

# On technology's cutting edge

The magic of what you don't see

BY REBECCA BREDHOLT

"Any smoothly functioning technology will have the appearance of magic."

— Arthur C. Clarke  
Author and Inventor

According to your running shoes, your two-mile run is up. How do you know? Your iPod tells you, along with dozens of other stats about your workout.

This is a perfect example of what the future holds: smaller, savvier, more efficient technology. If you want to know how to stay on the cutting edge for the next five to 10 years, you'll need to know about the three areas of innovation that are converging to change the world of tomorrow.

SANDWICHES • PIZZA • COLD DRINKS

THI



Shopping

Eat at Joe's

THEATER

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TIMES SQUARE INFORMATION CENTER  
INFORMATION CENTER  
ATM

THINK IT

Audio, visual and broadband/wireless technologies are all coming together to make life more productive. The changes that are coming down the tech pike for tomorrow will make gadgets that are much more personal – and just plain cool.

### First Things First

Before you can have the gadgets, you have to have the wireless network to support them. Saying goodbye to cords means saying hello to radio and broadcasted waves. Regulating those waves is the Federal Communications Commission. And lobbying the legislative body on behalf of the wireless industry is CTIA – The Wireless Association. Rob Mesriow, a representative with CTIA, has worked in the wireless industry for 20 years. Even after all that time, he believes the next few years are going to be the most exciting.

Why? Mesriow says, “Watch what happens when everything is connected to everything else.” Everything, he explains, is about to change. “From a gadget standpoint, you can get rid of car keys, wallets, and incorporate them into your phone,” says Mesriow. “Wireless abilities will fundamentally change the way we live, work and play. My 3-year-old daughter may never know what it’s like to stand in a check-out line.”

Small chips known as RFID operate on radio frequencies eliminating the need for multiple forms of identification and/or payment methods. The Container Store has tested this payment method in some of its stores in New

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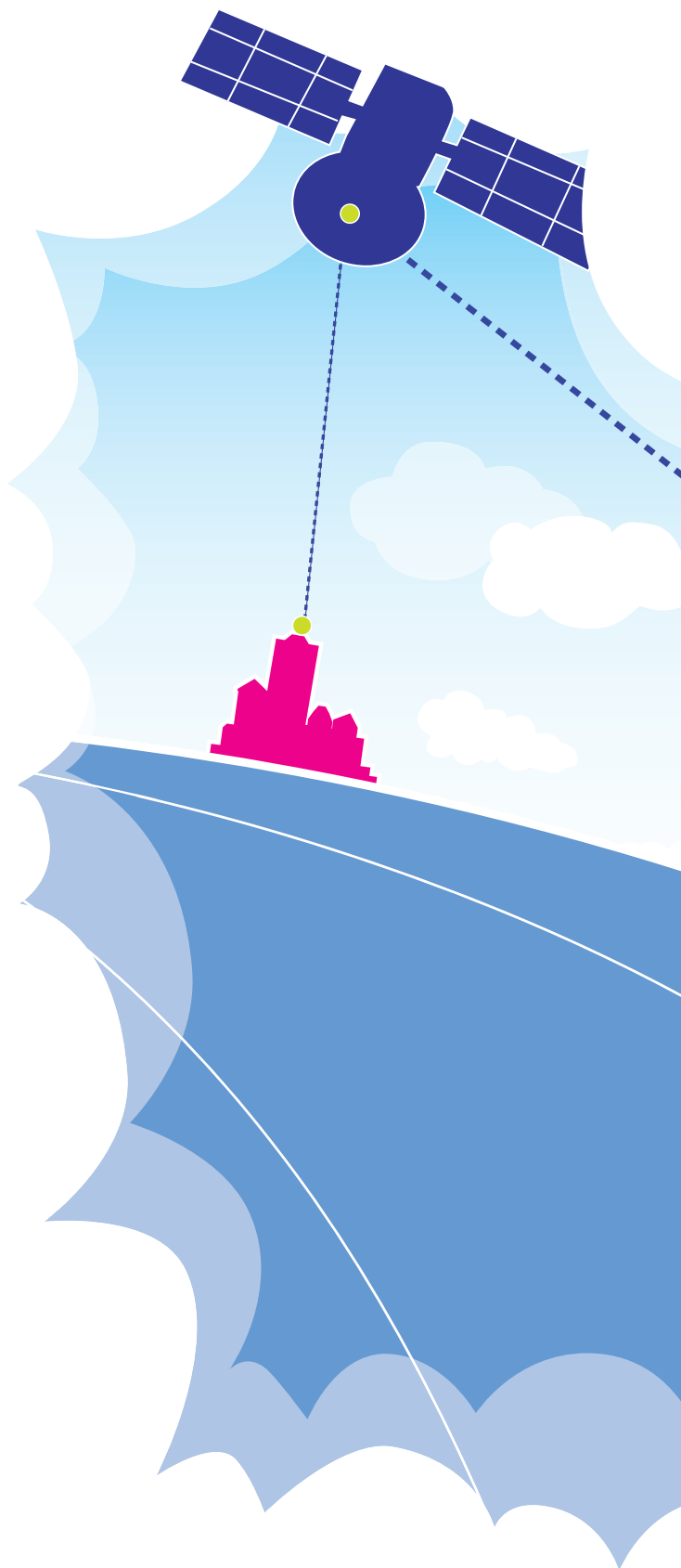
York. But the “swipe your phone here” option isn’t the only use for RFID technology. A garage door opener can send a signal to your refrigerator, signaling that you are about to leave, so it can warn you that you are out of milk.

What is connecting everything (to everything) most efficiently is EVDO, which stands for easier video download operations. Mesriow gives the example of being on a train from Washington D.C. to New York and using his laptop’s EVDO abilities to connect to the Internet. While riding on the train, he was able to reply to e-mails faster than a speeding, well, you know. Other wireless options include WiFi, WiMax and Municipal wireless – each of which has its merit, but Mesriow has his money on EVDO, which international technology company Lenovo will start building into its laptops the way WiFi is currently built into laptops.

In the future, high-speed access will blanket entire cities across the world. With a more widespread wireless range, and more gadgets from which to connect, will mean more ways for advertisers to reach people. “The future of advertising is such an interesting topic,” explains Mesriow. As the gadgets become more mobile, so goes the message. “What’s going to happen when you can advertise on the handset – aka ‘the third screen?’” He pointed out that there are almost two times as many cell phone devices around as TVs.

Another example of increasing mobility is geo-targeting, where televisions display ads depending on where the bus is at any given moment.

“Geo-targeting works by taking a satellite feed. A satellite knows where the bus is, and it’s preprogrammed into the computer on the bus that every time the bus goes past a certain restaurant, it knows that it’s there and it pops up a little ad,” Robert Bridge of Transit TV says.



Similarly, geo-tagging will literally put information from anywhere into the palm of your hand. Web sites, blogs and RSS feeds can have a longitude and latitude attached to them. If you look at a photograph on a computer, whether it's in Adobe Acrobat, iPhoto or someone's homepage, you can click on it to get a satellite image of where the photo was taken.

By 2010, Mesirow says, 90 percent of the planet will be reachable by wireless device. "Think about the power of that," says Mesirow. "The Google model is working because it not only speaks to advertiser, it speaks to consumer. They're only getting people who are interested in their ads to look at them. You'll see a blending of that model in the next few years."

Mesirow pointed out that download speeds in Korea top 100 megabytes per second, a whopping 95 megabytes faster than what most in the U.S. get for \$45 a month.

CTIA holds a conference every three years to focus on developments and issues in the industry. The Outdoor Advertising Association of America (OAAA) holds a conference every year for the same reasons, highlighting technological changes. Everyone knows about Bluetooth technology. What's left to explore are the creative ways in which it can be used, not just for advertising, but also for creative communication.

Stephen Freitas, CMO for OAAA, says technological innovations are giving consumers a more engaging experience. He has seen this shift play out in outdoor advertising, where the national brands are re-evaluating previously static designs.

**"They're only getting people who are interested in their ads to look at them."**

Consumers with Bluetooth-enabled phones that pass by Titan posters in Philadelphia's Center City rail station were invited to download a 30-second video clip about TH Properties. The Bluetooth campaign invite activated when a consumer passed within 150 feet of the interactive billboards.

CBS partnered with Kameleon Technologies using Bluetooth technology to promote the Fall 2006 TV lineup in New York. Five Bluetooth-enabled billboards in New York's Grand Central Terminal transmitted 30-second video clips that took 20 seconds to download to Bluetooth-enabled phones. Users had to accept the transmission, which prevented them from being bombarded by unwanted content.

"Senior art directors are now taking on outdoor," says Freitas, "where they used to pass it down to other designers." Alex Bogusky of Crispin Porter + Bogusky and BBDO's Jim Lesser are big proponents of outdoor, he says. "They are putting their attention on it first." External forces, Freitas went on to explain, are hurting TV, "but with outdoor it can't be TiVo'ed."

#### Can You Hear Me Now?

Bluetooth doesn't just talk to phones. It can talk to your watch, too. Fossil's Caller ID watches can display the incoming information from the wearer's cell phone on a small LCD screen. The watches vibrate to alert users of calls and provide the phone number. Users cannot answer the calls from the watch (yet), but using Sony's service, they can be sent to voicemail with the touch of a button.

For those who have tried to make phone calls using online, you know how shoddy that connection can be — even if it is free. Technology is changing that too. Skype is a service that provides

free calls made through its Web-based service. Using VoIP (Voice over the Internet Protocol), and a Skype WiFi-enabled phone, callers can talk to people on the other side of the

world at no charge. Soon these services will include video communication as well. VoIP will never replace cell phones or satellite phones, but the technology allows for an alternative — the way cell phones were an alternative for landlines.

"In the future, HTML will display well on phones," says Joe Fabris, director of Wireless Solutions for Palm Inc. "We've found the 'sweet spot' as far as the size of phones." Fabris noted that the Treo is an example of a device small enough to be portable and large enough to be functional. He doesn't see them getting any bigger or smaller in the years to come. "Advertising on these types of devices will work well if it's not intrusive," says Fabris. "It can be a great way to opt in."

#### Now You See Me...

Using the Internet in your living room for more than just surfing is another trend about to go mainstream.

"In two or three years, everyone will have some kind of computer or video game console that can browse the Web and play either music or high-def video through the Internet," says Marshall Brain, author and founder of

HowStuffWorks.com, who has appeared on Oprah and other shows as an expert on technological innovations. For the first time, a television screen's visual quality is better than a computer's because of HD, explains Brain. "We are seeing the first inklings of what is about to happen," says Brain in reference to redefining a TV screen's function.

Imagine an entertainment center with no DVD player, no satellite dish out back, no cable box. Maybe even no remote control. Movies play via the Internet and games are stored on the TV's hard drive. Such convergence has long been abuzz among tech geeks. Much like the chip in the Nike shoe, the new video technology seems to work like magic. For example, Nintendo's Wii comes with a "wand" that can be used as a tennis racquet to play a video game. But the technology can be more than just fun and games.

Even Bill Gates believes that the future will not require a disc drive. "In terms of movies, I often say that this is the last format battle there will ever be," says Gates, referring to the Blu-ray battle. "Everything is going to go online – you're going to download it." In other words, everything will transition to the Internet. "It begins the domino effect that causes the elimination of the DVD," says Brain. "Eventually of all physical media period."

Couple that with a steep drop in consumer electronics, and you get a new perspective of mobile electronics. Brain sees the steep drop in consumer electronics pricing as a precedent to revamped packaging and point of sale approaches.

Portable DVD players now sell for around \$60, instead of \$200. "What that changes is the fact that you have the DVD reader and the LCD display all in a package that you could deploy," says Brain. "It starts to change the way you think about video. It starts to become viable to consider point-of-sale video advertisements because everything you need is in that little package. You could build a display around it, you can reach consumers with a vestige." The way Brain sees it, video is much more powerful now because of price points. "It'll be a lot more common, almost to the point where it's disposable," he says.

Likewise, the need for Flash memory will go the way of the DVD drive. In the future, videographers (professional or amateur) will be able to pour their video onto a hard drive through a wireless connection. "Hooking up a firewire cable and waiting in real time for the video to get captured seems primitive," says Brain. "So, if it's recording onto a hard disk, you can erase what didn't work. You can suck it off the hard drive into your computer at 10 times the rate you could do it over firewire."

# "Everything is going to go online – you're going to download it"

– Bill Gates

## In the Year 2525

The bigger implications of streamlined technology and boosted broadband can already be seen in businesses around the world. Downloading e-mails onto your handheld device might seem like a minor intrusion into otherwise personal time, but Mesirov quantifies those brief moments into palatable time gained. "I was a beta user for BlackBerry," Mesirov says. "I said, 'This is the greatest productivity tool in my lifetime.'" He gave an example of conference attendees going back to their hotel rooms, plugging into the wall, and taking 20 minutes to get hit with 200 e-mails. "Meanwhile," says Mesirov, "I'm going to go to dinner because I've already addressed my inbox."

Mesirov even pointed to major gains seen over the last decade in terms of companies' wealth and stock market increases. "Where are these gains coming from?" he asks. "Wireless. You ain't seen nothing yet. The next decade is going to be amazing." ■

## ABOUT THE CONTRIBUTOR

**Rebecca Bredholt** is currently employed with Vocus Inc., a leading provider of strategic on-demand software for public relations, news monitoring and online press release distribution based outside Washington D.C. She holds a key position with the Vocus Media Research Group where she applies her vast knowledge of the magazine industry in her role as managing editor overseeing all magazine content in the Vocus Media Database. In addition to freelance photography and feature writing, Bredholt is also polishing off her first novel with literary agency, Horton Gregory + Associates. Movie rights anyone?

