

# E.I.T. Links

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

“The real danger is not that computers will begin to think like men, but that men will begin to think like computers.” - Sidney J. Harris

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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 Apr 2010, 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

#### Brain

- [Motivated Multitasking: How the Brain Keeps Tabs on Two Tasks at Once](#) – New research shows that rather than being totally devoted to one goal at a time, the human brain can distribute two goals to different hemispheres to keep them both in mind---if it perceives a worthy reward for doing so.

#### Chatterbots

- [eBay Inc. offers Intelligent Customer Support](#) – eBay is taking customer service to a new level by offering its members access to intelligent customer support using virtual agents.

#### Future

- [Your Life In 2020](#) – The future of "ubiquitous computing" has been heralded for decades. It sounds grandiose-- computing, everywhere!--but ironically, a future of ubiquitous computing is one where computers actually go unnoticed. That's 2020. (Includes link to video)
- [DARPA Looks to Make a Flying Car](#) – The Defense Advanced Research Projects Agency is on track to develop the world's first true flying car.

#### Innovation

- [Robots look to the cloud for enlightenment](#) – Several applications are in the works to facilitate robots and agents making use of the 'cloud' computing environment to improve capabilities.
- [Collaborative Innovation and a Pull Economy](#) (video) – John Seely Brown's recent talk about how the core ecosystem can be made stronger by sharing knowledge gathered from learning on the edge. In addition, Seely Brown touches upon his theory of a monumental economic shift from a push to a pull economy as outlined in his 2010 book, *The Power of Pull: How Small Moves, Smartly Made, Can Set Big Things*

in Motion.

### Manufacturing

- [3D printer could build moon bases](#) – Researchers have developed a huge three-dimensional printer called D-Shape that can print entire buildings out of sand and an inorganic binder. The printer works by spraying a thin layer of sand followed by a layer of magnesium-based binder from hundreds of nozzles on its underside. The glue turns the sand to solid stone, which is built up layer by layer from the bottom up to form a sculpture, or a sandstone building.

### Medical

- [The wireless future of medicine](#) (video) – Eric Topol says we'll soon use our smartphones to monitor our vital signs and chronic conditions. At TEDMED, he highlights several of the most important wireless devices in medicine's future -- all helping to keep more of us out of hospital beds.
- [Several TED MED videos posted](#) – Many TED MED videos from the recent conference are now available. As always, the TED videos are outstanding.
- [Smart Pill Reports Back](#) – The medicine cabinet of the future could help make sure patients take their medications on time via a myriad of smart technologies. There are already pill bottles that wirelessly report to a computer when a cap has been opened, and devices for automatically dispensing medicine at the right time, and for reminding patients to take their meds.
- [Dual-Action Antibodies](#) – Antibody drugs work by binding to antigens such as extracellular proteins or receptors on a cell's surface, blocking their ability to function or targeting them for destruction by the immune system. Genentech's new antibodies can bind to two different antigens, potentially reducing the number of drugs required to treat diseases.
- [Stimulating Healing in the Heart](#) – While the human heart was once thought incapable of

regeneration, growing evidence shows that even the adult heart can grow new cells, albeit slowly.

### MISC

- [Technically enabled underpants](#) – If you don't get very many text messages and often feel a bit left out of today's super-social modern life, there's a... pair of underpants that may be able to help you fit in. According to Discovery News, the technically enabled underpants, developed by Simavita, are a little on the grim side - they have the ability to send out text message alerts whenever the owner has had a urine-based control accident.
- [Kevin Kelly tells technology's epic story](#) – In this wide-ranging, thought-provoking talk from TEDxAmsterdam, Kevin Kelly muses on what technology means in our lives -- from its impact at the personal level to its place in the cosmos.
- [Synapse on a Chip](#) (video) –The memristor — the so-called “missing link of electronics” memory technology that can change its resistance in varying levels — has been around on paper for nearly 40 years. However it wasn't until 2010 that a group at the University of Michigan led by Dr. Wei Lu demonstrated that it can be used to build brain-like computers in a paper just published in Nano Letters. *New Scientist* reports that “memristors can behave uncannily like the junctions between neurons in the brain.
- [Artificial Intelligence to the Auto Dealership](#) – Artificial Intelligence has now permeated the automobile dealership market. Every salesperson dreams of having a personal assistant, right? Someone to sift through the constant stream of leads and hand you a daily schedule of preset appointments with the hottest prospects. Someone who could weed out the morale-busting, mood-killing, bad leads, and save you from those nasty, negative responses that can kill your morning.
- [Videos from the Singularity 2009 Summit](#) – Videos from one of my favorite events, the

yearly Singularity Summit, are now available. Many of these videos are mind-blowing.

- [10 Emerging Technologies 2010](#) – Technology Review’s list of the ten emerging technologies to watch this year.
- [10 Smart Clothes You'll Be Wearing Soon](#) – As part of the ‘Internet of Things’, everyday objects are becoming networked. Clothing is no exception. It's still early days for Web-enabled clothes - the best example so far is the Nike+ running shoe, which contains sensors that connect to the user's iPod. But expect to see everything from your shirt to your underwear networked in the not too distant future.
- [Stephen Wolfram: Computing a theory of everything](#) (video) – Stephen Wolfram, the creator of Wolfram|Alpha, talks about his quest to make all knowledge computational - able to be searched, processed and manipulated. His new search engine, Wolfram Alpha, has no lesser goal than to model and explain the physics underlying the universe.

### [Nanotechnology](#)

- [Nanotechnology in motion: the good, the bad and the.. just plain weird?](#) (videos) – Several recent interesting videos, updating the progress in the world of nanotechnology.
- [The Nanotech Timeline](#) – This outstanding document includes a very complete timeline (through March 2010) for the development of nanotechnology, including many links.

### [Neural Networks](#)

- [Bringing artificial intelligence into the barn](#) – A pioneer research effort in Brazil is exploring an innovative method in the study of animal behaviour and welfare: the use of automated image analysis and interpretation systems. They have potential for evaluating differences in hen behaviour under different thermal stress conditions, offering a vast array of promising possibilities. **NOTE:** I have a streaming video presentation on

neural networks available at:  
<http://www.steveknode.com/ET/NN/nn.html>

### [Robots](#)

- [Robots, space technology run Australia's mining miracle](#) – There are now robots doing much of the mining in Australia, teleoperated and directed by specially trained operators far away.
- [Heart operation performed with robotic arm](#) – The world’s first heart operation to use a remote-controlled robotic arm has been carried out at Glenfield Hospital in Leicester.

### [Search Engines](#)

- [Real-Time Search](#) – Real-time search is a response to a fundamental shift in the way people use the Web. People used to visit a page, click a link, and visit another page. Now they spend a lot of time monitoring streams of data--tweets, status updates, headlines--from services like Facebook and Twitter, as well as from blogs and news outlets.

### [Sensors](#)

- [Smart Pill Reports Back](#) – The medicine cabinet of the future could help make sure patients take their medications on time via a myriad of smart technologies. There are already pill bottles that wirelessly report to a computer when a cap has been opened, and devices for automatically dispensing medicine at the right time, and for reminding patients to take their meds.
- [MIT/Stanford VLAB Event in March 2010 on the Internet of Things](#) (video) – MIT and Stanford team up to provide an excellent update on the ‘Internet of Things’, including some excellent ideas for applications.
- [The Dawning of Intelligent Wind Turbines](#) – Wind turbines may soon be getting smarter, as an emerging technology promises to endow them with the ability to "see" oncoming wind and react to it before it

arrives at the turbine's spinning blades.

- [Bringing Sensor Networking to Smartphones](#) – Think your smartphone is cool now? Wait till it gets RFID chips, then it'll truly be 'smart.' That's the promise of two emerging RFID-based mobile technologies called NFC and DASH7.
- [5 Ways That Cars Are Getting Smarter](#) – The growth of sensors embedded in cars has led to several developments that will alter how cars are using sensors. One can easily imagine the day when most cars are connected to the network.

### Virtual Reality

- [Augmented reality puts the squeeze into virtual hugs](#) (video) – Now you really can reach out and touch someone through the Internet, with the help of a wearable robot designed by a husband-and-wife team of scientists based in Japan.
- [Augmented-Reality Floor Tiling](#) – Researchers at McGill University in Montreal, Canada have developed floor tiles that can simulate the look, sound and feel of snow, grass or pebbles underfoot. Such a tool could perhaps be used for augmented reality applications, tele-presence, training, rehabilitation or even as virtual foot controllers.

### Web 2.0

- [Memo to Gov Agencies: You May Now Tweet, Blog and Facebook](#) – Next time you hear about your federal government looking to pass a law, make sure to check out their blog, Twitter and Facebook accounts. The Office of Management and Budget issued a memorandum yesterday that should make it easier for government agencies to both communicate with citizens and receive feedback by way of the Internet and social media.
- [The Entire Web Will Be Social](#) – Facebook, as expected, launched at its f8 conference in San Francisco its master plan to make the rest of the web social. The

company laid out three major initiatives to that effect, social plugins, open graph protocol, and graph API.

- ["Design Outside the Box" Presentation](#) (video) – Interesting presentation on how Facebook is now substantially driving the online gaming industry.