



# TECHNO

THE BIG IDEAS THAT  
ARE CHANGING EVERYTHING

# TRENDS

## GO MOBILE! A HIGHER LEVEL OF SOCIAL MEDIA MARKETING (PART I)

BY DANIEL BURRUS, CEO OF BURRUS RESEARCH



By now, most businesses know how vital social media marketing is for their bottom line. From keeping a pulse on your customers' experience to branding your company to promoting

your products and services, social media marketing allows you to do so much for so little.

Yet, one of the main complaints businesses cite about staying on top of their social media marketing efforts is the time involved to do so. They feel that someone has to be tied to the computer 24/7 to make the effort effective. Fortunately, with today's mobile applications and technology, social media marketing is being reborn as a mobile experience – a mobile social media marketing initiative, so to speak.

As more people realize and embrace the fact that social media marketing is a real time experience rather than a "wait till I get to my computer" experience, they're taking advantage of the processing power today's mobile phones have to offer. So while real time does mean you have to have your computer with you at all times, that computer is now your cell phone, not your laptop or desktop.

*continued on page 2*

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- Smart Cane
- Purging Personal Data
- Vehicle Sound Synthesizer
- E-Wallpaper
- Spider Web Glue
- "Clean Hands" Reminder
- Magnetic Mood Enhancer
- Wireless HI-FI
- Fish Tracking
- High-Efficiency Jet Engine
- Self-Cleaning Windows

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## GO MOBILE! (PART I) *(continued from page 1)*

### THE DRIVING FORCES

Both technology and people are driving the prevalence of mobile social media. One of the basic human needs since the dawn of time is to connect with others. Additionally, today's increased processing power, bandwidth, and storage available on mobile devices enables people to have better audio and video capability on their phones. This means people can communicate with their phone more effectively, in a way that goes beyond your basic phone call. And when any time technology allows you to communicate and connect better, you have a revolution. From smoke signals to telegraphs to telephones to cell phones to the mobile social media, all are evolutions that cause revolutions.

Other driving factors include globalization and localization. Globalization means you can now connect to the world with your phone. You don't need a laptop or a television to see news feeds from around the world. At the same time, it's local. You have access to local events and happenings. With permission, you can see where your friends or employees are at any given time. So your phone can deliver much more than just weather forecasts; you can also know what's going on around you at all times.

### THE CASE FOR MOBILE SOCIAL MEDIA

Because the phone was designed for two-way communication and social media marketing is a two-way dialogue, it's a natural extension to have cell phone applications for mobile social media – programs for your cell phone that allow you to view and post to various social media sites.

With mobile social media, we're no longer just sharing information; we're disseminating knowledge in an organized way, getting feedback, and gaining additional knowledge to help us grow. Between text messages, tweets, blogs, and other social media posts, we're seeing a shift in how people discover, read, and share news, information, and content. We're learning information in real time before the evening news or morning paper reports it.

When you incorporate your mobile device as a key way to achieve your business objectives and attain these benefits, you open your company up to a whole new world of sales and profits. In my article next month I will share the benefits of mobile social media marketing and how they can impact your company immediately.

## TECHNOLOGY NEWS HIGHLIGHTS

### SMART CANE

For over one million people in the U.S. who are visually impaired, the Smart Cane will improve their ability to get around safely and independently. It uses an embedded ultrasonic sensor to detect obstacles, and then it sends a signal to a miniature navigation system that is worn over the shoulder to provide audible voice alerts. Radio frequency identification (RFID) tags located on flags sticking out of the ground also enable the device to provide navigational cues for the user. Eventually city sidewalks will have RFID tags embedded in them. To assist hearing impaired individuals, the system has also been fitted with a glove that uses vibrating sensors in different fingers to indicate an alert or provide direction.

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### PURGING PERSONAL DATA

The goal of the Vanish project is to ensure online security of personal data by putting expiration dates on things like emails, chats, and social network postings. The system would help protect users from unflattering or incriminating information that floats around in cyberspace even after it's been deleted from its original post site. The prototype works by encrypting messages with a key and then distributing part of that key among random computers within the file-sharing network. When one of those computers leaves the network, part of the encryption key goes with them, so the message becomes undecipherable.

*For information: Roxana Geambasu, University of Washington, Computer Science & Engineering, Box 352350, Seattle, WA 98195; phone: 206-543-1695; fax: 206-543-2969; email: [roxanag@u.washington.edu](mailto:roxanag@u.washington.edu); Web site: [www.washington.edu](http://www.washington.edu) or <http://vanish.cs.washington.edu>*

## VEHICLE SOUND SYNTHESIZER

The quiet ride of an electric car was once considered a benefit. But now, there's concern that "noiseless" vehicles could pose a risk to unsuspecting pedestrians. So developers have come up with a system known as Electronic Sound Synthesis (ESS) that processes data from the car's electronic control unit (ECU) to generate a range of engine sounds depending on the speed and acceleration of the vehicle. This is just the first in a line of active noise control technologies that are currently in development. An internal sound synthesis system is aimed at giving drivers the feel of a high-powered engine. And a noise cancellation system is set to enter production in 2010 that detects vibrations from the road and tires and sends an out-of-phase signal through the vehicle's sound system to compensate for the noise.

*For information: Harman International Industries, 400 Atlantic Street, 15th floor, Stamford, CT 06901; phone: 203-328-3580; Web site: [www.harman.com](http://www.harman.com) Lotus Cars USA Inc., 2236 Northmont Parkway, Duluth, GA 30096; phone: 770-476-6540; fax: 770-476-6541; Web site: [www.lotuscars.com](http://www.lotuscars.com)*

## E-WALLPAPER

Most designs for interactive walls are power-hungry and expensive to produce. But a new type of electronic wallpaper offers an affordable (and attractive) way to activate and control a variety of electronic devices within a room. The design begins with a thin layer of steel foil sandwiched between layers of paper. The paper is coated with acrylic paint that has been infused with particles of iron, making it magnetic. Designs are painted onto the surface using copper paint to form a conductive circuit. Inexpensive sensors, LEDs and even wireless components can then be added to perform a variety of functions – such as turning on a light or controlling the music system – simply by touching the wall.

*For information: Leah Buechley, Massachusetts Institute of Technology, Program Media Arts and Sciences, E14-548L, 77 Massachusetts Avenue, Cambridge, MA 02139; phone: 617-253-2870; email: [kah@media.mit.edu](mailto:kah@media.mit.edu); Web site: [www.mit.edu](http://www.mit.edu)*

## SPIDER WEB GLUE

The secret to a spider's sticky web is a glue-like substance known as glycoprotein – a protein molecule with sugar molecules attached. Recently, researchers used DNA sequencing to discover that this glycoprotein is actually made up of two separate proteins (similar to an epoxy), a finding that could lead to a new generation of bio-based adhesives. Cloning these genes and reproducing them in large quantities would potentially yield a class of "green" glues that may be stronger and more flexible than traditional epoxies. And because they would be non-chemical-based, it's possible that they would even be tolerated inside the body, paving the way for a new generation of medical and surgical adhesives.

*For information: Randolph Lewis, University of Wyoming, Molecular Biology, 1000 E. University Avenue, Laramie, WY 82071; phone: 307-766-2147; email: [silk@uwyo.edu](mailto:silk@uwyo.edu); Web site: [www.uwyo.edu](http://www.uwyo.edu)*

## "CLEAN HANDS" REMINDER

Each year, an estimated two million hospital-acquired infections add billions of dollars to the cost of health care. Now, a new system that keeps track of who has (and has not) washed their hands could help stop the spread of many in-hospital infections. Called HyGreen, the device detects the presence of alcohol-based sanitizers on a clinician's hands and sends a wireless signal to a badge worn on their pocket, indicating that their hands are clean. At the patient's bedside, a monitor checks for the "all clean" signal and causes the badge to vibrate if it's absent, reminding the wearer to wash up. In a five-month field test, infection rates at one hospital dropped to zero.

*For information: Xhale Innovations, Inc., 3630 S.W. 47th Avenue, Suite 100, Gainesville, FL 32608; phone: 352-371-8488; fax: 352-375-3133; Web site: [www.gohygreen.com](http://www.gohygreen.com)*

## MAGNETIC MOOD ENHANCER

A therapeutic system was recently FDA approved that could help the millions of Americans suffering from depression who are not helped by antidepressants. It uses a method called transcranial magnetic stimulation (TMS) to stimulate the part of the brain that is thought to control mood. The non-invasive, non-systemic treatments are administered in a physician's office. An electromagnetic headpiece, positioned just above the forehead, sends pulsed magnetic fields two

to three centimeters into the prefrontal cortex of the brain. The pulses are similar in strength to those produced by a magnetic resonance imaging (MRI) machine, and they act to stimulate the neurons to increase production of dopamine – a neurotransmitter that elevates mood. The treatment protocol consists of daily sessions, about 40 minutes each, for four to six weeks. In clinical trials, symptoms were significantly reduced in about half of the subjects.

*For information: Neuronetics, 31 General Warren Blvd., Malvern, PA 19355; phone: 877-600-7555; fax: 610-640-4206; Web site: [www.neurostartms.com](http://www.neurostartms.com)*

## WIRELESS HI-FI

A new wireless hub will soon be available that integrates all the components of your home theater – including speakers – to offer fast, easy set-up. The patented SpeakerFinder™ system uses ultrasonic technology to automatically balance phase delay, volume and sweet spot, and deliver optimum sound based on the listener's location in the room. It transmits over a newly-dedicated channel that is unaffected by WiFi or microwaves. Speakers must be equipped with a proprietary chip, the first of which will be available later this year.

*For information: Focus Enhancements Inc., 1370 Dell Avenue, Campbell, CA 95008; phone: 408-866-8300; fax: 408-866-4859; Web site: [www.focusinfo.com](http://www.focusinfo.com)*

## FISH TRACKING

UK researchers have developed a new GPS tag system for tracking fish in their ocean habitat. Unlike traditional tagging systems, which are slow to respond, the new system – called Fastloc – can lock onto a location almost immediately, thanks to a proprietary signal processing technique that overcomes some of the problems frequently encountered with wave wash and poor antenna orientation. The tags are attached via a tether to the dorsal fins and are towed about five feet behind the fish. A salt-water switch ensures longer periods of operation by turning the tag on only when it nears the surface. GPS tags such as these will be beneficial for revealing foraging patterns and monitoring fish stocks in the open ocean.

*For information: David Sims, Marine Biological Association of the United Kingdom, The Laboratory, Citadel Hill, Plymouth PL1 2PB, Devon, United Kingdom. phone: +44-(0)1752-633207; fax: +44-(0)1752-633102; Web site: [www.mba.ac.uk](http://www.mba.ac.uk)*

## HIGH-EFFICIENCY JET ENGINE

An innovative jet engine called Pure Power™ is due to appear in the Bombardier C-series jet starting in 2013. It features an advanced gear system that decouples the air fan and the compressor turbine, allowing them to turn at different speeds. The result is a smaller, lighter, more efficient engine that produces the same power, but uses 12 to 15 percent less fuel and produces 35 percent fewer carbon dioxide emissions. In addition, the new design reduces noise by about 50 percent and is expected to require less maintenance. It will also be capable of operating on alternative fuels.

*For information: Pratt & Whitney, 400 Main Street, East Hartford, CT 06108; phone: 860-565-4321; Web site: [www.pratt-whitney.com](http://www.pratt-whitney.com)*

## SELF-CLEANING WINDOWS

A coating made up of protein nanotubes could someday be used to make windows self-cleaning. The tiny structures are made up of peptides – simple molecules that are inexpensive and easy to produce. When placed in a vacuum under high temperatures, they self-assemble into “forests” of grass-like tubes that repel water and dust. As a coating for skyscraper windows, it would eliminate the need for cleaning, since rain would easily wash away any residual dirt without a trace. Solar panels would also benefit greatly from such a coating, as efficiency is reduced when they become dirty. The “peptide forests” also have an unusually high energy density, which could be used to develop high-power rechargeable batteries for electric cars.

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