

# E.I.T. Links

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

“The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom.”  
 ~Isaac Asimov, *Isaac Asimov's Book of Science and Nature Quotations*, 1988

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

### Links for this Issue

#### AI General

- [Autonomy Without Intelligence?](#) –Excellent article about how High Frequency Trading takes place without any guidance, blindly following rules. The dangers of such an approach are emphasized.
- [NASA system warns of turbulence ahead](#) – NASA is developing a system which can warn of clear air turbulence. This AI based

system is unique.

- [Computers with Commonsense: Artificial Intelligence at the MIT Round Table](#) (video) – Presentation by one of the giants, Patrick Winston, on the subject of a computational theory of intelligence.

#### Brain

[Seeking](#) – How the brain hard-wires us to love Google, Twitter, and texting, and why that's dangerous.

#### Data Mining/Business Intelligence

[Operational Business Intelligence: State of the Art](#) – Outstanding report on where we are with operational business intelligence (BI). Great charts and case studies are included.

#### Decision Support Systems

- [Rules-based innovation](#) – Rule-based systems are continuing to be incorporated into decision support systems. This article shows how effective and innovative they can be when properly utilized.

#### Educational Technology

- [College Textbooks for the iPhone](#) – It had to happen sooner or later—looks like sooner!

Yes, textbooks on the iPhone are a reality.

- [Open-Source Textbooks a Mixed Bag in California](#) – California’s experiment with open source textbooks has a mixed review thus far. (NOTE: I think this approach shows promise---first efforts are always burdened by high expectations and start-up problems. However, the ultimate quality for the price might make this a truly ‘disruptive technology’ for the textbook industry.)
- [SONY announces wireless e-reader](#) – eReaders continue to advance --- this one adds wireless capability and an increased partnership with suppliers.

### [Future](#)

- [2009 State of the Future Report is now available.](#) – The 2009 report is now available. Although not free, (\$49.95), the report does contain 100-page print and an attached CD containing about 6,700 pages of research behind the print edition and The Millennium Project's 13 years of cumulative research and methods. (NOTE: You can see many of the graphics and the table of contents at this link.)
- [Autonomous Systems: Social, Legal, and Ethical Issues](#) – This outstanding report from the Royal Academy of Engineering lays out the many issues on the near term horizon as the progress toward truly autonomous systems continues. Excellent examples, definitions, and ideas to solve the issues are presented.

### [Information Overload](#)

- [Global midsize firms shrug off crisis, eye additional technology investments](#) – SME’s (small and middle-sized entities) continue to recognize the value of IT and invest, even in hard times. Social media, cloud computing, and green applications lead the way. (NOTE: One of the highest-priority technology concerns, chosen by 75 percent of respondents, is managing information, the survey said, adding that these companies are "drowning in a sea of data.")

### [Information Visualization](#)

- [UN and Google create Climate Change Mapping Resources](#) – Applications featuring information visualization continue to emerge, this one featuring innovative ways to show climate change information.

### [Innovation](#)

- [Part 1 of a several part series on Disruption in the Publishing Business](#) – There are several parts to this series on ‘disruption’ in the publishing business. If you wish to see how a ‘disruptive technology’ can change things, this is an excellent example. (NOTE: other parts available: [part 2](#); [part 3](#); and [part 4](#))
- [Government IT on the Leading Edge](#) – In case you were wondering, the government does have some leading edge IT applications in place. This excellent article highlights several of them. (NOTE: Free registration may be required to access the article.)
- [Video appears in paper magazines](#) – A coming copy of Entertainment Weekly magazine will feature a page which will show a video within the magazine. Chips are now small enough and cheap enough to make this a reality. Can textbooks with video embedded be far behind?

### [Intelligent Agents](#)

- [21CSI Technology Selected by CSC for Indiana National Guard Training Center Surveillance](#) – This system will be comprised of intelligent agent-based command and control software with an integrated surveillance suite capable of monitoring, filtering, and interpreting data from intelligent sensors, cameras, motion detectors and unattended ground sensors.

### [Manufacturing](#)

- [A Metal Coating That Repairs Itself](#) – Airplanes, cars, and ships that don’t corrode are on the horizon, based on a new metal

coating that can repair itself if damaged.

### Medical

- [Crystal Ball For Brain Cancer? New Method Predicts Which Brain Tumors Will Respond To Drug](#) – This new approach is better able to identify which tumors will respond to treatment, thereby lessening the number of persons who needlessly undergo treatment.

### MISC

- [Five emerging sectors offer promise with new technologies](#) – Some of the latest promising technologies include Medical Robotics, LED's, Electronic Readers, Tele-health, and Location-Based applications.
- [Where's My Jet Pack? Apple Tablet and Future Interfaces](#) – Very good summary of where we are and where we are headed with sensory interfaces. Lots of video demonstrations included.
- [Internet of Things Compendium](#) – As a fan of the 'Internet of Things', I find this site to have links to many articles on the subject. If you wish to get caught up on the progress, this is the place to go. (NOTE: Last month's newsletter has an article on the companies building the 'internet of things'.)
- [How smartphones are transforming our lives](#) – As the use of 'smart' phones continues to grow exponentially, their impact on how we live is also growing accordingly. This article includes vignettes on how life is changing due to smart phone usage.

### Nanotechnology

- [Try Nano website](#) – Want to understand what nanotechnology is? And, more importantly, what it will mean for you? This site is excellent as a source of information, easily understandable, on nanotechnology.

### Neural Networks

- [Neural nets make a comeback at Darpa](#) – Neural networks are back, according to DARPA. Long one of my favorites, neural networks can be a tremendous tool for many application areas. (NOTE: I have taught courses in Neural Networks and have a streaming presentation on neural networks, available from: [http://www.steveknode.com/streaming\\_presentations\\_main.htm](http://www.steveknode.com/streaming_presentations_main.htm))

### Quantum Computing

- [Tiny device is first complete 'quantum computer'](#) – Amazingly, we finally have a complete 'quantum' computer which performs perform all the functions required in large-scale ion-based quantum processing. (NOTE: For a reasonable overview of exactly what quantum computing is, see: <http://computer.howstuffworks.com/quantum-computer.htm>)

### RFID

- [RFID tags get an intelligence upgrade](#) – RFID tags have been spreading in applications over the past few years. However, RFID tags are about to add more 'intelligence' to their capabilities, vastly expanding their potential uses.

### Robots

- [Scientists fear a revolt by killer robots](#) – Leading researchers are warning that mankind might lose control over computer-based systems that carry out a growing share of society's workload, from waging war to chatting on the phone, and have already reached a level of indestructibility comparable with a cockroach.
- [Cascio's Law of Robotics](#) (video) – One of the big thinkers I follow, James Cascio, has an excellent presentation, outlining his view of where robotics (artificially created intelligences) are headed and how they need to be handled.
- [Robots 'Evolve' the Ability to Deceive](#) – Researchers in Switzerland have found that

robots equipped with artificial neural networks and programmed to find "food" eventually learned to conceal their visual signals from other robots to keep the food for themselves.

### [Search Engines](#)

- [Microsoft Taps Wolfram to Make Bing Geekier Than Google](#) – Yet another development with Wolfram|Alpha (see April, May, July 2009 newsletters for more Wolfram|Alpha news)---this time the announcement that Bing will incorporate Wolfram|Alpha.

### [Sensors](#)

- ['Spiderbots' talk amongst themselves inside active volcano](#) (video) – A squadron of 'spiderbots' inside Mount St Helens is the first network of volcano sensors that can automatically communicate with each other and with satellites, rather than sending data to a base station first.
- [An intelligent system to help the elderly avoid forgetting everyday tasks](#) – Scientists have announced a new system incorporating AI that helps elderly people, or those with special needs, to avoid forgetting certain everyday tasks.
- [Smart Clothes For Better Healthcare](#) – Comfortable smart clothes that monitor the wearer's heart, breathing and body temperature promise to revolutionise healthcare by reducing hospital visits and allowing patients to lead more active lives.

### [Virtual Reality](#)

- [Scientists Use Virtual World to Support Troops](#) – Scientists are using virtual online worlds to improve the flow of information and support to servicemembers returning from deployments.
- [10 Smart Examples of Augmented Reality](#) – Augmented reality applications continue to emerge. Ten excellent examples, covering a range of areas (e.g., interactive cars, bubble gum cards that come to life,

holographic business cards, etc.), are highlighted in this article.

- [Visual Time Machine Offers Tourists A Glimpse Of The Past](#) – Past historical sites are now available for touring and interacting with. A ruined temple, ancient frescos and even a long-dead king have been brought to life by a "visual time machine" developed by European researchers.
- [Virtual Worlds May Be the Future Setting of Scientific Collaboration](#) – Normally, virtual worlds are the setting of many online games and entertainment applications, but now they're becoming a place for scientific collaboration and outreach, as well. A team of scientists have formed the first professional scientific organization based entirely in virtual worlds.

### [Web 2.0](#)

- [Global CIO: Why CIOs Need The Transformative Power Of Twitter](#) – Several in-depth examples of how 'twitter' is making a significant difference in organizations. Examples include: 1) the Mayo Clinic; 2) Pepsi; 3) Teusner Wines; 4) Major League Baseball; 5) Hyatt Hotels; and, 6) the University of Kentucky basketball coach.
- [Four Ingredients to Government Web 2.0 Success](#) – As more governments leverage web 2.0 technologies to become more effective, certain principles for success are emerging. (NOTE: There is a link to the full report from Accenture, Web 2.0 Collaboration Tools for the Next Generation of Public Service, in the article.)
- [Wikipedia Launches Official iPhone App](#) – The Wikimedia Foundation, the non-profit organization behind the popular Wikipedia, just released its first official iPhone application for Wikipedia. Wikipedia Mobile, which is available for free in the App Store now (iTunes link), gives users access to iPhone-formatted Wikipedia articles.