For example, Wilson's Atari is opening the doors to developers to bring new interpretations of classic titles, as evidenced by the recent *Pong* developer challenge.

"We thought it would be a fun thing to do," says Wilson. "It's important for us to build and maintain a good relationship with the development community. This also gives us the opportunity to tap into new ideas, and new ways that people consume games. *Pong* is just the beginning of that."

But for all its similarities, the new face of the company is, perhaps, a little more conservative about where it chooses to be innovative. Some things just come down to a simple matter of business.

"What I wanted to do was make the heart of the brand a little more mass market in feel," Wilson explains. "All about easy to get into, difficult to master experiences, innovation, technology, platform. That really didn't seem to be what Atari was represented as [when it was taken on from previous owner InfoROMS]."

So, while the values remain the same, the methodology, perhaps, is a little more a-la mode. Today's industry is a very different landscape to that of 40 years ago, especially with regards to how people consume games. Licensing out the brand (rather than licensing games in) is a big part of the current business, and can be seen in products like the popular Atari Arcade Duo iPad accessory from Discovery Bay, as well as the company's back catalog.

"You know, free-to-play games are obviously the big trend in mobile and online, and it's really up to us to take games that used to make people put quarter after quarter in, put the proverbial virtual quarter in, or microtransaction today," Wilson says.

So, 40 years down the line and Atari has seen many incarnations, some good times, some bad times and a lot of fond memories. But, despite all of this, it keeps the fire of the arcade burning, whether it's via your iPad, Nintendo DS, Flashback console, branded t-shirt, re-issued General Mills cereal boxes or *Asteroids the Movie.*

PLAYLIST

Roy Thomas
Comic Book Writer

My favorite Atari game was *Swordquest.* Never played it, but of course co-wrote the comics series and helped design the game, so got paid. Atari gave me this several-foot-high pile of every game they'd done. I played *Space Invaders* once or twice… wasn't much of a step up from the *Pong* game the Conways had gotten me earlier. I played the TV-screen chess they had once or twice, too. Then I put away, and later gave away, the whole pile to someone, except for a couple of the *Swordquest* games, maybe.

>> *IN REAL LIFE*

Welcome to IRL, an ongoing feature where we talk about the gadgets, apps and toys we're using in real life and take a second look at products that already got the formal review treatment.
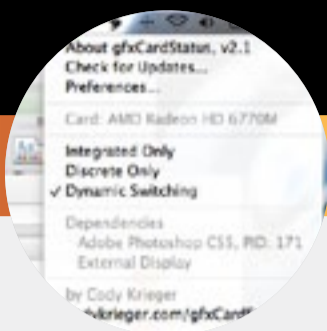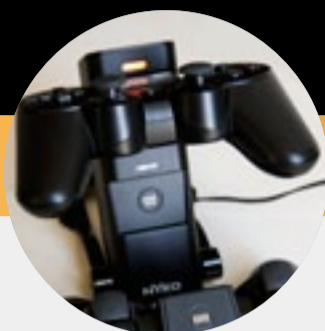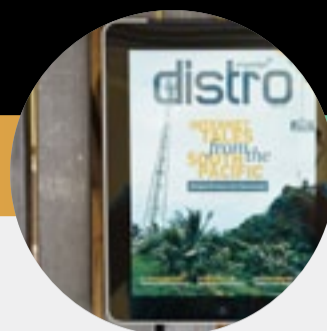
1.   *2.*   *3.*

# gfxCardStatus, Nyko Charge Base 3 for PS3 and the OG iPad

BY ENGADGET STAFF

Different strokes for different folks. While Darren may have long since sworn off tablets as productivity machines, our very own Billy Steele (a designer by trade, don'tcha know) has been using one to workshop projects with clients. For Darren, anyway, productivity means having a laptop with a discrete GPU at the ready — except for when the GPU drains his battery life, which is where an app called gfxCardStatus comes in. Rounding things out, we've got Jason Hidalgo talking up the different ways he's attempted to charge his needy PS3 controllers.

Forgetting About gfxCardStatus

Years and years ago, Apple made MacBook Pro laptops that wouldn't even survive a single Apple liveblog. I literally lugged around an external battery just
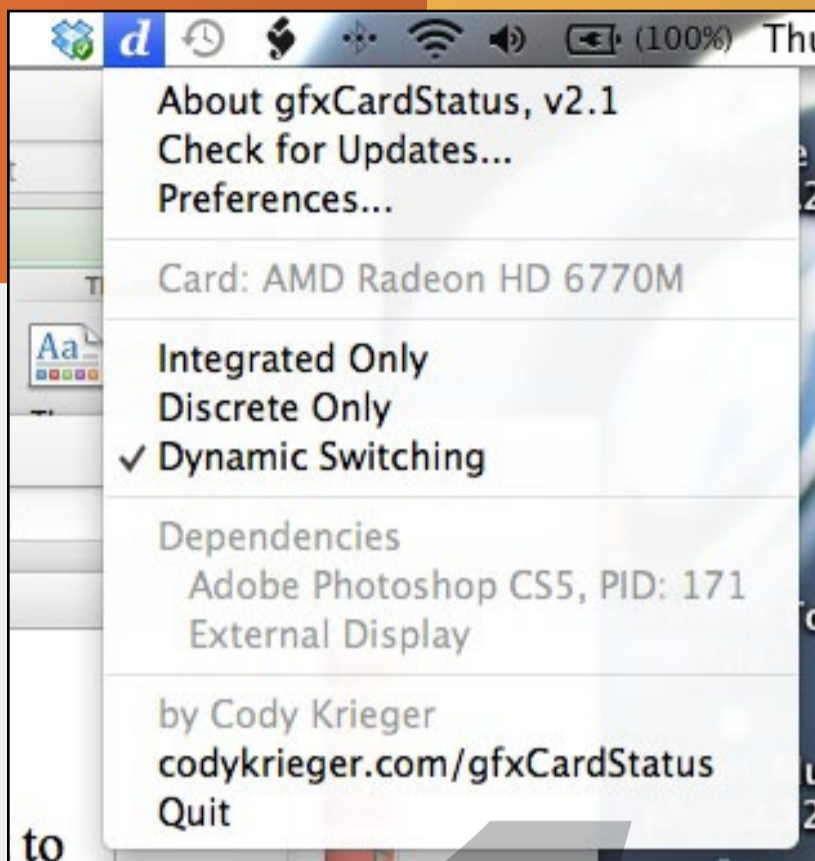
to make it through. In those days, gfx-CardStatus wasn't just a nice amenity; it was a necessity. This lightweight, totally free program sits up in the top icon bar alongside your AirPort icon and Bluetooth notifier, but the concealed nature masks just how powerful it is.

Essentially, this allows MacBook owners to force their machine to rely on the discrete GPU *or* the integrated GPU. The latter obviously sips less power, which is great for extending life on long-haul flights and the like. Over the past few years, I've found myself leaving it forced to integrated by default; I never even bothered to use discrete, since I don't game on my MBP.

And then came the external monitor fiasco. I went through four cables and four adapters, testing out a total of four different monitors in an effort to hook an external LCD to my machine. None of them worked. Months went by. I

wept. Nightly. And then, I noticed gfxCardStatus. I simply enabled Dynamic Switching, and as soon as it detected an external monitor, boom. Turns out, pushing a 1080p picture on a second display is a good reason to use a discrete GPU. The lesson? gfxCardStatus is an *amazing* tool for any MacBook owner, but a notification feature in a future build would be great — you know, to let goons like me know when they should wake up and realize that a discrete GPU is truly needed. — *Darren Murph*

Nyko Charge Base 3 for PS3

Charging PlayStation 3 controllers via the console's USB ports can be a pain in the neck — literally. I first realized this when I found myself staring up at my 63-inch TV from close range while I waited for my lone controller to charge over a laughably short USB cable. Since you can't rejuice it unless the PS3 is turned on, I developed a tendency to charge while playing. Eventually, I bought a new Dualshock 3 so I could have one controller charging while I used the other to play wirelessly from a more comfortable distance. This was pretty much my main method for charging until I got the Nyko Charge Base 3.

The Charge Base 3 has two slots for rejuicing two controllers, which dock automagically with the device via a magnetic adapter. In brief, the $25 charge stand offers a convenient way to top off your controllers even when you're not using your PS3. A yellow indicator light means the device is charging while a green light lets you know that the controllers are all juiced up. It also has a shut-down circuit so you can leave your controllers in the device overnight without worrying about drawing vampire power.

Nonetheless, I have my share of niggles:

charging is supposed to only take an hour and a half, but I've seen it take several. The clip-on adapter covers up the player indicator lights. Unlike with a direct USB connection, you also can't use your controllers to play while charging with the device. Overall, though, the Charge Base 3 is a convenient way to keep your controllers charged. It even doubles as a tidy holding station, which helps with organization when you've got a gajillion controllers for other consoles. Just watch out when folks bring little kids over. This thing's a toddler magnet. — *Jason Hidalgo*

First-Generation iPad

I got my iPad about four months before the iPad 2 was announced. By the time the sequel debuted, I had everything situated just so, and the slate had found a cozy spot in my daily workflow. Given that, I wasn't looking to splurge on the new model just because of its novelty or improved specs; I was happy with my OG tablet. I use my iPad mostly when meeting with clients about design projects. It allows me to show comps and in-progress work without having to haul around and fire up a MacBook Pro. We can interact with the images in a way that's quick and easy. If I happen to forget to download a file, I can access it from DropBox without skipping a beat. Ignoring the Retina display on the third-gen model for a moment, the original still works well for showcasing design work on the go.

Never once have I wanted to take a picture with my iPad, and I can't imagine that I ever will. If I need to snap a quick photo of something to tweet or reference later, my phone has a more than capable shooter for that. Most of the time, if I know photos will be a possibility, I carry the ol' NEX-C3 along anyway. As long as the folks in Cupertino continue to update iOS for the original iPad, I'll still prefer it to dropping coin on the latest hardware. But, if they figure out a way to integrate a BBQ smoker, I may be forced to reconsider. — *Billy Steele*

THE NEXT WEB'S MANAGING EDITOR REMEMBERS HIS GRANDPARENTS' CARPHONE AND THE JOYS OF INSTALLING *PUZZLE BOBBLE* ON A NOKIA 7650.

MARTIN BRYANT

Q&A

What gadget do you depend on most? As clichéd as it may be, my iPhone 4S. I spent a couple of years with Android — largely for the notification tray, which is to me by far the single most important element of any mobile OS as I'm bombarded with information throughout the day. As soon as iOS 5 arrived with the same concept on board, it was enough to win me back. That said, I still keep an Android device on hand, as I'm a bit of a Google junkie.

Which do you look back upon most fondly? My Nokia 7650, which I got in 2003. It was a revelation to suddenly have a phone that was a computer too, and not in the 'Shove Windows onto a small screen' way that Microsoft was following at the time. S60 was an excellent operating system at the time, although installing apps was notoriously hard. The joy of installing *Puzzle Bobble* was only matched by the effort required to do so. Data was too expensive to do anything over the air, and the PC suite software never worked as it was supposed to. Still, it was an excellent smartphone for the time — and built like a tank so it was almost impossible to damage.

Which company does the most to push the industry? Apple — not through innovation but through precise execution that keeps its rivals on their toes. 'But what will Apple do?' is a familiar refrain from industry figures and pundits alike. They shape the industry as much by what they don't do as what they do.

What is your operating system of choice? Desktop: Mac OS X, undoubtedly. There's a reason why a Windows-using tech blogger is a rare thing — we want to fit in with the row of illuminated Apple logos in the press area at conferences. I jest — it's because OS X makes it so easy to do everything a blogger needs to do, quickly and easily without the need for additional software.

Mobile-wise, I can switch between iOS and Android easily enough, as all the services I use are cloud-based. Now, if Google Voice would come to Europe, even my number would be the same on both devices.

What are your favorite gadget names? Android devices have the best names — Droid Razr Maxx is satisfyingly silly.

The speed at which an idle thought of one person sitting at a bus stop can spread around the world, catching on and <mark>inspiring others.</mark>

What are your least favorite? Another Android device, the Motorola Devour, makes me feel a little queazy and I'm not sure why.

Which app do you depend on most? Evernote — I'm writing my answers on it now. It's my to-do list and my notepad and I'd be lost without it.

What traits do you most deplore in a smartphone? Having to charge it three times a day.

Which do you most admire? Feeling good in my hand — if you're going to hold something so much, it can't be an annoyance.

What is your idea of the perfect device? Always connected, infinite battery.

What is your earliest gadget memory? The carphone my grandparents got in the early 90s. It seemed so futuristic. I've no idea if they ever used it, but the idea of a phone in your car seemed to me like the ultimate in communications at the time.

What technological advancement do you most admire?

ANSWER

Which do you most despise? The speed at which a piece of misinformation can spread around the world, catching on and whipping people into a frenzy before anyone checks if it's true.

What fault are you most tolerant of in a gadget? Apps crashing — especially on iOS, it's presented almost as if nothing happened. There's something to be said for not flashing up error messages when something goes wrong.

Which are you most intolerant of? When my smartphone data connection disappears — always hard to tell if it's because of the phone or the network, but it's always when I have something really important to do — like filing a breaking story, or checking in on Foursquare at the local grocery store.

When has your smartphone been of the most help? When I'm out and about and the WiFi wherever I am dies — tethering saves me from an embarrassing absence from the virtual office.

What device do you covet most? I'd love a 2012 iPad with 4G — but that's an impossible dream in Europe.

If you could change one thing about your phone what would it be? I'd love my iPhone 4S to be more resilient — I shattered the glass in my first one just a couple of weeks after getting it by tripping and falling onto it. I dropped my existing one on the kitchen floor and shattered the rear glass. I've learned my lesson and bought a case, but surely a phone should be resilient enough for everyday wear and tear without a case? iPhones look far better without them, too.

What does being connected mean to you? As sad as it sounds, just about everything! I make my living online, and to be offline is to miss out on opportunities, entertainment and an important part of my life.

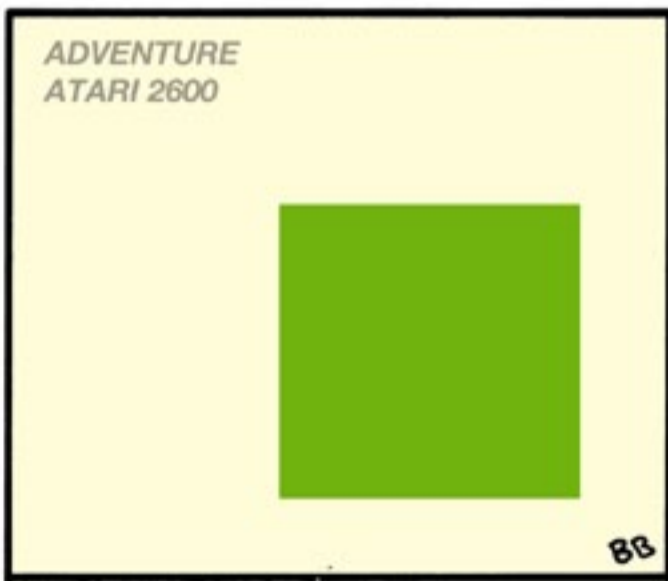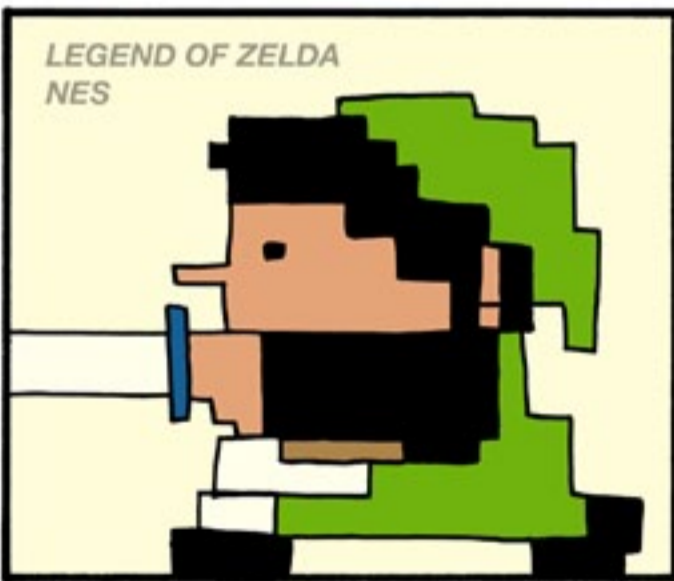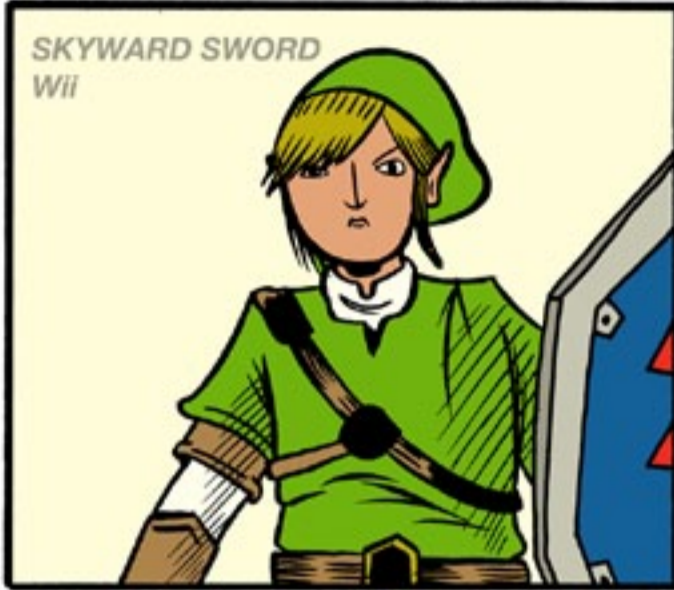**When are you least likely to reply to an email?** I'm a little obsessive about reaching inbox zero at least once per day, and so, the only real significant gap in my email replies is when I can't — when I'm sleeping or on a plane (there's no WiFi on flights in Europe yet, which I'm quite pleased about — one place where I can just kick back and listen to podcasts).

When did you last disconnect? The last day I felt like I'd totally disconnected by choice is my birthday last year — I took the day off and didn't look at email or the Web. I looked at Twitter and Facebook for a few minutes each, other than that it was a refreshing break, and you know what? The world didn't end just because I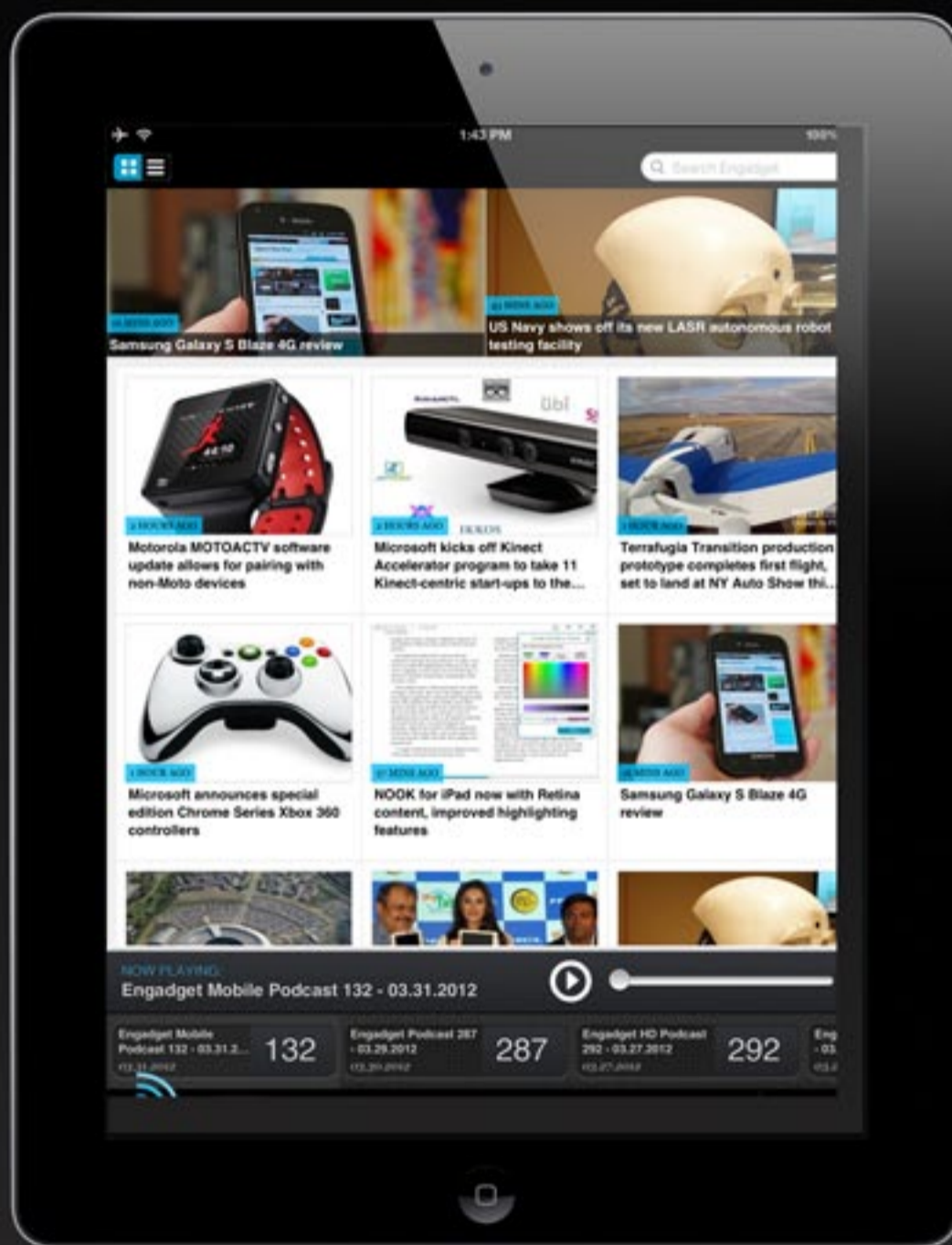 didn't reply to my emails. I should do it more often.