

The History Behind BB10, Taking Time
with Pebble + Hands-On at NAMM 2013

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Back to Life?

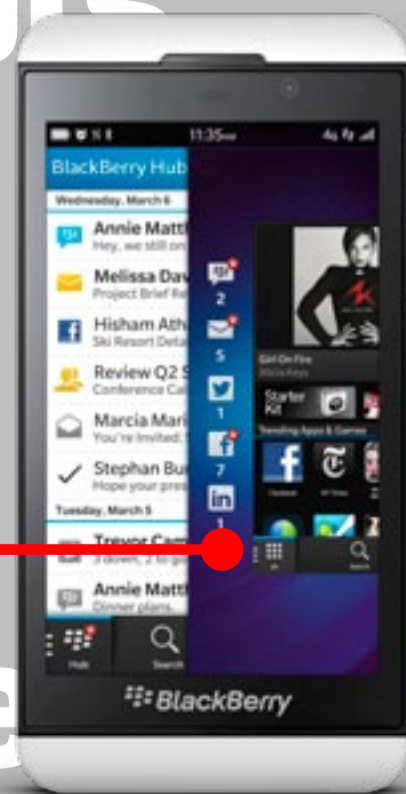
With its reputation as
an innovator in free fall,

BlackBerry attempts

reinvention with a

new phone, a new

OS and a new name



BLACKBERRY Z10

— THE WORLD'S —
BIGGEST CHALLENGES
DESERVE EVEN
BIGGER SOLUTIONS

{ POWERFUL ANSWERS }

FIND OUT MORE



ISSUE 76

DISTRO

02.01.13

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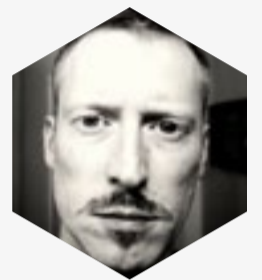


BlackBerry Z10
By Tim Stevens

ESC



VISUALIZED
Illuminated Net-Work



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EDITORIAL
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REHASHED
Business Needs, Fickle Keys and Locked Out of the Office



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BLACKBERRY TAKES OVER

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EDITOR'S
LETTER



A new drinking game was invented this week by our editor Mark Hearn: every time you say “RIM” instead of “BlackBerry” you take a shot. As I don’t drink myself, I’ll take a pass on this particular pastime, but there were certainly plenty of opportunities to get tipsy this week, with the former Research in Motion finally rebranding itself as a corporate entity to BlackBerry. That was just one of the many announcements CEO Thorsten Heins made this week — and just one of the announcements I wish the company had made years ago.

This is a major signifier of a real shift for the company, a renewed focus on what’s important and, frankly, what’s been good at RIM for the past few years. It’s one of many broad, sweeping changes pushed through by Heins over the past year, clearing the path to the company’s massive, global unveiling of BlackBerry 10. And, of course, some hardware to run it on. Namely: the Z10 and Q10, both of which you’ll be reading a lot more about later in this issue.

A new name, a new OS and a new infusion of celebrity branding courtesy

of Alicia Keys. And Neil Gaiman. And Robert Rodriguez. All three will be acting as cultural ambassadors of a sort, with Ms. Keys getting the additional blessing of an executive title: Global Creative Director. Cue the snarky questions about her day-to-day corporate responsibilities, but I’ll let the Twitter pundits have fun exploring that topic.

Laugh all you like, but I think BlackBerry genuinely needs a bit of a cultural boost, and this might not be a bad way to start — though, it must be said, hiring someone with an iOS-exclusive app and who famously performed next to Steve Jobs at the iTunes launch is a bit of a curious choice.

My full views of the phone and the OS await you, so I won’t spoil too much, but suffice to say that BlackBerry has a long road ahead of it to become the smartphone powerhouse it once was. I wish the Q10 were launching at the same time as the Z10, and I wish both were launching in the US before MWC, and I wish BB10 had Netflix and Hulu and Spotify, but overall I still think this is a good step forward. I do think that most of the BlackBerry faithful will be happy with this — happy



enough to stave off the advances of iOS, Android and Windows Phone, at least.

But RIM BlackBerry didn't entirely dominate the news cycle this week. Apple slipped the 128GB iPad into existence. Now \$799 gets you an iPad with twice the storage capacity of the previous maximum, though if you want LTE you'll need to spring for the \$939 version, which Sprint, AT&T and Verizon have all said they'll be carrying.

Apple also dropped iOS 6.1 into our laps, bringing some mostly minor tweaks, including support for more worldwide LTE carriers, the ability to buy US movie tickets through Siri and, finally, iTunes Match users can now download individual tracks rather than just entire albums or playlists.

Nokia, meanwhile, finally started pushing out Windows Phone 7.8 to its devices, a gradual rollout that's said to run through February. The company also unveiled a subscription music service called Music+. For \$4 every month, you can stream and download as much music as you like to your phone — music that will, of course, disappear should you ever stop paying that fee. A Windows Phone app is a natural, but browser playback is also supported. I personally hope they bring it to more platforms — a little pricing competition for Spotify and Slacker wouldn't hurt.

Finally this week, we added some more amazing guests to the list of personalities we'll be featuring on-stage at our Expand event, which takes place

on March 16th and 17th in San Francisco. Yancey Strickler, co-founder of Kickstarter, will be sharing some of the many, many things he's learned about crowdfunding to our own crowd. Willow Garage CEO Steve Cousins, will talk DIY, we'll discuss how the Curiosity rover got to Mars with JPL's Tom Rivellini and LiftPort's Michael Laine will talk about the very practical considerations that must be taken into account when building an elevator on the moon.

Again, this week we're looking in detail at the new BlackBerry, including my full reviews of the Z10 smartphone and BB10 OS. Jon Fingas takes us on a trip through the company's history, starting with its humble beginnings and leading us up to Wednesday's reinvention. We also have Zach Honig's review of the eagerly anticipated Pebble smartwatch, a few funky highlights from our coverage at NAMM and a new IRL, too. Joshua Fruhlinger talks trolling in Modem World while Ross Rubin takes a broader look at evolving smartphone sizes in Switched On and, finally, designer Brian Reed sits down for Q&A. It's all waiting for you just ahead, so Keep Moving. 



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET



CONTROL FREAKS, SLOW SURFING AND THE RUNNING MAN



Touch article names
to read full threads

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INBOX



AUDOJO IPAD GAMING CASE

ISSUE 75,
JANUARY 25TH, 2013

“So, when will the games we actually want to play get supported? This is the failure that most controllers have right now, large price tag with no / low support. You might as well put PS Vita on the front of it! I just want to be able to use my PS3 controller; I don’t need something that is useless if I sell my iPad. If anything, I want something

that will connect and ‘WORK’ with the major games that I can use with my Nexus.”

—**JBRASCO**

“None of these controllers will ever gain traction until the manufacturers rally behind a single unified specification. Even better if Apple would create a system level API for Bluetooth controllers.”

—**MHARRMSI**

BLACK POWDER MEDIA IMPULSE CONTROLLER

ISSUE 75,
JANUARY 25TH, 2013

“Nice, they should also open a carpal tunnel business. They can cross market to their customers.”

—**JUNKYARDWILLIE**

“Finally! Small enough to stash in my underwear.”

—**AIDENALEXANDER**

THE INTERNET USED TO BE BETTER

ISSUE 75,
JANUARY 25TH, 2013

“I never lived anywhere where any of these services existed, but I remember my first email using Pine and the thrill of chatting real time with my friends (on campus) in 1993. I also miss the days when having a goofy screen name was the norm for email aliases until so many people were using the internet that it became impractical and I agree that social networking just . . . ‘happened’ and when it did it was because you figured it out.

The speed of the internet today is wondrous, but I was saved more than once by slow internet when I sent an email that I had sec-



ond thoughts about and had plenty of time to make sure it didn't send. There is not much innocence left on the web and that is not something to celebrate."

—LEADERRAT

"I once bought an 'internet yellow pages' book. Yes, a hefty physical book that contained website addresses in a yellow book-style format. Can you imagine?"

—GOPBACK

"'It was slow.' The better reason behind this is that it caused us to really think about what we're posting, spellcheck and ensure it's complete and accurate, and make sure it's relevant before posting it. There were no hundreds of useless videos of people doing inane things; that one video of you 'planking' would take two hours to upload. Instead, the content that was available was of higher value.

Likewise, you found yourself doing more worthwhile things on-

line, instead of spending three hours on Facebook and YouTube and secretly wondering, 'What am I doing with my life?' You re-

ally had to weigh the pros and cons of committing 30 minutes of time to an exclusive download."

—BBASKIN

"Absolutely loved this story. The nostalgia is palpable. I miss those good old days where you would listen to the modem dialing up to connect, seeing the little running AOL man and then constantly losing the connection. Not to mention, no one could use the phone while you were online, and vice versa. I used to pick up a phone when my dad tried to log onto my school's website to see my report card so he couldn't see my grades :P. Those were the days."

—ROLLINGTHEBONES



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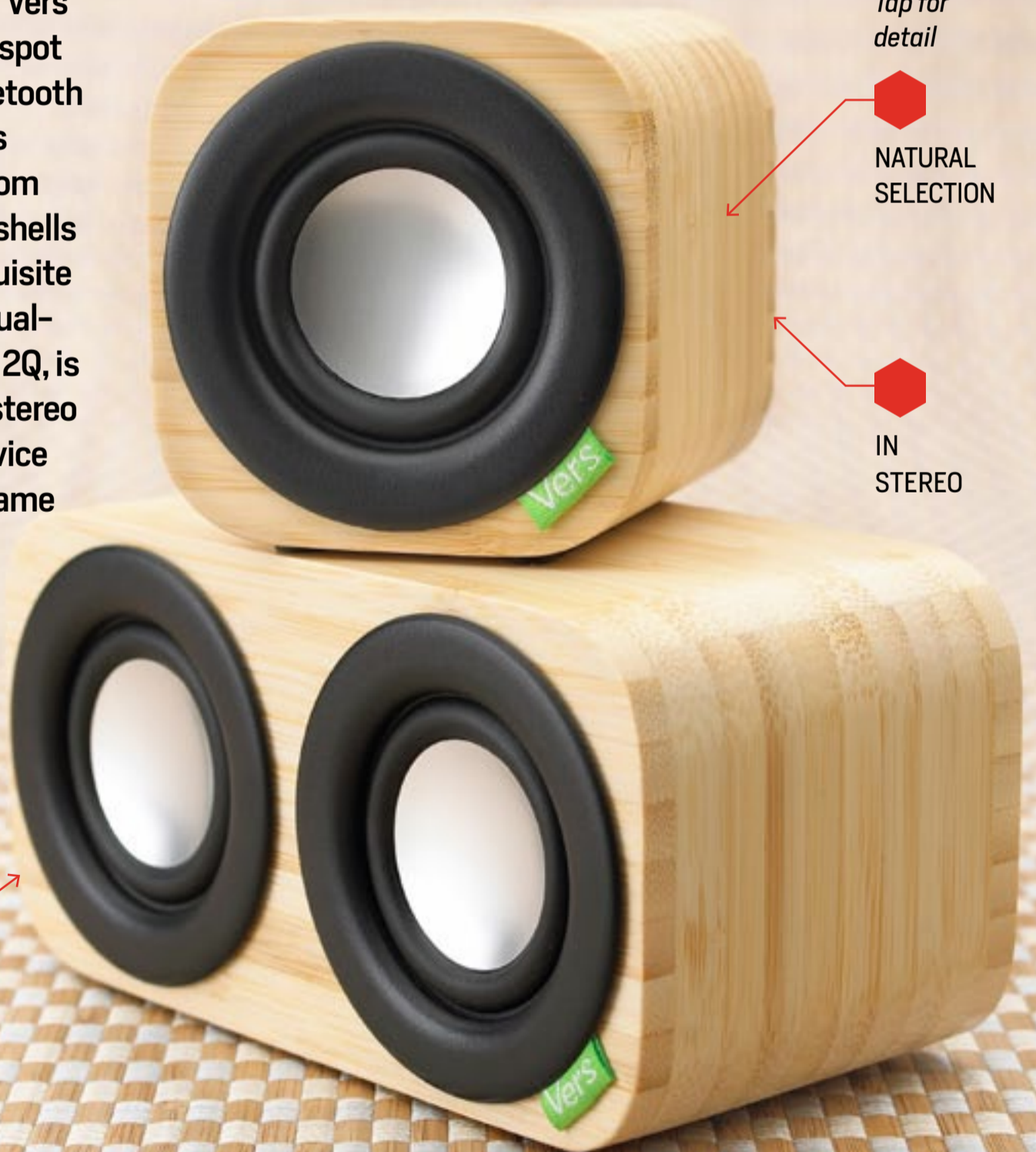
EYES-ON

VERS 1Q & 2Q

THE CUBED SOUND

We've seen a number of good-lookin' audio gadgets get Kickstarted, and Vers' 1Q nabs yet another spot on that list. The Bluetooth wireless unit gets its earthy aesthetics from diminutive wooden shells that protect the requisite internals. The 1Q's dual-wielding sibling, the 2Q, is outfitted to handle stereo duties in a single device while sporting the same dapper exterior.

THE DAMAGE:
\$119 & \$199





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BLACKBERRY Q10

PRICE: TBD

AVAILABILITY: APRIL 2013

THE BREAKDOWN: BLACKBERRY CATERS TO THE QWERTY FAITHFUL WITH A QUICK, BEEFY HANDSET SPORTING BB10.

Forget the all-touch Z10 for a moment. This here is BlackBerry's other BB10 device – the QWERTY BlackBerry Q10. With a 720 x 720 Super AMOLED 3.1-inch display, the Q10's screen is slightly larger than its touch-hybrid predecessor, the Bold 9930, and sports a much tighter pixel density of 328 ppi (BlackBerry claims the display is 360 ppi, which doesn't jibe with our math). The screen itself is plenty bright and contrasty with incredible viewing angles and we didn't notice any of the telltale blue tinge typical of AMOLED implementations.

The steel band around the middle and "glass-weave" backplate actually gave the device a pleasantly premium feel in our hands. It was solid, well-shaped and smooth to the touch without being plas-

ticky. The 1.5GHz dual-core CPU and 2GB of RAM keep the device humming along quite smoothly. It reacted almost instantaneously to input with no hiccups. The smaller screen size did make touch input seem a little less natural, but the ability to just start typing and search or perform actions more than made up for the slightly cramped confines. The 10.3mm-thick body does feel slightly chunky when compared to its all-touch sibling the Z10, and downright brick-like next to a svelte beauty like the Galaxy S III, but its short, stout shape will fit in your pocket and palm with equal ease. At 139g, it does pack some heft, but we don't see that as a bad thing.





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NUMARK ORBIT

Before NAMM opened its doors fully, we managed to sneak a hands-on with the freshly announced Orbit DJ controller from Numark. As you can see, the wireless device looks like a game controller that crashed into a disco — it's certainly distinctive. This is no accident, and the design is purposely built with quick and easy button access in mind, letting DJs (and any MIDI-based performers) step out from behind the DJ booth, and onto the stage. It feels light yet solid, and

PRICE: \$100

AVAILABILITY: SPRING 2013

THE BREAKDOWN: NUMARK'S HAND-HELD MIDI CONTROLLER LOOKS TO MAKE DJs MORE MOBILE WITH A WEALTH OF CUSTOMIZATION

the soft-touch finish means your hands won't get tired gripping this thing in the throws of a drum pad solo. Those pads feel smooth, yet tactile and — most importantly — responsive.

That dial you see in the middle is designed to be used as a multi-purpose knob, and is big enough for you to comfortably thumb it, while still reaching the side controls. There are four buttons that can be assigned as “virtual rotaries.” Once selected, spin that wheel to modulate whatever you have it assigned to (filters, reverb amount, etc.). The other set of four buttons let you expand those 16 pads out to a potential 64, so if you want one bank for controlling lights, one for sample triggering and another for hot-cues, you can do this all from one small device. It's not just the external controls that make this interesting, but also the internal two-axis accelerometer, which can be assigned to parameters of your choice.





KORG MS-20 MINI

Korg's MS-20 mini is, as you might surmise, a smaller version of the classic analog synth that arrived back in 1978, measuring in at 86 percent the size of the original. The mini was developed by the same engineers, has the same synthesis setup (two oscillators, ring modulation, VCA design, etc.) complete with manual cable-patching system (which is now 3.5mm rather than 1/4-inch). There is one modern addition, and that is a USB-MIDI jack around the back, letting you plug in to your favorite DAW / sequencing software through the more contemporary connection — should you prefer that over the good, old 5-pin MIDI (which is still an option).

Undoubtedly, the MS-20 mini looks like the real deal. Although smaller the second time around, it's still a good

PRICE: \$599

AVAILABILITY: SPRING 2013

THE BREAKDOWN: THE MS-20 MINI HOUSES THE SAME ANALOG TECH FROM THE ORIGINAL IN A SMALLER, UPDATED PACKAGE.

size, and big enough for competent keyboard players to do their thing. The knobs and pots felt surprisingly plastic, but the rest of the machine seems robust and well made. It's hard not to get sucked into the whole vintage detail, especially the patch bay on the right-hand side. The action on the keys feels responsive, and those dials should be able to take some vigorous use — ideal for live performances. The sound it generates will definitely please fans of analog synths, and we even caught Deadmau5 making an appearance to check it out. If you'd like to upgrade from that iPad app, to the real deal, you should be able to do so this spring.



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HANDS-ON



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PDJ PORTABLE DISC JOCKEY

The PDJ is a rectangular slab of refreshing creative optimism. On each end is a touchscreen display that shows a virtual turntable, and in the middle is a small mixing and FX section. So, already the PDJ will be familiar in set-up to any DJ who picks it up. The mixer section has rotaries for volume, FX and additional functions. The most important thing, however, is the onboard audio interface that crucially means you can monitor in headphones before unleashing your mix onto the world. There's 2GB of internal storage and an SD card slot (up to 32GB) for queuing up sounds, too. Beyond headphones,

PRICE: \$599

AVAILABILITY: MID 2013

THE BREAKDOWN: THE COMPACT PDJ OFFERS A TOOLKIT FOR CREATING ON THE GO AND DJING AN IMPROMPTU SET WHEN NEEDED.

there's a line out for connecting it to a sound system, and a line in and microphone jack for adding external clips.

The brochure claims it offers 12 hours of battery life too — rechargeable by mini-USB. At about 286 grams, the PDJ is light to hold and sits in the hand comfortably. The rotaries and crossfader in the middle section are plastic, but feel solid enough. The LCD touchscreens let you get hands-on with your music, and it's responsive and intuitive enough. Thankfully, most of the key functions have hardware controls too. To reach the extra functionality, you swipe the screen to the left or right accordingly to bring up the relevant screen. Purists might malign the constant attempts to shrink and gameify DJing, but we say you're thinking about it too much. Throw one of these in your bag, and the next time you're on the train and want to mix in headphones, the PDJ will suddenly make a lot more sense.





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ARTIPHON INSTRUMENT 1

Music, MIDI and mobile? Seen that before, right? Well, yeah, but there's more than one way to crack a nut. Artiphon's method involves creating a high-quality multi-instrument device that uses an iPhone or iPod touch as its brain. So, this is no plastic "ap-processor." The Instrument 1 is made out of special-quality African hardwood, and centers on an intentionally ambiguous design. A pair of high-quality custom speakers offers impressive 30W onboard sound. There is, of course, a line out and MIDI in / out too. Dr. Mike Butera, Artiphon's founder and CEO, was keen to explain to us that this is intended not to replicate one specific de-

PRICE: \$800

AVAILABILITY: LATE 2013

THE BREAKDOWN: ALTHOUGH THE INSTRUMENT 1 HOUSES AN iPhone, ANY CORE MIDI APP BECOMES A WEALTH OF OPPORTUNITIES.

vice but rather to enable musicians to be able to work in a way they want to. The Instrument 1 works with any core MIDI-enabled app, but there are plans to release a companion app for more detailed / custom mappings in the future.

The first thing we noticed was how authentic it felt. It definitely felt more like holding an instrument, than a MIDI





device or an accessory component. The oiled wood finish, metal speaker grilles and overall quality of the device make it feel like something you'd wield with care. The iPhone section is also pleasantly discreet. Under the neck you'll also find some additional controls that steer the Instrument 1 in more dedicated-instrument directions. The small black box below the iPhone housing serves as a strum-surface and the neck section is largely akin to a guitar neck, but when approached creatively, can be used in all manner of ways, such as drum pads when resting on your lap. There's also a physical volume control and a USB port.

As for the MIDI options, there are plenty: polyphonic aftertouch, vibrato, versatile modulation and mapping — just to name a few. There is an octave switch on the neck, also, so that you can get a wide range of musical notes with ease. Butera showed us that as there are two sensors on each neck-note, you can effectively cram two octaves into the same space, should this better suit your needs. **D**



Sleigh Bells and Fat Bills: It's Earnings Season Again

As always, tech's big guns raked in big money over the last quarter, with Apple, Samsung, Google and Microsoft all making profits in the billions. This round of earnings puts a value on the holiday season, with each of the players' quarters

(regardless of what they called them) wrapping after the seasonal retail rush. So, who came out on top? Herewith, a financial breakdown for four of the industry's biggest moneymakers.

— Christopher Trout

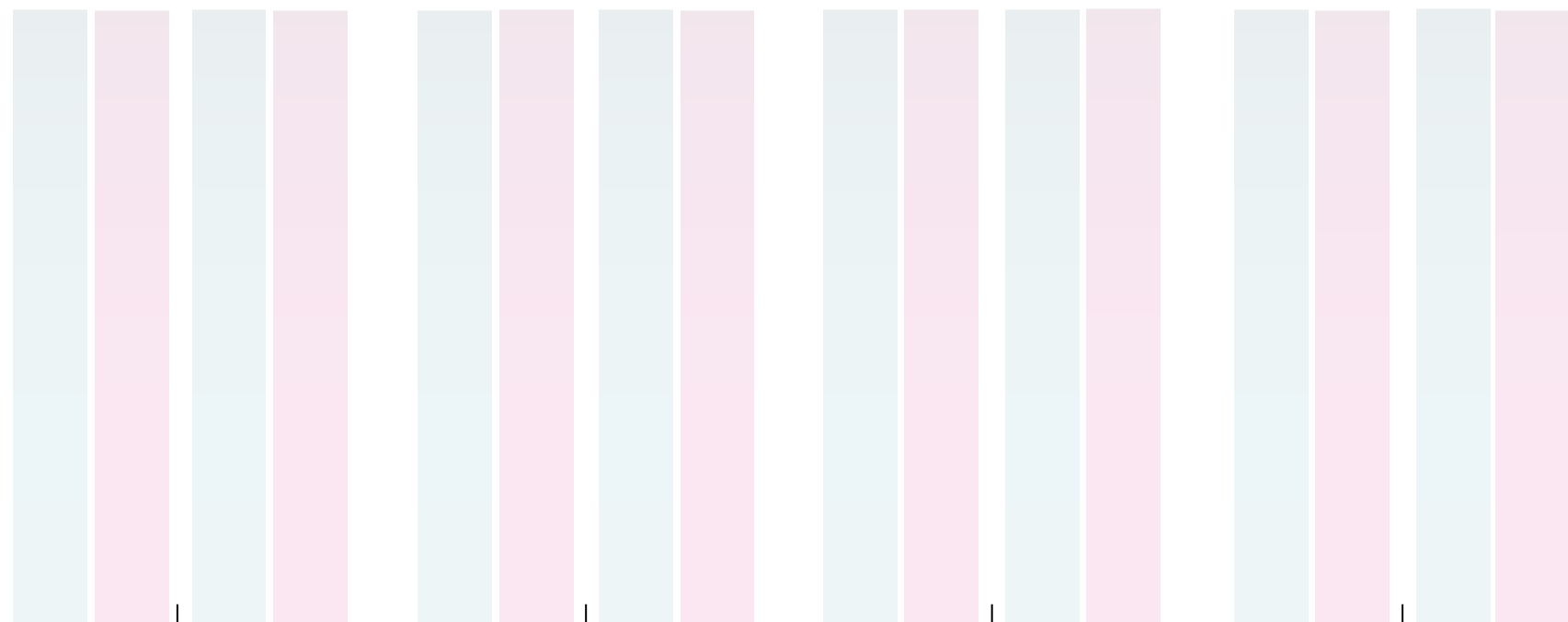
LATEST FINANCIAL RESULTS YEAR-OVER-YEAR AND QUARTER-OVER-QUARTER

2011

TAP
FOR
INFO

2012

SOURCE: GOOGLE, MICROSOFT, APPLE, SAMSUNG



GOOGLE

2012 marked the first year Google broke the \$50 billion revenue mark. However, prospects were not so sunny for its Motorola Mobility acquisition, which lost \$353 million last quarter.

MICROSOFT

The company saw record revenues this quarter as well as a 24 percent increase in revenue coming in from its Windows division, no doubt due to the release of Windows 8.

APPLE

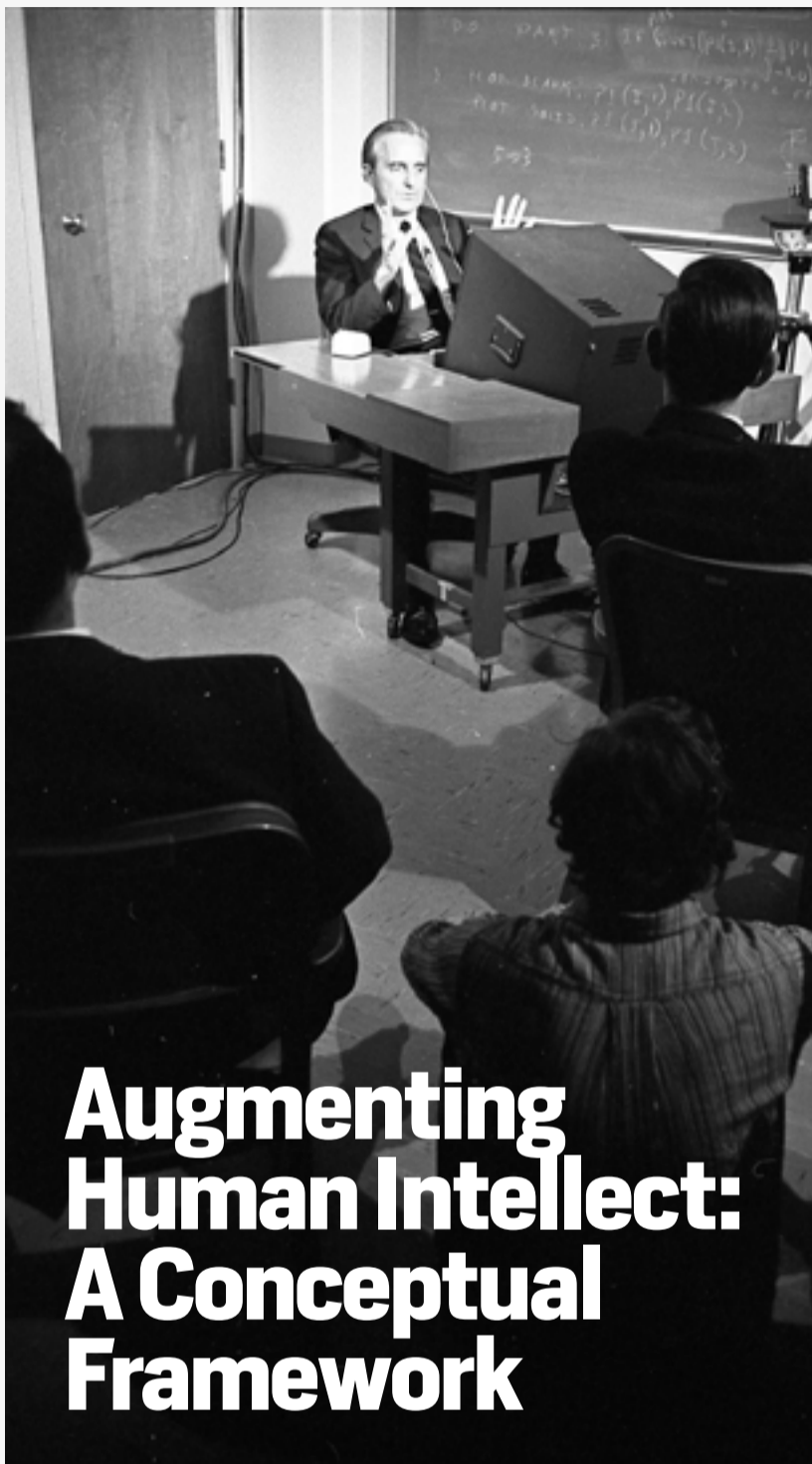
Despite record profits and sales figures, Apple faced declining stock prices and rumors of diminishing demand for the iPhone leading up to its earnings call.

SAMSUNG

The South Korean company brought in nearly double the profit year-over-year, which it attributed largely to phone sales.

Accounting practices and fiscal calendars may vary from company to company.
Samsung estimates based on current exchange rates.





Augmenting Human Intellect: A Conceptual Framework

By Douglas C. Engelbart, *SRI Summary Report*

This key work from computing pioneer Douglas Engelbart was referenced in Howard Rheingold's *Mind Amplifier* e-book featured here last fall, and it's again cited in Bianca Bosker's piece on the history of Siri also featured on this page. So, it seems as good a time as any to properly feature it ourselves. Written in 1962, *Augmenting Human Intellect* laid much of the groundwork for our current thinking about how technology can be used as a tool to enhance our knowledge, at a time when computers were anything but "personal." Engelbart wasn't the first to explore the idea — indeed, he draws heavily on the work of Vannevar Bush in the piece — but he provided a unique, deep understanding of the issue, which we're still really just scratching the surface of. It was also a clear call to action (a pursuit Engelbart saw as ultimately more important than nuclear research), one that continues to be picked up (perhaps now more than ever) more than 50 years after it was first published.



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How Newegg Crushed the 'Shopping Cart' Patent and Saved Online Retail

By Joe Mullin, *Ars Technica*

It got a bit overshadowed by some other patent disputes as of late, but Newegg's fight with Sovereign Software over its so-called shopping cart patent was one of the higher-profile and more contentious of recent years, and it recently drew to a close with the online retailer claiming a decisive victory. Here, Joe Mullin goes back to the beginning for an in-depth look at the case.

The Never-Before-Told Story of the World's First Computer Art (It's a Sexy Dame)

By Benj Edwards, *The Atlantic*

For all that's been written about the history of computers, there are still plenty of stories to be told. That's no more evident than in this piece from Benj Edwards for *The Atlantic* on the world's first computer-generated art, which was inspired by an *Esquire* pin-up and made possible by a multi-million dollar military supercomputer.

Siri Rising: The Inside Story Of Siri's Origins — And Why She Could Overshadow the iPhone

By Bianca Bosker, *The Huffington Post*

As you may be aware, Siri had a bit of history before it landed on Apple's iPhone, but there's naturally much that hasn't been public knowledge. Bianca Bosker managed to uncover some heretofore unknown details about the personal assistant for this piece, though, which offers a look at Siri's pre-Apple days and what could be in store for the future.



A HANDSET FOR HUMAN HANDS



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FORUM

SWITCHED
ON

BY ROSS RUBIN

In the golden era of the PDA, many debated whether future consumers would adopt a one-device or two-device approach. The two-devicers argued that the connectivity for phone calls would come from a simple, bare-bones cellphone while all the fancy data management would occur on a Bluetooth-tethered, PDA-like device unbound from cellular contracts. The Handspring Treo was for many the first device-converged handset that accomplished key tasks well enough to make a convincing case for handset integration, and the smartphone revolution ensued.

The first iPhone featured a large screen for its time but not a much larger footprint than its contemporary competitors such as the BlackBerry or Treo. Competitors asked if a 3.5-inch hand-held palette was good for consuming web content, wasn't a 4.3-inch

display — like that on the HTC EVO 4G — better? Screen sizes and attendant resolution continued to grow with the 5.3-inch Galaxy Note, 5.5-inch Galaxy Note II and culminated in the 6.1-inch Huawei Ascend Mate that debuted at CES. Samsung and Huawei are joined



by LG, Sony and HTC in offering or announcing a 5-inch or larger Android phone. The latter joined the pocket-stuffing ranks with the 5-inch Droid DNA on Verizon, available in China as the HTC Butterfly.


But HTC is offering an intriguing accessory for the Butterfly, the HTC Mini. The Mini upends the two-device approach of the mid-'90s. The largest phones are now so big and complex that they can be awkward to carry around in the hand and use for simple phone calls. And so the HTC Mini resembles one of those mid-'90s "candy bar" feature phones that might have been produced by Nokia with a large keypad and a small display — except that it really is about as thin as a candy bar this time around. The handheld computer and the voice-centric device are still paired, but the radio is now in the former rather than the latter.

The HTC Mini can be used with your smartphone in a backpack or purse, or you can use it while looking up information on your smartphone's screen without having to do the ear-eye shuffle. As novel as the HTC Mini is, it is but one accessory to facilitate making, or at least staying on, calls from cellphones. Bluetooth headsets and car visor-mounted speakerphones have been with us for years.

And those are just some options. For those looking for the creature comforts of a home phone, Native

Union has offered full-sized, retro-styled handsets that can connect via wired or Bluetooth connections. Yet another alternative is the wearable Star Trek-inspired Indiegogo project CommBadge. A spate of Kickstarter-fueled smartwatches from the likes of Cookoo, MetaWatch and Pebble can relay bits of glanceable information from smartphones, and one from Martian can even activate commands on it via an integrated microphone.

The Mini offers a keypad, but perhaps a different take could offer a BlackBerry-style physical keyboard for email power users missing the tactile experience. Or perhaps even a fully functional Android touchscreen device? It may sound like the height of redundancy, but, as Switched On discussed last May, Samsung included just that kind of functionality in its most recent Galaxy Players.

All in all, Android handset makers have done a good job balancing growing screens with ergonomics as they've supersized the smartphone. There's no doubt we'll see other devices like the HTC Mini. However, their viability is hardly a condemnation of the phablet. The HTC Mini is just another option for phone input and control. While those have been around since before the dawn of smartphones, the one-device school is poised to remain the default as we move forward. 



WHY WE TROLL



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02.01.13

FORUM

THIS IS THE
MODEM WORLD

BY JOSHUA FRUHLINGER

Back when the PlayStation 2 was the world's most popular game console, the original Xbox was struggling to gain a post-*Halo* audience and the GameCube was a cute diversion with a couple decent titles, I trolled gaming message boards. I was so sure that anyone who bought anything other than a PS2 was out of their mind that I set out on the most immature mission in history: to inform the masses, proselytize the word as handed down by Hirai-san, and ridicule those who were wasting their time with *The Wind Waker*.

Those who were active gamers at the time probably read that paragraph and are now either annoyed or cracking a wry smile in understanding. The latter are the ones who played *Ico*. Those who weren't gamers at the time can insert their own products into the mix for context.

Anyway, yes, I was a troll. I would plop myself into *Halo* discussions and ask silly questions about Master Chief's

personal life, then excuse myself with, "Sorry, gotta go play *SOCOM!*"

It was, in retrospect, a horrible thing to do, and I probably made some kids' nights pretty miserable. But the truth is that I was amused. Really amused. It felt just like when I would torture my sisters by interrupting phone calls using another extension. A thick mix of glee, fear, anxiety and jealousy stirred together and



tickled my evil side as they would shout, “Josh, get off the line!”

It’s in all of us. It’s something children do. It’s something adults do when we can get away with it.

It’s even something animals do.

I adopted a male kitten over the holidays and, while he is the cutest thing since, well, kittens, he is a master troll. He’ll sleep all day, cuddle in the evenings when I get home from work and just as I am about to slip into a silky slumber, he’ll run across my head and disappear under the bed until I begin to doze just to do it all over again.

Rather than strangle the furry monster with a gentle squeeze (he’s small), I Googled the trolling kitten phenomenon only to learn that what Sparky is doing is totally normal. “Cats are nocturnal,” the experts say. “Play with him until he’s tired,” others suggest. “Close the door,” the smart ones conclude.

It’s 11PM right now as I write this, and Sparky is passed out behind me. He’s certainly not acting nocturnal, and I guarantee he’ll be shredding toilet paper the moment I plop into bed. I tried playing with him until he was virtually unable to stand for a couple nights. But within 10 minutes, he was back to his old self, face-running as I tried to catch some shut-eye. As for the door, well, I live in a loft. Pity me.

The point is that we’re all trolls. We get off on others’ misery. The Germans even have a word for it: schadenfreude.

And, to be honest, it’s kind of cute when we troll those we love. Whether it’s a little brother embarrassing his big sister or a kitten trying to say, “I am your new nightmare, adore me!” trolling is a weird way of showing love.

But trolling turns poisonous when we do it to others online. We don’t know them, and we’re looking for that same satisfaction from people who don’t love us. The intention is attention, but the result is misery and annoyance, and that’s when trolling becomes antisocial.

Back when I was bugging Xbox fans, I found some joy in the attention I received, but that quickly soured as they learned to troll me back. What started as a gentle poke turned into creepy name-calling and potentially dangerous threats. Within weeks I realized that what I was doing wasn’t productive or healthy.

So here’s the thing: Unless you’re a kitten or a really cute little brother, if you’re thinking of trolling someone, you’re not going to get the kind of attention you think you will. Your trollee isn’t going to forgive you and feed you in the morning when you meow. Nor is she going to simply pass it off and say, “That was my stupid brother. Ignore him.”

No, you’ll just get a taste of your own medicine, and it’s pretty bitter.

The next time you’re about to troll, go ahead and type it out. But before you click “submit,” read it out loud to yourself.

See how annoying you sound? 



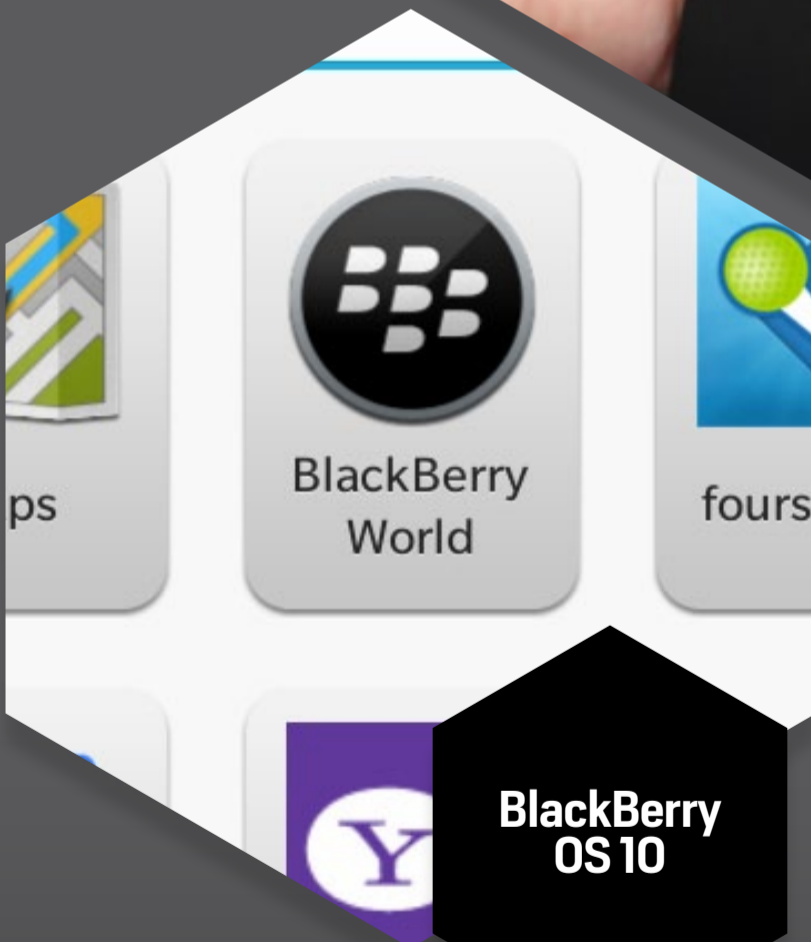
REVIEW

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DISTRO
02.01.13



**Pebble
Smartwatch**



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PEBBLE SMARTWATCH



The crowdfunded darling arrives with an attractive price tag, but does this **smartwatch** deliver the goods?
By Zach Honig

What is Kickstarter? The answer you'll hear, as long-winded as it may be, will likely touch on Pebble. If it doesn't, you'll probably want to ask someone else — with more than \$10 million pledged, the people's smartwatch catapulted past the crowdfunding site's records and the startup's own expectations. It achieved a \$100,000 funding goal in two hours, and it was clearly a favorite among our readers. Of course, there were doubts that Eric Migicovsky, the company's founder, would deliver such an appealing and seemingly powerful product for \$125, but following our first



look during the company's CES press conference, that dream became real.

So, what is Pebble? It's not a smartphone for your wrist, as we've seen attempted before. In fact, it's far less sophisticated than you might expect — the lightweight device reads out basic text, lets you skip through music tracks and, of course, displays the time. It's hardly the greatest achievement of our generation, or even the device of the year. It's become incredibly popular, sure, but despite the hype, you certainly don't *need* to own one. Yet, somehow, even the most technologically inept people in our lives have heard it mentioned on morning talk shows, FM radio stations or from pre-teens anxious to impress their friends. Having a smartphone alone isn't enough anymore. Or is it?

HARDWARE

We tested a black Pebble, which is the first color to ship. The face is slightly glossier than renders implied, but otherwise the production device looks nearly identical to early prototypes. There's a 22mm rubber strap for mounting the device to your wrist — you'll likely be able to swap in your own band with matching dimensions. It's a fairly attractive combination, though regardless of the strap you choose, you'll probably want to leave Pebble behind during formal events, or walks down the runway.

Pebble feels very comfortable when fastened on the wrist — it's relatively

lightweight, and the smooth edges maintain their distance from sensitive skin. Still, it feels solid enough for regular use, and thanks to waterproofing down to 50 meters (164 feet), it can stay on your wrist during laps in the pool (or in the ocean), and it'll work just fine in the shower as well. There are two exposed metal connectors, used to pair up with the proprietary magnetic USB charging cable (the only accessory that ships in the box), but the housing appears to be properly sealed.

Pebble is powered by an ARM Cortex-M3 processor, with a 140mAh battery keeping you up and running for up to a week with occasional use, or five days with frequent notifications and backlight activation. The secret to Pebble's weeklong battery life and daylight readability is a technology similar to what's penetrated the lives of bookworms young and old: an e-paper display. The 114 x 168 black-and-white screen sports nearly 20,000 pixels, letting you view emails and a time readout in several fonts, along with watch faces and other indicators. The display looks great both indoors and out, though we did notice some odd black spotting while viewing the panel in direct sunlight — likely a "Mura Effect," and adjusting the angle eradicates the issue.

There's a simple backlight that illuminates the panel briefly at night, automatically when you receive a notification or manually when you activate any of the four side-mounted but-



tons. It's fairly dim, enabling you to avoid disturbing fellow moviegoers or that patient significant other sharing your bed, but still bright enough for you to catch every detail. Pebble will reflect even a small amount of ambient light, however, so your backlight usage is likely to be fairly minimal.

Pebble doesn't offer much functionality without a smartphone. You'll need one (and an accompanying app) to get started, and although you'll be able to display the time while disconnected (in Airplane Mode, for example), software updates, feature additions and notifications all require a Bluetooth connection. Fortunately, there's Bluetooth 4.0 support, which offers speedy performance with reduced energy consumption. This also contributes to Pebble's weeklong battery life, and a reported five to 10 percent hit to your smartphone's longevity.

We'll detail the user interface more in the section below, but since there's no touch functionality here, you'll need to navigate using the four side-mounted buttons. There's a home (or back) button on the top-left side, which brings you back to Pebble's main configuration page. Positioned to the right of the e-paper panel: a top button scrolls up, a smaller center button makes selections and the control on the bottom scrolls down — through messages, menus or



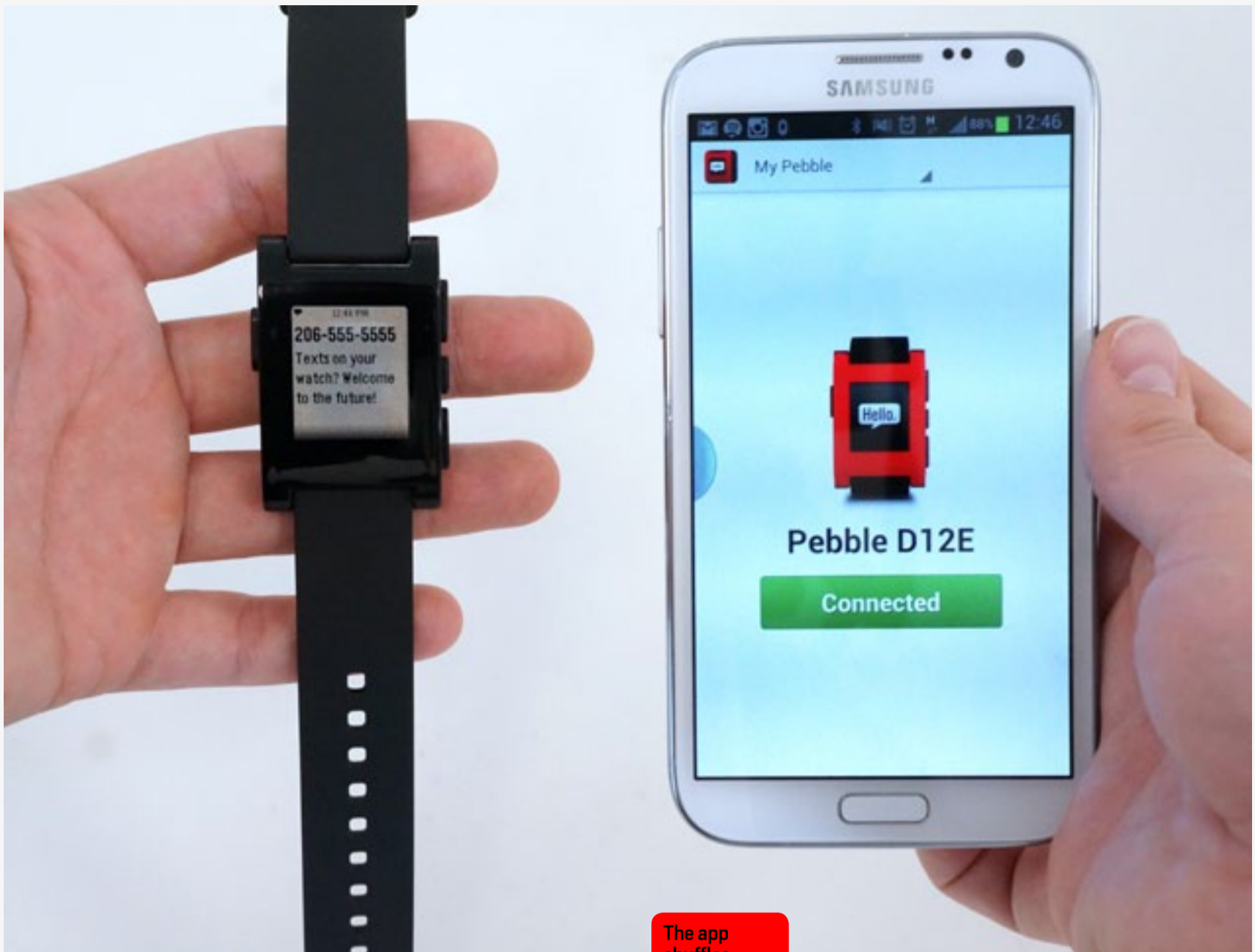
Displaying email text is just one function of the Pebble.

tracks while controlling music playback. All of these buttons require a firm press, rather than a tap, and while you won't accidentally activate the controls, registering input can take a bit of effort.

SOFTWARE

Pebble's two apps — one for Android 2.3 or later and the second for Apple devices running iOS 5 or later — enable everything from initial setup to push notifications. There's no user manual in the box, so you'll need to download your respective app to get started. Pairing takes a few seconds, and then you're good to go. The smartwatch will automatically adopt the local time on your smartphone, and you can select from a few default watch faces, ranging from Text Watch, which you're probably already familiar with, to Classic Analog.





The app shuffles watch faces and sets up notifications.

To take full advantage of the device's functionality, you'll need to head back over to the smartphone app, where you can push additional watch faces (there are currently just five to download, including TicTockToe). Eventually, this custom app store will include third-party apps, such as the bike computer and golf rangefinder that the company pitched on its Kickstarter page, though they're not available now.

The app's Settings page is where you'll select notifications to push. Based on the apps installed on our Galaxy Note II, we were able to choose

from incoming call alerts, text messages, calendar reminders, email previews, Google Talk messages, Google Voice messages and Facebook messages. Each option has a checkbox, so if you want to use your Pebble for caller ID but don't want to be bothered with Facebook messages, that's perfectly OK. With each notification, the watch will vibrate once, the backlight will flip on (for a few seconds) and the message will pop up.

Theoretically, you can simply shake your wrist to dismiss the notification, though we were only able to accomplish



this by pressing one of the buttons. You can choose from large and small fonts for notifications, but regardless of the size, you can scroll to see more using the up and down buttons. You'll need to hop over to your smartphone to read the full message or send a response. Similarly, when you receive a call, your only option on the watch is to dismiss the notification, but doing so won't send your caller to voicemail.

Unless you're looking at your watch every few seconds, there will likely come a time when your inbox contains multiple messages. Unfortunately, Pebble will only display the very last notification received, so it won't completely eliminate the need to check your smartphone. English is the only language currently supported (which explains why our Chinese characters rendered as rectangles), but others will soon follow.

At this point, all of the interactions between Pebble and a connected smartphone go in one direction — from your handset to the watch — with one exception. The wristwatch's music player controls playback on your Android or iOS device, including play / pause and track skipping. There's no volume control, which seems reasonable given the limited number of buttons. With our Android phone, the watch was able to identify and control music from the native app. Third-party apps that support the Audio / Video Remote Control Profile (AVRCP) should be compatible with

Pebble's audio controls. Spotify, however, does not include this support.

THE COMPETITION

Although it may seem to be the case given the excitement surrounding this launch, Pebble is not the only smartwatch on the market. Sony and now Toshiba are two of the giants behind similar tech, and the former company's SmartWatch is even reasonably priced, at \$149. Allerta, the company behind Pebble, released its own wearable several years ago, called inPulse, but smartphone compatibility was limited to BlackBerry models and certain Android-powered handsets, and the device uses an OLED display. Similarly, WIMM Labs' WIMM One was made available to developers, but is no longer in production. Migicovsky, Pebble's fearless leader, responded with the answers to a few of our questions. He confirmed that the goal is to fulfill all Kickstarter orders within the next six to eight weeks, with preorders following. The device may eventually end up in retail stores, but there's no firm timeline there.

Pebble's success stems from the promise of third-party apps and the practical e-paper display, along with the marketing power of Kickstarter. Functionality remains somewhat limited, but this is a first-generation device from a small manufacturer that's currently only in the hands of a very limited number of lucky backers. If consumer interest is any indication, developers will likely soon be





A magnetic USB cable replenishes the energy supply.

hard at work on a variety of unique applications, if they aren't already. The platform is incredibly young, and the best is yet to come.

WRAP-UP

We've really enjoyed our time with Pebble so far — it's not a fashion statement, necessarily, but we wouldn't be surprised to see it pop up on many wrists in the weeks and months to come. Functional-

ity is still quite limited at this point, and considering how fresh the device is, that's to be expected. The features that are already available work well, and the smartwatch has been a pleasure to use.

Taking price into account, Pebble is an excellent value, especially for lucky Kickstarter backers who were able to take advantage of \$99, \$115 and \$125 pre-orders. We're very

optimistic for the device's future — our chief concern relates not to the hardware, but how it will affect behavior: If you thought that friend who glances at his smartphone every few minutes was rude, just wait until he owns a Pebble. **D**

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

BOTTOMLINE

ALLERTA PEBBLE

\$150



PROS

- Easy setup
- Stable performance
- Android / iOS compatibility
- Waterproof to 50 meters

CONS

- Limited app selection at launch

BOTTOMLINE

Pebble is already an excellent value, but new features will increase the appeal.



BLACKBERRY 10 OS



Can the fresh new **BB10**, help BlackBerry make its way back into the hearts (and pockets) of today's savvy smartphone buyers?
By Tim Stevens

For years now, the BlackBerry OS has occupied something of a special state, almost feeling as if it were thrown down into a pit and locked into a bar of carbonite, preserved in stasis for future generations to see. Want to show your kids what using a smartphone was like in 2006? You just needed to find a Bold on display at the local electronics store and let your little ones gaze wide-eyed at a sea of menus and tiny buttons.

BB7, then, was a disappointment for many, feeling like a bare-minimum update to those versions that came before rather than the com-



plete QNX-based retooling we'd all been waiting for. The PlayBook showed us what was possible with a clean-sheet approach to a BlackBerry OS, and we wanted that on a phone. Now, two years after the release of that tablet, here we have it. It's BlackBerry 10. It's a wholly new experience, very different even than the PlayBook, and in general it's quite good. But is it good enough to thrive in a world dominated by iOS and Android? Let's find out.

GENERAL LAYOUT AND GESTURES

The input-free BlackBerry Z10 drives home the need to use gestures to interact with this new OS, because there's a complete lack of buttons on the face — only the volume controls and a power / lock toggle on top remain. Even the touch-heavy 9850 Torch made room for a suite of discrete inputs, but not here. So, it'll be gestures, then, which means there's a bit of a learning curve.

Thankfully, it's a slight one.

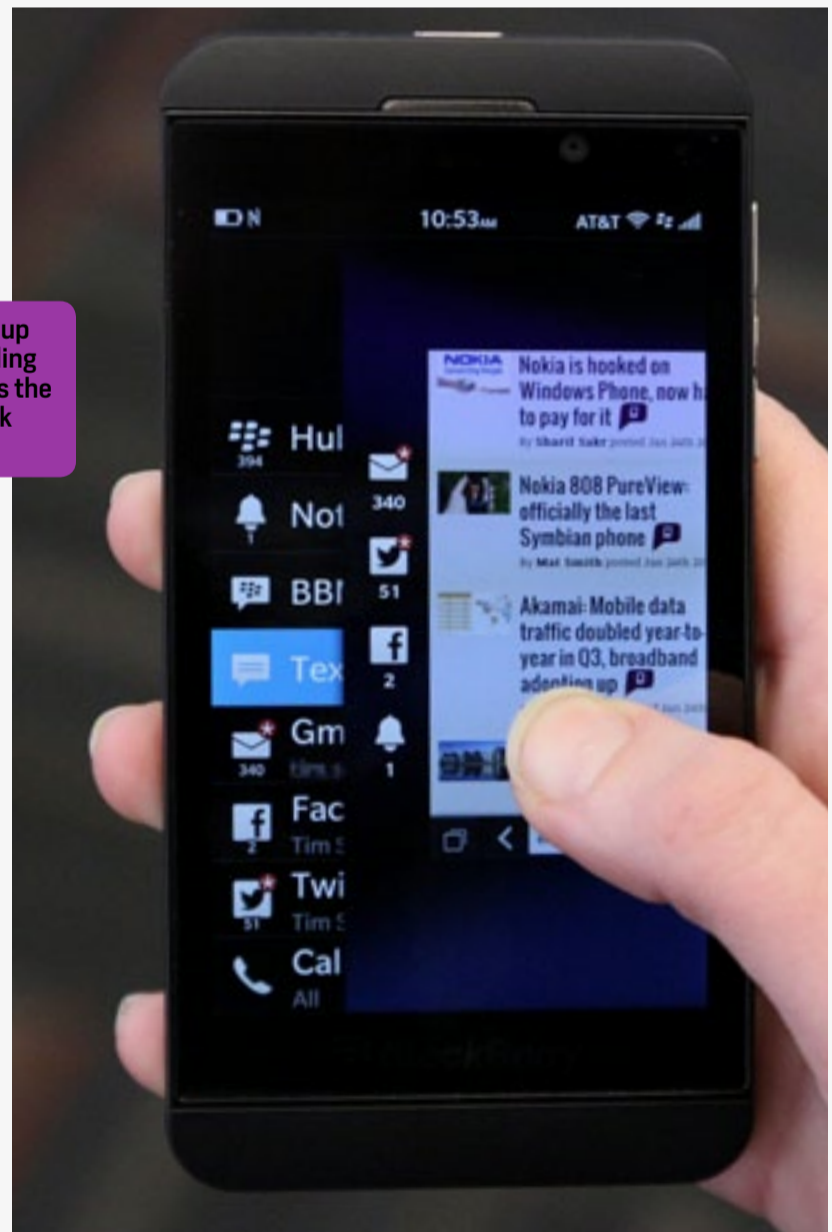
The most important gesture is swiping up from the bottom bezel, which always brings you back to a tiled

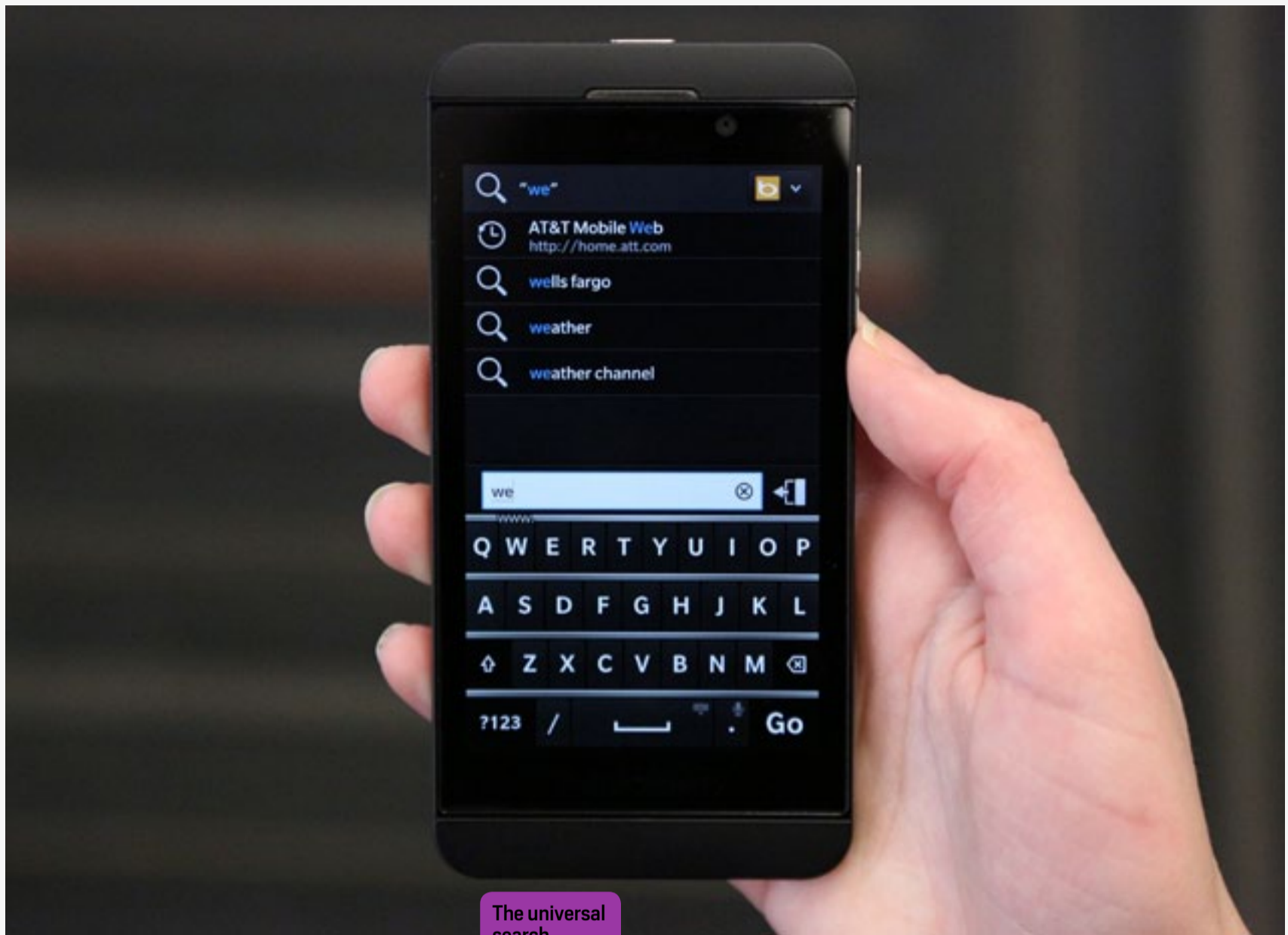
So, it'll be gestures, then, which means there's a bit of a learning curve. Thankfully, it's a slight one.

view of all the running apps. This will be the gesture most familiar to PlayBook users, and is one of the few that survived. (Swiping from the left or right bezels to switch apps, for example, isn't possible here.) Up to eight apps can be kept running in the background on this screen and bringing one back to life just requires a tap. Or, to properly kill a running app, hit the X in the lower right, an action that feels a bit ornery compared to the fun of flinging an app that you no longer needed off the top of the PlayBook's display.

From here you can swipe your way left or right. To the right lies a grid of

Swiping up and holding accesses the new Peek feature.





The universal search queries your entire phone for answers.

icons, arranged on the Z10 in a 4 x 4 matrix of rectangular tiles, each holding an app icon and a name. Repositioning is performed by tapping and dragging, while dropping one on another creates a folder. Folders are represented by a smaller grid of icons within a single app icon space, with no other identifying characteristic, which makes them a bit hard to pick out amidst the sea of apps.

App icon and folder pages extend off to the right as more apps are installed and there's no attempt at categorizing them, again unlike the PlayBook, which had pages for "Favorites" and "Media"

apps. Widgets and other desktop-like controls are not supported here. Just icons. But, a bit of room was carved out to create a static area holding three special controls: a phone, a search glass and a camera.

Tap the phone and the dialer interface shows up. This is split into three sections, with the leftmost giving you a look at your previous incoming and outgoing calls. In the middle is a long list of contacts (sucked in from BBM, Facebook, Twitter and Google Contacts, among others) that is searchable and, in the right tab is a simple dial pad in case you're one of the lucky few who



can actually remember a phone number.

The search icon takes you into a universal search that, with one form, enables the querying of apps, contacts, messages, calendar appointments and even web history. The results, then, tend to be a bit long, but thankfully you can filter them by category. If that weren't enough, third-party apps can also hook into the search interface, represented at the bottom of the search results. Tap an app icon and your search text is handed off to the app in question.

Finally, the camera icon predictably brings up the photography interface, which we'll explore in more detail later.

Again, swiping up from the bottom bezel is the gesture that takes you to this interface, but if you extend that gesture you begin what BlackBerry calls the "Peek." Swiping up and holding causes a row of icons to arrive from the left, representing unread emails, calendar reminders and the like. A red asterisk by any of these means you have something new to look at. To see what that is, just continue that gesture off to the right, which brings you to the BlackBerry Hub, a section of the OS best covered in its own section.

BLACKBERRY HUB

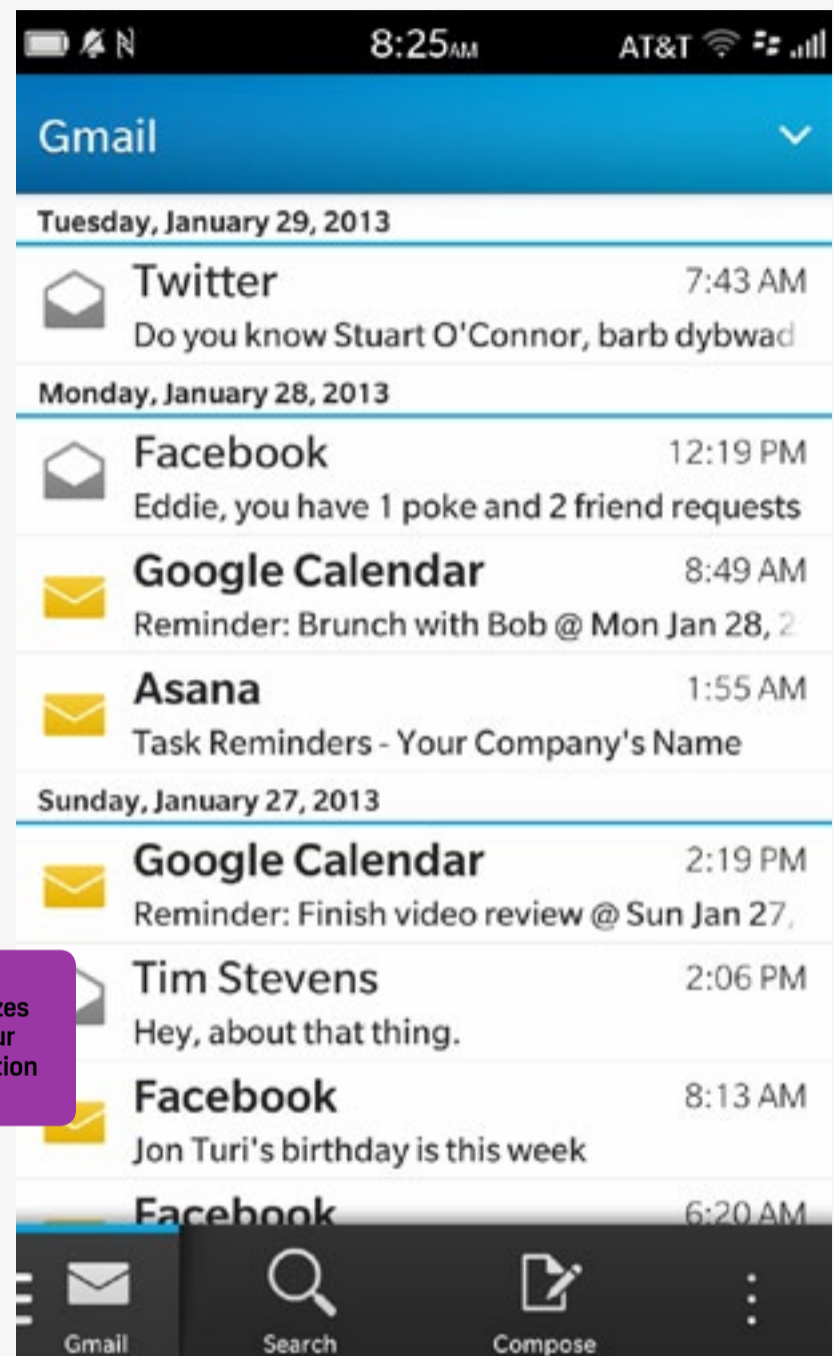
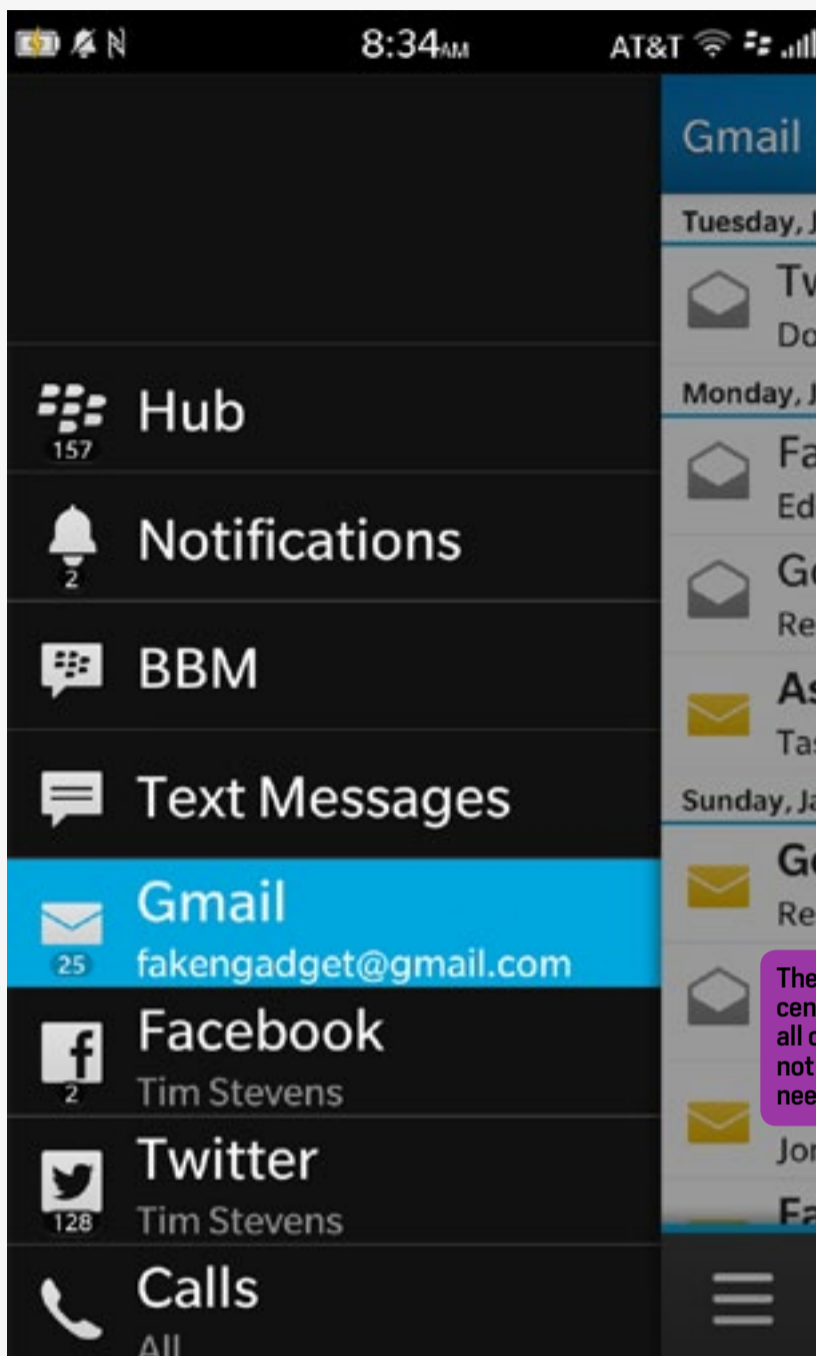
The name "Hub" is apt. This is the place that BlackBerry thinks will be so vital to your BlackBerry 10 experience that it's made available from anywhere, in any app, with just a single gesture. Swipe up and to the right and you're immediately

This is the place that BlackBerry thinks will be so vital to your BlackBerry 10 experience that it's made available from anywhere, in any app, with just a single gesture.

hit in the face with an aggregated list of emails, Twitter replies and DMs. Also, text messages, BBMs, Facebook messages, voicemails and missed calls. Also, system updates and, yes, even LinkedIn messages will be listed here. It can be a little overwhelming for sure — especially if you have multiples of each type of account to manage.

In theory this could make it a great way to keep up with all your connected options, but we found it a bit cumbersome to use when quickly managing masses of messages. For example, if you want to select a bunch of emails and file them all away, it's two taps just to enable multiple-select mode. If you want to simply delete a single email, it's three taps: one tap to open it, a second to bring up a menu and then, finally, a third on the "delete" button. Or, you can perform a long tap and wait for a context menu, which takes a few seconds to pop up.





By comparison, in the latest Gmail app you can delete an email right from the list with just a quick, single swipe. Overall, as a communication tool, BlackBerry Hub is powerful if you get relatively few messages scattered across multiple platforms, but if you spend a good portion of your day fending off a mountain of email, it can begin to feel unwieldy.

But, when it comes to jumping into calendar invites, that's made very easy. Just scroll down in Hub and those appear up top, ready for your tapping. And, as ever, if those meetings take place on a

conference bridge, just tap the number to dial in. This sort of navigation has always been a trademark of BlackBerry, and it's great to see it live on here.

But, if that mega-list of all your messaging gets overwhelming, you can filter it by an individual account, perhaps showing only Twitter messages and replies for your work account or only your BBMs. This is done by grabbing the lower-left icon, which has three notches drawn on the side, and dragging it right to expose all the accounts you've added to the phone. This



is a gesture and control common on many of the stock apps. You then tap the content that you want or, for more control, you can dive into the settings and individually pop them on or off.

From here you can compose messages in any of these aggregated accounts, including sending Twitter direct messages, BBMs, text messages and, yes, emails. To do that, you'll need something to type on.

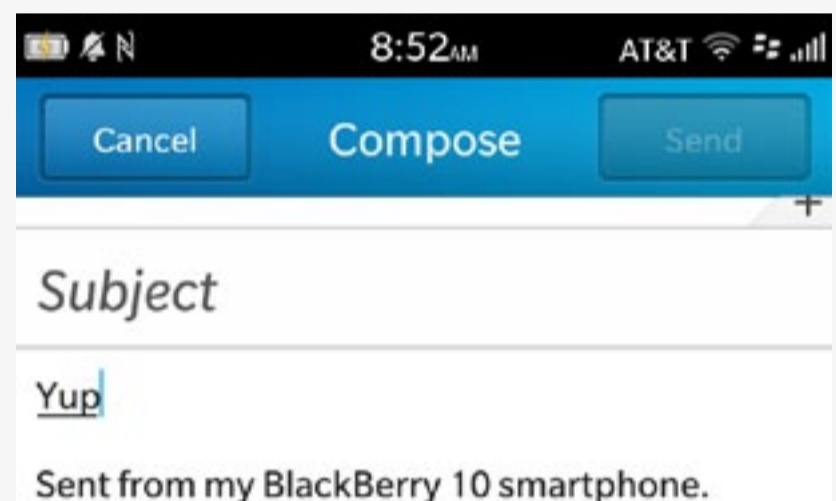
KEYBOARD

Much has been made of the relatively pain-free method of text entry on BlackBerry's traditional, QWERTY keyboard-having devices — and much has been said of the agony of entering text on any of BlackBerry's previous keyboard-free devices. Each one, we were told, would deliver a typing experience as good as a physical keyboard without the compromise in screen size and each one failed to deliver. Until now.

The virtual keyboard in Black-

Berry 10 is good. Really good. It's the best stock keyboard of any mobile OS at the moment — a good thing, because there's no way to replace it. It starts with a comfortable layout, which includes rows of generously sized keys separated by gray bars meant to evoke the chrome ones found on many a BlackBerry QWERTY handset in the past. This gives even meaty thumbs plenty of space for hunting and pecking, but that's only the beginning.

It's a four-row layout to begin, with no dedicated buttons for numbers or



BB10's word suggestions aim to assist typing with one finger.

The virtual keyboard in BlackBerry 10 is good. Really good. It's the best stock keyboard of any mobile OS at the moment.



characters other than letters, comma, period and, of course, a space. But, to get to numbers and other special characters you just swipe downward, which kindly cycles through two pages of special characters. A swipe from right to left, meanwhile, deletes whatever word was just entered, à la SwiftKey.

Finally, the most talked-about point here is the predictive nature of the thing. The keyboard snoops through your email and social history to get an idea of what phrases you commonly type and files those away. As you type, it's helpfully suggesting what you might want to type next, and it does so in an interesting way: presenting whole words hovering above keys. To type that word, you simply swipe up from the key and the keyboard enters it for you — plus a space.

For example, if you want to type “Good morning,” you'd start by hitting the “G” key. And, immediately, the BB10 keyboard superimposes the word “Good” above the “O” key. Swipe up on that and you can immediately move on to the next word, “morning,” which is now conveniently floating above the “M” key. Swipe up and you're done with just three presses of the screen.

Mind you, it doesn't always work this way, and in practice it can actually be a bit distracting and befuddling at times. In SwiftKey, for example, the predicted next word is always in the same place and, to select it, you hit the space bar. You very quickly get used to

looking in that spot, which means you don't need to look at the keyboard itself. In BB10, the predicted words are scattered all over the letters, forcing you to follow your thumbs as you type. If you've learned to touch-type on your smartphones, this can take a bit of adjustment.

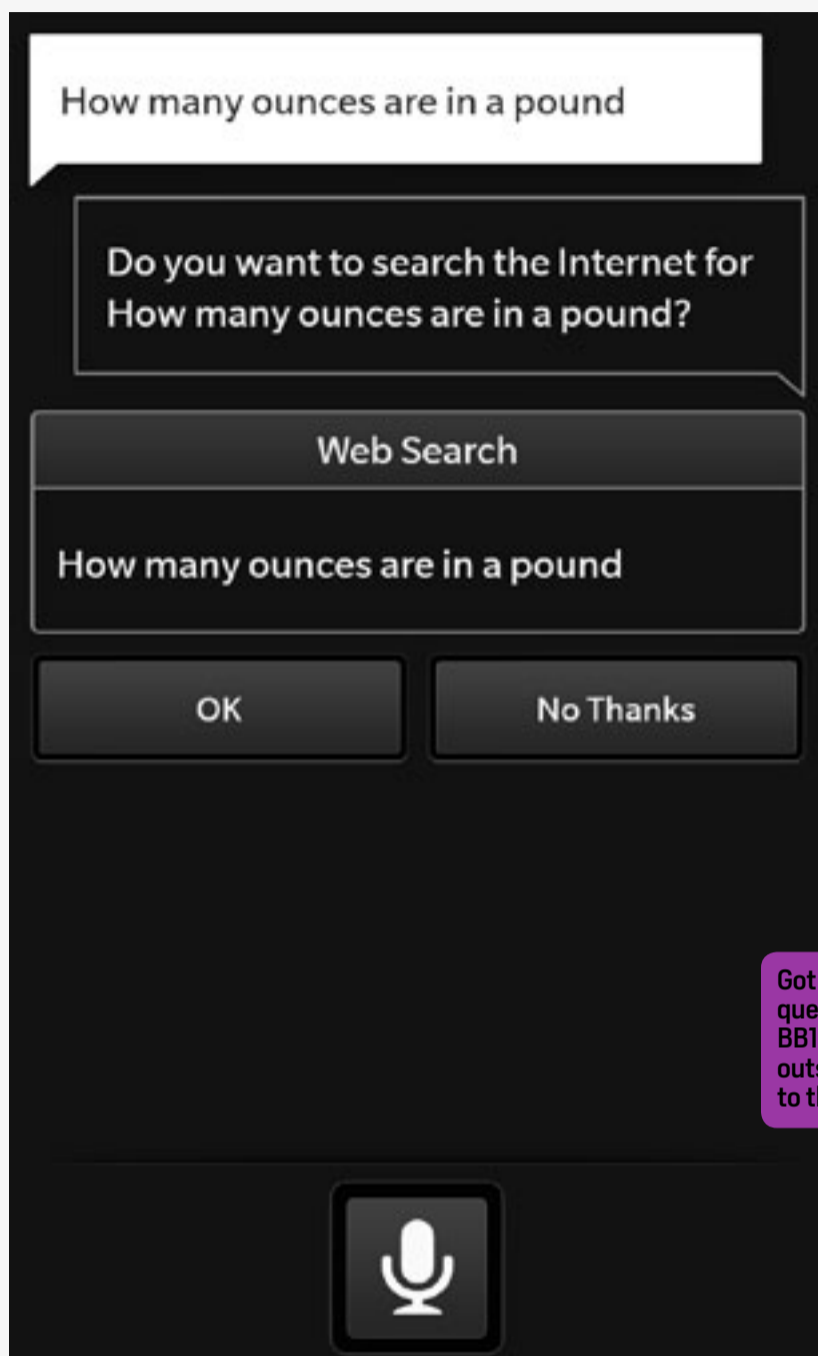
But is it truly better than a physical keyboard? We still hold the Bold 9900 at the pinnacle of smartphone typing experiences and, from a tactility sense, a touch experience isn't going to win. But, from a typing speed perspective, we have to give the nod to the BlackBerry 10 keyboard. We were able to blurt out emails and texts in record time.

VOICE RECOGNITION

If typing isn't your thing, BlackBerry 10 offers full voice recognition — handled via network, as on most mobile devices, meaning you'll need to stay actively connected if you want to take this for a spin. There's a dictation feature, accessed by holding down the period key. We found the voice recognition to be quite impressive, nailing easy phrases like “The quick brown fox jumps over the lazy dog,” and even perfectly parsing more complex ones, like “I live in Schenectady, New York and I'm looking for a Mexican restaurant.”

Then there's also the Voice Control feature, which allows you to give your phone some simple commands — much like Siri, it must be said. Hold down the play / pause button on the phone





(which is nestled between the volume up and down buttons) and a feminine voice asks you what you'd like to do. From here you can say things like "call Amanda" or "send a text message" or even "BBM Alex: Hey I just saved you 10 cents by not sending a text message."

We found phrases like "note to self" to set a reminder or "schedule a meeting" most powerful, but couldn't help but wish there were more available commands. When saying, "call my wife," the phone reacted by trying to find a contact named "wife," rather

than asking which of your existing contacts is your wife. Any attempt to get directions or navigation to a location or contact was rebuffed, and the service is unfortunately unable to deliver answers to simple questions, like: "How many ounces are in a pound?" It simply hands all those off to Bing.

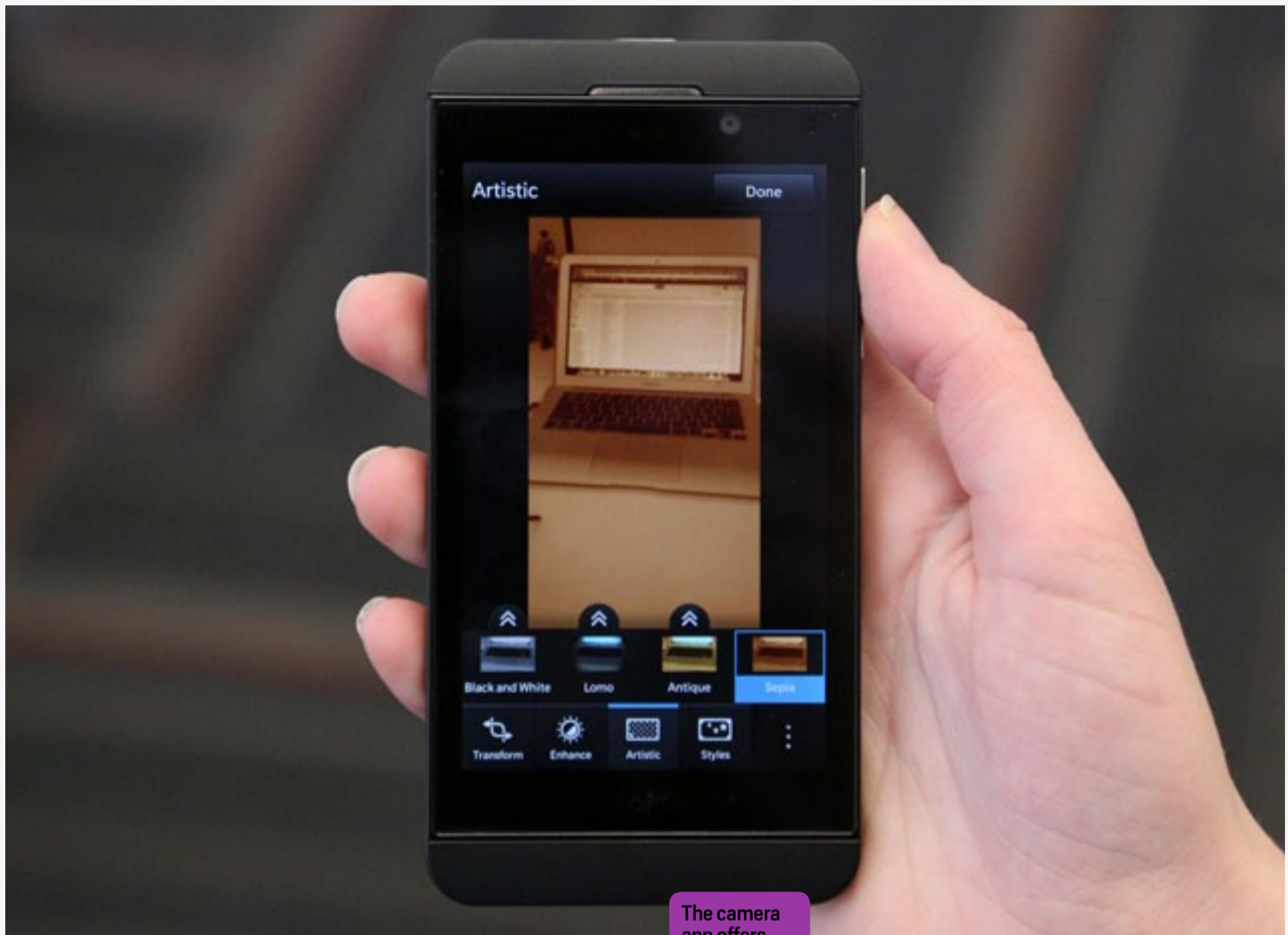
CAMERA

The camera has a dedicated icon on the bottom of the main interface, though you can also bring it up from the lock screen by performing a long press on a camera icon there, too. The interface is simple, with a focus reticle in the center that changes to green and contracts slightly when focus is achieved. The typical ellipsis in the lower-right corner brings up a quick menu that lets you switch between front and rear cameras, toggle shooting modes, select from one of four pre-defined scenes (like Action or Whiteboard), enable / disable the flash and, finally, select between 16:9 and 4:3 images.

When it comes to the business of taking photos, there's no discrete shutter button here, either physical or virtual. You just tap anywhere on the screen to take the picture. To select a different focus point other than dead-center you have to manually drag the reticle around before snapping the picture, something that we found cumbersome. We'd much prefer tap-to-focus with an on-screen shutter release.

BlackBerry has also bundled in a fea-





The camera app offers Instagram-esque color filters.

ture called Time Shift that, when taking a shot of a group of people, actually takes a burst of photos and then lets you selectively choose the best frame for each individual in the photo. This works well when it identifies all the faces, but in our trials it had a difficult time identifying bearded faces, which are quite common this time of year — especially among the Engadget staff.

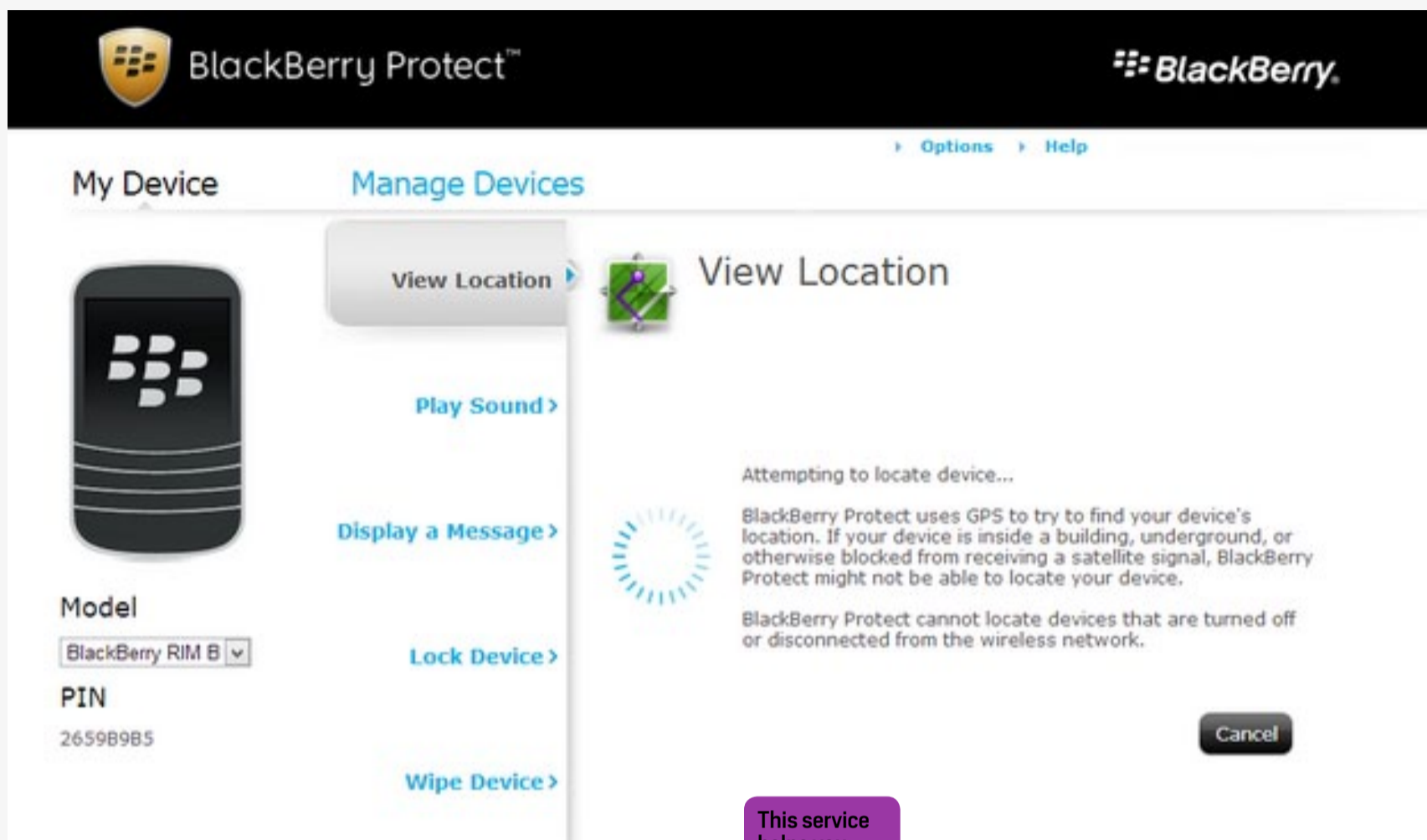
Once images are taken, you can review them and, should you like, open them up in a reasonably comprehensive editor to crop, rotate, color adjust — or get more funky with a series of Instagram-like filters. No, there's no official Instagram

app here, but you can put a predefined sepia hue on anything you like. What better way to add a little mystique to that blurry shot you took of the whiteboard before the mortal remains of your last brainstorming session were swept aside?

BLACKBERRY PROTECT

BlackBerry Protect returns in BB10, BlackBerry giving you an integrated way to find your handset should you and it part company. Enable the service on your device and you're enabling the means for it to phone home when lost. That's done via a BlackBerry-hosted





website, which offers the ability to view your phone's current location, make it play a sound or make it display a message. You can also lock it remotely and, if things should go completely pear-shaped, remotely wipe it with the click of a button.

All this is accessed via your BlackBerry ID, so we'll go ahead and remind you to make sure you chose a secure password for that service. Once logged in, you'll need to create a separate password via the website, and then you can start making the phone blurt out horrible sounds, so that you can find it in the sofa cushion. Frustratingly, there's no way to stop those annoying sounds once they start — they'll play for 60 seconds no matter what.

In our testing, these control signals

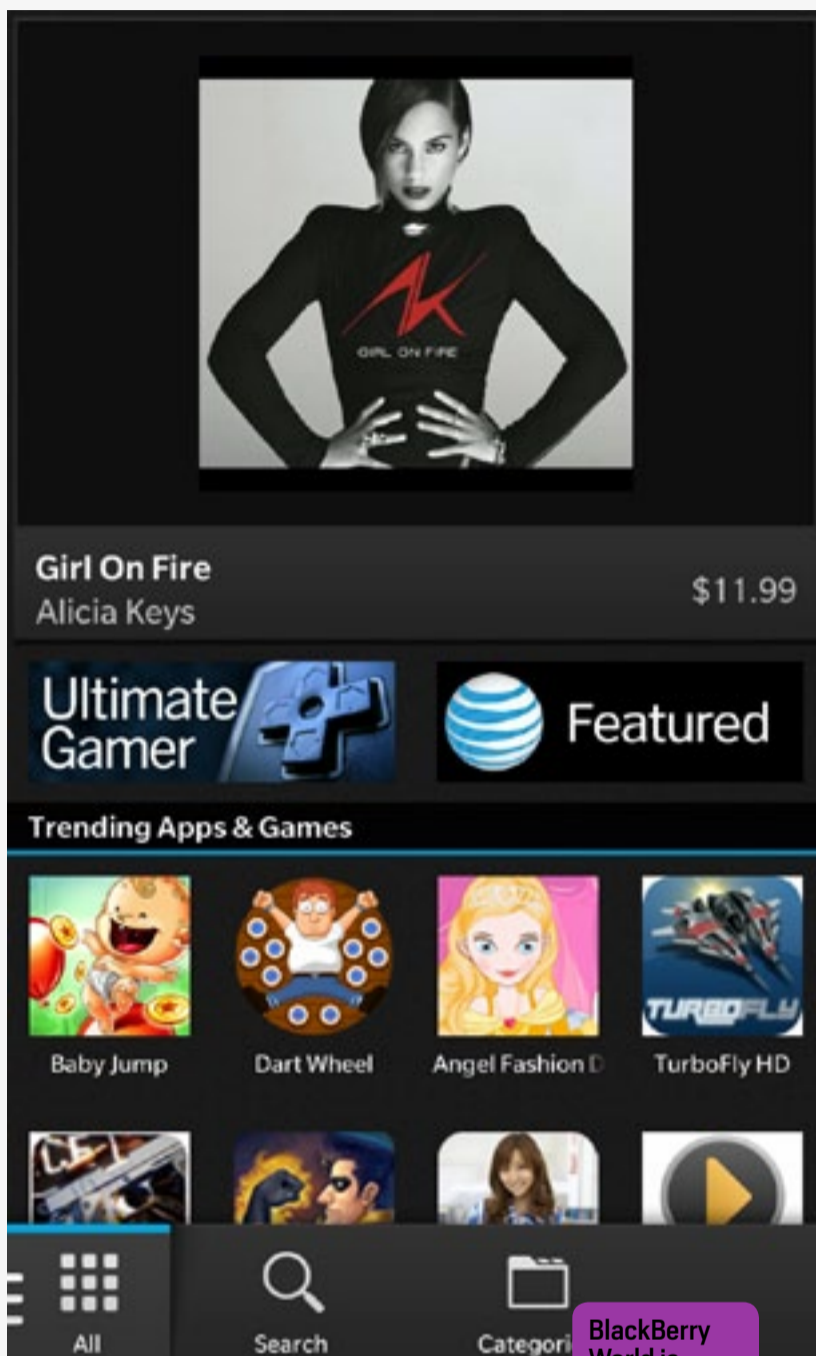
This service helps you find, or lock, your handset when lost.

took about five minutes to actually get to our Z10, only happening after the website had indicated a failure to communicate before putting on its mirrored glasses and walking away. But, those commands were indeed delivered.

BLACKBERRY WORLD

BlackBerry World is the all-conquering portal for spending money on BlackBerry 10. Here you can get apps, music and movies — the vast majority of which are all available at a premium. Yes, there are plenty of free apps, but you'll find a disappointingly low ratio of free to paid distractions in here compared to Google's Play Store and even Apple's App Store. And, being a new OS, there's a general shortage of apps overall.





There are a lot of heavy-hitters, like *Dropbox*, *Angry Birds Star Wars*, *Box*, *Four-square* and, uh, *Hockey Night in Canada*. But, there are also a lot of missing players, like *Netflix* and *Hulu*, media apps that many smartphone users on other platforms use daily. (Kindle isn't there, but it's coming, says Amazon.) And, while many PlayBook apps are available for download here, those that we sampled almost universally looked terrible. Controls were often stuffed together to fit into the phone's display, stacking on top of each

Plenty of premium music is on offer, though we found pricing here to be consistently higher than elsewhere.

other and often making the apps unusable. In one app, a Pandora client called *Apollo*, the Terms of Service was formatted such that the "Accept" button was somewhere off the bottom of the screen.

That shortage of apps does not extend to the multimedia aspects of BlackBerry World, thankfully. Plenty of premium music is on offer, though we found pricing here to be often higher than elsewhere. *Unorthodox Jukebox* from Bruno Mars is \$11.99 here, or \$1.49 per track, versus just \$5.99 on the Amazon MP3 Store (where it's \$0.99 per track). Likewise, it's \$10.99 in iTunes (\$1.29 per track). Similarly, *Babel* from Mumford & Sons is \$12.99, compared to \$9.99 on Amazon and \$11.99 at iTunes.

Video content, thankfully, has more competitive pricing. *Taken 2* is \$4.99 to rent here (\$4.98 on Amazon, \$5.99 on iTunes) or \$16.99 to buy (\$12.99 on Amazon and \$14.99 on iTunes), while an episode of *Modern Family* is \$1.99 to buy here, which matches both Amazon and iTunes. But, it must be pointed out that this content can only be down-



loaded to up to five devices, an unfortunate and seemingly dated restriction in these halcyon days of cloud-based, download-when-ever-you-want media.

STOCK APPS

While a world of apps awaits in BlackBerry World, there are quite a few pre-installed, some more useful than others. Here are some highlights.

Browser: A new mobile platform will set off on a rocky start without a solid web browser, and thankfully the one built into BlackBerry 10 is quite good indeed, and we'll get what may be its hallmark out of the way early: it supports Flash. Yes, this is one mobile browser that's happy to serve up every annoying, flashing and bouncing banner ad it can find, plus the thousands of obnoxious restaurant websites that were sadly made into overcomplicated "experiences." That Flash is disabled by default says a lot.

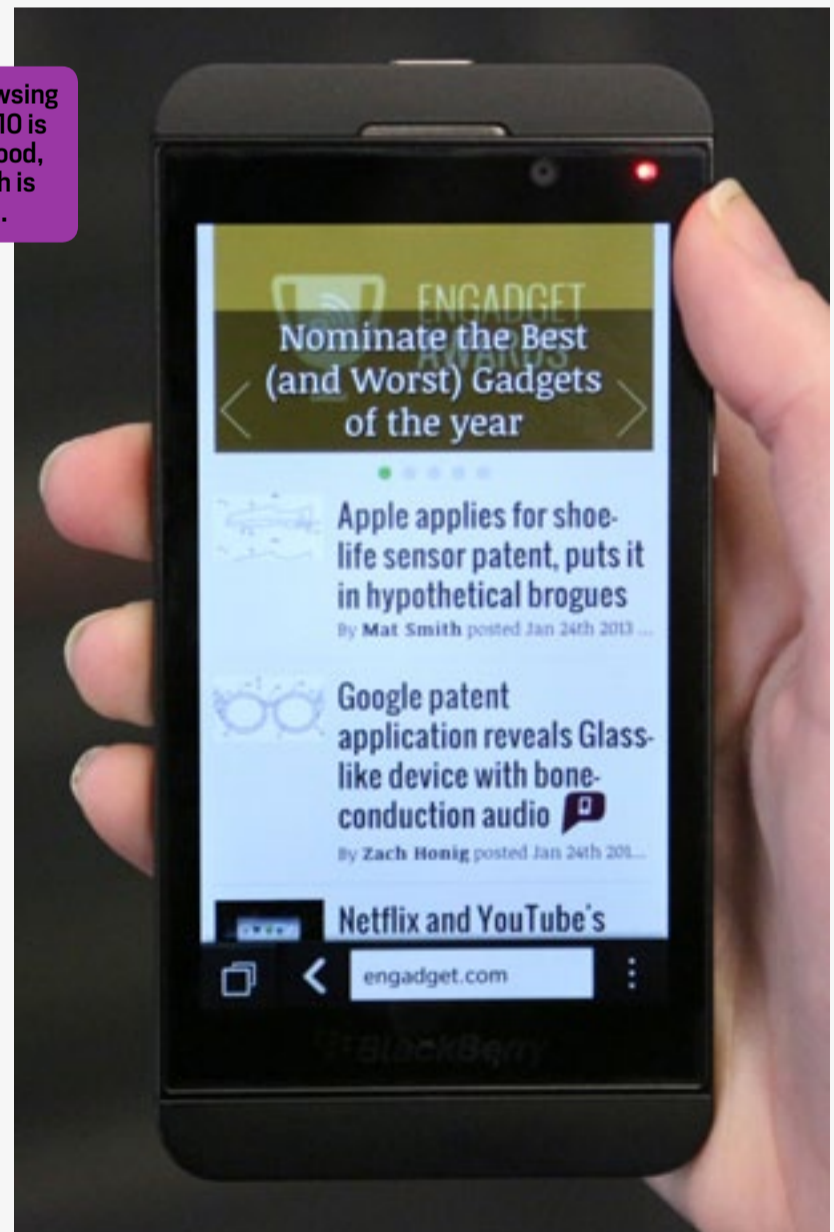
Also, it's worth noting that sites like Hulu and Netflix have predictably blocked access to their content, which drastically reduces the usefulness of

We'd rather have Flash with the option to disable it than not have it at all, and it is indeed here.

this once-great mobile technology. Still, we'd rather have Flash with the option to disable it than not have it at all, and it is indeed here.

Otherwise the browser is a fairly traditional experience, with a URL bar at the bottom doubling as a search field for Bing. A button to the left of that gives quick access to bookmarks and history, while the vertical ellipsis on the right pops up a context menu offering buttons for things like accessing settings and bookmarking the current page. It also allows access to the Reader mode, which strips out all the pictures and ads and gives you a single, lean look

The browsing on the Z10 is pretty good, and flash is optional.



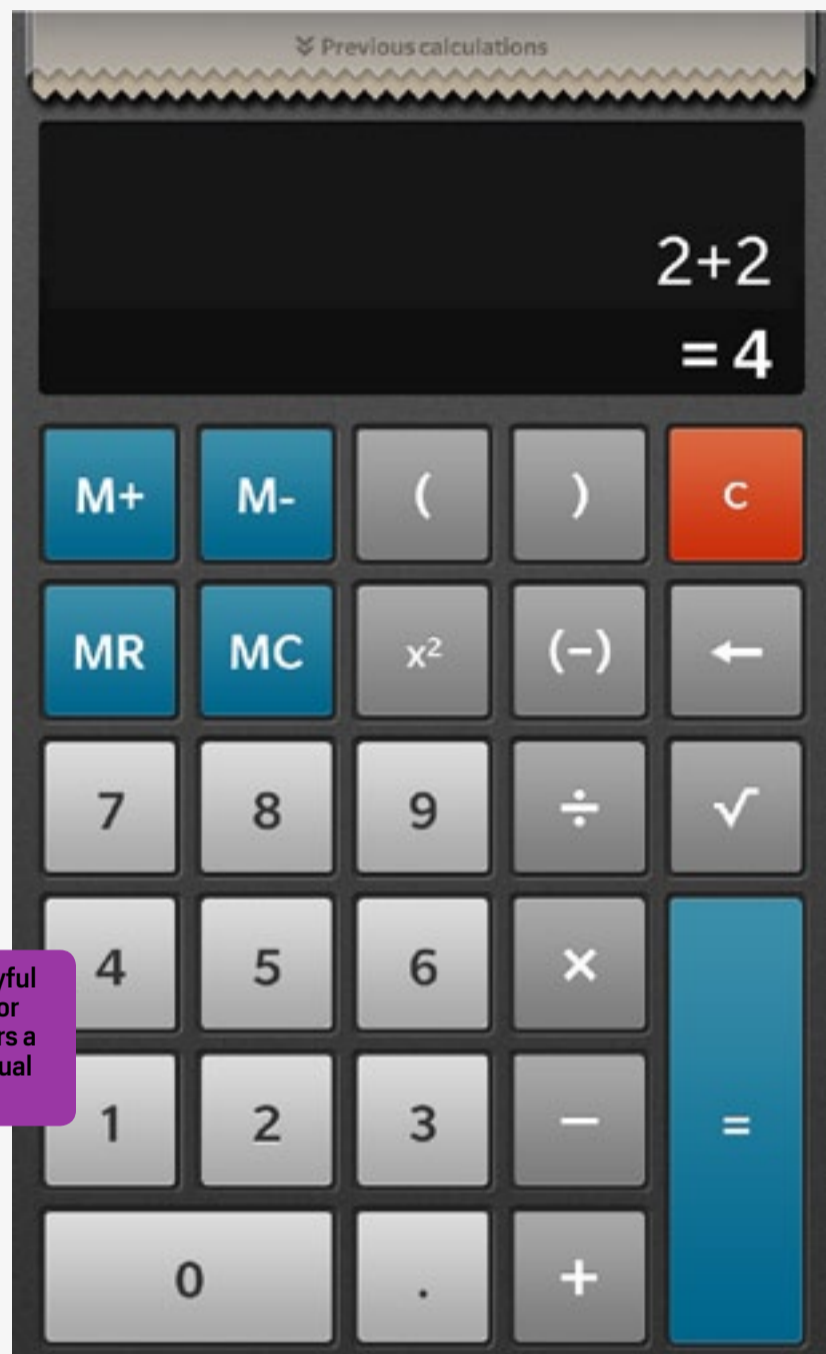
at the text on the page. Unfortunately, there's no way to save that view for later offline reading.

BBM: BBM lives on, and gets the very useful (and, these days, necessary) addition of video chat. That adds on to the voice chat feature that was included with BlackBerry 7. To start a voice or video chat, just go to the messaging interface with that person and tap the icon in the upper-right corner. Video chats are only possible with people also using BB10, but you can do a voice chat with folks on older versions. It's unclear at this point which (if any) carriers will allow this on a cellular connection.

Also new is a screen-sharing function, which could make mobile enterprise support a far easier thing. While in a video chat, users can opt to share what's currently on their own display, making collaboration or troubleshooting much easier — even when you're just stuck trying to fill out a digital crossword puzzle.

And, as we mentioned above, BBM is integrated into the BlackBerry Hub, so you can send and receive messages directly in there, too.

Calculator: The funky calculator on the PlayBook, an obvious product of The Astonishing Tribe, was one of our favorite pre-loaded apps on that tablet. The calc app in BlackBerry 10 is much the same, offering the same playful color scheme



This playful calculator app offers a retro visual style.

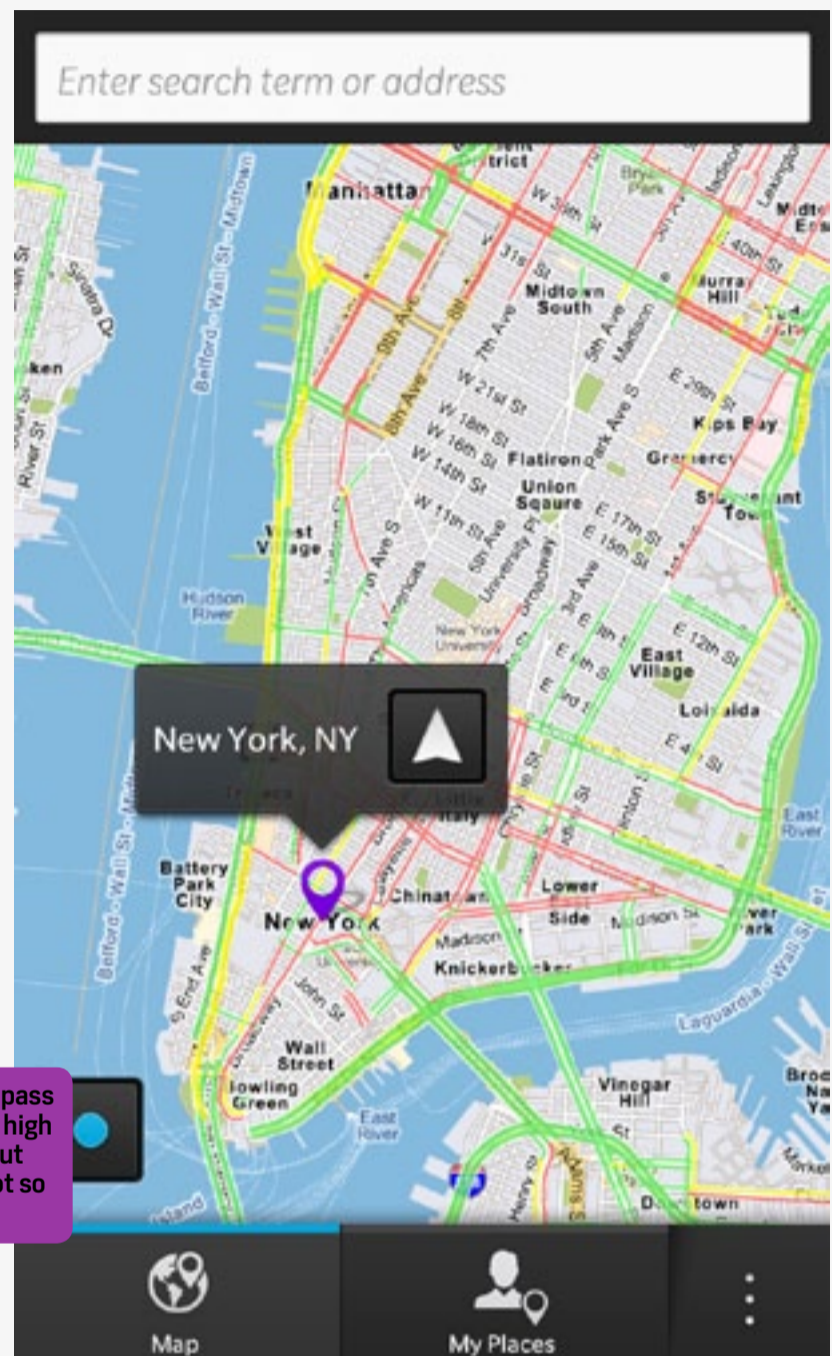
and quirky skeuomorphism. Punch away and your figures are tallied on a virtual paper tape, which can be virtually torn off and thrown into the virtual trash bin. There's also an integrated unit converter and a handy tip calculator, if you really want to make sure your cheap friends are doing their part.

Compass: Compass is another simple but visually striking (and fun-to-use) app. This is just a floating compass that always points north (thanks to the integrated magnetometer), but it has a very





The Compass app gets high marks, but Maps, not so much.

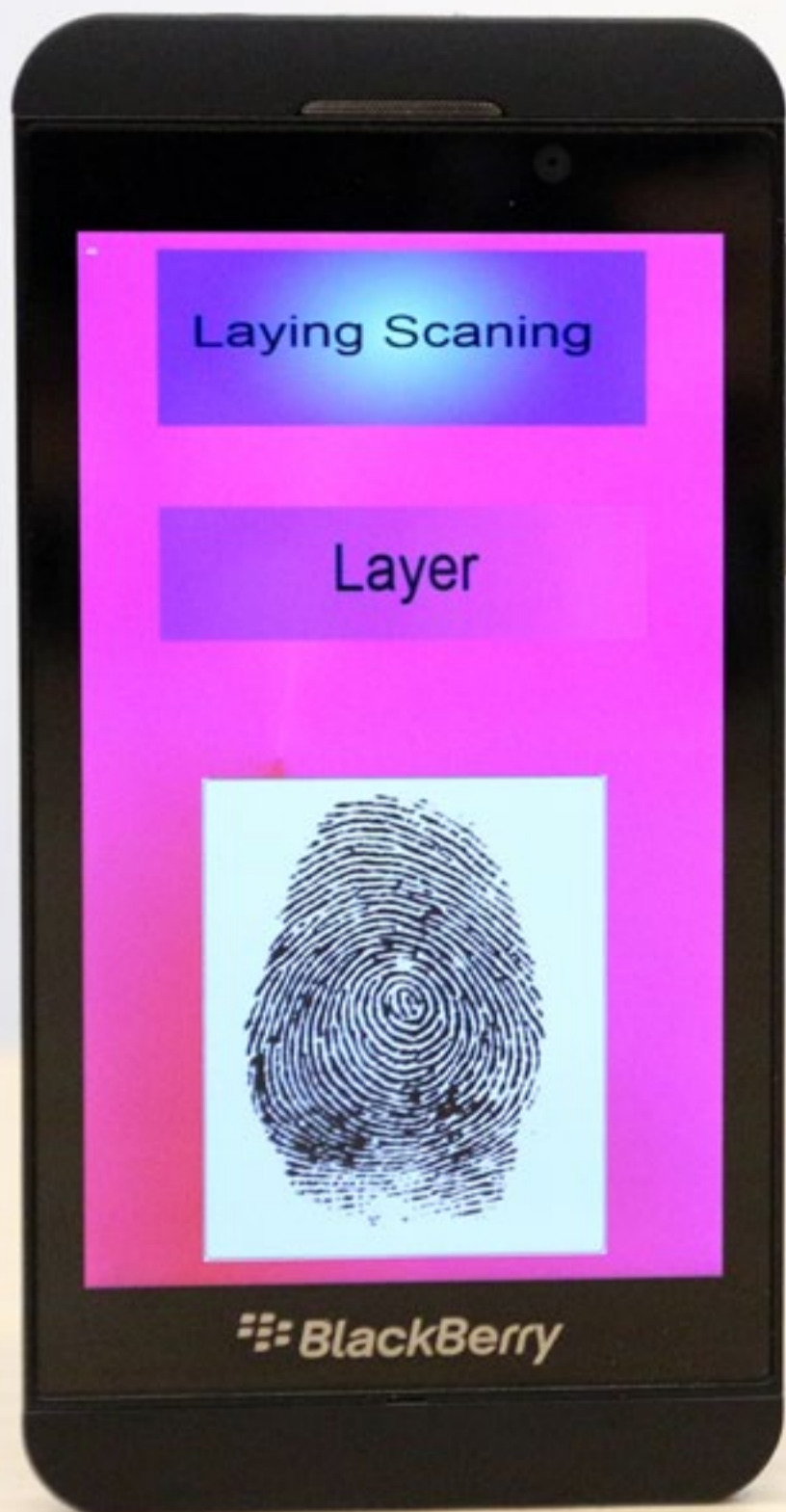


clean, simple look that makes it a pleasant thing to look at and, as the compass disk is floating freely, it's interesting to turn the phone around and see that disk from the sides and even the bottom. Granted, not the most useful app here, but you might be more inclined to use this to find your way about than the default maps application.

Maps: In an era when mapping and navigation are increasingly important pieces of a mobile platform's pie, the Maps app in BlackBerry 10 is functional

The app only works when you're online, not even caching routes once you get going, so you'd best restrict your expeditions to areas with good signal coverage.





A sampling of some of the more unique apps available.

at best. The features on offer here pale in comparison to even Apple's oft-de-rided option in iOS 6. It's instead best compared to the bare-bones carrier-installed options like VZ Navigator — especially since they were both developed by the same company.

You can search for POIs and look at

a map to see where a given contact is located and then get bare-bones navigation to that destination. By "barebones" we mean no re-routing for traffic, no satellite overview, no POI displays, no gestures to look around the map while navigating and, should you ever lose your connection, a com-



plete loss of functionality. The app only works when you're online, not even caching routes once you get going, so you'd best restrict your expeditions to areas with good signal coverage.

WRAP-UP

It's challenging to put down a final verdict on an operating system that's just emerging after such a long period of incubation. Like Microsoft with Windows Phone 7 back in the day, BlackBerry is basically starting from scratch here, and that's a difficult thing to do when the two biggest competing platforms, iOS and Android, each have millions of users deeply entrenched within their respective ecosystems, users happily sated by the hundreds of thousands of apps from all the major players.

As a company, BlackBerry has been doing a ton of legwork to ensure that

app partners are lined up and ready to deploy their wares here, and indeed there's a lot of potential for BlackBerry, but at this point it's hard to imagine that potential outshining the established goods offered by the competition.

As a replacement for older versions of BlackBerry OS, BB10 is a huge step out of the dark ages of mobile OS design. It's something that finally feels intended for a modern, full-touch device, yet still offers the core productivity focus we think BB10-holders will like. Does it have mainstream appeal? Yes, it does, but we're not sure a great stock keyboard and some trick gestures are enough to unseat the current kings of mobile devices. **D**

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

BOTTOMLINE

BLACKBERRY 10 OS

\$N/A



PROS

- Powerful, intuitive gestures
- BlackBerry Hub aggregates everything
- Great stock keyboard

CONS

- Maps application feels unfinished
- Hub can quickly get overwhelming
- Limited selection of quality apps

BOTTOMLINE

BlackBerry 10 is fast, intuitive and far more modern than the dated OS it replaces. But, its tardiness and limited selection of quality apps make it a bit of a hard sell for those already on iOS, Android or Windows Phone.



BLACKBERRY Z10



Will the **Z10** help BlackBerry reclaim its stake in today's smartphone market?

By **Tim Stevens**

One cannot overstate the importance of this phone. This, the BlackBerry Z10, is the device upon which the fate of BlackBerry (formerly Research In Motion) hangs. That's not to say that the company will disappear if the Z10 — and the BlackBerry 10 OS that it contains — is not a mass-market success. But if this phone does



not do its job of extending the reach of the 'Berry OS beyond those die-hard loyalists who have clung on to their Bolds and Torches and Storms, it's safe to say that RIM is in for some very hard times.

The company hasn't exactly bet the proverbial farm on this BB10 release, but with massive financial losses tempered only by job cuts, plus an absolutely tectonic shift among the executive leadership and corporate culture architected by CEO and President Thorsten Heins, the phrase "make or break" feels pretty apt. So, then, is this the phone that's good enough to woo buyers away from the Galaxy S III or the iPhone 5 or any of the other delicious devices on the other platforms? The short answer is that no, it probably isn't — but of course it's a lot more complicated than that.

HARDWARE

As the PlayBook was an understated, professional-looking device, so too is the Z10 stylistically muted. Its dark, monochrome exterior is broken up only by a mirrored BlackBerry logo beneath the display, the chromed BlackBerry emblem on the back and a few matte-aluminum buttons around the rim. (Our review device,



The Z10 eschews QWERTY keys for a touchscreen.

which included an AT&T SIM, is carrier branding-free, but we're told that will not be the case on retail phones shipping to the US.) These details fade into an overall appearance devoid of chromatic highlights. It's an appearance that from the front, it must be said, looks an awful lot like the iPhone 5.

That's not to say there was any creative inspiration going on here — surely the Z10 was on the drawing board long before the iPhone 5 was revealed — but the visual similarities can't be ignored.

As the PlayBook was an understated, professional-looking device, so too is the Z10 stylistically muted.



Still, where Apple's device presents an all-glass front, creating a clean, monolithic appearance, the front of the Z10 is broken up by horizontal bands that span the top and bottom.

These painted pieces extend across and meet the sides to form the rim of the chassis, components that give this phone a feeling of rigidity, much like the Play-Book before it. But, unlike that tablet, here the soft-touch exterior doesn't carry around to the back of the device. The Z10 features a removable backplate, made of plastic and given a thick, rubberized, dimpled coating. It does make for a device that's easy to hold in one hand securely, with no worries about it slipping and falling, but it lacks the premium look and feel of the tapered carbon-fiber back on the 9900, and even the faux leather on the 9700. This is not a phone that says "prestige" in any way.

You might be inclined to think this is a much bigger device than the 9900, and indeed with a 4.2-inch, 1,280 x 768 display it's certainly far from petite. But, at 66mm (2.6 inches) wide, it's actually a fraction of a millimeter narrower than the most recent Bold. It's only slightly taller, too, at 130mm (5.13 inches) vs. 115mm (4.5 inches) but, thankfully, it's far thinner: 9.3mm (0.37 inch) vs. the 11mm (0.43 inch) of its QWERTY-bearing predecessor.

Inset above the pane of (non-Gorilla) glass is a wide, gunmetal speaker grille that covers the earpiece. Just below that, protected beneath the glass, are the

Discrete buttons allow you to raise or lower volume, while a third button in the middle acts as a play / pause button and also toggles BlackBerry's new Siri-like Voice Control.

front-facing, 2-megapixel camera and a notification LED. That sensor can record 720p video, but if you want full-quality 1080p stuff you'll need to rely on the 8-megapixel rear-facing unit, situated in the top-left corner of the back and paired with a small LED flash.

Buttons are few, the one of primary import being the sleep / wake toggle, found in the traditional BlackBerry position of top-center. On the right is another BlackBerry tradition: the three-way volume rocker. Discrete buttons allow you to raise or lower volume, while a third button in the middle acts as a play / pause button and also toggles RIM's new Siri-like Voice Control. And ... that's it. The Menu button is gone and there's no physical camera button this time around, either, but the volume buttons can be used as such if you don't feel like tapping on the screen.

The two primary ports for the device are situated on the left side. Here



you'll find micro-USB and micro-HDMI connections nestled in close proximity toward the center. Up top is the only other easily accessible connector: the 3.5mm headphone jack. Pry off the backplate (which bends and flexes like the cases on Samsung's latest smartphones, but comes off far more easily) and you'll find a microSD slot. Unfortunately the phone doesn't support cards larger than 32GB, but the cards are at least hot-swappable, and that helps to bolster the 16GB of internal storage. The micro-SIM card is found under here, too, but its position next to the 1,800mAh battery pack necessarily means you won't be swapping that out without shutting things down.

The NFC antenna is built into the backplate, while the rest of the communications are better integrated into the chassis itself.

RIM will offer four sepa-

The left side includes micro-USB and micro-HDMI ports.



rate SKUs of the Z10, effectively boiling down to one for each of the US LTE carriers (AT&T, Verizon and Sprint) plus an HSPA+ model. The version we tested offered quad-band LTE at 2, 4, 5, 17 (700/850/1700/1900MHz) plus penta-band HSPA+ I, II, IV, V, VI (800/850/1700/1900/2100MHz) and quad-band EDGE. A second LTE / CDMA model, presumably intended for Verizon, offers LTE band 13 (700MHz), dual-band CDMA (800/1900MHz), dual-band HSPA+ I, VIII (900/2100MHz) and quad-band EDGE. A third LTE model offers quad-band LTE at 3, 7, 8, 20 (800/900/1800/2600MHz), quad-band HSPA+ at I, V, VI, VIII (800/850/900/2100MHz) and quad-band EDGE. Finally, there's the penta-band HSPA+ model at I, II, V, VI, VIII (800/850/900/1900/2100MHz) with quad-band EDGE. Those are all paired with 802.11a/b/g/n and Bluetooth 4.0,

while the phone also offers an accelerometer, gyro, magnetometer and, of course, GPS.

Call quality was about average — recipients had no problem understanding us — but we were told we definitely sounded like we were calling on a cellphone. Transmitted volume was also a bit low,



meaning we had to speak up to get the same level of output as compared to a few other handsets we tried.

Volume levels also troubled us on the receiving side. The speakerphone built into the device has a disappointingly slight maximum output. BlackBerry handsets quite often get used for impromptu conference calls, plunked face-down in the middle of a conference room table, but with the Z10 you'll want to make sure you go to a quiet place before attempting this. Similarly, we often had a hard time hearing the voice in the navigation app, even with the volume all the way up.

DISPLAY

Again, it's a 4.2-inch display on offer here, a huge amount of space compared to the relatively cramped 9900. That, of course, comes thanks to the deletion of the QWERTY keyboard, trackpad and physical buttons. Other than the token volume controls on the right side, this is a full-touch device, and here the glass surface is recessed beneath a slightly protruding frame. This is in contrast to many other recent smartphones, like the Galaxy S III or Lumia 920, which project

the glass upward somewhat to give your thumbs a smooth transition off the edge to nothingness, a tactile experience we've come to prefer. We're told this is to protect the display and, since it isn't Gorilla Glass, perhaps it needs it.

That LCD here offers a healthy resolution of 1,280 x 768, just slightly beating 720p and offering a fine pixel density of 356 ppi. This means text is rendered incredibly clearly, making web surfing a pleasure and photo viewing quite comfortable as well. The panel is very capable in other regards, too. It's officially rated at 800 nits, which is quite high for a mobile panel, making it easily visible outdoors in direct sunlight. Contrast and color saturation are also quite good and viewing angles excel when you're looking at the phone on either the left or right sides. That said, tilting the

This 800-nit, 1,280 x 768 display is bright and colorful.



phone up or down introduces a slight yellowish hue to everything. It's hardly distracting, but it is noticeable.

CAMERA

On the back of the BlackBerry Z10 is an 8-megapixel camera, capable of taking 1080p stabilized video. We put it through its paces in a variety of situations and found it to be a decent shooter, but not a world-class one.

We struggled a bit with the interface. The camera is reasonably quick to focus and even quicker to capture images, not matching the rapid-fire shooting of the iPhone 5, but letting you capture roughly one shot per second. (If you need more, switch over to Burst mode, which takes two to three photos per second for as long as you hold your finger down.) As mentioned above, you can use the volume buttons if you're really craving something physical to press, but we found it more comfortable to just tap on the screen — though that didn't react as we'd expect.

We've become used to tapping on

We've become used to tapping on the portion of the image we'd like to be in focus, something that doesn't work in BlackBerry 10.

the portion of the image we'd like to be in focus, something that doesn't work in BlackBerry 10. You have to actually tap and drag the focusing reticle to where you want it before tapping again to take the shot, a process that can take just long enough for you to miss what you're trying to capture. And, should you need a second shot, you'll need to drag that reticle around once more.

Helping to ensure you won't need a second shot — at least when trying to take pictures of smiling faces — is the Time Shift feature. It's very similar to the Smart Group Shot feature Nokia threw in its Lumia line courtesy of Scaldato, capturing a blast of photos then letting you selectively cycle through individual faces so that everyone is looking their best — or their worst, if you're a terrible friend. When it works, it works amazingly well, but unfortunately it wasn't always successful in our testing. We often had to take three or four shots before it would detect everyone's faces. In particular it had a hard time picking up mugs of the hirsute variety, which posed a bit of a problem for this particular reviewer.

Standard stills taken when plenty of lighting is available are bright and clear, showing great contrast and color. However, focus was quite often off, resulting in a number of very soft photos. Manually dragging the reticle where we wanted it and waiting for the camera to refocus usually worked, but in times when we simply wanted the camera to focus





The Z10's volume controls and the 8MP shooter.

on what's in the center of frame, it didn't always do that — at least, not quickly enough to capture a good photo.

Lower-light stuff was, predictably, more of a mixed bag. The Z10 does a good job of automatically dialing up the ISO dramatically enough to ensure that you can see something, but photos even in reasonably lit rooms frequently came out murky and noisy. They were, at least, sharp, the camera still keeping a short enough exposure to prevent motion blur. The flash, positioned immediately below the lens, does result in a slight shadow cast above whatever

object you're capturing when you get in close, but it's bright and generally does a good job of illuminating close-up

Since this is a camera that we think will be used by many traveling professionals, we decided to see how it handles capturing images of receipts.



shots. Its range is short, but it's more effective than the token LED flashes we see on many other cameras.

And, since this is a camera that we think will be used by many traveling professionals, we decided to see how it handles capturing images of receipts — a common task for those filing business expenses on the road. On a well-lit desk, the camera focused on the slip from a distance of about six inches quickly and took a perfectly clear shot. Recreating that in a poorer lighting condition (something akin to a hotel room late at night) resulted in a far murkier, but still legible scan. Finally, we flipped on the flash, which sadly blasted the text into oblivion. So, stay away from the flash and this will do a reasonable job of keeping your accountant happy.

SOFTWARE

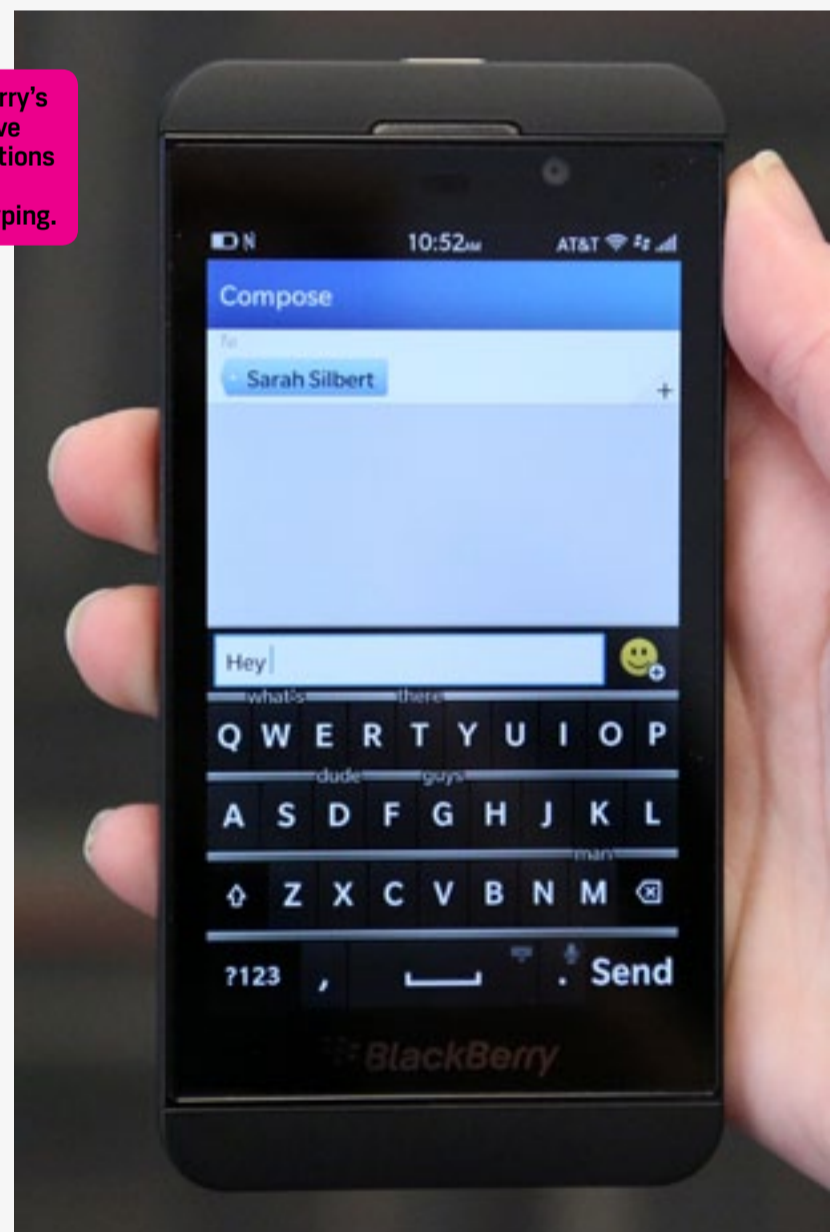
We'll defer to our formal BlackBerry 10 review also in this issue, because there's a mighty great amount of stuff to talk about and the Z10 review is long enough as it is. But, as a quick summary: the BB10 OS is a huge step forward over BB 7, feeling like a modern OS in most respects. It's heavily gesture-based, with a swipe from the bottom bezel bringing you to the main interface, where you can select between up to eight concurrently running apps for multi-tasking. All installed apps are listed in a grid, not unlike iOS, which you can drag and drop to re-arrange or

create folders.

The most important gesture, however, is swiping up and to the right. This exposes the BlackBerry Hub, which aggregates all your forms of connectivity into a single, overpowering list. Through here you can keep up on everything that's going on — or at least try to.

There are a number of apps installed by default. Some are good, like funky calculator and compass apps courtesy of The Astonishing Tribe, and some are bad, like the overly simplistic Maps app. The most important apps, however, are those that come from third parties, and BlackBerry has done a fair

BlackBerry's predictive word options for one-finger typing.



job of lining many of them up. Dropbox and *Angry Birds* make appearances, but as we write this review, the BlackBerry World store is overflowing with junk apps, many of which are being sold at premium prices.

Are there junk apps on other platforms? Undoubtedly, but here they not only seem to vastly outnumber the good apps, they're actually floating up to the top of the recommended and most popular apps lists. Quantity is beating quality over the head, and we're left doubting the quality of the curating process itself. That major entertainment apps like Netflix, Hulu, Pandora and Spotify will be missing at launch is disappointing.

PERFORMANCE AND BATTERY LIFE

The Z10 offers a 1.5GHz Qualcomm MSM8960 dual-core CPU paired with 2GB of RAM. We're starting with a new OS here, so most hardware-taxing benchmarks haven't been ported over just yet. In other words: we're left relying on a combination of web-based browser benchmarks (namely: SunSpider) and general impressions. And, when it comes to those overall impressions, they're generally good.

The whole OS is all about keeping you moving (or Keeping You Moving, if you care to use the trademarked version), and so it needs to be very quick to respond. That it is. Most apps launch promptly and, once launched, are snappy and responsive. Web pages load in

The Z10 takes more than a minute to boot up after the battery is removed and it sometimes took up to 30 seconds just to shut itself down.

short order and pinch-zooming and other common navigation tasks won't keep you waiting.

Still, overall web performance isn't up to snuff with other modern smartphones according to the SunSpider JavaScript benchmark. On average, the test completed in 1,775ms. That's nearly twice the time it took the iPhone 5 to complete (924ms) and more than twice as slow as the \$100 Samsung ATIV S we recently reviewed.

Battery life is merely average. On our standard video rundown test, where we set the display to a fixed brightness and loop a video endlessly, the Z10 managed eight hours and 11 minutes. That's an hour less than the Verizon LTE-flavored version of the Galaxy S III and three full hours short of the record put up by the iPhone 5. But, of course, unlike the iPhone, the 1,800mAh battery pack here is user replaceable — and it's small enough you might reasonably consider taking a second one with you.

But there's one thing that will stop you from wanting to ever pull the bat-





BlackBerry offers a removable 1,800mAh battery.

tery: the incredibly slow boot-up time. The Z10 takes more than a minute to boot up after the battery is removed and it sometimes took up to 30 seconds just to shut itself down.

ACCESSORIES

BlackBerry has a number of accessories planned, two of which stood out to us. First is a funky little Bluetooth speaker, intended for use in conference calls and the like. It's actually U-shaped, folding over upon itself, the idea being you could clip it on a seatbelt or even the strap on a messenger bag. It makes for a passable music playback experience, but for the

\$100 MSRP we'd save up a little more and go with a Jambox. Frankly, we'd have simply preferred a louder speaker in the Z10.

The other option that caught our eye is the Battery Charger Bundle. It's a tiny device, barely bigger than the Z10 battery pack, which can charge up a spare battery thanks to a micro-USB in. But, interestingly, it also has a micro-USB cable built-in, so if you insert a charged battery you can actually use this to recharge the Z10 — or anything else. So, it's either an external battery charger or an auxiliary battery charger. Or, you can just open it up and swap the battery into the Z10. At





Accessories include a speaker and a battery charger.

\$50, we'd say this is a good investment.

RIM will also be releasing a series of cases, including the \$30 Leather Pocket we received, which has magnets to automatically turn the display on and off as it goes in and out. Yes, BlackBerry will be releasing a proper holster, too, because everybody knows BlackBerries look best when slung from the hip, just like they wore 'em in the Old West.

WRAP-UP

The BlackBerry Z10 is genuinely a pretty nice phone. Performance, helped by the lightweight QNX-based OS, is more than acceptable. The form factor offers you

plenty of screen size in a device that may not feel luxurious, but does at least seem durable. And, bucking the trend, the battery is removable. Camera performance is adequate in most cases and overall there's really a lot to like.

But, tragically, there's really nothing to love. Nothing in the Z10 stands out as class-leading and, while the BB10 OS does have a lot of charm and brings all the best productivity-focused attributes of BlackBerry to bear in a much more modern package, the app selection is poor and the gestures here aren't so good that they make up for that major shortcoming. Will more





The Z10's leather pocket carrying case.

in the US), the Z10 and BB10 are a nice piece of kit. The BlackBerry faithful who've been waiting patiently for something more modern will flock to this (and its QWERTY-having cousin) in droves, but there simply isn't enough here to woo those consumers who have already made investments in Android or iOS. Too little?

and better apps come with time? Absolutely, but after waiting this long (and then making Americans wait another month yet) BlackBerry really needed to make a huge impact out of the gate. Unfortunately, it hasn't.

All is not lost: at \$199 (which BlackBerry says is the suggested on-contract price

Maybe. Too late? Sadly. **D**

Zach Honig and Edgar Alvarez contributed to this review.

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

BOTTOMLINE

BLACKBERRY Z10

\$199
(ON CONTRACT)



PRO

- Nice display
- Solid build quality
- Removable battery

CON

- Limited app selection
- Slow boot and shutdown
- Underpowered speaker

BOTTOMLINE

The BlackBerry Z10 is a better-than-good, but far-from-great smartphone.



RIM: A Brief History From Budgie to BlackBerry 10

From mobile communications magnate to innovation holdout, we look at the beginnings of Research in Motion and its transformation into the BlackBerry of today

By Jon Fingas



Listen to much of the chatter about Research in Motion today and you'll hear the launch of BlackBerry 10 described in almost apocalyptic terms. All-or-nothing. Live-or-die. Make-or-break. There's some truth to the extreme language, but BlackBerry 10 is really just the latest in a series of transformational moments for a company that has frequently had to adapt to survive. In that sense,

the appreciation for crises and opportunities is almost as natural as breathing for RIM. What's less certain is whether or not the company in 2013 is as capable of wholesale shifts in strategy as it was for much of its not-quite 30-year history. Reform is possible, but won't be quite so easy.

For its first two decades, RIM often showed the traits of a scrappy startup. It had nothing to lose and was willing to turn its business model on a dime to stay afloat. More importantly, it also had a simple, overriding determination to spread wireless data to the masses, no matter how that would come to pass. That gave it a leg up over contemporary technology stalwarts like Apple, Microsoft and Palm, all of whom were at least slightly behind RIM in seeing the value of truly instant mobile communication. CEO Mike Lazaridis (and eventual co-CEO Jim Balsillie) would see a void in the market, whether it was two-way paging or mobile email, and switch strategies to fill it.

As the 2000s wore on, however, RIM slowed down. Much of the decade revolved around entrenching what we know as the core BlackBerry business model, where messaging-focused smartphones ship to large-scale customers. The company acknowledged the consumer world as early as 2003, but its approach was increasingly reactionary. We wouldn't



The company spent more time trying to justify its existing smartphone philosophy and less time getting ahead of trends.

have had the BlackBerry Storm without the iPhone popularizing touchscreens first, for example. The company spent more time trying to justify its existing smartphone philosophy and less time getting ahead of trends, even as it lost its market share advantage and started working on BlackBerry 10. Some saw the eventual departures of Lazaridis, Balsillie and a slew of executives as necessary to undo an institutionalized resistance to change.

The launch of BlackBerry 10 isn't just the test of a software redesign, then. It's gauging whether or not a leaner RIM (now BlackBerry) is once again nimble enough to stay relevant. We haven't quite returned to the company's early days, but its current position is an uncannily familiar one where BlackBerry has to bet the farm on a new project. The difference? It isn't entering an untapped wireless market this time. While it's on better footing than a defunct mobile veteran like Palm, there's not much room for a second chance.





Mike Lazaridis,
Chris Shaw
and Doug
Fregin with the
Budgie, RIM's
wireless-to-TV
transmitter
product, circa
1984.

1984 - 1994

Mike Lazaridis and Doug Fregin officially founded Research in Motion on March 7th, 1984 with a desire to commercialize Budgie, a system that wirelessly displayed information on a TV screen. It generated enough business to let RIM take on side projects, including a film barcode reader, but the real kick start was the arrival of one of the earliest wireless data networks, Mobitex. Software deals to support it led to the 1993 launch of RIMGate, the precursor to BlackBerry Enterprise Server, and wireless point-of-sale terminals in 1994. This early period also saw the introduction of Jim Balsillie, who met Lazaridis while trying to negotiate a purchase of RIM in 1992 and quickly became the future BlackBerry maker's VP of Finance. Few other companies were as actively interested in mobile data at the time: apart from Mobitex creator Ericsson, the most conspicuous participant was IBM, whose smartphone-like Simon Personal Communicator went on sale briefly in 1994 and still depended on a 2,400-baud modem for data.



1995 - 2001

Mike Lazaridis with a lineup of Inter@ctive Pagers. Below: The data-only RIM 950 and the more modern 957.



RIM's experience developing code for Mobitex led it to building hardware, starting with a PCMCIA modem in 1995. The company's first mobile messaging device, the RIM 900 Inter@ctive Pager, came a year later, followed by the smaller and more successful RIM 950 in 1998. The first hardware that resembled a BlackBerry as we know it today was the not-very-elegantly named RIM 957 from April 2000, but it only offered data and wasn't joined at the hip with the BlackBerry name. While the BlackBerry email service launched in January 1999 and



went mobile with the 957, it would be three years before there was a proper BlackBerry phone. More smartphone-like technology was emerging in the form of devices like the Nokia 9000 series in 1996, Ericsson's Symbian-based R380 in 2000 and the Palm OS-running Kyocera 6035 in 2001, although few would say they cracked the market wide open when the PDA side was either crude or entirely separate. This was Palm's heyday, and many were still satisfied with a cellphone in one hand and a PDA in the other.

The BlackBerry line begins with the 5810, packed with GSM phone service.

2002 - 2005

The BlackBerry era started in earnest in March 2002, when RIM unveiled the BlackBerry 5810. It was the first handheld from RIM to carry GSM and GPRS, although phone service was almost incidental when owners had to plug in a headset just to make calls. The situation got better when the 6710 and beyond had audio hardware



built-in. Color came with the 7200 and 7700 series in 2003, but the real breakthroughs were the 6200 series from that year and the 7100 in 2004, which were explicitly targeted at “prosumers” who wanted a BlackBerry for personal use. In 2005, the 8700 series took the 7100’s sleeker aesthetic to the high-end; for many, it was the first modern BlackBerry, where a polished design, phone features and a full keyboard were all in one device. Not that RIM could rest on its laurels. Nokia, Palm and others had thrown themselves wholeheartedly into smartphones, and Microsoft’s launches of Pocket PC 2002 and Windows Mobile provided a start for smartphone makers that would eventually play important roles, like HTC.



Above: The BlackBerry 7100i. Left: Past presidents get frisky with the BlackBerry Pearl.

2006 - 2007

It’s at the middle of the last decade that RIM simultaneously reached its creative zenith and sowed the seeds of its decline. The BlackBerry Pearl of 2006 was





BlackBerry's QWERTY-equipped Curve 8300 and the Pearl 8100, a phone aimed at the everyday user.

the company's first phone built expressly for the regular public, and had such radical concepts (for RIM) as a camera and dedicated media playback. Both the Pearl and the QWERTY-equipped Curve of 2007 would be key to an explosion in sales over the next few years. However, it's also in 2007 that Apple launched the iPhone and began the public's love affair with touchscreens in their mobile devices. RIM's response, even into 2010, was to downplay the threat; it argued that customers needed hardware keyboards. It was difficult to know then just how dangerous the attitude would be when others were similarly dismissive — see Steve Ballmer's jab that the iPhone was too expensive to succeed, for example — but it's clear in hindsight that RIM had put the blinders on at the very moment its eyes needed to be wide open.

2008 - 2009

Despite its love of physical keys, RIM's solution to newfound competition was to hedge its bets. Traditionalists got the upscale Bold 9000 line in May 2008; would-be Android and iPhone converts got the BlackBerry Storm





BlackBerry's Pearl Flip 8230, the touchscreen-centric Storm and the Bold 9000.

in November of that year. BlackBerry App World also countered the Android Market and the App Store several months after the fact, in 2009. The platform reached a peak of 20.8 percent market share in the third quarter that same year, according to Gartner, but the bloom was already starting to come off the rose. The iPhone 3GS helped Apple outsell RIM for the first time, as Steve Jobs noted that fall. Hype for the Storm quickly fizzled out, and Verizon's edition of the Storm 2 launched the same day in October 2009 as the more heavily promoted (and ultimately more successful) Motorola Droid. RIM could mostly take comfort in knowing that the competing Nokia N97 and Palm Pre also did little to halt the declines of their respective creators.

2010

RIM was aware that the BlackBerry needed more than just a small tuneup, and spent much of 2010 laying the groundwork for an overhaul. It bought real-time OS developer QNX in April for code that would eventually power BlackBerry Tablet OS and BlackBerry 10. Help building the





The PlayBook, BlackBerry's first foray into the tablet realm suffered, ironically, from a lack of messaging capability.

interface would come in December, through the acquisition of mobile software developer The Astonishing Tribe. We quickly saw early results from the QNX deal when RIM previewed its first-ever tablet, the BlackBerry PlayBook, in September. Mobile customers weren't patient enough to wait for a finished product: Apple eventually eclipsed RIM's market share on a more permanent basis and more and more of the BlackBerry's loyal enterprise users were among those switching to Android and the iPhone. Most long-serving competitors weren't faring much better. Palm's overcommitment to Sprint and its missed opportunity with Verizon led HP to snatch it up. The year was ultimately defined by Android, which Gartner says catapulted from a token 3.9 percent of the smartphone market in 2009 to 22.7 percent for 2010, just behind a rapidly crumbling Symbian.



2011

RIM arguably faced its nadir of public perception in 2011. The PlayBook was rushed to market in April and tanked badly enough to require fire sale pricing for unsold stock — in part because it initially lacked the very messaging features that were supposed to be RIM's strong suit. BlackBerry 7 devices like the Bold 9900 series gave RIM's legacy platform a last hurrah, but a sustained, worldwide service outage stained the line's reputation (and the company's) in October. Building the \$2,000 Porsche Design P'9981 BlackBerry and losing the BBX trademark dispute didn't exactly endear RIM to the public, either. Management was increasingly seen as the problem, rather than the solution, as disappointing earnings and delays became the order of the day. The firm escaped the ignominy of Palm's fate, which saw HP reduce webOS to a side project, but was well behind Nokia in the reinvention process, which already had Windows Phone-based devices shipping in late 2011. Apple and Google both took advantage of customer frustration with old stalwarts like Nokia and RIM, to the point where their respective iOS and Android platforms were the only ones gaining significant share. Gartner and other firms crowned Android as the market leader in the spring, and Apple would eventually rise to second place in 2012.



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RIM:
A BRIEF
HISTORY
FROM
BUDGIE TO
BLACKBERRY
10

BlackBerry enlists Porsche Design to style the smartphone as business status symbol, with the P'9981.

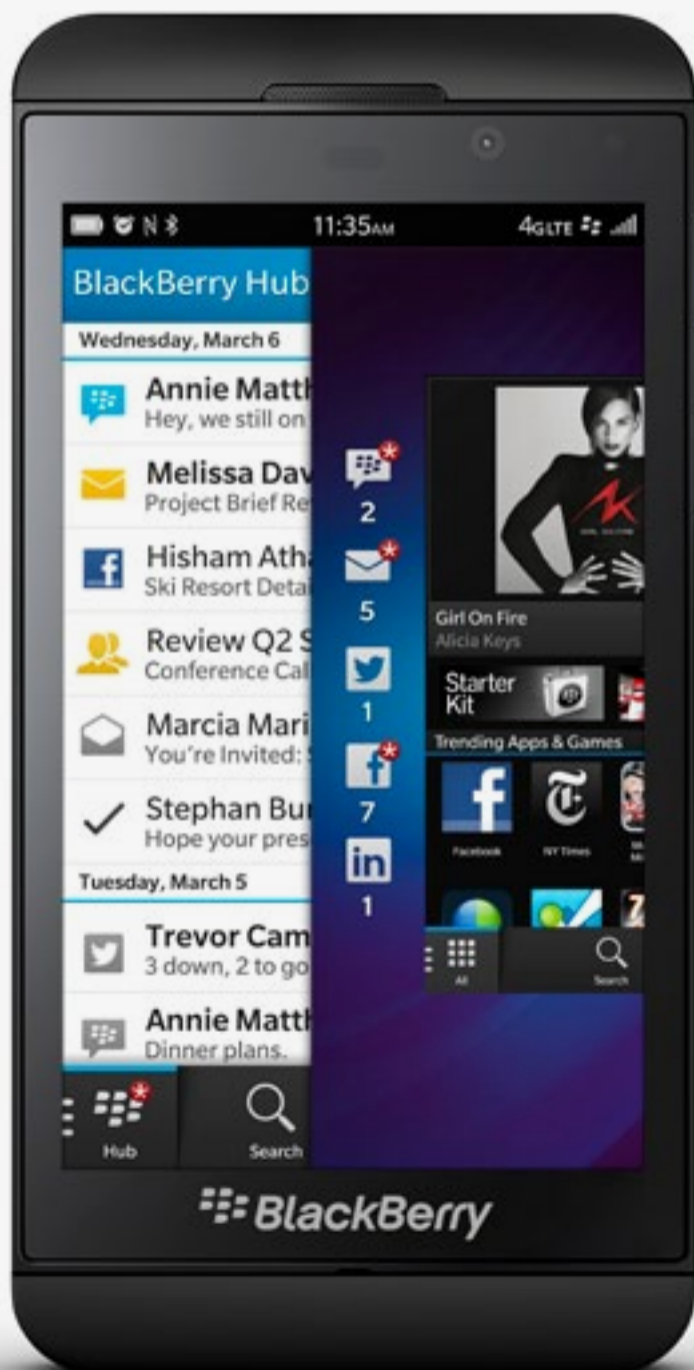




2012's BlackBerry Curve 9320 running OS 7.1 and gearing, in part, towards social media.

2012

The year of renewal... mostly. Balsillie and Lazaridis were out almost as soon as the year began, replaced by company veteran Thorsten Heins. He spent most of the year getting RIM's house in order, including thousands of job cuts among the rank and file. Multiple long-serving executives left, and little energy was put into new hardware outside of the already expected 4G PlayBook and budget phones. Most of the company's fate was now tied up in BlackBerry 10 and its matching devices. Heins ran into flak quickly: BlackBerry 10 was delayed into 2013, and the company started racking up significant losses after years of profit.



BlackBerry's Z10, embracing the touch experience and sporting their new OS, BB 10.

2013

BlackBerry is starting 2013 much as it spent most of 2012. It's in a race to establish BB 10 as a truly credible third competitor among smartphone platforms before the industry shifts to an Apple / Google duopoly — and before the cash runs dry. **D**

Jon has led a double-sided life: he grew up with technology as a youngling but spent much of his time learning to write.



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PHOTOGRAPH BY KLAAS FOPMA / COURTESY OF AMSTERDAM LIGHT FESTIVAL



**ILLUMINATED
NET-WORK**

VISUALIZED



BRIAN REED



THE NORTH CAROLINA-BASED DESIGNER AND ILLUSTRATOR talks about Ligers and Apples and printing unplugged.

What gadget do you depend on most?

Being in the graphic arts world I practically live on my Mac Pro and MacBook Pro. While at the office I am rocking out a Mac Pro, hooked up to a wonderful 30-inch Cinema Display. That makes it a little hard to come home and work on the 15-inch MacBook,

but it gets the job done. I love that I can sync projects on both these machines.

Which do you look back upon most fondly?

I remember getting my first iPod back in 2005. It was just after the release of the colored screen. I was rocking the 60GB iBrick. That thing was huge. I wasn't gonna get a 30GB 'cause I needed to have all my music with me. That is funny to say that nowadays with all the radio apps. It probably was the first time I had the newest release of an Apple product. That didn't last too terribly long though.

Which company does the most to push the industry?

I thought it would be an easy one but the more I think, the harder it is. All the video guys at work talk and drool about are the Red Cameras. I was living in a Canon/Nikon world, silly me. However, being that I am based more in the graphics world, I'd have to say that Adobe is continually pushing. The Creative Cloud was a pretty brilliant move from a marketing standpoint. That and you gotta love Smart Objects. Thank you Adobe.



What is your operating system of choice?

I currently am running Lion. I usually wait until the beta and bugs are tweaked a bit after the initial release. I do remember how excited and wonderful it was to go from 10.6 to 10.7 with access to iCloud. That made life so much easier. I know that cloud tech has been around before that, with Google Calendar and all. I hadn't dove into Google yet. Actually, I forgot about Google for my previous answer.

What are your favorite gadget names?

I was a little surprised that Apple went with Lion so "early" in the game. It seemed like they were climbing the ladder and skipped a few rungs to get to Lion. Honestly, I don't think there would be a person out there not chuckling to have OS Liger running on their Macs. I know it'll never happen, since Apple doesn't seem to have a sense of humor. But at least release it as an April Fools gag. It may help with the "pretentious air" they have amongst those who haven't bought in to Apple.

"I don't think there would be a person out there not chuckling to have OS Liger..."

What are your least favorite?

On the same token I am a little tired of the "iThis" and "iThat." I know it's a matter of marketing and branding for them.

Which app do you depend on most?

Depend on ... probably Evernote. It helps me make sense of my brain vomit. "Talking Tom" keeps the kids occupied when I need a moment to breathe.

What traits do you most deplore in a smartphone?

That they are always in our faces. That, and they are sometimes smarter than me and never as easy to use as people say they are.

Which do you most admire?

The fact that the tech inside could/did put a man on the moon.

What is your idea of the perfect device?

If it ever was designed and produced, it'd be obsolete in two months anyway. That said, a time machine would be great.

What is your earliest gadget memory?

My wife and I were laughing the other day about this. I had a Casio calculator watch and played *Lode Runner* on the little "word processor" home computer we had growing up. She had an Apple II GS and played *Where in the*



World is Carmen Sandiego?

What technological advancement do you most admire?

I love being able to see the face of those I am talking too, so I'd have to say Skype, FaceTime or Google video chat. Speed is also something that amazes me. However, it is funny how frustrated we can get when 2-second load times don't happen fast enough for us.

Which do you most despise?

The fact that as a people we don't take the time to interact with those around us when gadgets are present. That or Facebook, where "virtual" fights take place.

What fault are you most tolerant of in a gadget?

Cost. It's not getting any cheaper. Well unless you wait for last year's "old" gadgets.

Which are you most intolerant of?

Toss up between battery life and weight. Oh, don't forget wireless. Why are there still wires! Shouldn't phones be charged by the carbon dioxide we breathe out?

When has your smartphone been of the most help?

It was the snowstorm of 2009. Driving through the middle of it in West Virginia, the turnpike closing while

we were driving on it. Finding an open hotel with vacancies could not have happened without some Google action and some networking.

What device do you covet most?

That would be the Wacom's Cintiq 24HD touch. Although, Timothy Saccetti's answer of a home planetarium system is a great answer!

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

The bill attached at the end of the month. Seriously though, the dropped calls are annoying. That may be a network thing. Other than that, they are always impressing me.


What does being connected mean to you?

Being able to bring ideas to life in ways that were impossible a few years prior. It's all at the end of our fingertips.

When are you least likely to reply to an email?

Between the hours of 6-8PM. Busy reading bedtime stories, brushing teeth and saying good-night prayers with my girls.

When did you last disconnect?

I'm sure not being able to remember is a bad thing. I did unplug over Christmas. I went analog and got some screen printing done. 



A photograph of a man in a suit standing on a stage with his arms outstretched. Behind him is a large screen displaying the BlackBerry logo. The stage is lit with blue spotlights.

BlackBerry®

Engadget on BlackBerry 10

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02.01.13

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GROUP
EDITORIAL

JANUARY 30TH HAD BEEN CIRCLED on our calendars for quite some time. It was the day that Research in Motion (now known as BlackBerry) officially pulled the curtains away from its next-gen BlackBerry OS — aka BB10 — revealing all of its secrets to the world after no less than 15 months of development. Don't underestimate the importance of this move; this is just the beginning of BlackBerry's battle to



remain relevant in the mobile industry. Now that BlackBerry 10 devices are ready to spend time in the public eye, what does our editorial staff think about the products — as well as BlackBerry's future? Engadget sounds off about BlackBerry 10 in the paragraphs that follow.

TIM STEVENS

You can read my review of the Z10 and of the BlackBerry 10 OS if you want my full take on things, but in a nutshell it boils down to this being what would have been an amazing product last year. Thorsten [Heins] obviously didn't have a choice but to delay the launch and that's unfortunate, because RIM's — sorry — BlackBerry's product now looks less compelling than it would have in early 2012. As of now, nothing really jumps out at

Research
in Motion
will move
forward as
BlackBerry.



you and screams “This is so amazing I need to drop my iPhone right now and get one of these.”

Will the Z10 and BB10 keep the BlackBerry faithful happy for another few years? Absolutely. BB10 is a huge step forward over what's come before, yet it maintains the focus on productivity. I'm a big fan of that. And, I think some folks who regretfully moved over to iOS and Android will come back. But, there's not enough meat here, there's no single killer feature that will drive a full-scale flock of people to BB10 and rocket it into a solid third position in the mobile OS race. I think that's what a lot of people, myself included, were hoping we might see.

DAN COOPER

The problem, for me at least, was that while Heins and Co. were celebrating the operating system's many innovations, things like built-in video calling are old news. As such, BB10 is an attempt to drag the company kicking and screaming into being on level terms with iOS and Android — not to better them. While the show was enough to drum up some mild curiosity



in the platform, I'm not sure that mild curiosity has ever been enough to open people's wallets on the scale the company currently needs.

JON FINGAS

You'd expect me to be one of BlackBerry 10's bigger champions, as I not only live in Canada, but in Ottawa — where BlackBerry has a key office, and QNX got its roots. To some extent, I am. I want the platform to show that Canada can keep up with the competition. BlackBerry 10 may also be the best hope, in the short term, of avoiding an Android / iOS duopoly. Windows Phone appears to be building support, but it's not as big as BlackBerry or as beloved in the public eye.

QWERTY faithful will have to wait until April to snag the Q10.

I won't give my native land's company a free pass, however, and the initial results are mixed. There's some definite cleverness to BlackBerry 10 that could make it the go-to choice, especially for those who live and die by their messaging. Yet it's hard to get completely excited when the Z10 amounts to a strictly mid-range smartphone, and there are still gaping holes in the app ecosystem. Mapping, to me, could be the software's Achilles' heel: when Apple got flak for the subpar accuracy and missing features of iOS 6's Maps tool, releasing a BlackBerry app with even fewer features won't get customers to hop aboard if they at all value navigation.

The best chance for the BlackBerry might be the Q10. It's a rare instance



of giving a portrait QWERTY smartphone the true spotlight, rather than treating it as a budget or niche model — witness how quickly Android parallels like the Droid Pro or Replenish were shunted aside. The Q10 both caters to an underserved audience and, really, represents the BlackBerry's home turf. If the company can deliver a truly standout experience to keyboard lovers, it may corner a market that has been sorely lacking.

SEAN COOPER

I'm an admitted BlackBerry enthusiast — and until quite recently, apologist — amongst Engadget editors. I've done my level best to keep a calm eye on all the news leading up to the event without spoiling the punch line for myself by forming an opinion. But now that the deed is done and the Z10 and Q10 (almost) launched, I find myself mostly excited about the prospect of this BB10 OS becoming a real alternative to iOS, Windows Phone and Android. Mostly. I also worry that the devices and OS will become lost in endless discussion about what might have been or why not sooner? BlackBerry pretty much nailed the devices and OS. Sure there is always



BlackBerry looks to cash in with new features like Flow.

room for improvement, but as a stepping stone, it did extremely well. Top-shelf first hardware offering? Check. App developers on board? Sizeable check.

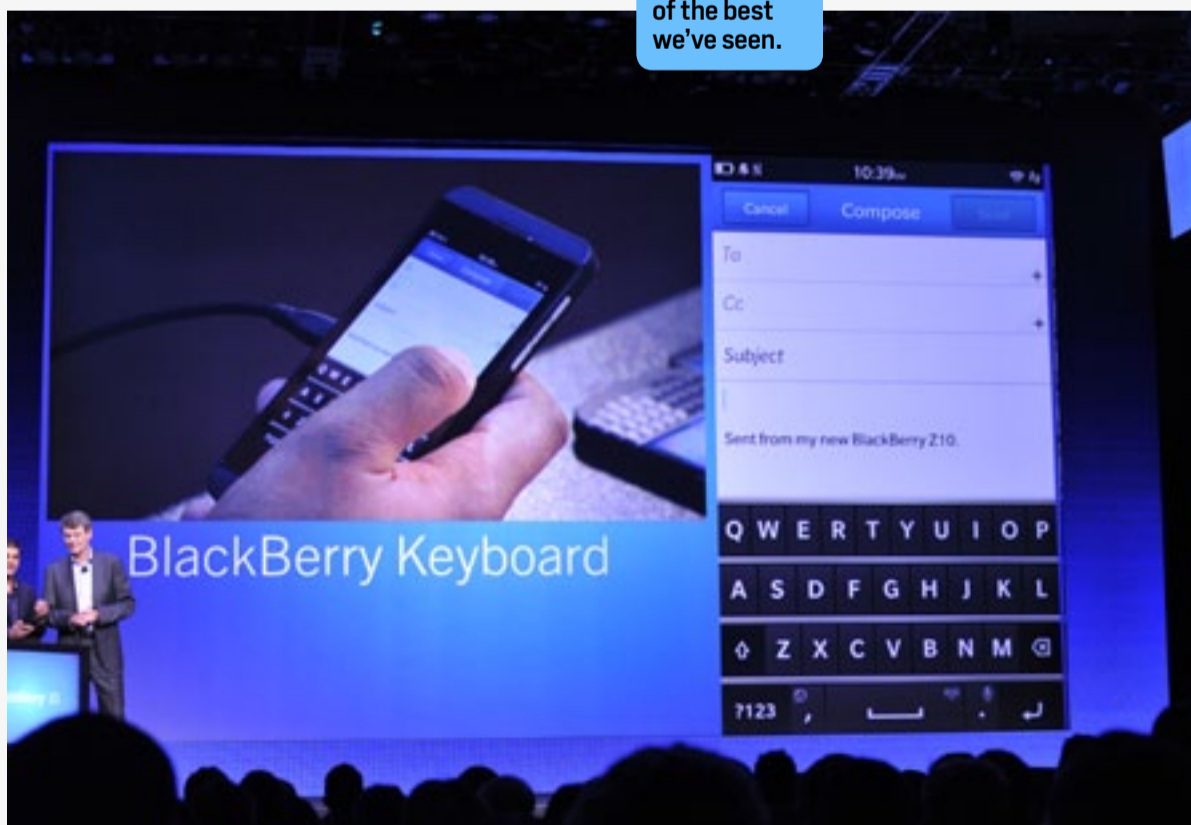
BlackBerry's newest helps it get caught up with other players in this space, not leap ahead. Though a massive leap ahead was likely never even a dream and would have taken a minor miracle to achieve. But now that it's set to move forward in lockstep with the competition, all that can be hoped is to keep existing customers and maybe even win some back with BB10. I for one am looking forward to seeing BlackBerry compete with models and pricing, launch new sets and even drop trivial OS updates. As a consumer, the width of the market you shop in just got bigger and arguably better and that's a huge win.



NICOLE LEE

The biggest question I had going into the event was: “Will it be too little, too late?” Perhaps Heins borrowed some of that reality distortion field from [Steve] Jobs, but I came away with a much more optimistic stance than I initially had. The Z10 looks to be much better than BlackBerry’s past full-touchscreen efforts, and the Q10 is a clever nod toward current loyalists who still hunger for that physical keyboard. What’s particularly encouraging is that revamped OS — the on-screen keyboard looks excellent, the gestures strike me as a refreshing take on phone navigation and the overall feel of the UI is about 10 times better than what was there previously. Of course, there are still hurdles — terrible maps, poor app selection and a rather disappointing camera — but I still have to stand back and applaud what the Black-

The keyboard experience in BB10 is one of the best we’ve seen.



Berry team has done here and hope this means better things to come. Now, whether it’ll match up to the Androids and iPhones of the world or fall into obscurity much like Palm did, well, we’ll just have to wait and see.

MARK HEARN

While I want to be excited about BlackBerry 10, I’m still somewhat on the fence. The company formerly known as RIM is definitely making steps in the right direction, but I’ve yet to see any functionality from the BB10 operating system that really outperforms its competition. Also, if you factor in the platform’s light list of launch apps, BlackBerry 10 becomes an even tougher sell. However, given the company’s long-standing history, I’d say it’s still too early to label BB10 the next webOS.

Overall I’d say that BlackBerry’s hardware appears to be the most promising change in the company’s resurgence. While critics have pushed for modernization, it’s good to see the company hasn’t completely abandoned what brought it to the dance in the first place. For the longest time, I’ve felt that premium smartphones with physical keyboards were a dy-



ing breed, however with devices like the BlackBerry Q10 on the horizon, hopefully this won't be the case.

There's no doubt that BlackBerry has an uphill battle ahead of it, but it's just too hard to judge a platform by its first wave of devices. I'll say that we'll truly know what the future holds for BB10 somewhere around the 10- to 12-month mark. Hopefully, for BlackBerry's sake, said time span will see an abundance of new hardware introduced and a major influx of developer support. If not, BlackBerry 10 could very well be operating on borrowed time.

STEVE DENT

It's not quite fourth and long yet for the now RIM-less BlackBerry, but the Canadian outfit has got maybe one more punt before it could find itself thoroughly out of its league — or perhaps playing for another country. As such, it needs to at least have hit a triple here, to thoroughly mix this lame sports metaphor — so, has it done that?

For sure, the company was trying to play to its business-oriented fans with the promise of a more buttoned-down BYOD experience. As such, it stressed the productivity aspect of the new OS, with features like front-and-center notifications, a fresh keyboard on the touch-only Z10 (aimed at those who hate touch keyboards) and actual physical keys for the Q10. That's smart, because white-collar fans of the aging OS who've switched to more whizzy An-

droid or iOS devices may still miss the workmanlike aspect of previous models.

At the same time, it was trying to bring a new message to those who made the switch because BlackBerry had become, well, boring, and therein lies the rub. By announcing all manner of games, readers, players and social apps, they'd like to convey that you can have a heap of BYOD icing on your workaday smartphone cake. That bordered on desperation at times, like when it trotted out Alicia Keys as the new "Global Creative Director," a ceremonial position if ever there was one. But if the new phones and OS handle your daily diversions nearly as well as other devices, could it actually grab back some of the market share the company needs, especially from those who "found someone else at the gym," as Keys put it? Unfortunately, part of every buying experience is lust, and the new OS and devices seem to lack that certain "something something" — and it seems doubtful that middle managers could make up the lost sales it needs so badly.

EDGAR ALVAREZ

There was certainly no doubt about how crucial the BlackBerry 10 event would be for RIM (aka BlackBerry), with some even going as far as calling it a make-or-break juncture for the company that was once king of the handset business. BlackBerry itself, anchored by CEO Thorsten Heins, didn't fail to deliver products-wise, although it felt as if we had previously seen the majority of things being shown off on





BlackBerry looks to continue its global focus, availability.

stage. Still, for consumers, the fact that there's a new choice in mobile is a marvelous element in itself, but I think BlackBerry's problem will be not that people don't fancy what it has to offer. It's how invested many of them already are in other platforms — and yes, I'm also talking about the business sector, which is, and has always been, one of the Canadian firm's main target audiences.

That's not to say BlackBerry didn't showcase anything I took a shine to, however, as the Q10 definitely made quite an impression on me. Unfortunately, Heins let it be known that the BlackBerry Q10 won't be available until sometime in April, which, to be honest, is pretty disappointing, and it also pinpoints a problem in the company's plan to bring back, or keep, the physical QWERTY faithful. The BlackBerry Z10, on the other hand, will be making its way to consumers' hands as early as this week in some places. But what could easily be considered BlackBerry's flagship didn't do much for me in general. Yes, the operating system

is as novel as it gets, but the hardware, in my humble opinion, leaves very much to be desired — especially when you take into consideration that BlackBerry had many, many months to, perhaps, introduce us to a smartphone carrying a “wow factor” of some sorts.

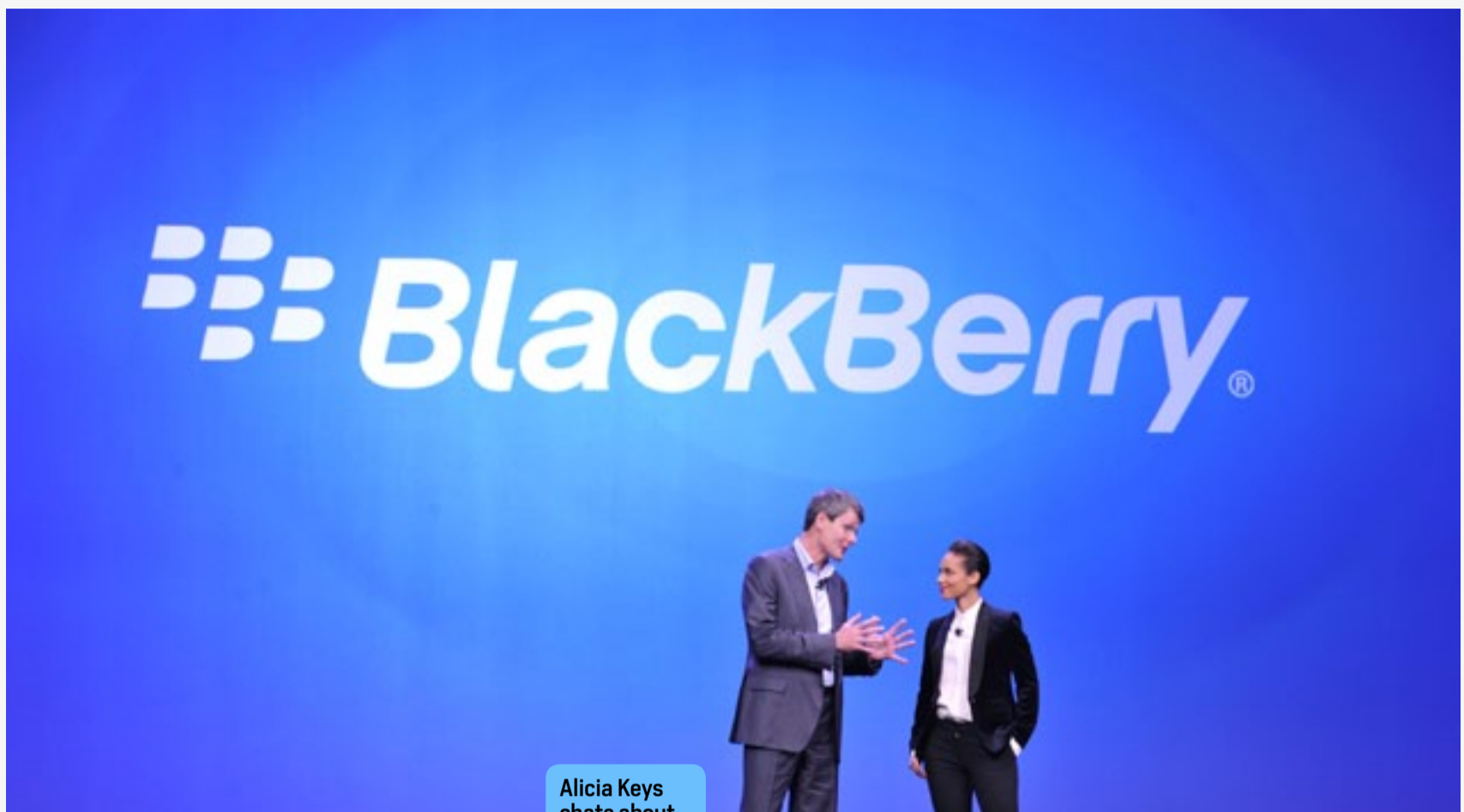
Alas, here's to hoping Heins and Co. find success with the recently launched products, be-

cause, if anything, you have to tip your hat to the Waterloo-based outfit for not taking the easy route and adopting something like, say, Android. Instead, something designed from the ground up was born with BlackBerry 10, and as wise man Victor Hugo once said: “We see past time in a telescope and present time in a microscope. Hence the apparent enormities of the present.”

SHARIF SAKR

I was only paying attention for one reason: QWERTY. After all this time using touchscreens, I still grit my teeth and get impatient when tapping on anything smaller than a Note II, so I'm open to the idea of physical keyboards being re-invented. Alas, there's little evidence of that happening. By the time it reaches us, the Q10 will contain nothing that — technically at least — couldn't have been released 12 months earlier. Fair enough, the handset seems nicely built along the lines of the Bold 9930, and it's also possible that the new OS might exert some slow-burn attraction. But April is a long





Alicia Keys
chats about
being Global
Creative
Director.

way away, and didn't I just say that I'm prone to impatience? Sorry BlackBerry, but this is one slow ballad in A minor.

BRIAN HEATER

There's little question RIM, er, BlackBerry, put on the best possible show it could manage. It was a bit awkward at times, a bit stilted and occasionally lacking direction, but it's tough to come out swinging without the world on your side — and at the moment, the company's still got a lot to prove. With that in mind, Heins and Co. jam-packed the thing full of hardware and software news, partnerships, a celebrity cameo and a lot of promises about the future of the company. And, arguably most importantly, the company took time to put special focus on one of BlackBerry's historical shortcomings: apps.

Ultimately, however, Heins really hit the nail on the head when he referred to the event as the “starting line.” The hard part is just starting: getting their babies in people's hands. Here in the States, that dream is a ways off, thanks in part to a March release for the first BB10 handset. But that delay just underscored a larger theme: in spite of its NYC location, this was a global announcement. BB execs threw to simulcast locations throughout the event, and availability outside the US seemed to get a lot more love — and it makes sense, the company's looking to get a foothold for BB10 amongst already devoted BlackBerry owners. As much pomp and circumstance as the company opts to employ at events like this, the success of BB10 will live and die with the enthusiasm of its fans. **D**



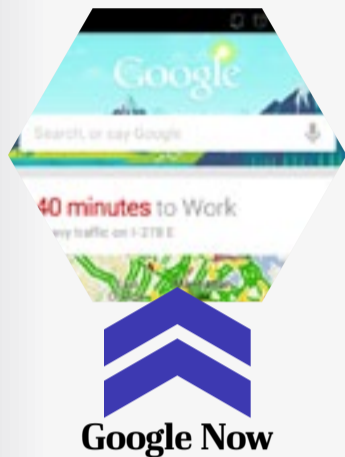
HTC 8X

What's this? Another Windows Phone 8 test? Yes, while I was trying the Lumia 920 and before I reviewed the ATIV S, I felt it was only fair to give the third flagship of the platform, HTC's Windows Phone 8X, a proper shakedown. I spent a few weeks with one to gauge the differences and came back with the impression that HTC has a worthy flagship — but not necessarily the one I'd choose for myself.

If you talk solely about ergonomics, the 8X is undoubtedly my first pick. It's much lighter and grippier than the Lumia 920, and the smaller screen makes it easier to reach every corner with one hand than the ATIV S. About the only reservations I have are that hard-to-press power button and the relatively sharp edges. The standout appearance can't

help but sway me, too. If you get the phone in one of the bolder colors (read: not black), it's simply iconic. No one will mistake an 8X for another phone, while both the ATIV S and Lumia 920 have familiar-looking peers.

Yet there are a few ingredients missing that make it hard to call HTC's creation my perfect Windows Phone 8 device. Simply speaking, the camera just isn't as good as it needs to be in early 2013. While the 8X is sometimes a better pick for up-close photography than the Lumia 920, it falls apart in low-light situations where the Lumia is a champ. Nokia Maps isn't vital, but I missed its navigation when I switched devices — at least there's now the Drive+ beta for those that need it. And I'll have to admit that being Canadian skews my preferences towards the Nokia phone's glove-friendly screen: it's great to avoid the binary choice of making a phone call versus preserving my fingers. While I'd be inclined to choose the 8X over the ATIV S as long as storage wasn't a priority, I would still give Nokia the ultimate nod as the most relevant to real-world use. — *Jon Fingas*



Google Now



iPod Shuffle (4th Gen)



GOOGLE NOW

Pretty much from the moment I first launched Google Now it changed the way I interacted with my phone. I've used Siri and toyed with S Voice, but Now is the only virtual assistant that seems like more than an occasionally useful gimmick. Truth is, at this point I unlock directly into it almost as often as I go to the home screen. Sure, in the early days its functionality was fairly limited (and still is), but there was enough information presented by default to keep me coming back. When Gmail was added to its repository of information, the app became a true game-changer for me. While other "assistant" apps are little more than voice commands with personality, Now actually helps track information for you and presents it at valuable times. I don't have to ask what

the weather is like or how long it'll take me to get to my next appointment — it just tells me without prompting.

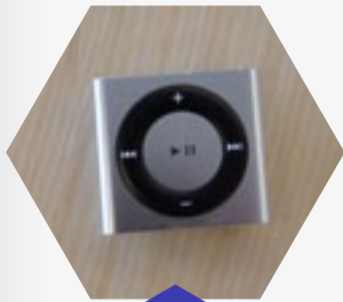
Of course, things aren't perfect. Now still has a lot of rough edges to work out. For one, the mobile boarding pass feature has yet to work as advertised for me, though its flight-tracking

feature turns out to be quicker and more accurate than United's own app. It also stumbles a bit on tracking packages. I like that it recognizes tracking numbers and presents them to me with a quick link, but Now doesn't *actually* do any tracking itself. Instead it simply shows the card to you for a predetermined amount of time. That's fine if you're enjoying free two-day shipping thanks to Amazon Prime, but if your delivery takes more than a couple of days, the card disappears before the box hits your doorstep. It also has an unfortunate habit of presenting me directions to a "new place" almost any time I perform a web search. Oh, and some higher-res icons for the sports score cards would be greatly appreciated.

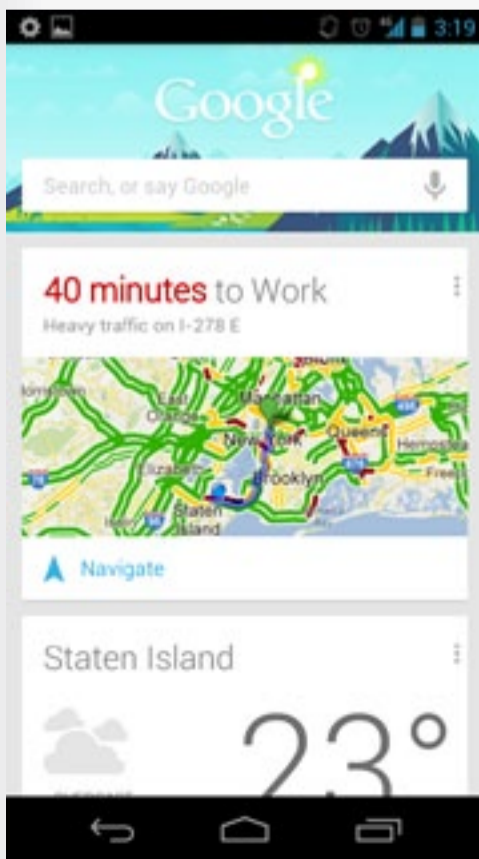
None of that is enough to ruin the experience, however. If I need to know when my bus is coming, what the temperature is, if my flight is on time or even how many steps I took this month I simply swipe up on my Nexus lock screen and let Google do the work for me. What's more, things can only get better as the company improves its algorithms, opens up new sources of data and, hopefully, develops an API to let other apps tap into the power of Now. — *Terrence O'Brien*



HTC 8X



iPod
Shuffle
(4th Gen)



iPOD SHUFFLE (4TH GEN)

We runners are a superstitious bunch. In my training group, “Nothing new on race day” is our mantra, and it’s one to which I’ve adhered earnestly. It goes without saying that new shoes, running shorts and Snozberry-flavored energy gels are out of the question, but I even get antsy about wearing my SPIbelt around my waist instead of my hips. Yeah, I’m neurotic, but running 26.2 miles is scary, yo.

So I was none too pleased when I had a gadget emergency the week before the 2011 New York City Marathon. I’d been training with the Sansa Clip Zip for two months when it abruptly began having mood swings. It started repeating songs, even when I had set my library to shuffle. Sometimes, if it encountered a song it didn’t like, it just froze. On a good day, I could sidestep the issue by selecting a different artist or song. At its worst, the only way to revive it was to perform a hard reset.

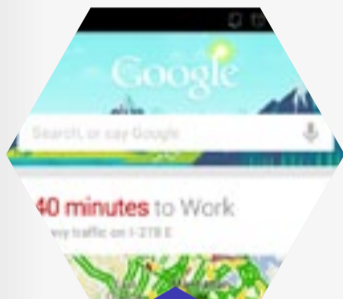
Obviously, that wasn’t going to cut it for my epic run, so I did what any desperate person would do: I went to Best Buy and spent \$50 on

an iPod shuffle. Truly, I would have preferred something like the nano, which would have let me choose specific songs, but I wasn’t about to drop \$149 on what was essentially an impulse buy. Fifty bucks was about as much as I was willing to spend without having had the opportunity to hem and haw over my purchase.

So I used it. And it was okay. The clip doesn’t feel as strong as on the third-generation model. Also, it came with regular headphones (i.e., ones without inline controls), which meant I had to press the buttons on the device to pause the music and skip tracks. To this day, I find the keys a bit too small, and I often hit the wrong one, mistaking pause for fast-forward, etc. Fortunately, I’ve since subbed in a pair with an inline remote, which means I barely have to touch the device anymore (except, perhaps, to reposition it in a place where the clip will stay put). Battery life was initially awesome — I got through that nearly six-hour marathon (oof) with plenty of juice to spare. It’s since seen better days, though, to the point where I now have to recharge it several times a week. Faint praise, if ever you’ve heard it, but at least it doesn’t force me to listen to the same Madonna song over and over. That would just be cruel. — *Dana Wollman*



HTC 8X



Google Now



The week that was in 140 characters or less

Business Needs, Fickle Keys and Locked Out of the Office

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ESC

REHASHED

@rossrubin

RIM renames itself BlackBerry. Consumers ask, "What's RIM?"

@levie

Wait a second. The new Blackberry doesn't have Snapchat. How are real business people supposed to use this thing?

@LaughingStoic

10 minutes until Alicia Keys tweets how much she loves the BlackBerry Z10 from her iPhone.

@davidcrow

Ballmer doesn't think Office on iPad is a requirement. If distribution and an entire segment doesn't matter.

@eringriffith

Whenever Zuckerberg says Facebook is not building a phone, I picture Paul Giamatti in *Sideways*. "I'M NOT DRINKING MERLOT"

THE STRIP

BY SEAN PRYOR

THE REC ROOM

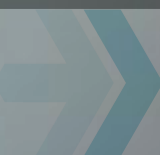


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