DANIEL BURRUS'
TECHNO TRENDS
THE BIG IDEAS THAT ARE CHANGING EVERYTHING

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In This Issue

Is Big Media Dying...or Is It Reinventing?

By Daniel Burrus, CEO of Burrus Research

It seems that almost daily we hear another report that big media is dying thanks to the Internet. Radio stations, newspapers, magazines, and even local television stations are struggling, and many are predicting their demise. If you were to look at the balance sheets of these companies, you might even agree.

But before we order the tombstone, let's consider something: Perhaps it's not time for media to die, but rather to reinvent itself.

Realize that in the twenty-first century, the one and only thing any industry can depend on is transformation. This means you can't go backward, and you can't stand still; you can't keep doing what you've always done, even if you do your best to keep doing it better. The only way to survive, let alone thrive, is to continuously reinvent and redefine.

What should media reinvent and redefine? Three key things.

1. Reinvent Media Itself

In this world of smart phones and tablets becoming our primary computer, are mainframe computers dead? The answer is no. We're still using mainframes. Of course, we're not using them the same way that we did in the 1980s or even in early 2000. The mainframes of today are more like super-servers. But they certainly didn't go away.

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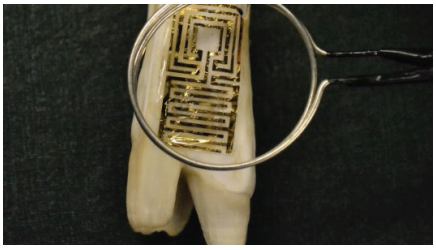
TECHNOLOGY NEWS HIGHLIGHTS

Flexible Bionic Sensors



A number of research projects are currently underway to develop electronics that conform to the shape of the human body and perform a variety of functions. For example, a graphene-based sensor printed on biodegradable silk is designed to be placed on a tooth to alert the wearer of dangerous bacteria in their saliva. In one test, it successfully identified a single E. coli microbe, and was able to pick out H. pylori (the culprit responsible for stomach ulcers) in human saliva.

Another device, which uses silicon ribbons on a rubbery substrate, can detect changes in temperature, pressure or strain and could someday be used to track a person's health status. Finally, a new technology known as a "heart sock" may eventually replace today's defibrillators by using painless, low-energy pulses to quiet abnormal cardiac conditions, such as atrial fibrillation.

For information: Michael McAlpine, Princeton University, Department of Mechanical and Aerospace Engineering, Engineering Quad Room D214, Princeton, NJ 08544; phone: 609-258-8613; fax: 609-258-6109; email: ***mcm@princeton.edu****; Web site:* ***www.princeton.edu/~mcm***

Thought-Controlled House

One of Japan's largest home builders – known for their environmentally sustainable designs – recently unveiled a new dwelling that promises to redefine independent living for wheelchair-bound individuals and seniors who would otherwise be unable to live alone. The home is equipped with infrared, ultrasound and other sensors designed to detect brain wave signals to operate wheelchairs, appliances, televisions, air conditioners, lighting and a host of other electrically-controlled devices.

Sensors on top of a user's head respond to changes in brain wave activity and blood flow, and correlate them to commands.

The patterns are then stored for later reference by an expert system that continually refines its responses. Tests have shown that it takes between 6 and 30 second for devices to respond with an accuracy of more than 70 percent.

For information: Sekisui House, Ltd., 1-88 Oyodonaka 1-chome, Kita-ku, Osaka 531-0076, Japan; email: ***info-ir@qz.sekisuihouse.co.jp*** *or* ***eco@sekisuihouse.co.jp;*** *Web site:* ***www.seksuihouse.co.jp/english/***

Rapid Prototype Satellite

In a new application for 3-D printing, sending satellites into space may become faster, easier and less expensive to do. Known as CubeSats, metal varieties of the 4-inch cube-shaped devices have been used in a variety of space explorations for more than ten years, however, they are somewhat cost-prohibitive to manufacture.

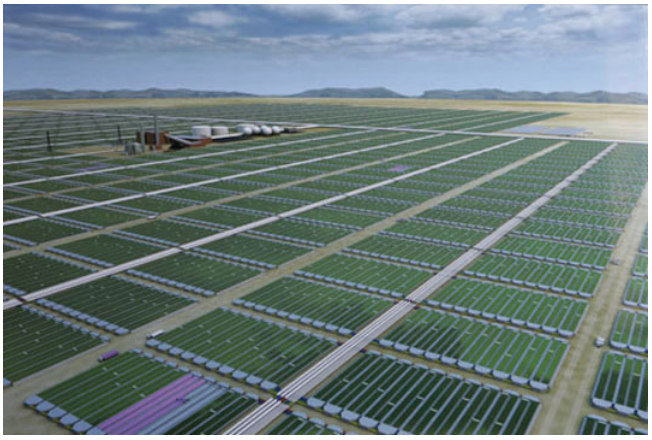
On the other hand, rapid prototyping enables faster production and simpler assembly while maintaining the required levels of accuracy and precision. The 3-D printed version also weighs less, leaving room for more payload. The first of these new CubeSats is scheduled to be launched in 2014 on a Russian rocket.

For information: Fabio Santoni, University of Bologna, Via Zamboni, 33, 4-0126 Bologna, Italy; Web site; ***www.eng.unibo.it/***

From Algae to Biocrude in One Minute Flat

In an effort to mimic the natural process that converts marine organisms into crude oil, researchers have found a way to transform green marine micro-alga (Nanochloropsis) into biocrude quickly and inexpensively.

Current methods used to create algae-based fuel require drying the algae so that the natural oils can be extracted, a process which costs upwards of $20 per gallon. The new method uses wet algae, which reduces cost up front. A small sample (1.5 ml) is placed in a steel pipe and heated to 1100 degrees Fahrenheit in a bed of sand. Because of the small volume, the temperature can be raised quickly, a factor that appears to be essential to the efficiency of the process. Within one minute, about 90 percent of the energy from the original algae was converted to oil.



The researchers estimate that, once an economical process for generating biofuel has been developed, enough could be produced in an area the size of New Mexico to meet current U.S. petroleum consumption.

For information: Phil Savage, Michigan University, Department of Chemical Engineering, 3024 H.H. Dow Building, 2300 Hayward Street, Ann Arbor, MI 48109; phone: 734-764-3386; fax: 734-763-0459; email: ***psavage@umich.edu****; Web site:* ***www.umich.edu***

Alternative Lighting

The cold, harsh glare (not to mention the incessant hum) of fluorescent lighting may soon be a thing of the past, replaced by a new technology known as field-induced polymer electroluminescent (FIPEL) lighting.

FIPEL consists of a nano-engineered polymer matrix that emits light when exposed to an electrical charge. In addition to being at least twice as efficient as today's compact fluorescents (CFLs) FIPEL contains no hazardous chemicals (such as mercury) that could leach into the environment. They can be manufactured to emit virtually any color light, including soft, white light that's easy on the eyes, and can be molded into a variety of form factors – from bulbs to fit existing fixtures to large sheets for use as lighted ceiling tiles or walls.

In addition, the technology has been around for some time, so researchers have alerady demonstrated its long life; one prototype has been working for ten years. And because they already know how to produce it, FIPEL lighting could be available to consumers as early as next year.

For information: David Carroll, Wake Forest University, Center for Nanotechnology and Molecular Materials, 501 Deacon Blvd., Winston Salem, NC 27105; phone: 336-727-1806; email: ***carrolld@wfu.edu****; Web site:* ***www.wfu.edu/nanotech***

Finger Vein ATM

This month, customers of Bank BPH (a subsidiary of General Electric) will be able to deposit and withdraw funds at select ATMs using only their fingers. The technology being implemented utilizes the web of veins in a person's finger as a unique identifier. The system will be the first of its type to be available in Poland.

When exposed to near-infrared light, the hemoglobin in the blood appears as a pattern of dark lines. This pattern is recorded by a camera and compared to a database of registered images. Because the veins are located beneath the skin surface and the method only works on living persons, finger vein identification is almost impossible to counterfeit.

For information: Ewa Piwowar, Bank BPH S.A., ul. Towarowa 2a, 00-958 Warsaw, Poland; phone: +48-22-531-8602; Web site: ***www.bph.pl*** *(Polish only)*

Quantum Leap

Like quantum computing, the ability to build a quantum Internet has been the "Golden Fleece" of physicists worldwide. Recently, Chinese scientists reported transmitting quantum information from one location to another – a difficult task in light of the fact that the simple task of measuring quantum bits (or qubits) destroys them.

Unlike standard bits, which are encoded as ones or zeroes, qubits can simultaneously be a one, a zero, or both. In addition, they possess a mysterious property known as entanglement, which allows two quantum particles to be inextricably linked so that, no matter how far apart they are, what happens to one will instantly influence the other. It is because of this influence that quantum information can be transmitted from one point to another without even needing to pass through the space between them – kind of like teleportation.

The researchers used ensembles of rubidium atoms to transmit quantum information over a distance of 150 meters – the first demonstration of teleportation from one macroscopic object to another. In addition to networking superfast computers, the implications for a quantum Internet include the ability for totally secure communications.

For information: Xiao-Hui Bao, University of Science and Technology of China, Key Laboratory of Quantum Information, No. 96, JunZhai Road, Baohe District, Hefei, Anhui, 230026, P.R. China; phone: +86-551-360-6727; Web site: ***http://en.ustc.edu.cn/***

Anti-Collision Cars

At least two automobile manufacturers plan to incorporate new safety technologies into mainstream models sometime in the near future. Toyota recently announced their anti-collision technology, which is designed to prevent rear-end crashes by warning drivers when they are getting too close to the car in front of them. It will also apply the brakes in the event the driver fails to do so. The new safety feature will be introduced by year end in the luxury Crown sedan, but the goal is to offer it across the entire product line, taking advantage of economies of scale to produce the system more cost-effectively.

Nissan has also developed a technology to help avoid accidents. Radar and cameras installed on various points around the vehicle alert the driver to obstacles or approaching vehicles and display the direction in which the car should be steered. In the event the driver does not respond quickly enough, it switches to an automatic steering mode to avert the collision.

In addition, Nissan unveiled their driverless parking technology at a recent car show in Japan. The system even allows users to send instructions from their smart phones, telling their vehicle to search for the nearest parking space.

For information: Toyota Motor Corporation, 1-Toyota-cho, Toyota City, Aichi Prefecture, 471-8571, Japan; phone: +81-0565-28-2121; Web site: ***www.toyota-global.com/innovation/safety_technology/***

Is Big Media Dying...

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The point is that when new technology emerges, we tend to think that the old technology is completely dead, but that usually isn't the case. Rather, the old technology gets repurposed and integrated to add value to the future.

Let's look at radio as an example. Many people call radio "old media," but I would challenge that and say it's timeless media. Today, a radio station can have a website, which allows them to have video, interactivity, contests, and all sorts of things they couldn't have done in the past.

Not only that, but in the past you needed to buy a radio. Not so anymore. Your TV, computer, and even smart phone can be a radio. It's no longer a physical device; rather, it's audio-sponsored content that can be delivered anywhere, at any time.

So is radio dead? No. It's simply being reinvented. One of the keys to reinventing—whether it's radio, print, television, or local news—is to not deny where the future is going, but to embrace it. At the same time, you need to look at how to bring the best of the past forward.

Therefore, a good question big media needs to ask is, "What are the elements of the past that are vital for us to bring into the future?" But remember, you can't take everything—just the things that are essential for success. Then it's about looking at how you can take those essential elements from the past and leverage them in new ways.

2. Reinvent Media Marketing

For media to thrive in the future, it's imperative that it have an integrated approach. That is true for media marketing, as well. One of the reasons ad dollars are falling for newspapers, as well as traditional media, is that they don't fully understand the new realities of marketing. Two key shifts are taking place that media companies can no longer ignore.

First, media and marketing have always been about storytelling. Advertisers have a story to tell, and the media is there to help tell it. Today, however, media and marketing go beyond mere storytelling; now it's about storytelling and dialogue. That's why social media's so popular. It's not about the word "media"; it's about the word "social."

Unfortunately, we have community newspapers, television, radio, and news programs that are failing to build community through activity, engagement, and dialogue. Yes, they have a website, but for the most part they are static sites that are not engaging.

So in order to move forward, big media needs to focus not just on the story, but also on the dialogue. When you add dialogue, you're moving from the information age (where so many media companies started) to the communication age (where the audience is now).

Second, when we look at our traditional media players that are trying to sell advertising, they are still using the old model of media-specific ads: Radio ads just for radio, TV ads just for TV, and print ads just for print. But if you want to serve your customers well these days, you need to think in terms of a media neutral ad. Why? Because it's not about siloed media anymore; it's about the integrated use of media. The sooner media salespeople embrace this concept, the sooner their sales will rise.

For example, someone selling newspaper ads can no longer just focus on making that print ad sale. A better approach is to say to the customer, "I'm suggesting you take an integrated approach to your advertising. I'm here today not as a newspaper ad salesperson, but

as your trusted advisor. And I'm going to help you to see how integrating newspaper, web, mobility, social, and radio advertising will give you better results."

This approach works because we're shifting from a transaction to a relationship. It used to be about "how many transactions can I get?" Today it's about developing long-term relationships that span price, time, and the competition. Building this kind of relationship requires a high level of trust.

To get higher levels of trust, focusing on the customer and educating them on the integrated approach to advertising is key. This is how media salespeople can get away from being transaction-centric to becoming the trusted advisor.

When sales reps become trusted advisors who truly serve customers and think in terms of an integrated approach, they'll see there's more opportunity to serve customers than ever before. Old media will no longer be seen as old media, but rather as more relevant media because salespeople are using new ways to create value.

3. Reinvent Media Results

Finally, marketing used to be about consumer reach—about how many people you could get to see or hear your ad. As such, many companies would do national ads so they could reach more people, knowing that a certain percent will be interested in the product or service.

Today, I don't just want consumer reach. What I want, and what is even more important, is consumer engagement. In other words, it's about getting people to take immediate action. How can I get them to take part in the ad? How can I get them to become the ad? We saw this done with Super Bowl ads, where companies got customers to create the ad they aired during the Super Bowl. That's just one way to get engagement. Engagement can happen in many different ways, over and over again.

Additionally, companies used to have unknown customers. Advertisers would place multiple ads with the hopes of increasing sales. But today we can actually know who is clicking on our ads, buying our products, and even talking about us online.

Because we have more ways of knowing who's responding and engaging with us, tracking results is easier. We used to have hard-to-measure results, and much of it was based on averages. But now, thanks to the digital world, it's easy to measure exact results and get them in real time.

This engagement factor is ushering in another shift in advertising. Whereas we used to pay for services (pay for someone to run the ad), we're now able to pay for results (pay for the number of people who take action on the ad). Unfortunately, many media companies are reluctant to embrace this new model. But those who do will certainly cause a revolution.

The Reinvention Imperative

Ultimately, this is about reinventing how various media outlets work at all levels. After all, the old doesn't always go away; often, it gets repurposed into the new. So let's forget the concept of big media versus the Internet. It's really big media and the Internet. It's not an either/or world; it's a both/and world. It's about taking the best of our past and leveraging it in new ways into the future. Remember, if it can be done, it will be done. And if you don't do it, someone else will.

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