



# TECHNO

THE BIG IDEAS THAT  
ARE CHANGING EVERYTHING

# TRENDS

## SOCIAL NETWORKS THAT BOOST YOUR BUSINESS (PART II)

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The business use of Web 2.0 represents a new trend called "Business 2.0."

Aside from being the name of a defunct magazine, Business 2.0 is about using the new web-based social networking applications (many of which were originally created for personal use) in a way that fosters teamwork, customer touches, and internal and external collaboration in a low-cost seamless way.

Last month I shared a few personal Business 2.0 tools with business applicability. This month I will share two more personal tools along with some purely Business 2.0 tools that will help create collaboration in a low-cost seamless way.

### TWITTER

Twitter is a micro-blogging service that allows friends, family and co-workers to communicate and stay connected through the exchange of short, quick answers using no more than 140 characters per message. Senders can restrict delivery to those in their circle of friends or co-workers. Users can receive updates via the Twitter website or other social networking sites such as Facebook. Young people use Twitter for answering the question: What are you doing? Business 2.0 use: Business users could change that question to: What problem are you trying to solve? Several companies have used this as a fast way to solve problems. Hotels, airlines, and airports are using Twitter to pitch *continued on page 2*

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## SOCIAL NETWORKS *(continued from page 1)*

services, travel updates, and respond to travelers needs. Ask yourself: Could we use Twitter to solve problems faster with our organization or our customers?

### DELICIOUS

Delicious is a social bookmarking web service for storing, sharing and discovering web bookmarks. It uses a non-hierarchical classification system in which users can tag each of their bookmarks with freely chosen index terms. Business 2.0 use: Business users can share their most useful websites with co-workers or business partners. If a customer purchases a product, sellers could share relevant bookmarks that keep the customer coming back for more information and hopefully more products. Ask yourself: Could we use Delicious to share important new websites faster within our organization or with our customers?

### PURELY BUSINESS 2.0 TOOLS

#### WIKI

A Wiki is a collaborative web page or collection of web pages designed to enable anyone to create a quick web page that allows visitors to search the Wiki's content and edit the content in real time, as well as view updates since their last visit. Wikis are often used to create collaborative websites and to power community websites. On a moderated Wiki, Wiki owners can review comments before additions to the main body of the topic. Additional features include calendar sharing, live AV conferencing, RSS feeds, and more. Ask yourself: Could we use Wikis to enhance internal and external collaboration?

#### LINKEDIN

LinkedIn is a business-oriented professional networking website for exchanging information, ideas, and opportunities. There are over 35 million registered users spanning 170 industries actively networking with each other. For example, large insurance companies use LinkedIn to foster networking with their independent sales representatives. HR professionals from all over the world could use LinkedIn to share best practices. Ask yourself: Could we use LinkedIn to expand our organizational network for enhanced knowledge sharing?

### CLOUD COMPUTING & SOFTWARE AS A SERVICE

In Cloud Computing, some or all of the storage, software, IT Processes, and data center facilities you use can exist on your provider's server, which is maintained and cared for by your provider, giving you 24/7 access from any device anywhere. The cost of upgrading hardware and software, maintenance, and associated IT labor costs can be dramatically reduced or eliminated. Currently, the ideal organization would be any size company that's facing big investments in computing and communications infrastructure. For example, Amazon.com can give you an entire e-commerce back end. Software as a Service (SaaS) such as Salesforce.com has a CRM package, SciQuest has a spend management package, and Google, Microsoft and others have a suite of offerings. Ask yourself: Could we use Cloud Computing & Software as a Service to streamline our IT needs?

### GAIN A NEW COMPETITIVE ADVANTAGE

By reframing the use of social networking technology, companies can increase communication, collaboration, problem solving, and competitive advantage with little cost. Remember, many of these tools are free or nearly free, making them accessible to even the smallest of business. Therefore, the sooner you embrace Business 2.0 and put it to work for you, the faster you can penetrate new markets and win the lion's share of business.

## ***TECHNOLOGY NEWS HIGHLIGHTS***

### BIOETHANOL FROM TREES

A Japanese paper manufacturer has come up with a low-cost method to use the parts of a tree that are not usable for making paper (i.e. bark, branches, and leaves) and turn them into bioethanol. The technology would not only make use of 30 percent of the tree that is currently discarded or used as fertilizer, but would also reduce the need to divert crops from the food supply for making biofuels. Although timber can be converted into ethanol using current techniques, it is

about three times more expensive than using sugar cane or corn. That's because their cellulose fibers are bound together by a compound called lignin, which prevents them from decomposing. The chemical process that has been developed uses an alkaline solution to create fractures in the lignin sheath. Using the same mechanical methods used to produce pulp, it is broken apart. The cellulose can then be isolated and fermented to make ethanol at a cost comparable to using corn or sugar cane.

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## BATTERIES THAT CHARGE IN SECONDS

Researchers have designed an experimental lithium ion battery that recharges 100 times faster than normal batteries. The secret? Tiny nano-sized balls of lithium iron phosphate, which transport electrons faster and more efficiently. A typical recharge cycle takes time because detaching lithium ions from the cathode so that they can be absorbed by the anode is a slow process. The nanoballs act as a catalyst to quickly release lithium as the battery charges. The same ions are then reabsorbed by the nanoballs as the battery discharges. In cell phones, the new batteries could charge in as little as 10 seconds, and larger batteries (for plug-in hybrid cars, for example) could recharge in just 5 minutes as opposed to 8 hours for existing cells.

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## THE POWER OF HUMAN THOUGHT

Honda's Asimo humanoid robot is now taking orders from a human brain using technology that allows a user to control its movements by thought alone. The Brain Machine Interface (BMI) consists of a helmet that measures brain waves using electroencephalography (EEG) and cerebral blood flow using near infrared spectroscopy (NIRS). During thought processes, small but measurable changes in these parameters are analyzed and correlated to specific movements, such as moving an arm or leg. Once calibrated to a specific user, the robot can be controlled simply by thinking about it. In about 100 tests over a three month period the system was shown to be more than 90 percent accurate, although it can take up to 8 seconds to register a command and respond. The technology will be used to develop a variety of human-friendly, hands-free electronic appliances in the future.

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## LISTEN TO YOUR DOCUMENTS

A new scanner can turn any document into an audio document quickly and easily. Called BookReader, it scans books, magazines, or other documents, and then employs character recognition and text-to-speech software to play it back on your computer or portable audio device with an exceptionally human-like voice. Its unique hardware design employs a patented technology called SEE™ (Shadow Elimination Element), which can scan up to the edge of a page without distorting the lines of text like traditional flatbed scanners. Scanned documents can be saved in text, RTF, MP3, WAV or PDF format for playback anytime and anywhere. BookReader also allows you to listen to PDF documents downloaded from the Internet. The PC compatible device will scan letter size documents and also includes graphic functions that allow users to read along. It retails for about \$700.

*For information: Plustek Technology Inc., 17517 Fabrica Way, Suite B, Cerritos, CA 90703; phone: 714-670-7713; fax: 714-670-7756; Web site: [www.plustek.com](http://www.plustek.com)*

## LOW POWER DESALINATION

Desalination of seawater for drinking and irrigation is vital in areas of the world where fresh water is limited, but the process typically requires large amounts of energy, making it very costly. Recently a new system was introduced that consumes up to 61 percent less energy than traditional desalination systems, using only 10.6 kilowatts of electricity to process 100 cubic meters of water every day. It takes advantage of elevated pressures in the highly concentrated

wastewater to drive a pressure recovery device. This supplements the pressure needed to pass the seawater through a reverse osmosis membrane, thereby reducing the amount of power required.

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## LIQUID WOOD

A new material known as ARBOFORM® combines the sustainability of wood with the flexibility of plastic. Made of 100 percent renewable raw materials, the “bioplastic” not only reduces dependence on petrochemicals, but is totally biodegradable. Originally used mainly for injection-molded wood applications, its developers have since found a way to make it suitable for other molded items, such as toys, by reducing sulfur content and adding compounds to keep it from dissolving in water. The goal is to create a material that releases no heavy metals – no matter how roughly its treated – and will retain its structure even when wet.

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## QUANTUM LEAP FOR SOLAR CELLS

In the continuing quest for more affordable solar power, quantum dots could be the next step. All solar cells rely on light-sensitive semiconductors to produce current, but the semiconductors used in today’s solar panels can only absorb a narrow wavelength of light. To improve efficiency over a broader spectrum, several layers are used, which greatly increases cost. Quantum dots, on the other hand, can absorb a wide range of wavelengths. And when these tiny crystals are placed adjacent to semiconductor layers, they transfer their energy directly to produce up to six times more current than conventional photovoltaic cells. Plus, the dots are easy to apply to virtually any surface using inkjet printing methods.

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## IT’S METAL...IT’S PLASTIC...IT’S BOTH!

A new material will soon be available commercially that incorporates the thermal and electrical properties of metal in a lightweight, inexpensive plastic. The revolutionary composite is not simply bonded together; instead, the components are integrated to form an electrically conductive network that is also chemically stable and very resilient. In addition to simplifying circuit board design, the material has potential applications in other areas. For example, an airplane fuselage made of the plastic-metal hybrid could dissipate charges from lightning strikes to better protect sensitive internal aircraft components.

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## REVERSING MS

In an early clinical trial of 21 patients, doctors at Northwestern University have succeeded in reversing early-stage multiple sclerosis (MS) using a patient’s own stem cells. MS is an autoimmune disorder in which a person’s immune system attacks their central nervous system. The new treatment being studied involves removing stem cells from the bone marrow of an MS patient and disabling their immune system using chemotherapy. The stem cells are then injected back into the patient to “reset” their immune system so that it no longer attacks healthy tissue. Three years after transplantation, the disease had stabilized in all of the patients, and 17 of them (81 percent) had improved by at least one point on a disability scale in areas such as walking, limb strength and vision.

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