engadget
distro

CES
2012

DAY 4

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DISTRO Issue #23...

We wrote more posts on more things than at any CES before, and that's despite it being a relatively quiet year in the grand scheme of things.

Photos cover and above, Will Lipman
www.lipmanphoto.com

The Week that Was

It's through. We've yet again managed to survive the most intense week in tech — and do it with flying colors. We wrote more posts on more things than at any CES before, and that's despite it being a relatively quiet year in the grand scheme of things. Microsoft, for example, chose to slink its way off the stage with nothing exciting nor new, no particularly exciting tablet was debuted and the company couldn't even manage to conclusively tie together its various ecosystems. I wasn't hoping so much for something new from Microsoft, I was just hoping we'd see how Windows 8 works with Windows Phone and the Xbox to bring together a household. I was left disappointed.

Microsoft did, at least, have two of the most talked-about phones: the HTC Titan II and the Nokia Lumia 900. Both are big 'uns — 4.7 and 4.3 inches, respectively — and both are packing LTE on AT&T, making for a huge improvement on the platform as a whole. In fact AT&T's LTE network was one of the top non-device stories at the show. Seemingly half the announced devices are getting tickled by that carrier's frequencies. The US version of the Samsung Galaxy Note is perhaps the one that has me most intrigued.

On the tablet front, it's the 1,900 x 1,200 Transformer Prime TF700T that's blowing some minds, if only because going forward we're going to want 1080p or greater displays on all our 10-inch tablets. Then there's the Galaxy Tab 7.7

LTE with its 720p non-PenTile AMOLED display that is, in my eyes, looking even better.

On the Ultrabook front, the Acer Aspire S5 was the most notable, but if that one doesn't float your boat there are plenty of others, seemingly one from each manufacturer — some offering multiple. This instant over-saturation of the Ultrabook name was a constant talking point at the show, but even if the name quickly becomes irrelevant the important fact will remain: skinny laptops are cheaper and better than ever.

Still, though, for me the most impressive things at the show were those two 55-inch OLED TVs. The LG seemed closer to production and so got the nod from many, but frankly they're both phenomenally gorgeous. I want one. I wouldn't mind both.

In this, the second and final special Distro edition from the 2012 Consumer Electronics Show we'll take a bit of a further look at some of

the smaller yet perhaps more interesting things at CES, like the dancing and Bieber-themed TOSY mRobo robot and the Lumus wearable display. We'll give you a first look at the Sprint flavor of the Galaxy Nexus and a peek at the radically styled BlackBerry Porsche Design P'9981. Ross Rubin weighs in about the ubiquity of app stores and a shocking comic looks at the perils of 3DTV at CES.

It's been an incredible show for us and I'm very glad that we were able to bring you along in Distro. It's thanks to the tireless work of the Engadget and Distro crew that we were able to deliver these two special editions this week, so my thanks go out to Jeremy, Will, Candy, Aaron, Jon and Christopher and of course the entire Engadget team. Now, as I prepare to soak my feet in a hot tub after a long, long week I hope you'll relax too and enjoy what was CES 2012.

TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

The most impressive things at the show were those two 55-inch OLED TVs. I want one.

Steve Balmer Reboots

This week saw Microsoft's last keynote at CES, a somewhat scaled back affair that was marked more by a year in review than any big new product announcements. Even CEO

by Ashley Vance
Bloomberg BusinessWeek

Steve Ballmer, who rarely even stands still for a second during a keynote, sat down for most of it (joined at a table by Ryan Seacrest). But it was still the same Ballmer — pumped, excited and louder than the rest of the room. ¶ Of course, there's more to Ballmer than his famous on-stage persona, as evidenced by this timely and extensive profile by Ashley Vance for *Bloomberg Business-Week*. In it, Ballmer reflects on some of the mistakes he and Bill Gates made in the past — he says they spent too much energy on "where to go" and not enough on how to get there — and he talks about where Microsoft goes from here, promising a "reset moment" in 2012. Vance also talked to a host of characters to get their impressions of the man, including Netflix CEO (and Microsoft board member) Reed Hastings, who called Ballmer the "most honest, self-critical, self-aware person" he's ever met.

AROUND THE WEB

John Brockman: The Man Who Runs the World's Smartest Website

John Naughton
The Guardian
Edge.org may be a familiar site to veterans of the web, but if it's slipped under your radar you'll likely want to set aside some time to do some catching up — as you'll also want to do for this lengthy interview / profile of site founder John Brockman, regardless of which camp you fall into.
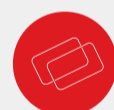
Lockdown: The Coming War on General-purpose Computing

Cory Doctorow
Boing Boing
Cory Doctorow has written plenty about copyright, but here he goes one big step further, arguing that we're about to see the "copyright wars" take on a new shape and play out on a much larger field: general-purpose computing itself.

Internet Access Is Not a Human Right

Vint Cerf
The New York Times
When Vint Cerf talks about the internet, people generally listen. This op-ed for *The Times* proved to be no exception, sparking a number of responses on the issue that are also worth seeking out.

Building the Team that Built Watson

David Ferrucci
The New York Times
IBM's David Ferrucci offers a first-person account of how the company put together the team that built the intelligent super computer.

Recommended Reading

CES
2012

CES doesn't officially end until the doors close, Friday, but we're stopping short a day in the interest of bringing you the biggest breakouts before the weekend begins. We've seen ridiculously big TVs, insanely skinny laptops, tablets galore and more than our fair share of crapgadgets. Herewith, the conclusion of our five-day CES 2012 timeline.

DAY 4

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SPRINT SAMSUNG GALAXY NEXUS WITH LTE

We were giddy with excitement when Sprint's VP of Product David Owens came onto our stage at CES 2012 and gave us the very first peek at its version of the Samsung Galaxy Nexus, one of the Now Network's inaugural entries into the world of LTE sometime in the first half of 2012. It's certainly a fair way to get the next-gen lineup started, we'd say. As was expected, the exterior of both phones are nearly twins, with differences only found in the branding and the inclusion of Google Wallet — not to mention the exclusion of pre-loaded bloatware — on Sprint's version. We got some extra hands-on time with the Nexus, but sadly weren't able to get too comfortable with it, as the phone is far from being a final product and still had early software builds.
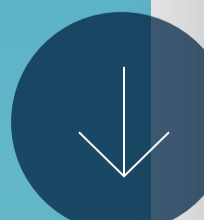
— Brad Molen

PRICE
TBD

AVAILABILITY
First Half 2012

FIRST IMPRESSIONS
Sprint joins the Galaxy Nexus party without the bloatware bog down but opted to bring its Google Wallet along for the fun.

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PRICE
TBD

AVAILABILITY
TBD

FIRST IMPRESSIONS
The future's so bright, we gotta wear... wearable displays.

LUMUS DK-32 WEARABLE DISPLAY

Lumus was showing off two different types of wearable displays, the development kit or DK-32 and the PD-18-4 a monocular version using the same technology. Driven by Lumus' patented Light-guide Optical Element, a micro-display pod, and the Optical Engine which projects light into the lens — where it is reflected back to the user's eye via reflectors embedded in the lens — the Lumus' DK-32 delivers a bright 720p 3D-capable display that only weighs 27 grams. The effect is really quite impressive, the colors are bright — and adjustable using the display pod — and images were surprisingly clear. But the best part, of course, is that while you're watching YouTube vids and walking about you'll avoid stumbling into objects and passersby. Also on hand was the monocle which was very much like something you'd see in a science fiction flick. With the PD-18-4 we checked out a nav program, some eye tests, and a phone UI mockup. We're stoked at what this development kit will make possible once it gets into the hands of some evil genius.

— By Sean Cooper

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FUJIFILM X-PRO1

The interchangeable lens camera market grew by one this week, following Fujifilm's confirmation of its new X-Pro1. The 16 megapixel APS-C ILC may in fact be a mirrorless model, but company reps prefer that you don't use "the M-word," insisting that the shooter stands alone in its own category as a "premium" interchangeable lens camera. And after spending an hour with the oversized, solidly built ILC and viewing a variety of comparison samples, it's not difficult to confirm that the assessment may not be far off. The entire hands-on experience was in line with that premium claim — from the white gloves we were required to use when handling the camera to the Japanese design lead taking care to make sure sample models were clean of markings and positioned just right, it's clear that Fujifilm is taking this launch very seriously, and you should, too. Join us for an early CES look at

what may very well be the sharpest mirrorless interchangeable lens camera to date. ¶ In many ways, the X-Pro1 is simply an updated X100 with the incredible benefit of an interchangeable lens mount. To the untrained eye, the bodies look nearly identical, with a similar construction and finish, familiar dial location and control layout, and even a hybrid viewfinder and full-size flash mount. Though it has a similar height, the X-Pro1 is noticeably wider and thicker than the X100, which is to be expected given the need to accommodate swappable lenses. It towers over other ILCs, like the Sony NEX-C3, but with a demonstrated performance boost, implied durability and an estimated $1,700 body-only price tag, one of the few things separating this from mid-range and even some high-end DSLRs is the mirror. The X-Pro1 includes a 1.23 megapixel 3-inch LCD and a 1.44 megapixel range- **(CONT.)**

finder-like Hybrid Multi Viewfinder, which offers either a data overlay or a full EVF - there's a dedicated dial to switch between the two. ¶ The camera's new APS-C X-Trans CMOS sensor is without question the star of the show, capturing 16 megapixel images with quality that exceeds Sony's NEX-7 and even the aging Canon 5D Mark II — at least according to Fuji's comparison sample images. A new 6-by-6 RGB pixel arrangement in the imaging sensor helps to eliminate undesired effects such as moire without the need for a resolution-hindering optical low-pass filter. This, along with a thinner (yet still quite durable) lens mount that allows the first element in each lens to be positioned closer to the sensor, helps to improve image quality overall. ¶ Based on samples we saw today that were captured with a prototype camera, the sensor really shines with low light shooting — the X-Pro1 can produce usable 16-by-20-inch prints even at ISO 25,600, which is the maximum supported sensitivity. Identical images shot with the 5D Mark II showed significant noise in shadow areas, while the Sony Alpha A77 (NEX-7) produced an image that you certainly wouldn't want hanging on a wall. The playing field was much more even at ISO 6400, where all three cameras captured usable images — noise was still visible on both the Canon and Sony cameras, though it was indistinguishable in the Fujifilm print. Again, all of these samples were provided by Fujifilm, and were not the result of independent testing. ¶ We tested the autofocus system in a variety of lighting scenarios, and it performed equally well in both bright and low light, achieving focus in less than a second every time. We were only able to evaluate focus on-screen, however, since we were not permitted to take away the images we shot with the X-Pro1 prototype. ¶ This isn't a sports camera by any means, but the X-Pro1 can capture stills at 6 frames-per-second, and has been confirmed to snap between 12 and 15 consecutive RAW + JPEG shots when used with a 35 MB/s card. Fuji reps expect that consecutive image count to jump when using a higher-performance card, of course. There are three lenses available at launch, including an 18mm (27mm equivalent) f/2, 35mm (53mm equivalent) f/1.4 and a 60mm (91mm equivalent) f/2.4 macro lens. Fujifilm opted to launch the camera with three prime lenses, rather than a zoom, in order to highlight the camera's image quality. A much wider selection of lenses is on the works, however, beginning with a 14mm f/1.4 prime and 18-72mm f/4 zoom lens later this year, followed by a 28mm f/2.8, 23mm f/2, 70-200mm f/4 and 12-24mm f/4 to come in 2013. All of the zoom lenses will include constant f/4 maximum apertures throughout the range, but may or may not ship with built-in optical image stabilization. The three launch primes are expected to sell for about $650 each when they become available in late February. A Leica M-mount adapter is also on the way. ¶ The Fujifilm X-Pro1 is without doubt a very intriguing camera, offering image quality that appears to exceed some high-end DSLRs in a smaller (though not much smaller) body. It will no doubt be a hit with deep-pocketed X100 owners, but considering that the camera body alone is expected to run around $1,700 when it hits stores in late February, it'd be stretch the expect the X-Pro1 to fly off shelves and into the homes of amateur and even many advanced ILC-seeking photogs. — *Zach Honig*

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SNAPSHOT
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CES 2012

DAY 4
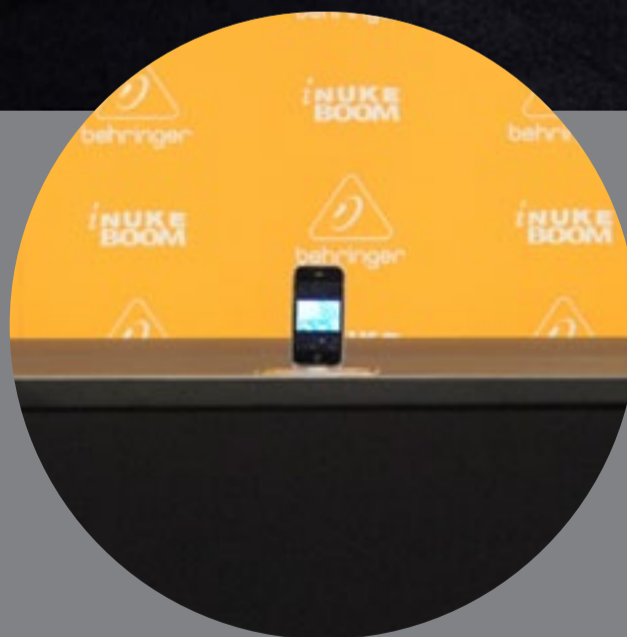
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BIG FAT BASS

Behringer's 8-foot iNuke is one part iPod dock and one part cheerleading platform.

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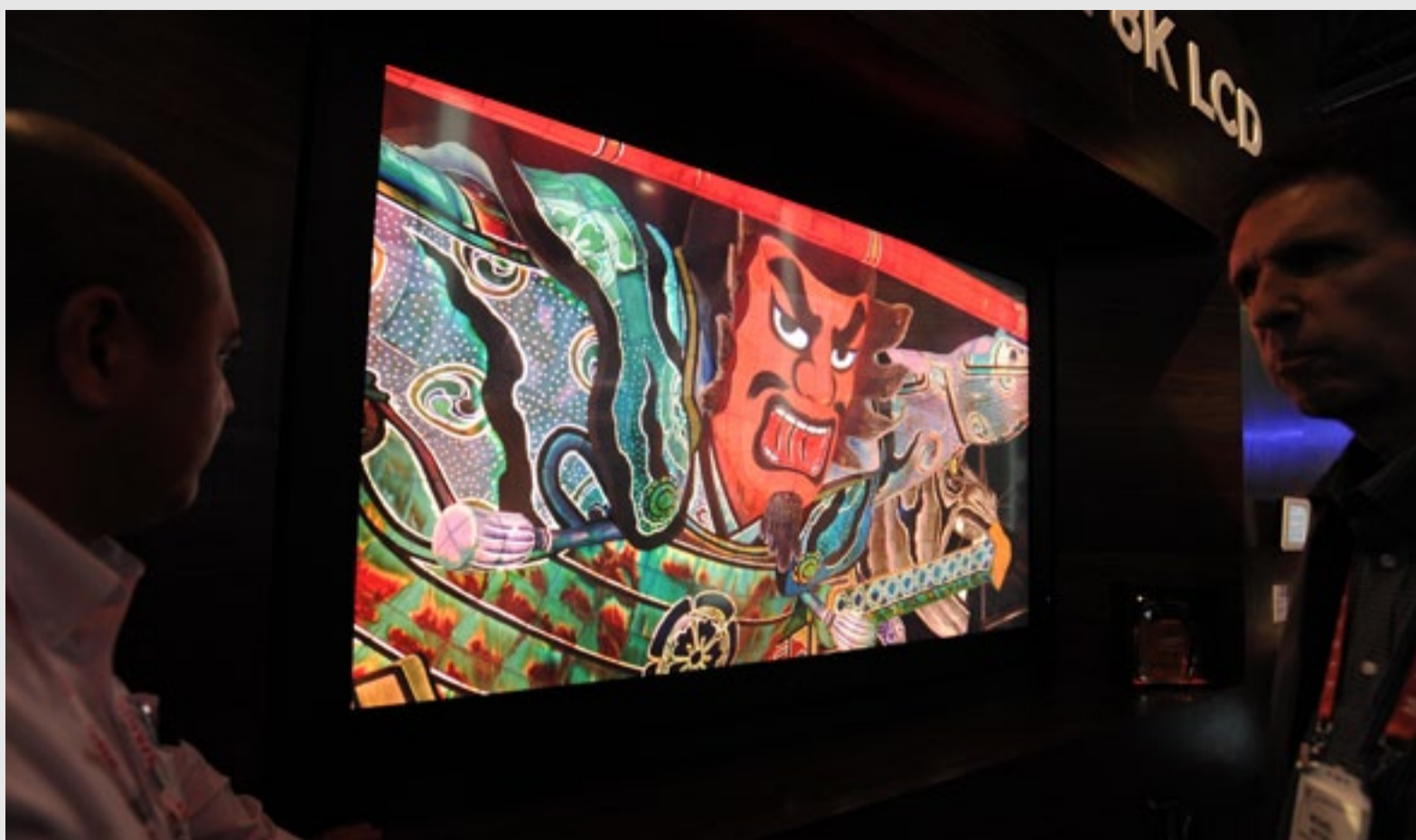
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SHARP 8K SUPER HI-VISION LCD, 4K TV AND FREESTYLE WIRELESS LCD HDTV

PRICE
TBD

AVAILABILITY
TBD

FIRST IMPRESSIONS
These concept displays left us smitten, and spoiled us for pretty much anything else.

We got a hint of Sharp's plans during its CES 2012 press conference two days ago, but really nothing can prepare you for the sight of the company's 7,680 x 4,320 resolution 85-inch Super Hi-Vision 8K LCD. No matter how close we got, we still couldn't see the pixels, and the video reels being demonstrated showed an almost unimaginable level of detail. The worst part of it was, seeing that first almost ruined the experience of checking out the ICC 4K demo at the other end of the booth. We can say this — after seeing Super Hi-Vision there's really no going back.

Make an appointment to see those 33 megapixel broadcasts from the London Olympics now. Also a concept, but packed in a more conventional design, were Sharp's Aquos Freestyle LCDs. These featherweight flat-screens were also featured in the press conference, and pack wireless HD streaming inside capable of extending up to 98 feet. The 20-incher in the video above even has a battery good enough for two hours of completely wireless 1080p viewing. While Sharp called them concepts, the displays seemed incredibly polished.
— *Richard Lawler*

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SNAPSHOT

PRICE
$2,799

AVAILABILITY
Mid-January 2012

FIRST IMPRESSIONS
Serious gaming computer power heads to your keyboard and your wallet loses valuable gold pieces.

RAZER BLADE

Back in September, we got our hands on the 17-inch gaming behemoth from Razer. There was only one snag: the trackpad wasn't fully functional yet. There were screens in place, but we weren't able to test out all of the controls. Here at CES, we were able to get a quick hands-on with a final consumer model, ready to start dominating your next *Skyrim* marathon. As you may recall, the trackpad is offset to the right side of the keyboard so as not to interfere with your access to the essential in-game controls. Serving up quite a few functions, the tech includes a miniature web browser, access to control settings, macro key set-up, YouTube viewer, a number pad and a regular ol' laptop touchpad. Another difference between the model pictured here and the one we spent some time with is the inclusion of a 256GB SSD instead of a 320GB HDD which pushed the launch date back to mid January. The kit will still set you back $2,799 and is slated to ship later this month. — *Billy Steele*

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SNAPSHOT

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TOSY MROBO

PRICE
$200

AVAILABILITY
Fall 2012

FIRST IMPRESSIONS
It's all locks, pops and LOLs as this funky bot gets down in the most amazing ways.

Beethoven's Fifth. Michelangelo's Pietà. Plato's Republic. Cornerstones of human civilization, to be sure, but they all pale in comparison to what we saw today at CES: TOSY's new mRobo robot, inspired by none other than the Cultural Colossus of our time, Justin Bieber. The Vietnamese manufacturer and pubescent Prince have just taken the wraps off their latest collaboration: a petite, portable speaker-robot that dances — nay, *transcends* — just like his only slightly larger ~~progenitor~~ counterpart. When in speaker mode, the mRobo stands a little under eight inches tall, weighs in at just 3.3 pounds, and boasts 2GB of internal memory. Its integrated speaker pumps out the jams at bass levels of 40Hz, but the real magic happens once the music starts playing, automatically prompting the system to transform into an 18-inch tall robot and start dancing. Unfortunately, the bot is still in prototype mode, but it's expected to retail for about $200 when it launches during the fall of 2012. — *Amar Toor*

SPAREONE

Xpal Power (owners of Energizer and PowerSkin) has leveraged its battery-tech know-how into the SpareOne, a cellphone that can maintain its charge for up to 15 years on just a single AA battery. It's designed to be used for sponsorship, hotel use and (most importantly) emergencies, to throw into your trunk and forget about until you need to contact roadside assistance. ¶ We took this device back to the Engadget trailer at CES and every single member of staff played with it, fascinated by the concept. It looks like your average cheap cellphone, except in place of a screen is a transparent plastic void and a prominently branded battery. It's surprisingly solid and well put together, opening the battery compartment reveals a sizable capacitor — which is what we think is the real hero behind its purportedly long life. Because of the stripped-down nature of the phone, we didn't understand why it wasn't initially making calls. The two flashing LEDs indicate battery life and signal strength, but that's all the phone's gonna let you know. ¶ Call quality was basic and loud (like a phone from a decade ago) — harsh to our ears, which have been cosseted by years of noise-canceling microphones. The only thing we weren't able to judge was its USP: the length of its battery life is something we'll have to address in a few year's time, assuming the world hasn't ended. But here's the kicker — judging the phone on its merits today, would you buy one of these over a cheaper Nokia C1 (or the admittedly rare Motofone F3?). We'd be a little more confident about the phone if the warranty of the device was

PRICE
$50

AVAILABILITY
First Quarter 2012

FIRST IMPRESSIONS
Your last line of communication after the Robopocalypse.

longer than a year, you know? Still, we'd feel reasonably comfortable keeping one of these in the first aid kit for when the Robopocalypse hits, hoping that we'd never really need to use it. It'll be available at some point this quarter, will take any GSM SIM or microSIM (it has an adapter) and cost $50. — *Daniel Cooper*
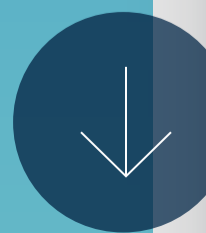
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PRICE
Free

AVAILABILITY
Beta Coming
Soon
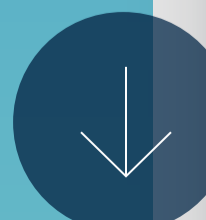
FIRST IMPRESSIONS
A promising play for TV on the (really) small screen.

CELEBRITIES

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DYLE MOBILE TV

Dyle couldn't have found a better showcase than CES to exhibit its next gem. It's only been a few days since we first heard that the joint venture between MetroPCS and the Mobile Content Venture would bear fruit in 2012, and, we've already seen it take its first steps. Although live TV broadcasting to mobile devices isn't exactly cutting-edge, judging by our time with the handset, this is one of the greater implementations of the concept. The company tells us that the app is set to hit its beta stage within the next few months at no cost, but that might change depending on partners and networks. Speaking of partners, Samsung alongside the Metro carrier will be the first to have the chipset-embedded smartphones on the market — yes, that means you won't actually see the circa 1990's antenna. Dyle's also partnered up with Belkin to bring the service past phones and onto tablets, however, unlike the Sammy-branded phone that's expected to use the chip, the tablets will be able to pick up the airwaves by doubling the headphones as a receiver.

—By Edgar Alvarez

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CELEBRITIES

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AINOVO NOVO7 PALADIN

PRICE
$79

AVAILABILITY
TBD

FIRST IMPRESSIONS
Simply not the best, but at $79 it's a tempting treat.

Nope, that's not a typo — we really did get our hands on a $79 Ice Cream Sandwich tablet. The folks from MIPS popped by the Engadget stage to talk about the budget device. The Ainovo Novo7 Paladin is available now in China, so if you actually want to get your hands on the thing here in the US, it will likely cost you a bit more when you actually factor in, you know, air fare and such, but the company assures us that something along the same lines ought to be coming to the States in the near future, with a similar price point. ¶ As expected, this isn't the sexiest tablet we've seen on the show floor — you're not getting a Galaxy Tab here — but the build quality is quite solid. The seven-inch screen is 800 x 480 — again, not high-end specs we're dealing with, but it does the trick for casual gaming and YouTube videos, and the MIPS folks mentioned to us plans to bump up the res for a US release. Along the top of the device, you'll find three buttons: power, back and menu — the placement on the latter two are a bit counterintuitive when first picking up the tablet, but you'll get used to it pretty quickly. Along the right side, you'll find a headphone jack, miniUSB port (yes, mini), volume buttons and a microSD slot for expanding the already decent 8GB of storage. ¶ Inside you'll find that MIPS-based 1GHz single core processor and 512MB of RAM — again, not the greatest, but it should get the job done for most of the paces you'd expect to put a $79 tablet through. There's no cameras or GPS on the thing, though we didn't really miss either one. If you're looking for something that can do video and stills, however, $20 more will get you the $99 Novo7 basic. *— Brian Heater*

Nicole "Snooki" Polizzi for iHip

Jillian Michaels for BodyMedia

Dennis Rodman for PalTalk

CELEBR

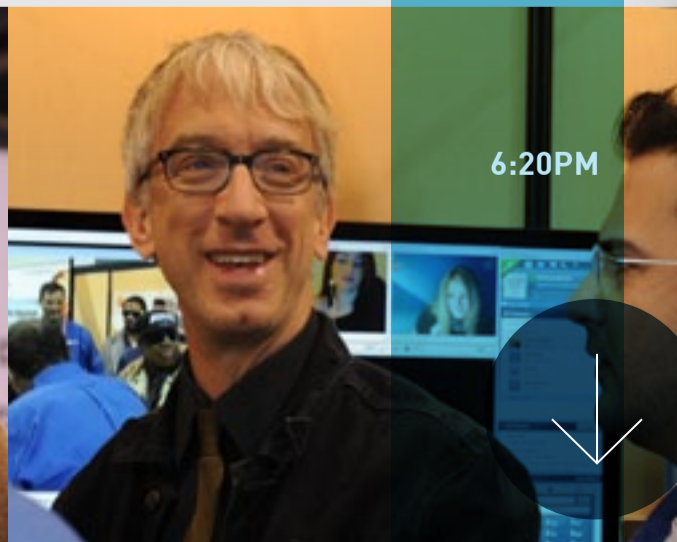PHOTOS THIS PAGE WILL LIPMAN

ATTENTION GRABBERS

CES is all about the hottest products, but it's easy to get lost in the wash of innovation. Companies looking to rise above the noise pull out all the stops and even a few household names.

Justin Bieber for TOSY

Carl Banks for iHip

Andy Dick Dropping In

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ACER ICONIA TAB A510

The follow-up to last year's Acer Iconia Tab A500 — aptly named the A510 — is hanging out in the NVIDIA booth at CES. The 10.1-inch, 1280 x 800 display (the same one on the A500) comes with Android 4.0 on board, alongside a 5 megapixel rear camera and 2 megapixel front-facing cam. The tablet feels lighter than its predecessor (as it should, since it loses the USB 2.0 port), and we prefer the soft-touch plastic backing to the aluminum finish on the last-gen model. ¶ What's most interesting about the A510, though, is not that it has Ice Cream Sandwich pre-loaded, but that it has a custom UI, similar to what you'll find on the Honeycomb-packing A200. Thankfully, Acer's choice of skinning is low-key, and makes for an enjoyable, unobtrusive experience. First off, the UI is very ring-centric: tapping a virtual button in the middle of the task bar launches a ring with four customizable shortcuts, as well as a carousel on the right. Additionally, the lock screen offers a similar circular batch of four direct-access points, rather than the stock two. We appreciate that Acer isn't looking to add a full fifteen pieces of flare to its proprietary user interface. *— Brad Molen*

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CELEBRITIES

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PRICE
$2,000

AVAILABILITY
Now in Middle
East / UK

**FIRST
IMPRESSIONS**
An elegant
ringer, if you've
got the scratch.

BLACKBERRY PORSCHE DESIGN P'9981

Porsche Design's executives use BlackBerry religiously, so when the time came for the luxury brand to consider adding smartphones to its portfolio, Research in Motion was a natural — and perfect — fit. Problem is, BlackBerry phones don't necessarily exude the luxury look and feel necessary to attract Porsche Design's customer base, so CEO Juergen Gessler got in touch with RIM to see if the two companies could collaborate on a phone that would take the best of BlackBerry and combine it with Porsche's premium design. Presto, the device now known as the P'9981 was born. We had the chance to behold the phone with our own eyes and hold it in our hands. ¶ Since the smartphone was meant to be a niche product focused heavily on elegant design and the best materials at Porsche's disposal, the P'9981 isn't going to be mass-distributed. The phone, as you'd expect, is essentially a BlackBerry Bold 9900 in a body crafted with forged stainless steel and a leather-wrapped back. On the bottom you'll find a plastic material that allows for better reception without worrying about interference. The **(CONT.)**

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CELEBRITIES

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keys, much like the rest of the phone, are made of metal and offer a decent amount of give. We enjoyed the keyboard because it felt solid, but the frets were angled differently and the typing experience wasn't as smooth or fluid as the 'board found on the 9900, but it was by no means a horrible experience. ¶ The P'9981 offers many of the same innards as the BlackBerry Bold, complete with a 1.2GHz single-core CPU, HD video recording capabilities, 640 x 480 display, 8GB of onboard memory, a microSD expansion slot and an inbuilt NFC module. While the device has a touchscreen, we found it to be unresponsive. The 9900's optical pad is replaced with a camera that lays beneath the glass and senses the movement of your thumb. Aside from this and the other external design differences, the software won't look quite the same. While the phone runs BlackBerry 7.0, it uses an exclusive Porsche Design theme and every PIN begins with a P, which makes it easy to identify other high-end users — just like you're part of a swanky, exclusive club — and you can BBM your fellow P'9981 buddies while they're finishing up their 18 rounds. ¶ Let's get this out there: it's a beautiful phone that's wonderfully crafted. Its premium materials and attention to detail definitely makes this a top-notch phone for anyone who can afford it. Now, keep in mind that this is an extremely niche product that isn't meant for everyone; think Vertu for the BlackBerry brand. Currently available in the Middle East and select stores in the UK for "around $2,000," and will be making it to the US and Canada sometime in the coming months. No carriers have been announced, which comes as absolutely zero surprise to us; expect to see the device sold on a limited basis as an unlocked GSM device.
—By Brad Molen
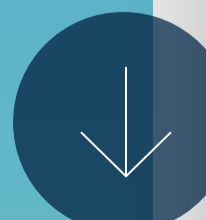
OMAP 5 REFERENCE DESIGN

PRICE
TBD

AVAILABILITY
TBD

FIRST IMPRESSIONS
TI's latest OMAP processor looks to have a bright future on phones and beyond.

12:25PM

4:13PM

Texas Instruments promised us a new helping of OMAP right around a year ago, and sure enough, OMAP 5 processors will be sampling to partners as early as next week. Texas Instruments' Remi El-Ouazzane (VP of OMAP) just debuted an OMAP 5-based reference design (or "development platform," if you will) on our CES stage, a solid four years after OMAP 3 debuted on a non-descript Archos tablet. OMAP 5 brings along a pair of cores and plenty of power savings, a dual-GPU architecture and more raw horsepower than the average simpleton is used to handling in a single palm. We saw quite a bit of swiping through Android 4.0, and as you'd expect, everything looked decidedly snappy. 720p video at 30 frames per second is no real chore, with the plat-form capable of pushing 1080p material at 64 frames per **(CONT.)**

second (130 frames per second without screen refresh limitations). Of course, with everything being hardware accelerated, we can't feign surprise about its future on netbooks and laptops. To quote Remi:

"**This is the greatest platform on Earth right now... way ahead of Apple, and it's the first Cortex-A15 (which runs 2x faster than the Cortex-A9) product on the market. When running two Cortex-A15 chips at 800MHz, it's more or less the same performance as running two Cortex-A9s at 1.5GHz. You'll see [commercially available products] ramping up with this stuff in late 2012 or early 2013. We are also running Windows 8 on the latest OMAP; it runs perfectly well, and we've been working very closely with Microsoft. We're working on multiple form factors — tablets, thin-and-lights — and we think ARM is going to bring tablets to the masses."**

He also made clear that he's hoping to bring more and more Android into the enterprise, therefore accelerating the proliferation of the OS as a whole. Moreover, he told us to "expect" OMAP 5 in laptops and Ultrabooks running Windows 8, and alluded to the possibility of seeing the first ones by CES 2013.
— *Darren Murph*

CES
2012
DAY 5

6:20AM

11:02AM

12:21PM

CELEBRITIES

12:25PM

4:13PM

ROBOTS

It wasn't all TVs and tablets at the Las Vegas Convention Center this week. In fact, we saw a decent number of robots at CES 2012, dedicated to everything from washing your windows to getting the party started — thankfully, there weren't many automatons with a vengeance on hand. Below are just a few of the cute and curious show floor robos.

TOSY DISCOROBO

CLOCKWISE
FROM TOP
RIGHT:
OLOGIC AMP
MUSIC BOT,
SKETROBO
"SKETCH
MASTER,"
NEC PAPERO
& RYDIS H800
AIR CLEANER
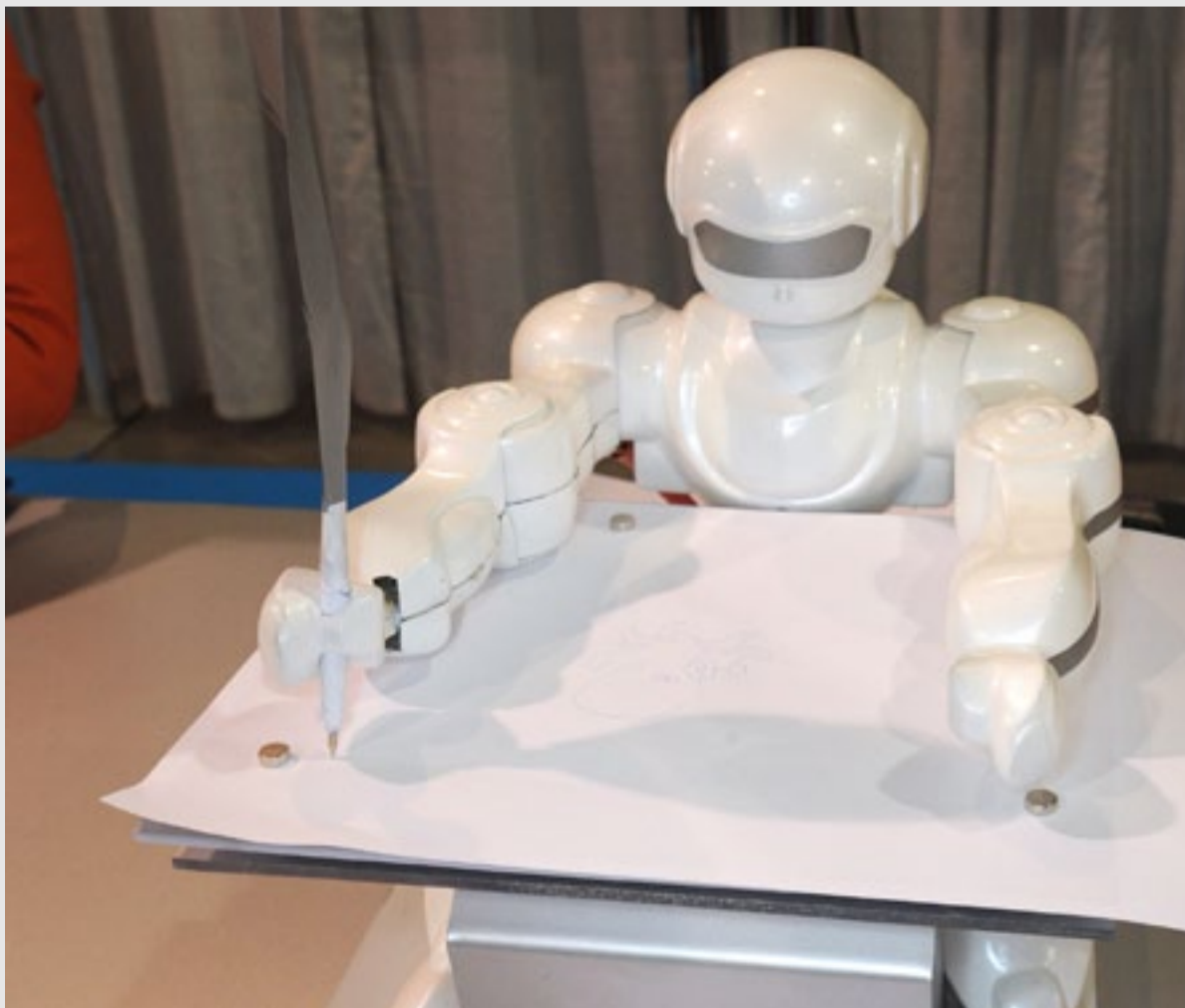
CLOCKWISE FROM TOP: ECOVACS WINBOT WINDOW CLEANER, YURBOT DESKTOP COMPANION & PLEO

A CES without crapgadgets would be like a toilet without, well... you get the point. As in years past, finding these useless and unusual oddities was like finding hay in a haystack. We'll let the pictures do the talking on this one.

MUGTUK'S INTERACTIVE IPHONE CASE FOR KIDS

CES
2012
CRAPGADGETS

CLOCKWISE FROM ABOVE:
XROCKER GAMING CHAIR,
ARTMOTION TV FRAME &
W-KING AIR MOUSE

CLOCKWISE FROM ABOVE: K-OK CASE FOR IPAD 2 & 3, ICARLY KARAOKE MACHINE & THE WATCH YOUR BAG

AUTOS

Cars may not be at the center of the Consumer Electronics Show, but there were plenty on offer both inside and outside the LVCC. As could be expected, most of the autos featured top-notch navigation systems, heads-up displays and banging sound. If you have a need for speed, feel free to proceed.

AUDI

FORD

KIA

CONCEPT FOR LAMBORGHINI

CES 2012 AUTOS

KIA

CROSLEY

MERCEDES-BENZ

THERE'S AN APP STORE FOR THAT

Switched On

BY ROSS RUBIN

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

When the iPhone was launched in 2007, it enticed consumers with its then-large display and multitouch user interface. But an even more critical part of the iPhone experience wouldn't arrive until a year later when Apple opened the door to third-party apps via the iTunes app store. Apps available for the iPhone expanded the device's functionality to the point where their variety became the key to Apple's TV market and spawned a catchphrase. Over time, virtually all of Apple's smartphone competitors have added their own app marketplaces, and Apple brought the digital marketplace to the Mac with Lion. ¶ One of the main ideas behind an app store is that they help software developers monetize their efforts, but they can also be used to help legitimize new platforms or encourage or coerce certain development priorities. We saw evidence of all of these as app stores continued their proliferation in three emerging platforms at CES:

Windows 8

If there's one platform that most would say does not need an app store, it is Windows, which has been one of the most successful of all time in attracting developers due to its massive installed base and mature development tools. But the next version of the dominant operating system on PCs brings the biggest changes to the default user interface in its history as it adopts the Metro stylings that presently define the Windows Phone user interface. Microsoft will use the Windows app store to help proliferate the style of these apps as it begins a massive migration.

Lenovo K91

In contrast to Apple, which allows only its app store on the

iPhone, Android is open to many app stores. The largest that Google runs, is Android market, which has expanded its purview from phones to tablets and now to televisions via Google TV. But in launching the first TV to run the latest version of Android in its home country of China, Lenovo has had to take some matters into its own hands, launching its own app store in order to review Android apps that conform to the resolution and input methods available on television.

Netgear's Smart Network

Microsoft's Windows Home Server was launched with the idea of taking the flexibility of enterprise Windows servers into the home. That included the ability of developers to create add-on applications, which Microsoft called "snap-ins." The platform has attracted a few, but the product's limited customer base hasn't pushed Microsoft to bring an app store to it yet. Netgear, though, which makes the competitive ReadyNAS line of home servers, isn't waiting around. At CES, the company announced its "smart network" initiative, which provides a friendly user interface for seeing and configuring which apps are on home networking devices as well as a means to acquire new apps for them easily.

As we've seen with the iPhone, iPad and Android phones, well-populated and managed app stores can be key to driving a rich user experience. But they can also point out the sparse selections for a platform, as they did for the HP Touchpad and BlackBerry PlayBook.

The Last Word - Box Brown

engadget distro

While you were at home enjoying our coverage, the Engadget staff was running things from a doublewide in a parking lot in Vegas. We had to catch winks of sleep when we could — even if that meant curling up on the trailer's industrial carpet. Fueled by Doritos and Starbucks, and churning to a sound track courtesy of the posh potty, we worked ourselves stupid, as evidenced by the pictures here. If one thing drove this pack of wild wolves more than a love for the game it was Bieber fever.

The handwritten whiteboard in the collage reads:

TIMS
Times Fired   Doven Fired

Brad   ZACH
Josh B   Josh B
Brian   Tim
Dylan   Dante
Matt   Dana W
Zach H   DEVS
Mycob   Brian FUBAR'D
DANTE   DAN
Dana W   MAT

DANTE LIST   MYRIAM LIST

Billy   JOSEPH
Tim   Dante
Scott B   MIRIAM
Matt   ZACH H
                        ZACH L