

TOOLS of the TRADE



Acer Aspire R7

If the design factor of the tablet continues to erode laptop sales but the glass keyboards still fail to impress those who like to feel what they're typing, then what about a futuristic-looking hybrid like the Aspire R7 from Acer? It's a tablet with a keyboard body. Acer has co-branded its new convertible notebook with the latest Star Trek film, *Into Darkness*, in which the computer stars as a product placement. Instead of a conventional laptop hinge, which allows a screen/tablet to rotate and unattach, the Aspire R7 has an Ezel™ hinge that allows it to float over the keyboard at any viewing angle. The 15.6", 1,080-pixel responsive touchscreen is bright and, like the body, encased in metal. The R7 is powered by an Intel Core i5 1.8 GHz processor with Turbo Boost to 2.7 GHz. There's 6GB of RAM memory, a 500GB SATA hard drive, and a 24GB solid-state drive. There's an HD web-

cam with dual microphones, and the sound system is optimized Dolby Digital Plus Home Theater with Intelligent EQ and Surround Virtualizer. Networks include wireless A, B, G, and N, and it's Bluetooth enabled. There are two USB 3 and one USB 2 ports, and the operating system is Windows 8. The R7 is only 1.1" thick, but, at 5.3 lbs., it isn't a lightweight. It's available for just under \$1,000. www.explorebeyondlimits.com

Tableau Software

Communicating business intelligence often requires a process to translate the numbers into

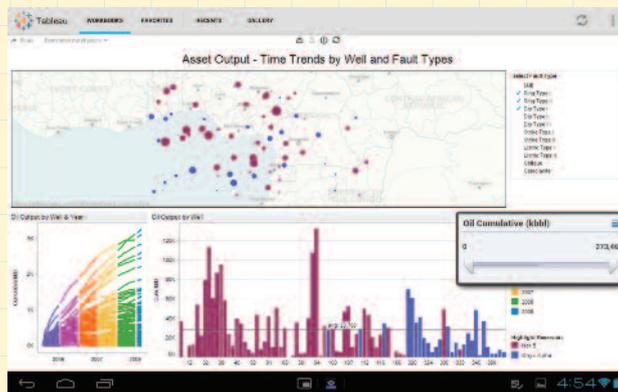
images and colors. Data visualizations can involve charts—bar and pie—heat maps, graphs, multiple views of the same data simultaneously, and more.

Tableau Software calls this abstraction of the data a "viz," and the Tableau products that enable the creation of these are Tableau Desktop, Tableau Server, Tableau Reader, and Tableau Public. Desktop lets you work with spreadsheets, databases, or even data warehouses, and it's designed so that any Excel user can create a viz or a multiple-view dashboard. The Server is used to send out analytics across your entire organization. And the Tableau Public is a free, cloud-based product that anyone can use with public data to analyze and create dashboards. You publish your work to the Tableau Public hosted service,

providing interactive, live data visualization on the Web without setting infrastructure or doing any programming. www.tableausoftware.com

Samsung Galaxy S4

A Samsung co-CEO at launch said that he expected the latest Galaxy S4 Android big-screen smartphone to sell at least 10 million units in the first month. That would be twice as fast as the S3, and it looks like it will happen. With its quad-core 1.9 GHz processor running on Android 4.2 Jelly Bean OS, more than a few reviewers have called it "the most powerful, do-everything smartphone." It's big—5.4" × 2.7" × 0.3"—but it weighs only 4.6 oz. The 5" HD Super AMOLED (1,920 × 1,080 pixels) screen displays 441 pixels per inch. There's 2GB of RAM and the choice of 16, 32, or 64GB of memory, with a microSD slot to add up to an additional 64GB. Pair the processing and memory with the Android App offerings—almost 700,000—and this oversized phone is a very capable computer. The main camera is a 13-megapixel auto focus with flash



TECH FORUM

Internet TV from Philo to Roku

By Michael Castelluccio, Editor

On September 7, 1927, inventor Philo Farnsworth lugged his image dissector camera tube into another room in his San Francisco lab and then invited perspective investors to witness the operation of the world's first all-electronic television set. Seventy-five years later, also in California, another group of innovators debuted the Roku, a small black box, weighing ounces, that also radically changed broadcasting using Philo's murky, brightly lit window. Farnsworth's greatest contribution was that he changed television from what had been merely a mechanical machine using disks and rotating mirrors to an all-electronic device, and the first generation Roku added a very small video streaming box running Linux rigged to deliver Netflix content on your television from the Internet.

Prophetically, the first thing Farnsworth broadcast that day was the image of a dollar sign. A little heavy-handed with the symbolism, but it turned out to be historically accurate, nonetheless. The long-range effect of the Roku device on an established community of television networks is still unclear, but importing the new world network, with much of its content free, to home television is a definite challenge for the cable networks, which, ironically, were themselves already threatening the broadcast networks—CBS, PBS, and the rest.

INTERNET TV

To get Internet TV at home, you just need a Roku and a wireless network. You don't need a computer to connect, so even households without a smartphone, laptop, or tablet can check their Facebook before they select which Netflix offering they want to stream that evening. The benefits are numerous. Computers are expensive, whereas you can buy a Roku for as little as \$49.99. Smartphones come with a contract—the Roku offers a load of free channels and low-cost subscription-based channels if you want them. The device itself has no additional charges, just a one-time purchase price. *continued on next page*



and zero shutter lag. The front camera is two megapixels. The camera features include dual shot, 360-photo, animated photo, best photo, HDR (High Dynamic Range), panorama, and sports. Video is full HD 1,080 pixels. The built-in sensors include accelerometer, RGB light, gyro, barometer, temperature and humidity, and gesture. Networking includes Wi-Fi (ABGN), GPS, Bluetooth, and IR LED to use your phone as a TV and DVR remote control.

www.samsung.com

Logitech Tablet Keyboard

If you already have a cover or folio for your iPad but still want an external wireless keyboard, you can get one from Logitech that doesn't duplicate what you already have. The Logitech Tablet Keyboard for iPad is a Bluetooth key-

board with its own cover that doubles as a stand for the tablet. If you prefer the way your current cover can position the iPad for typing, that's fine, too. The keyboard connects wirelessly via Bluetooth 1.2, and the connection to iPad, iPad mini, and even iPhones and iPod Touch is automatic once you ask your device to look for a Bluetooth connection. Bluetooth has a range of 30 feet so the two don't have to be side by side. The full-size keyboard is 11.3" × 5.5" × 0.62", weighs 14 oz., and runs on four AAA batteries, already installed. The keyboard carrying case doubles as a stand accommodating landscape and portrait positioning.

www.logitech.com



And a final comparison between getting Internet content either on your computer or a Roku connected to your television involves the learning curve for each.

There is no learning curve beyond three menu choices on the Roku home screen.

Computers? Well, we know how that's gone. And because your television set in the living room is probably much larger than your laptop, movies, news, games, and sports are going to look better there than on the 15-inch screen on your desk or in your lap.

Roku isn't the only set-top receiver for Internet content. Apple TV will do the same thing Roku does, and most side-by-side comparisons of everything from hardware to cost are pretty even between the two. Roku has a better selection of content, but Apple TV is a great product. Why Cupertino has neglected the marketing, especially in light of the hoopla for the mobile products, remains a mystery. There's also the difference in corporate cultures that might influence buyers deciding between the two. If you remember the two cultures described in Eric Raymond's classic *The Cathedral and the Bazaar*, Roku is from the open-source world while Apple TV is from the corporate cathedral. For those who prefer the Internet as open source and free, that might be moving the market.

HOW DOES IT WORK?

In simplest terms, the three-inch, five-ounce Roku appliance brings the Internet to your television without a computer. There are only four different models you can buy—three will work with virtually any TV, while the top-of-the-line Roku 3 will work only with HD TVs. Otherwise, all provide the same content via built-in Wi-Fi. You do need an adequate Internet connection in your home and Wi-Fi, but almost any router or access point with 802.11b/g/n wireless protocols should work—that includes Apple's Airport stations.

The installation is unlike any you've encountered with a computerized device. You plug it in. It looks for your Wi-Fi Internet connection. When it sees that, it will check to see if your system is password-protected. If it is, you enter that password, and...that's it.

As mentioned, there are no monthly charges for the box, but like iTunes and the Android app stores, you're asked to sign up for an account with a credit card.

At this point you'll encounter the retro annoyance of typing in information by arrowing to letter blocks and tapping.



Later, you can get another remote by downloading the Roku app on your iPhone, Android, or tablet, which then lets you type on the keyboard of your mobile device. It's a good idea to do this anyway because you'll then still be able to

navigate menus and access channels when the dog carries off your Roku remote or your toddler decides to hide it. The app remotes also have information and search functions for the channels.

Speaking of which—they technically aren't really channels. Since you're pressing buttons on a remote that flips through them like they were, however, we'll use that general classification. There are about 750 channels, along with a number that are unlisted by Roku, and you can find these with their subscription numbers by Googling them on your computer.

Much of the content on Roku is free, but there are premium channels that require modest subscriptions. The most prominent of these is the original stream tapped from Netflix. There's a free trial period, and then the charge is \$8 per month. Other very popular movie channels with subscriptions are the Amazon Instant Video, Hulu Plus, and HBO GO. The free channels range from Crackle to a number of vintage and independent film venues. There are many specialized movie channels, like those in the horror and documentary fields, and short independent videos are at locations like Vimeo, a channel where you can watch or even post your own work.

Channels include the Ted ideas channel, TWIT (This Week in Technology), coursework from universities around the country, foreign television, radio like Pandora and Tune-In, PBS, endless kids' fare—it would take weeks to browse all the offerings, and then you'd have to start over with those "just added." Unlike those unhappily trapped in cable fiefdoms where you end up paying for a lot of offerings you would never watch, you can pare your list down on Roku to an absolute minimum of what you'll watch and get a chance to select between many, many choices within the categories you select. They can be free or subscription; your cable provider has nothing to say about it.

On the September day that Farnsworth presented his demonstration, he offered an official pronouncement marking the event. He said, "There you are—electronic television." With Roku, we can edit the "electronic" part to now read "Internet." Can you imagine how amazed he would have been with this? **SF**