

# E.I.T. Links

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

“If you tried to read every document on the web, then for each day's effort you would be a year further behind in your goal.” - Anonymous

By Steve Knode, [steve@steveknode.com](mailto: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](mailto:sknode@gmail.com).*

**Note: This newsletter contains links found during Dec 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](http://www.steveknode.com/news_updates.htm) and previous newsletters are available at: <http://www.steveknode.com/newsletters.htm>.*

*Anyone seeking more frequent updates can follow my 'tweets' via my twitter account, <http://www.twitter.com/sknode>*

### Links for this Issue

#### *AI General*

- [MIT Plans to Rebuild Artificial Intelligence from the Ground Up](#) – The \$5 million **Mind Machine Project**(MMP), a patchwork team of two dozen academics, students and researchers, intends to go back to the discipline's beginnings, rebuilding the field from the ground up.

#### *Brain*

- [Cyborg Life](#) (video) – Famous scientist Kevin Warwick outlines his latest plan to become a cyborg. (NOTE: I first mentioned Dr. Warwick in my August 2007 newsletter.)
- [Behavioral-Based Video Surveillance System That Reasons Like a Human Brain](#) – It is impossible for humans to monitor the tens of millions of cameras deployed throughout the world. BRS labs has developed a new approach which uses cognitive reasoning, much like the human brain, to process visual data and to identify criminal and terroristic activities.
- [Scientists discover first evidence of brain rewiring in children](#) – Carnegie Mellon University scientists have uncovered the first evidence that intensive instruction to improve reading skills in young children causes the brain to physically rewire itself, creating new white matter that improves communication within the brain.
- [Lifelong Memories Linked to Stable Nerve Connections](#) – Our ability to learn new information and adapt to changes in our daily environment, as well as to retain lifelong memories, appears to lie in the minute junctions where nerve cells communicate.
- [New Brain Connections Form Rapidly During Motor Learning](#) – It appears that new connections begin to form between brain cells almost immediately as animals learn a new task, according to a study

published recently in *Nature*.

### [Chatterbots](#)

- ['Artificial intelligence' 221b Sherlock Holmes game](#) – Good example of the use of a chatterbot to mimic human interaction. This chatterbot is based on similar technology to ‘cleverbot’ (see following link).
- [PopSci's Future Of: Cleverbot](#) – Cleverbot is one of the more ‘intelligent’ chatterbots and continues to learn automatically. Already this agent can hold a fairly stimulating conversation on almost any topic.

### [Decision-making](#)

- [A Deluge of Data Shapes a New Era in Computing](#) – An entirely new paradigm for managing the tremendous information glut now facing us. The author argues for a focus on supporting cheaper clusters of computers to manage and process all this data.
- [Help Understanding the Retrevo Value Map](#) – A new approach, visually comparing products by their real-time value, is providing a smarter way to find the right product for you. Interesting way to improve decision-making.

### [Educational Technology](#)

- [Don Tapscott at TEDxToronto](#) – Don Tapscott is one of my top five favorite ‘big thinkers’. He is usually very prescient about what is going to happen, as evidenced by his best-selling books (*Grown Up Digital* for one). Here he discusses the future of education.
- [The Future of Learning Agents and Disruptive Innovation](#) – An excellent report on how education will likely be ‘disrupted’ by the incorporation of agent technology in the classroom.

### [Future](#)

- [Future Interfaces: Gestures, Light and the BiDi Screen](#) (video) – In this video you will get a glimpse of several exciting new interfaces on the near horizon.
- [For 2010, IDC Predicts an Apple iPad and Battles in the Cloud](#) – Excellent report on some 2010 developments, specifically the Apple iPad and Cloud Computing. (NOTE: You can download the complete report at: <http://www.idc.com/research/predictions10/predictions10.jsp>)
- [Grow your own body parts? The future is now](#) – Amazing progress on growing body parts and other medical advances. Medical advancements that sound like science fiction -- growing your own organs, being cared for by robotic nurses, popping anti-aging pills -- are either at or near reality already.
- [Our devices will spin denser webs of data in 2010s](#) – Ten years ago, we would have been blown away by a cell phone with far more computing power and memory than the average PC had in 1999, along with a built-in camera and programs to manage every aspect of our lives. Ten years from now, the iPhone and its ilk will be antiques.
- [2010 Predictions](#) – Several prominent leaders predict happenings for 2010.
- [Ten emerging technology trends to watch over the next decade](#) – For a longer time horizon, check out these predictions for the next decade.
- [The next medical frontier: nano-surgery](#) – Now, a nanorobot could be performing non-invasive surgical procedures on patients with tumors within the next decade.

### [Information Overload](#)

- [How Much Information? 2009 Report on American Consumers](#) – The definitive report on exactly how much information we are producing each year, mind-boggling numbers it turns out.

### [Information Visualization](#)

- [New York Times Launches Times Skimmer: A New Way to Read the Paper Online](#) – If

you wish to read the NY Times, but don't have time to read the entire paper, you can now 'organize' the paper in the method you wish with this technology.

### Innovation

- [Apture website](#) – Enhance your blog posts and articles with interactive videos, images, Wikipedia, maps and more from 50+ sources without making readers leave the page.
- [Hal Varian on Combinatorial Innovation](#) – Interesting and thought-provoking video lecture on 'combinatorial innovation'.
- [SoundHound: A Music App That Could Change Mobile Search](#) – SoundHound lets you listen to music through your own iTunes library or Pandora account. With SoundHound you can capture FM radio, identify a song and create a Pandora internet radio station within seconds.
- [Looking Back At The 100 Best Innovations Of 2009](#) – A look back at the best innovations from the year.

### Intelligent Agents

- [The thrilling potential of SixthSense technology](#) – An absolutely enthralling video about the latest progress in developing the 'Sixth Sense' technology.
- [Use Outlook? Liaise Intelligent Assistant Available Now](#) – For those who use Outlook, you can now use email plug-in Liaise to automatically extract action items, delegation and priority levels from the free text of email conversations.

### Kurzweil

- [Top futurist, Ray Kurzweil, predicts how technology will change humanity by 2020](#) – Kurzweil's latest prognostications about the future of humanity, stunning as always.

### Medical

- [Medical Tattoos Are Catching On](#) – A study finds increasing numbers of patients are getting tattoos that would tell emergency responders of serious medical conditions they have in case they become incapacitated.
- [Ubiquitous Health: Enabling Telemedicine to Cut Hospital Visits, Save Money](#) – We are well on our way to a ubiquitous health monitoring system that automatically alerts the patient's family or physician to problematic changes in the person's vital signs. Such a system could cut hospital visits and save lives.
- [Healthcare Resources](#) – A comprehensive list of healthcare resources from the web.
- [The Year in Biomedicine](#) – An excellent summary of the outstanding progress made in biomedicine in the last year.

### MISC

- [SmartBidNet Offers Smarter Construction Bidding Process](#) – This Web-based software package allows contractors to create a database of subcontractors that may be organized in a variety of ways — where they're located, their level of skills, their federal minority status, their bid participation levels and even a "report card" on their general performance track record.
- [Creating the Intelligent Enterprise](#) – How business analytics and optimization (BAO) is helping top performing organizations in every industry use information for business advantage.
- [THE AGE OF THE INFORMAVORE](#) (video) – An interesting talk with Frank Schirrmacher about the the most significant intellectual development of the first decade of the 21st Century ---- the concepts of information and computation that have infiltrated a wide range of sciences, from physics and cosmology, to cognitive psychology, to evolutionary biology, to genetic engineering.
- [Get a Human](#) – Comprehensive list of phone numbers to call to directly contact a human at hundreds of companies.

- [You'll buy more from web ads that know how you think](#) – People who are looking to buy things online tend to behave in distinctive "cognitive styles" when presented with information: deliberative or impulsive, holistic or analytical, and visual or verbal. By changing the appearance of banner ads to fit in with personality type, it is possible to make the ads more appealing to the user.
- [Painting Circuits On Your Skin](#) – This may sound impractical, but the potential number of applications is mindboggling.
- [Cloud rEvolution \(vol 2\): The Art of Abstraction](#) – The second volume of the Cloud revolution series from CSC is now available. (NOTE: Volume 1 was highlighted as a link in my Oct 2009 EIT newsletter.)

### [Nanotechnology](#)

- [Nanotechnology to end insulin injections for diabetics](#) – Insulin injections may soon be a thing of the past for diabetics thanks to nano-technology. At UCSF Professor of bioengineering, Tejal Desai, implants millions of pancreatic cells that secrete insulin into tiny capsules that can be implanted into the body in an effort to create an artificial pancreas.

### [Neural Networks](#)

- [Healthcare software predicts trouble](#) – Neural networks are good at predicting. This company says it can predict future costs for an individual's disease, not from some diluted average of a cost of care, but by using data analytics to match a person's medical history and disease to others with the same characteristics to predict future behaviors, and costs, in a matter of microseconds.

### [NLP](#)

- [Google's top inventor says talking computers are the future](#) – Interesting perspective from one of the top Google inventors.

### [Robots](#)

- [Popeye, the robot with brains not brawn](#) – One of the most advanced robots, incorporating the latest technology integrating sound and vision.
- [At the International Robot Exhibition in Japan, Robots For Your Every Need](#) – Great images of some of the most advanced robots in existence.
- [Nao - a robot that sees, speaks, reacts to touch and surfs the web](#) – Yet another example of the remarkable progress being made in robotics.
- [A Review of the Best Robots of 2009](#) (with videos) – Here are many of the most amazing robots of the year, complete with videos showing the advanced features.

### [Search Engines](#)

- [Google Real-Time Search Live Now](#) – Google held a major search product event today and among many incredible new products and features displayed was real-time search. Fresh search results pushed live to the search results page, with a pause button above that section of the page.
- [SearchTrends Shows What's Hot In The Search World On The iPhone](#) – This iPhone app, SearchTrends, is a great new way to stay up-to-date on popular search terms, news and events. Instead of relying on news sources, you're keying off of what people around the world are talking about in real time.
- [Snap and Search \(No Words Needed\)](#) – The world, like the World Wide Web before it, is about to be hyperlinked. Soon, you may be able to find information about almost any physical object with the click of a smartphone.

### [Semantic Web](#)

- [Searching for an Intuitive Internet That Knows What Is Said--And Meant](#) – Researchers are actively working to make the web more intuitive, using the principles of the Semantic Web.

### Web 2.0

- [Personalized, Real-Time Web Content](#) – Netvibes, a startup based Paris, France, that lets users build custom home pages, is testing a service that pulls together real-time data from Twitter and Facebook, as well as frequently updated blogs and news sites, on personalized home pages.
- [3D mash-up maps let you 'edit' the world](#) – Explorers who fly over cityscapes can now get used to the idea of maps with an extra dimension. But they are now getting accurate enough to offer much more than a preview of your next holiday destination. Accurate, large-scale 3D maps could soon change the way we design, manage and relate to our urban environments.