TECHNO TRENDS
THE BIG IDEAS THAT ARE CHANGING EVERYTHING

THE FUTURE OF APPS (PART II)

BY DANIEL BURRUS, CEO OF BURRUS RESEARCH

Last month, I shared my vision on the future of apps for personal use as well as the future of business enterprise level apps and what companies should consider before and during development.

This month, I would like to share my vision on the next evolution of apps for the Television. Today's newer televisions are Internet enabled. (And, by the way, all our devices will be Internet enabled one day.) That means the processor and the television browser are built into the TV set so you don't have to plug a computer into your television; the TV is the computer.

With this comes the wide-scale use of Internet Protocol Television, or IPTV for short. It's essentially TV over the Internet versus on cable and satellite. In fact, many Millennials use IPTV service for all of their television viewing rather than cable or satellite. Knowing this, it's only logical that we'll also see apps for TV, Television level apps. (Some new models already have them.) Flat panel displays provide even more visual real estate and will most likely have faster processors. Many new TVs are also 3D equipped, meaning that your apps will be 3D too. As you can see, in the app world, this is a game changer. Smart companies need to stay ahead of this evolution and create their apps accordingly.

continued on page 2

AUGUST 2010 VOL. XXVI, NO. 8

DAN BURRUS' NEW BOOK FOR 2011

Flash Foresight: How To See the Invisible and Do The Impossible will be the lead business book published by HarperCollins for 2011. The scheduled release date is January 4, 2011. Stay tuned for more exciting news on Dan Burrus' new book.

FOLLOW DAN BURRUS

www.Twitter.com/DanielBurrus
www.Facebook.com/DanielBurrus
www.linkedin.com/in/DanielBurrus

PUBLISHED BY: burrus research
800-827-6770
www.burrus.com

THE FUTURE OF APPS *(continued from page 1)*

STAKE YOUR CLAIM IN TOMORROW'S APPS

If you look at the types of apps currently available in the app stores, you can see that most of the companies developing apps don't see the future of apps. They're doing simplistic and basic apps that don't take into account future needs and they certainly aren't enterprise level apps. In fact, if you look for business apps in iTunes, the largest app store, you'll find numerous apps on such things as document scanning, creating to-do lists, and document sharing. Such apps are so common that some could argue they're commodities. Standing out in the business world requires you to be more than a commodity – you need to be a unique solutions provider. Tomorrow's apps will do precisely that.

Realize that apps are a major tectonic revolution in computing. We went from servers, mainframes, and terminals to having our own desktops and PCs to having our own laptops. Smart Phones and Smart Pads that enable us to connect to the world from anywhere are now becoming our main computing devices.

By making the Smart Phone and Smart Pad a multimedia PC powered by dozens if not hundreds of apps, people can now have a powerful computer with them at all times. As result, people from all walks of life and every industry have the ability to do some amazing things they couldn't do before. That's a giant shift in thinking about phones and apps…and one your company needs to be a part of.

TECHNOLOGY NEWS HIGHLIGHTS

IPHONE SHOPPING APP

With online shopping becoming more and more popular, brick-and-mortar retailers are looking for innovative ways to bring people through their doors. Now, a new iPhone app has been developed that is designed to do just that. A tracking device – called a deducer – is installed in the store or shopping mall to detect when a shopper has entered the building. After getting the user's permission to activate the service, it then informs them of special offers, discounts, or other information that is tailored to their needs. The free mobile app (known as Shopkick) is being rolled out in Macy's and Best Buy stores in New York, Los Angeles, San Francisco and Chicago. Simon Property Group, the largest mall operator in the U.S. also has plans to launch the service at 100 of its shopping malls.

For information: Shopkick; Web site: www.shopkick.com

COMPARISON SHOPPING FOR HEALTH CARE

Cleveland Clinic recently teamed up with some prominent venture capitalists to build a search engine that will allow consumers to comparison-shop for health care services. In these days of sky-rocketing costs and reduced benefits, many consider this kind of transparency to be an important tool for consumers to make better-informed health care decisions. The company contracts with employers (on a per employee basis) giving them access to a portal where they can search for a specific procedure to find doctors in the area and how much they charge. The information in their database is taken from explanation-of-benefits (EOB) forms provided by employers. In the Bay area, for example, charges for a colonoscopy can range from $500 to $3,000. Under the new system, if an employee chooses a doctor who charges more than the employer's pre-determined usual and customary fee, they are responsible for paying the difference. Future enhancements will likely include an educational component that further explains the types of tests that would typically be ordered for a particular problem and what they entail.

For information: Giovanni Colella, CEO, Castlight Health, 685 Market Street, Suite 300, San Francisco, CA 94105; phone: 415-671-4683; Web site: www.castlighthealth.com

FIBERGLASS GLUE

German researchers recently announced the development of a new material that could revolutionize the use of lightweight plastic composites for the construction of aircraft, boats, automobiles and wind generators. The polymer resin, which was developed using nanotechnology, is injected between dry carbon fibers, then cured using microwaves to form a bond that is strong enough to hold even fuselages and wings together. The trick was to

achieve consistent curing even when the fields are not homogeneous, as is the case with microwaves. The result is a low density bond that is ideally suited to lightweight construction applications, and is also uniform throughout thick fiberglass structures. The new technology is fast and energy efficient, and could open up a host of new applications for the use of glass fiber composites.

For information: Karlsruhe Institute of Technology, P.O. Box 3640, 76021 Karlsruhe, Germany; Web site: www.kit.edu/english/index.php

MINI FLASH DRIVE

A new USB flash drive is now available that's about the size of a paper clip and comparable in weight to a penny. Called the Cruzer® Blade™, the miniature device boasts up to 16 gigabytes of storage – enough to hold about 4,000 songs or 5,000 photos. Available in a variety of capacities, the 16 GB model retails for about $78.00USD while a 2GB version sells for around $15.00USD.

For information: SanDisk, 601 McCarthy Blvd., Milpitas, CA 95035; phone: 408-801-1000; fax: 408-801-8657; Web site: www.sandisk.com

WIND POWER FOR CARS

A new system is being tested in Japan that will make wind generators more cost-effective by reducing the need for costly battery storage units. Currently, power companies purchase the power that's generated during the day, when demand is at its peak. But the power produced at night needs to be stored in a network of sodium-sulfur batteries, which can be as expensive as the generators themselves. The new system is designed to bypass the need for costly batteries by utilizing the energy generated at night to charge multiple electric vehicles. It monitors each vehicle's battery status as well as the amount of power being generated to evenly distribute the charge. One windmill generating 3000Kw of energy is capable of charging 200-300 cars per night. The technology will initially be commercialized in areas with small grids, such as remote islands.

For information: Mitsubishi Motor Corporation, 33-8, Shiba 5-chome, Minato-ku, Tokyo 108-8410, Japan; Web site: www.mitsubishi-motors.com

FLEXIBLE LIGHTING

Most of the energy-efficient LED lights available today are made using polymethylmethacrylate (PMMA) resin, which is highly transparent but difficult to bend. Now, a new proprietary material is under development which not only has a higher transmissivity (by about 3 percentage points) but is also flexible enough to be rolled up by hand. Light-emitting diodes (LEDs) are fixed along the edges of the material, but because the plastic has a reflectivity index of angled light that's 1.3 times higher than glass, the light is evenly distributed throughout the material, even when it's bent at a 90 degree angle. Applications for the new plastic include both direct illumination and backlighting for advertisements. It could also be used for television screens. And because it's flexible, it can be used flat or wrapped around posts or other curved surfaces.

For information: Idemitsu Kosan, Co., Ltd., 1-1, Marunouchi 3-chome, Chiyoda-ku, Tokyo 100-8321, Japan; phone: +81-3-3213-9554; fax: +81-3-3213-9565; Web site: www.idemitsu.co.jp/e/index.html

DRIVING BLIND

A new technology that employs "non-visual interfaces" may someday allow the blind to drive a car. Many of the components could also be used to make conventional vehicles safer. The system utilizes an array of cutting-edge technologies to sense information about the area surrounding the vehicle and uses it to guide the driver. For example, laser range finders are used to sense obstacles and to gather data about the road. A tactile map interface then presents the information to the driver. A combination of voice commands and a click-counter steering wheel give feedback on direction, and a vibrating vest is used to indicate changes in speed. The "dirt-buggy" prototypes were tested on an obstacle course marked out by traffic cones. However, the researchers are in the process of retrofitting a Ford Escape to

be demonstrated on a course near Daytona International Speedway in January.

For information: Dennis Hong, Virginia Polytechnic Institute and State University, Mechanical Engineering Department, 105 Randolph Hall, 118 N. Main Street, Blacksburg, VA 24061; phone: 540-231-7195; fax: 540-231-9100; email: dhong@vt.edu; Web site: www.vt.edu

INEXPENSIVE SOLAR CELLS

What do blue jeans, ink pens and solar cells have in common? As it turns out, the same molecule found in common industrial dyes used to make denim and pen ink can be used to fabricate solar cells that are cheaper and more versatile than today's silicon-based panels. The organic dye molecules were combined with stable molecules called protected catechols and an acid catalyst to form two-dimensional sheets. The sheets were stacked together to form a lattice which, when filled with another organic material, formed a low-cost, lightweight, flexible and highly-efficient solar cell.

For information: William Dichtel, Cornell University, Department of Chemistry and Chemical Biology, 122 Baker Laboratory, Ithaca, NY 14853; phone: 607-254-2356; fax: 607-255-4137; email: wdichtel@cornell.edu; Web site: www.cornell.edu

FLYING ROBOTS

A number of researchers are taking inspiration from insects to develop innovative robots capable of performing a variety of tasks. At Wright State University, a four-winged robot dubbed the Wright Dragonflyer is being designed to perform aerial surveillance for environmental monitoring as well as search and rescue operations. The prototype (about the size of a real dragonfly) is expected to be completed this year. Harvard University roboticists are working on a colony of RoboBees – life-sized mechanical flies that combine optical and chemical sensors with communication systems to coordinate with other members of the "swarm" as they search for objects or people. And a flying robot has been developed at the University of Waterloo in Ontario which is about the size of a pencil eraser and has a pair of laser-operated grippers to grasp small objects. The developers hope to modify the design for use inside the human body as a vehicle for targeted drug delivery.

For information: Haibo Dong, Wright State University, Mechanical & Materials Engineering, Russ Engineering Center, 3640 Colonel Glenn Highway, Dayton, OH 45435; phone: 937-775-5143; email: haibo.dong@wright.edu; Web site: www.wright.edu

Robert Wood, Harvard University, Engineering and Applied Science, Maxwell-Dworkin 149, 33 Oxford Street, Cambridge, MA 02138; phone: 617-496-1341; email: rjwood@eecs.harvard.edu; Web site: www.harvard.edu

Mir Behrad Kahmesee, University of Waterloo, Department of Mechanical & Mechantronics Engineering, 200 University Avenue West, Waterloo, Ontario, Canada N2L 3G1; phone: 519-885-1211; fax: 519-885-5862; email: khamesee@mecheng1.uwaterloo.ca; Web site: www.uwaterloo.ca

PREDICTING TRAFFIC FLOW

According to the Texas Transportation Institute, traffic congestion in the U.S. alone burns up the equivalent of 58 supertankers of fuel and 105 million weeks of vacation time annually. Per person, that's nearly a week's worth of time and 26 gallons of gas every year! That's why, as part of their "Smarter Planet" initiative, IBM has come up with a way to predict traffic flow as much as an hour before it occurs, giving drivers the opportunity to avoid congestion. The system uses a predictive modeling algorithm that combines historical and real-time data (from road sensors, cameras and GPS transponders in taxis) with information about roadwork and weather. Advisories are broadcast to electronic road signs as well as car navigation systems. The system recalibrates every week using a six-week moving window of statistical data. It can also be customized to selectively re-route drivers to optimize traffic flow.

For information: IBM Corporation, 1 New Orchard Road, Armonk, NY 10504; phone: 914-499-1900; Web site: www.ibm.com/smarter-planet/traffic

Technotrends is published 12 times a year by Burrus Research, Inc., a research and consulting firm that monitors global advancements in science and technology and their direct impact on business and consumers. Mary Norby, Editor P.O. Box 47, Hartland, WI 53029-0047. To subscribe, call 800-827-6770, or email office@burrus.com. © 2010 Burrus Research, Inc.