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Prepare for Takeoff

Zach Honig Boards Boeing's 787 Dreamliner



Can Verizon's
Galaxy Nexus Live
Up to the Hype?

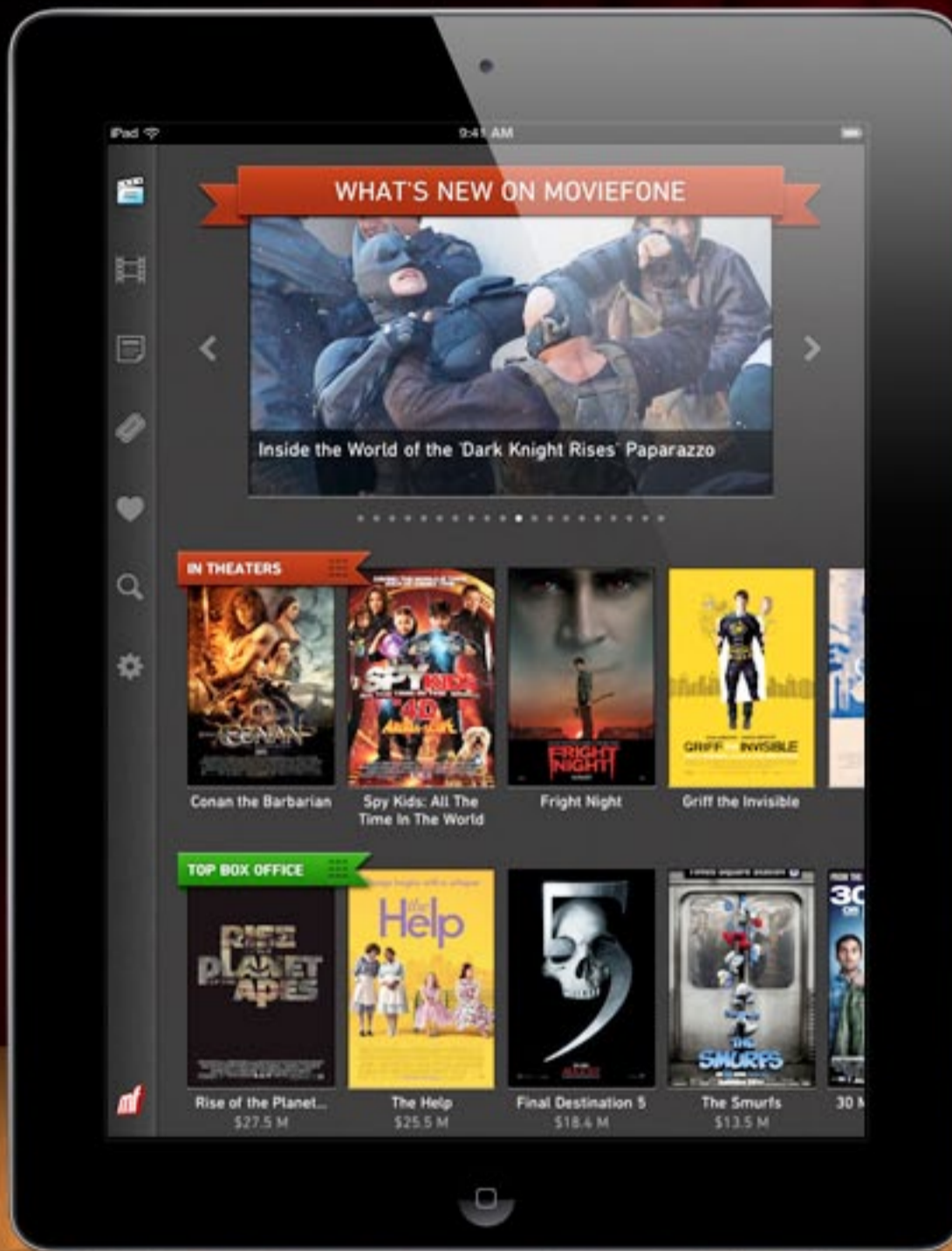
Motorola Xyboard
8.2 A Slate Apart?

Can Samsung's
Series 7 Slate PC
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Meizu MX Third
Time's a Charm?

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Finally on Android, and AT&T Calls Things Off with T-Mobile

Editor's Letter

I'm going to kick off this week's recap in news by extending a warm welcome to all of our Honeycomb and Ice Cream Sandwich faithful out there. Trust me when I say our developers have been working hard to bring you into the fold for quite some time and we're all thrilled that you're here. I really hope you enjoy our weekly magazine. I think you will.

Biggest news this week is the (apparently) final and unsuccessful conclusion to the attempted merger between AT&T and T-Mobile. This courtship has been progressing and degrading for months and, with the FCC and DOJ seemingly unwilling to give their blessing, Ma Bell and Deutsche Telekom have decided to call the whole thing off. If there are any winners, one must be Deutsche Telekom itself, which gets a healthy \$4 billion check from AT&T for its troubles, though Sprint wasted no time in firing off yet another snippy press release to say how happy it was about how messy this all turned out.

Verizon stayed fairly mum during all these proceedings, and it continued that theme



this week. Perhaps that's because it was too busy fielding complaints about the Galaxy Nexus, which was snapped up by eager LTE-lovers across the US. Many of them noted signal-strength woes, but testing seems to indicate that's more

to do with how many bars Ice Cream Sandwich throws up than an actual antenna issue on the device itself. Samsung has promised an update, just the same.

Debates over the Stop Online Piracy Act, a.k.a. SOPA, continued this week as government hearings began and then promptly were suspended, slated to resume sometime "early next year." This after 29,000 of you eager citizens digitally signed a petition at Whitehouse.gov asking that President Obama veto this bill. No telling how many would-be digital activists went to Whitehouse.com and left thoroughly confused.

The future of Fusion Garage, and its Grid10 tablet, were left in doubt this week when the company's website suddenly stopped functioning and its PR firm basically quit. This came after we received dozens of notes from frustrated buyers who



had not received their tablets yet. We spoke with CEO Chandra Rathakrishnan, who maintained his realistic perspective on things, saying, “In an industry where the benchmarks are the high test of the world, we fell short.” What happens next still remains to be seen.

ASUS suffered some rather less major issues this week, with many pre-orders of the Transformer Prime canceled or delayed at retailers like Amazon and Best Buy. It’s still unclear how many of these tablets will ship before the end of the year, but trust me when I say it’s worth the wait. The Samsung Galaxy Tab 7.7, which popped up at the FCC sporting Verizon-friendly LTE, should also be worth waiting for. That is one device I hope to see a lot more of at CES.

A week after injecting yet more doom and gloom into the hearts of BlackBerry fans with the announcement of the OS 10 delay, we heard much talk of attempted purchases of and mergers with RIM. The first came from Amazon, which was apparently rebuffed over the summer, and then Microsoft and Nokia, who apparently “flirted with the idea of making a joint bid.” We’re not entirely sure just how serious that flirting became (*was hair twisting*


There is one major browsing improvement in this [Kindle Fire] update: Amazon is no longer blocking the Android Market.

involved, nervous laughter?), but we do know that RIM needs to do something drastic. Soon.

We do, however, know that Nokia is killing Symbian for good. Well, the name at least. The next version of the OS, previously known as Symbian Belle, is now just called Belle. Microsoft, meanwhile, is killing off its CES presence. Steve Ballmer will still make the customary evening keynote at the show, but this will be the last for his company — at least for now. Microsoft cited the odd timing as one issue (mere weeks after the busiest shopping season of the year ends), but surely it would rather pump a little more money into its own events, like MIX and BUILD, than pour more into someone else’s.

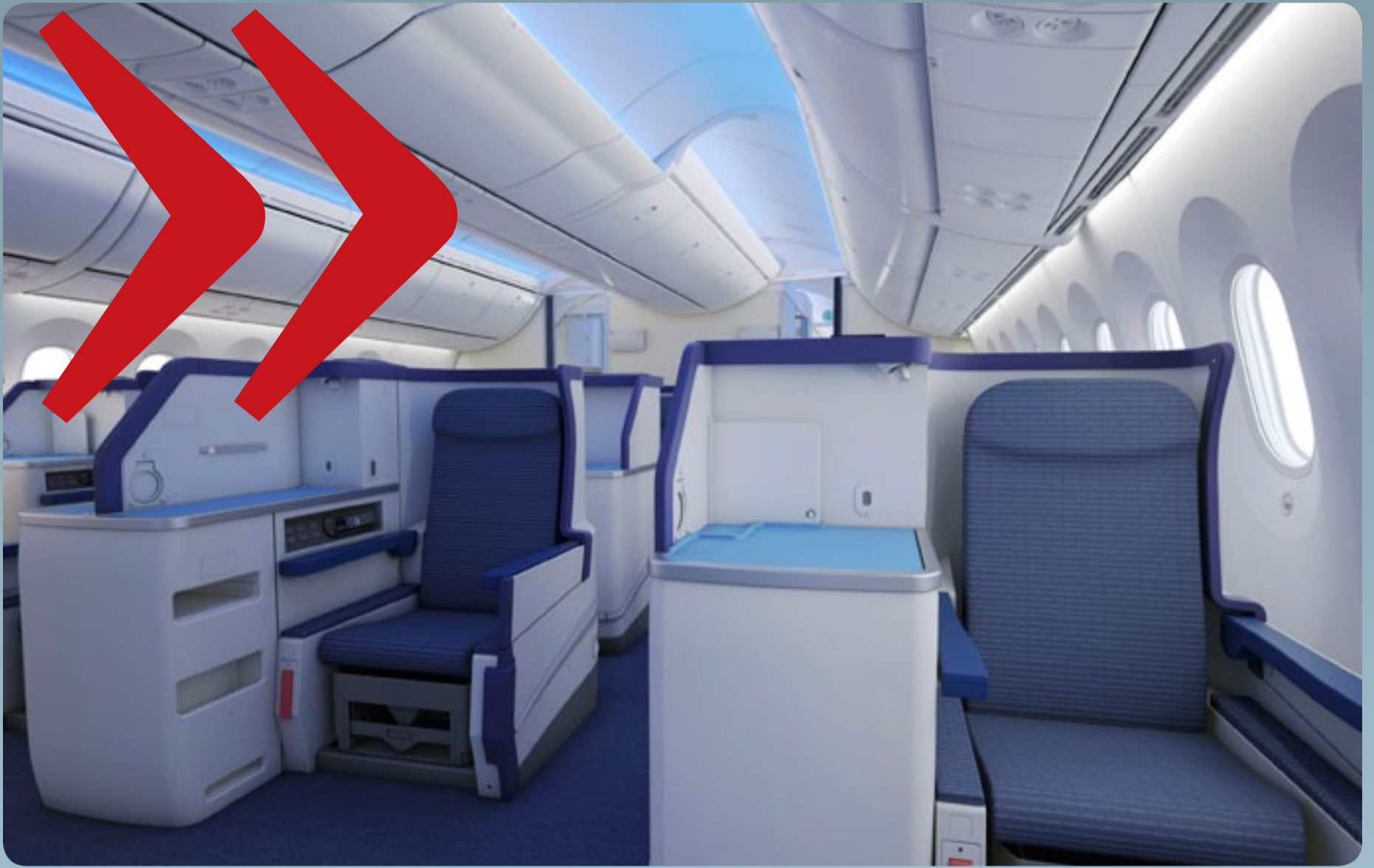
Finally, Amazon shipped a Kindle Fire update that helped improve the smoothness of the interface, but sadly didn’t do much to improve the speed of the web browsing. The Fire of

course features the Silk browser, which uses server-based rendering to speed up your web browsing — in theory. In practice, it’s no faster than the rest, and still isn’t after an update. That said, there is one major browsing improvement in this update: Amazon is no longer blocking the Android Market.

In this week’s edition of Distro we’re introducing a few new features, including a Recommended Reading section curated by our Senior Associate Editor Don Melanson, who will help you find some *other* good things to parse. We’re also running the first Distro Q&A, our spin on the classic Proust Questionnaire, and Engadget founder Peter Rojas is the lucky one. On top of that, we have a boatload of great reviews including the Meizu MX, Xyboard 8.2, Samsung Series 7 Slate, Verizon Galaxy Nexus and even the Boeing 787 Dreamliner, as well as a new Switched On from Ross Rubin and IRL from our staff. It’s a massive issue, and it’s our gift to you. Enjoy. 



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET



»Enter

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IN REAL LIFE

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By Engadget Staff

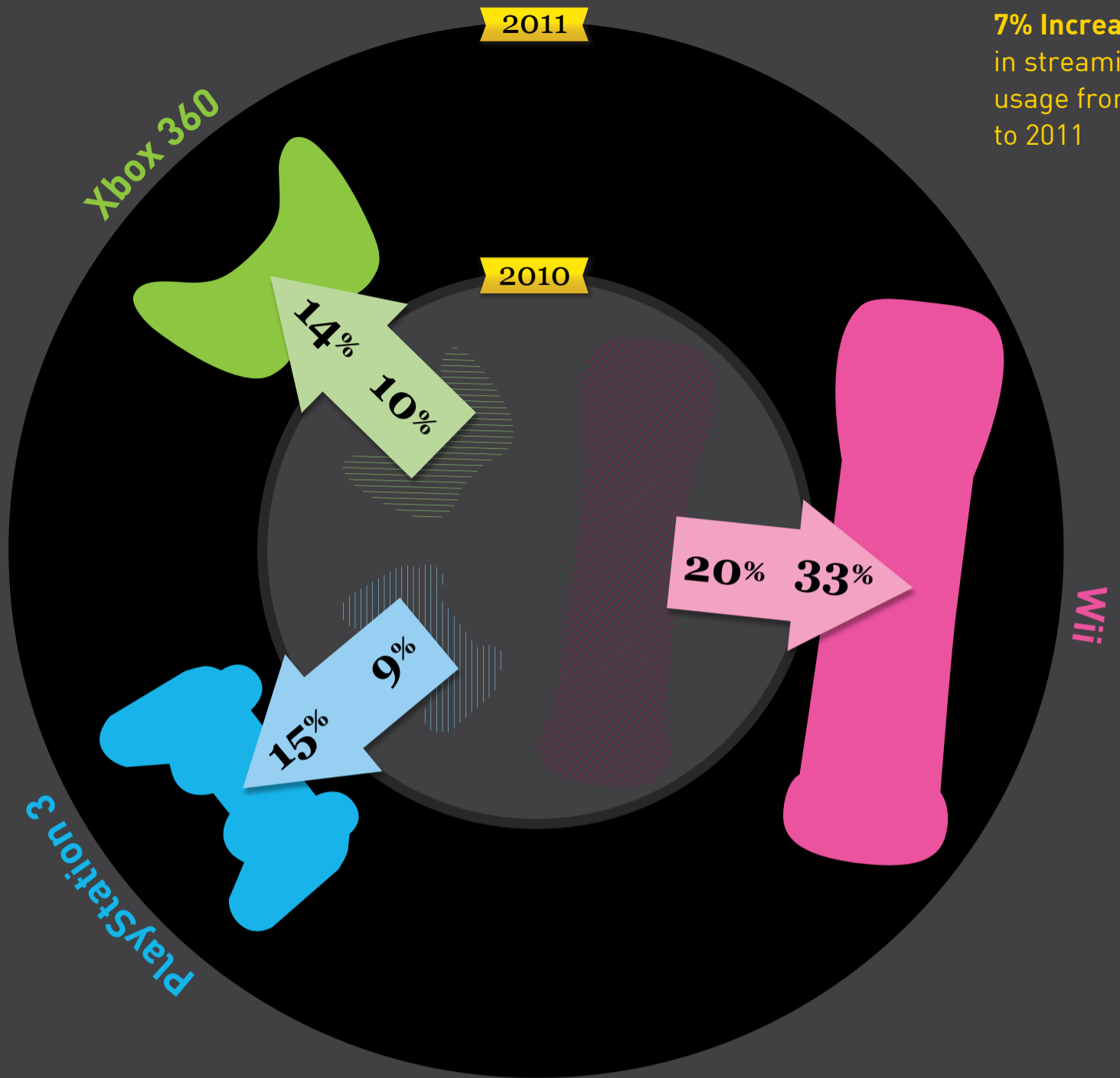
Q&A

Peter Rojas Opens Up

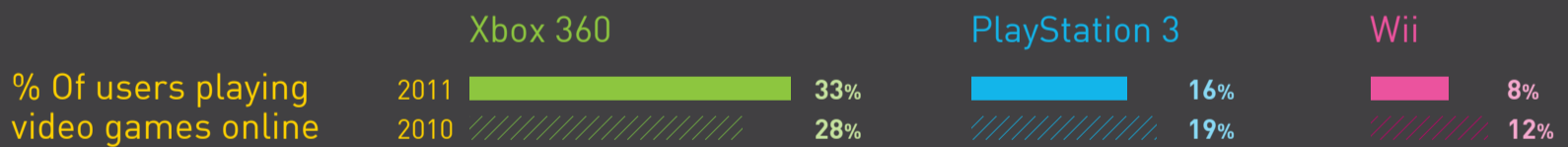
LAST WORD

A Hard Day's Work

By Dustin Harbin



7% Increase
in streaming video
usage from 2010
to 2011



Gamers Spending More Time Streaming Video to Their Consoles

The Weekly Stat

Nielsen, the purveyor of all things statistical and demographic, published a new study this week on game console usage within the US. Apparently, gamers this year spent notably more time streaming video to their consoles than they did in 2010, due in large part to the growing availability of services like Netflix, Hulu, MLB Network and ESPN3. Overall, Nielsen found that usage increased by seven percent over last year across all three platforms — Xbox 360, Wii and PlayStation 3 — which suggests that streaming may be keeping us glued to our consoles for even longer. — *Amar Toor*

THE YEAR OF REVERSAL

Switched On



BY ROSS RUBIN

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

Back in 2005, Switched On dubbed its first full year of existence “The Year of the Switch” as IBM sold its PC business to Lenovo, Apple announced plans to leave the PowerPC platform for Macs and Microsoft moved to PowerPC processors for the Xbox 360. But the dramatic reversals we saw in 2011 made even some of those decisions look tame by comparison. ¶ HP. Perhaps no tech company exhibited as much public expression of regret and uncertainty than the company often identified as the founding rock of Silicon Valley. A year after acquiring the hardware and software of Palm, Inc. and mere weeks after releasing its first webOS tablet, HP exited the webOS device business in which it had repeatedly vowed to “double down” (a kind of bet that indeed incurs some risk of loss at the card table) and ultimately decided to give the software to the open source community while retaining Palm’s patent portfolio. Now webOS is off to forage for developer support with the promise of HP ultimately getting back into the webOS tablet business in 2012 or beyond. ¶ Of course, the even bigger question swirling around the company was whether it would spin off its PC business entirely, which it ultimately decided against. That second-guess extended its 1990s decision to enter the consumer PC market and its 2001 merger with Compaq. It will take some time for all the implications of the webOS decision to be made clear. For now, though, HP’s consumer computing product line has essentially the same Windows-driven scope as it did before it acquired Palm.

AT&T. In contrast to HP, which developed its second-guessing internally, AT&T had it pushed upon it externally. Its bold move to acquire T-Mobile to once

AT&T's decision to give up on the merger required it to pay \$4 billion to its historical GSM rival.

again become the largest carrier in the U.S. and extend its spectrum holdings collapsed under pressure from the Department of Justice and the FCC. AT&T's decision to give up on the merger required it to pay \$4 billion to its historical GSM rival, proving that reversals can be costly.

Meanwhile, Verizon snatched up spectrum from cable companies: Comcast, TimeWarner Cable, Bright House Networks and Cox that themselves second-guessed their plans to do something with the wireless spectrum they had acquired. Cox withdrew from the cellular service market earlier in the year. While Verizon's moves are also attracting the interest of federal regulators, they are unlikely to create as much of an uproar as T-Mobile's potential market exit did.

As for T-Mobile USA, assuming its parent company Deutsche Telekom still wishes to sell the group, a whole new round of suitors may now express interest, including Sprint. In late 2011,

Sprint announced it would be moving away from WiMAX and embracing LTE, leading many to second-guess whether WiMAX had been the right move for the carrier after all.

Nokia. Months before HP decided to send webOS to the world of open source, Nokia, who had for years fought Microsoft via its support of Symbian and later the Symbian Foundation, embraced the company's Windows Phone platform as its strategic platform (jumping from a "burning" one) for smartphones moving forward, and marginalizing MeeGo, which had been its open OS of the future being built in collaboration with Intel. Nokia followed up this decision by releasing the MeeGo-based N9, which received broad accolades, and introduced design elements in Nokia's first Windows Phone-based flagship, the Lumia 800. Microsoft also had to bend a bit to woo Nokia to the Windows Phone party, allowing the Finnish phone maker the flexibility to make virtually any kind

Google promises it will be just about business as usual for the favored maker of Droids.


of change it wanted to the operating system, a term that it does not extend to its other licensees.

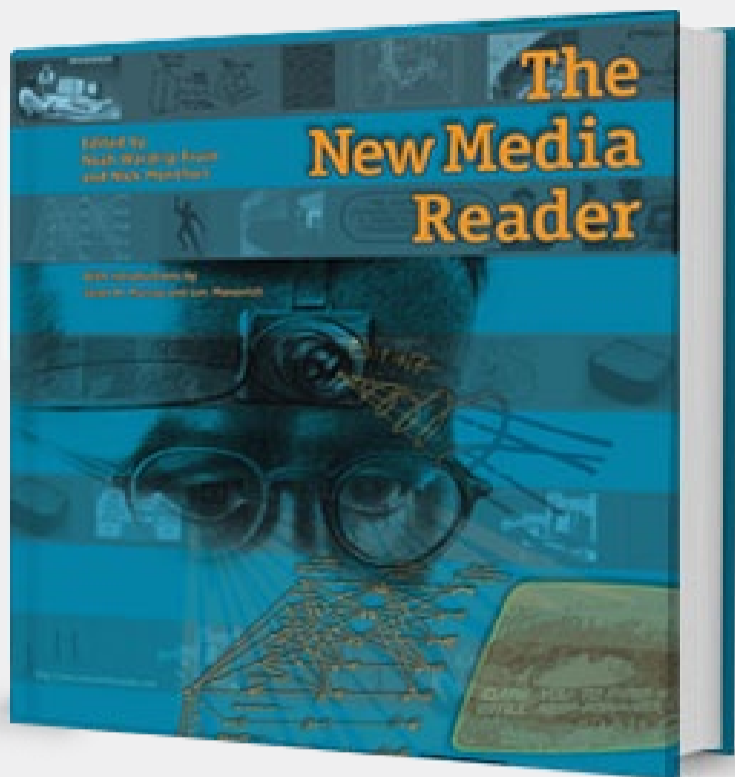
Nokia was not the only major handset multinational to see major changes in its business, particularly when it came to ownership. After a decade of participating in the Sony Ericsson joint venture, Sony will again go it alone in the handset business, seeking to stem the momentum of its rival Samsung in that space. And Motorola will become part of Google, although Google promises it will be just about business as usual for the favored maker of Droids.

Microsoft. Windows Phone was a huge bet for Nokia, but when CEO Steve Ballmer was asked what worries him most, he replied the next version of Windows. That generally wouldn't be much of a surprise as so much of the company's fortunes are tied to its desk-

top operating system. However, in the case of Windows 8, which was rolled out at its BUILD conference, it was easy to see why this was especially so.

Windows 8 will employ a new Metro user interface optimized for touch in a bid to recapture the slate market Microsoft first tried to drive with Tablet PC but saw stolen away with the iPad. Toward that end will also be the first version of Windows to run on ARM processors like those from Qualcomm, NVIDIA and TI, helping to deliver sleek form factors and long battery life. The new processor support marks the first extension beyond x86 since the days of Windows NT, which ran on PowerPC and MIPS processors in addition to those from Intel and AMD.

As we head into 2012 for the tech industry, one thing is for sure. On the other hand, maybe it isn't. 



The New Media Reader

Since this is our inaugural Recommended Reading list, we'll start with something of a primer. The *New Media Reader* may look like an intimidating textbook — and, indeed, it is being used as one at some schools — but it's also an indispensable addition to the collection of anyone interested in the technological society we live in. From Vannevar Bush's landmark essay, "As We May Think," to an excerpt from Scott McCloud's *Understanding Comics*, and everyone from Marshall McLuhan to Richard Stallman in between, it collects some of the key thinking on technology, media and its impact from the past seventy-odd years. ¶ Much of it isn't light reading, but it is presented in an accessible manner, with thoughtful introductions and side notes throughout. It also comes with a CD-ROM that includes videos, additional texts and even some early computer games. If there's a shortcoming, it's that it's missing important works from recent years (it ends with an introduction to the World Wide Web by Tim Berners-Lee et al), but given the book's heft, those may be best saved for a second volume. — Don Melanson

Edited by Noah Wardrip-Fruin and Nick Montfort. Published by MIT Press

AROUND THE WEB

The Invention of Waterloo
by Don Gillmor
The Walrus



RIM may be facing some considerable troubles these days, but its hometown appears to be on solid footing for the 21st century. Don Gillmor traces the history and future of Canada's "Technology Triangle."

Computer Space and the Dawn of the Arcade Video Game

by Benj Edwards
Technologizer



On the occasion of its 40th anniversary, Benj Edwards looks back at the creation of the world's first commercially sold video game, *Computer Space*, and its lasting legacy.

The Internet Gets Physical
by Steve Lohr

The New York Times



Much has been written about the "internet of things," but Steve Lohr suggests that it is now finally upon us, with technologies like the Nest digital thermostat and IBM's Smarter Planet initiative leading the way.

BOOKMARK IT
Paleofuture



First established as an independent blog in 2007, Paleofuture now rests among the Smithsonian's stable of blogs, where editor Matt Novak continues to examine the future as it was once imagined. Recent posts have looked back at Cold War-era notions of using the weather as a weapon, boxing robots of the 1930s, and a Disney-inspired vision of automated highway builders from the late 1950s.



Motorola Xyboard 8.2

The Motorola Xyboard 8.2 is a perfectly fine slate that's comfortable to hold and to use but fails to stand among the competition.

BY TIM STEVENS

The march of the Honeycomb tablets goes on, playing a tune that's starting to get a bit muted thanks to the promise of fresher beats coming from Ice Cream Sandwich. Still, there are plenty

of ways for manufacturers to add their own bit of swing to the same 'ol song. Motorola, of course, paved the way for all these slates with the Xoom. It's hard to believe that the first Honeycomb tab-



let was released just 10 months ago, but now we have its successor, the Xyboard, here in its 8.2-inch guise.

At least, that's what it's being called domestically. Elsewhere it's the Xoom 2 (we reviewed the 10.1-inch flavor already), but in America we get a patently unfortunate moniker for a tablet that offers an interesting design at an interesting size with the interesting bonus of LTE. But, all that mobile bandwidth is going to cost you: \$430 for the 16GB model or \$530 for 32GB if you sign on for a two-year data contract. Does the funky design, convenient size and high-rate connectivity make up for the added cost over something like the class-leading Transformer Prime? Let's find out.

Hardware

Slip the Xyboard 8.2 out of its box and, if you've used the Xoom that came before, you'll immediately feel comfortable. Yes, things are slimmer, lighter and overall better to the touch, but the overall aesthetic of something that's dark and industrial has carried over. Accentuated, even, with a metal inset on the back, held in place by six exposed

screws. The area around that is slightly raised and rubberized, with the combination of surfaces and depths making this one of the most pleasant-to-hold tablets on the market.

“So we like the shape, but we're not entirely sure we're in love with the button placement here.”

Compared to the sharp edges and cold metallic construction on the Transformer Prime or iPad 2, the Xyboard is something you'll really want to carry. It never feels like it's in danger of slipping out of your hand, and those tapered corners, which haven't seemed to be winning over any hearts, do make for a slate that rests against the palm of your hand without cutting into it. That said, it is a bit thicker than the competition, at 0.35 inches (8.89mm), though at 0.85 pounds (386g) it's a fair amount lighter than the Samsung Galaxy Tab 8.9.

The Xoom was frequently derided for



hiding the power toggle on the back and the Xyboard does the same, taking that a step further by shuffling the volume rocker there too. If you happen to be holding this tablet in portrait orientation in your right hand those buttons fall perfectly under your index finger. Any other way, though, and this placement is inconvenient, and we found ourselves flipping it over time and time again to find that volume rocker. This will, at least, give you a few moments of entertainment whenever you hand the thing to someone else as they fumble about for the hidden power button.

With the buttons on the back, left and right edges of the tablet are kept free of ports, plugs and protrusions. Sitting square in the middle of the top is an IR blaster, which could see this serving as a universal remote down the road, though Moto provides no software to assist there. Just off to the left of that is the 3.5mm headphone jack and, on the right, the first of the two speakers. The other is on the bottom, along with plugs for micro-USB and micro-HDMI as well as the slot for the LTE micro SIM, hid-

den behind a flimsy door that, thankfully, you shouldn't have to be prying open too frequently.

Up front is the 8.2-inch, 1280 x 800 LCD display that offers extremely good viewing angles and accurate color reproduction, even when you're gazing from a less-than-ideal vantage point. But, it does look a bit flat next to the Super AMOLED Plus panels Samsung is using.

Final details include a five megapixel camera (capable of recording 720p video) paired with an LED flash on the back, while a 1.3 megapixel unit peers through the bezel on the front. An LED indicator light is also situated there in the glass, which will blink plaintively at you whenever you have a message waiting.

Performance and Battery Life

So the Xyboard 8.2 is definitely a tablet that we like holding, but it wasn't universally fulfilling when it comes to performance. The thing absolutely feels much more sporty than the Xoom that came before, apps loading quickly and games running smoothly, handling HD video



BENCHMARK	MOTOROLA XYBOARD 8.2	SAMSUNG GALAXY TAB 8.9	ASUS TRANSFORMER PRIME	T-MOBILE SPRINGBOARD
Quadrant ¹	1,663	2,341	3,023	1,871
Linpack Single-thread ¹ (MFLOPS)	45.25	26.85	43.35	23.38
Linpack Multi-thread ¹ (MFLOPS)	69.79	N/A	67.05	55.36
NenaMark1 ¹ (fps)	28.87	38.1	60.07	57
NenaMark2 ¹ (fps)	19.27	18.1	46.07	24.5
Vellamo ¹	1,018.5	51.77	953	1,057
SunSpider 0.9.1 ² (ms)	1,926.9	2,295	1,861	N/A

¹ Higher the score the better.

² Lower the score the better.

playback without issue and generally trucking along as it should. That said, it still suffers from the sort of annoying stutters and hang-ups while brows-

“The Xyboard had no problem making and keeping a solid LTE connection on Verizon’s network and, once locked on, put down some connection speeds that warmed our jaded hearts.”

ing that have plagued seemingly every Honeycomb device known to man.

Webpages quickly render and appear almost complete, tempting you to inter-

act with them while the last remnants of content are still loading. But, do so and you’ll experience sluggish response and excessive tiling. You’re best off having a bit more patience.

Ignore that annoyance for a moment and look to the benchmarks to find some quite acceptable scores — and by “quite acceptable” we mean “these would have been fine before the Transformer Prime sauntered into town.” Sadly for Motorola, this device is living in a post-Prime world and it just can’t compete in terms of sheer number-crunching ability, which is important if you’re planning on doing some gaming on your tablet.

The Xyboard falls behind the Prime when it comes to battery life as well, clocking in at five hours and 25 minutes in our standard battery rundown test, which entails a looping video with the display set at a fixed brightness. Note that this was with CDMA enabled

TABLET	BATTERY LIFE
Motorola Xyboard 8.2	5:25
Apple iPad 2	10:26
ASUS Eee Pad Transformer Prime	10:17
Samsung Galaxy Tab 10.1	9:55
Apple iPad	9:33
Motorola Xoom 2	8:57
HP TouchPad	8:33
Lenovo IdeaPad K1	8:20
Motorola Xoom	8:20
T-Mobile G-Slate	8:18
Samsung Galaxy Tab 7.0 Plus	8:09
Lenovo ThinkPad Tablet	8:00
Archos 101	7:20
Archos 80 G9	7:06
RIM BlackBerry PlayBook	7:01
Acer Iconia Tab A500	6:55
T-Mobile Springboard (Huawei MediaPad)	6:34
Toshiba Thrive	6:25
Samsung Galaxy Tab	6:09
Velocity Micro Cruz T408	5:10
Acer Iconia Tab A100	4:54

but LTE disabled, so that score would surely go up should you be silent running with this, but surely down if you raise the LTE periscope.

And that, of course, is the one area where the Prime can't compete with the Xyboard 8.2.

Now, your mileage will certainly vary here depending on local network conditions, but testing near Palo Alto, California saw average downloads of around 18Mbps and uploads at about 16Mbps — very nearly synchronous.

When compared against an LTE phone at the same location the Xyboard uploads were consistently a bit quicker, while downloads were about the same. With pings under 50ms this could be a refreshing new way to host a *Counter Strike* server wherever you happen to be.

Software

There's not a lot to add here to what we said about the Xoom 2. What you have here is a virtually unmolested version of Android 3.2 Honeycomb that, if you squint, might be mistaken for Ice Cream Sandwich — which won't actually hit this tablet until sometime in 2012. Motorola has thrown a few choice apps on here, like MotoCast for streaming media and Quickoffice HD for attempts at productivity, while Verizon has added a few of its own, like My Verizon Mobile and its own little Apps store. The offending apps are few and, thankfully, far between.

Camera

We won't spend a lot of time here going over the camera performance as these are, as far as we can tell, the same camera units found in the 10.1-inch model we've so recently reviewed. The five megapixel shooter on the back produces acceptable images that will certainly capture



whatever you're looking at but won't exactly do so in a particularly endearing way, with muted colors and soft imaging. The lack of tap-to-focus is also a bit of a bother, leaving you hoping the tablet chooses to clarify what you'd like it to. When it does focus it does so a bit slowly, but that's still a big, big improvement over the slow shooter Moto put in the Droid Bionic. The 720p30 footage is similarly adequate, so long as you aren't trying to track any fast-moving objects.


It is worth a mention, however, that the camera placement on the back-left was a constant bother for us. Hold the tablet in landscape orientation, as you're likely to do when taking a picture, and it's incredibly easy to put your left hand right on top of the lens. In fact it's incredibly difficult to *not* put it there. That's a definite annoyance.

Wrap-Up

We've been having a hard time figuring out why anybody would choose the Xoom 2 / Xyboard 10.1 over the Transformer Prime — a device that's the same price or cheaper and considerably faster — but the 8.2-inch version makes a little bit more sense. A 10.1-inch tablet simply isn't the right size for everybody and, among those slates that slot in somewhere below, the 8.2 hits a lot of marks. It's light, comfortable to carry and to use, and reasonably quick. And, the integrated wireless connectivity makes it rather more useful for those who are frequently on the go.

Just prepare to pay dearly for that



extra usability. The \$430 or \$530 upfront costs for the 16 and 32GB versions aren't bad, but add on two years of data service and things suddenly look rather less practical — especially since you're paying that much for a tablet that's already slower than the competition. Go off-contract and prices are \$600 and \$700 for the two capacities, which is even harder to swallow. This, then, is a good choice exclusively for someone wanting a sub-10-inch tablet with a data contract and a goofy name. If you can live with only WiFi, save a little money and go with the Galaxy Tab 7.0 Plus or 8.9 — or maybe hold out a little longer for that mythical 7.7. 

Tim Stevens is Editor-in-chief at Engadget, a lifelong gamer, a wanna-be racer, and a born Vermonter. Dana Wollman contributed to this review.



BOTTOMLINE

Motorola Xyboard 8.2

\$430+ *on contract*

PROS

- Hand-friendly design
- Integrated IR emitter
- Great LTE performance

CONS

- High cost including contract
- Mid-range performance for a modern tablet
- No expandable storage

» The Motorola Xyboard 8.2 is a perfectly fine slate that's comfortable to hold and to use but fails to stand among the competition.



REVIEW

Meizu MX

Meizu's third-ever smartphone is its best product yet, but while it's priced attractively, there's some room for improvement.

BY RICHARD LAI

A quick tag search for “Meizu” on Engadget takes us all the way back to April 2006, where we saw the launch of the Chinese company’s M6 Mini Player with MP4 playback. But in fact, if you go as far back as early 2003 (before Engadget was even born) you’ll also dig up the Meizu MX, which was

eventually launched towards the end of the year. Confused? Well, bear with us here: this MX was Meizu’s first ever product, a simple 128MB or 256MB MP3 player that unfortunately bore much resemblance to the Cowon iAudio CW300, albeit with different guts. Was this a case of shameless cloning or



just an OEM product being rebadged? Our money's on the latter, but only with *Monopoly* bills.

Skip past the darker times and fast forward to about nine years later, Meizu would launch another MX, but now it's a totally different animal: a 1.4GHz dual-core Android smartphone that can handle a tad more than just music playback. Of course, company founder Jack Wong and his gang aren't the only players on the paddy field, as we also have the similarly powerful Xiaomi Phone already taking the lead in the Chinese Android enthusiast market. Adding more fuel to the fire is that shortly after the Xiaomi Phone's debut, Wong responded to a related forum post by accusing a certain someone — which is believed to be Xiaomi CEO Lei

Jun — of abusing his or her old position as an angel investor to deviously walk away with Meizu's trade secrets. Alas, we'll probably never know the truth, so we shall simply observe whether the new Meizu MX will bite back hard and good. Read on for our full review on Meizu's second Android handset.

Packaging and Hardware

Despite the spicy backstory, there's not a sign of spitefulness on the MX's cute packaging. Unlike most smartphone boxes with vertically stacked internals, here you get a squarish faux booklet that slides out of a white cardboard sleeve, both of which proudly show off a big gray "MX" logo bang in the middle on the front. There's also a removable blue paper band surrounding the



bottom of the sleeve, though its main purpose appears to be to remind us that this is an engineering sample, so there's no telling whether the retail units will come with the same decoration.

Where's the phone, you ask? Just think about how spies conceal their weapons (or in Hannibal Smith's case: cigars) inside hollow hardcover books. Yeah, it's pretty much like that with the MX: after flicking through four simplistic pages of feature highlights, you'll find the MX and its paperwork tucked inside a nicely cut compartment, while a second compartment accessible from the back contains a micro-USB cable and a Micro-to-Mini SIM adapter. Additionally, the MX comes with a 1.2-amp USB wall plug, albeit in its own little box. In case you're wondering, yes, this pentaband (850, 900, 1,700, 1,900 and 2,100MHz) HSPA+ phone uses a Micro SIM, and you even get a couple of Micro SIM template stickers to help

you cut your Mini SIM. Oh, and like the M9, you need to get your own headphones for the MX, though if you pre-order before December 31st, the MX will come with a free headset.

Upon lifting the phone out of the box, our attention immediately focused on the texture of the back casing. Unlike the soft touch cover on many devices these days (including the M9, the Xiaomi Phone and many HTC phones), the MX features a hard white crystal-like case on the back — the crystal part being that there's a 1mm-thick transparent plastic on top of a 1mm-thick white plastic, thus giving out a special glowing effect around the edges when shone under the light. In terms of grip, we were surprised by how comfortable the shape feels in our hand — you get a near-straight side, followed by a shallow tapering and then a flat bottom, meaning the phone can sit still on its back. Comparing the 139g-heavy, 10.3mm-thick MX to the



bulkier Xiaomi Phone, the latter's combination of girth, more rounded corners plus matte cover certainly offers a more secure grip, though we somehow prefer the former's slightly slippery yet solid feel for a change. We shall let you all be the final judge on this one.

To our surprise, the back cover is actually removable. There's no obvious groove for lifting up the case — the quick start manual actually instructs us to press down onto the case's micro-USB port opening, and then run our nail or a pick along the slit until the case unclicks at various spots. It was a bit painful for the first few times, but much like giving birth to kids after the first one, the procedure somehow became less of a torture over time — our thumb must have toughened up. That said, we do wonder how long it'd take before the slit starts to wear out, and the booklet even suggests that we avoid frequently removing the case in order to maintain a tight seal.

But would the users be frequently removing the case, anyway? The 1,600mAh battery isn't user-removable, nor is there a microSD card slot inside; so really, removing the case is just for us to access the spring-loaded Micro SIM tray, and you'd obviously have to be a frequent traveler to keep your nail busy. Another interesting point to highlight is that the camera flashlight is actually placed on the case rather than on the body, and it has three metal contact points underneath for power and earthing. Understandably, Meizu has confirmed that there are currently no plans for swappable cases, though third party manufacturers might churn out some accessories to reach similar goals.

At first sight, there aren't that many surprises externally when it comes to buttons on the MX, but it gets interesting as you touch it more and more. The basics include the power button at the top and the volume rocker on the left, but the physical home button is no longer a flat, round rectangle akin to Samsung's style — instead, it's now a small dome that's easy to click on, yet it also seems to be small enough to avoid accidental clicks while chilling in our pocket. That said, after a few days of full-time usage, we spotted some light scratches at the tip of the dome, which would explain why no other Android phones have gone with similar button designs. Still, we like our little nipple, so we'll just have avoid letting our phone face downward on the desk.

Other visible features include the

[Situation-aware bottom light keys are] obviously a very unique feature amongst the ocean of Android devices these days, and Meizu deserves much credit for such an innovation.

micro-USB port (which supports USB host, MHL for HDMI output and S/PDIF for digital audio connection), a microphone and two mysterious dents along the bottom side, as well as a noise-cancelling mic next to the 3.5mm headphone jack at the top side, and a mono speaker on the right-hand side of the back. Before you complain about the lack of a dedicated camera button, it turns out that in the camera app the volume up button doubles up as a single-stage trigger button (obviously not as satisfying as the two-stage camera buttons on many other flagship phones), while volume down toggles between photo mode and video mode.

We'll talk more about music playback in a bit, but since we're here, we do have some thoughts on the speaker. Yes, going mono is certainly a downgrade from the louder stereo speakers on the M8 and M9, though the MX is still a tad louder than the Xiaomi Phone. We can only assume that Meizu had great reasons to give up its hallmark feature, most likely for the sake of the new form factor. Another problem is that due to the position of the speaker, a lot of the times our right palm ends up blocking the audio entirely when holding the MX

in portrait orientation. This wouldn't happen if the speaker were located further up the phone.

In our opinion, the most interesting physical feature on the MX is its situation-aware bottom light keys. These are essentially five-dot LED cross-matrices, with the left set forming the back key while the other being the menu key. In addition to responding to touch input with a momentary brighter glow, the patterns light up according to the phone's orientation (both landscape modes supported) and the availability of back or menu feature, meaning users should be less frustrated by the lack of response when tapping a dormant key in certain situations (when you're already in settings, for instance). When on standby, the center dots of these keys also blink slowly to indicate new notifications. To sum it up, think HTC Incredible S's optically rotating buttons on steroids. This is obviously a very unique feature amongst the ocean of Android devices these days, and Meizu deserves much credit for such an innovation.

Those who are familiar with Meizu's OS — now oddly dubbed Flyme OS — will no doubt know that holding down the back button on the home screen

switches off the LCD (same as pressing the power button); and the same goes for the MX. Likewise, holding down both the power button and the home button lets you take a screenshot. But when the phone's completely turned off, holding down both the power button and the volume up key boots the MX into firmware upgrade mode (and you need to place your downloaded update.zip file in the root folder); whereas holding down the power button and the home key lets you wipe your personal data. While these button functions are pretty much the same as the M9, there is however one significant change: instead of double tapping the home button for the task manager, you now hold down the menu button instead on the MX. We'll come back to that later.

Following the evolution of most phones, one of the biggest physical changes from the M9 to the MX is the screen size increase, making a jump from 3.5 inches to 4 inches but preserving the same 960 x 640 resolution. Honestly, we aren't at all bothered by the drop in pixel density. If anything, we actually enjoyed the larger ASV LCD's improved viewing angles (which also beat the Xiaomi Phone's transreflective LCD) and the slightly wider color range. Still, when placed side by side, the iPhone 4S's Retina Display and the HTC Incredible S's SLCD show more realistic colors; but frankly, the quality difference is far from a deal breaker and is hardly noticeable when the MX is on its own.

Camera

When Meizu announced that the MX will come with an eight-megapixel backside-illuminated CMOS sensor (same technology used by the iPhone 4S and the Xperia Arc or Arc S), naturally we had high expectations on its picture quality; but first, let's focus on the camera app. When capturing stills you can use the menu to toggle between normal mode, smile detection mode and panorama mode. In normal mode you have access to all the usual options such as ISO (from 50 to 3200), scene, a three-level wide dynamic mode (aka HDR), photo size, white balance and geotagging. The flash switch at the top left corner can switch between auto, forced flash and no flash; whereas the button at the top right of the canvas lets you switch between the 0.3 megapixel front-facing camera and the main camera. We suggest users to not depend on the smaller camera for self-portraits, though, as its picture quality is only good enough for quick and dirty video calls.

Smile detection is pretty self-explanatory and it worked well with our grin video test, though the only settings available for fiddling with are ISO, photo size and geotagging. Panorama mode is left with only ISO and geotagging settings, but it also performed well using





SAMPLE
IMAGES



We tend to get satisfactory pictures so long as we have wide dynamic mode set to low or medium.

the phone's gyroscope and our own steady hands, thus producing combined images around the size of $3,264 \times 1,120$ — the latter value varies depending on coverage angle — with clean overlaps. However, the panorama mode only supports one landscape orientation: sweeping from left to right with the MX's volume rocker facing downwards. This is a bizarre design considering that the shutter button (volume up) is normally at the top right corner of a camera.

It's inevitable that we'd compare the MX's f/2.2 camera with the Xiaomi Phone's f/2.4 counterpart with the same eight-megapixel resolution. Interestingly, putting the images side by side shows that these two phones are at two different sides of the scale. While the Xiaomi Phone appears to produce more vibrant images, we find them to be over-saturated most of the time. On the other hand, the MX's wider photos displayed more realistic colors, but we're troubled by the greenish hue in many of our outdoor shots under daylight. We've expressed our concern to Meizu's engineers and they assured us that this is being tweaked as we speak, so we'll give this another spin when the right firmware comes along.

Other than that, we tend to get satisfactory pictures so long as we have wide

dynamic mode set to low or medium. One of our favorite stills is a night shot of a dark walkway under some trees and a street lamp: with the assistance of low-level wide dynamic mode, this surprisingly clear image is a prime example for showing off what BSI technology does best. Our macro shots also came out great, and we could get as far down as 5cm above the object without much trouble with the autofocus.

As for video recording, currently the MX beats the 720p-only Xiaomi Phone, though to our surprise, by default the former's video recording resolution is set to 1,080 x 720 only, and it kept disregarding our previous setting, often changing it back to this resolution. Two things boggle us here: why not 1,280 x 720 at least? And why set a video resolution lower than what the camera's advertised for? If the intention here is to save storage space then we'd rather be prompted for a decision upon first boot-up; otherwise we fear many users would be disappointed when they realize they'd been capturing much footage at a lower resolution than intended since day one.

Leaving our rant aside, the 1080p video quality (actually $1,920 \times 1,072$ at 30fps, MPEG-4 AVC main profile at level 4, up to 25.5Mbps) isn't bad at

all bar the same light green hue problem. There's no fancy optical image stabilizing technology here, obviously, but the lack of continuous autofocus — as featured on the Xperia Arc S and the Xiaomi Phone — is a slight drawback. That said, you can focus manually while filming by tapping on your desired spot on the screen, but be sure to tap lightly to keep a steady footage, and also beware of the light clicking noise coming from the lens while auto-focusing — this is more apparent when the lens is facing upwards. We also spotted a couple of bugs here, with the more severe one being that sometimes at night our recording tends to skip frames or slow down at certain points. The lesser problem we saw was that the first second of all our clips captured the camera's preparation autofocus in action, but this should be easy for the engineers to eliminate.

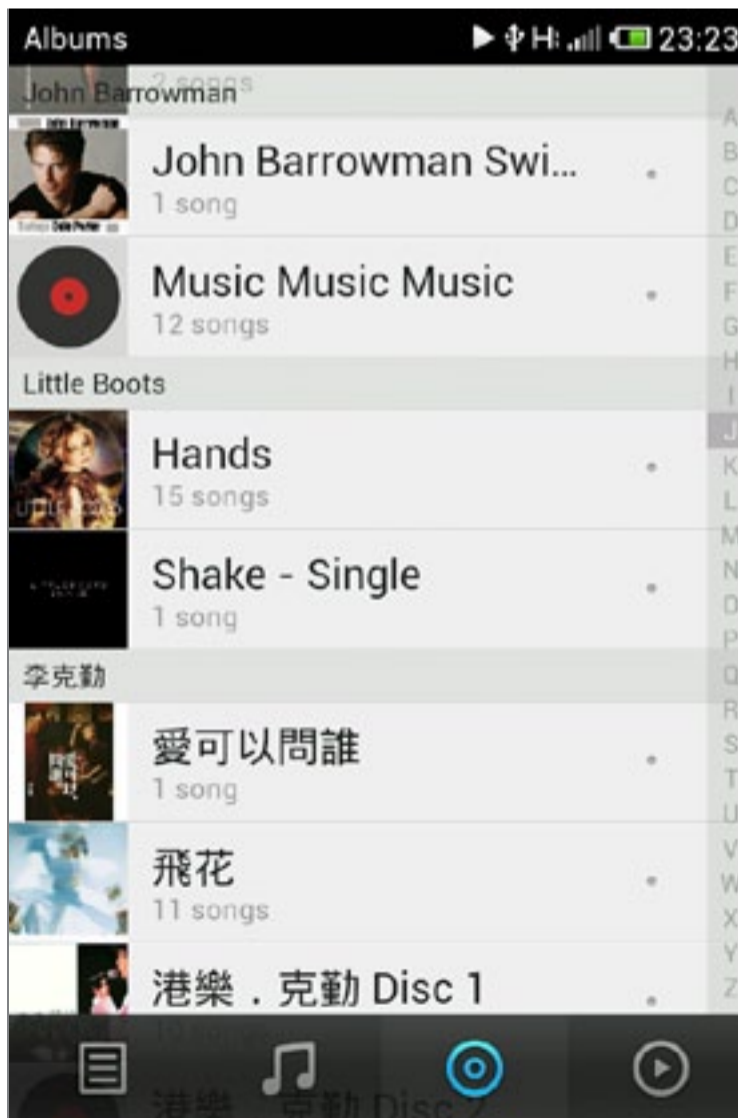
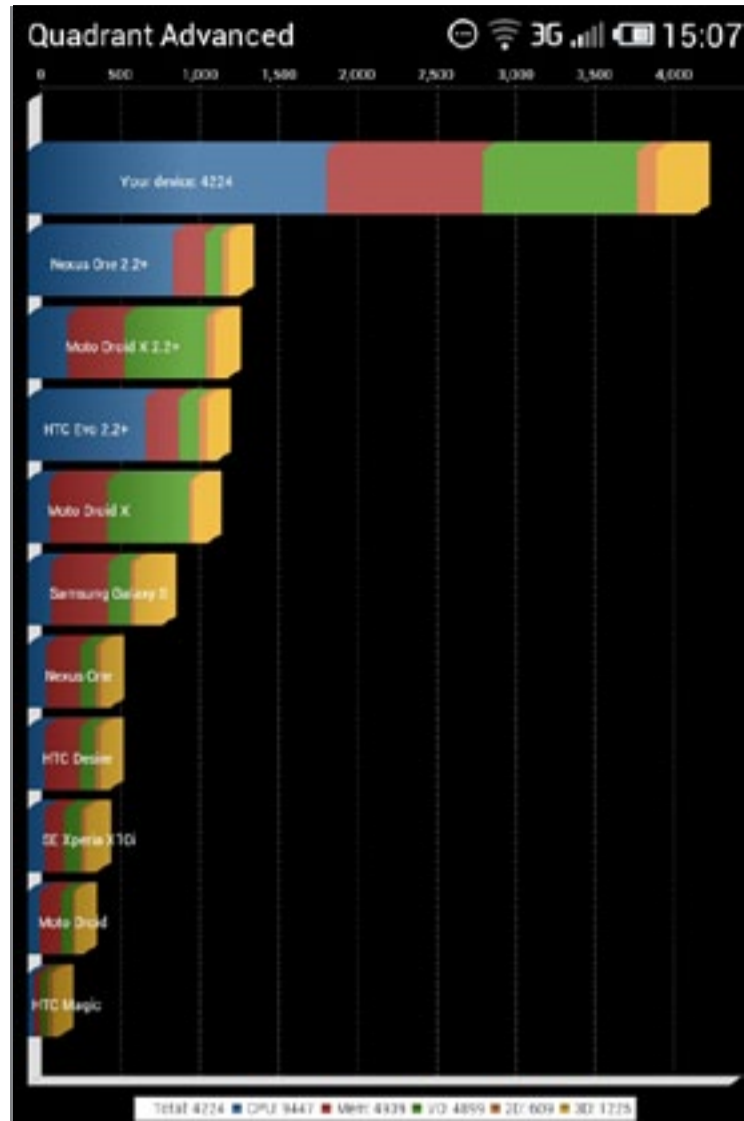
Software

As we mentioned briefly earlier, the MX's slick Flyme OS (currently based on Android 2.3.5 with 4.0 upgrade planned) has preserved many features from the M9, and on the international model it's also rootable. But in case this is your first acquaintance with Meizu's Android customization, it's probably the easiest if you think of it as a crossover between a standard Android OS and iOS: like the latter, there's no dedicated app list here, so all your apps are spread across up to ten home screens; but of course, you can also add widgets,

though Flyme only lets you use each of them once, which can be slightly inconvenient for those rocking numerous home screens. Interestingly, the Xiaomi Phone's MIUI OS also features this iOS-like app management, so the Chinese users must be pretty fond of Apple's mobile UX. Alas, unlike MIUI, there's no way of quickly jumping from one home screen to another on Flyme, so you'll just have to work your finger with plenty of horizontal swiping; or simply make better use with your folders.

Leaving the home screen management problem aside, Meizu made it up to us with various goodies dotted across the OS. Starting from the unlock screen, here you can toggle the music player controls by tapping on the menu key, as well as switching on USB storage mode if your MX is plugged into a computer. However, we noticed that the latter activates itself even if a screen lock password is set, so anyone could access the phone's content with just a USB cable. We do appreciate the convenience, but Meizu should also offer a more secure option; after all, most other phones only let you activate mass storage mode after you go past the screen lock.

Entering the home screen or your last active app is simply a matter of dragging the padlock icon up from the bottom, but if you do the same with either the phone icon or the speech icon on the side, you'll jump straight to either the phone app (which loads up the tab where you last left off) or the messaging app, respectively. And just like the good



BENCHMARK	MEIZU MX	XIAOMI PHONE	SAMSUNG GALAXY NOTE	HTC REZOUND
Quadrant ¹	4,224	3,784	3,998	2,347
Linpack Single-thread ¹ (MFLOPS)	53.74	55.74	64.3	52
Linpack Multi-thread ¹ (MFLOPS)	73.4	82.52	95.66	60.3
NenaMark1 ¹ (fps)	59	49.7	57.7	53.5
NenaMark2 ¹ (fps)	44.4	32	32.8	35.8
Neocore ¹ (fps)	58.9	61.4	51.8	59.8
SunSpider 0.9.1 ² (ms)	2,816	2,586	2,902	2,961
Vellamo ¹	916	1,194	944	920

¹Higher the score the better.

²Lower the score the better.

holding down the MX's menu button triggers the task manager; though unlike the one on the M9, this beefed up manager app also lets you toggle various radios like WiFi, Bluetooth and GPS, as well as switching between network modes (3G only, GSM only and GSM/3G auto). Alas, to toggle silent mode, vibration, flight mode (where WiFi cannot be enabled), phone-off mode or screen rotation lock, you'll need to either hold down the power button or dig them up in settings; whereas on MIUI you can simply access them on the notification tray. Having said that, Flyme does have many other hidden gems. As you probably know, on iOS you can tap the top task bar to jump straight to the top of lists, but this isn't possible on pretty

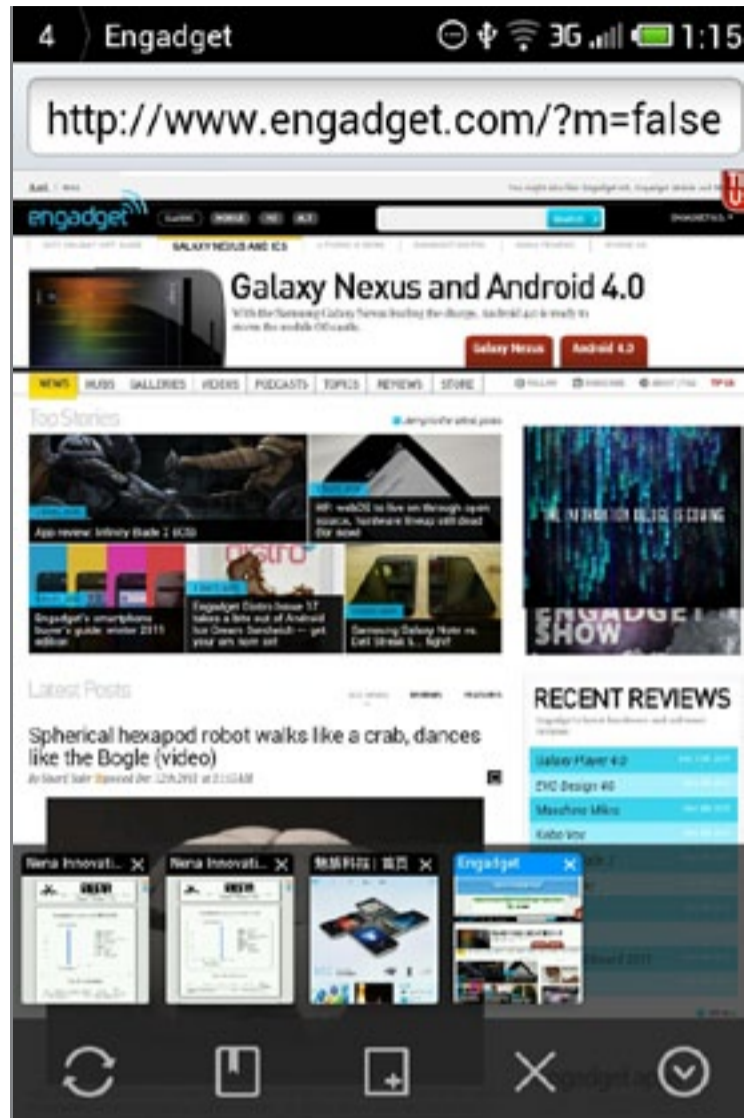
much all Android OSes due to the notification tray at the top; so Meizu's cunning solution is to implement this function on the clock area at the top right corner of the screen.

If that doesn't impress you, perhaps MX's remote control tool will: this rare feature lets you remotely control another MX within the same WiFi network. All that's required is to go into Accessibility in Settings, choose Remote Control, and then set up a device name plus a password on the host device. You can then go back to the controlling device to pick the host device from the list, log in using the aforementioned password, and voila! You should see the host device's screen on the controlling device. Understandably, there is a slight lag and a lower

frame rate for the controlling end, nor can the controller use pinch-to-zoom or watch a video feed (from the camera app or video player); but still, the input response was pretty much instantaneous for us, and the host device can still be used while connected to its controller. We're not sure how often we'd use MX's remote control feature in real life, but we can definitely see potential in walking new owners through their MXs.

Compared to many phones these days, the MX doesn't come with as many pre-installed handy apps. What you get out of the box are a calculator, an alarm clock, a file browser, a notes app, a voice recorder, an IMAP or Exchange email client, Google Maps (GPS tracking takes about half a minute) and Meizu's own app store, Mstore, which contains mostly Chinese apps. For typing, you get a multitouch English keyboard as well as various input methods for both traditional and simplified Chinese. If we were to give Meizu a wish list, we'd like to see a stopwatch or a countdown timer at least, and then maybe a torch app plus a compass app.

The MX's internet browser comes with all the features that you expect to see on a standard smartphone these days. Once a web page is fully loaded, you get pretty much a full screen view except for the task bar at the top, with the top left corner indicating the number of tabs you have opened. Hitting the menu key gives you thumbnails of all the tabs along with various buttons at the bottom: refresh, add tab, close tab,



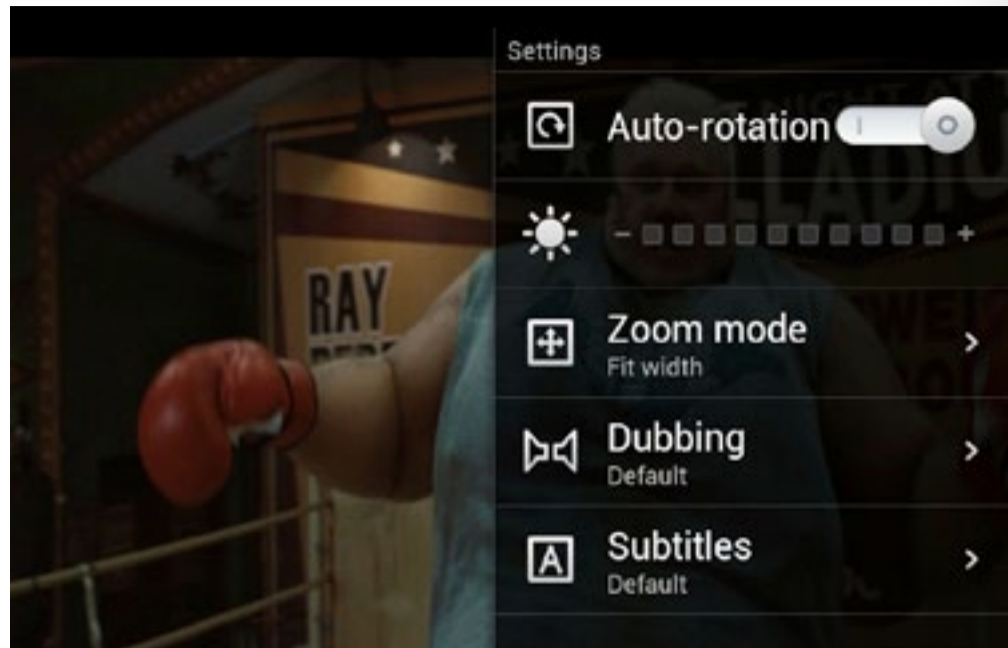
includes forward, history, settings, add to favorites, share URL via email or SMS, add to home screen and view downloads). There's little to complain about the browser — we got smooth scrolling on our full website, and likewise with pinch-to-zooming. Flash videos worked fine as well until we hit the HD button, but at this day and age, we're inclined to put the blame on Adobe.

On the multimedia front, the MX's native video player supports a handful of formats including MP4, 3GP, MOV, MKV, AVI, FLV, MPEG and M2TS (and before you ask, WMV didn't work for us); whereas the native music app can handle the usual MP3 plus M4A files, along with the more obscure FLAC, APE, AAC, OGG and many more formats. But

like the M9, there's no FM radio to be found on the MX. Meizu's reasoning here is that online audio streaming is the way forward, though it didn't indicate whether this is a hardware or software limitation, nor has it thrown in the same native music streaming app that the M9 had. Our guess is that Meizu didn't secure a new licensing deal (if any), but then again, there are plenty of alternatives in the app stores these days (especially the Chinese ones), so no biggie.

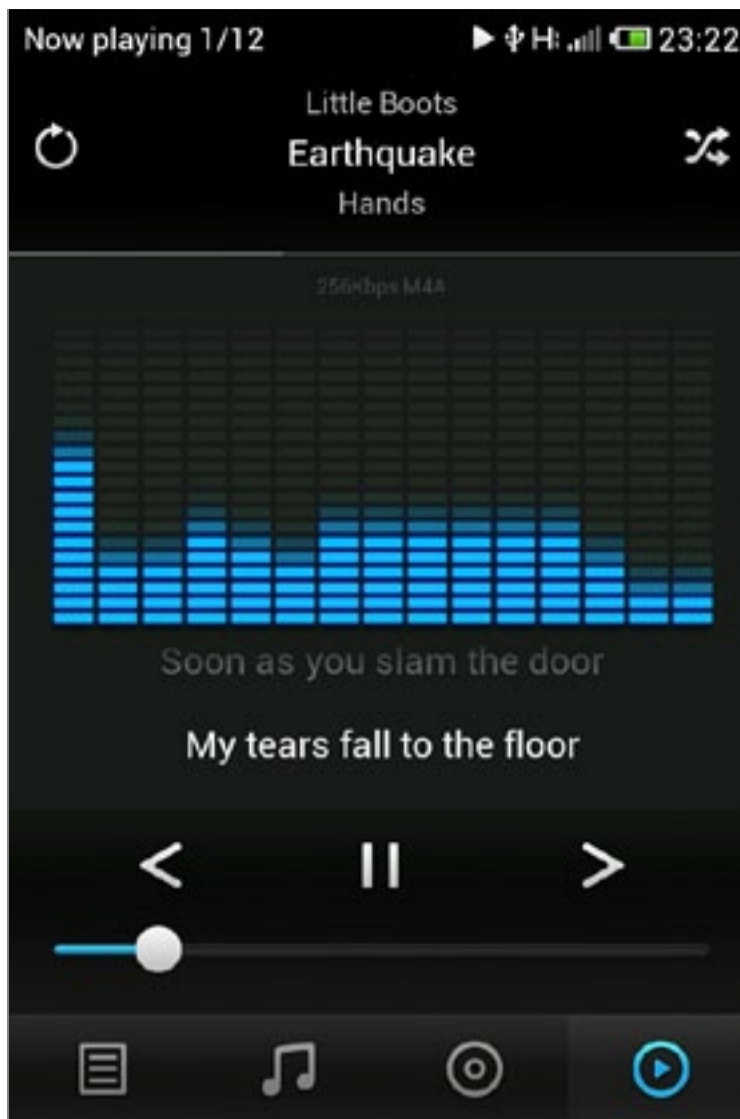
Speaking of app stores, we noticed that the Android Market on our MX is limited to just one download at a time, as opposed to allowing multiple download streams like many other flagship devices do. This goes along with many other weird default settings that we've had to change, where possible, to get the most out of the phone. For example: vibration notification was disabled; the auto-capitalization on the default English keyboard (which itself also has a weird layout due to the lack of row offsets) was also switched off; the punctuation mark bar on the English keyboard had to be launched manually every time we open the keyboard; and we had to install Gmail by ourselves as well (yet Google Talk and Google Translate were already dumped in a folder).

Still, none of the above are as weird as this: it turns out that there is a "CPU level" — hidden inside Accessibility in Settings, oddly enough — that's set to normal by default, which means the clock speed was capped at 1GHz. Considering that we usually get about six to



seven hours worth of normal usage on the 1.4GHz "high" setting (with 3G constantly on as well), or even just under 5.5 hours on our standard video loop test (we got about just 10 minutes more on the Xiaomi Phone, which has a much bigger battery), we don't really see the need to underclock the phone to preserve battery juice. Worse yet, surely it's not very nice to underpower a product without telling its owner? Perhaps Meizu will reconsider this odd decision once it has a solid stable firmware for the retail units.

Once we got our MX charged up again, we decided to do a stress test on its video playback performance. We loaded up three 1080p .MOV movie trailers from Apple's website, with video bit rate ranging from 9Mbps to 10Mbps. To our surprise, all three played smoothly except for one or two moments where the video and audio were out of sync, but it only took a couple of seconds to catch up. We then checked these offending spots in the 720p version of the clips (at about 6Mbps), and unsurprisingly,



the playback was flawless. That said, we noticed a tiny delay between the video and the audio when playing the same 720p clip through an MHL adapter (we used the Galaxy S II's HDMI adapter — which also simultaneously charges up the phone — as Meizu doesn't currently offer one), so hopefully this is something that can be tweaked in the software. We also had a go at playing *Shadowgun* on the big screen, and while the graphics looked great, we had a hard time with keeping our thumbs on the virtual buttons while simultaneously looking at the TV. Guess we'll be needing some Fling minis made just for *Shadowgun* — one pad on the left and two on the right.

The native music app itself is plenty of fun, though it's not that much different

than the one on the M9. With our hf3 earphones, we could use the call button to play and pause with a single click, skip track by double-clicking, and go to the previous track by triple clicking. As for the UI you still get four tabs at the bottom in this order: playlists, songs, albums (by artists) and now playing. The repeat and shuffle buttons are on the left and right-hand side of the top song info bar, respectively, and tapping anywhere up there toggles the scrobbling dot on the timeline. Swiping horizontally in the middle lets you jump between the album art, an ice blue visualizer and the current playlist. Hitting the menu key would prompt a dialog that lets you choose between the shutdown timer (from five minutes up to an

hour), song info and equalizer. If you need help remembering the words, you can go into song info to search for lyrics (as well as album art) for the current song. Once chosen, the lyrics would then start auto-scrolling below the visualizer, and tapping it would let it run atop of the visualizer. It's no doubt a cool feature, but sadly, we'll be needing more help to build up a larger lyrics library for non-Chinese music; and also, Meizu seems to have forgotten to provide a way to delete wrong lyrics.

Of course, what we really care about here is the audio quality. We've already shown our disappointment over the mono loudspeaker, but luckily, we found some sweet audio coming straight out of the 3.5mm headphone jack, and it's definitely an improvement from the M9. For instance, in Diana Krall's *Isn't This A Lovely Day* (from the album *From This Moment On*), her voice becomes significantly livelier with a fuller mid-range, while the occasional trumpet manages to hit the higher frequencies that the M9 seemed to have missed. We could also sense a wider range in the bass region, thus providing better control over the drums and the double bass. All in all, the MX makes the M9's audio sound dull, and we'd even argue that it has a finer bass control than the iPhone 4 (especially on the lighter vibrations of the double bass), but obviously you'd need a pair of nice earphones to fully appreciate this difference — we've been pretty happy with

“All in all, the MX makes the M9's audio sound dull, and we'd even argue that it has a finer bass control than the iPhone 4.”

our Etymotic hf3 matched with ACS custom earphone sleeves. Oh, and don't forget that there's also Bluetooth 2.1 + EDR, which worked just fine with our Nokia Play 360° wireless speaker.

Similarly, phone calls were easy to listen to on the MX's little earpiece, and on the other end the voice coming from the MX's caller is cleaner but a bit tinny. This is likely due to the nature of dual-mic noise cancellation as proven by our Nexus One, but hey, it does drown out a bit of background noise. Dig a little deeper and you'll find that the phone app also has some nice goodies in settings, such as exporting or importing contacts to and from a VCF file, a customizable blacklist for spam calls, and having an automatic SMS sent to a declined caller. For the creeps out there, you can even set it so that every single phone call gets automatically recorded (rather than having to hit the record button).

Last but not least, Flyme OS actually comes with a suite of cloud services (hence the name “fly me”). While the service isn't fully operational just yet,



we're promised automatic backup of our text messages, call logs, contacts, notes and settings, along with an iMessage-like phone number-based IM service that'll initially be supported in China only. Additionally, you'll also be able to locate and remote-lock your MX using the Flyme website, but again, it's not quite ready to be poked around just yet.

Don't worry, we haven't forgotten to give the MX some benchmark love for its 1.4GHz dual-core Exynos 4210 processor (garnished with 1GB 1066MHz LPDDR2 RAM and a Mali-400 MP graphics chip). But first off, boot time: our MX takes about 38 seconds to get to the lock screen, whereas our Xiaomi Phone takes only about 21 seconds. We then did a quick file transfer test over USB, and again, our MX's 8.5MB/s write speed hangs head in shame in front of the Xiaomi's 13.3MB/s; but to be fair, we did put a Class 10 microSD card in the latter device. Too bad we can't upgrade the MX's storage. However, the benchmark scores are more positive, with Quadrant and NenaMark both indicating that the MX is much better at 3D rendering, though

there's clearly space for improvement in browser performance.


Wrap-Up

After a week's worth of usage, it is safe to say that Meizu's third-ever smartphone has proven to be a huge improvement from the M8 and M9 days, and at HK\$3,099 (US\$398) unsubsidized it's still of great value. While there are still some features that were probably inspired by, ahem, similar devices, the MX has been given many unique features that will no doubt help shake away the company's old KIRF image. Having seen Jack Wong's Zhuhai factory late last year, it isn't hard to see that his team is on the right track to wade into the international market, which is why we're extremely pleased to see this fascinating company finally opening its first-ever store in Hong Kong this past week. Of course, there are still areas where Meizu can work on, and there were times when we wished we could just port the more flexible MIUI over to the MX, but it shouldn't take much for the engineers to dish out handy little tweaks here and there. Every little bit counts, much like





how we're baffled by every little weird setting mentioned previously, so hopefully we'll see most of those bugs eliminated in the remaining two weeks.

Will Meizu be able to hold Xiaomi back? It's hard to tell in the short term. Sure, performance-wise both the MX and the Xiaomi Phone are very similar, but the price war is obviously the biggest problem for the former. That said, with the help of regular fan events and forum interaction across the country, we think the company's users will remain loyal for a very long time. It's easier said than done, of course, but here's hoping that said outfit will figure out how to offer new services that will either help subsidize hardware cost or simply to make the existing devices a better value for the money. After all, that's exactly what Xiaomi's Lei Jun is gunning for, and Meizu must act quickly before its fierce competitor gobbles up more of its users. 

Richard Lai is addicted to gadgets, even more so than a typical Chinese lad. Also looking after Engadget Chinese.

BOTTOMLINE

Meizu
Meizu MX

HK\$3,099 (US\$398)

PROS

- Sharp display with slick graphics
- Great music quality through headphones
- Unique casing with good build quality

CONS

- Flyme OS not as intuitive as MIUI
- No memory expansion
- Camera pending improvement

» Meizu's third-ever smartphone is its best product yet, but while it's priced attractively, there's some room for improvement.




Samsung Series 7 Slate PC

The Series 7 is fast and powerful enough to replace a travel laptop, but with a price this high and battery life this short, it's best suited for businesses with very specific needs.


BY DANA WOLLMAN

All quiet on the Windows 7 tablet front? Well, no, but we haven't exactly seen many shots fired lately. Sure, HP recently refreshed the Slate 500 with the Slate 2, but for the most part, products like this have been eclipsed by excitement around Windows 8. Of course, Redmond's tablet-friendly OS won't ship for another year, so for now tablet makers are releasing Windows slates with little fanfare. Not Samsung, though. While its mobile team has dug

its heels into the consumer tablet market with devices like the Galaxy Tabs 10.1, 8.9 and 7.0 Plus, its PC division is taking a different tack. The Series 7 Slate PC was built by the same team behind the striking Series 9 laptop, making it one of the slickest business tablets we've ever beheld. It rocks an 11.6-inch display that handily dwarfs pretty much everything else out there. It runs a Core i5, not Atom, processor, and is offered with a custom dock and Bluetooth key-



It feels like a cousin to most other tablets, not a member of the same species.



board. The Series 7 Slate isn't just a rare Windows 7 tablet; it's also one of the most memorable. But are all of those things worth the \$1,099 starting price? Could be, but we can think of a few caveats. Allow us to explain.


Hardware

If you were to take our last few reviews of Samsung tablets and scoop out the paragraphs where we talk about design, they'd be more or less interchangeable. The Galaxy Tab 7.0 Plus looks kind of like the Galaxy Tab 8.9, which reminds us of the 10.1. Heck, we've even fallen into a pattern describing Samsung's phones: they're plasticky, we say. Not premium-feeling, exactly, but lightweight and solidly built.

But the Series 7 is no Galaxy product. In fact, it comes from an entirely different division within Samsung: not the mobile group, but the team responsible for the Series 9 and other laptops we've been ogling lately. Unsurprisingly, then, it feels more like a keyboard-less PC than

the kind of consumer tablet we tend to review. Which is to say, it's a serious-looking thing, with full-sized ports, a charcoal, brushed aluminum lid and three vents hinting at the powerful Core i5 CPU that lies beneath. It has style, to be sure, but also the kind of gravitas that makes even the Transformer Prime look like a toy in comparison.

Here's the thing about gravitas, though: it connotes weight. Dignity, yes, and in this case, a stunning 2.06 pounds (934.4g). It's not just that the Series 7 is heavy, or thick, at 0.51 inches (13mm): with an 11.6-inch display, it's simply oversized. Particularly because of that 16:9 screen orientation, it feels like a cousin to most other tablets, not a member of the same species. That said though, it's not as unwieldy as you'd think. It's surprisingly easy to cradle in landscape mode — much more so, certainly, than the Grid10, another of the few 16:9 tablets we've seen. Samsung was also smart to put the vents toward the top of the back side, near the three





megapixel rear camera; even though the vent is quick to spew out warm air, it sits high enough that you're unlikely to graze it with your fingers. Still, we tended to avoid using the tablet in portrait, as the weight distribution at the other end made it uncomfortable to hold up (viewing angles became an issue then, as well).

We'd add that the 16:9 aspect ratio makes it easy to slip under your arm and carry hands-free. It also helps that the metal surface is blessedly scratch- and fingerprint-resistant (those wide bezels are another story). And as hefty as it is, we regularly slipped it into a shoulder bag and toted it to and from the office without any real burden. Still, pile on the keyboard, dock, charger and a Bluetooth mouse and that journey turns into a schlep.

As you might expect from a Windows tablet, the Series 7 is well stocked with ports and once again, Samsung arranged them in pretty intuitive way. Imagine for a minute that you're holding it in landscape mode. On the bottom, all you'll find is the docking connector that allows it to work with the accompanying dock (more on that in a bit). On the right edge, toward the top, there's a power / lock button, which you can press lightly to turn off the screen, and hold to force a shutdown. Next to that, there's a button for locking the screen orientation. As with the rear camera, we appreciate that Samsung put these in a place where you're unlikely to hit them by accident in either landscape or portrait mode. Moving on to the left side, you'll find a USB 2.0 port up top, along with twin volume buttons that sit within reach of



where your fingers would be. Also on this side are a micro-HDMI socket and a 3.5mm headphone jack. Finally, on the top edge you'll find a microSD slot, hidden behind a sliding door.

The one thing we wish it had is a full-sized SD slot, like the kind you'll find on the ThinkPad Tablet. Even if Samsung couldn't fit it on the tablet itself, perhaps it could have squeezed it into the dock, as ASUS did with both generations of its Transformer keyboard.

And, not to be confused with an iPad or Android slate, the Series 7 has a button on the lower bezel that would appear to be a Start button — after all, it bears the same logo as the one on your PC. Ironically, though, the button acts as a shortcut for Samsung's Touch Launcher — a proprietary skin that makes the tablet feel a little less like a Windows tablet. There's a good reason for having this finger-friendly UI, of course (Windows 7 is best used with



a pen or keyboard-mouse combo), but before we get ahead of ourselves, let's continue talking about the hardware.

Accessories

Depending on the configuration you choose, your Series 7 may or may not come with Samsung's accessories, which include a Bluetooth keyboard (\$100) and dock (\$80). As it turns out, our top-shelf configuration did, but everything else comes with just the pen.

In case you were wondering why the tablet has only one USB port and no full-sized HDMI socket, fear not: all of that and more sits on the back edge of the dock. In total, you'll find an Ethernet jack, an extra headphone port, along with USB 2.0 and HDMI. The dock itself has a flap on top that opens to reveal the docking connector, and against which you can rest the tablet to prop it up. Close the flap, though, and the dock becomes a pocketable slab,

decked out in the same brushed metal as the tablet. We especially appreciate that it has a soft, rubbery finish on the bottom, making it difficult to accidentally slide it out of place on your desk.

As for the keyboard, what you'll get is much more generously sized than what you'll find on the Transformer Prime dock, which is to say all of the major keys (Enter, etc.) are plenty large. The keys themselves are easy to press, albeit a bit gummy. We do like that the module on the back holding the two AAA batteries gives the keyboard a nice lift, which makes for some comfortable typing. All told, it's no match for your laptop keyboard, but it's certainly an improvement over what you'd get if you went with the Prime. And, of course, you're not limited to Samsung's Bluetooth keyboard: if you don't like it, you can sub in your own.

One thing Samsung isn't selling alongside the Series 7 is a mouse, so be prepared to bring your own if you plan on making good use of the keyboard. For our part, we used Microsoft's Touch Mouse, and had no problem connecting it using the small USB dongle that came with it.

Display

The tablet's expansive, 11.6-inch, PLS display has a 1366 x 768 pixel count, which we see all the time on small- to mid-sized laptops, but rarely on tablets. Indeed, it's crisp enough for comfortable web surfing and working with a few windows open. But mostly, the display shines on account on its vibrant, punchy



colors. This is a 400-nit panel, making use of Samsung's SuperBright Plus technology — just like the screen in the Series 9 laptop, except with a glossy, not matte, finish. As sunny as it is, though, we were hesitant to crank the brightness when using it outdoors, just because the battery life is so skimpy (spoiler!).

In general, we were quite pleased with the way the display responded to finger input. Whether we were working in Windows 7 or Samsung's more finger-friendly overlay, the tablet reacted precisely and nimbly to our various taps and swipes. In particular, it offers solid palm rejection; you should have no problem carrying it around one-handed with your fingers grazing the screen. The one time this failed us was when we happened to have a note-taking app open; in this particular scenario, your finger-presses may well show up as virtual scribbles.

Etc.

No surprise here, but the sound coming from the speaker has a metallic, hollow feel to it, and the volume is fairly tame, even when pushed to the maximum setting. We can't say we've ever been bowled over by the audio on tablets, but it's worth pointing out given that this thing starts at \$1,100. For that kind of money, laptops offer sound quality that's, well, not quite as tinny as this.

Pen Input

And what would a Windows 7 tablet be without a little pen action? The Wacom-compatible pen comes included (unlike with some tablets), but oddly, there's no

“What good is a tablet this bulky if it can't justify its heft with generous runtime?”

place on that thick hunk of a tablet to actually store it.

But what a pleasure it is to use. From the start, writing on the screen felt buttery smooth, even if we pressed lightly on the pen. In what might be our favorite design touch, it has what looks like a classic, rubber eraser on top (except made of black plastic), and you can rub it against the screen to remove any markings. Also intuitive: if you press and hold the button and then tap the screen you'll bring up all the options you would have if you right-clicked. Similarly, if you're in Windows Journal, the included notepad app, you can hold the button and then circle text for options such as changing the text color.

The problem is, not every app supports pen input. Windows Journal does, of course, and you can use the pen to tap menus and shortcuts throughout Windows 7. But even the included “Notes” app (also part of Samsung's finger-friendly UI) doesn't accept pen input; just typed words. You also can't use the pen to mark up webpages or email attachments. Out of the box, at least, the pen is clearly meant for scribbling notes and navigating the operating system, though you can bet any business that's



TABLET	BATTERY LIFE
Samung Series 7 Slate PC	3:33
Apple iPad 2	10:26
ASUS Eee Pad Transformer Prime	10:17
Samsung Galaxy Tab 10.1	9:55
Apple iPad	9:33
Motorola Xoom 2	8:57
HP TouchPad	8:33
Lenovo IdeaPad K1	8:20
Motorola Xoom	8:20
T-Mobile G-Slate	8:18
Samsung Galaxy Tab 7.0 Plus	8:09
Lenovo ThinkPad Tablet	8:00
Archos 101	7:20
Archos 80 G9	7:06
RIM BlackBerry PlayBook	7:01
Acer Iconia Tab A500	6:55
T-Mobile Springboard (Huawei MediaPad)	6:34
Toshiba Thrive	6:25
Samsung Galaxy Tab	6:09
Motorola Xyboard 8.2	5:25
Velocity Micro Cruz T408	5:10
Acer Iconia Tab A100	4:54

*We ran our battery test twice: the first time, we used the same settings we do when we test tablets; the second, we went with the settings we use in the laptop test. The results from both scenarios were minutes apart, and what you see printed is the better score.

buying this particular device already has some pen-optimized, industry-specific apps in mind.

Battery Life

And this, friends, is why a tablet running Windows 7 on a Core i5 processor might not be such a fantastic idea. Though the tablet promises up to seven hours of battery life, in our rundown test (movie looping, WiFi on) it managed just three hours and 33 minutes. As always, we'll add the caveat that that's a more taxing routine than just surfing the web, but it's still not much of an excuse — after all, the Transformer Prime lasted 10 hours and 17 minutes on the same test, and that was without the battery-extending dock.

We know, we know: this isn't an apples-to-apples comparison; we're not aware of any Windows 7 tablet capable of 10-plus-hour battery life. But really, what good is a tablet this bulky if it can't justify its heft with generous runtime? At the very least, this kind of pitifully short battery life should make you think twice about how much you need Windows 7 in tablet form. If all you want is to stream video, check email and surf the web, you can do that on any tablet, even adding a Bluetooth keyboard if you so choose. And depending on how much you're willing to settle for a lighter feature set, you'll also find various office suites, photo editors and the like for iOS and Android. If you require certain Windows apps, fair enough, but even then, you have other options such as the new HP Slate 2 to consider. We just don't buy the idea that if you're dead-set on Windows you have to settle for that little endurance.

Performance

Our test unit (the highest-end configuration sold in the US) came loaded with a 1.6GHz Core i5-2467M processor, 4GB of RAM, a 128GB Samsung-made solid-state drive, integrated Intel HD 3000 graphics and Windows 7 Professional. Compared to an Ultrabook with similar components, its score of 4,195 on the benchmark PCMark Vantage isn't impressive, though its real-world performance is generally on par with what we've seen from ultraportable laptops. Similar to an Ultrabook with a Core i5 CPU and SSD, it boots in an insane 19 seconds, while its read / write speeds peak at 250 MB/s and 200 MB/s, respectively. In fact, we probably spent more time using the Series 7 as a laptop replacement than we did as a standalone tablet. Between the large-enough screen, laptop-grade components, included keyboard and matching dock, there's little reason not to use this as you would a computer. And if it weren't for the fleeting battery life (and the hassle of transporting a dock, keyboard and mouse), it would feel even more versatile.

Software

Though the Series 7 was running an early version of Windows 8 in one of our first two outings with it, it's currently shipping with Windows 7 Home Premium and Professional. As we've seen with other business-focused machines, the bloatware load is light, though hardly spartan. These programs



include: CyberLink's YouCam software, a trial of Microsoft Office 2010, Norton Internet Security and Norton Online Backup, Skype 4.2 and Windows Live Essentials 2011. Mostly benign stuff, except for Norton, which pops up to say hello as soon as you boot up the tablet for the first time.

Until Windows 8 gets the final seal of approval, likely sometime in 2012, companies like Samsung have to make do with Windows 7, which as we all know, isn't nearly as easy to navigate with fingertips as it is a mouse-and-keyboard or pen. So, Samsung leaned on its TouchWiz know-how and whipped up a more finger-friendly UI, dubbed

It's altogether a different experience than if you were to install Windows 8 Developer Preview on here.

the Touch Launcher.

As we said, to launch the Launcher (sorry, guys), you just press the Start button on the front side of the tablet. Now, if this isn't related to TouchWiz, we don't know what is: the interface consists of two home screens with grids of large, candy-colored shortcuts, similar to what you'll find on any of Sammy's Galaxy phones or tablets. To move from one home screen to the other, just swipe. If you're so inclined, you can organize apps into groups, as well as add a shortcut to a desktop program.

With us so far? Okay then. At all times — whether you're looking at the home-screen or one of the 24 touch apps — you'll see the Windows Taskbar at the bottom of the screen, so you'll never be too far removed from any programs you've pinned down there. That also makes it easy to dive back into a full-fledged Windows app you may have had open. Throughout, the Touch Launcher shows a big "X" in the upper right corner for closing apps or returning to the classic desktop, though you can just as easily do this by clicking the "show desk-

top" button at the end of the Taskbar.

On the left side of the home screen, there's a pane that slides out to reveal a little glanceable information: the weather, battery status and any items you have outstanding in the native ToDo app.

It's altogether a different experience than if you were to install Windows 8 Developer Preview on here, where you'd move back and forth between the classic desktop and Windows Phone-inspired tiles — a jarring experience, if you're not used to it. Here, you can make use of both Windows and this more touch-friendly UI, but you can also quarantine the dumbed-down Touch Launcher and open it only when you need it.

In addition to ToDo, the nearly two dozen pre-installed apps include: Photos, Videos, Music, Bing Map, Notes, Yahoo Finance, Social Dashboard, Recipe, Clock, Weather, Internet Explorer, Windows Journal, Twitter, RSS Reader, Calendar, Camera and Amazon's Kindle reader. There's also an icon for YouTube, but that's just a browser shortcut.

We won't exhaust you with a run-



down of every single app, but suffice to say, there's promising stuff here, but also room for improvement. Some highlights: the calendar app syncs with your various Gmail calendars within seconds, even preserving the colors you had originally assigned them. Social Feed lets you cherry pick people whose updates you really want to read, and then cobbles those together into a patchwork of tiles.

Still, we wonder why Samsung didn't include a touch-friendly email app, especially since the software can already go so far as to pull in data from Google Calendar. And though you can swipe between home screens, you can't do that inside apps. For instance, if you've got five pages worth of recipes calling for turkey sausage, you'll need to tap an onscreen arrow to move through them. Ditto if you want to jump to another week on your calendar. If this special interface is designed specifically for finger input, why not let us really touch it?

We also noticed the occasional hiccup in these touch apps, particularly with Social Feed, which frequently froze as we searched for friends to add to our update list.

Camera

The truth is that even if the primary camera on this guy had higher resolution, we might still have had a problem with it; after all, tablet cameras haven't exactly been carving out a reputation for their sterling optics. But it might have helped. Our 3 megapixel stills taken with the rear lens are blurry in some areas, with a good deal of detail stripped out. Predictably, too, it suffers in low light — not to mention twilight, harsh backlight and even dull light. In retrospect, we shouldn't have been surprised, though when we tested the camera around town we found it was relatively quick to focus and the images at least looked crisp on that smaller, 1366 x 768 display. Maybe they're best left there — everything goes

The Series 7 Slate is memorable, compelling and, ultimately, a niche product.

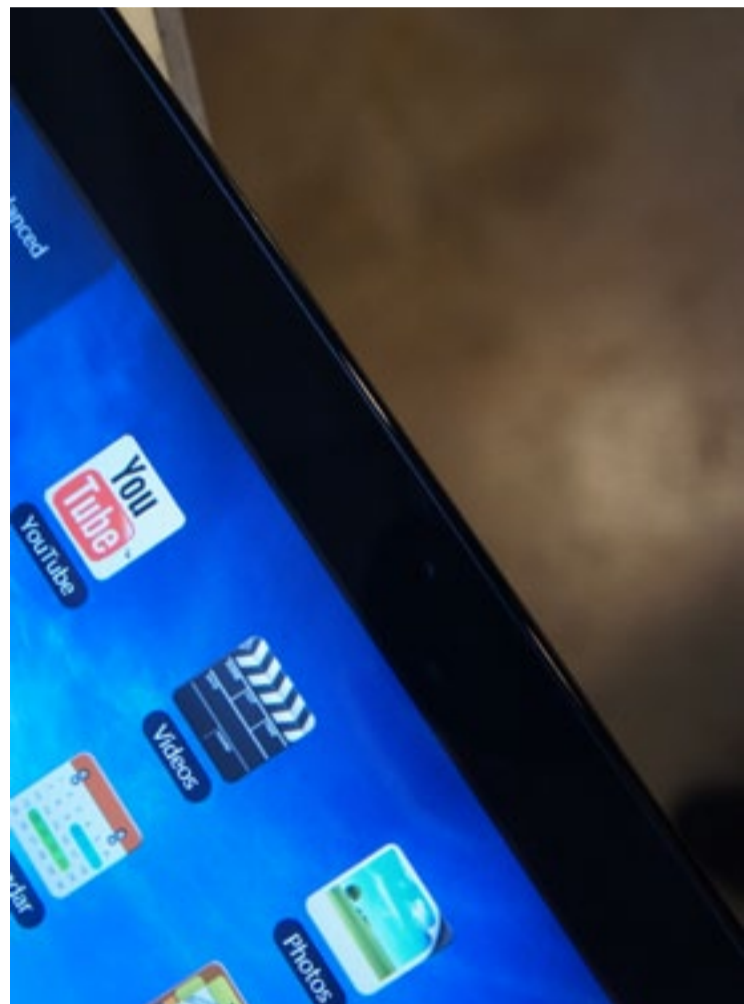
down hill when you offload them to the cloud and download them on some device with more viewing space. Ditto for the video: we had a hard time fully making out faces a few feet away from us, they were so blurry.

Configuration Options

The Series 7 tablet is sold worldwide, with different configurations offered in each region. In the US, at least, there are four pre-built models ranging in price from \$1,099 to \$1,349.

Across the board, it comes with that same Core i5-2467M processor and 4GB of RAM, and is rated for up to seven hours of battery life. Other details, such as the 802.11 b/g/n radio, Intel HD 3000 graphics card and 1366 x 768 resolution are also non-negotiable.


Starting with the base model, \$1,099 gets you a 64GB SSD and Windows 7 Home Premium. For an extra hundred bucks you can get the same model, but with Windows 7 Professional (from here on out, they all run this version of the OS). The other two models graduate to a 128GB solid-state drive, though one runs Home Premium and comes with



the Bluetooth keyboard and dock, while the other has Windows 7 Professional installed and doesn't come with any accessories. To be clear, our unit came with the accessories and ran Windows 7 Professional, which means it's not a configuration you'll find in US stores.

Wrap-Up

There's nothing quite like the Series 7 Slate. Windows 7 tablets, yes, but they're mostly still chugging along



on weaker Atom processors. Serious Android ones that accept pen input? Point, Lenovo. Tablets that easily morph into a dumbed-down laptop replacement thanks to a custom dock or case? There's the ThinkPad Tablet (again), along with the Transformer Prime. But it's rare to see a Windows tablet with enough power to match a laptop, and the kind of screen real estate and ergonomic accessories needed to transform it into a desktop-dwelling machine. For all these reasons, the Series 7 Slate is memorable, compelling and ultimately, a niche product.

More than anything, it's the battery that dampened our enthusiasm. As much as it triumphs as a laptop replacement, even a travel one, it fails where standalone tablets are supposed to succeed: it doesn't even last four hours on a charge. Between that and the unusually high price, any business considering this has to need Windows, specifically — not Android or iOS, but Windows. In particular, they need to be running apps that require a pen, Core i5 muscle and, possibly, a keyboard. Because if even one of those caveats doesn't apply, you can surely find something less expensive and longer-lasting, whether it be another Windows 7 slate or even an

BOTTOMLINE

Samsung Series 7 Slate PC

\$1,099+


PROS

- Fast performance
- Smooth pen input
- Works well as a laptop replacement

CONS

- Very short battery life
- Heavy and bulky for a tablet
- No full-sized SD slot

» The Series 7 is fast and powerful enough to replace a travel laptop, but with a price this high and battery life this short, it's best suited for businesses with very specific needs.

Android tablet with a pen and keyboard dock. 

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



Boeing 787: ANA's Dreamliner Flies Across Japan, We Join for the Ride

BY ZACH HONIG

The **Boeing 787 Dreamliner** is not the largest plane in the world. Nor is it the fastest. It doesn't have on-board showers or full-size beds, nor can it lay claim to the greatest range or sleekest entertainment system in the air. But it will change the way we fly for decades to come. Boeing's latest commercial airliner is several feet wider and longer than the 767, the company's smallest wide-body (twin-aisle) jet, yet it's 20 percent more fuel-efficient. Given that fuel is the single greatest operating cost for any airline, savings of that magnitude could return the industry to profit-

ability, and perhaps even usher in lower airfares for passengers.

But while the 787's efficiency makes it an attractive option for airlines, it also serves up a more comfortable ride for passengers. We recently had a chance to fly on a domestic round trip between Tokyo and Okayama in Japan aboard an All Nippon Airways (ANA) Dreamliner — one of the first two ever delivered. Quieter engines, dimmable windows, LED lights, huge overhead bins, an in-flight bar and on-demand entertainment enhance comfort, even during shorter flights, while higher humidity,



a greater internal pressurization level and a gust alleviation system reduce the effects of turbulence. Care to take a ride? Join us on board Boeing's brand new Dreamliner.

Hardware

The 787 concept originally began as the Sonic Cruiser, a Mach 0.98 airliner with a proposed fuel burn in line with the 767. Over the last decade, however, Boeing began shifting its focus towards efficiency and away from speed as the airline industry suffered over the last decade, and the Dreamliner as we know it today was born. The aircraft was originally scheduled to begin service in 2008, but a complicated design resulted in several delays, with the first delivery to ANA completed this September. Despite the timing of its launch, the 787 is not Boeing's answer to the Airbus A380, a double-decker with a seating capacity between 525 and 853. Instead, the outfit focused on building an aircraft that was both fuel- and space-efficient, with enough seating to accommodate 210 to 250 passengers.

The primary design improvement over previous Boeing aircraft is the use of composite materials. In fact, 50 percent of the 787's fuselage and wing structure is made up of carbon fiber-reinforced plastic and other composites, resulting in a lighter-weight, more robust design. Aluminum, titanium, steel and other materials comprise the remaining 50 percent. With a one-piece fuselage, Boeing was able to avoid using 1,500 alu-



The primary design improvement over previous Boeing aircraft is the use of composite materials.

minum sheets and some 50,000 fasteners, which naturally would have added to the weight and created more potential fault points. The titanium and composite materials are also more durable than aluminum, reducing the number of hours each aircraft will be out of service for maintenance.

Because enormous components like the main fuselage were pre-assembled, Boeing modified four 747s to become "Dreamlifters," which are used to ferry major assemblies from plants around the world to the company's headquarters in Everett, Washington.

The extra effort and transportation expense is worthwhile, though, considering the new materials make it possible to enhance passenger comfort as well. Because composites are resistant to corrosion, Boeing was able to boost interior humidity levels from four to 15 percent, with higher cabin pressure to boot — fixed at 6,000 feet, compared to 8,000 on older aircraft. A new air-conditioning system improves air quality, removing ozone from the atmosphere outside the plane, while also filtering out odors and harmful elements from recirculated air. Finally, a computer-controlled active gust alleviation system helps counter the effects of turbulence.

The 787 is powered by a pair of turbofan engines — either the General Electric GEnx or the Rolls-Royce Trent 1000 — each capable of 64,000 pounds of force. The engines employ a tooth-

like cover, which cuts noise when mixing exhaust with outside air — it's not silent, but the improvement is definitely noticeable from inside the cabin. Boeing made the engine type interchangeable at the wings, enabling Dreamliner owners to change the engine to match others in their fleets. Different engine types require different mechanic training, so this flexibility benefits airlines that tend to standardize their inventories. Speaking of maintenance, the 787 includes a computerized monitoring system that allows it to report potential issues to crews on the ground, so teams don't always need to come on-board to troubleshoot.

Cockpit

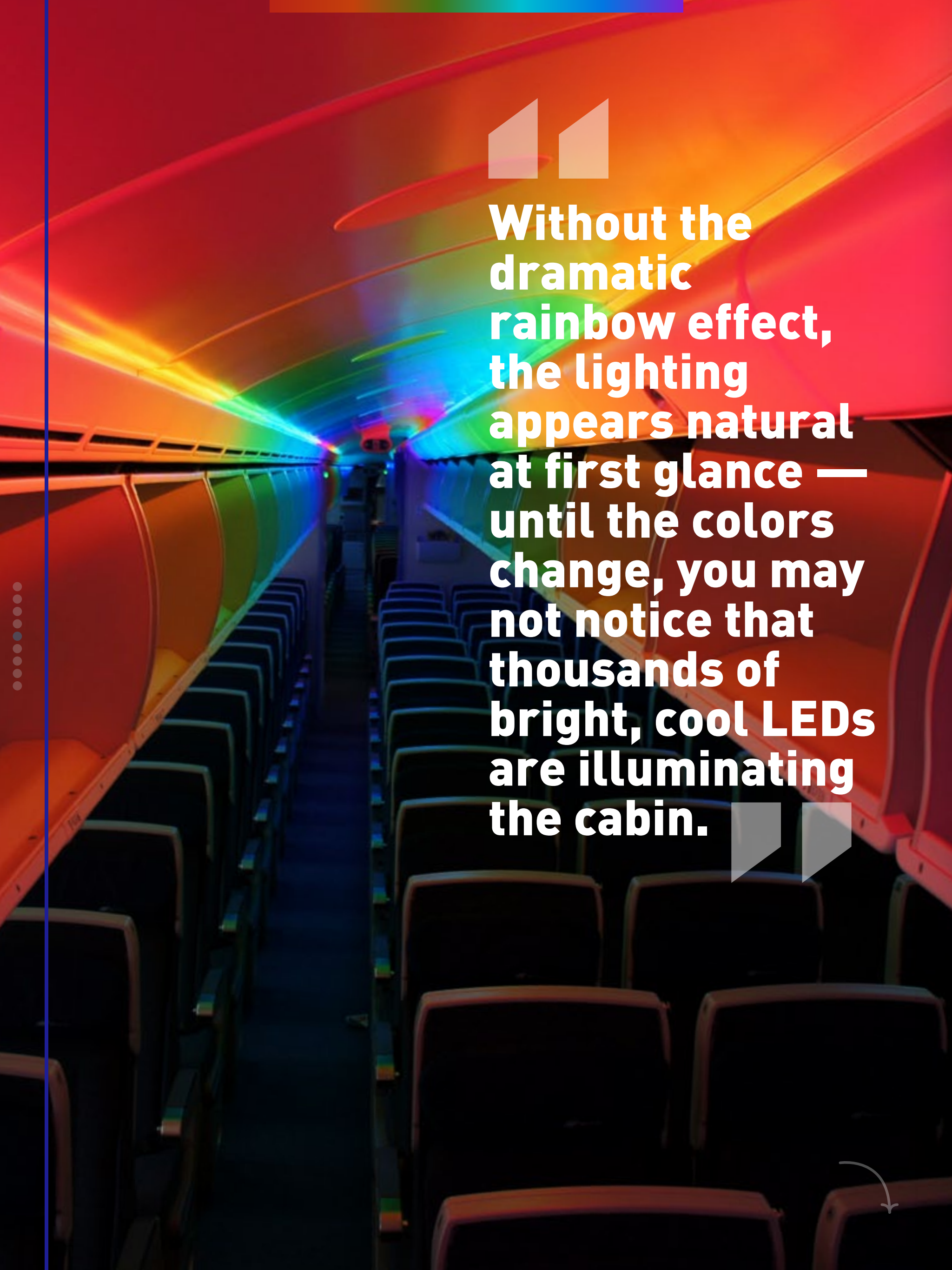
Naturally, the Dreamliner's cockpit is home to four huge primary LCDs with an industry-standard interface, includ-





ing gyroscope, elevation, fuel and other status indicators. Secondary displays control the radios and other communications equipment, while heads-up displays (HUD) for both the pilot and co-pilot display orientation and elevation without the need to direct attention away from the windows. Overhead panels have been simplified as well, with only critical, yet seldom-used controls remaining.

The cockpit also employs a variety of security and comfort features. It's quite roomy, with enough space for more than one person to move around at once. All told, there are two seats for the pilot and co-pilot, along with two extras behind those for relief pilots and other authorized personnel. A closed-circuit camera system allows the co-pilot to monitor cameras outside the entry door, along with two angles in the first



Without the dramatic rainbow effect, the lighting appears natural at first glance — until the colors change, you may not notice that thousands of bright, cool LEDs are illuminating the cabin.

class galley, while a five-digit PIN panel limits access while in-flight.

Interior Features

Depending on how the flight attendants have the aircraft configured, you may board the Dreamliner to a rainbow of LED lights, alternating colors throughout the cabin. The 787 is a bulbless plane that trades traditional florescent lights for a variety of single- and tri-color LEDs. Without the dramatic rainbow effect, the lighting appears natural at first glance — until the colors change, you may not notice that thousands of bright, cool LEDs are illuminating the cabin. You'll also find LEDs inside those individual overhead reading lights, along with gooseneck lamps in the premium cabin.

Those flexible reading lamps are pretty nifty, but how about an in-flight bar? The so-called premium cabin (think business or first class) includes just that, with permanent fixtures keeping bottles in place during take-off and landing. The ANA aircraft we rode will eventually be used for long-haul international flights, but is currently on a short domestic route between Tokyo's Haneda airport and Okayama, a city near Osaka. As its current configuration includes just 12 seats in the premium cabin, the bar is positioned in between coach cabins for the time being, so it wasn't in use during our short flight. That particular 787 will soon be reconfigured with a larger premium cabin, however — let the sake bombs ensue!

While seating will change slightly, some features are consistent between both cabins. Enormous overhead bins provide plenty of space to store carry-on bags, which will be particularly useful for domestic flights in the United States, where passengers have begun carrying on more bags to avoid fees for checking their luggage.

After you toss your overstuffed roller overhead, you'll probably notice the giant shadeless windows. The larger size makes it easy to look outside the plane without slouching, while traditional shades were replaced with electro-chromatic dimmable smart glass, rated for 70,000 cycles or 20 years of use. Think of it as an enormous Transitions lens, but with manual control. Want to dim the cabin? Simply press a button below the window to adjust the opacity. When the window is at its darkest setting, light won't enter the cabin, but we were still able to see details outside — in bright daylight, at least.

There's one place in the cabin where you can still find a window shade — the lavatory. The in-flight bathrooms that we used were quite large, and — unlike any other aircraft we've seen — include a window. It's the same size window used in the rest of the cabin, and comes complete with a dimmer switch, though a plastic shade is include as well for additional privacy (on the ground, we presume, since you won't encounter any voyeurs at 35,000 feet). ANA's variation also included a Japanese-style bidet, along with an automatic toilet seat low-



ering mechanism and a touchless sink. We imagine other airlines will opt out of the bidet option, which has become popular even at public washrooms in Japan.

Premium Cabin

We didn't have a chance to fly in ANA's premium class, but we did spend a few minutes in the seat on the airline's standby plane. It was reasonably comfortable, as expected, but not extraordinary by any means. Currently arranged in a 2-2-2 configuration, this aircraft offered just 12 premium class recliners — we're told that additional seats will be added once the plane begins international service. The seats reclined further

than those in economy, but don't lie flat, though ANA will be introducing staggered flatbed seats on its international routes, with additional storage and connectivity options. (As configured, our 787 included a USB port and universal power outlet for charging devices.) There was only a brief beverage service in economy during our short hour-long flight, but premium passengers received a light meal. There's a larger display for the in-flight entertainment system, which we'll return to in a moment.

Economy Cabin

Home sweet home. Beyond the windows and larger overhead bins, not much has changed in ANA's 2-4-2 (two seats on each side, four in the center) economy cabin. Middle seats are separated into pairs of two with a large space in between — not nearly wide enough to be considered a third aisle, but at least middle passengers don't need to feel like they're sitting on top of the person to their side. We flew on All Nippon from New York to Tokyo earlier this year, and experienced the same seats with 34-inch pitch (the amount of space from one seat to the next). The unusual seat design prevents you from disturbing the passenger behind you when reclining — the bottom cushion slides forward up to three inches as the back slides down, but if you're tall, you may find your knees up against the forward row at full sprawl. You're essentially shifting discomfort from your back to your knees. There was a beverage service during our flight, with drinks served



in special “787 - We Fly First” ANA cups. Naturally, you’ll see the same windows here as you will in the premium cabin, but with a smaller in-seat display and no meal service to keep passenger distracted, those dimmer switches will likely get quite a bit more use.

Entertainment System

And speaking of that in-seat display, the 787 (like any modern aircraft) includes a basic on-demand entertainment system. Sadly, there’s nothing special about ANA’s setup, with a basic 16:9 touchscreen display with a privacy filter and standard wired controller — it’s virtually identical to the system we used on an ANA 777 earlier this year. Since it’s up to each airline to configure its Dreamliners as desired, it’s possible that other carriers will dress to impress when it comes to their interiors. While the in-seat entertainment system didn’t blow us away with a crisp display or vast selection of HD movies, it’s perfectly fine for an hour-long flight. Considering that the 787 can fly non-stop from New York City to Hong Kong, however — a roughly 16-hour trip — a more modern configuration would make the in-flight experience more pleasant, and memorable.

As configured, the system we used includes a live flight map with multiple viewing options, including detailed and overview maps, along with a text overlay outlining departure and arrival time, distance traveled, elevation and ground speed. The “high resolution” map view is the only HD picture you’ll get on this

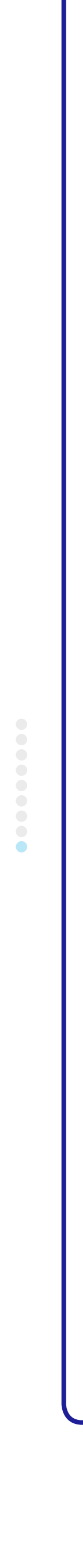


screen — menus and demo videos we saw weren’t sharp, and many were displayed with a 4:3 aspect ratio. Speaking of content, not much was loaded for our flight — movies wouldn’t play, and short programs were limited to a (rather informative) 787 overview and an extended ANA advert. The music menu appeared to be the only option that was fully populated, with channels for Japanese pop, jazz, classical and variety.

Since we’ve also traveled on trans-pacific ANA flights with a system that appeared to be identical, it’s safe to say that long-haul planes will be better equipped when it comes to programming, including a selection of Japanese and Western (read: American) flicks and TV shows. There’s also an in-seat messaging system if you’d like to try your luck at flirting with neighboring passengers — simply type their seat number in the “To” field and input your message using the QWERTY wired remote or on-screen keyboard.

Wrap-Up


If you haven’t already gathered, the actual in-flight experience isn’t drasti-



cally different on-board the 787 Dreamliner, but let's face it: that adage about how an adventure is more about the journey than the destination can never ring true with air travel in the day of mile-long TSA queues, baggage fees and fuel surcharges. Still, the 787 is noticeably more comfortable than nearly every other airliner, thanks to its oversized dimmable windows, large overhead bins, higher humidity and cabin pressure, LED lighting and quieter engines.

Those in-flight enhancements may improve the passenger experience — perhaps even prompting some aviation geeks to put their loyalty aside and try out a new carrier — but they aren't enough for an airline to justify overhauling its fleet. For that, the industry will turn its attention to the Dreamliner's fuel efficiency, versatility and low-maintenance design. As ANA representatives explained to us, adding medium-size long-haul aircraft to the fleet will allow the largely domestic airline to become more competitive in the international market, adding daily flights from Tokyo to destinations like Denver and Boston, where jumbos like the Airbus A380 or Boeing's new 747-8 Intercontinental would fly far below full capacity, yielding a loss for the airline. When you consider that connecting flights can be an enormous inconvenience, especially when returning to the US, this proposition is likely to be hugely appealing to

business and holiday travelers alike.

So how can you ride a Dreamliner? All Nippon Airways is currently the only carrier in the world to have received the 787, with two already in its fleet and two more expected sometime this month. There's only been one international flight so far, when one of the planes was used on a charter between Tokyo and Hong Kong in late October. It's currently in use on flights NH751 and NH754 between Tokyo's Haneda airport and Okayama every morning, and flights NH683 and NH686 between Haneda and Hiroshima each evening, with service to Itami, Yamaguchi and Matsuyama, Japan beginning soon. A flight between Tokyo and Beijing is scheduled to begin later this month as well, with overnight service between Haneda and Frankfurt expected to launch in February. Overall, the flight was quite enjoyable, but from the passenger's perspective, the 787's launch isn't as significant as, say, the Concorde in 1976 or the A380 in 2007, and probably doesn't warrant a trip to Japan. Is the 787 a solution for the struggling airline industry? That remains unclear — even with this *Dream* finally becoming a reality. 

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



REVIEW

Verizon Galaxy Nexus

Verizon's Galaxy Nexus isn't better than the HSPA+ version, but it's still a great phone.

BY TIM STEVENS

It's the Galaxy Nexus. It has LTE. It's the phone we've been waiting (and waiting) for. Sure, some of our more globetrotting members of the staff were suitably sated by the HSPA+ version that shipped a few weeks ago, but the rest of us domestic types simply need more bandwidth. Or, at least, we like to think that we do, and this \$300 (on-contract) Verizon release certainly has that in spades.

However, there's something missing: Google Wallet. That company's attempt at reinventing commerce isn't here and, while nobody's saying for sure, it surely has something to do with Verizon not wanting to kneecap the Isis payment service it has invested in. That leaves us wondering: with restrictions on what apps can be installed, and some rather prominent carrier branding on the back, is this really a Nexus device at all?

The phone has definitely put on some weight since the HSPA+ version was released.

And, more importantly, is it a good phone? Those answers and more wait for you below.

Hardware

If we had to guess, we'd say the Verizon Galaxy Nexus is a compulsive eater—you know, if it feels sad or guilty it just can't help but eat. Surely it's a bit down on itself for making all you gadget lovers wait, gnawing its way through a couple-dozen crullers as it suffered through delay after delay after delay. We're only speculating, of course, but the phone has definitely put on some weight since the HSPA+ version was released.

This LTE release is 9.47mm (.37 inches) thick and hits the scales at 150g. That's 15g heavier than the 135g HSPA+ version and a half-millimeter thicker than its 8.94mm predecessor. A half a mill may not sound like much, and it isn't, but that's not to say it isn't noticeable. The weight is more of a concern,



extra heft seeming to imbalance the phone somewhat. The HSPA+ version feels like it has much more of its mass situated at the bottom, so it rests nicely in the hand. The LTE version, annoyingly, is just a bit more top-heavy.

That said, these are all incredibly subtle distinctions that don't make for an LTE phone that's too heavy, but if you had your choice, the HSPA+ version is definitely the one you'd want to hold in your hand or toss in your pocket.

Some of that extra weight comes from the healthy 1,850mAh battery nestled in the back beneath a typically flimsy plastic cover, just the sort that we've seen on plenty of other super-phones from Samsung. That's a slight boost from the 1,750mAh model in the HSPA+ phone, but the difference in size and weight between the two cells is so minor that the extra girth and heft are definitely coming thanks to the boosted internals here. This is most noticeable at the top, where phone is visibly thicker.

Also under that battery cover lies a micro SIM card, smaller and in a different location than the HSPA+ SIM, which is up next to the camera assembly. Look closely and you'll see the screws, connectors and other details are all very differently positioned between these two devices, leaving us wondering just how similar they are internally. We're very much looking forward to iFixit's prying eyes and tools to tell us.

Interestingly, the differences are enough to make the near-identical looking

If you were hoping to pick up an HSPA+ cover to get rid of the Verizon branding, you're out of luck.



backplates non-interchangeable. So, if you were hoping to pick up an HSPA+ cover to get rid of the Verizon branding, you're out of luck. And yes, we'll say that again: there's Verizon branding on this thing. That's the first strike against this being a true "Nexus" device. The second is the loss of Google Wallet, which we'll cover in a bit.

BENCHMARK

SAMSUNG
GALAXY NEXUS
LTESAMSUNG
GALAXY NEXUS
HSPA+SAMSUNG
GALAXY NOTE

HTC REZOUND

Quadrant ¹	1,623	2,032	3,998	2,347
Linpack Single-thread ¹ (MFLOPS)	44.54	42.85	64.30	52.0
Linpack Multi-thread ¹ (MFLOPS)	74.4	69.37	95.66	60.3
NenaMark1 ¹ (fps)	52.02	53.03	56.67	53.5
NenaMark2 ¹ (fps)	24.00	24.26	N/A	35.8
Neocore ¹ (fps)	Would not run	Would not run	51.77	59.8
SunSpider 0.9.1 ² (ms)	2,256	1,985	2,902	2,961

¹Higher the score the better.²Lower the score the better.

ICS won't do much to convert the Android haters, but it will make the lovers very, very happy.



Despite the lack of Wallet there is still NFC here, as is the 1.2GHz dual-core processor paired with 1GB of RAM. Our phone is offering 32GB of built-in storage, but still there's no USB mass storage mode, meaning you'll still be relying on MTP or PTP for file transfers—not the end of the world, but certainly an inconvenience.

To transfer files you'll be connecting over the micro-USB port built into the bottom, which is situated next to the 3.5mm headphone jack. The power button is on the upper-right side, volume rocker on the left, and not much of anything is up on the top. There is

no dedicated micro-HDMI output, but the micro-USB port supports MHL, so that's almost as good. Also, we're fans of the three-color LED situated in the bezel below the display. It fades in and out gently and looks a good bit classier than your average blinking email notifier.

And of course we can't end the hardware discussion without discussing that superb 4.65-inch 1280 x 720 Super AMOLED display. Yes, there's been a lot talk about the RGBG PenTile layout here and how that results in poor color reproduction, lower effective resolution and male pattern baldness. Those things may be true, but you'll be too busy staring at it to care. It's bright, it's beautiful, the viewing angles are as close to 180 degrees as you can get.

And then there's the resolution. If you have the eyesight to match the 316ppi pixel density you will love being able to browse desktop versions of websites without having to scroll all over the place. We loaded up Distro and were able to read full magazine pages without trouble — a task some tablets struggle with. It's simply a great display, and the subtle curve given to the glass adds an extra touch of class.



Performance and Battery Life

This device may not have the highest clock speed in the world but it is definitely a strong performer. It's still hard to know how much of the responsiveness of the device comes from its Ice Cream Sandwich build and how much of that is thanks to the silicon it's running on, but that's a debate we can sort out later. Right now all that matters is that this thing is fast. Really fast.

Apps load quickly, webpages render in a snap, scrolling and pinch-zooming are butter smooth. Through and through, this is a fast phone. Even the installation of apps seems to happen far more

hurting on phone longevity and that appears to be the case here as well, our Nexus struggling to hold on to a charge in day-to-day use with all antennas firing. We've as of yet had very limited time with the thing, but in our 24 hours of intensive testing we had to reach for the charger multiple times. Using Google Navigation with LTE enabled? The battery drained so fast our in-car charger couldn't keep up, leaving us unsure of which exit to take off the 101.

However, disable the LTE in favor of just CDMA and the story is very different. In our standard run-down test, a looped video with the display locked

This thing is fast. Really fast.

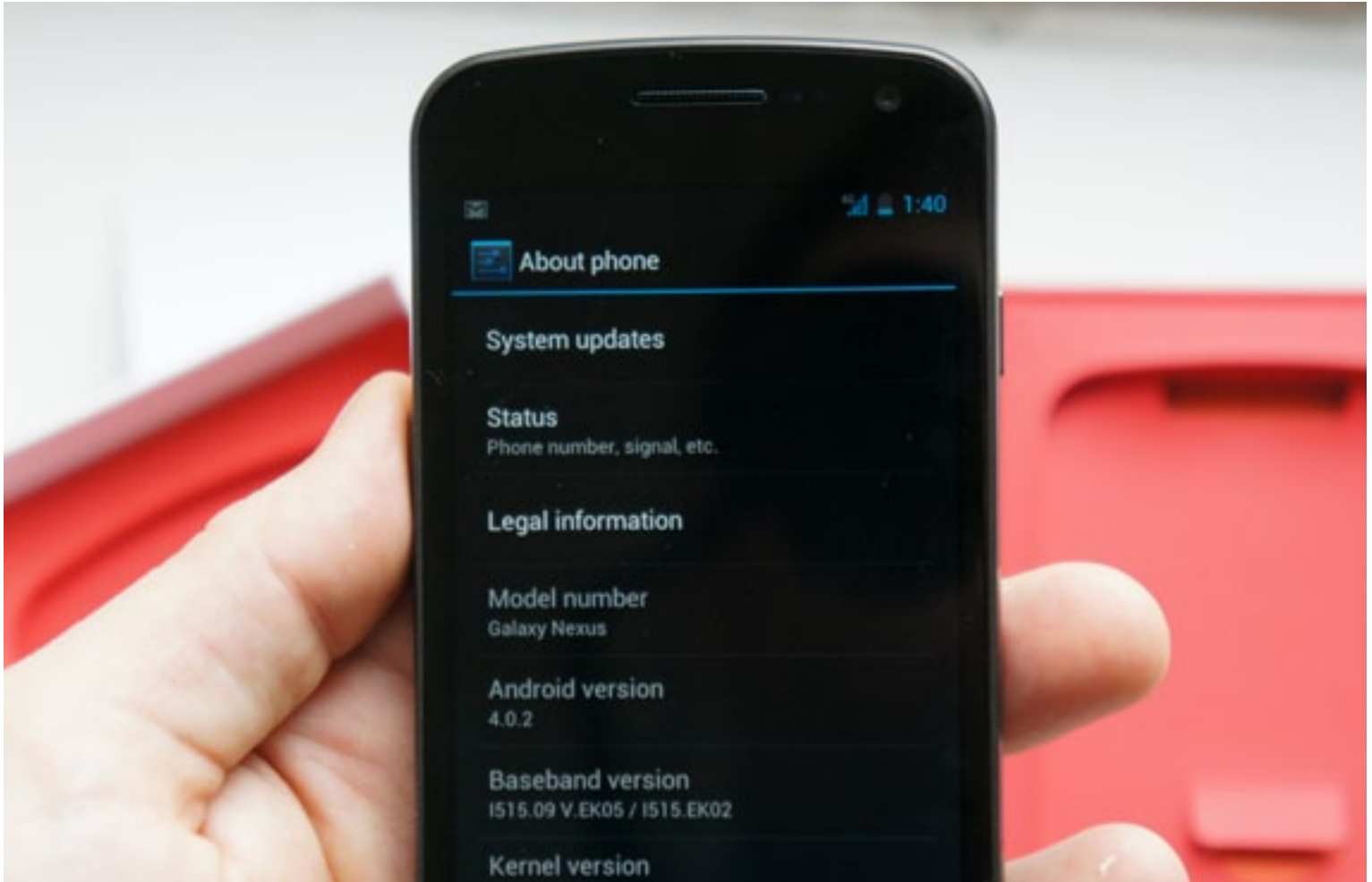
quickly than on other devices. It's a revelation, and you won't want to put it down.

This oomph comes from a TI OMAP 4460 processor and PowerVR SGX540 GPU, helped along by 1GB of RAM. This is the same configuration as the HSPA+ version but, curiously, benchmark scores here came up notably lower in both Quadrant and SunSpider. Not by a huge amount, mind, and we tend to not put a lot of weight behind such synthetic numbers, but it is a somewhat curious result that we verified on two Verizon phones. Other benchmarks were generally within spitting distance.

And then there's the battery life. It's well known that LTE can put a real

at 50 percent brightness and the phone connected via CDMA (LTE disabled), the phone managed six hours and 15 minutes. That's a full hour longer than the HSPA+ model, surely thanks in most part to that bigger battery. So, if you can refrain from drinking from that sweet, sweet fountain of 4G, this is actually a respectably long-lived phone.

Open up the spigot, though, and you'll see some great speeds. Data rates are predictably well into double-digits, but consistently slower than other LTE devices we had hanging around. Your performance will vary based on your region but average downloads hovered around 14Mbps, with uploads around



10. We saw peak speeds higher, up to around 18Mbps down, but a Droid Charge at the same location was pulling down 25 - 30Mbps. That is, needless to say, a significant difference.

Software

The big story here is Ice Cream Sandwich, the 4.0 release of Google's Android that's designed to unify the tablet and smartphone experience while also creating world peace and curing the common cold. It doesn't quite succeed on all-fronts, but it is a significant step up over Honeycomb both in terms of responsiveness and sheer visual appeal. We won't re-hash our entire thoughts on the OS here, as they've been comprehensively expressed in our full Ice Cream Sandwich review, so suffice to say ICS is quite good. It won't do much to convert the Android haters, but it will make the lovers very, very happy.

What will surely make them upset, however, is the lack of Google Wal-

let. It's safe to say that the company's mobile payment solution has yet to take the retail world by storm, but it certainly has the potential to do so. The thought of being stuck sitting on the sidelines while the platform develops is troubling to say the least, and so we would respectfully ask that Verizon end its "commercial discussions" and enable the damned app already.

While Nexus phones tend to have advanced hardware and designs, ultimately it's their unbridled access to the most recent flavors of Android that makes them most appealing to many buyers. This software restriction leaves us wondering whether this otherworldly Nexus will be similarly supported down the road.

It was, at least, first to receive Android 4.0.2, an update pushed the morning of release. Such a patch being delivered on the very day something ships is usually a good sign that things were coming down to the wire, as they most

certainly were on this version of the Galaxy Nexus. But, all appears to be rock solid now, as we never encountered any stability issues.

Camera

The camera module here is identical to that found in the HSPA+ version, which we found to be a bit less than exemplary. That's not to say bad—it's a perfectly average performer, but that's still a disappointment compared to the otherwise top-shelf optics found in some of Samsung's other cameras. Why didn't Samsung put a top-shelf eight megapixel unit in here? It's a frustrating mystery and more than a little disappointing.

Low-light images are noisy while bright ones are often soft. The 1080p24 video suffers similar faults but does at least offer continuous autofocus. And, for those who like taking a lot of stills, the zero shutter lag on the Nexus is a nice touch. Just tap-tap-tap on the screen and the camera rarely fails to keep up. It is even faster than Apple's iPhone 4S and a perfectly good way to fill up that 32GB of internal storage.

Wrap-Up

We already knew more-or-less what we were getting with the Verizon rendition of the Galaxy Nexus, and ultimately it delivers. Yes, battery life predictably takes a hit compared to the HSPA+ when you enable LTE, and it's safe to say this version of the phone has a bit more to love than the earlier release, but neither of those are deal-breakers. This,

BOTTOMLINE

Samsung Verizon Galaxy Nexus

\$300 *on contract*

PROS


- Simple, beautiful design
- Great performance
- Beautiful display

CONS

- No Google Wallet
- Merely average camera performance
- Poor battery life on LTE

» **Verizon's Galaxy Nexus isn't better than the HSPA+ version, but it's still a great phone.**

like the other version, is a great phone. At \$300 with a two-year contract (\$650 without) it is not cheap, but if you must have the best, it's well worth it.

Oh, and does it truly deserve to wear the Nexus name? No, not quite, but we're not going to let ourselves get too worked up about that. 

Myriam Joire and Zach Honig contributed to this review.

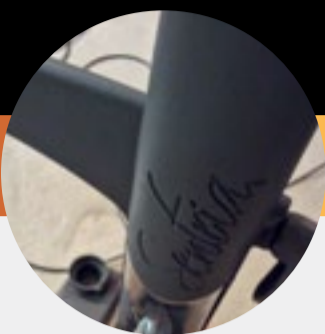
Tim Stevens is Editor-in-chief at Engadget, a lifelong gamer, a wanna-be racer, and a born Vermonter.



IN REAL LIFE

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

1.



2.



3.



Kirby Sentries, Sony Bloggie- MHS-FS1 and the OLPC XO Laptop

BY ENGADGET STAFF

Let's just cut to the chase: this week's IRL is a little schizophrenic. On the one hand, you've got Andy singing his bloggie's praises, Terrence waxing philosophical about his unused OLPC XO and Darren ranting about his grandmother's vacuum cleaner. Do you like camcorders that are not a smartphone? Do you despise door-to-door Sentries salesmen? Good. Let's hit it, then.





Do Not Buy

A few months back, a presumably nice gentleman convinced my dementia-stricken grandmother to spend hundreds of dollars on a Kirby Sentria vacuum cleaner. Given that it weighs roughly the same as an African elephant, she soon realized she didn't even possess the power to operate it—let alone connect the godforsaken shampooing system. Given that the company claims its Sentria system possesses “state-of-the-art technology,” I figured I'd save the poor woman from eternal embarrassment by actually putting it to use.

That, friends, was a horrific mistake. I'm simply awestruck at how poorly designed this insanely expensive machine is. I've used a few Dysons in my day, and a few bargain bin vacs as well. None of those options ever do a *phenomenal* job getting hidden dirt and debris out, but I'd rather sleep in

mounds of filth than be saddled with the chore of cleaning it with this thing.

It takes a college degree in vacuum engineering just to *understand* how the shampooer connections are made; actually making 'em happen is another thing entirely. It's pathetically manual, forcing users to align a belt, twist a knob, watch for a hook you can't see and sprinkle just the right amount of pixie dust on the handle. If you ever manage to get it assembled, it does a fine job of picking up trash... and randomly barfing it back up onto your floor. Perpetually. Please, if you need a serious carpet job, hire a professional. Whatever you do, do not buy a Sentria. Do not allow your family members to buy a Sentria. And while you're at it, warn your sworn enemy not to buy a Sentria. — *Darren Murph*



Six Months with a Bloggie

I'm not a prolific vlogger by any means, but I do jump at the chance to catch a friend in an embarrassing moment and spend the next three years, er, *reminiscing*. With that spirit, I bought a Sony Bloggie-MHS-FS1 about six months ago and it's suited me just fine. Which is to say, I've got plenty of blackmail fodder. Design-wise, it has a solid feel to it — not to mention, it's much skinnier than its outrageously more popular and colorful Flip rival. As for similar devices, I believe simpler is always better. From the time you press the power button, it takes just 1.5 seconds to go from stunned bystander to NBC's version of Peter Jackson. This means by the time you notice crazy 'ole

Johnny's up to something, you'll be able to watch him leaping off the side of the ferry, repeatedly.

As far as specs go, this particular Bloggie shoots an hour of 1080p video and packs a mini-HDMI port as well as a retractable USB 2.0 connector. Being a musician, I often use it for filming live shows, and the sound quality is actually pretty great — it picks up little to no noise around the 5-10K range. I've actually been able to work up a decent sounding track from the original Bloggie audio file. The native Bloggie software organizes clips by date or custom folders automatically. One cool feature is that I'm able to pre-assign clips on the device to custom folders on my MacBook directly after shooting. That way, when I import them, they're automatically filed. This proves heavenly when I'm on the go. If you're an unhealthy iMovie user like me, I've found that the best way to work between the two apps is to make events based upon your Bloggie folders. I became tired of importing from the device to both very quickly. One minor issue I've experienced is that every now and again the software won't start up and will leave me staring into a white screen of angst, but it's nothing a force-quit can't handle. In conclusion, Bloggie = spectacular. — *Andy Bowen*

Dumbed-Down, but Far From Intuitive

Sure, when I shelled out \$400 to join in the G1G1 (give one, get one) fun it made me feel good that some underprivileged child would be getting a free laptop on my dime. But, almost as important for a guy like me was that it would put an OLPC XO in my hands as well. It was probably the only way I'd ever be able to toy with its innovative new dual-mode screen and unique Sugar UI. Well, four years later, it's still floating around my apartment, but serves only as a technological curiosity and conversation piece.

The truth is, for all its good intentions, this petite hunk of green-and-white plastic never rose above a novelty. The screen, which switched from full color to an E Ink-like monochrome mode, is easily some of the most innovative technology I've ever seen in a computer. But it's attached to extremely underpowered components running one of the most unintuitive pieces of software I've ever encountered. And yes, I understand that the XO wasn't designed to satisfy western consumers, but even considering its target audience it's painfully slow. Opening a web browser could take over a minute when I first received the laptop. Later updates have greatly sped up the performance, but it's still



not exactly what you'd call "snappy." Then there are the countless confusing buttons littered about the keyboard and screen, and Sugar's stubborn insistence on reinventing the wheel when it comes desktop design. If you're the type of person who thinks Android isn't intuitive, an XO would have you shrieking and pulling out your hair. And remember, this is designed for young children who have probably never used a computer before.

That doesn't mean I regret the purchase, however. My XO-1 may primarily collect dust, but it's a fascinating footnote in computing history — one for which I'm proud to have a memento, and one that I could share with some child across the globe. — *Terrence O'Brien*





PETER ROJAS MADE HIS NAME WITH THE CREATION OF SITES LIKE *ENGADGET*, *JOYSTIQ*, *GIZMODO* AND, MOST RECENTLY, *GDGT*. NOW, THE MAN BEHIND THE WEB'S MOST INFLUENTIAL TECH PROPERTIES TAKES ON THE VERY FIRST DISTRO QUESTIONNAIRE.

PETER ROJAS

Q&A

What gadget do you depend on most? My phone, which at the moment is the Samsung Galaxy Nexus.

Which do you look back upon most fondly? The Treo 600. It was my first smartphone and the one that changed how I worked. Being able to check email, surf the web, manage my calendar, watch video and listen to music all from my phone is commonplace now, but back in 2003 it was a revelation.

Which company does the most to push the industry? I suppose the safe answer is Apple, right? The more complicated answer is that the industry is so competitive that everyone is really pushing everyone else.

What is your operating system of choice? I use OS X most of the time, but I have a soft spot for Ubuntu, which was my primary OS for a while there.

What are your favorite gadget names? I think TiVo, Walkman, and Xbox are all classics.

What are your least favorite? I dislike anything that's just a long

string of numbers and letters — though who does like those?

Which app do you depend on most? Gmail. A good Gmail experience is critical, it's the number one thing I look for when choosing a phone.

What traits do you most deplore in a smartphone? Confusing UIs and small screens.

Which do you most admire? Bright, pixel-dense displays and snappy UIs.

What is your idea of the perfect device? One that never becomes obsolete.

What is your earliest gadget memory? When I was about five years old (so this would be 1980) my father bought one of the earliest consumer-grade VCRs sold in the US. The first two VHS tapes we had were *Alien* — which was too scary for me to watch until I was older — and *Blazing Saddles*, which also wasn't suitable for a small child, but definitely was not going to give me nightmares.

What technological advancement

The open nature and architecture of the internet. It certainly didn't have to turn out that way and I don't think we realize how lucky we are that it did.

do you most admire?

ANSWER

Which do you most despise?

Does Facebook count as an advancement?

What fault are you most tolerant of in a gadget?

Poor battery life. Battery technology just doesn't improve at the same rate as Moore's Law. In many ways we're fortunate that we can get anywhere close to a day's worth of use out of something as complex as a smartphone.

Which are you most intolerant of?

Mediocrity. I can appreciate a gadget that fails because it's simply too early or because the use case behind it is just too niche, but I hate when you see something that never aspires for much beyond a middle-

of-the-road mediocrity. I'd rather see a company take a risk and fall flat than play it safe and end up with something boring. If you make failure an impossibility you make mediocrity an inevitability.

When has your smartphone been of the most help?

When I need to look up some obscure fact to win an argument.

What device do you covet most?

Lately I've been focused on giving away rather than acquiring in an attempt to simplify my life and have fewer things around. I suppose it helps that I live in a New York apartment and just don't have the space to let stuff pile up even if I wanted to.

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

Probably the camera. It's decent enough, but it definitely could be better.


What does being connected mean

to you? That I can always be reached in case someone needs me and I can take care of things without having to always be at a desk.

When are you least likely to reply to an email?

When I'm sleeping. Though during the early days of Engadget I would often wake up in the middle of the night just to check my email and make sure I didn't miss any important stories.

When did you last disconnect?

Earlier today, though the last time I did so for any length of time was in August when I spent five days in the middle of nowhere with no electricity and no cell coverage. During those five days an earthquake hit New York and Steve Jobs stepped down as CEO of Apple. When I got back online the first thing I read was that a hurricane would be hitting New York in two days, complicating my plans to return there that day. 

Q&A : Peter Rojas

A HARD DAY'S WORK

BY
"DUSTIN
HARBIN"

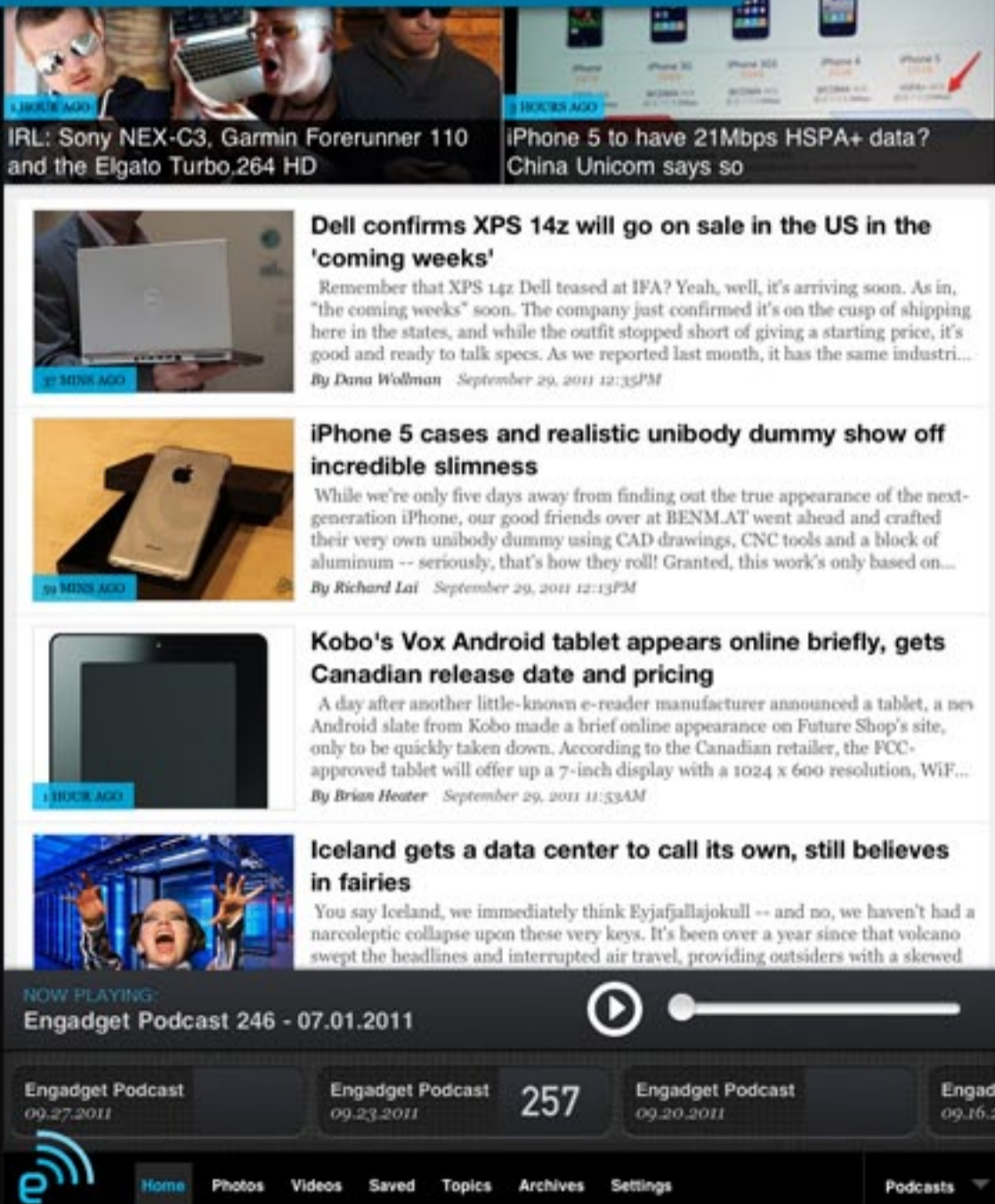



The Last Word - Dustin Harbin

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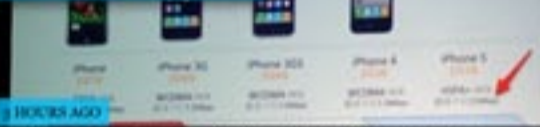
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1 HOUR AGO  iPhone 5 to have 21Mbps HSPA+ data? China Unicom says so

 **Dell confirms XPS 14z will go on sale in the US in the 'coming weeks'**
Remember that XPS 14z Dell teased at IFA? Yeah, well, it's arriving soon. As in, "the coming weeks" soon. The company just confirmed it's on the cusp of shipping here in the states, and while the outfit stopped short of giving a starting price, it's good and ready to talk specs. As we reported last month, it has the same industri...
By Dana Wollman September 29, 2011 12:35PM


54 MINS AGO  **iPhone 5 cases and realistic unibody dummy show off incredible slimness**
While we're only five days away from finding out the true appearance of the next-generation iPhone, our good friends over at BENM.AT went ahead and crafted their very own unibody dummy using CAD drawings, CNC tools and a block of aluminum -- seriously, that's how they roll! Granted, this work's only based on...
By Richard Lai September 29, 2011 12:13PM

1 HOUR AGO  **Kobo's Vox Android tablet appears online briefly, gets Canadian release date and pricing**
A day after another little-known e-reader manufacturer announced a tablet, a new Android slate from Kobo made a brief online appearance on Future Shop's site, only to be quickly taken down. According to the Canadian retailer, the FCC-approved tablet will offer up a 7-inch display with a 1024 x 600 resolution, WiF...
By Brian Heater September 29, 2011 11:53AM

 **Iceland gets a data center to call its own, still believes in fairies**
You say Iceland, we immediately think Eyjafjallajokull -- and no, we haven't had a narcoleptic collapse upon these very keys. It's been over a year since that volcano swept the headlines and interrupted air travel, providing outsiders with a skewed

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