

E.I.T. Links

From “self-service” to “room service” :
How Emerging Information Technology is changing the way we live

“Technology is dominated by two types of people: those who understand what they do not manage, and those who manage what they do not understand.”
 ~Archibald Putt

By Steve Knode, steve@steveknode.com

Editor's Note:

Please feel free to pass on the newsletter to those interested. Anyone wishing to receive future editions of the newsletter, please email me at: sknode@gmail.com.

Note: This newsletter contains links found during Jun 2009, and all of the links were working at time of publication.

Remember, all links here can be found at www.steveknode.com/news_updates.htm and previous newsletters are available at: <http://www.steveknode.com/newsletters.htm>.

Links for this Issue

AI General

- [A Time for AI](#) – In this Forbes’ article, the progress of AI is documented. Once things like AI show up in mainstream business journals, you can count on there being rapid progress as the early adopters and the early majority jump in.
- [The AI Report](#) – This entire report contains several articles dealing with progress in the world of Artificial Intelligence, including the one mentioned above.

Brain

- [Get Smarter](#) – With the serious problems facing humanity, it is imperative to ‘become smarter’. This article tells how that could happen.
- [Speeding up brain networks might boost IQ](#) -- Related to the article mentioned above is the concept of boosting the brain with drugs or other manipulations to increase the speed of the brain’s connections.
- [Smart People Really do Think Faster](#)-- It appears that there might be a relationship between IQ and how fast the brain is able to process information.
- [Brain Time](#) – Interesting article discussing how the brain is able to process information in a parallel manner.
- [Brain could adapt well to cyborg enhancements](#) – It appears that the brain would adapt easily to cyborg enhancements as long as the enhancements don’t measurably disturb the body schema too radically.

Decision Making

- [Problems are solved by sleeping](#) – Sleeping on a problem seems to actually help in solving the problem. Apparently, REM sleep promotes lateral thinking.

Educational Technology

- [THE IMPENDING DEMISE OF THE UNIVERSITY](#) – One of my favorite writers, Donald Tapscott, gives his take on the future of Universities.
- [The dark side of animation](#) – Apparently, the use of animations detracts from the ability to learn. Although students appear to like the use of animations in lectures delivered using PowerPoint, there is now strong evidence that animation is nothing more than an entertaining distraction.
- [Nibipedia](#) -- Nibipedia is the result of matching Wikipedia entries to YouTube videos. Search for a video and while you're watching that video you will see links to related Wikipedia content as well as more related videos.
- [Libraries, eBooks, and the Mobile Web: A Long Ways to Go](#) – The latest study shows that students are not yet ready to read eBooks and eJournals on their mobile phones. However, predictions are that the results will look markedly different in just a few years.
- [Layar's Augmented Reality Browser: Literally More Than Meets The Eye](#) – Layar has a new 'augmented reality' browser which turns your cell phone into a full-fledged information portal. Check out the video demonstrations at this link.
- [Simpler Data Visualization](#) – Protovis is a new software approach for visualizing complex data to make it understandable. Some absolutely stunning examples showing the technique are available at: <http://vis.stanford.edu/protovis/ex/>. (NOTE: Edward Tufte would be proud of this approach.)
- [Is This the Most Important Chart in the Technology Business?](#) – Many would agree that this chart shows the main reason for the tremendous growth in the use of information technology. NOTE: This is an updated version of this famous chart.
- [The Emerging World of Real-Time Cellphone Data](#) – As more and more people use 'smart' cell phones, the ability to build applications using real time cell phone data continues to emerge.

Information Overload

- [Multimedia White paper on the Digital Universe \(2009 update\)](#) – IDC has updated their yearly estimate of how much information exists. This year's update features a very innovative multimedia method for delivering the update.
- [New Cisco Visual Networking Index Forecasts Global IP Traffic to Increase Fivefold by 2013](#) – CISCO has a frightening forecast of a fivefold increase in IP traffic by 2013 as well as some insights into what this might mean.
- [The Dizzying Data Rate Conundrum](#) – As more and more experiments are conducted which involve massive amounts of data, the question of how and where to store the data presents a new challenge.

Information Visualization

Innovation

- [Create, Publish, Share your own Ebook](#) – At this site you can create your very own ebook, publish it, and share it for free.
- [Move Over, Amazon? Google Aims to Sell e-Books](#) – Google continues to innovate, this time providing ebooks on a variety of platforms.
- [U.S. an Innovation Laggard? \(video\)](#) – Video interview which seems to support the idea that the U.S. is no longer the leader in innovation.
- [OMB to measure IT projects through a dashboard](#) – The Obama administration is going to emphasize the use of dashboards to track federal IT spending.
- [One Team reports Success in the \\$1M Netflix Prize](#) – Netflix offered \$1 million dollars for anyone who could beat its in-house recommendation engine by 10% or

more. Now one team has claimed the prize.

Knowledge Management

- [Extracting Meaning from Millions of Pages](#) – A new software tool that attempts to extract meaning from webpages by analyzing basic relationships between words. Without a human in the loop, it can discover and learn relationships among large numbers of pages.

Machine Learning

- [Computers Make Great Students](#) – Unsupervised learning is rapidly becoming an effective way to solve many kinds of problems. Computers, unlike people, thrive on using this approach. Several instances are cited in this article where unsupervised learning is effective, now that immense computing power is readily available.
- [Cell Phones That Listen and Learn](#) – By tracking how a cell phone is used on a regular basis, a user's habits can be 'recognized'.

Medical

- [Stem-Cell-Coated Contact Lenses Are Curing the Blind](#) – By using their own stem cells, persons blind in one eye due to corneal damage have been cured. The stem cells are inserted into the contact lenses used by the persons, and, in a few weeks, presto---a cure!
- [Surgery's past, present and robotic future \(video\)](#) – Yet another great TED video, this time on the past and future of robotic surgery.
- [Virtual body parts take the guesswork out of medicine](#) (link to video) – Soon operations and treatments will be first tried on your 'virtual' body double. Researchers around the world are creating different personalized simulations of living body parts, so that therapies can be tested and optimized without risk to the patient.

- [New Drug Kills Cancer with Few Side Effects](#) – Developments in the treatment and cure of cancer continue. A drug tailor-made to strike at a tumor cell's Achilles heel shrinks or stabilizes tumors in patients with certain treatment-resistant hereditary cancers while causing few side effects.
- [A conversation about Personalized Medicine with Steven Pinker, Anne Wojcicki, George Church and Linda Avey](#) -- Interesting video conversation about the pros and cons of the coming personalized medicine revolution.

Military

- [US shells out \\$10M for unmanned aircraft that can perch like a bird](#) – Further advances are coming in the development of a tiny aircraft that can fly into tight spaces undetected, perch and send live surveillance information to its handlers.
- [NAVAIR's Information Fusion Center](#) – Making sense out of the vast array of information flowing into a command center is one of the challenges of today's warfare. Here is the approach taken at NAVAIR.

MISC

- [Cyberdyne Ready to Mass Produce Cyborgs](#) – Mass production of cyborgs seems to be only around the corner. Check out several interesting examples.
- [H+ Magazine Summer 2009](#) – The summer 2009 edition of H+ magazine is now available. Several very interesting articles, including Brain-Computer Interfacing, Here Come the Neurobots, etc.
- [Free Tool for Gov't Agencies to Communicate Public Safety Alerts Online or Via SMS](#) – There is now a new SMS service to allow governments to reach citizens when needed. Nearly 1,000 agencies have already signed up for the free service which should be a boost to safety notifications.
- [Multi-Device Wireless Broadband from Spring Mi-Fi](#) – Stay connected anywhere with this new wi-fi service from Spring.

Three connections can be used at once.

- [Kapitall, Like a Wii for Investment, Puts Democratic Spin on Financial Tools](#) – Kapitall is trying to make investing much more understandable by providing a more useable interface for financial tools. In marked contrast to many current investment tools online, Kapitall's web interface is game-like, visual, social, customizable, and intuitive. The Kapitall team created it to appeal specifically to socially connected, casual gaming, novice investors.
- [Read It Later](#) —A free service to save webpages to be viewed later. You can save to your computer or iPhone.
- [Wishlist of Apps for Augmented Reality](#) – Several extremely interesting video demos of ‘augmented reality’ applications are profiled here.

[Quantum Computing](#)

- [Physicists demonstrate quantum entanglement in mechanical system](#) – Physicists at the National Institute of Standards and Technology have demonstrated quantum entanglement in a mechanical system for the first time.

[Robots](#)

- [Plan to teach military robots the rules of war](#) – Scenarios are being developed to test whether robots can act ethically, following the rules of war. Several scenarios are being developed, with increasing complexity.
- [Opening Doors on the Way to a Personal Robot](#) – Progress toward personal robots continues. In this article an experimental PR2 robot, which has wheels and can travel at speeds up to a mile and a quarter per hour, was able to open and pass through 10 doors and plug itself into 10 standard wall sockets in less than an hour.
- [Superbots are the real-life Transformers](#) – These Superbots havemanaged to form combinations with two, four or six legs, move like a robotic snake using a slithering or sidwinding motion, and even inch along

like a caterpillar. Six of its modules can form a rolling track, and some combinations can even shimmy up ropes.

[Search Engines](#)

- [Search Tool Google Squared Goes Live](#) – Google has launched a new search tool which presents a whole new way to view and find data. Squared pulls information about members of a category from all over the Web and presents it in a table with rows and columns, instead of the series of page links typically returned by search engines.
- [Collecta Launches *Really* Real-Time Search Engine](#) – One of the first attempts to return real time data from social networks and microblogging sites.
- [6 Approaches to Semantic Data Collection](#)– A very good synopsis of several semantic search engines, outlining the capabilities and differences between them.
- [DARPA Hires Company to Build a Machine Reader that Scours the Web](#) – Realizing that humans cannot possibly search the entire web for relevant material, DARPA is taking the automated machine approach seriously.

[Semantic Web](#)

- [Enterprises, Struggling to Manage Your Data? Try The Semantic Web](#) – Summary of a Price-Waterhouse report on how the semantic web and other technologies are progressing. (NOTE: There is a link to the full report, available for free with registration.)

[Sensors](#)

- [Inside the Military’s Secret Terror-Tagging Tech](#) – The military has spent hundreds of millions of dollars researching, developing, and purchasing a slew of “Tagging tracking and locating” (TTL) gear — gizmos designed to keep covertly tabs from far away. Most of these technologies are highly classified. But there’s enough information in the open literature to get a sense of what the government is pursuing: laser-based reflectors, super-strength RFID tags, and

homing beacons so tiny, they can be woven into fabric or into paper.

- [Holm](#) – At its core, Hohm is Microsoft's answer to Google's PowerMeter and similar services. Hohm is dedicated to giving consumer's information about potential energy savings, while at the same time connecting those consumers whose energy providers already use smart meter technology with real-time information about their own energy consumption at home.
- [Apple Granted Patent for Sports Sensors](#) – Apple now is developing a network of sensors that deliver real-time velocity, impact, rotation and other data from sporting event participants to the web.

[Speech Recognition](#)

- [Multi-Language Chat App Simultaneously Translates YOU](#) – Google Translate announced the addition of Persian into their roster of supported languages in order to facilitate online communication within and from Iran.

[Virtual Reality](#)

- [Layar: the World's First Augmented Reality Mobile Browser](#) (video) – Check out the stunning applications of this augmented reality browser for mobile phones.

[Web 2.0](#)

- [US CIO Kundra Calls for Web 2.0 Co-Creation of Knowledge With Citizens](#) – Our first ever federal CIO, Vivek Kundra, continues to call for a radical new approach to government information technology, focusing on utilization of consumer-type Web 2.0 tools that can "tap into the vast amounts of knowledge...in communities across the country."
- [Open Source Bridge attendee wiki](#) – Excellent example of an effective wiki, this one for attendees at a conference. See how a group of attendees at a conference created their own guide to the conference.
- [Google Wave Preview \(video\)](#) – Google plans to reinvest email in a totally different

way with Google Wave. Google Wave is a new tool for communication and collaboration on the web, coming later this year. Watch the demo video. (NOTE: For more information about Google Wave, visit: <http://mashable.com/2009/05/28/google-wave-guide/>)

- [How Twitter is Changing the World of Professional Poker](#) – Twitter continues to make for interesting applications—this time 'tweeting' during poker tournaments. Twitter is changing the viewers involvement in tournaments, providing commentary and updates from the players. (NOTE: I am now 'tweeting' regularly on Twitter. You can follow my updates related to EIT subjects at <http://twitter.com/sknode>.)
- [For NASA Employees, It's "Spacebook" Not Facebook](#) – NASA has its own version of Facebook, called Spacebook. Employees can now log on to their own intranet portal designed for group collaboration, social bookmarking, and general employee-to-employee interaction. The most interesting part of the article for government employees is how NASA was able to solve the concerns about security and privacy.