

DISTRO

091412 #57

engadget

HOT AND HIGH DEF

IT'S THINNER, LIGHTER, FASTER
AND BETTER LOOKING. BUT
IS AMAZON'S **KINDLE FIRE HD**
WORTH THE UPGRADE?



MADS THIMMER
TAKES US INSIDE
INNOVATION LAB

WE HIT THE
ROAD WITH THE
CONTOUR+2
ACTION CAMERA

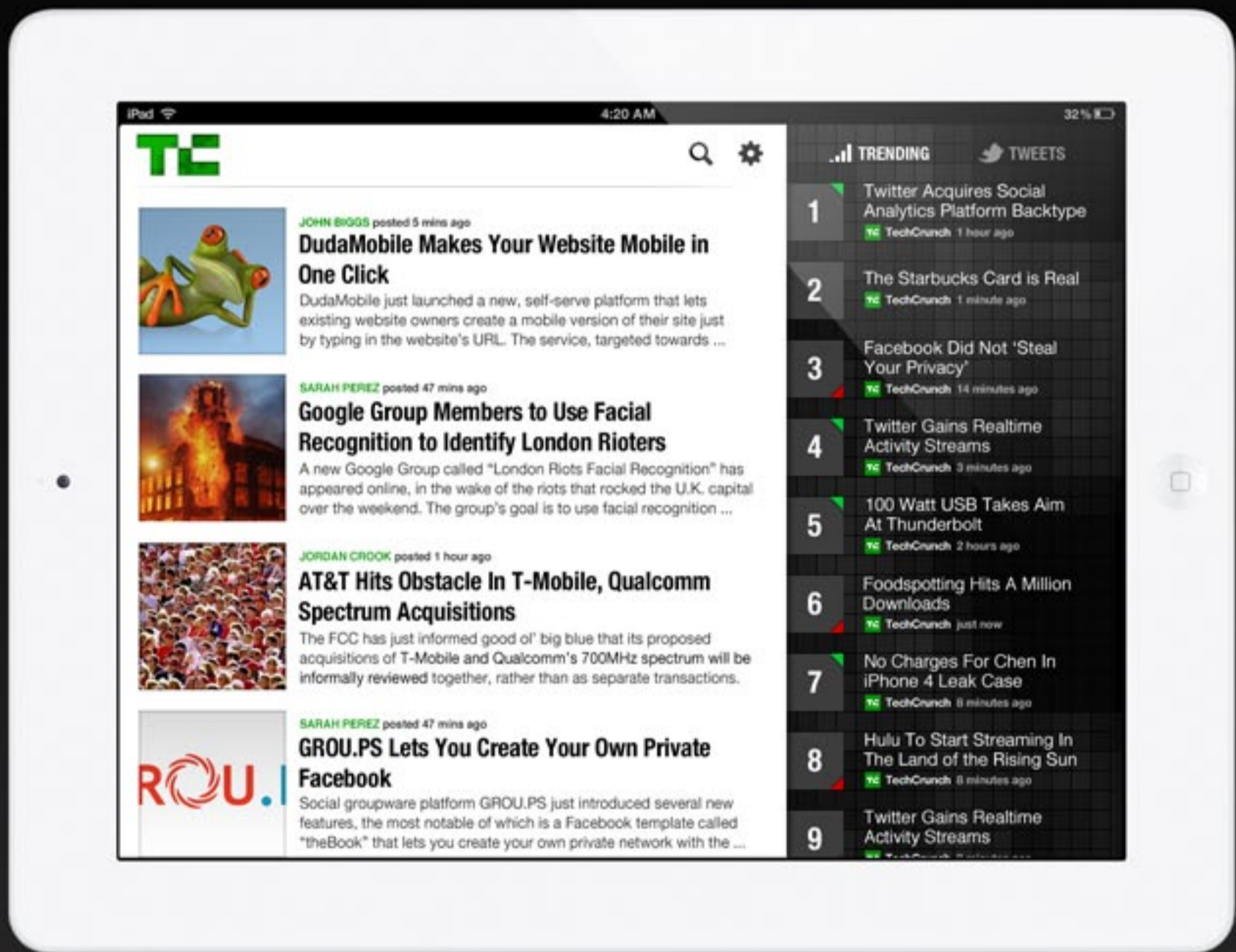
APPLE'S BIG NEW iPHONE 5





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ISSUE 57

DISTRO

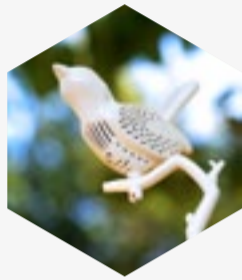
09.14.12

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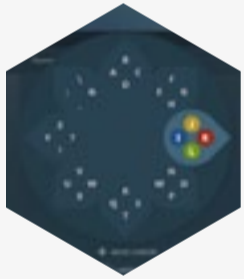
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By Tim Stevens



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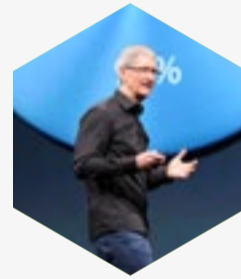
ESC



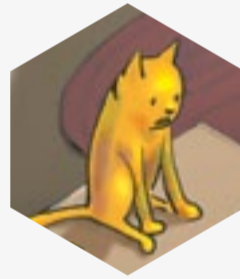
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GROUP EDITORIAL
Was the iPhone 5 Worth the Wait?



REHASHED
The iPhone 5 is Alive



TIME MACHINES
The Original Super Star

On the Cover:
Kindle Fire HD Photograph
by Will Lipman for Distro



IPHONE GETS BIGGER, SMALLER



DISTRO
09.14.12

EDITOR'S
LETTER

You can call me a fanboy all you like, but there's one tech story this week that stands heads and tails above the rest — and it wasn't AT&T flipping on LTE in my hood of Albany, NY. The biggest story is of course Apple's iPhone 5, an evolutionary step forward over the iPhone 4S that is sure to be a monumental success.

Apple's new phone had its coming out party at the Yerba Buena Center for the Arts, a familiar and cozy venue for Apple parties. It was quite the shindig, with the Foo Fighters serving as the closing act. Through the course of the two-hour presentation by the likes of Tim Cook, Phil Schiller, Scott Forstall and plenty of other Apple heavy-hitters we slowly and gradually came to understand the labor of love that is the iPhone 5.

You'll be reading Darren's preview of the device later in this issue, so I won't bore you with too many details here, only to say that the thing surprises not in its newly found height or even its recent loss of thickness. It's actually the reduction in weight that is most immediately impressive. There are a lot of light phones out there that feel cheap and flimsy. This is a light phone

that feels absolutely *rock solid*. That's a tough thing to pull off and Apple has absolutely delivered.

Of course there's a lot more to it than that when it comes to making a successful phone — things like battery life and performance are far more important — but we've, as of yet, only had a fleeting encounter with the iPhone 5. You'll have to wait a little longer for us to cross paths again with the thing and be able to weigh in with the full review. But, it shouldn't be long; the phone hits stores on September 21st.

That wasn't the only device unveiled at Apple's event, with the iPod line finally getting a bit of a refresh. The biggest change was for the iPod nano, which now has a 2.5-inch widescreen display, making it a more palatable place to watch some HD content downloaded from iTunes. But, it still isn't running iOS (at least, not any version with access to the App Store) and is lacking WiFi but does at least bring Bluetooth to the table. Also, it's hugely tiny: just 5.4mm thick. It isn't, however, hugely cheap at \$150 for a 16GB version.

The iPod touch also got a refresh, adding on the 4-inch display from the




iPhone 5 and bringing Siri to the party, finally. The device gets a faster processor, too, and a fresh, distinctive design with a brushed aluminum back. Apple seems to be positioning this as a compact camera killer, bringing a lower-resolution (5-megapixel) version of the camera found in the 4S and 5 but adding in an interesting feature: a wrist strap that connects via a spring-loaded button on the back. Will this be enough to convince people to leave their digi-cams at home? Probably not, but it's a slick little device — if an expensive one. Starting price here is \$299 for the 32GB version, \$399 for 64.

The iPod shuffle also gets a minor update, bringing it some of the new colors found in the multi-hued nano and touch devices — a chromatic contrast to the rather more desaturated iPhone 5. Here you'll get your choice of black or white, and I have to confess that both look stunning in a typically understated way. The black is anodized aluminum on the back matched with glass insets, while the white is raw aluminum on the back and a white bezel. Both look smooth and sophisticated, though I do think it might be time for Apple to think about maybe doing at least *one* more color. Might I suggest (RED)?

But, Apple didn't have all the news. Nintendo took this curious time the morning after Apple's event to announce the pricing and availability of the Wii U console — perhaps secretly hoping that it would get buried in

all the iPhone 5 news. Nintendo announced a \$300 price for the base Wii U, which offers 8GB of internal storage, though a higher-spec model with 32GB of storage and a bunch of charging stands will cost you \$350. That's a bit dear for a Nintendo console, but then you do get that fancy touch-sensitive tablet controller thing. Disappointing — but that didn't stop me from pre-ordering.

In this week's Distro you'll have not one but two reviews from yours truly. First up is the new Contour+2 helmet camera, which is a great way to show your friends just how extreme you really are. I also put Amazon's Kindle Fire HD tablet through its paces and see if it has enough street cred to hang with the Nexus 7. Joshua Fruhlinger asks the question of why we're stuck paying for a set-top box we don't necessarily want, while Ross Rubin discusses branding and how it's branching out across product ranges. We have Q&A with Bump co-founder Dave Lieb, more Recommended Reading and our group editorial on all that Apple has to offer. It's all waiting for you inside, and you won't need to re-up your contract to enjoy it. 



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET



ENTER

EYES-ON

DISTRO
09.14.12

CHICK-A-DEE SMOKE DETECTOR

Tap for detail



POECILE ATRICAPILLA

SAFETY NEVER LOOKED SO GOOD

Let's be honest: smoke detectors are far from handsome pieces of tech. The gadgets are usually masked in white to blend in with the ceiling to allow them to elude our passing gaze. Not so with the Chick-a-Dee. It takes the shape of a bird perched on a branch in order to keep you safe.

THE DAMAGE

\$75

PHOTOGRAPHS BY WILL LIPMAN

SOUND
THE ALARM

PERCHED AND
WAITING



DISTRO
09.14.12

HANDS-ON



PRICE: \$299-\$399

**AVAILABILITY:
OCTOBER 2012**

**THE BREAKDOWN:
THE LATEST HIGH-END IPOD
GETS AN A5 CHIP, THINNER
FRAME, 5-MEGAPIXEL
CAMERA AND SIRI.**



IPOD TOUCH (5TH GENERATION)



Click on
product
names to
read full
stories

The newest iPod touch takes a note from the newfangled display on its cellular sibling, bringing a vaster panel (the same 4-inch, 1,136 x 640 one found on the new iPhone). At 88 grams and just 6.1mm thick, it's also shockingly thin and light — of course, the anodized aluminum backing makes it feel like a premium piece of kit. The introduction of the dual-core A5 chip is a boon for the touch. Indeed, our interactions with the device were notably faster than on the prior touch, but we didn't have 40 hours here to test the playback claims.

Around back, it's impossible to glaze over the iSight (5-megapixel, f/2.4) camera with LED flash. It's actually an Apple first for the iTouch line, and while it's not quite as high-end as the shooter in the iPhone 5, it's unquestionably an improvement from the past. Oh, and that Panorama feature? It's here, too, along with Shared Photo Streams and the ability to handle 1080p video editing just fine. And then there's Siri. In our limited testing, the tech worked exactly as expected. In other words, it's useful so long as you have WiFi nearby, but it won't do you any good when you're offline.



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09.14.12

ENTER

HANDS-ON



IPOD NANO (7TH GENERATION)

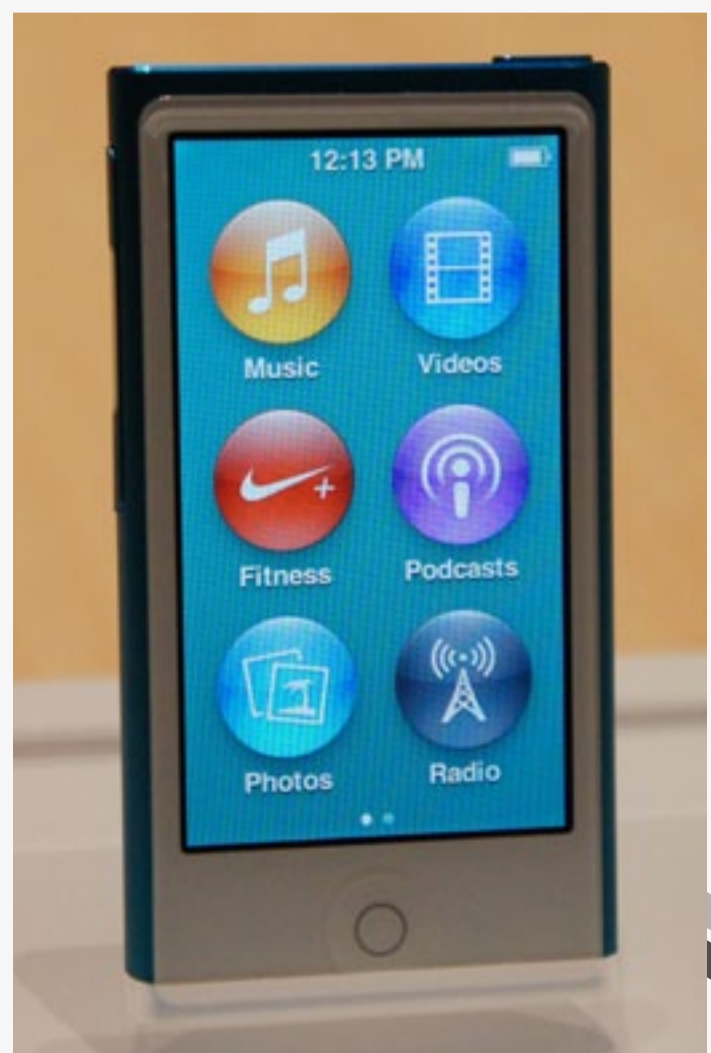
Not to be outdone by a refreshed iPod touch (and, let's face it, a new iPhone), Apple also shot out a 5.4mm-thick iPod nano — that's 38 percent thinner than the one it replaces. We got our hands on the newest, tiniest music player at Apple's product launch, replete with a 2.5-inch multitouch panel and a familiar Home button. As you'd expect, the enlarged display is hugely beneficial. While there's no bona fide version of iOS, the stripped-down variant here seems sufficient for handling media alone. As if the ability to watch widescreen video wasn't enough, fitness gurus are also apt to take notice — inbuilt support for Nike+ gear, along with Bluetooth, make this one potent device.

The Lightning connector seems to make a lot of sense here, given the dearth of real estate along the bottom, but somehow the company squeezed a big enough battery in here to net some 30 reported hours of battery life. In playing with it, we found screen transitions to be adequately smooth, and video playback was surprisingly enjoyable to watch.

PRICE: \$149

AVAILABILITY:
OCTOBER 2012

THE BREAKDOWN: SMOOTH NAVIGATION AND A REPORTED 30 HOURS OF PLAYBACK MAKE THE 16GB, MULTI-HUED NANOS FORMIDABLE PMPS.



AMAZON KINDLE PAPERWHITE

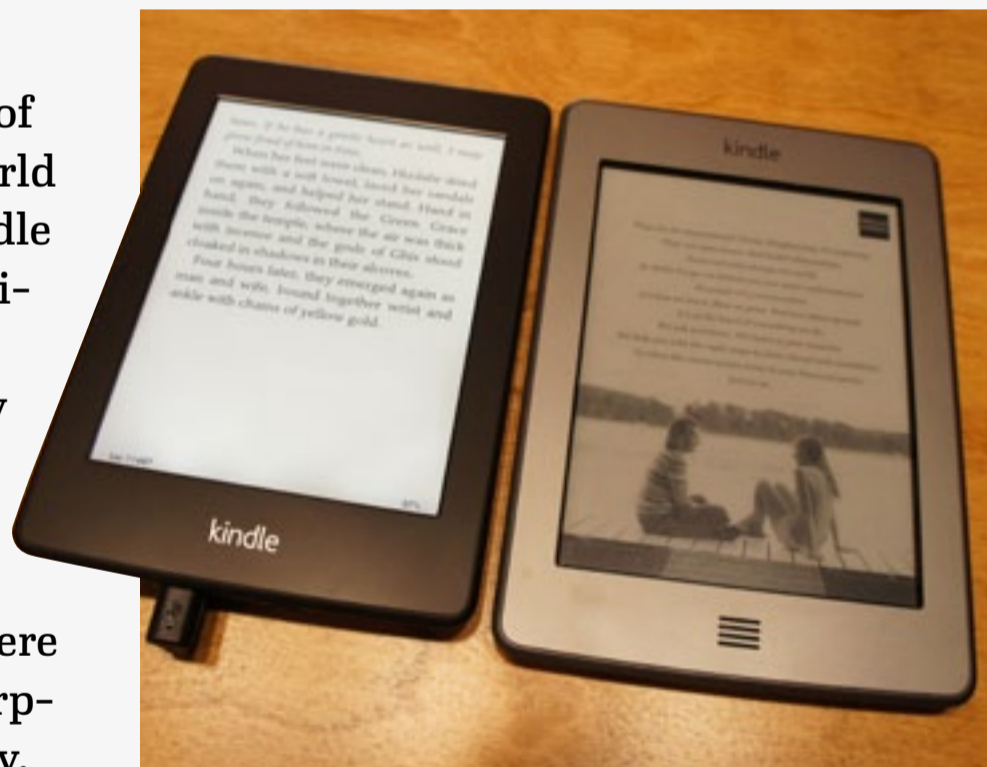
PRICE: \$119-\$199

AVAILABILITY: OCTOBER 1ST

THE BREAKDOWN: THE NEW E INK DISPLAY PROVIDES EVERY BIT OF ADDED CONTRAST, AS ADVERTISED, ALONGSIDE A RETOOLED EXTERIOR.

Amazon's still got a dog in the devoted e-reader race. The big news here, of course, is the company's entry into the world of lighted E Ink readers. Hold the new Kindle up to the old and something else is immediately obvious: there's a reason for the new moniker. The contrast is like night and day here. That tinted display we've become accustomed to has been traded in for something much lighter, and the text is that much sharper. Also, at first glance, there doesn't seem to be any degradation in sharpness due to the addition of glow technology, which we saw in the new Nook.

The glow is quite bright, even with the lights on — we get Amazon's point about wanting to keep it on at all times, so that increased battery life (eight weeks with the light on) is certainly a huge bonus here. Adjusting the light is also quite nice, with a dimmer switch and a whole lot of brightness levels. The reader also just looks bet-



ter. Physical buttons have been dropped altogether and the reader is a bit shorter and thinner than its predecessor. We still prefer the Nook's trademark design for long-term reading and there's less place for your fingers to go with the smaller bezel.





PRICE: \$199
(ON CONTRACT)

AVAILABILITY:
NOW AVAILABLE

THE BREAKDOWN:
SILLY NAME
ASIDE, THIS UNIT
IS RELATIVELY
UNCHANGED FROM
THE OPTIMUS VU
THAT WE REVIEWED
THIS SUMMER.

INTUITION BY LG



Usually when carriers nab smartphone exclusives, tweaks are made to the devices' overall build and OS. That's not the case here. One thing getting a slight makeover, though, is the Rubberdium pen. Whereas when it debuted with the Optimus Vu that capacitive pen was chunky and somewhat cumbersome, here it's been slimmed down for a more natural in-hand fit. That alteration isn't able to make up for the broken user experience — you still have to use a finger for the Android navigation keys — but it does make interaction somewhat more bearable.

The Intuition's 1,024 x 768 True-XGA IPS display might not have the immense saturation of an AMOLED panel, but it definitely still impresses even from afar. Let's talk about the (only) star of the Intuition's show: skinned Ice Cream Sandwich. This OS bears no resemblance to vanilla ICS. Much like the Vu, icons can be customized and screenshots can be captured to scribble notes upon. As for the 1.5GHz dual-core S3 moving things along, well, it does an acceptable job. Initially, we were impressed but soon that story changed, with noticeable hiccups and stutters cropping up. That's what you get with an outdated processor.



DISTRO
09.14.1

HANDS-ON



PRICE: \$349

**AVAILABILITY:
NOW AVAILABLE**

**THE BREAKDOWN:
WHILE A
SNOWMOBILE
WASN'T AVAILABLE,
IN-HAND THE
UNIT FELT QUITE
RUGGEDIZED
WITH A DECENTLY
VIEWABLE LCD.**



JVC ADIXXION CAMCORDER

After its mid-summer reveal, JVC's entry into the booming action sports camera market is now shipping and we got to spend some time with the questionably-named GC-XA1 ADIXXION at the company's CEDIA booth. To compete with offerings from GoPro, Sony and our most recent favorite, the Contour+2, the GC-XA1 brings its "Quad Proof" housing that makes it waterproof (to 5M), shock-proof (for falls of up to 2M), dust-proof and freeze-proof, as well as

built-in WiFi, integrated microphone, image stabilization and a 1.5-inch LCD on the side.

The device can use WiFi to make a video link with nearby Android or iOS devices as well as PCs so the wearer can check where the camera is pointing, and even stream video directly to Ustream via a hotspot, no PC necessary. For the \$349 asking price a goggle mount, flexible mount, two lens protection covers, USB cable and a single battery are included.



STEAM BIG PICTURE BETA

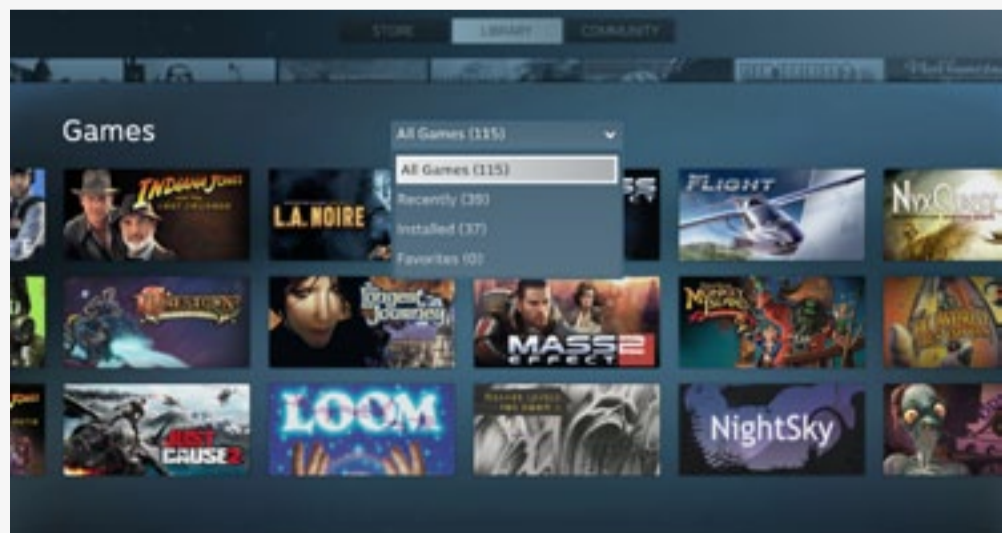
Valve hopes this 10-foot UI will let its content distribution portal get comfortable in front of your couch, offering gamers access to their favorite PC titles from a gamepad-friendly interface. After easing the user into the new controller-compatible environment, the new UI offers three familiar options: Store, Library and Community. Each section has its own personality, but all share the same basic navigational template. Valve also uses the beta to launch what it calls the first ever “first-person web browser,” which substitutes an analog-controlled mouse with an omni-directional crosshair.

Text input gets a fairly significant overhaul as well, representing a notable departure from common standards of controller-based typing. Valve is introducing Daisywheel — a familiar looking text entry setup designed specifically for analog gamepads. The beta does hit a few snags, albeit manageable ones. Windows 7, for instance, can pull the user out of the interface’s console-like experience with a security alert, requiring a bona fide mousing peripheral to put its concerns to rest. Some games present a similar problem, forcing users to click “play” in their own launchers before starting. **D**

PRICE: FREE

AVAILABILITY:
NOW AVAILABLE (PC-ONLY)



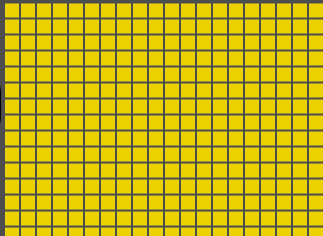





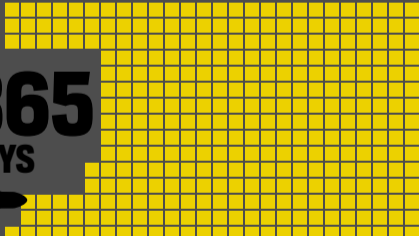


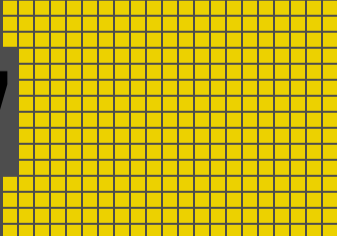


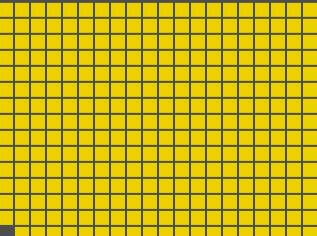
THE BREAKDOWN: IT WON'T TURN YOUR MEDIA CENTER INTO A GAME CONSOLE, BUT IT DEFINITELY MAKES HIGH-END PC GAMES IN YOUR LIVING ROOM A SMOOTHER EXPERIENCE.



The End of an Orbiter Era

Since its initial launch in 1981, NASA's Space Shuttle Program has captured our imaginations and encouraged our astronomical dreams. While space exploration may continue in earnest, our fleet

has been shuttled into retirement, settling down at scientific institutions across the US. It's been a long 31 years of travel and these Earth orbiters have certainly racked up some major mileage. — *Jon Turi*

SHUTTLE	EARTH ORBITS	MILES TRAVELED	TIME IN SPACE
ENTERPRISE (TEST VEHICLE)	0	N/A	0 DAYS
COLUMBIA	4,808 	121,696,993 	300 DAYS 
CHALLENGER	995 	23,661,290 	62 DAYS 
DISCOVERY	5,830 	148,221,675 	365 DAYS 
ATLANTIS	4,848 	125,935,769 	307 DAYS 
ENDEAVOUR	4,671 	122,883,151 	299 DAYS 

SOURCE: NASA



How to See the Future

by Warren Ellis
WarrenEllis.com

Warren Ellis knows a thing or two about the future. The author has tackled everything from superheroes to crime novels, but he's perhaps best known for *Transmetropolitan*, a now-classic comic that infused a bit of Hunter S. Thompson into a cyberpunk-styled future. He also happens to maintain an indispensable blog, where he's posted this text of a keynote he gave at the recent Improving Reality conference. In it, he addresses what can be described as the "where's my jet-pack?" phenomenon — the disappointment that sometimes sets in when folks realize that the future they were promised still hasn't arrived. That condition, he suggests, can largely be boiled down to Marshall McLuhan's notion of looking at the present through a rear-view mirror, and can be overcome by one simple thing: "looking around."



Click on headlines to read full stories

How Google Builds Its Maps — and What It Means for the Future of Everything

by Alexis Madrigal, [The Atlantic](#)

Anyone who's wondered what goes into Google Maps beyond raw satellite and Street View images won't want to miss this rare look behind the technology from *The Atlantic's* Alexis Madrigal, who details just how much human effort is involved in piecing together all of that data, and why we're still just seeing very the beginnings of what's possible with the vast stores of information at Google's disposal.

Game Maker Without a Rule Book

by Nick Wingfield
[The New York Times](#)

The news of Valve's new "Big Picture Mode" for Steam overshadowed the story itself a bit, but this Nick Wingfield piece is well worth reading for a look inside the company that's become famous for setting its own rules. Most recently, that's included a newfound interest in hardware development, including experiments with virtual reality systems — all of which it is, of course, remaining suitably vague about.

The Algorithmic Copyright Cops: Streaming Video's Robotic Overlords

by Geeta Dayal, [Wired](#)

Copyright bots — systems that scour the internet for content being used without a license — don't often make themselves immediately visible, but a number of recent events (including a shutdown of the live broadcast of the Hugo Awards) have brought them into the spotlight. Here, *Wired's* Geeta Dayal explains how they work and why we're likely to see their use only increase in the future.



CAN I PICK MY OWN SET-TOP BOX, PLEASE?



DISTRO
09.14.12

FORUM

THIS IS THE
MODEM WORLD

BY JOSHUA FRUHLINGER

When I was a kid, my parents actually rented our home phones from the phone company. They were hard-wired to the wall — no detachable RJ cables. The phones were heavy, and when you needed a new one, you would call the phone company and get in line. They would then come out in four to six weeks and install the new phone for you at your expense. If you wanted to move the phone to another room, the process was like calling an electrician: holes were drilled, ladders were scaled and money was spent.

The phone equipment itself was drab, heavy and came in your choice of two colors: boring and depressing. Answering machines were rare — instead, you had to use expensive answering services staffed by cranky women from New Jersey.

Then the glorious '80s saw the AT&T breakup that ultimately allowed consumers to choose their own phone equipment. Soon followed a wonderful wild west of phone design, collapsing prices and racing technology. Suddenly,

Americans could express their individuality with their phones.

Ever see “Coming to America,” that movie from a long-gone era when Eddie Murphy was still funny? If so, you’ll remember the wondrous hamburger phone (later reprised in “Juno”) used by his love interest’s father who owned McDowell’s, a McDonald’s knockoff. Then there was the football phone that *Sports Illustrated* used to give away with subscriptions. And let’s not forget the shoe phone, a favorite among “Get Smart” fans.

We learned that economists were right this time; competition is good. Companies won — more consumers wanted phones and little companies became serious consumer electronics players. Consumers won too — equipment was cheaper, better and more fun.

So what am I getting at?

It’s time cable companies let go of our set-top boxes. I’m not saying this simply because we want football-shaped boxes under our TVs (although that might be pretty cool). I’m saying that we’re at a point in which set-top box technology offered to us as rent-



It's time cable companies let go of our set-top boxes.

als from cable companies has become so bifurcated from what we want to do with our TVs.

We're installing Google TVs, Apple TVs, game consoles, Smart TVs, Rokus, wireless media players, Slingboxes, Boxees ... I can keep going. The point is, we're basically all using our cable boxes only to descramble the signal and using other equipment to actually view it. Sure, some of us use the DVRs built into our cable STBs, but we'd rather be using TiVos (or our own HTPCs) if we could.

But, no, we're stuck in the '80s because of our cable companies, forced to rent already outdated boxes that just get in the way of what we actually want to do.

Can't you let go already, cable companies? Let us choose our own boxes. Let us have fun!

I'll finish this with my recent experience of having cable installed in my new place this year. I knew exactly what I wanted: multi-room HD DVRs on my two TVs along with internet access, a pretty simple request.

What I ran into, though, was a technician who installed the wrong box — three times — until I did the research

myself and had to tell him exactly which units — model numbers and all — he had to pull from his truck. Luckily, he had one of each and after four hours, he had my system up and running. After he left, I dropped the wireless router he gave me into bridge mode and used my own.

Here's how this scenario could have — and should have — played out. I call the local cable company and ask them to turn the signal on. I install my own STB and modem of choice. I configure each one as I please, choosing the programming packages right from the box as I see fit — a mix of MLB.TV for my Yankees games, HBO Go for "Game of Thrones" and a basic TV package from the cable company for some History Channel. All in one box. Done. Boom. Bada bing.

Instead, I have a Smart TV that gets Netflix, MLB.TV and Amazon. I run Netflix on my PS3 because it looks and sounds better. I run YouTube on my Google TV because the interface is sweet. I use HBO Go on my Xbox 360. And, of course, I have a Motorola DVR from the cable company that descrambles "Pawn Stars."

What a mess. 



RUBBER BRANDS

DISTRO
09.14.12

FORUM

SWITCHED
ON

BY ROSS RUBIN

ONE SITS FAR ATOP the Android smartphone heap while the other has recently stepped up its efforts to compete more aggressively by acquiring the stake of its decade-long joint venture partner. But at the recent IFA event, electronics giants Samsung and Sony both acknowledged the importance of their smartphone sub-brands by stretching them into new product categories. For Sony, its Xperia sub-brand hopped across to its tablet while Samsung brought the Galaxy brand to a connected camera. How these companies have stretched these brands reflects their relative position, both in terms of where they've moved from and where they've moved to.

For Sony, the move of Xperia to another product category represents somewhat of a full circle (as does the return of the Sony brand to handsets itself). Part of the early playbook for Sony Ericsson was to bring established Sony Electronics brands — notably Cyber-Shot and Walk-

man — to phones focused on imaging and music in the heyday of the feature phone, which the joint venture clung to for too long. Xperia, in contrast, was the company's first “native” sub-brand meant to evoke “experience,” of course. And while many in the line have been well-received,



“Samsung is seeking to share the halo of the Galaxy smartphone brand with an Android-running cellular-connected camera.”


they never translated into a strong global market share for Sony Ericsson.

Alas, the same has been true for Sony's first tablets, the Tablet S and Tablet P. While the Tablet P's dual-screen design created a host of issues, the Tablet S' sloped “folded magazine” profile was differentiated and comfortable. The tablet itself was responsive, but that didn't translate into much headway, even in a product class where Android products have struggled overall. There's not a lot of “magic” in the Xperia brand that Sony can hope will rub off on its tablets. In this case, it's more about tying together two product categories that clearly have many similarities and, at least for Android, can run the same apps.

For Samsung, the Galaxy brand has been a juggernaut that the company has grown more dedicated to featuring as it did when it rolled out its mainstream flagship Galaxy S II, and one that it has used with its Android tablets from their inception. But while Sony may be playing catch-up to Samsung on smartphones, televisions and even tablets — at least from the S sales perspective — Sony has been firing on all cylinders in the digital imaging space, pumping out well-received products in the SLR category, NEX mirrorless line and high-end compacts such as the recently released RX100

with its large sensor size and fast f/1.8 lens. Samsung's cameras, while boasting competitive specs and some innovative features, haven't seemed to win over the market in terms of image quality.

And so, Samsung is seeking to share the halo of the Galaxy smartphone brand with an Android-running, cellular-connected camera. Unlike tablets, which are inherently connected devices, it's unclear whether Galaxy cameras will be applied to just some of Samsung's imaging devices or whether it will, over time, grow to encompass the entire line. But, clearly, Samsung is sending a message that it believes camera connectedness (and potentially usage and distribution) will be more like that of smartphones moving forward.

Sony's expansion of the Xperia brand to tablets is a low-risk bet, but one that seems to have relatively low reward potential as well. Samsung's also seems like a relatively low-risk move in that stretching the Galaxy brand to cameras will likely do little to dilute whatever value it may have in smartphones. Samsung hasn't been able to use connectivity to translate into a strong shift forward in its camera position, but that's clearly one of the tactics it's continuing to expand. 



IT'S TOUGH BEING WII U



DISTRO
09.14.12

FORUM

REACTION
TIME

BY LUDWIG KIETZMANN

IT SUCKS TO BE WII U in 2012. The current console generation, in which Nintendo's first Wii already occupies an atypical position, seems to be on its way out. By the time the existing audience starts to split and shift to whatever silicon successors Sony and Microsoft send into the marketplace, the Wii U will have faced a crisis of classification: Will avid consumers see it as the first new arrival, or as a latecomer to a party that started seven years ago?

The Wii U's confirmed lineup of launch games is solid, but certainly doesn't evoke any of the oohs and aahs you'd reserve for a bold new future. There's a distinct lack of first-party software, and a lack of distinctness in Nintendo's own *New Super Mario Bros. Wii U*, which is expected to launch somewhere between November 18th and March 2013. The homogenization of the "New" franchise has resulted in a classic look, but has made it more and more difficult to tell apart and appreciate the

individual games on DS, 3DS and Wii U. The good news: Eetsa Mario! The bad news: It's a Mario!

Meanwhile, there's a jaunt through *Nintendo Land*, a virtual theme park of mini-games built from the company's iconic characters and classic programs. It's essentially designed to highlight and teach the Wii U's new mechanisms, much like *Wii Sports* sold new adopters on the motion controls of the original Wii. It's not likely to excite hardcore fans, however, who'd rather have a new



Metroid than a cute *Metroid*-themed playground. *Pikmin 3*'s launch date has yet to be determined, and though Nintendo has hinted at a new *Zelda* game, that's about as certain as the four-plus years it'll take to develop.

Nintendo has touted the Wii U's extended support from third-party developers like EA and Ubisoft, but there's a heavy presence of ports in the launch, which brings a pervasive feeling of "too little, too late." Batman is escorting the Wii U to an updated version of *Arkham City*, more than a year after that game debuted, peaked and got the t-shirt. *Mass Effect 3* is making an appearance (losing the ability to import a saved file from the previous multiplatform game), alongside THQ's *Darksiders II* (on Xbox 360, PS3 and PC since August) and *Ninja Gaiden 3* (available since March). If you're really interested in these games, there's a good chance you already have the means to play them without tacked-on touchscreen tweaks.

Ubisoft is by far the biggest third-party supporter of the bunch, offering unique games like *Rayman Legends*, another beautifully drawn 2D platformer, starring the company's limbless mascot, and *ZombiU*, a post-apocalyptic shooter that expects players to survive all manner of horrors, starting with the title. Ubi's pair may be enough to hook in hardcore console adopters, but the real secret to Nintendo's success has been in unearthing a mainstream audience.

That audience couldn't help but

4 NEW GAME RELEASES FOR THE WEEK OF SEPTEMBER 14TH



DOUBLE DRAGON NEON
XBLA, PSN - \$10



JOE DANGER 2: THE MOVIE
XBLA - \$15



TEKKEN TAG TOURNAMENT 2
Xbox 360 , PS3 - \$60



**RED JOHNSON'S CHRONICLES
- ONE AGAINST ALL**
XBLA, PSN, PC - \$10



Click
on game
to buy





embrace the Wii, which pitched itself almost effortlessly with easily decipherable games (who doesn't get bowling?) and a see-it-and-believe-it gimmick. You swing the Wii Remote and your tennis racket moves in the game, just like that. That's cool!

The messaging behind the Wii U is more complicated by necessity, because the system's gimmick isn't as easy to demonstrate or explain. The concepts of asynchronous multiplayer and screen switching, made possible by the Wii U's blend of tablet and controller, are exciting prospects — to the informed audience. Whereas the Wii was a clear divergence from what people thought

of as conventional gaming (i.e. lots of shooting and lots of buttons), the Wii U layers traditional design on top of motion gaming, on top of a tablet.

As with any product, the right price can help the Wii U overcome the observation that it's harder to explain to a casual audience, and easier to dismiss by an entrenched one. With the system launching at \$300 (and \$350 for a "premium" model), while phones and tablets already eat a significant chunk of gaming time, I suspect many will be on the fence about the Wii U. Its value isn't as obvious compared to the Wii in 2006, and the price of its controller alone will be a sticking point once games start supporting multiple tablet-equipped players. Compare the Wii U's central interface — heck, why not the whole system? — to Google's Nexus 7, a fully featured \$200 Android tablet that plays games and plays movies. In 2012, that might seem like a better pill to swallow. **D**

**The good news:
Eetsa Mario!**
**The bad news:
It's a Mario!**



REVIEW

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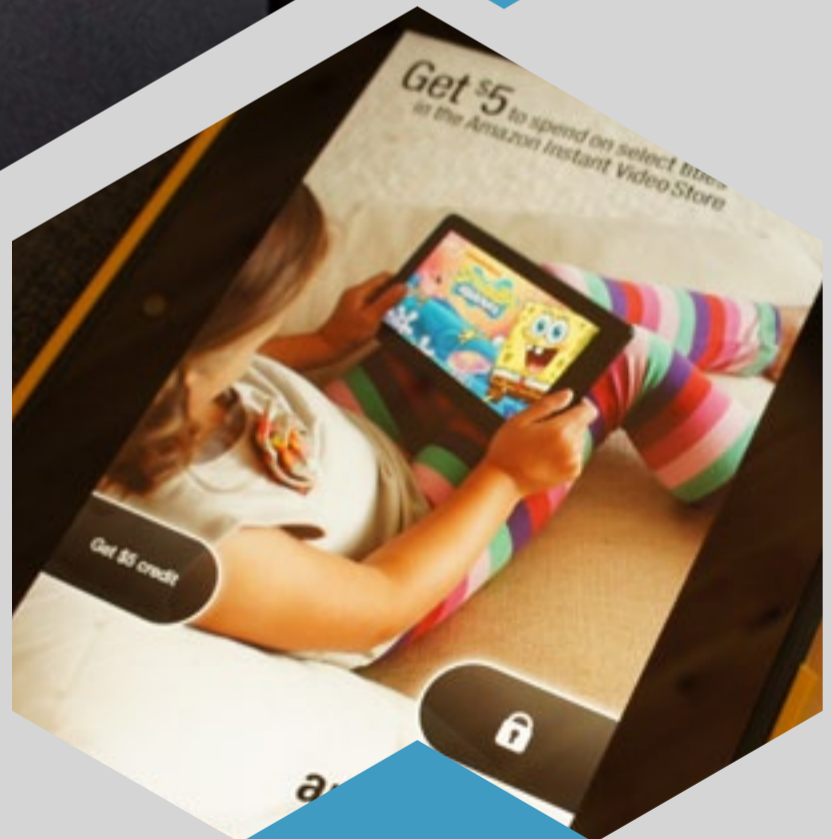
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iPhone 5
Preview



Contour+2



Amazon
Kindle
Fire HD



DISTRO
09.14.12

PREVIEW

IPHONE 5

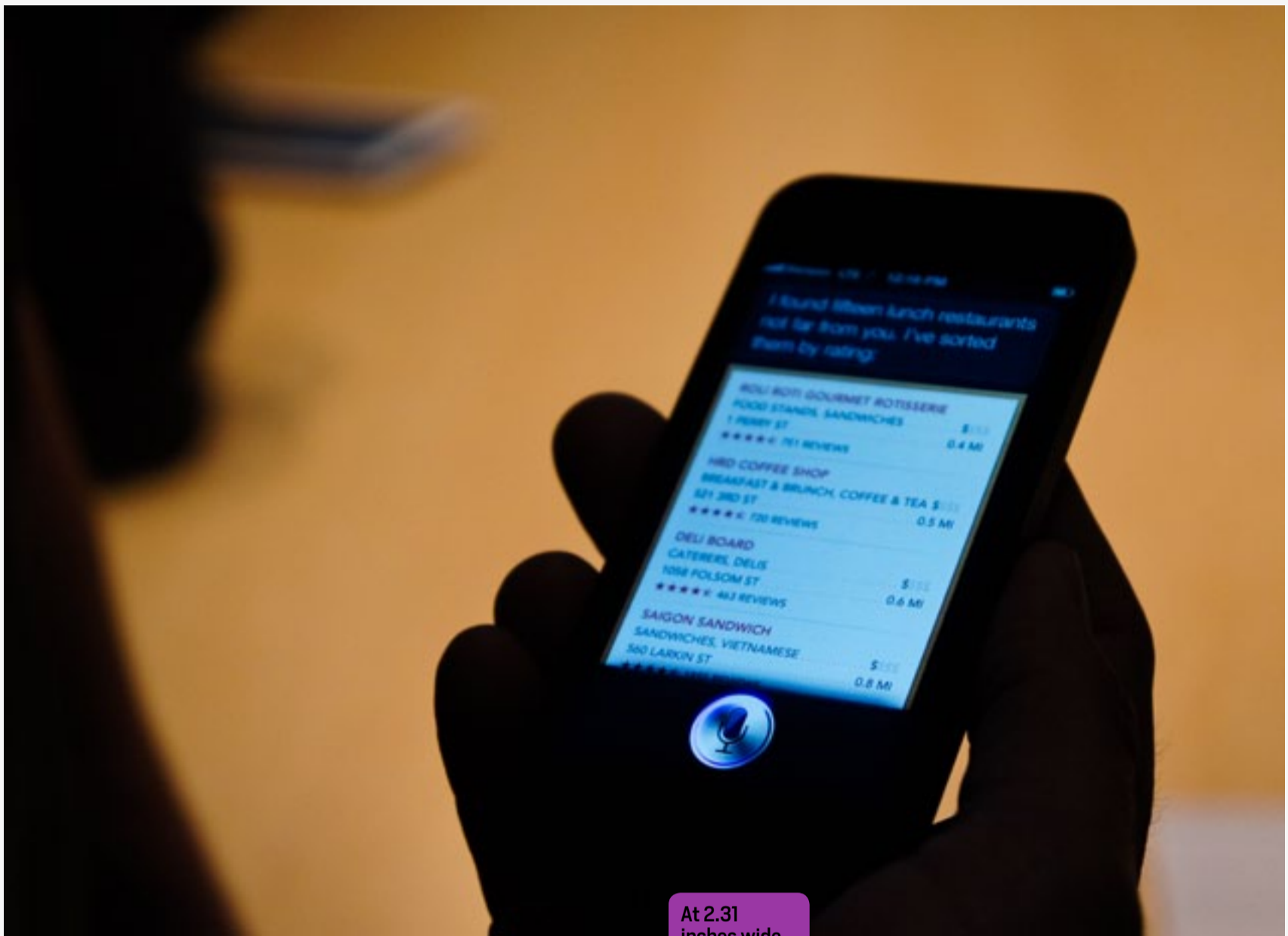


It's finally here.
The **iPhone 5**. It has a lightweight, superpowered package and sexy design, but will you be sold on Apple's next big thing?
By **Darren Murph**

At long last, the iPhone 5. We got our hands on Apple's latest smartphone following its unveiling in San Francisco, and suffice to say, it's a beautiful thing. Some might say we've been waiting for this moment since October 4th of last year, but another crowd may say that the *real* next-gen iPhone has been on the burner for much longer. Indeed, this is the first iPhone since June of 2010 to showcase an entirely new design, but it's obvious that Apple's not going to deviate far when it comes to aesthetics.

Apple followers will aptly recall Steve Jobs'





At 2.31 inches wide you'll still be able to grip it comfortably.

quote in July of 2010 — you know, that one about “no one” wanting a big phone, with current CEO Tim Cook seated just feet from Steve as the phrase was uttered. Now, however, Apple’s inching ever closer to that very realm, with an elongated 4-inch display that enables new apps to take advantage of more pixels (1,136 x 640), while legacy apps can still operate within a familiar space. The phone itself doesn’t feel too much different than the iPhone 4 and 4S; yes, it’s a bit taller, but by keeping the width the same, you’ll utilize a very familiar grasp to hold it.

In typical Apple fashion, even the finest details have been worked over tirelessly.

The metal feels downright elegant to the touch, and the same line we’ve said time and time again applies here: there’s no doubting the premium fit and finish when you clutch one of these things. Yeah, the headphone port’s now on the bottom, but avid Galaxy Nexus iPod touch users shouldn’t have too much trouble adjusting.

The rest of the leaks, by and large, were proven correct. High-speed LTE is being included in an iPhone for the first time, and the new Dock Connector is indeed smaller. Arguably, that’s the change that’ll cause the most headaches for longtime iDevice users — if you’ve





The glass and aluminum give the 5 a premium look and feel.



purchased an automobile, a speaker dock, or any of the other zillion iReady products in the past half-decade, you'll need to pony up \$30 for an adapter to make things work properly.

Apple's made this one lighter than before, and while the outgoing flagship never really felt heavy, this one feels impressively light. After all, it's both taller *and* lighter. The display — which meets sRGB color specification — now has an integrated touch layer, and Apple's not holding back when it calls it the “world's most advanced display.” Sure enough, it looks beautiful. Of course, displays across the industry

have been becoming increasingly sexy to look at, and Apple's newest most certainly pops when you ogle it. Is it better than the 4S? For sure, but it doesn't make the 4S' panel look dated by any means. The anti-glare measures implemented are highly appreciated, too.

The new A6 chip, in typical Apple style, hasn't revealed itself in terms of raw tech specs. But at a glance, it's definitely quicker than the chip in the 4S. Much like the speed increases between the iPhone 4 and 4S (and before that, the iPhone 3G vs. iPhone 3GS), they won't take you by storm right away. *But*, use it for half an hour and you'll have a hard time going back to a slower chip. The transitions are smoother, switching between apps is a bit quicker and everything just generally feels incrementally faster. ◊

Darren holds the Guinness World Record for being the most prolific professional blogger on planet Earth. He's also an argonaut.



CONTOUR+2

Will wireless control, GPS and an improved design give the **Contour+2** an edge over the competition?
By **Tim Stevens**

It's been a little while since the two major players in the helmet cam industry, Contour and GoPro, refreshed their wares. Contour launched its Contour+ and Roam models last summer, while GoPro delivered the HD Hero2 late last year. As our extensive testing can attest, both companies put out great cameras, but with Sony about to get in the game with its \$199 Action Cam, the pair need to raise their games — and that's exactly what Contour is doing with the Contour+2.

This logically named follow-up to the Con-



tour+ is a big step forward on many levels, still delivering 1080p recording while offering many design and software improvements, including the ability to use your smartphone not just as a viewfinder, but to start and stop recording, too. Plus, at \$400, it's \$100 cheaper than last year's offering — and that's despite coming with a fully waterproof case. Join us as we put it through its paces.

HARDWARE

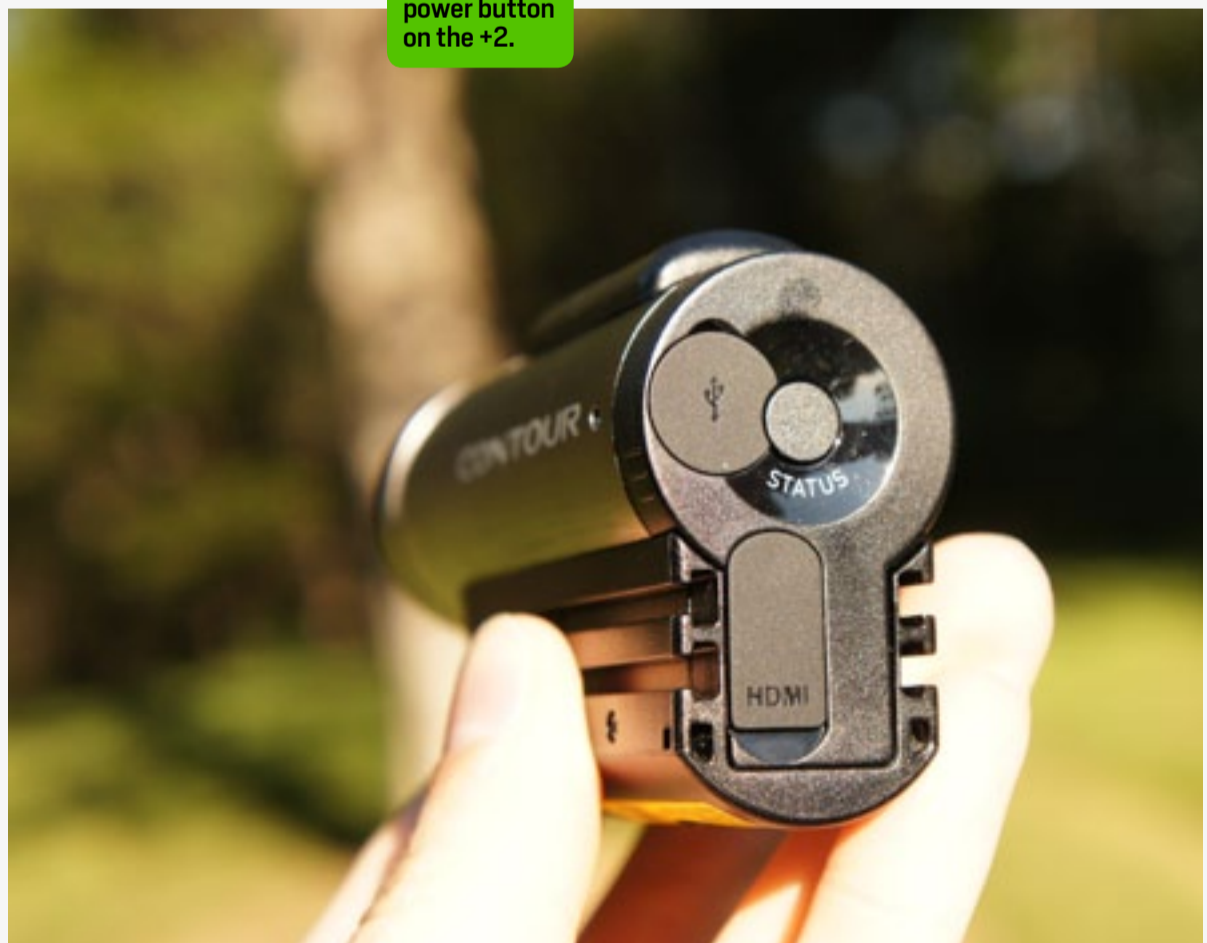
We've been tracking the evolution of this camera series since the company first hit 1080p with its ContourHD line back in 2009. Since then, the cameras have maintained their familiar shape, but with each iteration, they've gotten subtly better and better. The Contour+2 is the best yet. It's a small and unmistakably cool-looking thing, the dark plastics working well with the brushed metal barrel that holds the camera internals. The branding printed on the side is sophisticated and doesn't detract from the overall clean look.

Up top is the most important control: the Contour's trademark slider. As before, knock it forward and the camera starts recording.

The Contour cameras have maintained their familiar shape, but with each iteration, they've gotten better and better. The Contour+2 is the best yet.

Slide it back and it stops. The raised slider is textured and easy to find, even with gloves on, and there's still the reassuringly loud beep to let you know that you have, indeed, started filling up your memory card. Now, though, the power button is moot. You no longer need to even think about turning the camera on before filming. Just pop that slider for-

A status button replaces the power button on the +2.



ward and you're good to go.

That slider has been augmented with a manual lock, so you can ensure your recordings stop only when you want them to, while a series of three status LEDs are now situated behind it. From left to right, there's battery, memory card and GPS. The left two turn from green to red as they are slowly exhausted, while the GPS indicator blinks when searching for a lock. The Bluetooth toggle button still sits ahead of the slider, but now it's thankfully far easier to press than before.

On the back, where once was a power button there's now one called "Status." Tap this and all three indicator lights will illuminate, so you can see how you're doing, and the alignment laser up front will pop on, too. Yes, the front-mounted laser makes a triumphant return, shooting out a red line to help you quickly orient your camera.

That's important thanks to the rotatable nature of the Contour line. Like before, its largely cylindrical shape belies the clever, twistable innards that spin 270 degrees. So, regardless of how you mount it, you can ensure your footage is right-side-up.

The camera's largely cylindrical shape belies the clever, twistable innards that spin 270 degrees.

Below that barrel is the same grooved extension, shaped the same as all the older models to enable compatibility with old mounts. Thankfully, there's now a threaded receiver built into the bottom, meaning you can just screw this onto any standard camera mount and ignore those grooves altogether if you like.

Also on the bottom is an audio input, covered by a rubber door. This means you can run your own mic solution if the internal microphone isn't up to your standards (and there's a good chance it won't be). On the back, two more doors flip open to expose a mini-USB port for charging (still no micro) and a mini-HDMI socket to get a direct, digital feed of content. Furthermore, the whole back flips open to expose the 1,050mAh battery (same as before), as well as the microSD card (a 4GB unit is included in the box). Finally, there's a mode switch, so you can quickly toggle between two configurable video presets.

SOFTWARE

Connectivity with the Contour line mostly happens courtesy of the same old Storyteller software, which remains little changed from before — that is to say, it's kind of clunky and sluggish. But it's thankfully been granted some additional functionality that makes it rather more usable, especially on the sharing side.

Before, if you wanted to share your Contour footage and include the GPS metadata — map, altitude, speed and





You can now start and stop footage remotely from iOS.

such — you had to use a proprietary embed. You couldn't bake it right into the video itself. That changes with the +2. The new version of the software will let you add an overlay to the video showing the map, altitude and speed — or, if you'd like to hide any of those figures, you can. You can choose which corner of the video contains the overlay and then push it straight to YouTube, if you like. You can also get a GPX export of the coordinates recorded by the camera, which can then be fed straight into any of a number of tracking applications, like Strava or Endomondo.

The mobile apps have also been updated. Well, the iOS app has been updated — the Android version will get a fix soon, we're told. With the iOS app you can still use it as a remote viewfinder, connecting over Bluetooth and getting a live stream of the footage to help you get the camera perfectly aligned. Now, though, you can start and stop the footage remotely. So, if you've mounted the

camera somewhere out of reach, like the roof of your car, you can start or stop it without having to release your racing harness. (Or, you could just ask a member of your pit crew to do it for you.)

ACCESSORIES

Inside the box, the +2 comes with a fully waterproof case, a first for the series. If you've used the Underwater Mount Kit you'll be familiar with it. It's good down to 60 meters and allows you to start / stop recording with the slider on the top and also access the status button on the back. Two latches will lock it onto any sliding mounts and we're happy to report it's far easier to pop open than the GoPro's crack-prone latches, but it still feels secure when closed.

You also get a low-profile adhesive mount, good for sticking on smooth surfaces like motorcycle helmets, and another adhesive mount with a rotating base. This allows you to spin the camera around to point in the opposite direction, should you be so inclined. Both of these mounts use double-sided 3M adhesive, which we've found over the years to be highly effective at sticking on at extreme speeds without damaging the finish beneath.

If that doesn't provide you with enough options, Contour will be making





The Moto kit for all of your various mounting needs.

available a series of mount kits. We checked out the Moto kit, which gives you two more of those low-profile adhesive mounts (one for each side), another rotating flat surface mount, a flex strap mount that's great for handlebars and roll cages and a PanaVise suction cup mount. We've used these PanaVise mounts extensively on shoots in the past and found they stay stuck even when your speeds are well into the triple-digits — like, say, on the wing of a stunt airplane.

Finally, the kit also comes with a little pouch to carry all that mess.

TESTING

Cameras like this are meant to move, so we didn't waste much time before slapping the

+2 on the side of a helmet and taking it for a ride. First, though, we charged it up over mini-USB and hopped into Storyteller to tweak some settings. We opted for 720p60 recording for a stint on a motorcycle, then dropped down to 720p30 for a more leisurely bicycle ride. We left the GPS on in all situations, and bumped it up to 5Hz mode for better precision (sampling five times per second, rather than the usual 1Hz that most GPS units record).

The Contour+2 is a great package. Given the choice, it's the one this author would slap on his helmet.



Rotating, helmet-mounted camera is ready to go.



if you really want to capture every moment of the action, there's a 120fps mode — but only at 480p.

Captured footage looked bright and clear, though a bit heavy on the compression. Naturally the tiny sensors found in these cameras do best when there's plenty of light to be found, and indeed that's the case here. Riding around

After we took the camera outside, we were pleasantly surprised to see that a GPS lock was acquired after only a few seconds of green blinking. So, without further ado we flipped the recording slider forward and hit the road. We tried the rotating helmet mount first inside the waterproof case, then switched over to the PanaVise suction cup mount and ran that both with and without the case. Finally, we wrapped the strap mount around the handlebars of a road bicycle and went for a ride.

We stuck with 720p recording for the most part as that gives the widest field of view at 170 degrees. The camera cuts down to 125 degrees at 1080p, and we didn't find the increase in resolution a worthwhile tradeoff for the restricted field of view. Default is 60fps recording at 720p, but you can select 30 if you like or,

on a sunny day resulted in plenty of beautiful footage of the fields and trees that whisked by on the sides. But, even on the dark, morning bicycle ride, dodging in and out of long shadows, the camera coped quite well.

In bright sunlight, we did notice some visual aberrations when using the waterproof case. The corners of the video showed a hint of distortion from the edges of the lens and a bit of internal refraction of the sunlight was also occasionally apparent. So, you'll want to leave it off whenever the sun is shining, which means you'll unfortunately have to make do with some excessive wind noise.

Sadly, the biggest problem of the Contour line is still here. Audio quality still falls a bit short, with the front-mounted mic picking up a good deal



of wind noise at anything above about 20MPH. So, it should be fine for snowboarding and skating, but for motorsports you'll want to rely on an external mic should your +2 be mounted out in the wind. We'd hoped that the new waterproof case would help, and it does to some degree, but it also mutes just about everything else.

Again, though, the presence of a line-in for audio means you can fix this with a cheap external microphone. Put it somewhere out of the wind and distortion-free audio can be yours.

WRAP-UP

This helmet camera doesn't take any big steps forward with audio or video quality compared to the competition. Then again, with 1080p recording in a package this small, and a line-in for audio from whatever source you want, it could be argued there's not a lot of headway to make there. The improvements here lie elsewhere, with the addition of a fully waterproof case, bet-



A subtle logo paired with brushed metal and dark plastics.

ter wireless viewing and control from mobile devices over Bluetooth, easy video sharing and an MSRP that's \$100 cheaper than last year's model. While it's still about \$100 more than the GoPro HD Hero2, the wireless functionality and GPS tracking here more than make up for that.

The Contour+2 is a great package. Given the choice, it's the one this author would slap on his helmet. **D**

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

BOTTOMLINE

CONTOUR+2

\$400



PROS

- Great, discreet design
- Rotatable lens
- Wireless connectivity
- Quick, accurate GPS

CONS

- Middling audio quality
- Still pricey

BOTTOMLINE

Contour's latest POV camera is the one we'd choose for helmet-required action sports.



AMAZON KINDLE FIRE HD 7-INCH



Amazon juiced up its WiFi, audio, software and resolution, but is the **Kindle Fire HD** more than just a media consumption device?
By Tim Stevens

It was 10 months ago that we had a doppehgänger in our midst. Amazon unleashed the Kindle Fire to the world and we spent much of the beginning of our review comparing and contrasting it to the (even then a bit long-in-the-tooth) BlackBerry PlayBook. Now, finally, we can stop making that comparison — at least for this, Amazon's current top-shelf tablet.

It's the Kindle Fire HD and it quite handily addresses nearly every concern that we had with the original Fire. It's thinner, lighter, faster and, yes, better looking. It's a huge step forward from that



which came before and yet it still follows very much in the footsteps of its predecessor, existing as a physical portal to a digital marketplace with an alluring selection of premium content. Is it enough of an improvement to topple our current king of budget tablets, the Nexus 7? You'll just have to read on to find out.

HARDWARE

To borrow a bit of cigarette marketing, the Kindle Fire HD has come a long way, baby. Where the Fire is square, dark and decidedly slab-like, the Fire HD is... well, it still isn't a knockout in the styling department, but it is at least considerably more visually appealing. The angular edges from before have been banished, replaced by a profile that curves up to meet a few millimeters worth of flat surface that then curves back again to meet the glass up top. That surface is indeed made of Corning's Gorilla Glass, so you can probably do without a protector, and it covers a 7-inch panel, the same size as before. (The 8.9-inch model won't arrive until later this year.)

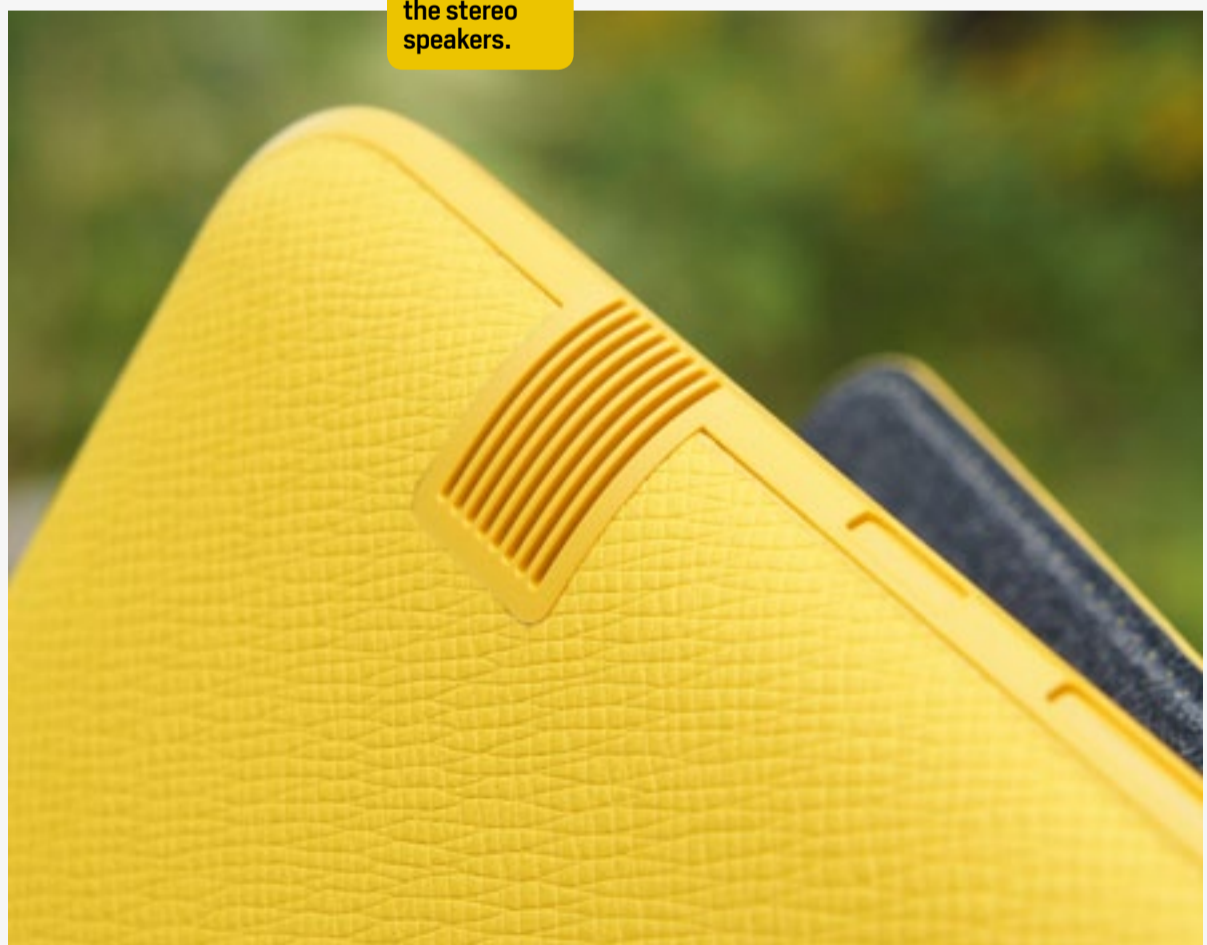
The Kindle Fire HD measures in at 7.6 x 5.4 x 0.4 inches (193 x 137 x 10.3mm). That's slightly (3mm) wider, noticeably (17mm)

Both speakers are covered with a lined grille that makes us think of the radiator inlets on a Ferrari Testarossa.

taller and fractionally (1.1mm) thinner than the Fire. In other words, it occupies roughly the same dimensions, but the taper on the back surface does a compelling job of making this feel thinner. It's slightly lighter, too, weighing in at 395g (13.9oz) compared to the OG machine's 413g.

The overall design remains understated; visually, a sea of soft-touch matte black will be your overwhelming impres-

This custom cover offers vents for the stereo speakers.



sion here. But, with that comes an air of sophistication. The Amazon logo is still subtly printed on the back, a dark shade of gray stamped atop the darker exterior. You may be visually assaulted by Amazon branding at every turn once you switch the device on, but the exterior at least is reasonably clean.

Across the back runs a slightly polished metal band, the lone bit of stylistic indulgence here. It spans the width of the tablet, running from one speaker to the other and, along the way, has the word “kindle” embossed. Yes, there are two speakers here, one for each of your ears in the natural way. Both are covered in a lined grille that makes us think of the radiator inlets on a Ferrari Testarossa, though that might be entirely due to the prevalence of said car on the walls of this author’s childhood bedroom.

Take a tour around the edges of the device and you’ll find a far more comprehensive selection of buttons and

This physical volume control is also new compared to the Fire, which asked you to hop into the UI whenever you wanted to turn up the jams — or the Audibles, as it were.

ports than in the original Fire, a big step forward that shows Amazon listens to criticism. This is a tablet clearly designed to be held in a landscape orientation when enjoying media, and held thusly, you’ll find micro-USB and micro-HDMI ports on the bottom. The USB port is used for charging or file transfers, though you can also email files to your device (via the custom address each Kindle is assigned) or upload them through the Cloud Player service. The HDMI output is a very welcome addition and enables pushing all those high-def movie downloads straight to your HDTV, should you be so inclined.

The left side of the device has nothing to offer, while the top has a small microphone. On the right is found the 3.5mm headphone jack, positioned atop a volume rocker and power button. This physical volume control is also new compared to the Fire, which asked you to hop into the UI whenever you wanted to turn up the jams — or the Audibles, as it were. This is far more convenient, but we found all the physical controls to be very hard to find by touch. The power button in particular is virtually intangible: tapered and flush. You’ll need to flip the tablet around to find it for at least your first week of ownership. The volume rocker, at least, has two slight protrusions to set it apart.

INTERNALS

There are two storage options for the 7-inch Kindle Fire HD: 16GB for \$199





With its dual antennas, the HD (left) had a heck of a WiFi boost.

or 32GB for \$249. Opt for the smaller and you'll have about 12.6GB of space at your disposal, while the larger offers 26.9GB. Otherwise the two are identical, both using a 1.2GHz dual-core TI OMAP4460 processor. Amazon doesn't quote the amount of RAM, but a system check shows 752MB.

There's no 3G / 4G option on the 7-inch Fire HD; you'll need to step up to the forthcoming 8.9-inch model for that — and pay an extra \$200, too. So, we're stuck with WiFi, but not just *any* WiFi. Jeff Bezos spent about five minutes of the Kindle Fire HD's coming out party to espouse the virtues of MIMO connectivity. That's multiple-input multiple-output if you're not hep with the lingo, basically meaning the tablet can both send and re-

ceive data simultaneously over its pair of antennas.

In theory, if you're sending and receiving a lot of data this means you'll receive better overall throughput. The dual antennas will also mean higher overall signal strength, and compared to a few other Android devices we had kicking about (a Nexus 7 and a Motorola Droid RAZR M), the Kindle Fire HD was easily the best of the bunch. We loaded up the Wifi Analyzer app on all three and the Kindle consistently had a 10 to 15dBm stronger signal, and was able to keep that signal farther away from the router than either of the other two.

DISPLAY AND SPEAKERS

If you hadn't guessed by the name, the Kindle Fire HD takes the tablet series





The HD sports one bit of bling in the form of a metal strip.

into the world of high-definition. It's a 1,280 x 800 IPS LCD that, like its sadly lower-res predecessor, offers solid brightness and contrast mixed with wide viewing angles. It looks very good indeed and, with greater-than-720p resolution, can finally do all that HD content in the Amazon store justice. That said, with that HDMI output you can also push that content digitally to whatever other display you want.

The HD also steps up to stereo speakers and Amazon is making a big deal about this being one of the few (if not the only) tablets offering Dolby Digital Plus. In theory that means better and broader support for digital compression algorithms, as well as other fun and largely useless stuff like virtual surround sound. We'll let you, the reader, decide how important virtual surround is to your listening enjoyment, but overall we didn't find the speakers themselves to be particularly impressive in terms of their acoustic delivery.

In fact their sound is distinctly on the tinny side, as one might expect

given the size, but they are respectably loud and, frankly, it's a refreshing change to have two of the things. Here they're well-positioned so that you get maximum stereo separation when watching a movie or playing a game and we found that they work well even when covered by your hands. That, too, isn't something that can be said for the sound ports on other slabs.

PERFORMANCE AND BATTERY LIFE

The Kindle Fire HD may only get a 200MHz boost in performance over the Kindle Fire that came before it, but it feels considerably quicker than that. The media-focused UI customization that the previous tablet couldn't really handle is far more responsive now. That main carousel of content and apps and websites that is the trademark of the Fire series no longer has fits and stops and stutters — but there are still some sluggish moments, particularly when reading comic books. We spent a fair bit of time admiring Frank Miller's "Batman: The Dark Knight Returns" and couldn't help noticing the uneven rate with which the pages turn. But that didn't stop us from being glad we have access to such a wide swath of the DC back catalog.

Web pages load quickly, the latest version of the remote-rendering Silk browser beginning to live up to its name, but it still doesn't beat a standard browser in either initial rendering time or fluidity of pinch-zooming. The Chrome browser



on the Nexus 7 rendered every page we threw at it faster than the Fire HD, all without relying on any fancy off-site rendering techniques. Of course, the purported beauty of Silk is that it'll just get faster the more people that use it, but we never quite saw that come to pass with the last version, and we don't have particularly high hopes about this one picking up in speed.

As with the last Fire, we didn't have much luck running specific Android benchmarks, but the SunSpider JavaScript browser test gave us an average score of 1,767ms. That's nearly 700ms faster than the previous Fire and almost identical to the Nexus 7's 1,785ms.

BATTERY LIFE

When it comes to battery life Amazon says you can expect 11 hours of normal usage, and in our typical battery run-down test (with a looping video, WiFi on and the display set to a fixed brightness) we scored about an hour short of that. Nine hours and 57 minutes, to be exact — eight minutes more than the Nexus 7 managed on the same test. Yet again, a near-identical score and well within the top-tier of tablets.

SOFTWARE

Much of the appeal — or the annoyance, depending on your perspective — of the Kindle Fire series comes with its heavily content-focused user interface sitting atop Android. This time around it's Android 4.0 Ice Cream Sandwich that's

BATTERY LIFE	
AMAZON KINDLE FIRE HD	9:57
SAMSUNG GALAXY TAB 7.7	12:01
APPLE IPAD 2	10:26
ACER ICONIA TAB A510	10:23
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
ASUS TRANSFORMER PAD INFINITY TF700	9:25 / 14:43 (KEYBOARD DOCK)
MOTOROLA XOOM 2	8:57
SAMSUNG GALAXY TAB 2 (10.1)	8:56
HP TOUCHPAD	8:33
ASUS TRANSFORMER PAD TF300	8:29 / 12:04 (KEYBOARD DOCK)
ACER ICONIA TAB A700	8:22
ACER ICONIA TAB A200	8:16
SAMSUNG GALAXY TAB 7.0 PLUS	8:09
SAMSUNG GALAXY NOTE 10.1	8:00
AMAZON KINDLE FIRE	7:42
GALAXY TAB 2 7.0	7:38
ACER ICONIA TAB A500	6:55
ARCHOS 101 XS	5:36



The interface is largely unchanged but, thankfully, so much smoother than before.

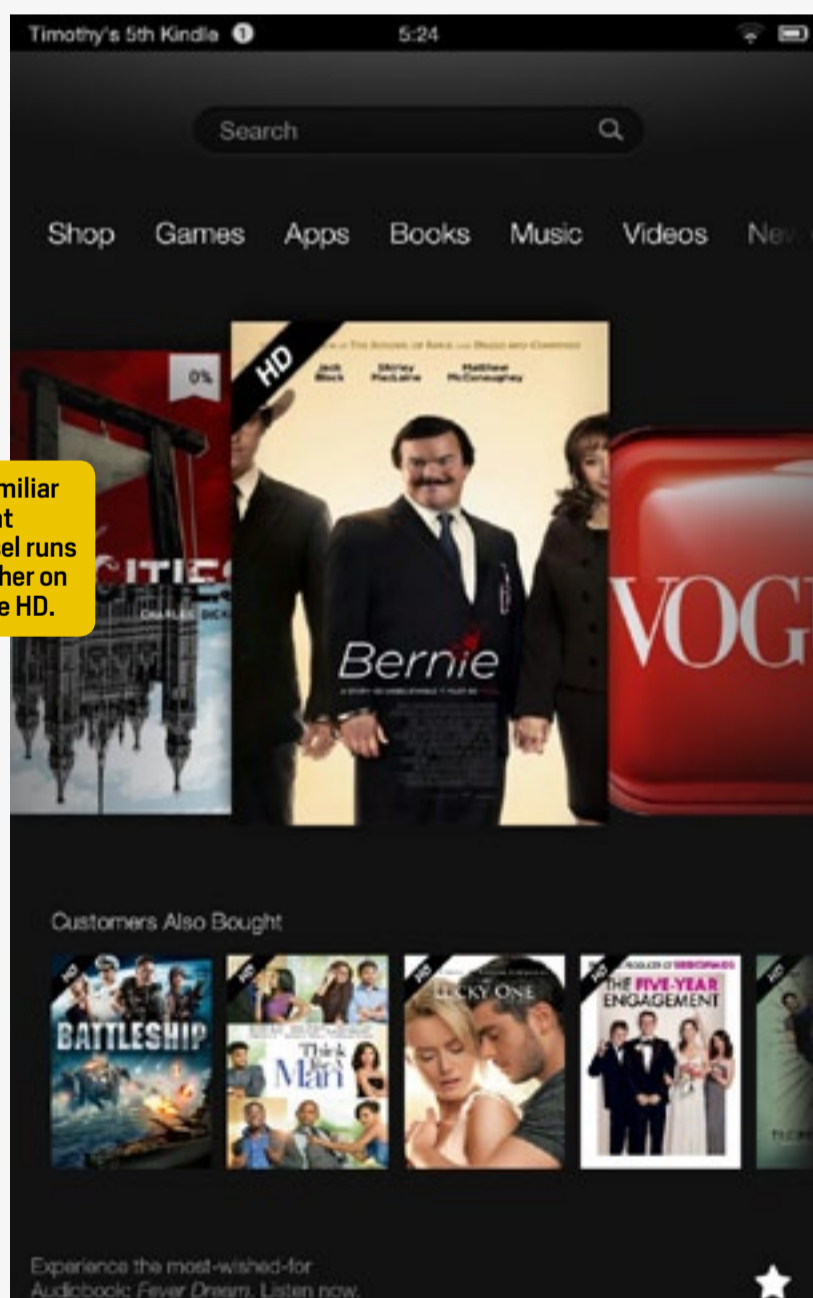
been given the treatment and, in general, things are much improved for it.

INTERFACE: The Kindle Fire HD is still built around the main carousel of content that was introduced with the Fire. It's largely unchanged but, thankfully, so much smoother than before. That carousel offers one-stop access to all your books, music, movies, apps and even websites, all presented in LIFO (last in, first out) order so your most recent selections are right there at the top.

Beneath the main cycle of icons is another sequence of smaller ones that changes dynamically based on what is highlighted above. Hover over an app and it will offer a selection of apps that "Customers Also Bought." Stop at a certain book and it will show you some other novels that people have also bought. The same can be said for movies, music albums, even magazines. Finally, at the very bottom of the screen is an advertisement. If you're looking to buy *something* but don't know what, the Kindle Fire HD would love to help.

READING: The basic reading interface is largely unchanged from what we've seen before, which is just fine by us — ain't broke, don't fix it and what-not. A swipe or a tap takes you from page to page and there are plenty of options for changing font (still just six), color (black on white, brown on sepia or white on black) and margins. Taking notes is as easy as dragging a finger across text and sharing anything to Twitter or Facebook is similarly simple. Just figured out who the murderer is? Feel free to issue a tweet right from that climactic page and spoil the book for all your friends.

The familiar content carousel runs smoother on the Fire HD.



The big addition here is Amazon's Immersion Reading service. Now, when you purchase a textual book that's also offered in Audible format you'll be given the option of adding the voice narration for a few bucks more. When these two mediums combine you can now play the narration while you read the text and the word being spoken will be highlighted on the tablet as it's said.

This is an experience that's said to increase reading comprehension, but more importantly, it means you can pick up *right* where you left off — whether you left off listening in the car or reading in bed. And, with Whispersync for Voice rolling out to Audible's various mobile apps, you can listen on any of them and have your current position go with you wherever you are. We tried this with the recently updated Android app and it worked perfectly.

PRODUCTIVITY:

Amazon includes OfficeSuite for opening your average Office-type productivity applications, which again you can email right to your Kindle if you like. There are also new email, calendar and contacts apps that deliver a fair bit more usability than with the previous Fire. We plugged in a Gmail

account and the tablet quickly sucked down our recent email, with labels, and within a minute or so, we were fighting the good battle of the inbox bulge anew.

The calendar and contacts app are similarly workable, but serious productivity-hounds will find them somewhat lightweight. For example, you can't tap on an address in a calendar invite to get directions there, can't view calendars shared with you in Gmail and, should you forget to enter an event without a name, it just says "Cannot create an empty event" and loses all of your changes. You do, at least, get reminder notifications pushed into the status bar.

ACCESSORIES

We also received Amazon's leather case for the Kindle, which costs \$44.99 and handily consumes your tablet on all sides and is



Amazon has a variety of vividly colored cases for the HD.



When we reviewed the Nexus 7, we called it the best \$200 tablet you can buy and now, a few months later, we still think that's true. But it's close.

available in a variety of mostly tame colors, like the somewhat subdued yellow we received. It provides easy access to all ports and buttons, cut-outs for the speakers and, best of all, has a magnetic flap that locks the screen when you close it.

Amazon also offers a \$19.99 (\$9.99 if you buy it with a Kindle) charging adapter for the thing, as you'll get only the micro-USB cable in the box. Yes, you can charge it up through any standard USB charger, but you'll need a higher-spec charger like this one (or any of the dozens of iPad chargers) to do so at maximum speed — about four hours by Amazon's reckoning.

And then there's the best accessory of all: \$15 to turn off Offers. Amazon hasn't enabled this feature yet so we weren't able to try it ourselves, but given the prevalence of advertising in this thing, it might just be worth it.

THE COMPETITION

When the original Kindle Fire launched, there wasn't an awful lot to compare

it to. After all, 7-inch tablets were rare and those priced at \$200 were largely, well, junk. That's certainly changed, but the most direct competition for the Kindle Fire HD is its predecessor, now informally called the Kindle Fire SD. It's largely the same device as before, still rocking the PlayBook-esque exterior and limping along with just 8GB of storage, but it now features the same 1.2GHz processor found in the HD. And, it's considerably cheaper at \$159.

For that \$40 here you get twice the storage and a lot more pixels to gaze at, which we think is well worth the increase in cost. But, honestly, if you're swaying well to the casual side and will be doing some simple gaming, surfing and reading — maybe looking for a tablet for a child — the Kindle Fire SD is a really good value.

If, on the other hand, you're someone who is leaning more toward the power user side, you're probably wondering how this stacks up against the \$199 Google Nexus 7. When we reviewed that, we called it the best \$200 tablet you can buy and now, a few months later, we still think that's true. But it's close. Really close. For the same money the Fire HD gives you twice the storage, proper stereo speakers, HDMI output and better WiFi performance. Plus, there's an amazing wealth of premium content always at your fingertips — you'll never want for something to watch, read or listen to.

But, we'd still take the Nexus 7. All that content can't make up for the dis-



tinctly limited offerings in Amazon's Appstore, most notably the first-party Google apps. Gmail and Google Maps alone add significant value to the Nexus 7, and then there's Amazon's heavy-handed Android customization. While the Fire HD is far more responsive than the Fire was before it, it doesn't compare to the feeling of raw, uncompromised Jelly Bean.

WRAP-UP

Even if you step up and pay the extra \$15 to disable Offers on your Kindle Fire HD, you can never and will never shake the feeling that this is less a tablet and more of a tool for shopping — a Trojan Horse that's let into your home thanks to its low price and then unleashes a legion of must-buy items to completely compromise the walls you've built around your budget.

If you can get past that, you have a

The HD 7-inch's snugly fitting case goes strapless.



compelling package in your hands. It's fast, has a nice design, a beautiful screen, proper stereo speakers and, of course, oodles and oodles of premium content. For casual users, the Kindle Fire HD should absolutely be at the top of your shopping list. But, for those looking to do more, and do more rapidly, the Nexus 7 is still the king of this hill. **D**

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

BOTTOMLINE

AMAZON KINDLE FIRE HD 7-INCH

\$199 - \$249



PROS

- Great-looking IPS LCD
- Much-improved design
- Strong WiFi performance
- Extensive premium content selection

CONS

- Occasionally sluggish performance
- Constant sales pitches

BOTTOMLINE

Amazon's Kindle Fire HD is a big step forward over the original Fire, but still a little too customized to appeal to more serious tablet users.



Dreams, Curiosity and a Passion for What's Next: Inside the Mind of Innovation Lab's Mads Thimmer

By Darren Murph



Thimmer gives a tour of the building that will play host to the new Innovation Lab offices, near Copenhagen's Tivoli Gardens.



Innovation. According to Mads Thimmer, it's a word that held a great deal of mystery some 10-plus years ago, but today, "it's thrown around as a cliché." When you really get down to it, though, the art of innovating is a hugely delicate and complex one, fraught with frustration and a curious passion for never settling on the here and now. In covering the world of

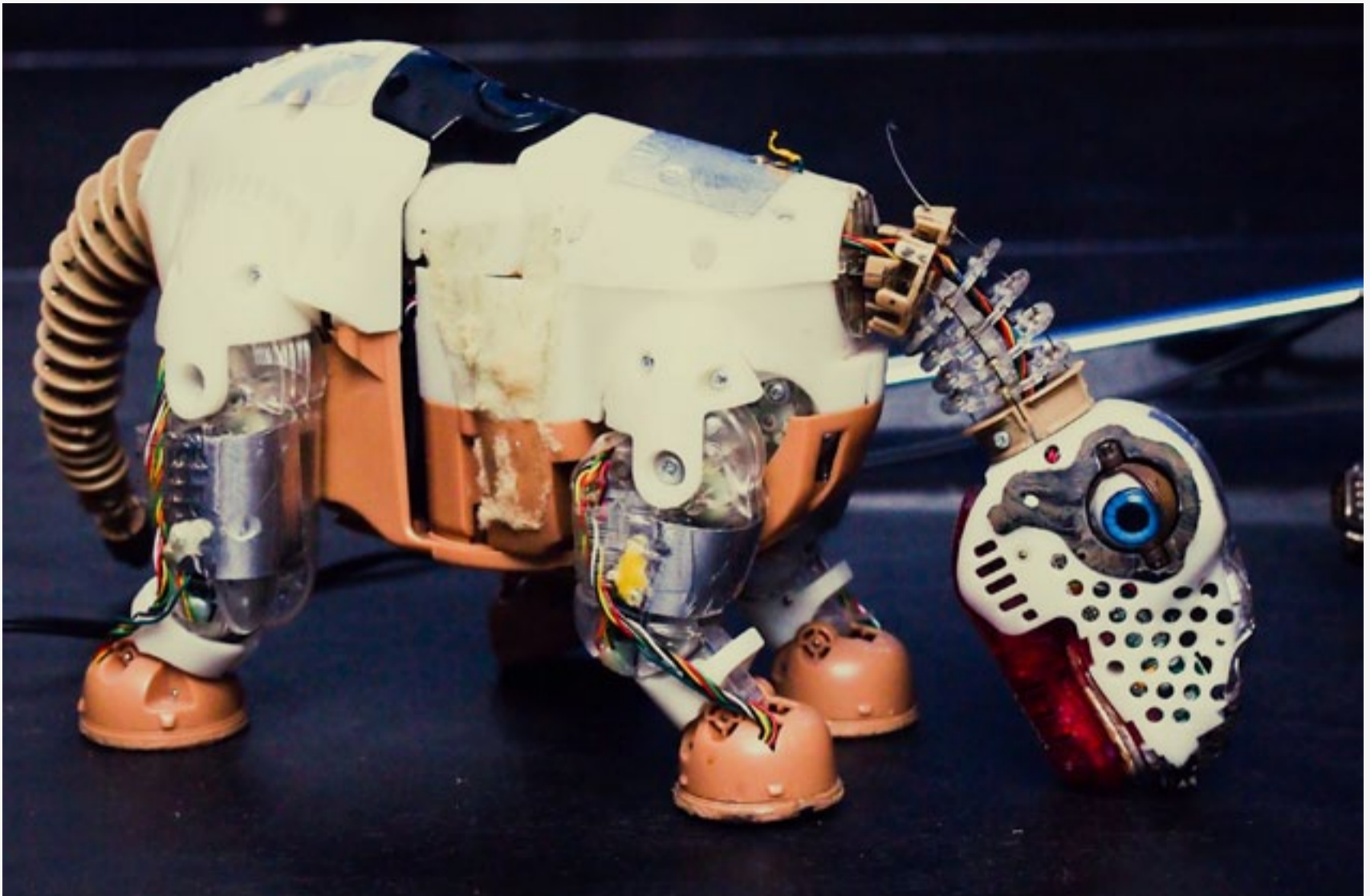
consumer technology, I've come to form my own understanding of what innovation is, what it isn't and how companies are embracing (or outright shunning) the idea. After an evening with the cofounder of Innovation Lab, however, I was rightfully ready to toss my own preconceived notions aside.

MAD BEGINNINGS

According to Thimmer — a man that created a "404" beer that only true internet nerds would appreciate — the cor-

Denmark may seem like a curious home, but a surprising amount of technology is finding roots in this region.





A stripped-down Pleo. Despite falling flat, Thimmer views it as a “Beautiful Mistake.”

porate world took its toll on him early on. Specifically, it was the seemingly endless bureaucracy that tends to sulk around and adhere to corporations with minimal friction. Prior to seeking sanity in his own company, he was crafting games for Games Workshop, working in press relations at Danish telecom TDC and translating Virginia Woolf to Danish. His view of cubes and hierarchy is one shared by plenty of those who have been buried in the enterprise at one point or another — myself included. I spent two years at DuPont pushing Excel sheets around, and another two at Nortel as its CEO drove a sinking ship directly into an iceberg. It’s quite possible that I’ll never get back the portions of my soul that I lost at each place, but if anything, those experiences have made me exceptionally grateful for everything that has come after.

Rather than seeking solace in a different profession as I did, Thimmer decided to devote his life to rescuing the lost. The exaggeration is my own, but Thimmer himself confesses that his work at Innovation Lab “isn’t a career, but a



lifestyle.” Indeed, what he has built is difficult to explain if you’ve only time to hear an elevator pitch. It’s not a consulting firm — he’s fairly turned off by the term — and it’s not *just* a coworking space. Innovation Lab, a non-profit entity based in Denmark but with tentacles in countless locales around the globe, was founded to do a couple of things. One: to attract corporate clientele seeking a more unchained way of thinking to solve problems. And two: to enable its own employees to curate events in order to deliver its message and have it spread in the outside world. He’s certainly okay with working with startups, but perhaps surprisingly, he prefers to target corporate minds that have already been polluted by rules and stipulations.

PURPOSE AND PRESENCE

In an effort to have Thimmer explain precisely what Innovation Lab is, I ask him how he’d describe his life’s work to others. After a bit of pondering, he confesses that simply describing a portfolio of successes and failures wouldn’t do much good. At the Lab, you see, past performance has little bearing on the future. After all, incredible ideas that were relevant in the world of technological innovation just five years ago probably aren’t so much today. That said, he does fondly recall working with a local Danish group that eventually went on to launch PLAY — one of the planet’s first music-streaming services for mobile. In fact, that project launched in March of 2008, well before stars like Spotify and Pandora were known outside of their own closets.

I ask Thimmer what motivates his efforts, and what

drives the machine at Innovation Lab. He chuckles a bit, and first confesses that even he doesn’t exactly have a “role.” He adds, “Rules inevitably lead to

**Rules inevitably
lead to restrictions ...
I don’t like systems.
I don’t like rules.**



restrictions ... I don't like systems. I don't like rules." You may assume that's a rebel's voice, but it's assuredly not. It's delivered with a sense of urgency that perhaps only he can truly understand — after all, he's spent the last 10 years trying to preach openness, respect and curiosity to companies that are being backed into a wall by shareholders who seek little more than short-term gains on playful stock maneuvers.

He fully understands the reality of the situation — in fact, part of every conversation involves the balancing of curiosity with reality, and then relentlessly pursuing methods that would enable sheer curiosity to create a *new* reality. Effectively, the goal at Innovation Lab is to use its myriad coworking spaces to let new ideas flow freely, outside of the conventional rulebook. As Thimmer puts it, there is no rulebook to succeeding in today's market.

"From 1998 to 2008, most of these companies could just throw anything to market, and it'd succeed," he says. "Management today is using a rulebook based on a decade

The more things change, the more they stay the same. One of the world's first personal keyboards next to the OLPC XO laptop.





Nothing like a bit of abstract art to get the juices flowing.

of tactics that no longer work in a demand-driven market. In the years before, we were living in debt-driven times, so there's no real benchmark on how or why something was successful."

In other words, it's easy to succeed when money flows freely; when consumers are forced to clamp down and get picky, the real challenges begin to surface.

I should also point out that Thimmer is relatively opposed to "goals." The point is brought up after I ask him about any overriding goals he has for Innovation Lab. To him, the mere act of setting a goal is the act of placing blinders upon one's eyes — if you're only aiming for a specific finish, you're missing out on opportunities to see what no other is seeing. And once you cross that line, what

next? Complacency? A lifetime of using the same approaches to cross different finish lines? At some point, the rinse-repeat methodology renders an idea or company behind the curve, and once that's recognized, it's likely too late to alter one's tactics. To him, the extended success of Innovation Lab will be the perpetual impact of positivity in the people and companies he comes into contact with.

To that, I inquire how he feels about frustrations. "Surely," I ask, "companies you meet with have obstacles and frustrations? You speak freely of new and open approaches to solving technological issues, but how do you handle the inevitable setbacks?"

Thimmer admits that he typically refuses projects that involve things like IT security and privacy, knowing full well that the requirements there are so burdensome that it makes it nearly impossible to rethink how these issues must be approached. "But for every one of me," he adds, "there are hundreds of negative thinkers." It's a statement that resonates with me — there are far too many instances of negativity, even in the realm of technology, and finding those devoted to instilling a new kind of culture into companies is rare.



ON MICROSOFT, NOKIA AND THE ART OF SELF-CANNIBALIZATION

In a bid to get Thimmer's take on companies frequently discussed on the pages of Engadget, I ask him for his unique view on how and why huge companies tend to run into more red tape than small, nimble outfits. He admits that not every monolithic firm struggles with bureaucracy, but those that do generally suffer noticeably. And it makes sense — for every day wasted on excess meetings and presentation preparation, some smaller, more focused company is probably homing in on the goal. Thimmer brings up one very specific example of a mistake that he sees far too many companies make. It's the mistake of trying to milk a good thing for too long, and moreover, trying to intentionally move forward without building something that's directly better than an existing in-house product.

"I can't think of a single company that has chosen to cannibalize itself and then failed specifically because of that," says Thimmer. "But look at the list of companies that have attempted to halt industry-wide innovation in an effort to prolong profits by maintaining a status quo." It's true. RIM, for years, continued to produce handsets that looked exactly like the model it announced a year before — surely people would continue to adore its legendary keyboard, right? Wrong. Regarding an idea put forth by myself in our conversation, Thimmer concurs that RIM was a classic case of a company shying away from self-

cannibalization, only to have other companies swoop in and do the deed for it. Nokia, similarly, faced "managerial issues" that kept it from spotting the writing on the wall.

As a Dane, Thimmer has enjoyed a better view than most Americans when it comes to the deterioration of Nokia. He describes an era where Nokia's marketing efforts plastered televisions



Thimmer gives me a tour of Central Copenhagen, proving that innovation can happen in one of the planet's oldest cities.



Too many companies look at product launches and expect marketing and timing to do the rest.

with its “Connecting People” slogan. “People were enamored,” he says. “They’d see the ads, flock to stores and pay whatever they had to pay to come away with ‘that new Nokia.’” According to Thimmer, it lulled the company into a place of comfort and complacency — a place where it’d be a waste of time and resources to even *think* about the future being anything but bright. He witnessed a company rake in hundreds of millions in revenue, and rather than spend that internally in an attempt to disrupt itself, it waited until 2007 to have itself disrupted.

“Today, the iPhone possesses Olympic status,” says Thimmer. “It wasn’t that way in 2007 — I recall rather lukewarm reactions to it here in Denmark. Nokia laughed it off. But as it was riding the wave of massive cellular adoption,

it was ignoring an opportunity to build a mobile operating system more fluid and enjoyable than that on the iPhone. It finally chose a different path some two years too late.”

Apple, on the other hand, took a very different approach. On the day the original iPhone was introduced, CEO Steve Jobs actually called out the fact that the iPhone could take the place of an iPod. That it *was* an iPod. Effectively, he was ensuring that you — the consumer — realized that this new device was a more multifaceted version of its hottest-selling product. That, by definition, is self-cannibalization. As if prophetically, Apple has been selling fewer iPods ever since — the lone, sad trombone in every quarterly earnings call is the unsurprising slide in classic iPod sales. But rather than waiting for someone else to come and destroy its iPod market with another creation entirely, it went ahead and did the honors. One could even argue that the iPad is in the earliest stages of also cannibalizing at least a portion of Apple’s Mac sales.

In a slight pivot, I bring up the ill-fated Kin that Microsoft



launched a number of years ago. “Is that not the atypical outside-of-the-box thinking that you’d never expect a behemoth like Microsoft to muster? Is that not exactly the kind of thing you’re encouraging companies to do? How do you respond to a Microsoft executive that uses something like the Kin’s failure as leverage to severely throttle the funding of wild new ideas?” Thimmer clearly understands that things like this do indeed happen, but he suggests that Microsoft likely did not do one of the fundamental things his staff implores clients to do: cultural research. “Too many companies look at product launches and expect marketing and timing to do the rest. If a product fails, it’s clearly due to failed marketing. It’s never due to a failed product.”

Brash, but oftentimes true. Hours earlier, I spoke at a Financial Innovation Network session dreamt up and hosted by Innovation Lab. In the building were a few dozen players from all sides of the banking industry, each struggling with ways to handle the new realities facing banks in an increasingly digital world. Effectively, they view brick-and-mortar banks as becoming less important, and in turn, less necessary. To combat that sort of grim reality requires a renewed sense of thinking — a problem-solving solution that won’t come from any rulebook. On the topic of mobile payments, Thimmer notes that banks cannot simply form a bond, agree on a technology and launch a product into a global market without first studying cultural norms in the regions they hope to penetrate.

“In some areas, the physical exchange of cash is culturally significant,” he says. “To make mobile payments work there, for example, you would need to create a process that very closely mimics the expression of the presently accepted transaction. Or, at least, educate that market on what the new offering is. Throwing a product into the wild and expecting people to simply adapt to it will not always be successful.”


In other words, Microsoft’s cultural research department failed to pick up red flags as the Kin was being engineered. It’s as if they expected tweens in 2010 to be completely receptive to a socially minded featurephone with



full-blown data rates. Somehow, inexplicably, Microsoft's research team missed the fact that tweens in 2010 were demanding iPhones.

GREAT PEOPLE, GREAT PLACES AND GREAT PROJECTS

If there are three pillars to Innovation Lab, they would be these: great people, great places and great projects. To date, the company has branded offices in Denmark's Copenhagen and Aarhus as well as Nuuk in Greenland. But it has partnered with technologically minded coworking spaces around the globe to bring those in Scandinavia and Greenland closer to those in Silicon Valley, Barcelona, New York and beyond. It's hoping to expand in San Francisco (and will soon be changing its Copenhagen address to an extraordinary new space near Tivoli Gardens), and via partnerships to any nook or cranny available. With a (roughly) 50 / 50 mix of responding to pleas for new approaches and hosting curated sessions like the one I attended in Denmark's capital, Innovation Lab is aiming not to provide temporary solutions to long-rooted problems, but entirely new approaches to business that remove walls, remove rules and remove the notion of conventional expectations.

Thimmer concurs that failure in technology should be more celebrated than it is. For every rousing success story at Google (Gmail, Android, Maps, etc.) there are rows upon rows of brilliant ideas that didn't go anywhere for one reason or another. But that's okay, says Thimmer. He also believes that specific rules and regulations placed on employees by management eventually act to hinder the overall performance of the company, and that the art of avoiding risk by ignoring the future is in fact more risky than leaping after the unknown. Perhaps it's all a bit utopian, the idea of technology companies having their success viewed at least in part on how positively they impact their own employees and the world around them. But if it's between that or some arbitrary figure of value trading hands 700 times per second on a stock exchange, I'll take the former. No one ever said innovation and crazy couldn't coexist, right? 

Innovation Lab brews its own beer locally. It's called "404 Ale," paying homage to a familiar website error.



ESC

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VISUALIZED

**GOOGLE GLASS
AT NEW YORK
FASHION WEEK**



AP PHOTO/SETH WENIG



DAVE LIEB



He made media sharing simple with the release of **BUMP**. Now, the company's co-founder and CEO takes some time to reflect on his favorite accessory: the Motorola StarTAC.



What gadget do you depend on most?

Hands down, my iPhone.

Which do you look back upon most fondly?

My hip, futuristic Motorola StarTAC flip phone, which I wore on a belt clip.

Which company does the most to push the industry?

Apple, both in technology and design.

What is your operating system of choice?

iOS, Mac OS X.

What are your favorite gadget names?

iPhone, iPad. There is only one iPhone, and everyone knows what it is.

What are your least favorite?

Any product named with letters or numbers, or named after something that has nothing to do with the product.

“When I was a kid, my grandfather bought me a toy robot arm called Armatron. It was a blast to play with.”

Which app do you depend on most?

Facebook, MLB At Bat, Words with Friends.

What traits do you most deplore in a smartphone?

Features included so you can make a snazzy TV commercial but are so difficult to actually use that no one actually uses them.

Which do you most admire?

I admire the courage to not fight feature and tech wars but instead focus on the user experience for normal people.

What is your idea of the perfect device?

One that solves a real problem you face in your life, regardless of whether you knew it ahead of time or not. For me, that is the iPhone. I'm very biased, but I think the iPhone 4 is the best consumer product ever created.

What is your earliest gadget memory?

When I was a kid, my grandfather bought me a toy robot arm called Armatron. It had four or six



degrees of freedom and you could use it to pick up balls and objects. It was a blast to play with.

What technological advancement do you most admire?

Space exploration. I mean, we can launch humans into outer space, land them on celestial bodies, and return them home intact. That's nuts! It makes mobile and internet stuff look like child's play :)

Which do you most despise?

I despise technology created primarily to make money, rather than to solve problems for real people.

What fault are you most tolerant of in a gadget?

Lack of features.

Which are you most intolerant of?

Too many features.

When has your smartphone been of the most help?

I recently called an airline to re-

schedule a canceled flight from the gate. The representative told me there were no seats available, but while I was talking to him, I made the reservation from my iPhone and called his bluff.

If you could change one thing about your phone what would it be?

Wouldn't it be great if you could go a full week on one charge?


What does being connected mean to you?

It means the ability to solve any problem myself, immediately.

When are you least likely to reply to an email?

I think the only time that I haven't ever replied to an email is while waterskiing or surfing. Every other situation: yup, I've done it.

When did you last disconnect?

Hmmm ... I recently had a cross-country flight that didn't have WiFi...? 

“We can launch humans into outer space, land them on celestial bodies, and return them home intact. That's nuts!”



iPhone 5

Bigger, Faster, Smarter

Was the iPhone 5 Worth the Wait?



DISTRO
09.14.12

ESC

IPHONE 5
EDITORIAL

FOR ALL OF APPLE'S infamous secrecy, the company couldn't mask the arrival of the next iPhone. As expected, the big number five was the centerpiece of Wednesday's festivities in San Francisco, and Tim Cook and gang certainly had plenty of nice things to say about the latest harbinger of iOS. The question, of course, is whether the souped-up handset is enough to maintain Cupertino's position in the seemingly ever more cutthroat smartphone wars. To answer that query, our editors weighed in on the biggest tallest iPhone yet.



DAN COOPER

I've been proudly telling anyone who'd listen that Apple would never change the screen, produce a two-tone device or call it the iPhone 5 — and clearly I was talking out of my elbow. I let my Vodafone contract lapse two months ago ready for this handset, but I'd be lying if I didn't admit to having a sneaky eye on the Lumia 920 instead. It's not that I'm underwhelmed by the hardware, but after being locked out of Siri 12 months ago, I was hoping for a revolutionary leap that was a little more future-proof. When I give in and wind up buying this, I'll be spending a fraught few months hoping they don't build anything too magical into iOS 7, since I'm reasonably sure my bank balance can't take it.

DARREN MURPH

Look, there wasn't a lot that surprised me at today's event, but I'm pre-ordering an iPhone 5. I want the LTE radio. I want the extra pixels. I want the new camera. But most of all, Apple made it really easy for me to justify using my AT&T upgrade on this: it's a flagship, 4G-enabled phone that's launching at \$100 less than many of the Android-based flagships. Sure, I could enjoy most of the iOS 6 spoils on my existing iPhone, but the new one is faster, sleeker and just sexier. Do I need it? No. But as a technology lover, I really am impressed with the design. I genuinely feel that Apple's hitting its stride with phones, and perhaps more impor-

I genuinely feel that Apple's hitting its stride with phones, and perhaps more importantly, I'm downright thrilled to see how Nokia, Samsung, HTC, Motorola and the rest react.

tantly, I'm downright thrilled to see how Nokia, Samsung, HTC, Motorola and the rest react. Competition is wonderful for consumers, and without the iPhone 5, there'd be less reason for those other guys to seriously buckle down and produce something that they view as superior. (But look, I'll be the first to admit that I'd just get a dumbphone for voice and an iPod touch if Apple ever puts an LTE data chip in its top-shelf media player.)

BRIAN HEATER

Was it everything we expected? Yeah. Was it everything we'd hoped for? Not quite, but at the very least, Apple's gone a ways toward making up for some of the lingering disappointment still floating around the ether from last year's iPhone 4S event — an announcement that left us wondering whether the company would be left behind in the smartphone wars





it helped kickstart. Sure, this is the device Apple should have delivered last year, rather than the largely incremental 4S, but the 5 arrives with the sense of a company not quite ready to rest on its laurels in the mobile department. It also, perhaps more importantly, signals that Cupertino is adapting to the mobile market — a fact perhaps no more clearly demonstrated than with the increase in screen size, which many have pointed out, seems to fly in the face of past comments by Steve Jobs.

Disappointments? We've got a few. There's no NFC to be found and that adapter — well, you know... For the most part, however, Apple delivered precisely the handset it needed to in order to help tamp

down concerns that the company is falling behind in a world of increasingly stiff competition. Has Apple set the bar again? It's tough to say for sure until we play with the thing — and in an ever-diversifying field, it's nearly impossible to make such a blanket statement. Certainly the iPhone will be the handset suited to some needs — and at the very least, I think it's pretty safe to call it the best iOS handset out there.

TERRENCE O'BRIEN

Well, I can't say that Tim Cook won me back to the iOS ecosystem, but the iPhone 5 announcement certainly wasn't a letdown in the same way that the 4S was. The addition of LTE alone is huge for the Cupertino faithful. It's easy to dis-



As exciting as the iPhone 5 is, there are definitely enough changes here that the ecosystem — the main selling point of an iOS device — will suffer some growing pains.

miss such an upgrade as playing catch-up (and, make no mistake about it, this *is* Apple playing catch-up), but the company was able to add a true 4G radio without sacrificing battery life. Eight hours isn't the longest talk time on the market, but it's certainly better than many LTE handsets out there. And, most importantly for the company's quest for ubiquity, it'll be available on Verizon, Sprint and AT&T in the US with the high-speed radio — an advantage it'll be taking away from Samsung. It's also great to see the iPhone

move to a larger screen. As the RAZR M has proven a “large” display doesn't have to mean a large phone. In fact, as the competition has gone bigger, I've found it harder and harder to go back to the tiny 3.5-inch panel of the 4S and its predecessors. It's also an undeniably smart move to go with an aspect ratio that's much closer to the standard widescreen of 16:9, which should make it a much more enjoyable device to watch videos on.

It's not all wine and roses, though. As exciting as the iPhone 5 is,

Apple's A6 reportedly doubles processor speeds.



there are definitely enough changes here that the ecosystem — the main selling point of an iOS device — will suffer some growing pains. The larger screen will send devs scrambling to update their apps to make use of the extra real estate. Apps designed for the less elongated displays of iPhones past will still work, but they'll be presented in a less-than-ideal letterbox format. And we haven't heard any word about how apps designed for the iPhone 5's dimensions will scale down to the 3.5-inch panels of older models. Then there's the new dock connector, which basically makes an entire cottage industry of accessories obsolete instantaneously. Lastly, I'm left wondering what the lack of NFC means for the future of the standard. It seems as if it's about ready to take off, and Apple has been notoriously late to the party on many other standards (see LTE, above), but with so many iPhones in circulation this could hurt the adoption rate, just as mobile phone payment systems are getting ready for prime time.

ZACH HONIG

From a typical user's perspective, there's not much not to like about the iPhone 5 — it's super-fast, has a 16:9 Retina display and, finally, LTE. But for me, and other folks who spend most of their time on the road, collecting SIMs abroad faster than passport stamps, that nano-SIM is a bit of a deal-breaker. Most international carriers only pack full-size SIMs, or, in some rare cases, full-size SIMs with a pop-out micro-SIM. I can't even imagine

how long it'll be before carriers in developing countries offer nano-SIMs in corner stores — the already arduous process of tracking down data upon arrival will be infinitely more complicated. That said, the 5 is gorgeous, and I (however briefly) considered purchasing one after holding it in hand. If Apple somehow manages to convince carriers to make prepaid nano-SIMs accessible in even the most obscure locales, I may consider retiring my Galaxy Note and making the switch back to iOS, but for now, I'm a happy Android user, if only because of that global compatibility.

JON FINGAS

A common refrain I've heard on Twitter is that the iPhone 5 is reactionary, rather than revolutionary. That's accurate on at least one level. Apple virtually *had* to introduce a bigger screen. It *had* to introduce LTE. The camera features, like capturing photos in mid-video and taking panorama photos, have been in other phones for months or more. The iPhone's biggest update may simply be

Although 32GB of space is nice, I'd have rather seen Apple drop in a \$249 16GB iPod touch — or at least, scrap the older 32GB edition.



the processor speed, which, at twice that of the 4S, could just put Apple ahead (however temporarily) of its Android rivals. We're ultimately missing the inescapable, gotta-have-it exclusive, unless you count iOS 6, and the pace really needs to pick up for next year.

At the same time, Apple may not have needed to do more. I see the iPhone 5 as proving that you don't need to go super-sized to build a high-end smartphone. Think of it as fixing every flaw that the HTC One S had: Apple didn't have to compromise on cameras, cellular speeds or the display to get a thin, full-performance smartphone that fits in one hand. Even Motorola's Droid RAZR M sacrifices screen quality and some thickness. The Galaxy S III, RAZR HD and One X will be waiting for those who want a bigger canvas, but they're not necessarily better anymore. You now have to explicitly want a giant screen rather than consider it a side benefit (or drawback) of getting LTE or a faster processor.

If there's anything that has me scratching my head, it's the new iPod touch. Technically, the new model is a slam dunk. That camera and screen turn it into an obvious substitute for both a dedicated camera and an MP3 player. But at a \$299 minimum? Although 32GB of space is nice, I'd have rather seen Apple drop in a \$249 16GB model — or at least, scrap the older 32GB edition. The iPod nano, as nice as it is, has lost the wearability that some loved so well. While dedicated media

players are on their way out, I'd still have liked more clarity of purpose.

RICHARD LAWLER

The iPhone 5 is finally official, and whether it's due to leaks detailing every element of the hardware, or that we'd already heard about many of the most compelling parts of iOS 6, or just overall gadget fatigue, I'm not particularly impressed. Taking a class-leading design then making it lighter, thinner, bigger (vertically) and adding LTE to the mix is nothing for Apple's engineers to be ashamed of, but — in a rare case after an iPhone press conference — I'm not even particularly looking forward to the competition snagging one or more of those bullet points for themselves.

When it comes to the software, Apple's Maps, a more capable Siri, Passbook and deeper Facebook tie-ins aren't moving the needle over here either, although the platform lock-in from iOS to OS X has tightened.



Externally, competition like the Galaxy S III and Nokia 920 are each at least as impressive in their own ways, and when it comes to the guts of the phone, if the best case study for the A6 CPU's power is rearview mirrors in a racing game, then I'm comfortable passing.

When it comes to the software, Apple's Maps, a more capable Siri, Passbook and deeper Facebook tie-ins aren't moving the needle over here either, although the platform lock-in from iOS to OS X has tightened. So, is this the go 'round that any single company takes a chunk out of Apple's market share? I'm not so sure of that either since a truly revolutionary idea (making the screen bigger, touting a better camera and wireless charging, or any implementation of NFC seen so far don't quite cut it) is hard to find. Until users or developers find a way to make sense of the capabilities we've been given, someone wake me when the next Nexus hits.

BEN GILBERT

I'm pretty sure that, outside of Darren, I'm the only one on staff who is totally excited for a new iPhone. I'm a simple man, and I like simple things — having spent some time with the Lumia 920 and new RAZRs earlier this week, I can certainly appreciate the approach of other hardware manufacturers. Both the 920 and the RAZRs are nicely designed pieces of hardware, and the smart phone market is looking more and more diverse by the day. No doubt credit is due in their direction. That said, the sim-

plicity of the iPhone is what draws me in, and the iPhone 5 is yet another entry from Apple in a long line of "Stuff I want to put in my house."

Does the iPhone 5 offer a lot of new bells and whistles, or any major design changes? Not really, no. It does make some slight improvements to things that, frankly, could use some improving. The screen size, for one, is an important change for me. When I use a nice Droid or WP8 phone, the majority of my interest focuses on the lavish screen size — while the new screen isn't anywhere near as large as the Lumia, for instance, it's a small step in the right direction. And for me, that new A6 processor is a full-on sell point. I play lots of games on my phone (what's a 3DS?), and the new, doubly powerful processor makes an already powerful gaming device into a miniature next-gen console. So ... uh, I'm pretty clearly pre-ordering one. You probably guessed that already though, eh?

ZACH LUTZ

We can all breathe now. The iPhone 5 officially exists, and once again, the Earth can resume its rotation. Hyperbole aside,

So ... uh, I'm pretty clearly pre-ordering one. You probably guessed that already though, eh?



today's launch was incredibly important, and almost without exception, Apple rose to the challenge. That's a hard thing to pull off, especially when — unlike in the Android world — the company has only one chance to get it right. While I genuinely doubt that it'll cause a significant number of Android users to jump ship, that's entirely beside the point, because today was about Apple and its fans. Everything we saw today — from the addition of LTE and a larger screen, to the fantastic industrial design — will most certainly keep the fan base satisfied and enthralled. It's true that the iPhone will never be all things to all people, but that's okay. There are alternatives in the marketplace.

Speaking for Apple users, the only thing that disturbs me is the company's near-freakish obsession with thinness.

I've yet to meet a person that felt the iPhone 4S was too damn thick, and yet the company changed it anyway. I'd like to see a manufacturer tout insane battery life the same way it does the form factor.

I've yet to meet a person that felt the iPhone 4S was too damn thick, and yet the company changed it anyway. This trend certainly isn't exclusive to the Apple world, but just once, I'd like to see a manufacturer tout insane battery life the same way it does the form factor. They aren't mutually exclusive; it just requires a balancing act. Don't let me rain on the parade, though. I trust spirits are running too high for much of that.

DON MELANSON

What struck me most about today's event was just how few surprises there were. That's not a complaint, just an observation of the sheer number of leaks that turned out to be spot on. The ear buds, the new "Lightning" cable and, of course, the iPhone 5 itself didn't just turn up in blurry photos beforehand, but in detailed shots and videos that showed them off from all angles in what we now know to be their near-finished state. That, naturally, lends some further credence to similar leaks of a smaller iPad — which, incidentally, appears to bear a striking resemblance to the new iPod touch. In hindsight, Tim Cook's famous comment about doubling down on secrecy may well have been about those leaks that were already out of the bag — if not, the company would seem to have quite a bit more work to do.

On the software side of things, it was also a case of having seen much of it before — albeit this time from Apple itself in its previews of iOS 6. We did





Scott Forstall demos Siri's new moves in iOS 6 in San Francisco.

see a new iTunes today, but Maps still seems like a step backward for the time being, and I'm sure I'm not the only one who would like to see some bigger changes to the OS itself beyond an extra row of icons. But, as with the hardware, it was more than enough to meet expectations, and will surely not be enough to put a damper on sales. As for myself, I'm certainly interested in trying out iOS 6 on my 4S and seeing an iPhone 5 first-hand, but I can't say I'm feeling the urge to upgrade just yet.

SEAN BUCKLEY

Small expletives of relief passed my lips each time Tim Cook confirmed one of the iPhone 5's not-so-secret upgrades. A 4-inch display, an LTE radio, Face-

Time over cellular connections — *finally* the iPhone is getting with the times. That's not to say that its previous five iterations weren't solid devices — they most certainly were and *are*, but switching between an iPhone and a large-screened Android device left me wanting. For a trendsetter, Apple's handset felt out-of-style. Cupertino's sixth smartphone definitely brings it up to speed, attractively stretching its body to adopt a new screen size while retaining the iconic iPhone style. The iPhone 5's sleek new hardware isn't enough to sever my ties to Google's ecosystem, nor are iOS 6's new features — but together, they may be able to rekindle the envy I once felt of my iPhone-toting colleagues. 



The week that was
in 140 characters or less.

THE IPHONE 5 IS ALIVE!

@kevinrose

new iTunes looks cool, but
i can't remember the last
time i used iTunes, it's a Spotify /
Pandora world now.

@zpower

the V in jony ive's t-shirt gets deeper
with every subsequent
video testimonial. by iphone 8, he'll
be shirtless.

@xeni

Magical thing re: Apple product
launches: whatever older-gen iPhone
I'm using at time instantly feels as
clunky + crude as a dried dung chip

@nickbilton

And that's a wrap
folks. Wait, there's
one more thing:
Untucked dress shirts
are the new black.

@tarhitrade

Are you
better off
than you
were four
iPhones ago?

THE STRIP

BY SHANNON WHEELER



CDC 6600

WHAT IS THIS?  TOUCH TO FIND OUT



Back in the early days, it was hard enough to fit a computer in one room let alone the pocket of your skinny jeans. In 1964, the Control Data Corporation led by Seymour Cray released the CDC 6600, boasting a room-friendly console and “plus” shaped cabinet — a machine that kickstarted the age of supercomputers. This parallel processing powerhouse sped past the competition for years with its minimalistic RISC style, multi-threaded architecture and 3 MFLOPS speeds. Although, that pales in comparison to recent supercomputers like IBM’s Watson, which can reach 80-plus TeraFLOPS.



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